JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT
FOURTH QUARTER MEETING
NOVEMBER 16, 2011

The Joint Committee on Public Employee Retirement held its 4th Quarter Meeting on Wednesday, November 16th at 1:30 pm in House Hearing Room 7. With a quorum being established, Chairman Crowell called the meeting to order. Joint Committee members in attendance in person or via conference call were Senators Chappelle-Nadal, Crowell, Green, Keaveny, and Lamping and Representatives Anders, Atkins, Brown, Franz, Pierson and Wieland. Senator Rupp was not in attendance.

The Chairman turned the meeting over to the Executive Director, Ronda Stegmann. Preliminary plan year 2010 data was reviewed. Plan assets, liabilities, revenue streams and expenses were outlined. Preliminary numbers show a $4.3 billion increase in the market value of assets.

The 2011 Watch List, highlighting plans that are under 70% funded on a market value basis, was presented to the Committee. It was noted that the number of plans on this list decreased from 43 on the 2010 Watch List to 26 plans in the current year. This year's list consisted of 15 Municipal Plans, 5 Fire Protection Districts, 4 Transportation Districts, and 2 Statewide Plans. Many of the plans on the list are considering or have made modifications to address funding issues. Thirteen of these plans did not receive the annual required contribution as recommended by the plan actuary. Senator Lamping inquired and discussed the ultimate responsibility of pension liabilities.

A report on the annual required contribution (ARC) as recommended by the plan's actuary vs. the actual contributions made by each defined benefit plan over the past 5 years was presented. Of the 88 plans, 37 did not receive the ARC in 2010.

Quarterly plan reporting was reviewed for the 3rd quarter of 2011. Fifty-three of the 88 defined benefit plans monitored have reported to date. Due to the market fluctuation, a decrease of $4 billion occurred in market value from the prior quarter.

The Director overviewed the recent plan projection request stemming from Senator Lamping's request during the 2011 first quarter meeting for staff to correspond with plans. It was noted the request was sent to LAGERS, MOSERS, MPERS, PSRS and PEERS staff. After cost related concerns were expressed by one of the requested plan staff, Senator Lamping agreed to table the request for now. It was also noted that MOSERS forwarded the requested projections and that information was included in the packet. Senator Lamping thanked MOSERS for complying with the request and indicated the forwarded projection was helpful for policy makers. He expressed his continued concern with the interest rate assumptions used by plans.

An update on the KC Metropolitan Ambulance Services Trust (MAST) employee issue was provided. An arbitrator has ruled that the KC municipal government does not have to provide full retroactive pension to city ambulance workers for their prior MAST service. It was indicated a cost statement has not been filed with the JCPER on the most recent substitute ordinance which provides for partial service credit. According to the ordinance, there will be a 45 day public comment period once the cost statement is filed. The Director will keep committee members aware of the implementation of the public comment period.

No further business being presented, the committee adjourned.

Ronda Stegmann
Executive Director

JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT

4th QUARTER MEETING
November 16, 2011
1:30 p.m.
House Hearing Room 7 or Conference Call

AGENDA

Roll Call

Preliminary PY 10 Reporting

Watch List

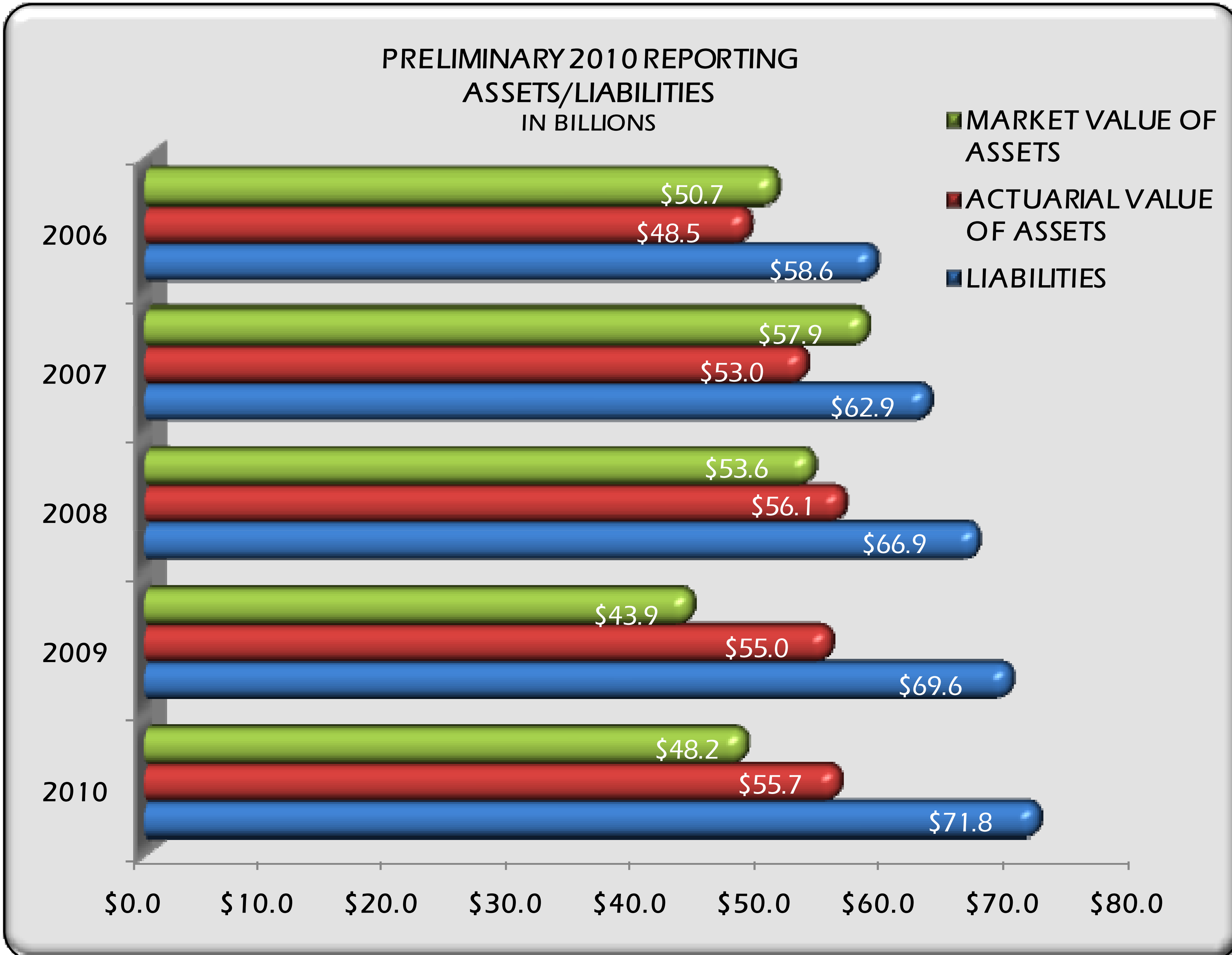
ARC List

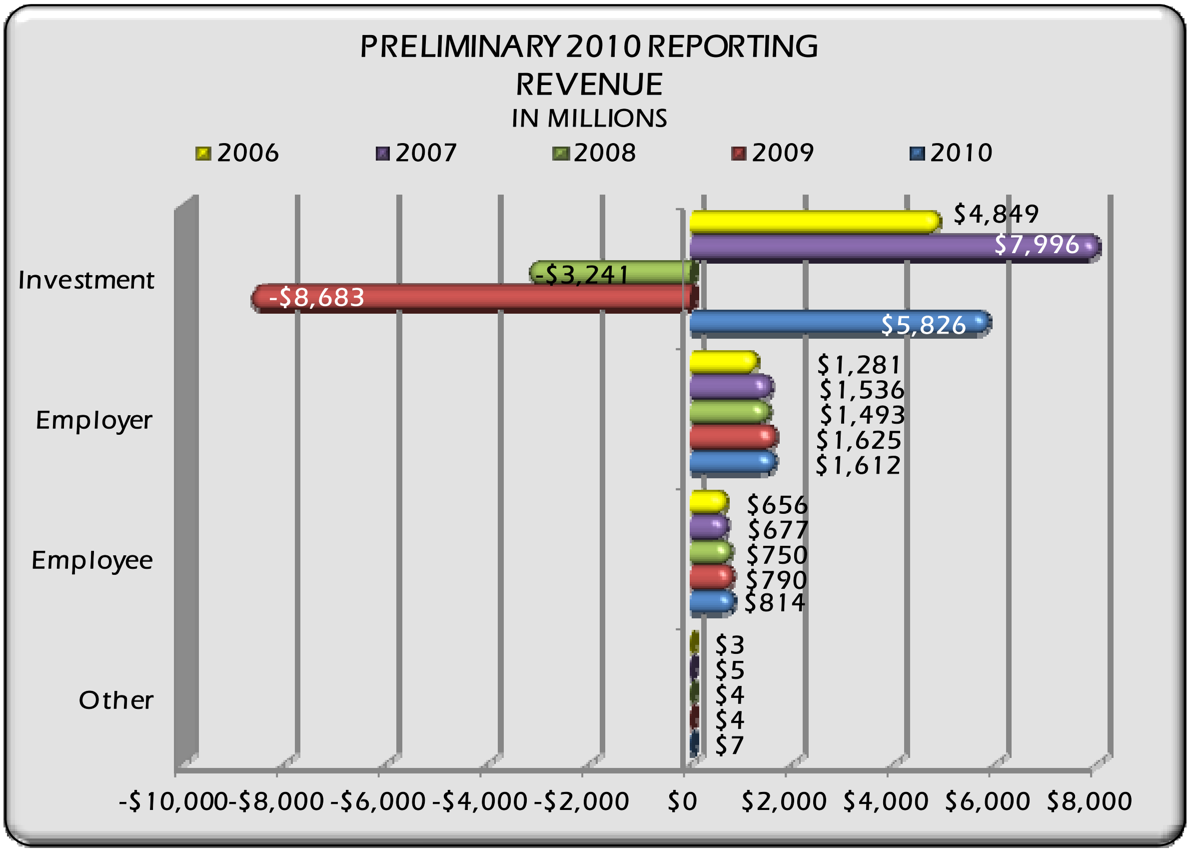
Quarterly Reporting

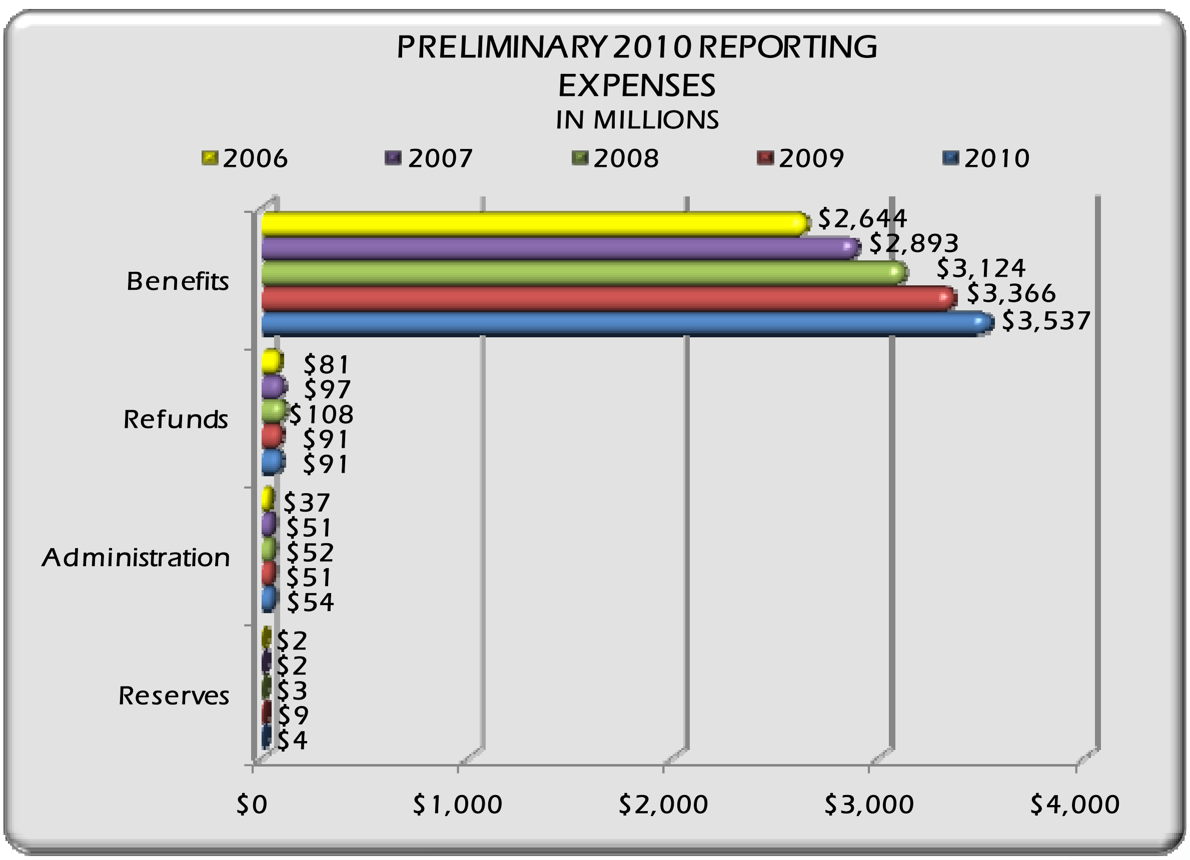
Plan Projection Request

Other Business

JCPER


PRELIMINARY 2010 REPORTING
ASSETS/LIABILITIES
IN BILLIONS
MARKET VALUE OF ASSETS
ACTUARIAL VALUE OF ASSETS
LIABILITIES
2006
$50.7
$48.5
$58.6
2007
$57.9
$53.0
$62.9
2008
$53.6
$56.1
$66.9
2009
$43.9
$55.0
$69.6
2010
$48.2
$55.7
$71.8
$0.0
$10.0
$20.0
$30.0
$40.0
$50.0
$60.0
$70.0
$80.0


PRELIMINARY 2010 REPORTING
REVENUE
IN MILLIONS
2006
2007
2008
2009
2010
Investment
Employer
Employee
Other
$4,849
$7,996
-$3,241
-$8,683
$5,826
$1,281
$1,536
$1,493
$1,625
$1,612
$656
$677
$750
$790
$814
$3
$5
$4
$4
$7
-$10,000
-$8,000
-$6,000
-$4,000
-$2,000
$0
$2,000
$4,000
$6,000
$8,000

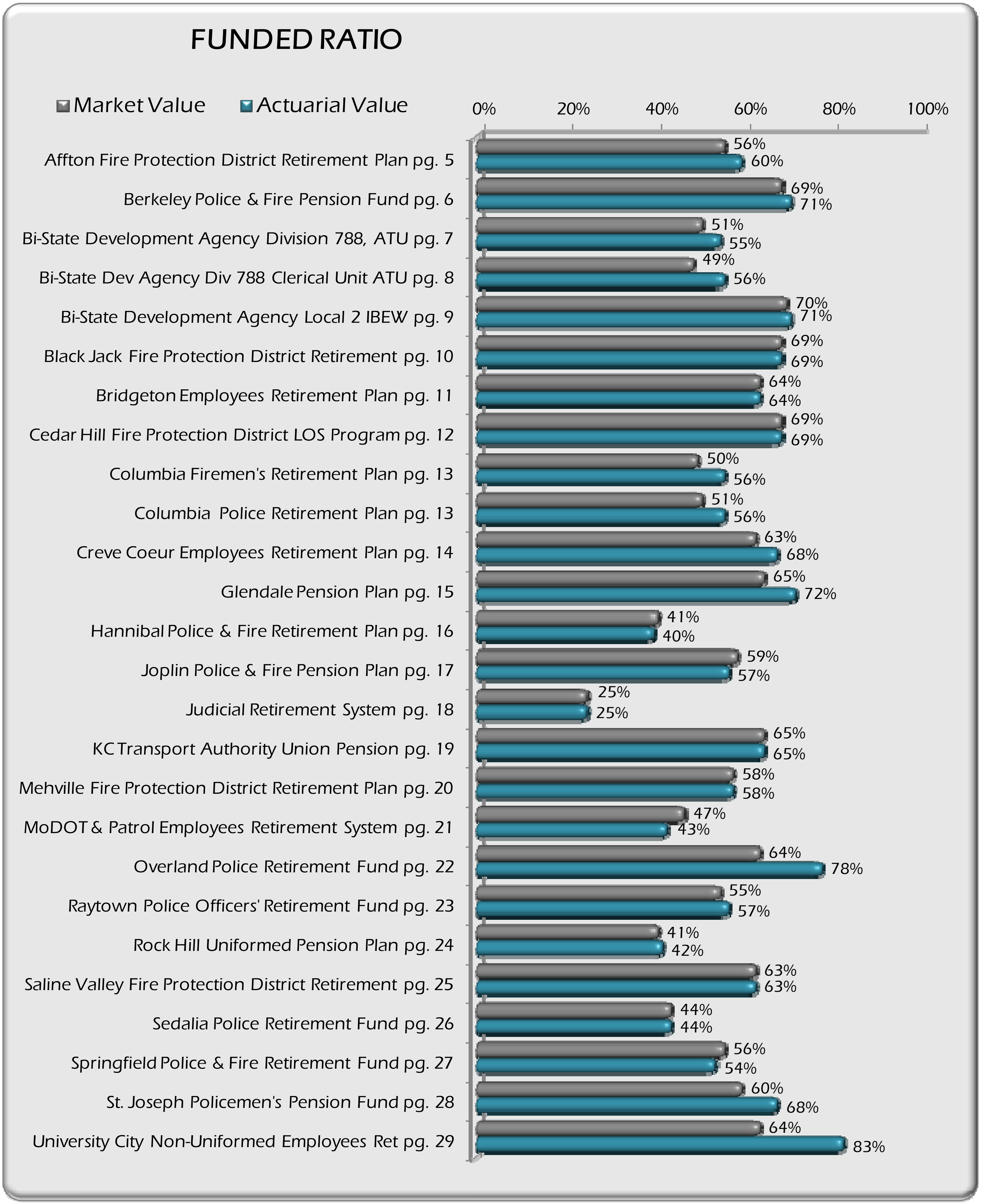

PRELIMINARY 2010 REPORTING
EXPENSES
IN MILLIONS
2006
2007
2008
2009
2010
Benefits
Refunds
Administration
Reserves
$2,644
$2,893
$3,124
$3,366
$3,537
$81
$97
$108
$91
$91
$37
$51
$52
$51
$54
$2
$2
$3
$9
$4
$0
$1,000
$2,000
$3,000
$4,000

JCPER

Joint Committee on Public Employee Retirement

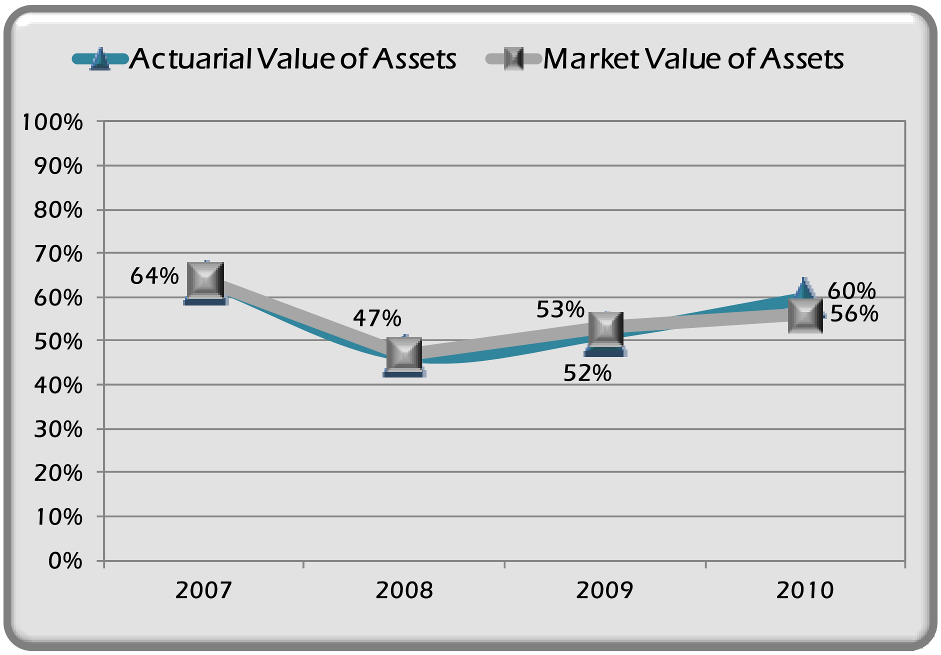
Watch List

November 2011


FUNDED RATIO
Market Value
Actuarial Value
0%
20%
40%
60%
80%
100%
Affton Fire Protection District Retirement Plan pg. 5
56%
60%
Berkeley Police & Fire Pension Fund pg. 6
69%
71%
Bi-State Development Agency Division 788, ATU pg. 7
51%
55%
Bi-State Dev Agency Div 788 Clerical Unit ATU pg. 8
49%
56%
Bi-State Development Agency Local 2 IBEW pg. 9
70%
71%
Black Jack Fire Protection District Retirement pg. 10
69%
69%
Bridgeton Employees Retirement Plan pg. 11
64%
64%
Cedar Hill Fire Protection District LOS Program pg. 12
69%
69%
Columbia Firemen's Retirement Plan pg. 13
50%
56%
Columbia Police Retirement Plan pg. 13
51%
56%
Creve Coeur Employees Retirement Plan pg. 14
63%
68%
Glendale Pension Plan pg. 15
65%
72%
Hannibal Police & Fire Retirement Plan pg. 16
41%
40%
Joplin Police & Fire Pension Plan pg. 17
59%
57%
Judicial Retirement System pg. 18
25%
25%
KC Transport Authority Union Pension pg. 19
65%
65%
Mehville Fire Protection District Retirement Plan pg. 20
58%
58%
MoDOT & Patrol Employees Retirement System pg. 21
47%
43%
Overland Police Retirement Fund pg. 22
64%
78%
Raytown Police Officers' Retirement Fund pg. 23
55%
57%
Rock Hill Uniformed Pension Plan pg. 24
41%
42%
Saline Valley Fire Protection District Retirement pg. 25
63%
63%
Sedalia Police Retirement Fund pg. 26
44%
44%
Springfield Police & Fire Retirement Fund pg. 27
56%
54%
St. Joseph Policemen's Pension Fund pg. 28
60%
68%
University City Non-Uniformed Employees Ret pg. 29
64%
83%

AFFTON FIRE PROTECTION DISTRICT RETIREMENT PLAN

- Rate of return on investments equaled 11.72% (Market) and 4.77% (Actuarial) vs. 7.5% assumed.
- 2008 Investment losses smoothed over a 4 year period otherwise assets are valued at market value.
- Employee contributions were implemented in 2010 at 4% through June 30, 2010 and then 7% thereafter.
- Actuary notes, "*contributions from tax revenue and employee salaries are projected to be about $95,000 less than necessary to support the promised benefits.*"
- Plan provisions have been modified and extraordinary payments have been contributed to the fund since 2006.
- The employer has not met the ARC in several years.



As of 1/1/11

Market Value:
$5,050,837

Actuarial Value:
$5,381,405

Actuarial Accrued Liability:
$8,961,056

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2010	$384,986	$284,870	80%
2009	$583,257	$326,225	71%
2008	$476,913	$347,709	73%
2007	$484,424	$345,381	56%
2006	$461,810	$369,212	74%

CURRENT MEMBERSHIP

Active Members: 32

Retired: 10

Beneficiaries: 2

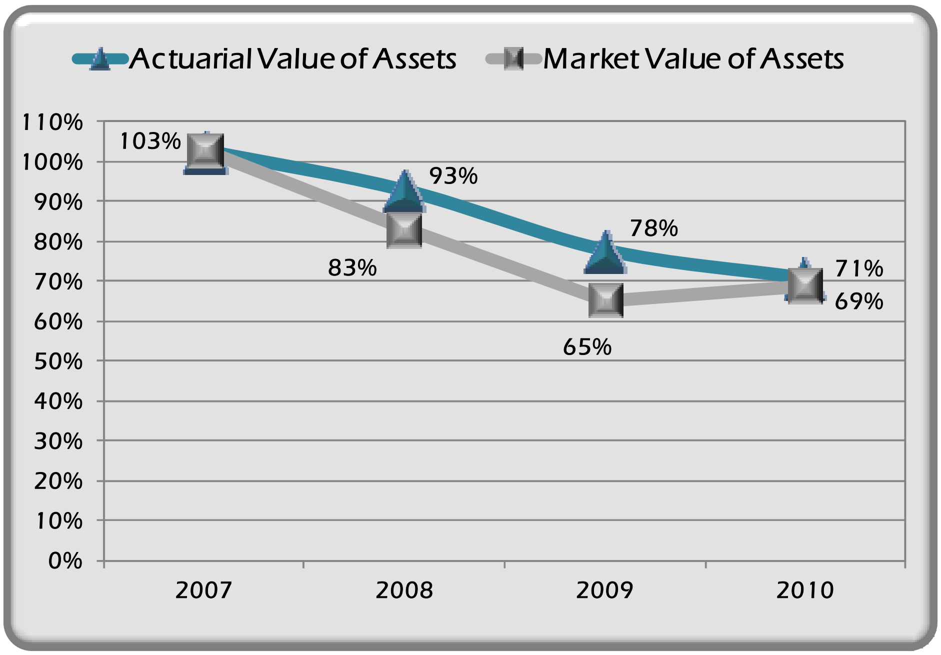
Disability: 2

Term Vested: 6

TOTAL: 52

BERKELEY POLICE & FIRE PENSION FUND

- Rate of return on investments equaled 16.1% (Market) and –.3% (Actuarial) vs. 7.5% assumed.
- Investment gains/losses are smoothed over a 5 year period.
- Actuary notes, *"If the City's current annual contribution rate continues into the future, we project that the funded ratio will continue to deteriorate, dropping below 60% within 4 years and below 50% within 8 years, and the Fund will be on a path toward insolvency that will be difficult to reverse."*
- The employer contribution to this fund is set a 11 cents per $100 assessed valuation. The expected annual revenue is therefore approximately $230,000, which is only about 25% of the recommended contribution for the Plan Year ending June 30, 2011.
- Employees contribute 6% of pay to this plan.
- The employer has not met the ARC since 2003.



<u>As of 6/30/10</u>

Market Value: $10,709,689

Actuarial Value: $11,099,868

Actuarial Accrued Liability: $15,561,593

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
10/11	$976,809	N/A	
09/10	$855,227	$228,800	27%
08/09	$557,893	$211,259	38%
07/08	$349,203	$221,851	64%
06/07	$422,883	$201,789	48%

CURRENT MEMBERSHIP

Active Members: 68

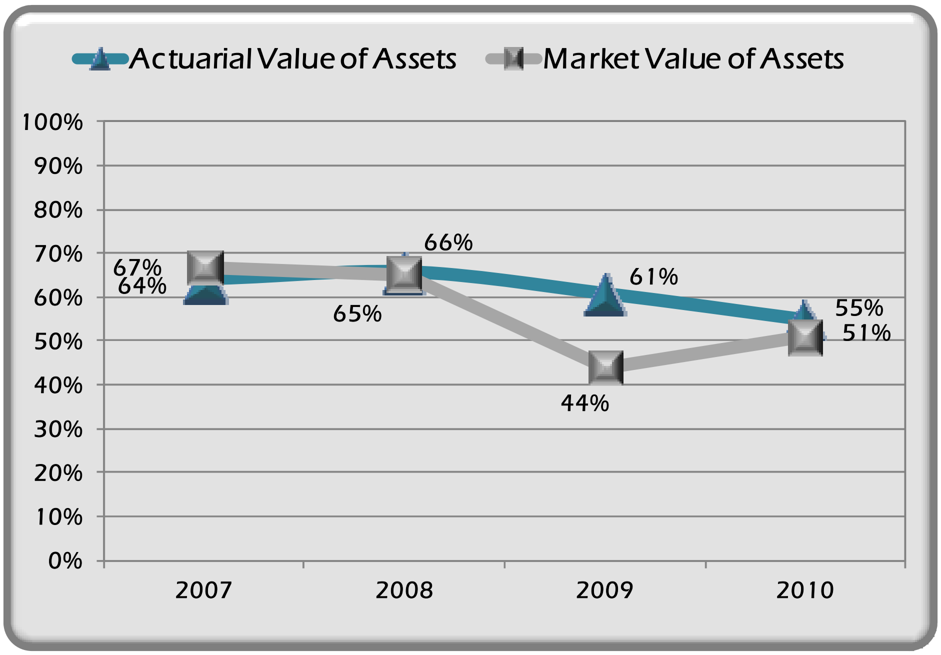
Retired: 44

Term Vested: 6

TOTAL: 118

BI-STATE DEVELOPMENT AGENCY DIVISION 788, A.T.U.

