

**ILLINOIS MUNICIPAL RETIREMENT FUND**  
**ANNUAL ACTUARIAL VALUATION REPORT**  
**DECEMBER 31, 2008**

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April 14, 2009

Board of Trustees  
Illinois Municipal Retirement Fund  
Oak Brook, Illinois 60521

Ladies and Gentlemen:

The results of the **December 31, 2008 annual actuarial valuations of members** covered by the Illinois Municipal Retirement Fund are presented in this report. The purpose of the valuations, as provided by Article 7 of the Illinois Pension Code, is to measure IMRF's funding progress and to establish contribution rates for the 2010 calendar year.

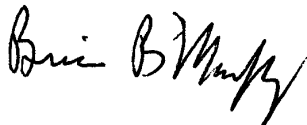
The valuations are based upon current plan provisions related to Regular Members, Sheriff's Law Enforcement Personnel (SLEP), and Elected County Officials (ECO) employment. All promised benefits are included in the actuarially calculated contribution rates. These provisions are summarized in Section B.

IMRF staff furnished the individual member statistical data required for the valuations, together with pertinent data on financial operations. Their cooperation in furnishing these materials is acknowledged with appreciation.


The actuarial assumptions used in the valuations are summarized in Section D of this report. The Board of Trustees establishes the assumptions after consulting with the actuary. They are internally consistent and are based on the results of the Triennial Experience Study covering 2005-2007 experience.

The valuations were completed by qualified actuaries in accordance with accepted actuarial procedures prescribed by the Actuarial Standards Board. Both actuaries submitting this report are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of our knowledge, this report is complete and accurate and the actuarial methods and assumptions produced results that are reasonable. It is our opinion that the Illinois Municipal Retirement Fund is in sound condition in accordance with actuarial principles of level percent of payroll financing.

Respectfully submitted,



Brian B. Murphy, FSA, EA, MAAA



Mark Buis, FSA, EA, MAAA

BBM/MB:sc

## INTRODUCTION

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IMRF is established under statutes adopted by the Illinois General Assembly. It is an agent multiple employer defined benefit pension plan that, as of December 31, 2008, serves 3,255 active plans and 420,632 active, inactive and retired persons. Since IMRF reports information to us by plan, there are cases in which a person with employment in more than one plan is counted multiple times for census counts. This produces an overstatement in the census when compared with true counts of people. Liabilities are, however, correctly calculated and apportioned among employers. This issue may affect inactive members to a greater extent than it affects others. IMRF is funded by both member and employer contributions. Members contribute at fixed rates determined by statute. Regular members contribute 4.5% of pay; SLEP members contribute 7.5%; ECO members contribute 7.5%. Participating employers make all additional contributions needed to provide benefits. Each employer contributes to a separate account within IMRF which, when combined with member contributions and investment income, will be sufficient to provide future benefits for its own employees. Employer contributions for each plan are computed each year in the actuarial valuation and consist of:

- **Normal Cost Contributions** for normal and early retirement benefits, separation benefits, permanent disability benefits, and annuity type death benefits. These contributions are the same for most employers (larger employers have the option of being individually rated).
- **Contributions for lump sum death-in-service benefits**, which are separately determined for each employer.
- **Contributions for temporary disability benefits**, which are 0.15% of payroll for each employer.
- **Contributions for 13th checks**, which are 0.62% of covered payroll for each employer.
- **Contributions for Early Retirement Incentive (ERI) unfunded liabilities** which are separately determined for each employer.
- **Contributions for other unfunded liabilities**, which are separately determined for each employer. For employers with taxing authority, unfunded liabilities are being funded over 30 remaining years. For non-taxing employers the remaining period is 10 years. Unfunded liabilities associated with the recent benefit changes for SLEP members (Public Act 94-712) are amortized over 27 years for most employers. The amortization policy is described on page D-11.

Employer contributions computed in this valuation compared with those computed in the prior valuation are shown below.

	<b>Average Employer Contribution Rates Expressed as %'s of Active Member Pays</b>		
	<b>Regular</b>	<b>SLEP</b>	<b>ECO</b>
This Valuation	11.89%	21.63%	43.57%
Prior Valuation	9.27%	18.65%	42.77%

This year's valuation results were affected by:

- Changes in the corridor for the Asset Method from 15% to 20% and changes in the amortization policy (described on page D-11.)
- Significant decline in the Market Value from the prior year.
- Changes in actuarial assumptions.
- Increases in the covered population.
- ERI liabilities.
- Three employers are individually rated (DuPage County; Union School District 46 and Peoria County). Although these employers will receive separate valuation reports, member counts, assets