- Rate of return on investments equaled 35.8% (Market) and 4.2% (Actuarial) vs. 8% assumed.
- Investment gains/losses are smoothed.
- Plan assumption and method changes incorporated in the 4/1/10 valuation include:
  - Decreased interest rate assumption from 8% to 7.25%
  - Mortality assumption changed from 1983 GAMT to RP-2000 mortality tables
- Employees contribute approximately 30% of the weekly contributions.
- The Employer continues to meet the full ARC.



As of 4/1/10

Market Value: $85,626,523

Actuarial Value: $93,422,609

Actuarial Accrued Liability: $168,931,028

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
09/10	$4,953,503	$4,953,503	100%
08/09	$4,854,000	$4,854,000	100%
07/08	$4,671,805	$4,671,805	100%
06/07	$4,689,803	$4,689,803	100%
05/06	$4,774,765	$4,774,765	100%

CURRENT MEMBERSHIP

Active Members: 1,201

Retired: 987

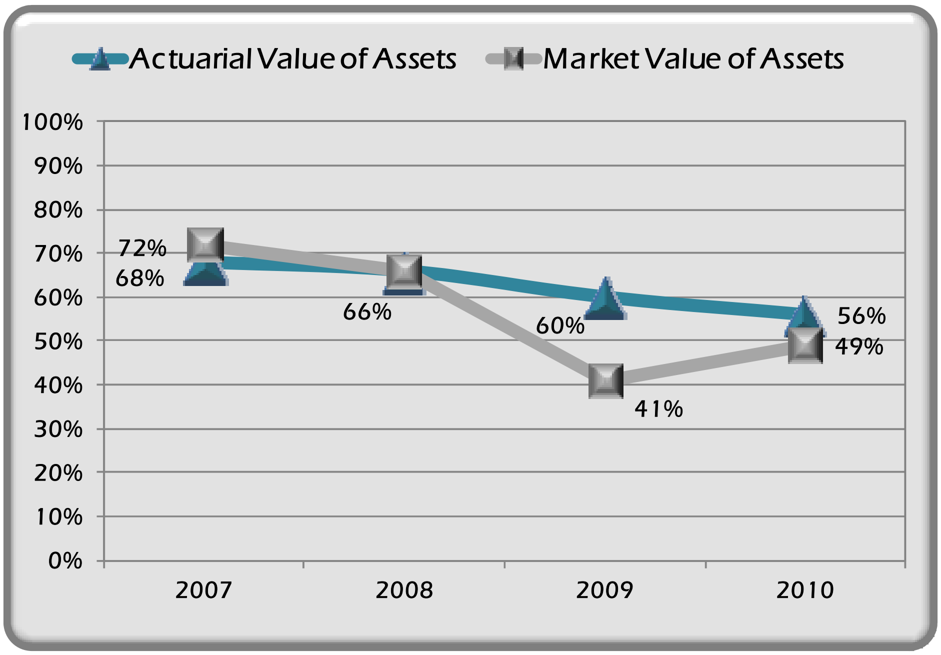
Disability: 7

Term Vested: 20

TOTAL: 2,215

BI-STATE DEVELOPMENT AGENCY DIVISION 788 CLERICAL UNIT ATU

- Rate of return on investments equaled 40.4% (Market) and 4.5% (Actuarial) vs. 8% assumed.
- Investment gains/losses are smoothed.
- Plan assumption and method changes incorporated in the 4/1/10 valuation include:
  - Decreased interest rate assumption from 8% to 7.25%
  - Mortality assumption changed from 1983 GAMT to RP-2000 mortality tables
- Employees contribute approximately 30% of the weekly contributions.
- The Employer continues to meet the full ARC.



<u>As of 4/1/10</u>

Market Value: $5,246,169

Actuarial Value: $5,887,209

Actuarial Accrued Liability: $10,601,527

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
09/10	$223,550	$223,550	100%
08/09	$216,471	$216,471	100%
07/08	$229,977	$229,977	100%
06/07	$221,053	$221,053	100%
05/06	$222,215	$222,215	100%

CURRENT MEMBERSHIP

Active Members: 52

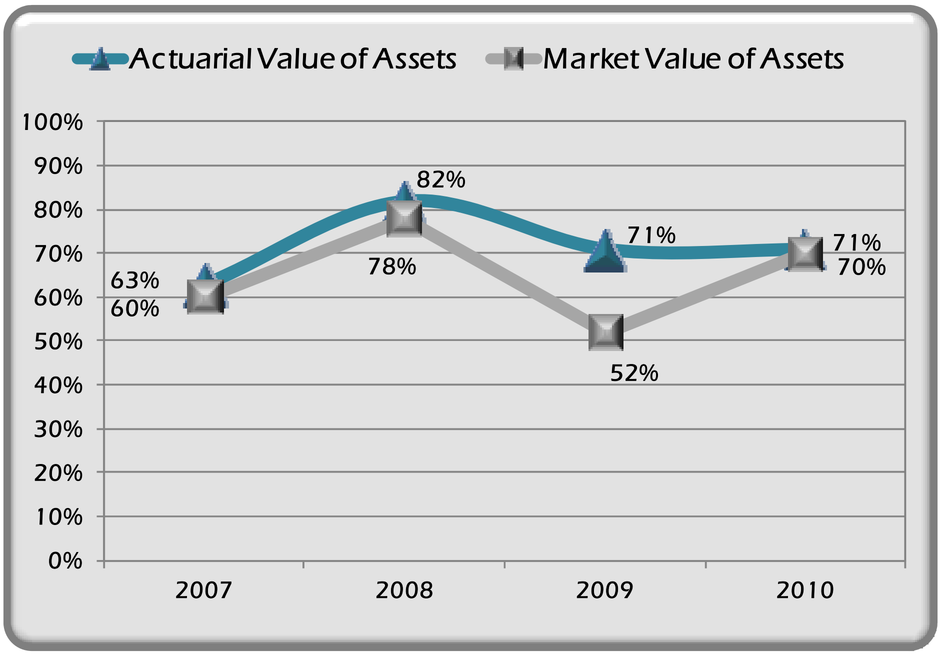
Retired: 61

Term Vested: 2

TOTAL: 115

BI-STATE DEVELOPMENT AGENCY
LOCAL 2 IBEW

- Rate of return on investments equaled 34.4% (Market) and 1.9% (Actuarial) vs. 8% assumed.
- Investment gains/losses are smoothed.
- Plan assumption and method changes incorporated in the 4/1/10 valuation include:
  - Decreased interest rate assumption from 8% to 7.25%
  - Mortality assumption changed from 1983 GAMT to RP-2000 mortality tables
- Employees contribute approximately 30% of the weekly contributions.
- The Employer continues to meet the full ARC.



As of 4/1/10

Market Value:
$1,613,537

Actuarial Value:
$1,649,706

Actuarial Accrued Liability:
$2,319,562

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
09/10	$122,475	$122,475	100%
08/09	$125,842	$125,842	100%
07/08	$191,261	$191,261	100%
06/07	$110,149	$110,149	100%
05/06	$87,760	$87,760	100%

CURRENT MEMBERSHIP

Active Members: 54

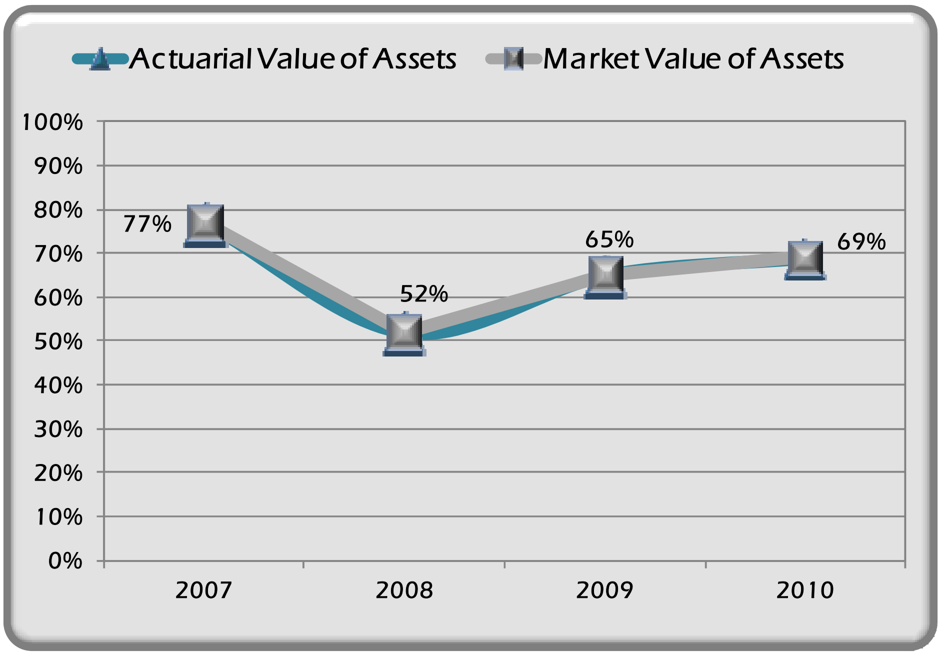
Retired: 6

Term Vested: 2

TOTAL: 62

BLACK JACK FIRE PROTECTION DISTRICT RETIREMENT PLAN

- Rate of return on investments equaled 13.1% (Market) vs. 7% assumed.
- Plan does not smooth investment gains/losses.
- The actuary notes, *"with these (investment) gains, expected contributions for the current year are now somewhat more than what is sufficient to sustain the plan."*
- The plan's Social Security supplement (to age 62) and the $20 temporary benefit account for nearly 40% of the total projected liabilities for the active group.
- Employees do not make a payroll contribution to this plan.
- The employer has consistently met or exceeded the ARC with the exception of 2009.



As of 1/1/11

Market Value:
$7,757,809

Actuarial Value:
$7,757,809

Actuarial Accrued Liability:
$11,217,744

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2011	$397,271	N/A	
2010	$470,777	$533,662	113%
2009	$702,391	$534,704	76%
2008	$368,516	$531,314	144%
2007	$350,850	$526,011	150%

CURRENT MEMBERSHIP

Active Members: 36

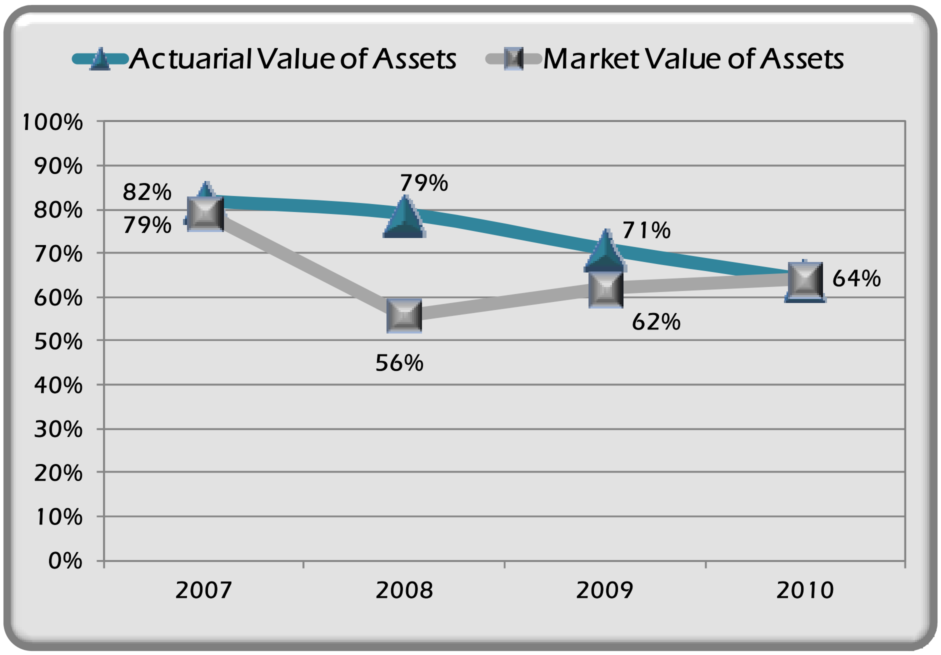
Retired: 6

Term Vested: 4

TOTAL: 46

BRIDGETON EMPLOYEES RETIREMENT PLAN

- Rate of return on investments equaled 10.1% (Market) and –3.5% (Actuarial) vs. 7.5% assumed.
- Investment gains/losses are smoothed over a 3 year period.
- Employees do not make a payroll contribution to this plan.
- The Employer has not met the ARC since 2007.



As of 12/31/10

Market Value: $20,482,992

Actuarial Value: $20,429,324

Actuarial Accrued Liability: $32,145,844

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2010	$1,400,936	$900,000	64%
2009	$1,165,675	$900,000	77%
2008	$970,865	$971,000	100%
2007	$970,800	$975,000	100%
2006	$963,332	$890,000	92%

CURRENT MEMBERSHIP

Active Members: 132

Retired: 74

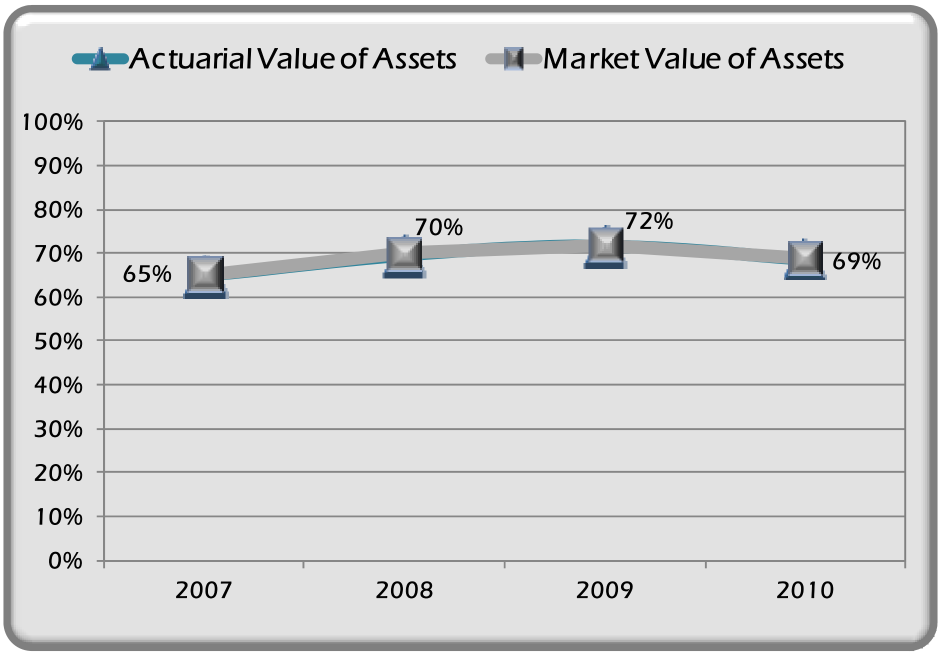
Beneficiaries: 17

Term Vested: 38

TOTAL: 261

CEDAR HILL FIRE PROTECTION DISTRICT LENGTH OF SERVICE AWARDS PROGAM

- This plan provides a pension benefit for volunteer members of the fire protection district.
- Provides $15 per month per year of service with a maximum monthly benefit of $450.
- Normal form of payment is life annuity guaranteed for 10 years.
- Active members do not make a monetary contribution to this plan.
- The District did not make the full ARC in 2009 and 2010.



As of 12/31/10

Market Value:
$108,774

Actuarial Value:
$108,774

Actuarial Accrued Liability:
$156,658

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2010	$26,310	$27,796	95%
2009	$22,013	$19,074	87%
2008	$17,263	$18,877	109%
2007	$18,167	$19,810	109%
2006	$19,378	$20,654	107%

CURRENT MEMBERSHIP

Active Members: 25

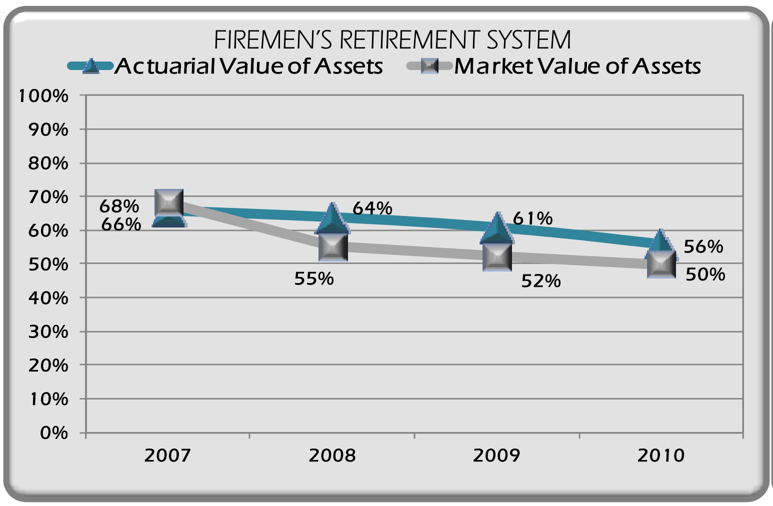
Retired: 1

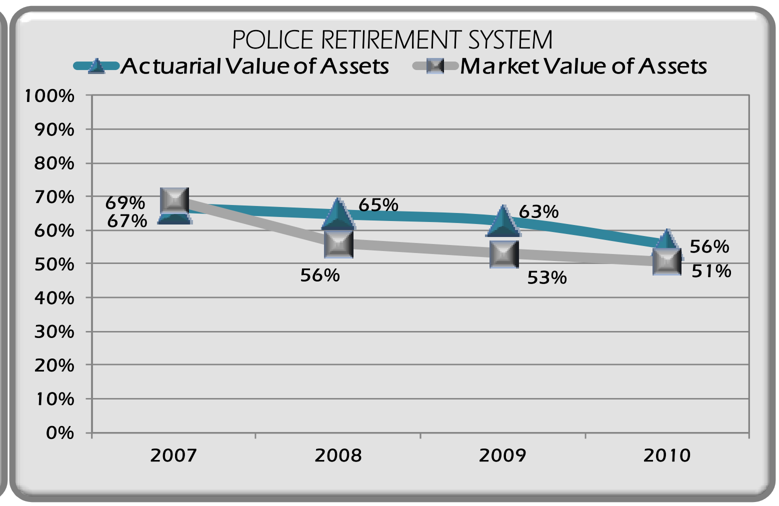
Term Vested: 5

TOTAL: 31

COLUMBIA FIREMEN & POLICE RETIREMENT SYSTEMS

- The Fire & Police plans are comingled for investment purposes. Rate of return on investments equaled 10.9% (Market) & 2.2% (Actuarial) vs. 8% actual.
- Investment gains/losses are smoothed over a 4 year period.
- Plan assumptions were modified in the 9/30/10 valuation with the assumed investment return reduced <u>to 7.5% (from 8%)</u>, the payroll growth reduced <u>to 3.5% (from 4%)</u>, the amortization period changed to a <u>closed 30 year period</u> (beginning with 9/30/09 valuation) from closed 19 yrs and a <u>25% market value corridor</u> was adopted.
- After receiving recommendations from the Mayor's Pension Review Task Force, a proposal has been brought forth to move new police & fire employees into LAGERS
- The actuary notes "*If scheduled investment losses as of the valuation date (9/30/10) are not offset by future <u>market invest-ment gains, the employer contribution is expected to increase by approximately</u> 3% of payroll in future fiscal years.*"
- Fire employees contribute 16.32% of pay and do not participate in Social Security.
- Police employees contribute between 7.45% and 8.35% of payroll and do participate in Social Security.
- The employer continues to meet the ARC for each plan.





FIREMEN'S RETIREMENT SYSTEM

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2011	$3,529,603	N/A	
2010	$3,330,409	$3,330,409	100%
2009	$3,098,617	$3,098,617	100%
2008	$2,853,109	$2,853,109	100%
2007	$2,759,165	$2,759,165	100%

POLICE RETIREMENT SYSTEM

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2011	$2,856,933	N/A	
2010	$2,693,152	$2,693,152	100%
2009	$2,549,967	$2,549,967	100%
2008	$2,520,373	$2,520,373	100%
2007	$2,401,908	$2,401,908	100%

FIREMEN'S RETIREMENT SYSTEM
<u>As of 9/30/10</u>
Market Value: $49,083,072
Actuarial Value: $54,288,533
Actuarial Accrued Liability: $97,740,285

CURRENT MEMBERSHIP
Active Members: 127 Retired: 92 Beneficiaries: 21
Disability: 13 TOTAL: 253

POLICE RETIREMENT SYSTEM
<u>As of 9/30/10</u>
Market Value: $33,725,944
Actuarial Value: $36,987,824
Actuarial Accrued Liability: $66,426,426

CURRENT MEMBERSHIP
Active Members: 155 Retired: 77 Beneficiaries: 26
Disability: 14 Term Vested: 11 TOTAL: 283

J
C
P
E
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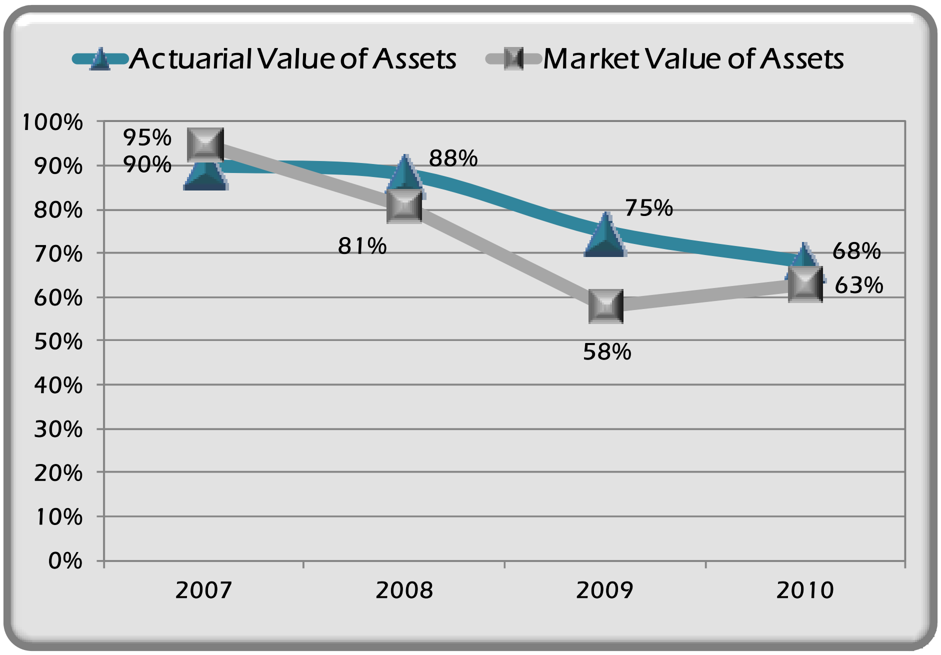
CREVE COEUR EMPLOYEES RETIREMENT PLAN

- Rate of return on investments equaled 12.2% (Market) and –7.0% (Actuarial) vs. assumed rate of 7.5%
- Investment gains/losses are smoothed in over a 3 year period.
- Investment assumption reduced from 8% to 7.5% and salary assumption reduced from 5.5% to 5.0% in 2009.
- This plan is closed to new employees hired after June 1, 2006. Those new employees participate in the City's defined contribution plan.
- Employee payroll contributions are being phased in beginning 07/01/11 at 1% with annual increases of .5% until the contribution rate meets 3%.
- Employees do not make a payroll contribution to this plan.
- Employer has consistently met or exceeded the ARC.



As of 6/30/10

Market Value:
$14,236,006

Actuarial Value:
$15,200,155

Actuarial Accrued Liability:
$22,499,248

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2010	$1,004,897	$1,057,900	105%
2009	$675,394	$757,900	112%
2008	$609,164	$642,000	105%
2007	$618,308	$618,308	100%
2006	$655,061	$655,061	100%

CURRENT MEMBERSHIP

Active Members: 76

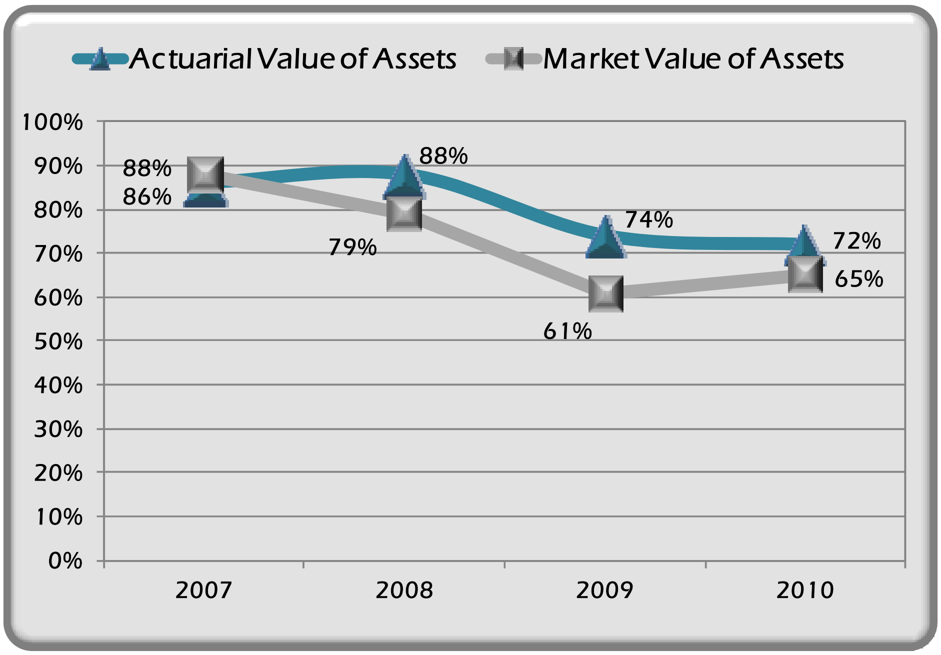
Retired: 59

Term Vested: 22

TOTAL: 157

GLENDALE PENSION PLAN

- Rate of return on investments of 13.5% (Market) and 4.8% (Actuarial) vs. 7.5% assumed
- Investment gains/losses are smoothed in over a 5 year period
- The actuary notes contribution requirement increase *"is due mostly to the continuing recognition of asset losses."*
- Employees contribute 3.25 % of pay
- Employer has met the ARC one time since plan year 2004. Contribution source is property tax proceeds which have not kept up with contribution requirements.



As of 6/30/10

Market Value: $4,090,548

Actuarial Value: $4,529,842

Actuarial Accrued Liability: $6,255,223

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2010	$305,247	$132,524	43%
2009	$181,814	$123,650	68%
2008	$165,546	$170,661	103%
2007	$164,345	$159,932	97%
2006	$159,816	$155,388	97%

CURRENT MEMBERSHIP

Active Members: 29

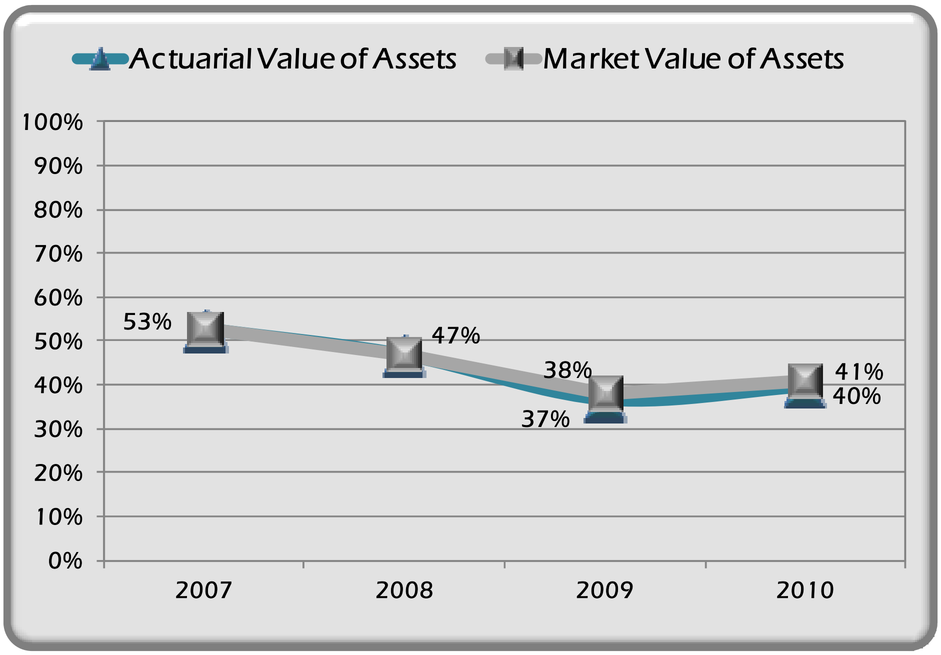
Retired: 11

Term Vested: 4

TOTAL: 44

HANNIBAL POLICE & FIRE RETIREMENT PLAN

- The plan does not smooth investment gains/losses.
- Actuary notes "*In recent years the city has been contributing less than the actuarial recommended contribution. Investment returns helped increase the funded status slightly despite only 80% of the recommended contribution actually being made. A continuation of a less than adequate funding policy will decrease the funded status of the Plan to a point from which it will be impossible to recover.*"
- Plan modifications effective 7/1/11 include: Increasing mandatory employee contributions from 9.5% of pay to 12%, 11.4% annual minimum City contribution will be modified to provide that the City's contribution will not be reduced unless the plan is determined to be at least 80% funded.
- Plan year 10 employee contribution equals 9.5% of pay and these employees do not participate in Social Security.
- The employer has not met the ARC for the last 6 plan years.



As of 6/30/10

Market Value:
$9,402,321

Actuarial Value:
$9,216,214

Actuarial Accrued Liability:
$23,142,622

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2011	$1,179,620		
2010	$1,169,397	$638,858	55%
2009	$982,832	$803,329	82%
2008	$856,414	$678,725	79%
2007	$735,065	$704,405	96%

CURRENT MEMBERSHIP

Active Members: 80

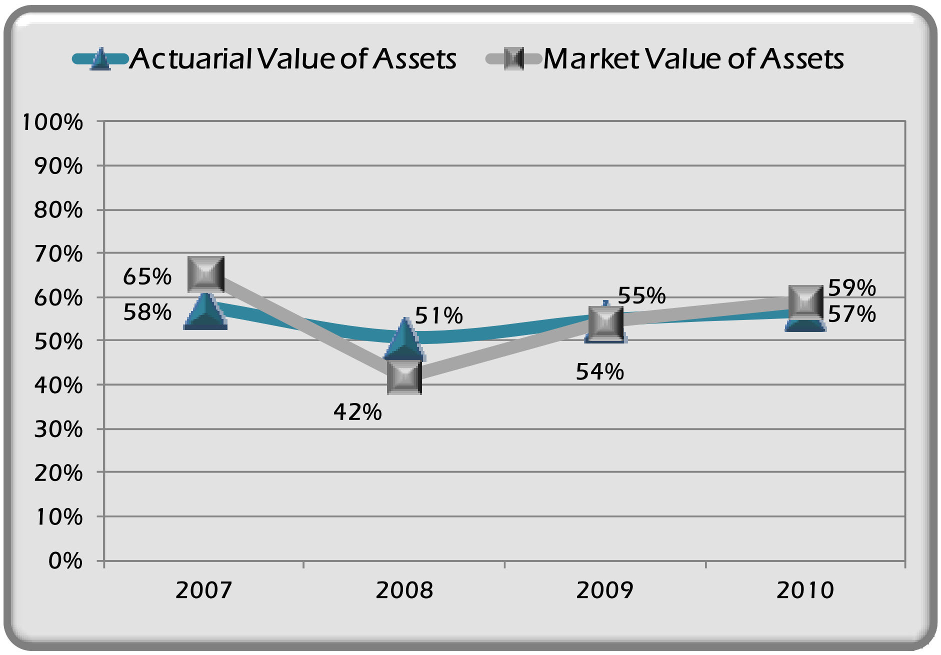
Retired: 51

Disability: 11

TOTAL: 142

JOPLIN POLICE & FIRE PENSION PLAN

- Rate of return on investments equaled 12.3% (Market) and 7.9% (Actuarial) vs. 7% assumed.
- Investment gains/losses are smoothed over a 5 year period.
- A new tier was implemented for those hired after 1/31/09 with provisions including normal retirement service of 25 years (from 20) and maximum benefit of 60% of compensation (from 65%).
- Employees contribute 18.08% of pay, which is refunded at retirement. Those hired under new benefit tier contribute10% of pay without refund.
- The City has agreed to make an additional payment of $950,000 and beginning each plan year as of 11/1/11 and after, the City's contribution shall be as calculated by the plan's actuary.
- The City did not meet the full ARC in plan year 2010.



As of 10/31/10

Market Value:
$26,218,301

Actuarial Value:
$25,518,976

Actuarial Accrued Liability:
$44,434,007

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
09/10	$2,206,690	$1,797,683	81%
08/09	$2,169,744	$2,443,752	113%
07/08	$1,761,639	$1,201,804	68%
06/07	$1,821,934	$1,091,380	60%
05/06	$1,374,361	$1,395,340	102%

CURRENT MEMBERSHIP

Active Members: 182

Retired: 98

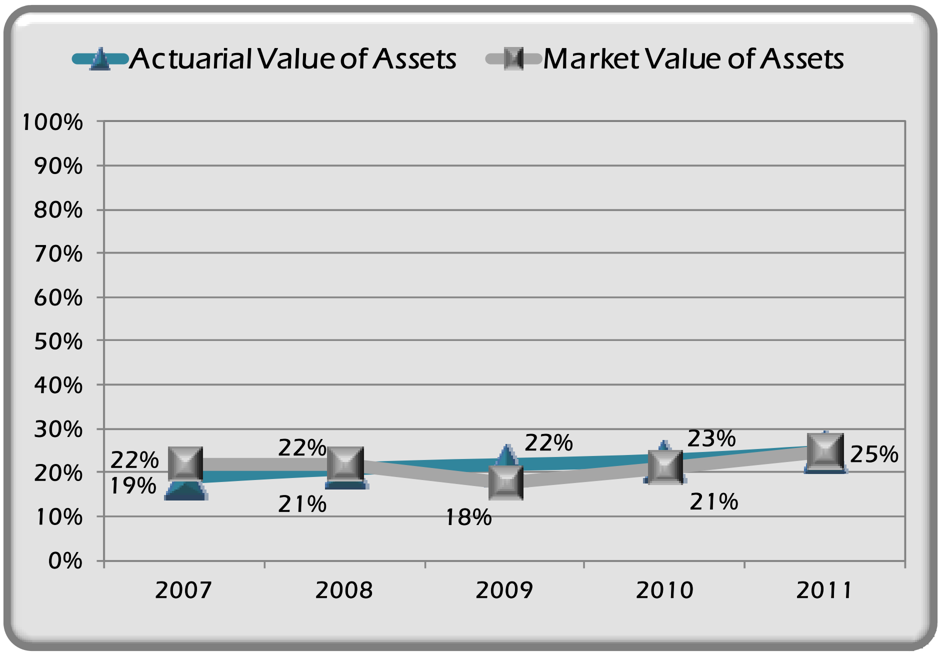
Beneficiaries: 34

Disability: 4

TOTAL: 318

JUDICIAL RETIREMENT SYSTEM

- Rate of return on investments equaled 21.93% (Market) and 8.03% (Actuarial) vs. 7.5% assumed.
- Investment gains/losses are smoothed over a 5 year period.
- New tier provisions were passed in 2010 requiring increased age and service requirements, increased vesting period and employee contributions for members serving for the first time on or after 1/1/11.
- Prior to 1998, the plan was funded on a pay-as-you-go basis.
- Judges serving for the first time on or after 1/1/11 make a 4% of pay contribution.
- The Employer continues to meet the ARC.



<u>As of 6/30/11</u>

Market Value:
$98,208,033

Actuarial Value:
$98,398,628

Actuarial Accrued Liability:
$393,484,589

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
12/13	$27,200,000 (estimated)	N/A	
11/12	$27,500,000 (estimated)	N/A	
10/11	$27,762,640	$27,762,640	100%
09/10	$27,029,198	$27,029,198	100%
08/09	$27,725,883	$27,725,883	100%

CURRENT MEMBERSHIP

Active Members: 402

Retired: 321

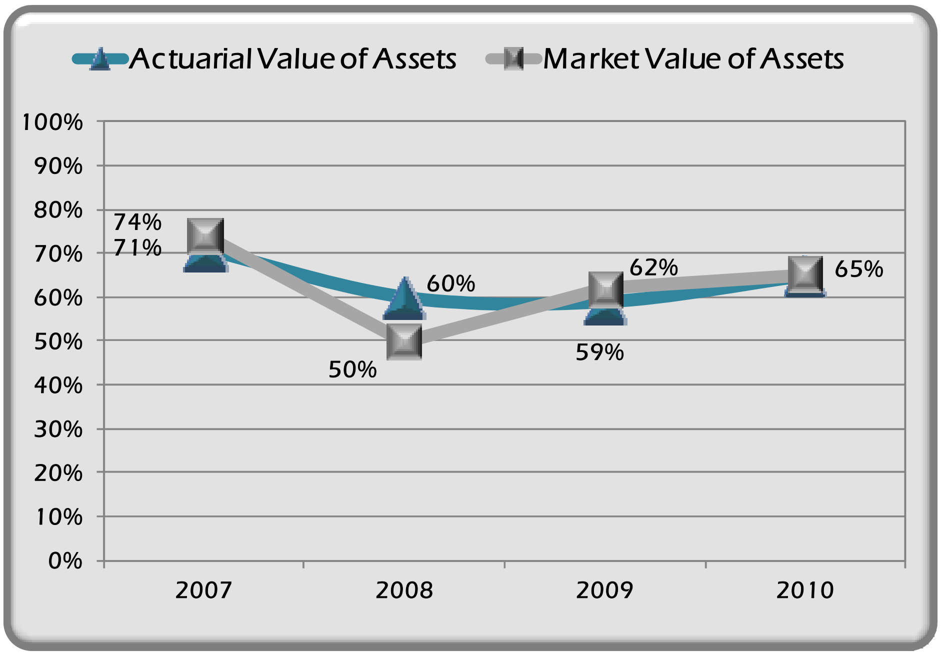
Beneficiaries: 144

Term Vested: 42

TOTAL: 909

KC TRANSPORTATION AUTHORITY UNION EMPLOYEES PENSION PLAN

- Rate of return on investments equaled 12.8% (Market) and 3.2% (Actuarial) vs. 7.5% assumed.
- Investment gains/losses are smoothed over a 5 year period.
- Mortality assumption changed from 1983 GAMT to RP-2000 mortality table.
- Actuarial value of assets reset to market value and smoothed going forward.
- Employees contribute 3.75% of pay which was increased from 3.25% in 2007.
- The employer contributes 7.5% of pay and has not met the ARC since 2008.



As of 1/1/11

Market Value:
$36,766,718

Actuarial Value:
$36,766,718

Actuarial Accrued Liability:
$56,743,266

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2011	$2,511,878	N/A	
2010	$2,370,772	$2,073,236	87%
2009	$2,422,138	$2,115,271	87%
2008	$1,803,128	$2,136,311	118%
2007	$1,792,053	$2,047,060	114%

CURRENT MEMBERSHIP

Active Members: 577

Retired: 162

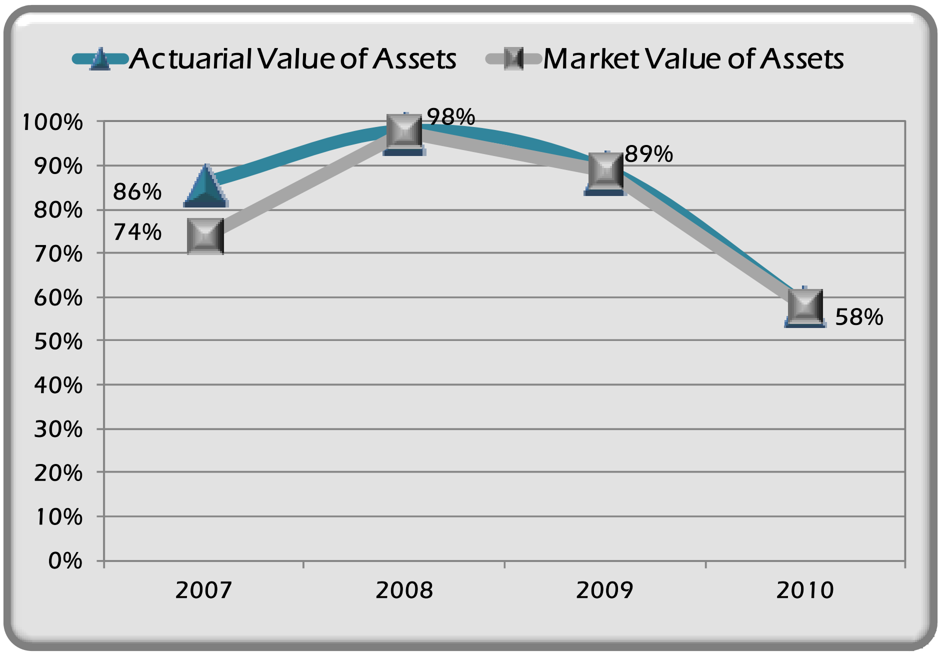
Disability: 52

Term Vested: 31

TOTAL: 822

MEHLVILLE FIRE PROTECTION DISTRICT RETIREMENT PLAN

- Rate of return on investments equaled .35% (Market) vs. 7.5% assumed.
- Plan does not smooth investment gains/losses.
- Plan was closed in 2006 and a defined contribution plan was established for District employees.
- According to the actuarial valuation, the IRS, in a Determination letter dated June 11, 2010 approved the Plan's termination. The Plan's assets and liabilities have yet to be fully settled as part of that termination as of 1/1/11.
- Interest rate assumption decreased from 7.5% to 5.0%.
- The employer has not made a contribution to the plan since 2006.



As of 1/1/11

Market Value:
$7,786,626

Actuarial Value:
$7,786,626

Actuarial Accrued Liability:
$13,373,649

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2011	$426,969	N/A	
2010	$35,435	$0	0%
2009	$35,435	$0	0%
2008	$110,715	$0	0%
2007	$1,681,820	$0	0%

CURRENT MEMBERSHIP

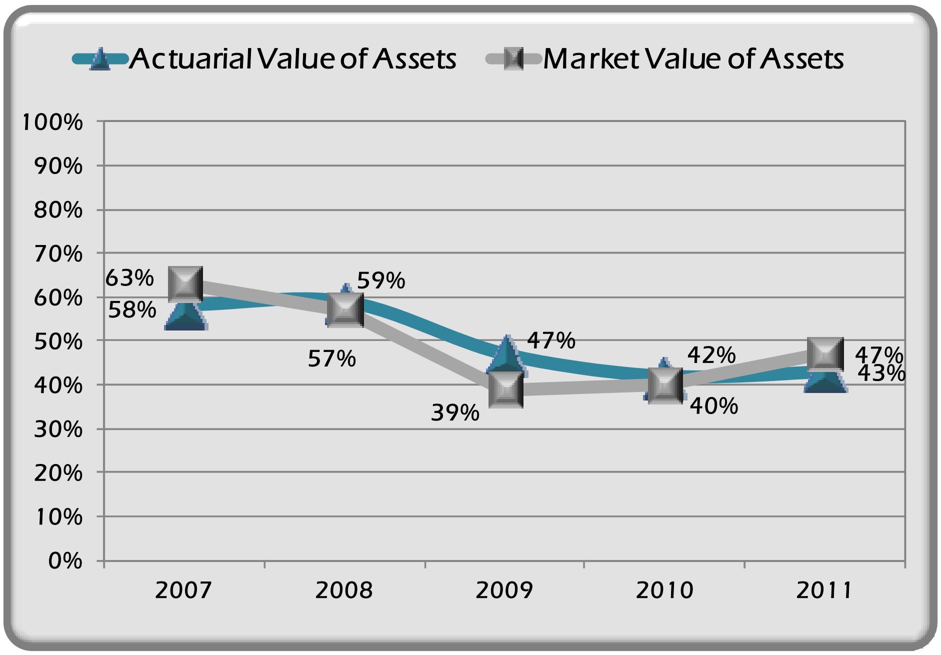
Retired: 33

TOTAL: 33

JCPER

MoDOT & PATROL EMPLOYEES RETIREMENT SYSTEM

- Rate of return on investments equaled 21.67% (Market) and 6.51% (Actuarial) vs. 8.25% assumed.
- Investment gains/losses are smoothed over a 3 year period.
- New tier provisions were passed in 2010 requiring increased age and service requirement, increased vesting period and employee contributions. As of 6/30/11, 84 members were covered under this new 2011 tier.
- Effective 7/1/11, 82 members of the Water Patrol were moved from MOSERS to MPERS.
- Actuary notes *"We commend the 2009 Board in its decision to more aggressively address the unfunded retiree liability issue."*
- Employees hired for the first time on or after 1/1/11, contribute 4% of pay.
- The Employer continues to meet the ARC.



As of 6/30/11

Market Value:
$1,552,347,992

Actuarial Value:
$1,427,290,718

Actuarial Accrued Liability:
$3,297,589,869

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
12/13	$187,847,039 (estimated)	N/A	
11/12	$176,978,731 (estimated)	N/A	
10/11	$155,829,180	N/A	
09/10	$124,476,706	$124,476,706	100%
08/09	$123,043,301	$123,057,975	100%

CURRENT MEMBERSHIP

Active Members: 8,457

Retired: 5,606

Beneficiaries: 1,862

Disability: 142

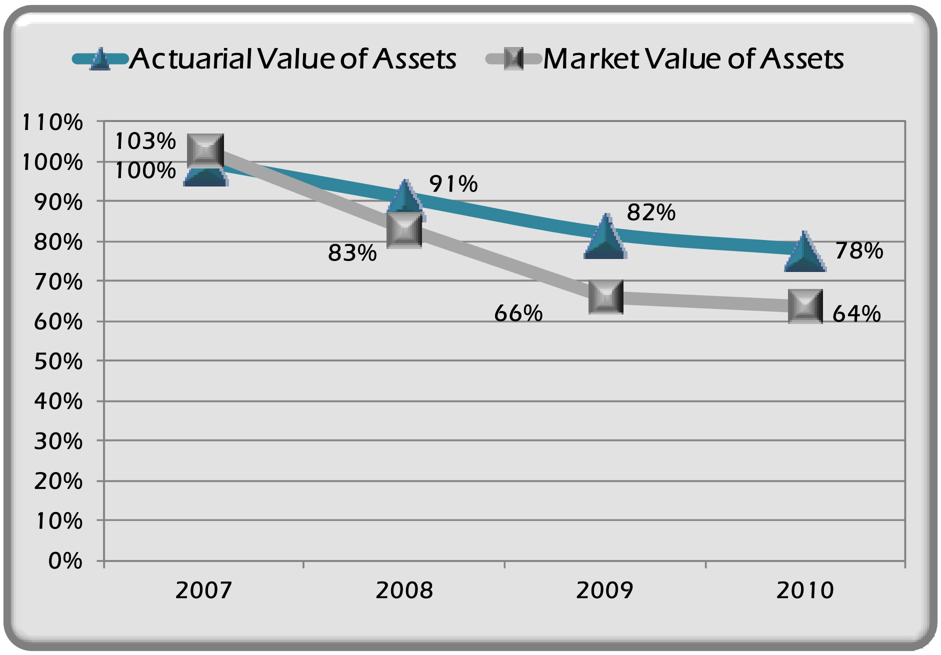
Term Vested: 1,787

TOTAL: 17,854

JCPER

OVERLAND POLICE RETIREMENT FUND

- Rate of return on investments equaled 26.5% (Market) and 3.7% (Actuarial) vs. 7.5% assumed
- Investment gains/losses are smoothed in over a 4 year period.
- Actuary notes *"Although the Plan has no immediate solvency issues, this contribution shortfall issue should be addressed as soon as possible. Potential approaches might include: i) securing a higher rate from the county; ii) developing an additional source of funding; and/or iii) adjusting the benefit provisions to a level consistent with what the current tax rate will support."*
- Employees contribute 5% of pay.
- Employer contribution stems from tax levy proceeds which have not kept up with increased contribution requirements. The ARC was not met in 2009 and 2010.



As of 4/1/10 & 6/30/10

Market Value: $11,501,062

Actuarial Value: $14,090,078

Actuarial Accrued Liability: $18,104,986

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2010	$569,492	$259,656	46%
2009	$400,965	$314,083	78%
2008	$303,072	$280,188	92%
2007	$315,547	$297,236	94%
2006	$345,521	$289,396	84%

CURRENT MEMBERSHIP

Active Members: 45

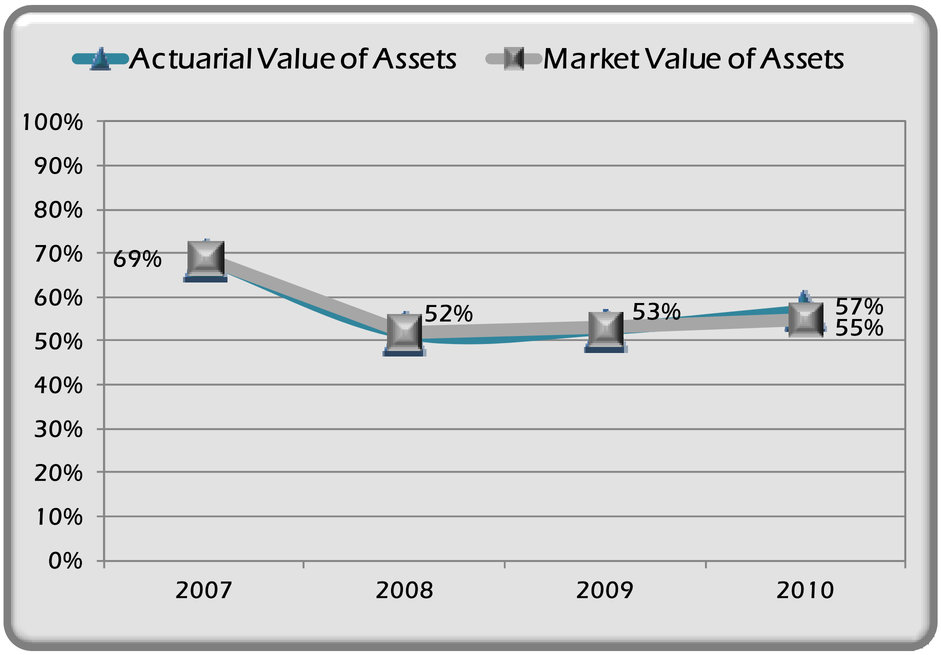
Retired: 30

Beneficiaries: 6

TOTAL: 81

RAYTOWN POLICE OFFICERS' RETIREMENT FUND

- Plan experienced a more favorable than expected plan year due to investment gains.
- Plan does not smooth investment gains/losses.
- The Employer contributed 222% of the ARC in 2008 however, 41% and 83% were contributed in 2009 and 2010, respectively.
- An Employee contribution of 3% of pay was ceased in 2000 when the Plan was 101% funded.
- The actuary notes *"The Plan has been making progress toward a safe funding level. Asset gains in 2009 and 2010 continue to help offset losses from 2008. The City policy to contribute the recommended contribution will allow the funded status to continue to improve."*
- The City modified its fiscal year period which consisted of a 14 month ARC.



As of 12/31/10

Market Value: $8,712,192

Actuarial Value: $8,998,016

Actuarial Accrued Liability: $15,759,311

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2010	$865,591	$721,033	83%
2009	$685,030	$278,854	41%
2008	$501,472	$1,115,415	222%
2007	$525,837	$560,191	107%
2006	$419,985	$282,579	67%

CURRENT MEMBERSHIP

Active Members: 45

Retired: 29

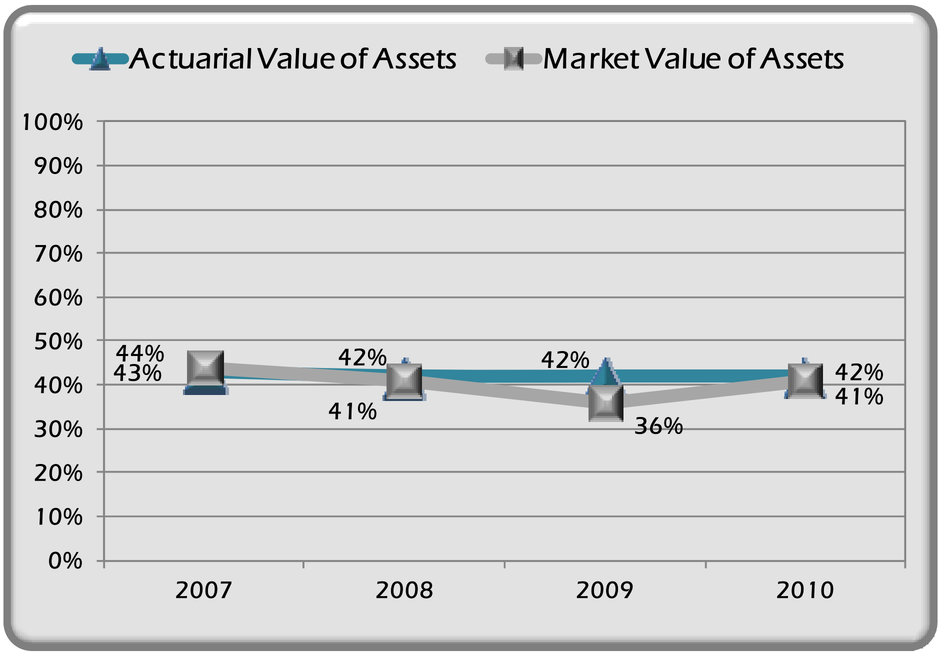
Term Vested: 2

TOTAL: 76

ROCK HILL UNIFORMED PENSION PLAN

- This plan was closed to new employees effective May 2003.
- All active participants as well as new hires are members of LAGERS as of 09/2007.
- After multiple years of the employer not making a contribution to this plan, contributions have resumed to this plan. However, contributions for FY08 & FY09 did not meet the ARC.
- Employees do not make a payroll contribution to this plan.
- Plan does not smooth investment gains/losses.
- The employer has not met the ARC since 2007.

Same information included in the 2010 watch list.



Market Value
(As of 3/31/10):
$1,409,839

Actuarial Value
(As of 5/1/10):
$1,420,031

Actuarial Accrued Liability
(As of 5/1/10):
$3,418,536

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2010	$293,522	$142,000	48%
2009	$260,954	$237,000	91%
2008	$260,954	$236,769	91%
2007	$236,769	$236,769	100%
2006	$236,769	$0	0%

CURRENT MEMBERSHIP

Active Members: 10

Retired: 11

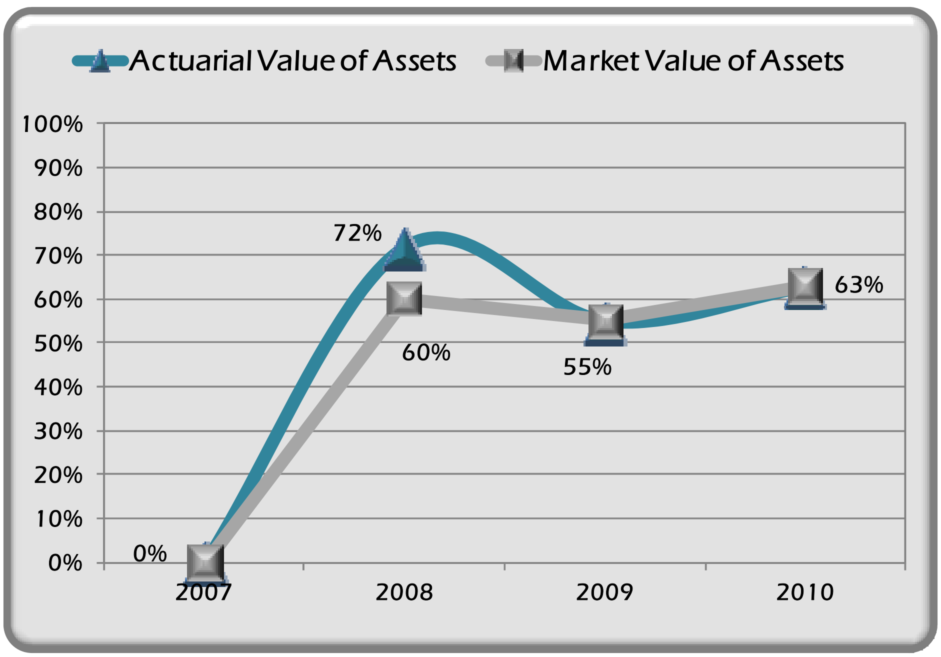
Beneficiaries: 4

Term Vested: 5

TOTAL: 30

SALINE VALLEY FIRE PROTECTION DISTRICT RETIREMENT PLAN

- Rate of return on investments equaled 9.81% (Market) vs. 7.5% assumed.
- Plan does not smooth investment gains/losses.
- Lump sum option was removed from plan in 2010.
- This plan is a result of a merger between the Springdale FPD & Shady Valley FPD.
- The District also maintains a defined contribution for its employees.
- Employees do not make a payroll contribution to this plan.
- The Employer has met or exceeded the ARC since 2009.



As of 12/31/10

Market Value:
$873,780

Actuarial Value:
$873,780

Actuarial Accrued Liability:
$1,378,153

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2011	$118,880	N/A	
2010	$138,816	$203,305	148%
2009	$150,010	$152,569	102%
2008	$66,557	$63,000	95%

CURRENT MEMBERSHIP

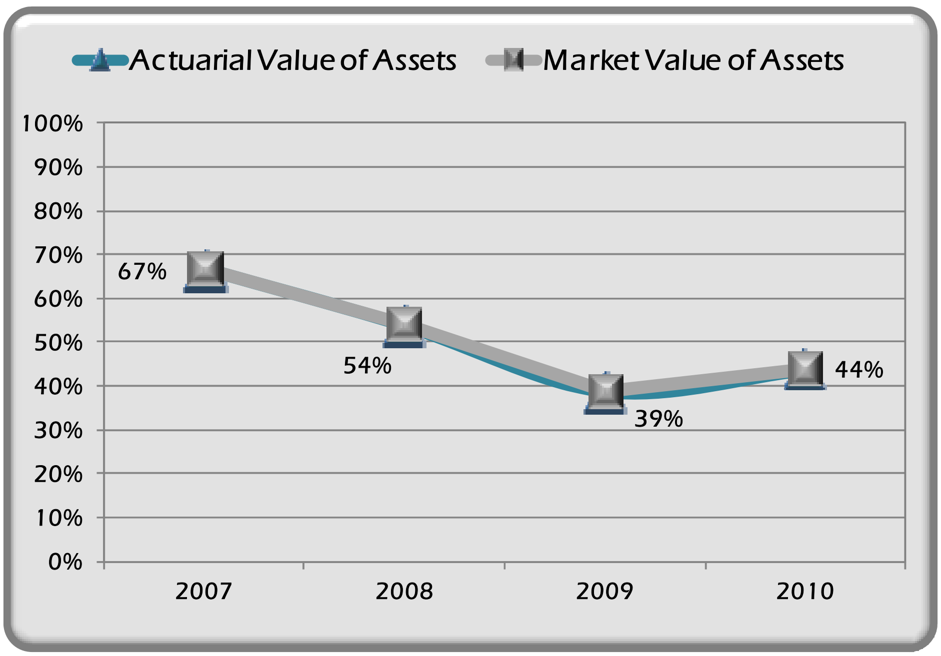
Active Members: 32

Term Vested: 7

TOTAL: 39

SEDALIA POLICE RETIREMENT FUND

- Plan was closed as of April 1, 2010.
- Existing and new employees moved to LAGERS.
- Plan does not smooth investment gains/losses.
- Employees make a payroll contribution of $15 monthly to the plan.
- The employer continues to be deficient in meeting the ARC.



Market Value:
(as of 7/31/10)
$3,258,704

Actuarial Value:
(as of 12/31/09)
$3,298,346

Actuarial Accrued Liability:
(as of 12/31/09)
$7,472,968

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2010	$597,847	$212,723	36%
2009	$476,644	$213,378	45%
2008	$324,570	$186,446	57%
2007	$416,346	$200,148	48%
2006	$337,180	$195,321	58%

CURRENT MEMBERSHIP

Active Members: 45

Retired: 28

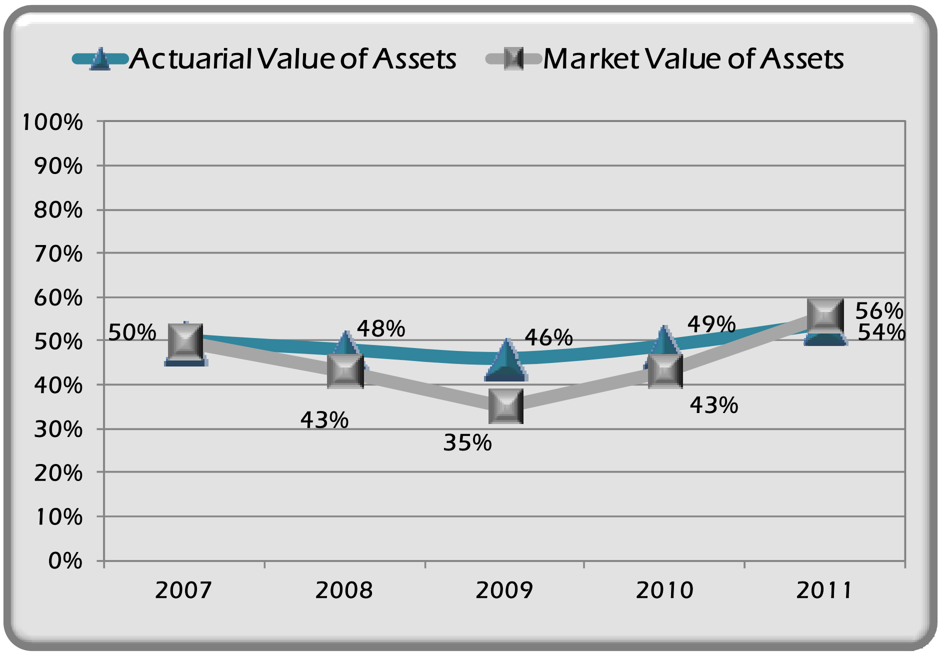
Beneficiaries: 6

Term Vested: 6

TOTAL: 85

SPRINGFIELD POLICE & FIRE RETIREMENT FUND

- Rate of return on investments equaled 21.7% (Market) and 2.2% (Actuarial) vs. 7.5% assumed.
- Investment gains/losses are smoothed over a 4 year period.
- A 3/4 cent sales tax was passed in November 2009. Tax proceeds contributed $26.2 million to the plan for PYE 6/30/11 in addition to the City's contribution of 35% of pay. A renewal vote for this sales tax will be held in 2014.
- Plan is closed to new employees. Tier 2 members (hired after June 2006) and new employees were moved to LAGERS in 2010.
- Employees make a 13.35% payroll contribution to the plan.
- The Employer has exceeded the ARC since PYE 6/30/09.



<u>As of 6/30/11</u>

Market Value:
$191,167,559

Actuarial Value:
$183,459,812

Actuarial Accrued Liability:
$340,162,627

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
12/13	$18,757,823	N/A	
11/12	$19,506,658	N/A	
10/11	$12,972,229	$34,141,687	263%
09/10	$13,137,104	$31,916,855	243%
08/09	$13,273,246	$23,979,519	181%

CURRENT MEMBERSHIP

Active Members: 478

Retired: 283

Beneficiaries: 83

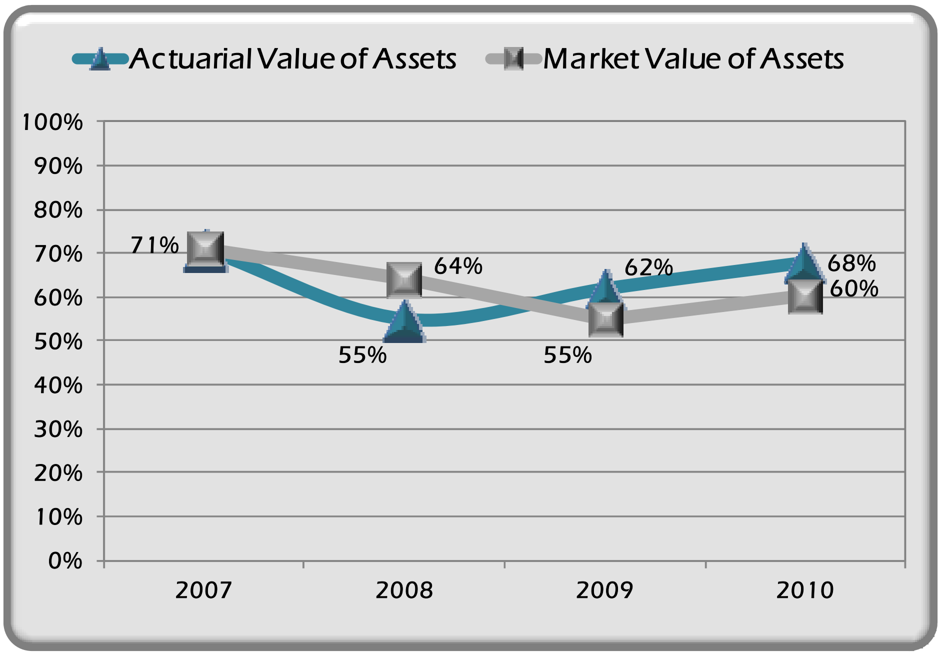
Disability: 119

Term Vested: 8

TOTAL: 971

ST. JOSEPH POLICEMEN'S PENSION FUND

- The plan experienced a total actuarial gain for the year ended 12/31/10 of $1.8 million.
- Plan does not smooth investment gains/losses.
- Actuary notes *"The plan has been making progress toward a safe funding level. Asset and liability gains in 2009 and 2010 continue to help offset losses from 2008. The City policy to contribute the recommended contribution will allow the funded status to continue to improve."*
- Employees contribute 4% of pay to this plan.
- The employer continues to meet the ARC.



As of 6/30/10 & 1/1/11

Market Value: $23,150,892

Actuarial Value: $26,333,980

Actuarial Accrued Liability: $38,762,271

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
11/12	$1,650,531	N/A	
10/11	$1,779,460	N/A	
09/10	$1,897,553	$1,980,812	104%
08/09	$1,444,388	$1,550,095	107%
07/08	$1,429,455	$1,536,575	107%

CURRENT MEMBERSHIP

Active Members: 110

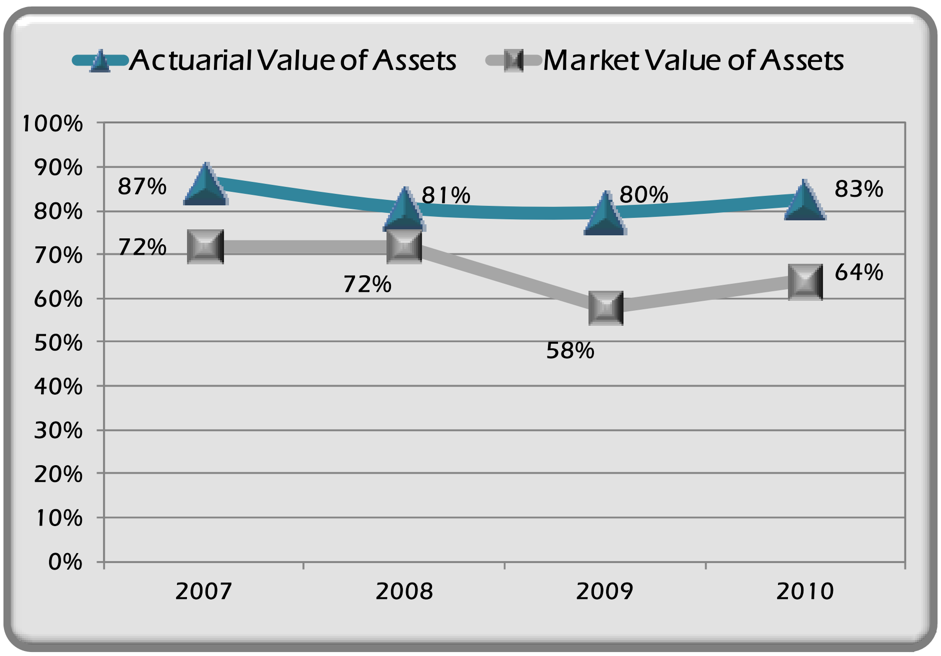
Retired: 68

Beneficiaries: 26

TOTAL: 971

UNIVERSITY CITY NON-UNIFORMED EMPLOYEES RETIREMENT FUND

- Rate of return on investments equaled 8% (Market) 4.44% (Actuarial) vs. 6.5% assumed.
- Plan investment gains/losses utilize a smoothing period.
- Actuary notes, *"Unless the rate of return on the market value of assets exceeds the 6.5% assumed rate, the annual costs will continue to increase over the next few years."*
- Employees make a 3% payroll contribution to plan.
- The employer continues to make the ARC with the exception of 2009.



Market Value:
(as of 6/30/10)
$13,084,765

Actuarial Value:
(as of 1/1/11)
$17,009,021

Actuarial Accrued Liability:
(as of 1/1/11)
$20,602,237

	RECOMMENDED CONTRIBUTION*	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2011	$531,833	N/A	
2010	$591,057	$592,681	100%
2009	$524,594	$481,184	92%
2008	$500,477	$562,138	112%
2007	$437,974	$591,603	135%

* Per City's 6/30/10 CAFR

CURRENT MEMBERSHIP

Active Members: 145

Retired: 54

Beneficiaries: 11

Disability: 1

Term Vested: 19

TOTAL: 230

ACTUARY'S RECOMMENDED vs. ACTUAL CONTRIBUTION

AFFTON FPD RETIREMENT PLAN			
Market Value = 56%		Actuarial Value = 60%	
	Recommended	Actual	% Contributed
2006	$461,810	$369,212	80%
2007	$484,424	$345,381	71%
2008	$476,913	$347,709	73%
2009	$583,257	$326,225	56%
2010	**$384,986**	**$284,870**	**74%**

Plan frozen in 2009

ANTONIA FPD PENSION PLAN			
Market Value = 72%		Actuarial Value = 65%	
	Recommended	Actual	% Contributed
2006	$160,061	$70,649	44%
2007	$160,061	$75,236	47%
2008	$200,804	$78,806	39%
2009	$200,804	$53,354	27%
2010	**$62,560**	**$62,560**	**100%**

ARNOLD POLICE PENSION PLAN			
Market Value = 87%		Actuarial Value = 87%	
	Recommended	Actual	% Contributed
2006	$393,674	$329,595	84%
2007	$425,810	$457,273	107%
2008	$398,846	$421,152	106%
2009	$391,668	$579,665	148%
2010	**$426,095**	**$503,087**	**118%**

BERKELEY POLICE & FIRE PENSION FUND			
Market Value = 69%		Actuarial Value = 71%	
	Recommended	Actual	% Contributed
2006	$430,898	$211,516	49%
2007	$422,883	$201,789	48%
2008	$349,203	$211,851	61%
2009	$557,893	$211,259	38%
2010	**$855,227**	**$228,800**	**27%**

BI-STATE DEV AGENCY DIVISION 788, A.T.U.			
Market Value = 51%		Actuarial Value = 55%	
	Recommended	Actual	% Contributed
2006	$4,774,765	$4,774,765	100%
2007	$4,689,803	$4,689,803	100%
2008	$4,671,805	$4,671,805	100%
2009	$4,854,000	$4,854,000	100%
2010	**$4,953,503**	**$4,953,503**	**100%**

BI-STATE DEVELOPMENT AGENCY LOCAL 2 I.B.E.W.			
Market Value = 70%		Actuarial Value = 71%	
	Recommended	Actual	% Contributed
2006	$87,760	$87,760	100%
2007	$110,149	$110,149	100%
2008	$191,216	$191,216	100%
2009	$125,842	$125,842	100%
2010	**$122,475**	**$122,475**	**100%**

BI-STATE DIVISION 788 CLERICAL UNIT ATU			
Market Value = 50%		Actuarial Value = 56%	
	Recommended	Actual	% Contributed
2006	$222,215	$222,215	100%
2007	$221,053	$221,053	100%
2008	$229,977	$229,977	100%
2009	$216,471	$216,471	100%
2010	**$223,550**	**$223,550**	**100%**

BI-STATE SALARIED EMPLOYEES			
Market Value = 71%		Actuarial Value = 83%	
	Recommended	Actual	% Contributed
2006	$1,767,645	$1,767,645	100%
2007	$1,711,386	$1,711,386	100%
2008	$1,731,125	$1,731,125	100%
2009	$1,686,000	$1,686,000	100%
2010	**$1,924,943**	**$1,924,943**	**100%**

BLACK JACK FPD RETIREMENT PLAN			
Market Value = 69%		Actuarial Value = 69%	
	Recommended	Actual	% Contributed
2006	$431,156	$1,336,917	310%
2007	$350,850	$526,011	150%
2008	$368,516	$531,314	144%
2009	$702,391	$534,704	76%
2010	**$470,777**	**$533,662**	**113%**

BOTHWELL REGIONAL HEALTH CENTER RETIRE PLAN			
Market Value = 76%		Actuarial Value = 84%	
	Recommended	Actual	% Contributed
2006	$2,018,137	$1,505,485	75%
2007	$2,160,292	$2,488,349	115%
2008	$2,295,319	$2,285,296	100%
2009	$2,371,149	$2,447,575	103%
2010	**$2,626,019**	**$3,019,210**	**115%**

ACTUARY'S RECOMMENDED vs. ACTUAL CONTRIBUTION

BRENTWOOD POLICE & FIREMEN'S RETIREMENT FUND			
Market Value = 86%	Actuarial Value = 87%		
	Recommended	Actual	% Contributed
2006	$469,103	$920,076	196%
2007	$374,754	$1,095,966	292%
2008	$512,471	$949,751	185%
2009	$1,029,791	$1,082,631	105%
2010	**$994,948**	**$1,068,019**	**107%**

BRIDGETON EMPLOYEES RETIREMENT PLAN			
Market Value = 64%	Actuarial Value = 64%		
	Recommended	Actual	% Contributed
2006	$963,332	$890,000	92%
2007	$970,800	$975,000	100%
2008	$970,865	$971,000	100%
2009	$1,165,675	$900,000	77%
2010	**$1,400,936**	**$900,000**	**64%**

CARTHAGE POLICEMEN'S & FIREMEN'S PENSION PLAN			
Market Value = 72%	Actuarial Value = 84%		
	Recommended	Actual	% Contributed
2006	$176,747	$175,337	99%
2007	$177,243	$202,043	114%
2008	$179,644	$195,088	109%
2009	$235,336	$223,800	95%
2010	**$260,475**	**$253,458**	**97%**

CEDAR HILL FPD LENGTH OF SERVICE PROGRAM			
Market Value = 69%	Actuarial Value = 69%		
	Recommended	Actual	% Contributed
2006	$19,378	$20,654	107%
2007	$18,167	$19,811	109%
2008	$17,263	$18,877	109%
2009	$22,013	$19,075	87%
2010	**$26,310**	**$27,796**	**106%**

CLAYTON NON-UNIFORMED EMPLOYEE PENSION PLAN			
Market Value = 76%	Actuarial Value = 87%		
	Recommended	Actual	% Contributed
2006	$240,308	$0	0%
2007	$256,078	$0	0%
2008	$255,620	$0	0%
2009	$251,507	$0	0%
2010	**$353,902**	**$161,614**	**46%**

CLAYTON UNIFORMED EMPLOYEES PENSION PLAN			
Market Value = 77%	Actuarial Value = 81%		
	Recommended	Actual	% Contributed
2006	$798,089	$798,089	100%
2007	$756,282	$756,282	100%
2008	$733,009	$733,009	100%
2009	$677,396	$677,396	100%
2010	**$1,125,201**	**$1,125,201**	**100%**

COLUMBIA FIREMENS' RETIREMENT PLAN			
Market Value = 50%	Actuarial Value = 56%		
	Recommended	Actual	% Contributed
2006	$2,213,653	$2,213,653	100%
2007	$2,759,165	$2,759,165	100%
2008	$2,853,109	$2,853,109	100%
2009	$3,098,617	$3,098,617	100%
2010	**$3,330,409**	**$3,330,409**	**100%**

COLUMBIA POLICE RETIREMENT PLAN			
Market Value = 50%	Actuarial Value = 56%		
	Recommended	Actual	% Contributed
2006	$2,232,864	$2,232,864	100%
2007	$2,401,908	$2,401,908	100%
2008	$2,520,373	$2,520,373	100%
2009	$2,549,967	$2,549,967	100%
2010	**$2,693,152**	**$2,693,152**	**100%**

COMMUNITY FPD RETIREMENT PLAN			
Market Value = 111%	Actuarial Value = 111%		
	Recommended	Actual	% Contributed
2006			
2007	DC PLAN PRIOR TO 2009		
2008			
2009	$698,688	$1,225,702	175%
2010	**$591,078**	**$1,050,882**	**178%**

COUNTY EMPLOYEES RETIREMENT FUND			
Market Value = 72%	Actuarial Value = 70%		
	Recommended	Actual	% Contributed
2006	$13,447,802	$18,923,599	141%
2007	$6,474,975	$11,656,551	180%
2008	$11,930,574	$20,000,450	168%
2009	$16,011,408	$19,994,180	125%
2010	**$19,095,323**	**$19,815,866**	**104%**

ACTUARY'S RECOMMENDED vs. ACTUAL CONTRIBUTION

CREVE COEUR EMPLOYEES RETIREMENT PLAN			
Market Value = 63%		Actuarial Value = 68%	
	Recommended	Actual	% Contributed
2006	$655,061	$655,061	100%
2007	$618,308	$618,308	100%
2008	$609,164	$642,000	105%
2009	$675,394	$757,900	112%
2010	**$1,004,897**	**$1,057,900**	**105%**

CREVE COEUR FPD RETIREMENT PLAN			
Market Value = 87%		Actuarial Value = 74%	
	Recommended	Actual	% Contributed
2006	$615,086	$615,086	100%
2007	$442,425	$600,000	136%
2008	$404,197	$600,000	148%
2009	$775,649	$775,649	100%
2010	**$571,713**	**$571,713**	**100%**

EUREKA FPD RETIREMENT PLAN			
Market Value = 77%		Actuarial Value = 78%	
	Recommended	Actual	% Contributed
2006	$304,129	$234,635	77%
2007	$257,667	$291,398	113%
2008	$279,086	$269,000	96%
2009	$507,166	$265,000	52%
2010	**$496,422**	**$250,000**	**50%**

FENTON FPD RETIREMENT PLAN			
Market Value = 82%		Actuarial Value = 86%	
	Recommended	Actual	% Contributed
2006	$962,023	$988,194	103%
2007	$950,365	$1,025,145	108%
2008	$952,073	$1,129,810	119%
2009	$1,387,494	$1,148,719	83%
2010	**$1,319,989**	**$1,188,565**	**90%**

FERGUSON PENSION PLAN			
Market Value = 86%		Actuarial Value = 100%	
	Recommended	Actual	% Contributed
2006	$0	$0	0
2007	$0	$0	0
2008	$7,075	$7,075	100%
2009	$35,496	$35,496	100%
2010	**$107,526**	**$107,526**	**100%**

FLORISSANT EMPLOYEES PENSION PLAN			
Market Value = 82%		Actuarial Value = 82%	
	Recommended	Actual	% Contributed
2006	$664,951	$974,760	147%
2007	$525,967	$1,128,974	215%
2008	$364,775	$1,165,885	320%
2009	$1,597,209	$1,283,642	80%
2010	**$1,033,246**	**$1,301,778**	**126%**

FLORISSANT VALLEY FPD RETIREMENT PLAN			
Market Value = 96%		Actuarial Value = 90%	
	Recommended	Actual	% Contributed
2006	$961,680	$1,063,502	111%
2007	$587,788	$1,083,861	184%
2008	$497,477	$1,111,409	223%
2009	$592,515	$1,126,027	190%
2010	**$453,083**	**$1,154,608**	**255%**

GLENDALE PENSION PLAN			
Market Value = 65%		Actuarial Value = 72%	
	Recommended	Actual	% Contributed
2006	$159,816	$155,388	97%
2007	$164,345	$159,932	97%
2008	$165,546	$170,661	103%
2009	$181,814	$123,650	68%
2010	**$305,247**	**$132,524**	**43%**

HANNIBAL POLICE & FIRE RETIREMENT PLAN			
Market Value = 41%		Actuarial Value = 40%	
	Recommended	Actual	% Contributed
2006	$725,546	$686,932	95%
2007	$735,065	$704,405	96%
2008	$856,414	$678,725	79%
2009	$982,832	$803,329	82%
2010	**$1,169,397**	**$638,858**	**55%**

HAZELWOOD RETIREMENT PLAN			
Market Value = 85%		Actuarial Value = 87%	
	Recommended	Actual	% Contributed
2006	$1,006,404	$1,044,593	104%
2007	$973,769	$1,027,006	105%
2008	$1,017,336	$1,073,126	105%
2009	$1,039,281	$1,091,569	105%
2010	**$1,057,468**	**$1,105,631**	**105%**

ACTUARY'S RECOMMENDED vs. ACTUAL CONTRIBUTION

HIGH RIDGE FIRE PROTECTION DISTRICT PENSION PLAN			
	Market Value = 85%	Actuarial Value = 85%	
	Recommended	Actual	% Contributed
2006			
2007	JCPER REPORTING BEGAN IN 2009		
2008		$228,278	
2009	$418,180	$297,677	71%
2010	**$299,267**	**$323,408**	**108%**

JACKSON COUNTY EMPLOYEES PENSION PLAN			
	Market Value = 72%	Actuarial Value = 72%	
	Recommended	Actual	% Contributed
2006	$8,494,265	$6,646,911	78%
2007	$9,045,392	$6,684,430	74%
2008	$8,907,971	$7,301,478	82%
2009	$7,778,047	$8,073,063	104%
2010	**$7,345,170**	**$7,923,010**	**108%**

Plan closed 12/2008

JEFFERSON CITY FIREMEN'S RETIREMENT SYSTEM			
	Market Value = 120%	Actuarial Value = 120%	
	Recommended	Actual	% Contributed
2006	$1,001,001	$1,002,893	100%
2007	$1,041,041	$861,079	83%
2008	$1,058,726	$903,296	85%
2009	$1,103,629	$1,076,999	98%
2010	**$1,360,573**	**$1,335,490**	**98%**

Plan closed 1987

JENNINGS POLICE & FIREMEN'S RETIREMENT FUND			
	Market Value = 77%	Actuarial Value = 77%	
	Recommended	Actual	% Contributed
2006	$210,990	$161,821	77%
2007	$214,005	$163,862	77%
2008	$203,494	$177,429	87%
2009	$200,240	$185,587	93%
2010	**$216,908**	**$218,467**	**101%**

JOPLIN POLICE & FIRE PENSION PLAN			
	Market Value = 59%	Actuarial Value = 57%	
	Recommended	Actual	% Contributed
2006	$1,374,361	$1,395,340	102%
2007	$1,821,934	$1,091,380	60%
2008	$1,761,639	$1,201,804	68%
2009	$2,169,744	$2,443,752	113%
2010	**$2,206,690**	**$1,797,683**	**81%**

JUDGES RETIREMENT SYSTEM			
	Market Value = 21%	Actuarial Value = 23%	
	Recommended	Actual	% Contributed
2006	$22,401,569	$22,401,569	100%
2007	$23,745,467	$23,745,467	100%
2008	$26,215,309	$26,215,309	100%
2009	$27,725,883	$27,725,883	100%
2010	**$27,029,198**	**$27,029,198**	**100%**

KANSAS CITY CIVILIAN POLICE EMPLOYEES' RETIREMENT			
	Market Value = 70%	Actuarial Value = 77%	
	Recommended	Actual	% Contributed
2006	$3,480,720	$2,175,167	62%
2007	$3,854,132	$2,681,732	70%
2008	$4,202,987	$3,372,411	80%
2009	$4,322,860	$3,470,682	80%
2010	**$4,013,807**	**$3,329,727**	**83%**

KANSAS CITY EMPLOYEES' RETIREMENT SYSTEM			
	Market Value = 80%	Actuarial Value = 75%	
	Recommended	Actual	% Contributed
2006	$25,770,978	$17,557,758	68%
2007	$17,652,900	$18,496,476	105%
2008	$15,623,936	$20,011,617	128%
2009	$19,364,846	$20,330,486	105%
2010	**$29,589,060**	**$19,186,317**	**65%**

KANSAS CITY FIREFIGHTER'S PENSION SYSTEM			
	Market Value = 73%	Actuarial Value = 84%	
	Recommended	Actual	% Contributed
2006	$9,807,644	$9,087,549	93%
2007	$9,419,485	$9,466,685	101%
2008	$8,734,919	$9,937,683	114%
2009	$9,476,409	$10,319,886	109%
2010	**$17,123,835**	**$10,465,322**	**61%**

KANSAS CITY POLICE RETIREMENT SYSTEM			
	Market Value = 72%	Actuarial Value = 79%	
	Recommended	Actual	% Contributed
2006	$18,992,671	$13,729,225	72%
2007	$21,444,703	$14,526,734	68%
2008	$22,749,385	$15,747,111	69%
2009	$24,311,281	$16,700,688	69%
2010	**$23,642,278**	**$16,645,229**	**70%**

ACTUARY'S RECOMMENDED vs. ACTUAL CONTRIBUTION

KANSAS CITY PUBLIC SCHOOL RETIREMENT SYSTEM			
Market Value = 86%		Actuarial Value = 93%	
	Recommended	Actual	% Contributed
2006	$11,774,051	$14,431,062	123%
2007	$11,523,380	$15,365,235	133%
2008	$3,832,178	$15,888,234	415%
2009	$3,797,954	$27,656,639	728%
2010	**$7,779,060**	**$13,281,191**	**171%**

KC ATA SALARIED EMPLOYEES PENSION PLAN			
Market Value = 79%		Actuarial Value = 79%	
	Recommended	Actual	% Contributed
2006	$736,367	$739,550	100%
2007	$779,086	$795,951	102%
2008	$731,087	$812,552	111%
2009	$811,286	$860,000	106%
2010	**$854,001**	**$860,000**	**101%**

KC ATA UNION EMPLOYEES PENSION PLAN			
Market Value = 65%		Actuarial Value = 65%	
	Recommended	Actual	% Contributed
2006	$1,926,490	$1,639,485	85%
2007	$1,792,053	$2,047,060	114%
2008	$1,803,128	$2,136,311	118%
2009	$2,422,138	$2,115,271	87%
2010	**$2,370,772**	**$2,073,236**	**87%**

LADUE NON-UNIFORMED EMPLOYEES RETIREMENT PLAN			
Market Value = 88%		Actuarial Value = 91%	
	Recommended	Actual	% Contributed
2006	$120,800	$120,800	100%
2007	$143,662	$143,662	100%
2008	$148,695	$175,000	118%
2009	$203,664	$403,663	198%
2010	**$161,199**	**$261,199**	**162%**

LADUE POLICE & FIRE PENSION PLAN			
Market Value = 70%		Actuarial Value = 73%	
	Recommended	Actual	% Contributed
2006	$1,129,573	$1,129,573	100%
2007	$1,210,076	$1,810,076	150%
2008	$1,055,357	$2,240,000	212%
2009	$1,255,382	$2,255,382	180%
2010	**$1,092,786**	**$1,692,786**	**155%**

LAGERS STAFF RETIREMENT PLAN			
Market Value = 84%		Actuarial Value = 84%	
	Recommended	Actual	% Contributed
2006	$151,207	$451,207	298%
2007	$184,233	$184,233	100%
2008	$162,890	$162,890	100%
2009	$195,439	$195,439	100%
2010	**$222,160**	**$222,160**	**100%**

LITTLE RIVER DRAINAGE DIST RETIREMENT PLAN			
Market Value = 100%		Actuarial Value = 100%	
	Recommended	Actual	% Contributed
2006	$56,311	$0	0%
2007	$56,311	$0	0%
2008	$63,760	$0	0%
2009	$51,803	$0	0%
2010	**$55,742**	**$549,531**	**986%**

LOCAL GOVERNMENT EMPLOYEES RETIREMENT SYSTEM			
Market Value = 91%		Actuarial Value = 82%	
	Recommended	Actual	% Contributed
2006	$115,550,424	$122,740,124	106%
2007	$128,938,636	$122,740,124	95%
2008	$130,007,191	$137,981,284	106%
2009	$132,715,295	$132,715,295	100%
2010	**$137,849,763**	**$137,849,763**	**100%**

Plan closed 12/2010

MAPLEWOOD POLICE & FIRE RETIREMENT FUND			
Market Value = 77%		Actuarial Value = 71%	
	Recommended	Actual	% Contributed
2006	$617,366	$518,204	84%
2007	$815,622	$773,385	95%
2008	$992,184	$814,649	82%
2009	$793,408	$633,275	80%
2010	**$0**	**$0**	**0%**

MEHLVILLE FPD RETIREMENT PLAN			
Market Value = 58%		Actuarial Value = 58%	
	Recommended	Actual	% Contributed
2006	$1,758,431	$0	0%
2007	$1,681,820	$0	0%
2008	$110,715	$0	0%
2009	$35,435	$0	0%
2010	**$35,435**	**$0**	**0%**

ACTUARY'S RECOMMENDED vs. ACTUAL CONTRIBUTION

METRO ST. LOUIS SEWER DIST EMPLOYEES PENSION			
Market Value = 86%	Actuarial Value = 81%		
	Recommended	Actual	% Contributed
2006	$6,847,278	$6,847,278	100%
2007	$7,673,240	$7,673,240	100%
2008	$7,425,602	$7,425,602	100%
2009	$8,859,535	$8,859,535	100%
2010	**$10,306,739**	**$10,306,739**	**100%**

METRO WEST FPD RETIREMENT PLAN			
Market Value = 73%	Actuarial Value = 73%		
	Recommended	Actual	% Contributed
2006	$2,413,441	$1,711,881	71%
2007	$1,793,684	$1,968,722	110%
2008	$1,769,126	$2,027,760	115%
2009	$2,358,671	$2,064,298	88%
2010	**$2,295,171**	**$2,112,489**	**92%**

MID-COUNTY FPD RETIREMENT PLAN			
Market Value = 99%	Actuarial Value = 101%		
	Recommended	Actual	% Contributed
2006	$89,054	$141,901	159%
2007	$93,222	$150,000	161%
2008	$90,978	$200,000	220%
2009	$215,145	$209,228	97%
2010	**$72,132**	**$200,000**	**277%**

MO HIGHER ED LOAN AUTHORITY PENSION PLAN			
Market Value = 102%	Actuarial Value = 102%		
	Recommended	Actual	% Contributed
2006	$1,866,977	$1,866,977	100%
2007	$1,944,602	$1,944,602	100%
2008	$2,038,462	$2,038,462	100%
2009	$1,717,275	$4,035,804	235%
2010	**$2,015,707**	**$2,015,707**	**100%**

MO STATE EMPLOYEES RETIREMENT SYSTEM			
Market Value = 76%	Actuarial Value = 79%		
	Recommended	Actual	% Contributed
2006	$227,233,195	$227,233,195	100%
2007	$239,488,751	$243,122,610	102%
2008	$249,770,156	$249,770,156	100%
2009	$252,105,008	$252,105,008	100%
2010	**$251,226,187**	**$251,226,187**	**100%**

MODOT & PATROL EMPLOYEES' RETIREMENT SYSTEM			
Market Value = 47%	Actuarial Value = 43%		
	Recommended	Actual	% Contributed
2006	$111,542,717	$111,542,717	100%
2007	$121,794,458	$121,794,458	100%
2008	$124,527,678	$124,515,792	100%
2009	$123,043,301	$123,057,975	100%
2010	**$124,476,706**	**$124,476,706**	**100%**

MONARCH FPD RETIREMENT PLAN			
Market Value = 403%	Actuarial Value = 403%		
	Recommended	Actual	% Contributed
2006	$36,849	$305,000	828%
2007	$34,291	$237,500	693%
2008	$30,088	$225,500	749%
2009	$35,108	$270,000	769%
2010	**$39,592**	**$285,000**	**720%**

NORTH KANSAS CITY HOSPITAL RETIREMENT PLAN			
Market Value = 102%	Actuarial Value = 102%		
	Recommended	Actual	% Contributed
2006	$9,162,651	$10,730,691	117%
2007	$8,277,653	$9,810,000	119%
2008	$8,613,762	$10,200,000	118%
2009	$13,472,825	$49,000,000	364%
2010	**$8,695,345**	**$5,000,000**	**58%**

NORTH KC POLICE & FIRE RETIREMENT FUND			
Market Value = 85%	Actuarial Value = 82%		
	Recommended	Actual	% Contributed
2006	$1,154,894	$919,420	80%
2007	$940,009	$1,024,200	109%
2008	$1,093,702	$1,056,526	97%
2009	$1,192,596	$1,002,170	84%
2010	**$1,432,875**	**$1,044,840**	**73%**

OLIVETTE SALARIED EMPLOYEES' RETIREMENT PLAN			
Market Value = 71%	Actuarial Value = 71%		
	Recommended	Actual	% Contributed
2006	$343,514	$479,730	140%
2007	$113,709	$248,086	218%
2008	$118,505	$496,280	419%
2009	$937,182	$452,710	48%
2010	**$841,972**	**$678,723**	**81%**

ACTUARY'S RECOMMENDED vs. ACTUAL CONTRIBUTION

OVERLAND NON-UNIFORM PENSION FUND			
Market Value = 71%		Actuarial Value = 87%	
	Recommended	Actual	% Contributed
2006	$405,791	$399,541	98%
2007	$283,072	$405,791	143%
2008	$266,181	$296,000	111%
2009	$245,574	$266,181	108%
2010	**$355,277**	**$245,574**	**69%**

OVERLAND POLICE RETIREMENT FUND			
Market Value = 64%		Actuarial Value = 78%	
	Recommended	Actual	% Contributed
2006	$345,521	$289,396	84%
2007	$315,547	$297,236	94%
2008	$303,072	$280,188	92%
2009	$400,965	$314,083	78%
2010	**$569,492**	**$259,656**	**46%**

PATTONVILLE-BRIDGETON FPD RETIREMENT PLAN			
Market Value = 82%		Actuarial Value = 78%	
	Recommended	Actual	% Contributed
2006	$1,137,341	$990,000	87%
2007	$1,010,460	$1,260,000	125%
2008	$1,182,140	$1,387,000	117%
2009	$1,287,891	$955,000	74%
2010	**$1,435,394**	**$1,357,000**	**95%**

POPLAR BLUFF POLICE & FIRE PENSION PLAN			
Market Value = 96%		Actuarial Value = 100%	
	Recommended	Actual	% Contributed
2006	$170,896	$193,829	113%
2007	$142,409	$197,975	139%
2008	$140,136	$154,981	111%
2009	$95,190	$152,708	160%
2010	**$120,727**	**$154,033**	**128%**

PROSECUTING ATTYS' & CIRCUIT ATTYS' RETIRE SYSTEM			
Market Value = 87%		Actuarial Value = 96%	
	Recommended	Actual	% Contributed
2006	$893,256	$1,651,029	185%
2007	$765,601	$1,612,627	211%
2008	$1,124,479	$1,570,187	140%
2009	$1,068,222	$1,580,261	148%
2010	**$1,157,504**	**$1,545,692**	**134%**

PUBLIC EDUCATION EMPLOYEES' RETIREMENT SYSTEM			
Market Value = 82%		Actuarial Value = 85%	
	Recommended	Actual	% Contributed
2006	$79,707,834	$61,745,505	77%
2007	$89,945,503	$69,235,160	77%
2008	$90,727,016	$77,988,839	86%
2009	$96,775,289	$85,915,562	89%
2010	**$95,821,957**	**$91,478,725**	**95%**

PUBLIC SCHOOL RETIREMENT SYSTEM			
Market Value = 82%		Actuarial Value = 86%	
	Recommended	Actual	% Contributed
2006	$608,134,319	$429,578,911	71%
2007	$644,969,214	$472,216,630	73%
2008	$656,347,298	$521,241,501	79%
2009	$669,643,988	$563,454,487	84%
2010	**$737,381,187**	**$594,326,122**	**81%**

RAYTOWN POLICEMEN'S RETIREMENT FUND			
Market Value = 55%		Actuarial Value = 57%	
	Recommended	Actual	% Contributed
2006	$419,985	$282,579	67%
2007	$525,836	$560,191	107%
2008	$501,472	$1,115,415	222%
2009	$685,030	$278,854	41%
2010	**$865,591**	**$721,033**	**83%**

RICHMOND HEIGHTS POLICE & FIRE RETIREMENT PLAN			
Market Value = 93%		Actuarial Value = 113%	
	Recommended	Actual	% Contributed
2006	$659,052	$962,076	146%
2007	$659,052	$938,549	142%
2008	$676,723	$991,493	147%
2009	$676,723	$983,666	145%
2010	**$613,929**	**$907,796**	**148%**

ROCK COMMUNITY FPD RETIREMENT PLAN			
Market Value = 78%		Actuarial Value = 81%	
	Recommended	Actual	% Contributed
2006	$477,663	$665,610	139%
2007	$529,623	$522,039	99%
2008	$622,528	$732,742	118%
2009	$745,381	$643,240	86%
2010	**$801,015**	**$648,000**	**81%**

ACTUARY'S RECOMMENDED vs. ACTUAL CONTRIBUTION

ROCK HILL POLICE & FIREMEN'S PENSION PLAN			
Market Value = 41%		Actuarial Value = 42%	
	Recommended	Actual	% Contributed
2006	$236,769		0%
2007	$236,769	$236,769	100%
2008	$260,954	$236,769	91%
2009	$260,954	$237,000	91%
2010	**$293,522**	**$142,000**	**48%**

SALINE VALLEY FPD RETIREMENT PLAN			
Market Value = 63%		Actuarial Value = 63%	
	Recommended	Actual	% Contributed
2006			
2007	JCPER REPORTING BEGAN 2009		
2008	$66,557	$63,000	95%
2009	$150,010	$152,569	102%
2010	**$138,816**	**$205,305**	**148%**

SEDALIA FIREMEN'S RETIREMENT FUND			
Market Value = 75%		Actuarial Value = 75%	
	Recommended	Actual	% Contributed
2006	$314,937	$305,336	97%
2007	$262,099	$303,930	116%
2008	$244,931	$331,394	135%
2009	$248,683	$330,210	133%
2010	**$379,245**	**$338,865**	**89%**

Plan closed 2010

SEDALIA POLICE RETIREMENT FUND			
Market Value = 44%		Actuarial Value = 44%	
	Recommended	Actual	% Contributed
2006	$337,180	$195,321	58%
2007	$416,346	$208,038	50%
2008	$324,570	$218,719	67%
2009	$476,644	$221,320	46%
2010	**n/a**	**$212,723**	

SHERIFF'S RETIREMENT SYSTEM			
Market Value = 93%		Actuarial Value = 92%	
	Recommended	Actual	% Contributed
2006	$1,628,214	$1,708,827	105%
2007	$1,449,584	$1,700,270	117%
2008	$1,313,650	$1,743,092	133%
2009	$1,241,502	$1,773,689	143%
2010	**$1,144,303**	**$1,696,393**	**148%**

SPRINGFIELD POLICE & FIRE RETIREMENT FUND			
Market Value = 56%		Actuarial Value = 54%	
	Recommended	Actual	% Contributed
2006	$9,834,917	$6,831,133	69%
2007	$10,237,825	$7,388,016	72%
2008	$12,347,207	$8,794,259	71%
2009	$13,273,246	$23,979,519	181%
2010	**$13,137,104**	**$31,916,855**	**243%**

ST. JOSEPH POLICEMEN'S PENSION FUND			
Market Value = 60%		Actuarial Value = 68%	
	Recommended	Actual	% Contributed
2006	$1,473,453	$1,671,950	113%
2007	$1,557,192	$1,675,386	108%
2008	$1,429,455	$1,536,575	107%
2009	$1,444,388	$1,550,095	107%
2010	**$1,897,553**	**$1,980,812**	**104%**

ST. LOUIS COUNTY EMPLOYEES RETIREMENT PLAN			
Market Value = 72%		Actuarial Value = 71%	
	Recommended	Actual	% Contributed
2006	$28,527,411	$28,527,411	100%
2007	$28,192,299	$28,192,299	100%
2008	$27,245,017	$27,245,017	100%
2009	$32,848,970	$32,848,970	100%
2010	**$29,106,006**	**$29,106,006**	**100%**

ST. LOUIS CO LIBRARY DIST EMPLOYEE PENSION PLAN			
Market Value = 92%		Actuarial Value = 92%	
	Recommended	Actual	% Contributed
2006	$570,405	$500,000	88%
2007	$465,387	$450,000	97%
2008	$437,010	$437,010	100%
2009	$764,779	$665,000	87%
2010	**$1,088,903**	**$775,000**	**71%**

ST. LOUIS EMPLOYEES RETIREMENT SYSTEM			
Market Value = 72%		Actuarial Value = 82%	
	Recommended	Actual	% Contributed
2006	$29,478,032	$15,756,456	53%
2007	$29,599,091	$71,301,428	241%
2008	$25,297,801	$30,350,011	120%
2009	$26,072,575	$27,252,035	105%
2010	**$28,498,534**	**$27,116,763**	**95%**

ACTUARY'S RECOMMENDED vs. ACTUAL CONTRIBUTION

ST. LOUIS FIREMEN'S RETIREMENT SYSTEM			
Market Value = 91%	Actuarial Value = 93%		
	Recommended	Actual	% Contributed
2006	$18,179,873	$4,110,402	23%
2007	$14,285,300	$63,689,991	446%
2008	$7,484,524	$7,484,524	100%
2009	$12,193,989	$12,193,989	100%
2010	**$17,854,546**	**$17,854,546**	**100%**

ST. LOUIS POLICE RETIREMENT SYSTEM			
Market Value = 78%	Actuarial Value = 88%		
	Recommended	Actual	% Contributed
2006	$15,524,959	$8,093,226	52%
2007	$16,136,312	$42,289,488	262%
2008	$12,123,143	$10,384,025	86%
2009	$11,367,527	$14,318,031	126%
2010	**$15,107,558**	**$17,476,138**	**116%**

ST. LOUIS PUBLIC SCHOOL RETIREMENT SYSTEM			
Market Value = 88%	Actuarial Value = 85%		
	Recommended	Actual	% Contributed
2006	$14,414,133	$19,887,885	138%
2007	$17,311,658	$22,445,608	130%
2008	$21,021,316	$27,853,996	133%
2009	$21,406,949	$28,598,502	134%
2010	**$19,407,722**	**$26,075,146**	**134%**

UNIVERSITY CITY NON-UNIFORMED RETIREMENT PLAN			
Market Value = 64%	Actuarial Value = 83%		
	Recommended	Actual	% Contributed
2006	$189,262	$216,300	114%
2007	$437,974	$591,603	135%
2008	$500,477	$562,138	112%
2009	$524,594	$481,184	92%
2010	**$591,057**	**$592,681**	**100%**

UNIVERSITY CITY POLICE & FIRE RETIREMENT FUND			
Market Value = 71%	Actuarial Value = 92%		
	Recommended	Actual	% Contributed
2006			
2007	$252,338	$35	0%
2008	$466,478	$943,642	202%
2009	$535,107	$929,038	174%
2010	**$700,319**	**$939,475**	**134%**

UNIV OF MO RETIRE, DISABILITY & DEATH BENEFIT PLAN			
Market Value = 85%	Actuarial Value = 96%		
	Recommended	Actual	% Contributed
2006	$69,156,720	$66,924,584	97%
2007	$69,156,720	$74,104,905	107%
2008	$52,311,745	$68,444,616	131%
2009	$46,588,102	$55,433,624	119%
2010	**$81,294,347**	**$61,824,268**	**76%**

VALLEY PARK FPDISTRICT RETIREMENT PLAN			
Market Value = 91%	Actuarial Value = 91%		
	Recommended	Actual	% Contributed
2006	$153,654	$175,000	114%
2007	$124,071	$200,000	161%
2008	$160,642	$200,000	125%
2009	$265,733	$230,000	87%
2010	**$238,754**	**$190,000**	**80%**

WEST OVERLAND FPD RETIREE MEDICAL BENEFITS PLAN			
Market Value = 20%	Actuarial Value = 20%		
	Recommended	Actual	% Contributed
2006	$28,929	$7,500	26%
2007	$30,858	$45,000	146%
2008	$33,313	$30,000	90%
2009	$30,571		0%
2010			

Joint Committee on Public Employee Retirement
Quarterly Reports
2011 Third Quarter

Plan Name	Beg. Market Value	End. Market Value	ROR 12 mos.	ROR 36 mos.	ROR 60 mos.
Affton FPD Retirement Plan	$4,810,037	$4,172,512	-1.46% (Net)	NA% (Net)	NA% (Net)
Bi-state Dev Agency Division 788, A.T.U.	$91,507,567	$78,522,207	n/a% (Net)	n/a% (Net)	n/a% (Net)
Bi-state Development Agency Local 2 I.B.E.W.	$1,994,436	$1,809,455	n/a% (Net)	n/a% (Net)	n/a% (Net)
Bi-state Division 788 Clerical Unit ATU	$5,506,968	$4,559,068	n/a% (Net)	n/a% (Net)	n/a% (Net)
Bi-state Salaried Employees	$45,094,542	$40,259,149	n/a% (Net)	n/a% (Net)	n/a% (Net)
Black Jack FPD Retirement Plan	$8,012,084	$7,411,677	0% (Net)	2% (Net)	2% (Net)
Bothwell Regional Health Center Retirement Plan	$38,654,782	$34,964,715	1.3% (Net)	4.6% (Net)	2.9% (Net)
Bridgeton Employees Retirement Plan	$20,908,706	$18,827,341	0.06% (Gross)	1.76% (Gross)	-0.57% (Gross)
Carthage Policemen's & Firemen's Pension Plan	$5,692,820	$5,221,124	12.19% (Net)	2.69% (Net)	3.04% (Net)
Cedar Hill Fire Protection District Length of Service Awards Program	$118,542	$119,321	NA% (Gross)	NA% (Gross)	NA% (Gross)
Clayton Non-uniformed Employee Pension Plan	$10,462,040	$9,598,463	2.02% (Gross)	3.80% (Gross)	2.25% (Gross)
Clayton Uniformed Employees Pension Plan	$29,388,368	$27,624,057	2.41% (Gross)	4.64% (Gross)	2.92% (Gross)
Columbia Police Retirement Plan	$90,303,423	$84,278,075	1.27% (Net)	4.08% (Net)	5.09% (Net)
Community FPD Retirement Plan	$15,043,537	$12,794,773	-4.39% (Net)	N/A% (Net)	N/A% (Net)
County Employees Retirement Fund	$322,255,000	$287,456,000	.4% (Gross)	5.2% (Gross)	3.0% (Gross)
Creve Coeur FPD Retirement Plan	$8,284,255	$7,384,693	N/A% (Net)	N/A% (Net)	N/A% (Net)
Fenton FPD Retirement Plan	$22,700,807	$20,203,063	-1.47% (Net)	2.16% (Net)	0.23% (Net)
Florissant Employees Pension Plan	$10,921,724	$10,314,114	2.68% (Net)	3.89% (Net)	3.89% (Net)
Florissant Valley FPD Retirement Plan	$16,954,741	$15,693,660	n/a% (Net)	n/a% (Net)	n/a% (Net)
Glendale Pension Plan	$4,828,821	$4,204,037	.60% (Gross)	4.0% (Gross)	n/a% (Gross)
Hannibal Police & Fire Retirement Plan	$10,167,072	$10,013,847	10.2% (Net)	12.9% (Net)	16% (Net)
High Ridge Fire Protection District Pension Plan	$5,299,009	$4,686,886	-1.59% (Net)	NA% (Net)	NA% (Net)
Jackson County Employees Pension Plan	$181,305,206	$158,733,751	-.8% (Gross)	3.4% (Gross)	1.4% (Gross)

Plan Name	Beg. Market Value	End. Market Value	ROR 12 mos.	ROR 36 mos.	ROR 60 mos.
Kansas City Civilian Police Employees' Retirement System	$99,709,000	$92,023,000	1.4% (Gross)	3.9% (Gross)	1.7% (Gross)
Kansas City Employees' Retirement System	$865,463,599	$769,703,211	-0.9% (Gross)	3.4% (Gross)	0.9% (Gross)
Kansas City Firefighter's Pension System	$865,463,599	$769,703,211	-0.9% (Gross)	3.4% (Gross)	0.9% (Gross)
Kansas City Police Retirement System	$695,046,000	$636,507,000	1.6% (Gross)	4.2% (Gross)	2.1% (Gross)
KC Trans. Auth. Union Employees Pension Plan	$37,902,095	$33,430,854	-1.66% (Net)	4.32% (Net)	1.13% (Net)
Little River Drainage Dist Retirement Plan	$926,687	$891,623	-.35% (Net)	.44% (Net)	1.03% (Net)
Local Government Employees Retirement System	$5,643,475	$5,039,503	-1.29% (Gross)	2.79% (Gross)	1.01% (Gross)
Metro St. Louis Sewer Dist Employees Pension Plan	$207,701,159	$188,148,679	1.7% (Net)	5.5% (Net)	4.1% (Net)
Metro West FPD Retirement Plan	$32,788,416	$30,978,765	-0.5% (Net)	2.8% (Net)	1.4% (Net)
Missouri State Employees Retirement System	$7,846,507,570	$7,220,953,356	4.25% (Net)	5.77% (Net)	4.17% (Net)
MoDOT & Highway Patrol Employees' Retirement System	$1,541,611,143	$1,452,144,614	7.18% (Net)	3.44% (Net)	1.93% (Net)
North Kansas City Hospital Retirement Plan	$195,673,910	$174,952,801	.14% (Net)	4.63% (Net)	2.24% (Net)
North Kansas City Policemen's & Firemen's Retirement Fund	$39,112,183	$34,514,560	.49% (Gross)	4.99% (Gross)	2.32% (Gross)
Pattonville-Bridgeton FPD Retirement Plan	$22,689,751	$18,611,421	-5.42% (Net)	3.00% (Net)	.36% (Net)
Prosecuting Attorneys' Retirement System	$28,310,514	$25,869,242	-2.2% (Net)	3.8% (Net)	2.3% (Net)
Public Education Employees' Retirement System	$2,899,645,127	$2,651,389,627	2.68% (Net)	3.76% (Net)	1.73% (Net)
Public School Retirement System	$27,898,081,371	$25,401,732,654	3.57% (Net)	3.91% (Net)	1.83% (Net)
Raytown Policemen's Retirement Fund	$8,963,621	$8,781,928	0.67% (Gross)	4.75% (Gross)	0.00% (Gross)
Richmond Heights Police & Fire Retirement Plan	$34,904,354	$31,486,082	2.75% (Net)	6.59% (Net)	3.85% (Net)
Rock Community FPD Retirement Plan	$9,326,235	$8,261,911	-1.71% (Net)	3.9% (Net)	1.31% (Net)
Saline Valley Fire Protection District Retirement Plan	$1,095,187	$970,093	-3.02% (Net)	NA% (Net)	NA% (Net)
Sheriff's Retirement System	$30,473,247	$27,339,621	1.960% (Gross)	8.230% (Gross)	5.540% (Gross)
Springfield Police & Fire Retirement Fund	$186,132,582	$171,711,136	-.36% (Net)	2.40% (Net)	.05% (Net)
St. Joseph Policemen's Pension Fund	$27,927,753	$25,430,575	1.5% (Gross)	11.8% (Gross)	13.3% (Gross)
St. Louis County Employees Retirement Plan	$484,206,081	$427,952,992	.55% (Gross)	4.42% (Gross)	1.70% (Gross)
St. Louis County Library Dist Empl Pension Plan	$35,601,333	$31,648,955	17.88% (Net)	4.89% (Net)	6.07% (Net)

Plan Name	Beg. Market Value	End. Market Value	ROR 12 mos.	ROR 36 mos.	ROR 60 mos.
St. Louis Firemen's Retirement System	$425,924,352	$366,783,319	0.20% (Gross)	2.04% (Gross)	0.66% (Gross)
St. Louis Public School Retirement System	$929,390,540	$807,559,005	.7% (Net)	4.2% (Net)	-.3% (Net)
Valley Park FPD Retirement Plan	$3,672,940	$3,300,516	-6.07% (Gross)	N/A% (Gross)	N/A% (Gross)
	$46,410,108,311	$42,266,672,242			

Plan Projection Request

On September 16, 2011, JCPER staff corresponded with staff of:

Local Government Employees' Retirement System (LAGERS)
Missouri State Employees' Retirement System (MOSERS)
MoDOT & Patrol Employees' Retirement System (MPERS)
Public School & Education Employee Retirement Systems of Missouri (PSRS & PEERS)

This correspondence requested the performance of 10 year projections with resulting effects on plans. The projection criteria included:

- -A baseline projection with actual experience coinciding with assumed experience
- -Projection based on actual investment return of +1% higher than assumed rate
- -Projection based on actual investment return of -1% lower than assumed rate
- -Projection based on actual investment return of -2% lower than assumed rate
- -Projection based on earning the average return of return over the 10 years ended 06/30/11

Plans were also asked to provide the estimated annual actual investment return needed to reach 100% funded by 06/30/21.

After concerns were expressed by some of the requested plan staff regarding the costs associated with running these projection requests, the request was tabled in mid October. JCPER staff has received a MOSERS response to the request which is attached and summarized below.

MOSERS Response
(summarized by JCPER staff)

Projection Results			
	Current	Baseline Projection (with experience meeting assumed)	End of 10 year projection period
Employer Contribution	FYE 06/30/13 14.45% of pay* Approx $275.2 million	FYE 06/30/23 11.27% of pay Approx $295.3 million	FYE 06/30/23 ($ are approx) Return +1% = 9.08% ($237.9 million) Return -1% = 13.31% ($348.7 million) Return -2% = 15.20% ($398.2 million) 10 yr average= 14.16% ($371.0 million)
Employee Contribution (hired for the 1st time on/after 01/01/11)	FYE 06/30/13 4% of pay Approx $10.3 million	FYE 06/30/23 4% of pay Approx $71 million	FYE 06/30/23 4% of pay Approx $71 million

Projection Results			
	Current	Baseline Projection (with experience meeting assumed)	End of 10 year projection period
Actuarial Value of Assets	FYE 06/30/11 $8,022.5 million	FYE 06/30/21 $10,595.5 million	FYE 06/30/21 Return +1% = $11,530.8 million Return -1% = $ 9,726.7 million Return -2% = $ 8,919.6 million 10 yr average = $ 9,364.2 million
Market Value of Assets	FYE 06/30/11 $7,768.7 million	FYE 06/30/21 $10,596.2 million	FYE 06/30/21 Return +1% = $11,785.5 million Return -1% = $ 9,511.4 million Return -2% = $ 8,522.5 million 10 yr average = $ 9,064.9 million
Actuarial Accrued Liability	FYE 06/30/11 $10,123.5 million	FYE 06/30/21 $13,447.2 million	FYE 06/30/21 Return +1% = $13,447.2 million Return -1% = $13,447.2 million Return -2% = $13,447.2 million 10 yr average = $13,447.2 million
Funded Ratio (AVA/AAL)	FYE 06/30/11 79.2%	FYE 06/30/21 78.8%	FYE 06/30/21 Return +1% = 85.7% Return -1% = 72.3% Return -2% = 66.3% 10 yr average = 69.6%

**The Fiscal Year ending 06/30/13 Employer contribution rate was approved by MOSERS Board in September at 14.45% of pay or approximately $275.2 million.*

The estimated rate of return necessary <u>to achieve 100% funding by June 30, 2021 is 11.35% per year</u>. This assumes all other assumptions are met and employer and employee contributions are contributed on a projected schedule consistent with 11.35% annual investment return.

**MOSERS also supplied modified projections with the requested criteria as well as extending those criteria to all economic assumptions. This modified projection information is not included in the above summary but is attached.

MOSERS®
Missouri State Employees' Retirement System

Mailing Address
PO Box 209
Jefferson City, MO 65102-0209

Office Location
907 Wildwood Drive
Jefferson City, MO 65109

October 18, 2011

Ms. Ronda Stegmann, Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A
Jefferson City, MO 65101

Dear Ronda:

The projections of various financial measures for MOSERS that you requested be submitted to you by October 21, 2011, are enclosed. They are based on valuations using our current actuarial assumptions but with alternative rates of actual investment return over the next ten years.

Also enclosed is a second set of projections based on altering not only the projected rates of actual investment return but also altering the actual projected inflation experience. The reason for these projections is to reflect the likely reality that if investment return rates change for a protracted period it is probable that inflation rates will also be impacted. While it is not possible to predict with precision what actual financial experience will be (and certainly not for a period as short as ten years), relationships between investment return and inflation can be expected. Accordingly, this second set of projections is offered to provide yet another perspective on the matter.

If you or any members of the Joint Committee have questions about this material, please contact me.

Sincerely,

Gary Findlay

Gary Findlay

Enclosures

GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries

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October 17, 2011

CONFIDENTIAL

Mr. Gary W. Findlay
Executive Director
Missouri State Employees' Retirement System
907 Wildwood Drive
Jefferson City, MO 65109

Re: MOSERS Projections – Modified JCPER Projections

Dear Gary:

Enclosed are the results of projections requested by MOSERS which are based on the request by the Joint Committee on Public Employee Retirement for the Missouri State Employees' Retirement System. These projections differ from the JCPER request in the treatment of economic assumptions. While the JCPER request called for changes to the rate of return experienced by the system, these projections extend those changes to all economic assumptions.

If you have any questions or comments, please contact us.

Respectfully submitted,

Brad Lee Armstrong

Brad Lee Armstrong, ASA, EA, MAAA

BLA:bd
Enclosures

cc: Norm L. Jones, GRS
David T. Kausch, GRS

Missouri State Employees' Retirement System
JCPER Projections
as of June 30, 2011

REQUESTED BY: Mr. Gary W. Findlay, Executive Director

SUBMITTED BY: Brad L. Armstrong, ASA, EA, MAAA and David T. Kausch, FSA, EA, MAAA
Gabriel, Roeder, Smith & Company

DATE: October 17, 2011

This report presents the results of actuarial projections of the Missouri State Employees' Retirement System (MOSERS) as requested by MOSERS based on the request by the Joint Committee on Public Employee Retirement (JCPER). This report should not be relied on for any other purpose.

The projections are based on the valuation as of June 30, 2011. All data, plan provisions, assumptions, and methods are the same as those disclosed in the June 30, 2011 valuation except as noted. In particular:

- The assumed rate of return on investments is 8.5% per year net of investment expenses,
- The assumed rate of wage inflation is 4.0% per year,
- The assumed rate of price inflation is 3.2% per year,
- The amortization of the unfunded actuarial accrued liability is an open 30-year amortization.

The JCPER requested 10-year projections under the following scenarios:

- Baseline: Actuarial experience will coincide with assumed experience,
- Return +1%: Actual investment return (net of fees) will be 1% higher than assumed (9.5%),
- Return -1%: Actual investment return (net of fees) will be 1% lower than assumed (7.5%),
- Return -2%: Actual investment return (net of fees) will be 2% lower than assumed (6.5%),
- 10-Year Historical Return: Actual investment return (net of fees) will be based on the actual experience of MOSERS over the 10-years ending June 30, 2011.

The signing actuaries are independent of the plan sponsor and are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Missouri State Employees' Retirement System
JCPER Projections
as of June 30, 2011

At the request of MOSERS for internal consistency of economic assumptions, we have adjusted the rate of wage inflation and price inflation by the same amount as the rate of investment return in each scenario. The rate of return assumption in each scenario is assumed to be net of investment expenses and administrative expenses are assumed to be contributed as part of the normal cost as in the annual actuarial valuation. The 10-year historical assumptions are based on historical information from the annual actuarial valuations. The set of assumptions used in the scenarios is as follows:

Scenario	Rate of Return	Wage* Inflation	Price Inflation
Baseline	8.50%	4.00%	3.20%
Return +1%	9.50%	5.00%	4.20%
Return -1%	7.50%	3.00%	2.20%
Return -2%	6.50%	2.00%	1.20%
10-Year Historical Return	7.06%	0.65%	2.40%

**Wage inflation is assumed to be 4% lower for the first year of each projection scenario due to the state's pay freeze.*

Future actuarial measurements may differ significantly from the current measurements 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; and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

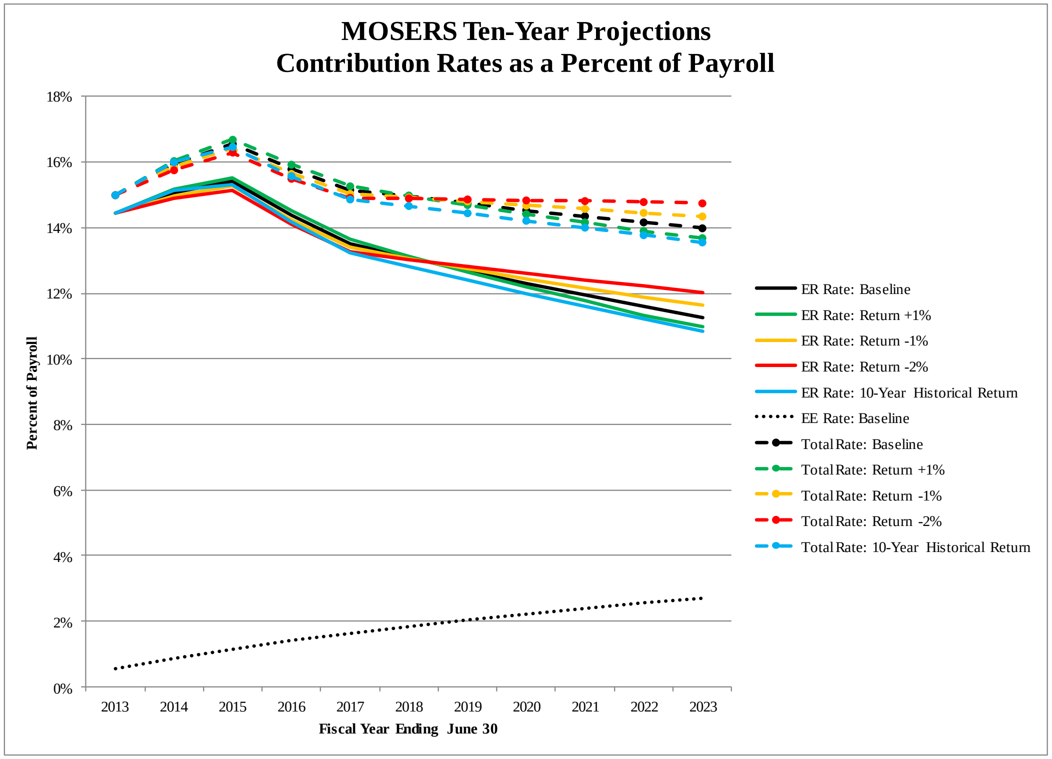
Missouri State Employees' Retirement System
JCPER Projections
as of June 30, 2011

A brief summary of the data used in this valuation follows:

Active Members	51,660
Annual Payroll ($ Thousands)	$1,875,570
Group Averages:	
- Salary	$36,306
- Age	45.9 years
- Service	11.4 years
Benefit Recipients	35,315
Annual Benefits ($ Thousands)	$525,567
Terminated Vested Members	17,712
Leave of Absence Members	262
Long-Term Disability Members	1,051

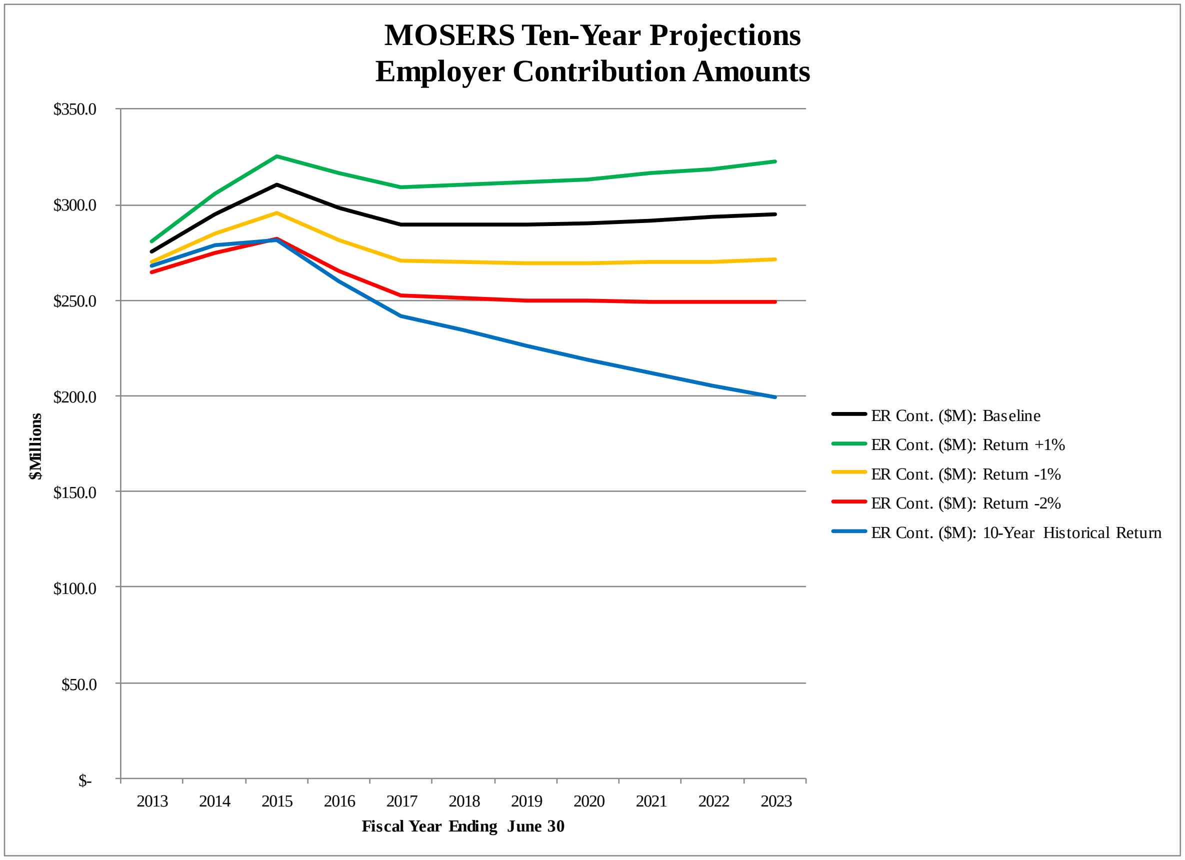
The valuation was based upon information furnished by MOSERS, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by MOSERS.

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



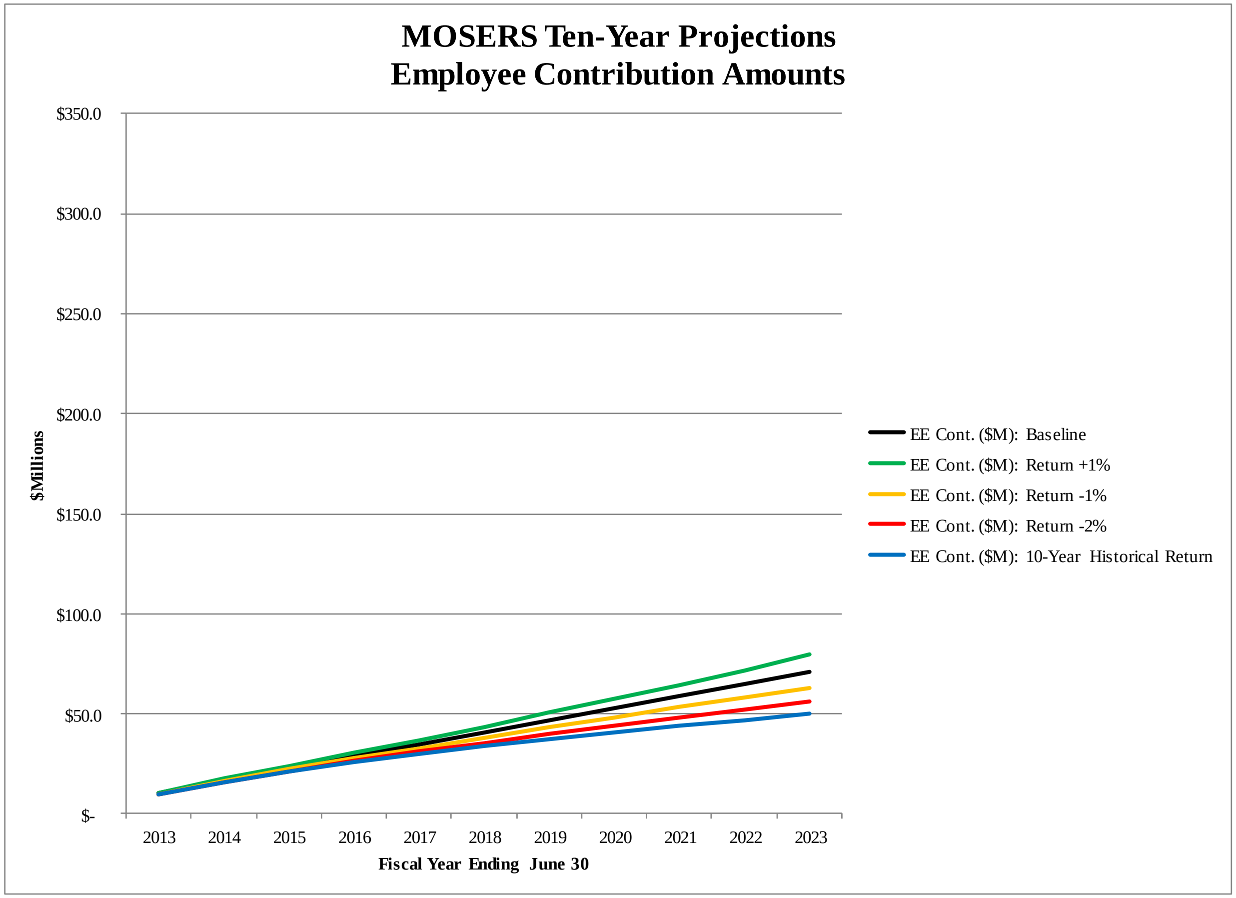
Fiscal Year Ending June 30	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
ER Rate: Baseline	14.45%	15.07%	15.40%	14.38%	13.52%	13.10%	12.69%	12.30%	11.95%	11.60%	11.27%
ER Rate: Return +1%	14.45%	15.16%	15.53%	14.52%	13.63%	13.13%	12.64%	12.18%	11.76%	11.34%	10.97%
ER Rate: Return -1%	14.45%	14.98%	15.27%	14.24%	13.40%	13.07%	12.75%	12.44%	12.17%	11.89%	11.63%
ER Rate: Return -2%	14.45%	14.88%	15.14%	14.09%	13.28%	13.04%	12.81%	12.60%	12.41%	12.22%	12.03%
ER Rate: 10-Year Historical Return	14.45%	15.12%	15.31%	14.17%	13.23%	12.81%	12.39%	11.98%	11.60%	11.21%	10.84%
EE Rate: Baseline	0.54%	0.87%	1.15%	1.40%	1.63%	1.85%	2.05%	2.23%	2.40%	2.56%	2.71%
Total Rate: Baseline	14.99%	15.94%	16.55%	15.78%	15.15%	14.95%	14.74%	14.53%	14.35%	14.16%	13.98%
Total Rate: Return +1%	14.99%	16.03%	16.68%	15.92%	15.26%	14.98%	14.69%	14.41%	14.16%	13.90%	13.68%
Total Rate: Return -1%	14.99%	15.85%	16.42%	15.64%	15.03%	14.92%	14.80%	14.67%	14.57%	14.45%	14.34%
Total Rate: Return -2%	14.99%	15.75%	16.29%	15.49%	14.91%	14.89%	14.86%	14.83%	14.81%	14.78%	14.74%
Total Rate: 10-Year Historical Return	14.99%	15.99%	16.46%	15.57%	14.86%	14.66%	14.44%	14.21%	14.00%	13.77%	13.55%

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



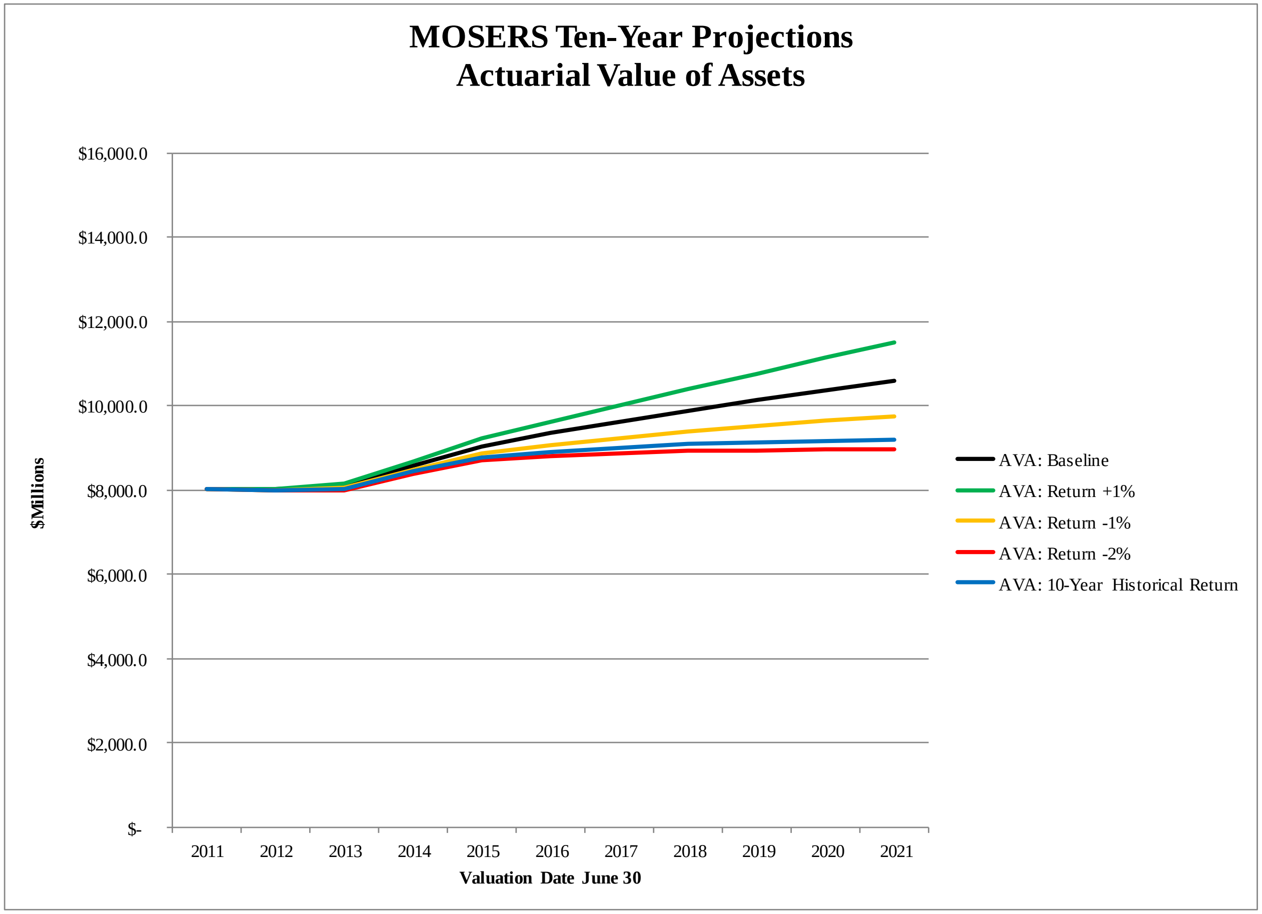
Fiscal Year Ending June 30	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
ER Cont. ($M): Baseline	$ 275.2	$ 295.0	$ 310.3	$ 298.5	$ 289.4	$ 289.5	$ 289.7	$ 290.4	$ 291.9	$ 293.4	$ 295.3
ER Cont. ($M): Return +1%	$ 280.6	$ 305.5	$ 325.2	$ 316.3	$ 309.1	$ 310.3	$ 311.6	$ 313.5	$ 316.3	$ 318.8	$ 322.5
ER Cont. ($M): Return -1%	$ 269.8	$ 284.8	$ 295.9	$ 281.5	$ 270.6	$ 269.8	$ 269.3	$ 269.1	$ 269.8	$ 270.3	$ 271.2
ER Cont. ($M): Return -2%	$ 264.5	$ 274.6	$ 282.0	$ 265.2	$ 252.8	$ 251.3	$ 250.2	$ 249.6	$ 249.5	$ 249.4	$ 249.5
ER Cont. ($M): 10-Year Historical Ret	$ 268.0	$ 279.0	$ 281.4	$ 259.7	$ 242.0	$ 234.1	$ 226.4	$ 219.1	$ 212.4	$ 205.7	$ 199.4

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



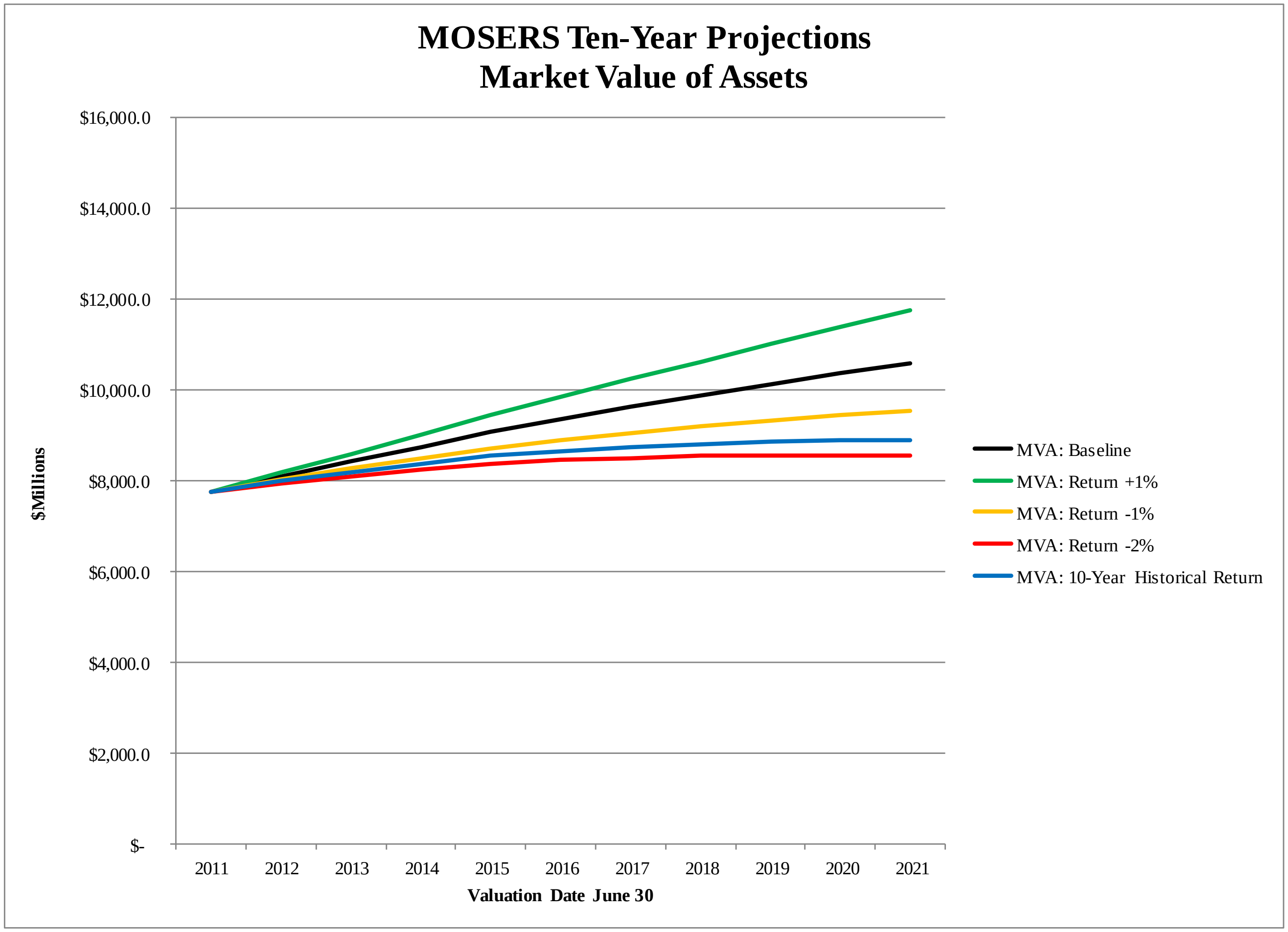
Fiscal Year Ending June 30	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
EE Cont. ($M): Baseline	$ 10.3	$ 17.0	$ 23.2	$ 29.1	$ 34.9	$ 40.9	$ 46.8	$ 52.6	$ 58.6	$ 64.7	$ 71.0
EE Cont. ($M): Return +1%	$ 10.5	$ 17.5	$ 24.1	$ 30.5	$ 37.0	$ 43.7	$ 50.5	$ 57.4	$ 64.5	$ 72.0	$ 79.7
EE Cont. ($M): Return -1%	$ 10.1	$ 16.5	$ 22.3	$ 27.7	$ 32.9	$ 38.2	$ 43.3	$ 48.2	$ 53.2	$ 58.2	$ 63.2
EE Cont. ($M): Return -2%	$ 9.9	$ 16.1	$ 21.4	$ 26.4	$ 31.0	$ 35.7	$ 40.0	$ 44.2	$ 48.2	$ 52.3	$ 56.2
EE Cont. ($M): 10-Year Historical Ret	$ 10.0	$ 16.1	$ 21.1	$ 25.7	$ 29.8	$ 33.8	$ 37.5	$ 40.8	$ 44.0	$ 47.0	$ 49.8

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



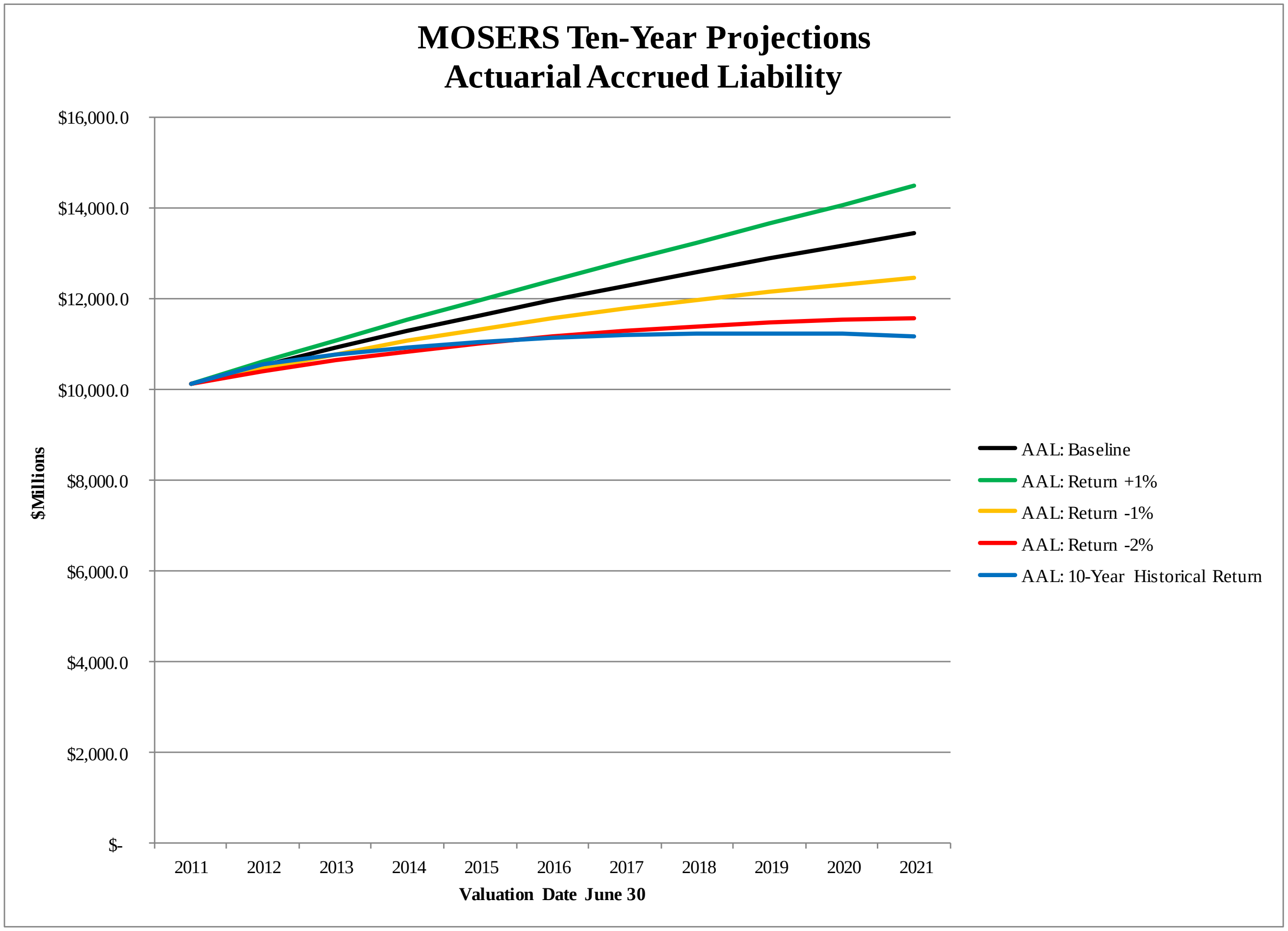
Valuation Date June 30	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
AVA: Baseline	$ 8,022.5	$ 8,029.3	$ 8,103.1	$ 8,592.0	$ 9,053.1	$ 9,349.7	$ 9,625.3	$ 9,890.1	$10,138.3	$10,372.7	$10,595.5
AVA: Return +1%	$ 8,022.5	$ 8,044.9	$ 8,152.0	$ 8,695.9	$ 9,235.1	$ 9,633.4	$10,019.9	$10,403.4	$10,776.7	$11,141.6	$11,499.1
AVA: Return -1%	$ 8,022.5	$ 8,013.7	$ 8,054.6	$ 8,489.7	$ 8,875.0	$ 9,073.9	$ 9,244.4	$ 9,398.5	$ 9,531.9	$ 9,648.6	$ 9,751.7
AVA: Return -2%	$ 8,022.5	$ 7,998.1	$ 8,006.5	$ 8,388.6	$ 8,700.5	$ 8,805.4	$ 8,876.5	$ 8,927.6	$ 8,955.8	$ 8,966.5	$ 8,963.5
AVA: 10-Year Historical Return	$ 8,022.5	$ 8,011.0	$ 8,033.2	$ 8,437.8	$ 8,776.6	$ 8,914.3	$ 9,016.3	$ 9,094.8	$ 9,146.3	$ 9,175.4	$ 9,185.9

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



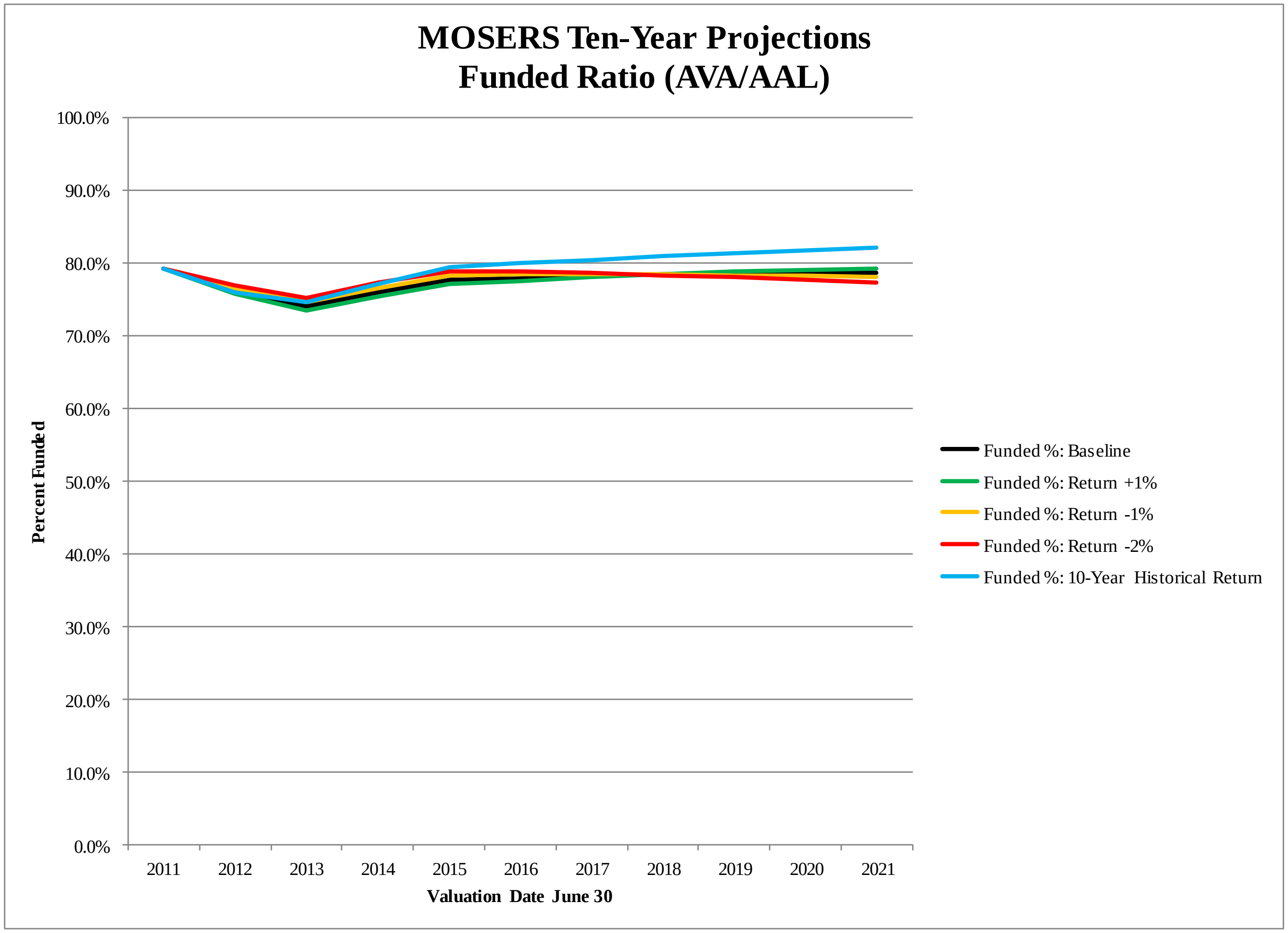
Valuation Date June 30	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
MVA: Baseline	$ 7,768.7	$ 8,103.7	$ 8,431.2	$ 8,757.1	$ 9,079.3	$ 9,372.3	$ 9,639.4	$ 9,895.9	$10,140.6	$10,374.0	$10,596.2
MVA: Return +1%	$ 7,768.7	$ 8,180.2	$ 8,593.9	$ 9,017.5	$ 9,448.0	$ 9,857.8	$10,248.6	$10,634.9	$11,014.6	$11,387.8	$11,753.6
MVA: Return -1%	$ 7,768.7	$ 8,027.2	$ 8,270.0	$ 8,501.7	$ 8,721.4	$ 8,905.8	$ 9,059.6	$ 9,199.4	$ 9,324.8	$ 9,436.8	$ 9,536.1
MVA: Return -2%	$ 7,768.7	$ 7,950.7	$ 8,110.5	$ 8,251.2	$ 8,374.0	$ 8,457.4	$ 8,508.0	$ 8,543.3	$ 8,563.6	$ 8,570.7	$ 8,565.6
MVA: 10-Year Historical Return	$ 7,768.7	$ 7,997.7	$ 8,199.4	$ 8,383.7	$ 8,546.2	$ 8,666.2	$ 8,749.8	$ 8,813.5	$ 8,857.2	$ 8,882.6	$ 8,890.6

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



Valuation Date June 30	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
AAL: Baseline	$10,123.5	$10,539.4	$10,932.7	$11,303.1	$11,652.7	$11,983.4	$12,297.1	$12,600.7	$12,893.4	$13,175.8	$13,447.2
AAL: Return +1%	$10,123.5	$10,609.2	$11,079.5	$11,535.3	$11,978.2	$12,410.1	$12,832.6	$13,252.8	$13,669.9	$14,084.5	$14,495.7
AAL: Return -1%	$10,123.5	$10,469.6	$10,786.9	$11,074.4	$11,334.6	$11,570.0	$11,782.7	$11,979.8	$12,160.6	$12,325.9	$12,475.4
AAL: Return -2%	$10,123.5	$10,399.6	$10,642.2	$10,849.1	$11,023.9	$11,169.5	$11,288.8	$11,388.8	$11,469.3	$11,531.4	$11,575.1
AAL: 10-Year Historical Return	$10,123.5	$10,551.8	$10,762.9	$10,928.9	$11,054.6	$11,144.1	$11,200.9	$11,232.5	$11,239.2	$11,222.5	$11,182.9

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



Valuation Date June 30	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Funded %: Baseline	79.2%	76.2%	74.1%	76.0%	77.7%	78.0%	78.3%	78.5%	78.6%	78.7%	78.8%
Funded %: Return +1%	79.2%	75.8%	73.6%	75.4%	77.1%	77.6%	78.1%	78.5%	78.8%	79.1%	79.3%
Funded %: Return -1%	79.2%	76.5%	74.7%	76.7%	78.3%	78.4%	78.5%	78.5%	78.4%	78.3%	78.2%
Funded %: Return -2%	79.2%	76.9%	75.2%	77.3%	78.9%	78.8%	78.6%	78.4%	78.1%	77.8%	77.4%
Funded %: 10-Year Historical Return	79.2%	75.9%	74.6%	77.2%	79.4%	80.0%	80.5%	81.0%	81.4%	81.8%	82.1%

Comments

Comment 1: The results of these projections are substantially different from the JCPER projections which only adjust the rate of return. There is a counter-intuitive increase (decrease) in the employer contribution rates in the high (low) return scenarios in the first few years of the projection. While investment return experience is projected to be better (worse) than assumed, the corresponding increase (decrease) in wage and price inflation creates short-term gains (losses) which outweigh the effect of the investment experience early on in the projection. This is because actual investment experience is different from assumed and is smoothed over five years in the valuation asset method whereas pay and COLA losses are recognized immediately. Ultimately, the investment experience carries more weight and the contribution rates revert to a more intuitive pattern of lower rates for higher rates of return experienced and vice versa.

Comment 2: The dollar amounts of the employer contributions increase more rapidly in the scenarios with higher investment return largely because of the coincident higher wage inflation. This is illustrated by the fact that the employer contribution rate for fiscal 2018 is very near 13% of payroll in each the first four scenarios, yet the contribution dollar amounts vary much more noticeably.

Comment 3: The portion of member contributions is expected to increase over the 10-year projection period as new hires with mandatory contributions replace current members with no contribution requirement. In all scenarios, the proportion of contributing members grows at the same rate resulting in the same expected member contribution rates over the 10-year period for all scenarios. The dollar amounts vary with payroll growth under the different wage inflation assumptions.

Comment 4: As with the employer contribution rates, the funded ratio exhibits the counter-intuitive pattern of declining more rapidly initially in the high return scenarios than in the lower return scenarios with the trend reversing by the end of the 10-year projection.

Comment 5: The rate of return necessary to achieve 100% funding by June 30, 2021 is not achievable if the wage and price inflation increase in lock-step with investment return. If just the rate of return experience is assumed to change from expected, a rate of return of 11.35% per year, the system is projected to reach 100% by June 30, 2021. This is 2.85% higher than expected. If wage inflation and price inflation are also 2.85% higher than expected, the losses generated by pay and COLAs moves the System farther away from 100% funded. The higher the rate of return, the larger the pay and COLA losses.

GRS

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October 17, 2011

CONFIDENTIAL

Mr. Gary W. Findlay
Executive Director
Missouri State Employees' Retirement System
907 Wildwood Drive
Jefferson City, MO 65109

Re: JCPER Projections

Dear Gary:

Enclosed are the results of projections requested by the Joint Committee on Public Employee Retirement (JCPER) for the Missouri State Employees' Retirement System. We have included the September 16, 2011 request from JCPER.

If you have any questions or comments, please contact us.

Respectfully submitted,

Brad Lee Armstrong, ASA, EA, MAAA

BLA:rmn
Enclosures

cc: Norm L. Jones, GRS
David T. Kausch, GRS

Missouri State Employees' Retirement System
JCPER Projections
as of June 30, 2011

REQUESTED BY: Mr. Gary W. Findlay, Executive Director

SUBMITTED BY: Brad L. Armstrong, ASA, EA, MAAA and David T. Kausch, FSA, EA, MAAA
Gabriel, Roeder, Smith & Company

DATE: October 17, 2011

This report presents the results of actuarial projections of the Missouri State Employees' Retirement System (MOSERS) as requested by the Joint Committee on Public Employee Retirement (JCPER). This report should not be relied on for any other purpose.

The projections are based on the valuation as of June 30, 2011. All data, plan provisions, assumptions, and methods are the same as those disclosed in the June 30, 2011 valuation except as noted. In particular:

- The assumed rate of return on investments is 8.5% per year net of investment expenses,
- The assumed rate of wage inflation is 4.0% per year,
- The assumed rate of price inflation is 3.2% per year,
- The amortization of the unfunded actuarial accrued liability is an open 30-year amortization.

The JCPER has requested 10-year projections under the following scenarios:

- Baseline: Actuarial experience will coincide with assumed experience
- Return +1%: Actual investment return (net of fees) will be 1% higher than assumed (9.5%)
- Return -1%: Actual investment return (net of fees) will be 1% lower than assumed (7.5%)
- Return -2%: Actual investment return (net of fees) will be 2% lower than assumed (6.5%)
- 10-Year Historical Return: Actual investment return (net of fees) will be based on the actual experience of MOSERS over the 10-years ending June 30, 2011. This rate was calculated as 7.06% based on the annual actuarial valuations.
- Estimate the estimated annual actual investment return (net of fees) to reach 100% funded by June 30, 2021. See Comment 5 on page 10.

The signing actuaries are independent of the plan sponsor and are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Missouri State Employees' Retirement System
JCPER Projections
as of June 30, 2011

Future actuarial measurements may differ significantly from the current measurements 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; and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

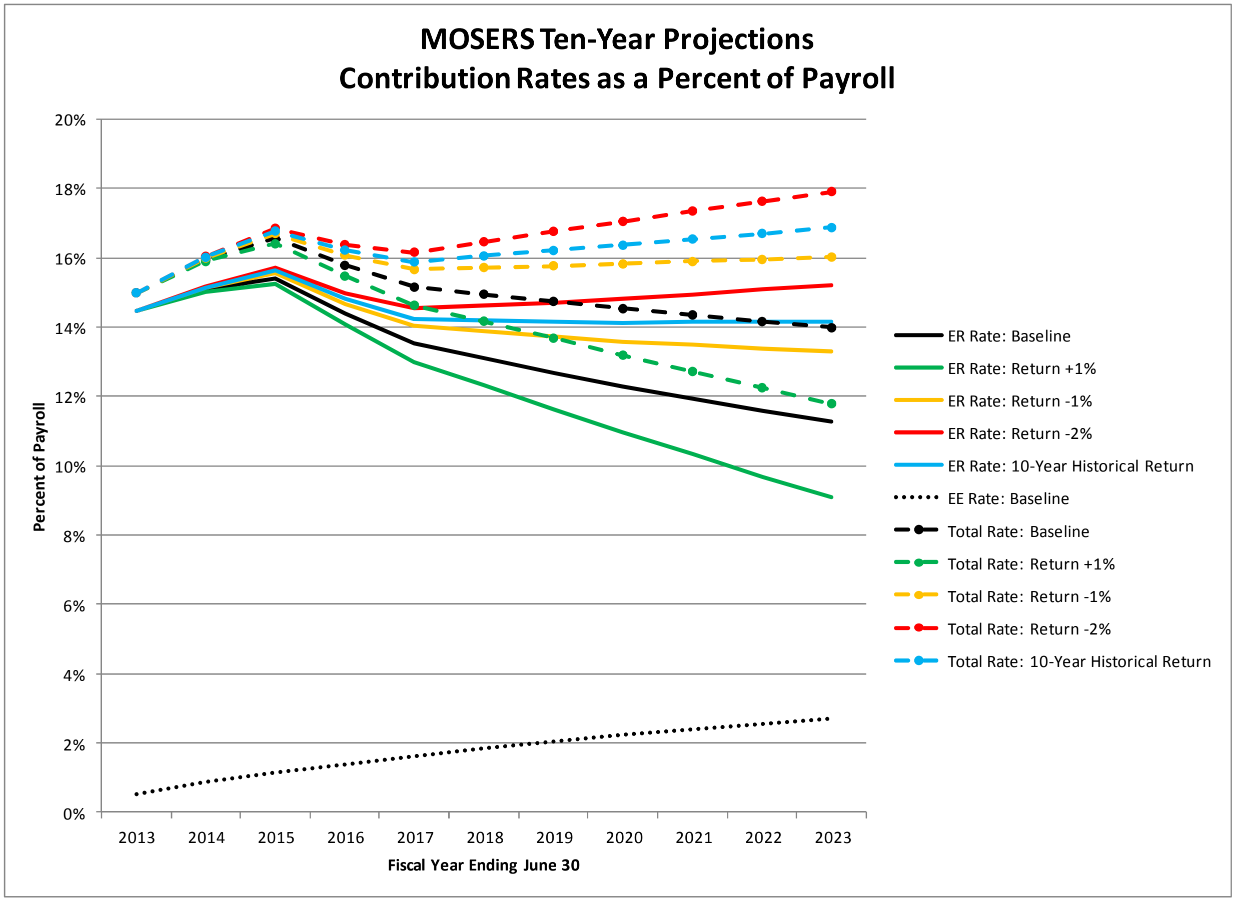
The rate of return assumption in each scenario is assumed to be net of investment expenses and administrative expenses are assumed to be contributed as part of the normal cost as in the annual actuarial valuation.

A brief summary of the data used in this valuation follows:

Active Members	51,660
Annual Payroll ($ Thousands)	$1,875,570
Group Averages:	
- Salary	$36,306
- Age	45.9 years
- Service	11.4 years
Benefit Recipients	35,315
Annual Benefits ($ Thousands)	$525,567
Terminated Vested Members	17,712
Leave of Absence Members	262
Long-Term Disability Members	1,051

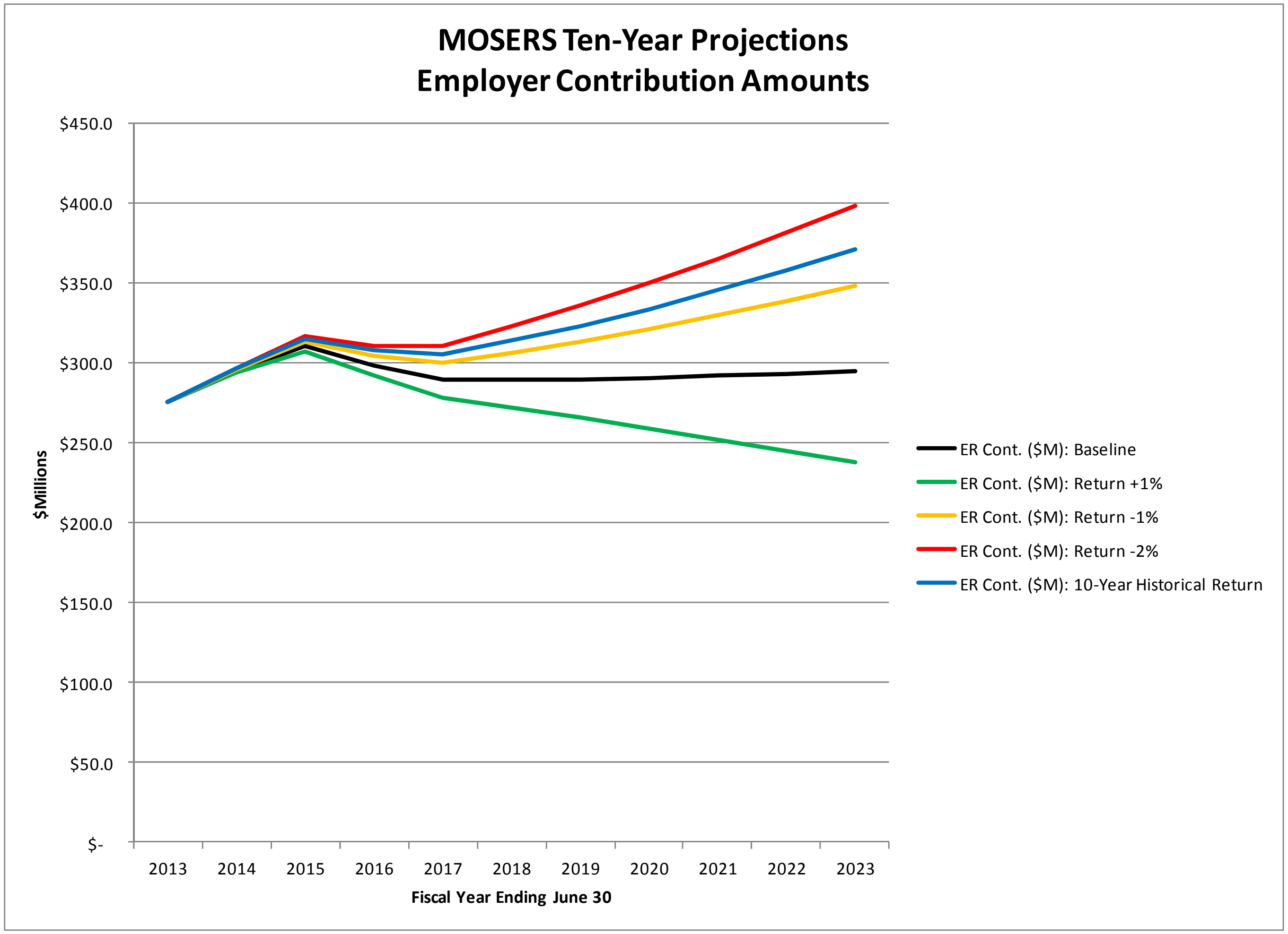
The valuation was based upon information furnished by MOSERS, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by MOSERS.

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



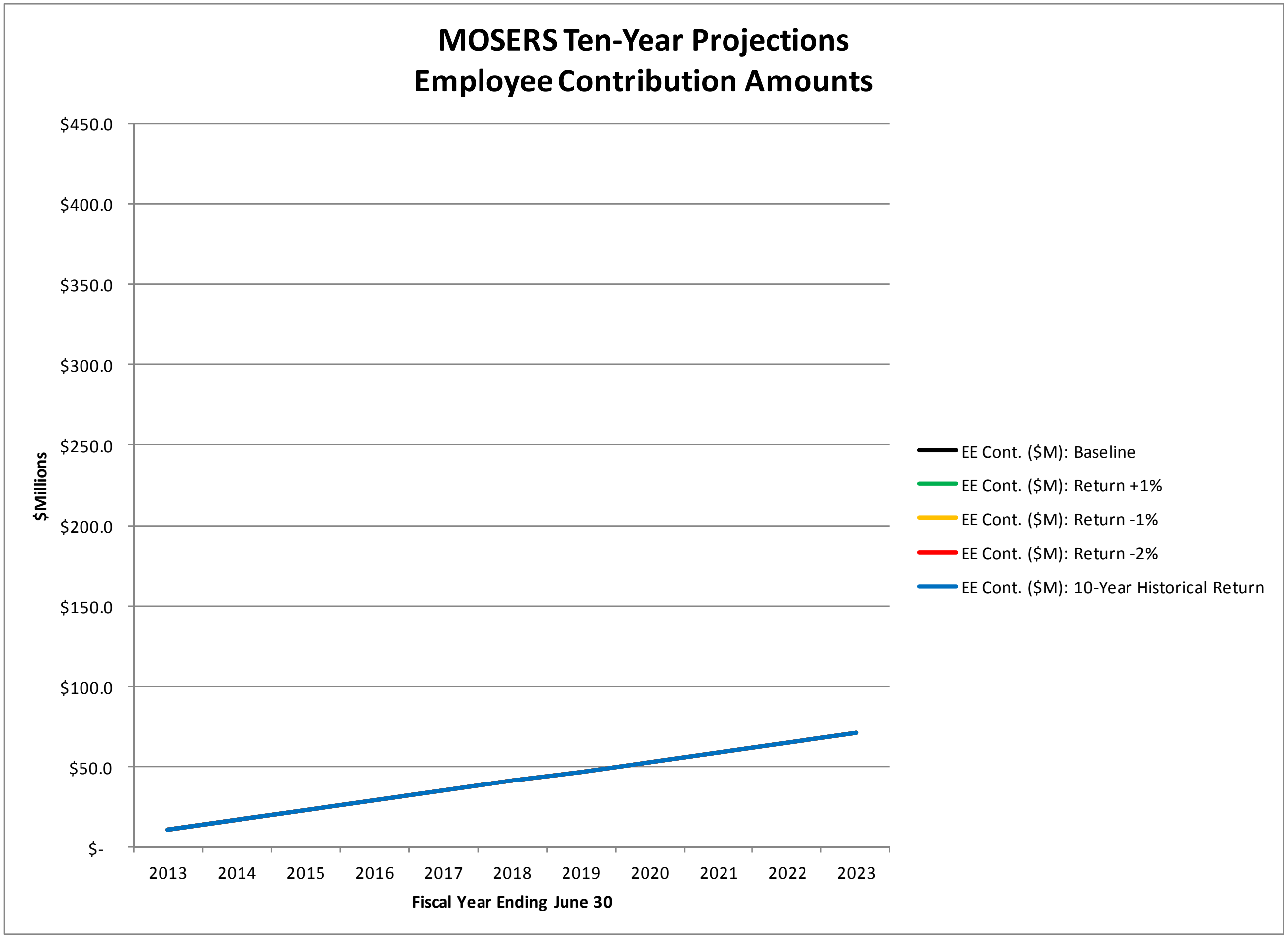
Fiscal Year Ending June 30	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
ER Rate: Baseline	14.45%	15.07%	15.40%	14.38%	13.52%	13.10%	12.69%	12.30%	11.95%	11.60%	11.27%
ER Rate: Return +1%	14.45%	15.02%	15.25%	14.07%	13.00%	12.32%	11.63%	10.96%	10.32%	9.69%	9.08%
ER Rate: Return -1%	14.45%	15.12%	15.55%	14.68%	14.03%	13.87%	13.72%	13.59%	13.49%	13.39%	13.31%
ER Rate: Return -2%	14.45%	15.17%	15.70%	14.98%	14.53%	14.61%	14.71%	14.82%	14.95%	15.07%	15.20%
ER Rate: 10-Year Historical Return	14.45%	15.14%	15.62%	14.82%	14.25%	14.20%	14.16%	14.13%	14.14%	14.14%	14.16%
EE Rate: Baseline	0.54%	0.87%	1.15%	1.40%	1.63%	1.85%	2.05%	2.23%	2.40%	2.56%	2.71%
Total Rate: Baseline	14.99%	15.94%	16.55%	15.78%	15.15%	14.95%	14.74%	14.53%	14.35%	14.16%	13.98%
Total Rate: Return +1%	14.99%	15.89%	16.40%	15.47%	14.63%	14.17%	13.68%	13.19%	12.72%	12.25%	11.79%
Total Rate: Return -1%	14.99%	15.99%	16.70%	16.08%	15.66%	15.72%	15.77%	15.82%	15.89%	15.95%	16.02%
Total Rate: Return -2%	14.99%	16.04%	16.85%	16.38%	16.16%	16.46%	16.76%	17.05%	17.35%	17.63%	17.91%
Total Rate: 10-Year Historical Return	14.99%	16.01%	16.77%	16.22%	15.88%	16.05%	16.21%	16.36%	16.54%	16.70%	16.87%

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



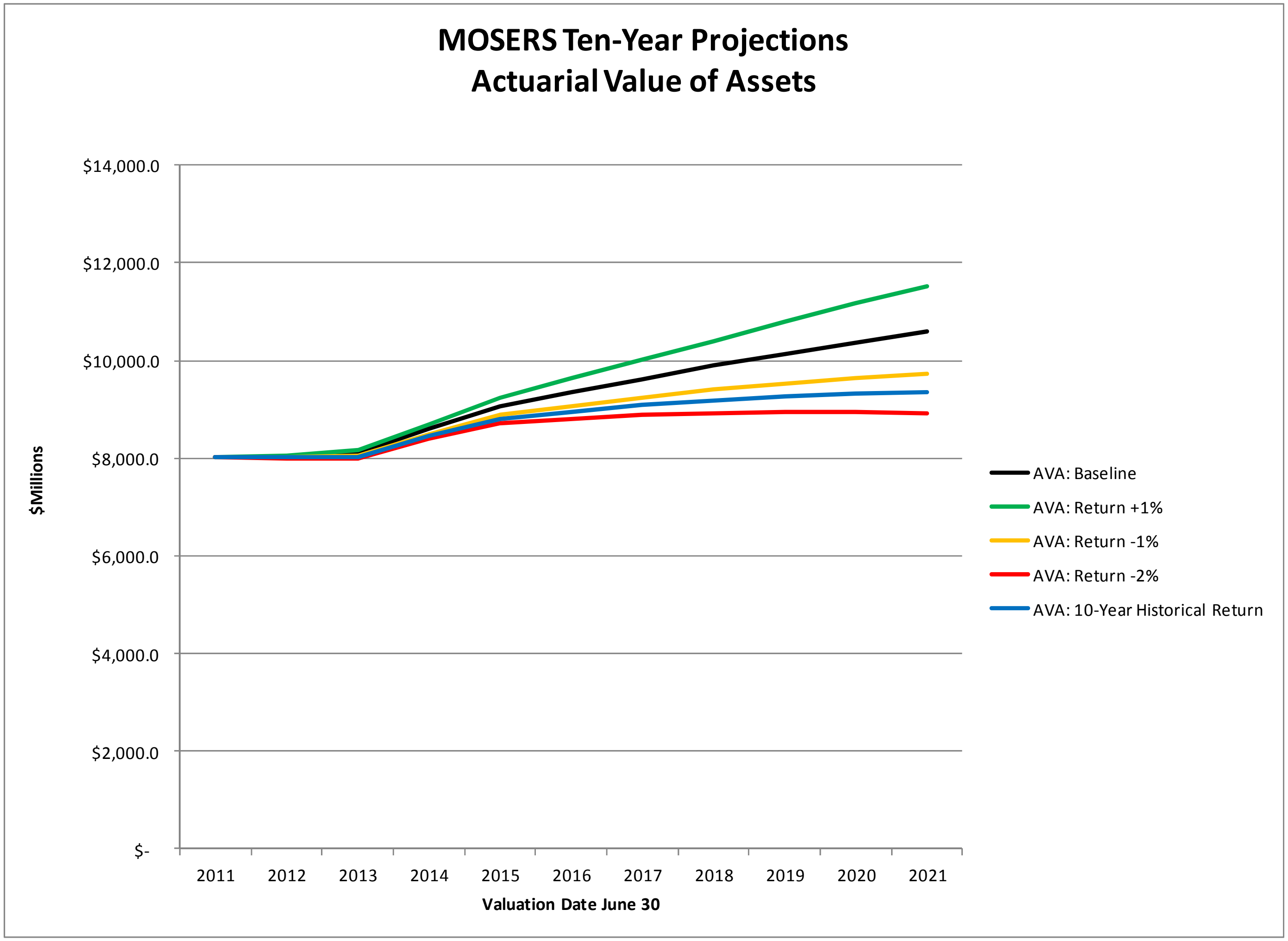
Fiscal Year Ending June 30	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
ER Cont. ($M): Baseline	$ 275.2	$ 295.0	$ 310.3	$ 298.5	$ 289.4	$ 289.5	$ 289.7	$ 290.4	$ 291.9	$ 293.4	$ 295.3
ER Cont. ($M): Return +1%	$ 275.2	$ 294.0	$ 307.2	$ 292.1	$ 278.2	$ 272.2	$ 265.5	$ 258.7	$ 252.1	$ 245.1	$ 237.9
ER Cont. ($M): Return -1%	$ 275.2	$ 296.0	$ 313.3	$ 304.7	$ 300.3	$ 306.5	$ 313.2	$ 320.8	$ 329.6	$ 338.7	$ 348.7
ER Cont. ($M): Return -2%	$ 275.2	$ 297.0	$ 316.3	$ 310.9	$ 311.0	$ 322.8	$ 335.8	$ 349.9	$ 365.2	$ 381.2	$ 398.2
ER Cont. ($M): 10-Year Historical Return	$ 275.2	$ 296.4	$ 314.7	$ 307.6	$ 305.0	$ 313.8	$ 323.3	$ 333.6	$ 345.4	$ 357.6	$ 371.0

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



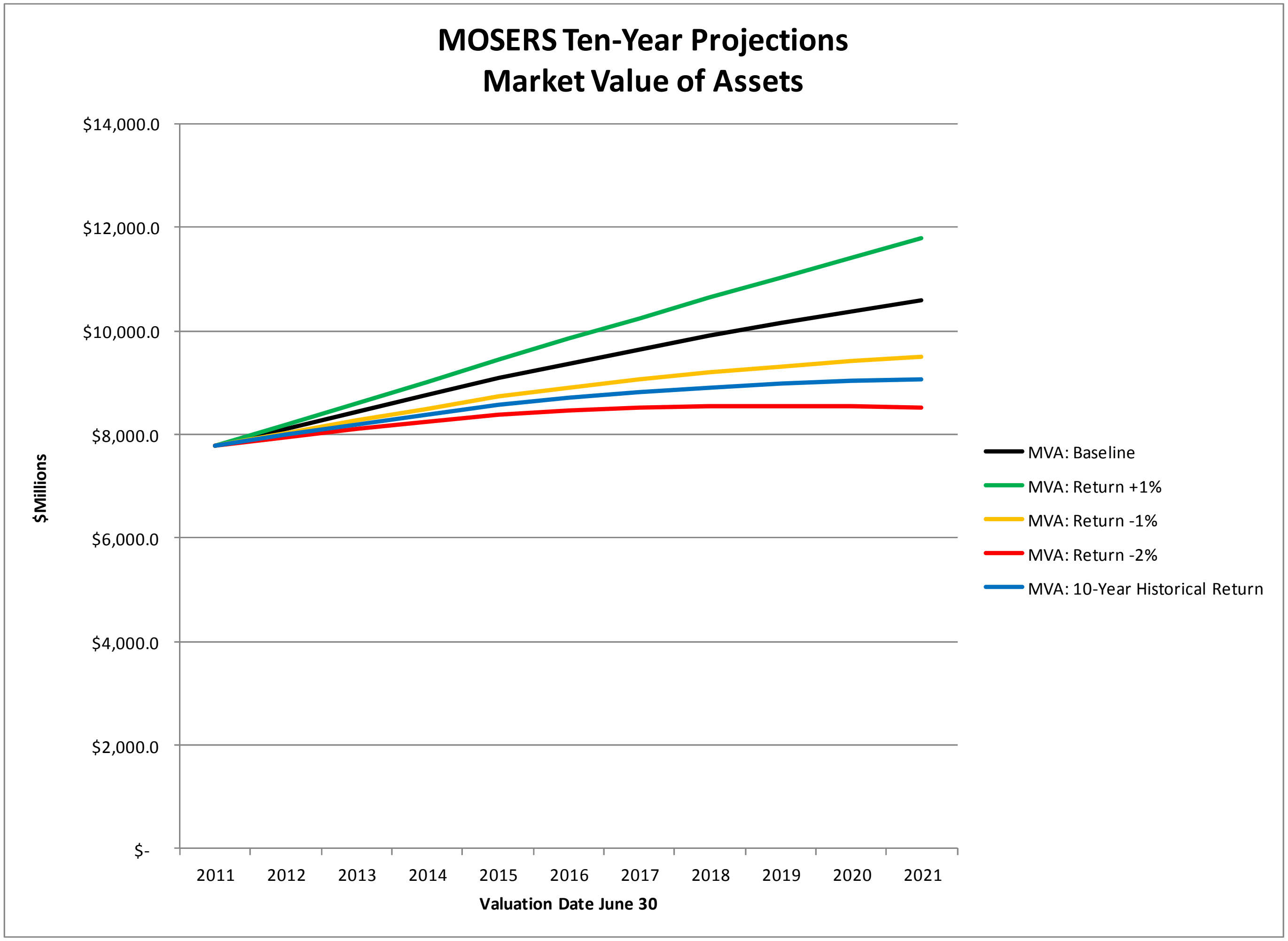
Fiscal Year Ending June 30	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
EE Cont. ($M): Baseline	$ 10.3	$ 17.0	$ 23.2	$ 29.1	$ 34.9	$ 40.9	$ 46.8	$ 52.6	$ 58.6	$ 64.7	$ 71.0
EE Cont. ($M): Return +1%	$ 10.3	$ 17.0	$ 23.2	$ 29.1	$ 34.9	$ 40.9	$ 46.8	$ 52.6	$ 58.6	$ 64.7	$ 71.0
EE Cont. ($M): Return -1%	$ 10.3	$ 17.0	$ 23.2	$ 29.1	$ 34.9	$ 40.9	$ 46.8	$ 52.6	$ 58.6	$ 64.7	$ 71.0
EE Cont. ($M): Return -2%	$ 10.3	$ 17.0	$ 23.2	$ 29.1	$ 34.9	$ 40.9	$ 46.8	$ 52.6	$ 58.6	$ 64.7	$ 71.0
EE Cont. ($M): 10-Year Historical Return	$ 10.3	$ 17.0	$ 23.2	$ 29.1	$ 34.9	$ 40.9	$ 46.8	$ 52.6	$ 58.6	$ 64.7	$ 71.0

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



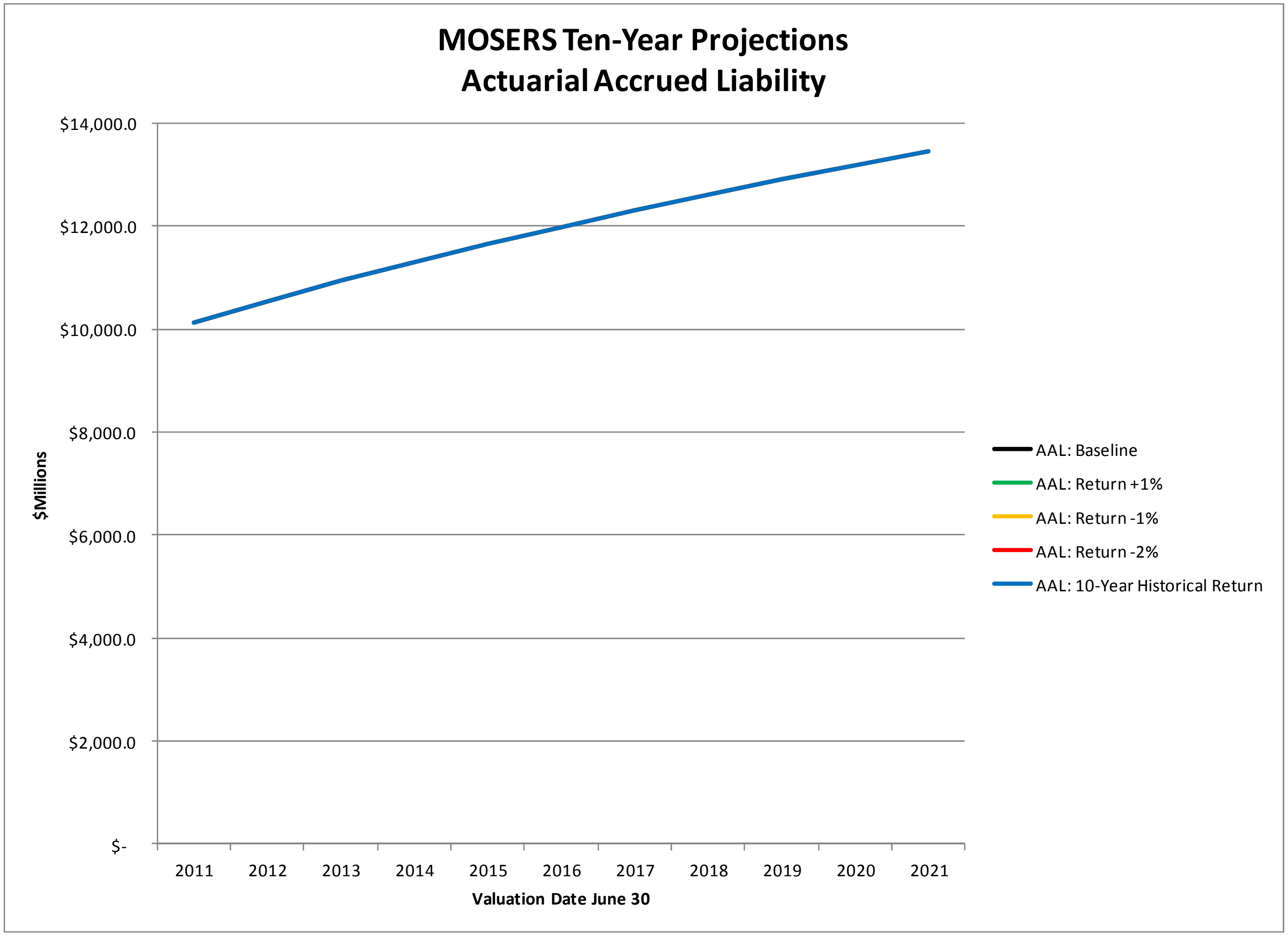
Valuation Date June 30	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
AVA: Baseline	$ 8,022.5	$ 8,029.3	$ 8,103.1	$ 8,592.0	$ 9,053.1	$ 9,349.7	$ 9,625.3	$ 9,890.1	$10,138.3	$10,372.7	$10,595.5
AVA: Return +1%	$ 8,022.5	$ 8,044.5	$ 8,151.9	$ 8,695.0	$ 9,233.0	$ 9,631.0	$10,019.3	$10,406.4	$10,785.9	$11,160.1	$11,530.8
AVA: Return -1%	$ 8,022.5	$ 8,014.1	$ 8,054.6	$ 8,490.4	$ 8,876.7	$ 9,075.5	$ 9,244.6	$ 9,395.8	$ 9,524.4	$ 9,633.9	$ 9,726.7
AVA: Return -2%	$ 8,022.5	$ 7,998.9	$ 8,006.5	$ 8,390.0	$ 8,703.8	$ 8,808.5	$ 8,876.9	$ 8,922.6	$ 8,942.3	$ 8,940.2	$ 8,919.6
AVA: 10-Year Historical Return	$ 8,022.5	$ 8,007.4	$ 8,033.4	$ 8,446.0	$ 8,800.3	$ 8,957.4	$ 9,081.4	$ 9,185.3	$ 9,264.7	$ 9,323.3	$ 9,364.2

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



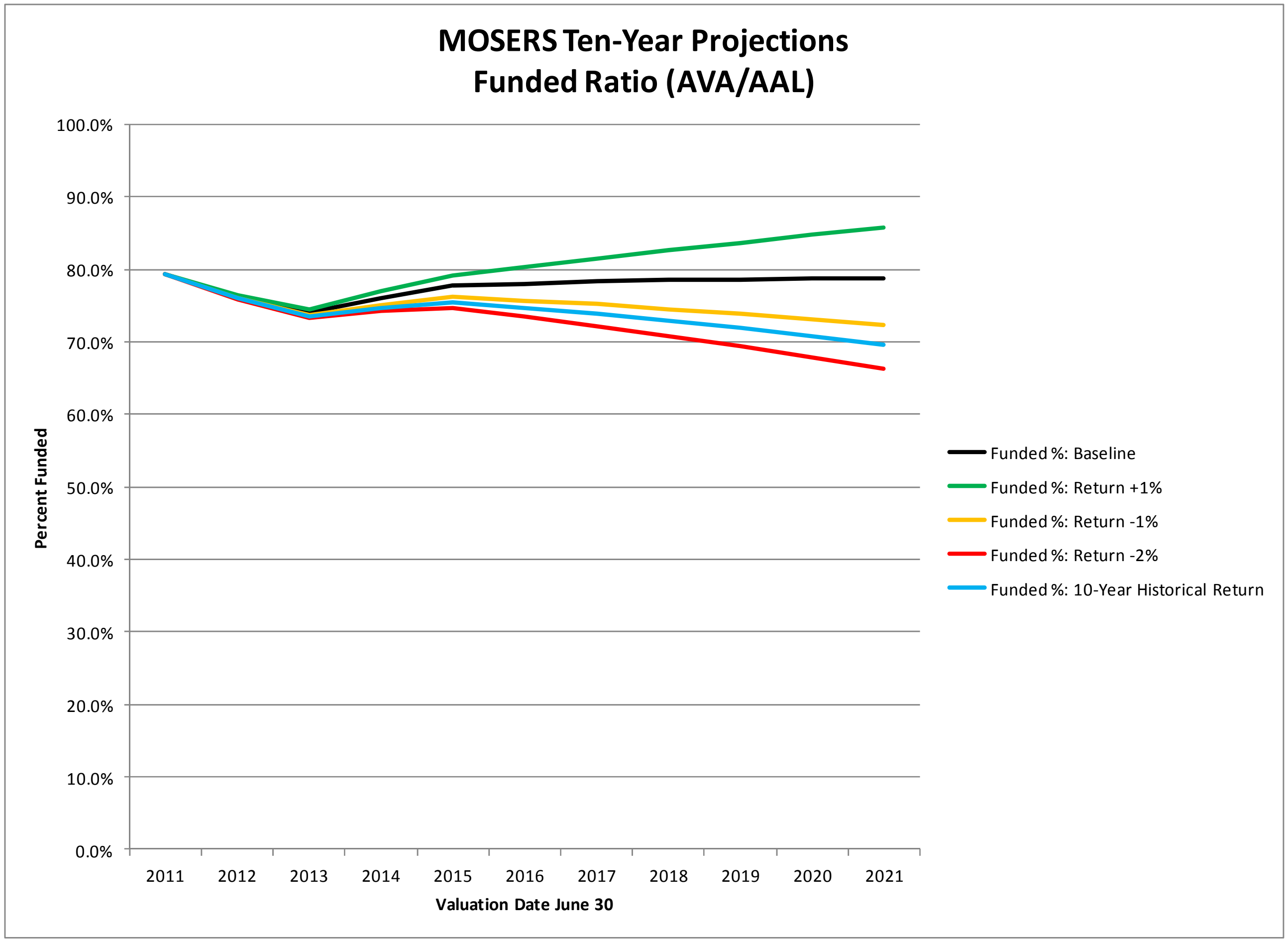
Valuation Date June 30	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
MVA: Baseline	$ 7,768.7	$ 8,103.7	$ 8,431.2	$ 8,757.1	$ 9,079.3	$ 9,372.3	$ 9,639.4	$ 9,895.9	$10,140.6	$10,374.0	$10,596.2
MVA: Return +1%	$ 7,768.7	$ 8,179.8	$ 8,593.8	$ 9,016.6	$ 9,445.9	$ 9,855.5	$10,248.0	$10,637.9	$11,023.9	$11,406.5	$11,785.5
MVA: Return -1%	$ 7,768.7	$ 8,027.6	$ 8,270.0	$ 8,502.4	$ 8,723.1	$ 8,907.4	$ 9,059.8	$ 9,196.8	$ 9,317.3	$ 9,422.2	$ 9,511.4
MVA: Return -2%	$ 7,768.7	$ 7,951.5	$ 8,110.4	$ 8,252.6	$ 8,377.2	$ 8,460.4	$ 8,508.2	$ 8,538.2	$ 8,550.1	$ 8,544.8	$ 8,522.5
MVA: 10-Year Historical Return	$ 7,768.7	$ 7,994.1	$ 8,199.6	$ 8,391.9	$ 8,569.7	$ 8,708.8	$ 8,813.9	$ 8,902.4	$ 8,973.3	$ 9,027.3	$ 9,064.9

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



Valuation Date June 30	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
AAL: Baseline	$10,123.5	$10,539.4	$10,932.7	$11,303.1	$11,652.7	$11,983.4	$12,297.1	$12,600.7	$12,893.4	$13,175.8	$13,447.2
AAL: Return +1%	$10,123.5	$10,539.4	$10,932.7	$11,303.1	$11,652.7	$11,983.4	$12,297.1	$12,600.7	$12,893.4	$13,175.8	$13,447.2
AAL: Return -1%	$10,123.5	$10,539.4	$10,932.7	$11,303.1	$11,652.7	$11,983.4	$12,297.1	$12,600.7	$12,893.4	$13,175.8	$13,447.2
AAL: Return -2%	$10,123.5	$10,539.4	$10,932.7	$11,303.1	$11,652.7	$11,983.4	$12,297.1	$12,600.7	$12,893.4	$13,175.8	$13,447.2
AAL: 10-Year Historical Return	$10,123.5	$10,539.4	$10,932.7	$11,303.1	$11,652.7	$11,983.4	$12,297.1	$12,600.7	$12,893.4	$13,175.8	$13,447.2

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011



Valuation Date June 30	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Funded %: Baseline	79.2%	76.2%	74.1%	76.0%	77.7%	78.0%	78.3%	78.5%	78.6%	78.7%	78.8%
Funded %: Return +1%	79.2%	76.3%	74.6%	76.9%	79.2%	80.4%	81.5%	82.6%	83.7%	84.7%	85.7%
Funded %: Return -1%	79.2%	76.0%	73.7%	75.1%	76.2%	75.7%	75.2%	74.6%	73.9%	73.1%	72.3%
Funded %: Return -2%	79.2%	75.9%	73.2%	74.2%	74.7%	73.5%	72.2%	70.8%	69.4%	67.9%	66.3%
Funded %: 10-Year Historical Return	79.2%	76.0%	73.5%	74.7%	75.5%	74.7%	73.9%	72.9%	71.9%	70.8%	69.6%

Missouri State Employees' Retirement System
JCPER Projections as of June 30, 2011

Comments

Comment 1: In each scenario the employer contribution rates and dollar amounts are projected to increase in the next two fiscal years followed by decreases for the following two years. These features are attributable to the past asset gains and losses yet to be recognized in the 5-year asset smoothing method. There are two years of asset losses remaining to be recognized from the fiscal years ending June 30, 2008 and June 30, 2009. In the year ending June 30, 2010 and June 30, 2011, the system experience market value of asset gains have three and four years left respectively before being fully recognized in the asset smoothing method.

Comment 2: The portion of member contributions is expected to increase over the 10-year projection period as new hires with mandatory contributions replace current members with no contribution requirement. In all scenarios, the proportion of contributing members grows at the same rate resulting in the same expected member contribution rates and dollar amounts over the 10-year period for all scenarios.

Comment 3: After the existing asset gains and losses are recognized, the employer contribution rate steadily decreases in all but one scenario. The scenario with the decreasing employer contribution rate is the case when the rate of return is 2% below the assumed rate of return. The primary factors decreasing the employer contribution rate in the other scenarios are the increase in member contributions as described in Comment 2 and the 30-year open amortization. If all actuarial assumptions are met, a 30-year open amortization will result in declining contribution rates in an underfunded plan.

Comment 4: The funded ratio in each scenario is expected to fluctuate the first four years before reaching a more stable trend. The initial fluctuation is a result of asset gains and losses as described in Comment 1. The baseline projection ultimately results in a gradually increasing funding percentage. This is consistent with a 30-year open amortization.

Comment 5: The estimated rate of return necessary to achieve 100% funding by June 30, 2021 is 11.35% per year. This assumes all other assumptions are met and employer and employee contributions are contributed on a projected schedule consistent with 11.35% annual investment return.

STATE OF MISSOURI
JOINT COMMITTEE ON
PUBLIC EMPLOYEE RETIREMENT

STATE CAPITOL, ROOM 219-A
JEFFERSON CITY, MO 65101
PHONE (573) 751-1280
FAX (573) 526-6459

September 16, 2011

Mr. Gary Findlay
Executive Director
Missouri State Employees' Retirement System
P.O. Box 209
Jefferson City, MO 65102

Dear Mr. Findlay:

At the 2011 first quarter meeting of the Joint Committee on Public Employee Retirement (JCPER), staff was directed to request Missouri's larger public pension plans to provide the Committee with ten year actuarial projections (07/01/11 - 06/30/21) using the below scenarios.

First, to establish a baseline, assume actuarial experience will coincide with assumed experience during the projection period. The next three projections include varying the actual investment return (net of fees) relative to the assumed rate as follows: +1%, -1%, and -2%. As an example, if the plan's assumed rate of return is 8%, the +1% projection would include the plan earning 9% each year over the ten year period. A fifth projection is requested based on prospectively earning the average net of fees rate of return achieved by the fund over the ten years ended June 30, 2011.

Please provide as part of these projections the resulting:

- Employer and employee contribution rates both as a percent of pay and dollar amount,
- Actuarial value of assets as well as market value of assets
- Actuarial accrued liabilities,
- Funded ratios,
- Projected inflation component used, and
- Any additional information you believe relevant.

In addition to the above request, please provide the estimated rate of return the plan would be required to annually achieve for the plan to be fully funded (100% funded ratio) by 06/30/21.

The JCPER appreciates your cooperation in this matter. We ask that this information be forwarded to our office by Friday, October 21th. If you have any questions, please do not hesitate to contact our office.

Sincerely,

Ronda Stegmann

Ronda Stegmann
Executive Director

cc: JCPER members

PSRS/PEERS
PUBLIC SCHOOL & EDUCATION EMPLOYEE
RETIREMENT SYSTEMS OF MISSOURI

M. Steve Yoakum
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Mary Hiatte
Senior Exec. Advisor
Ext. 1096

September 22, 2011

Ms. Ronda Stegmann, Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A
Jefferson City, MO 65101

Dear Ms. Stegmann:

We acknowledge receipt of your letter of September 16 requesting ten-year actuarial projections under a variety of scenarios. You indicated in your letter that you were directed to request this information from the 'larger public pension plans 'at the 2011 first quarter meeting. However, this is the first time we have been informed of such a request even though we were in attendance at the meeting and have also reviewed the minutes from that meeting. Therefore, we would ask specifically which pension plans are included in the request and how many reports have you received.

As I am sure you are aware, our annual actuarial valuation is being conducted at this time and is expected to be complete by the end of October. The request made by the Committee will require extensive actuarial work outside of the normal valuation. We have sent the request to our actuary for a proposal as to the cost of such additional research. We assume the Joint Committee intends to pay the additional costs and will inform you of the amount due prior to authorizing the additional research.

Sincerely,

Steve

M. Steve Yoakum
Executive Director

MSY/mh

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Phone (573) 634-5290 Toll Free (800) 392-6848 FAX (573) 634-5375
Website www.psrs-peers.org

Kansas City MAST Issue - Kansas City Star Article - 11/16/11

Arbitrator rules against full retroactive pensions for prior MAST service

www.kansascity.com/2011/11/15/3268315/arbitrator-rules-against-full.html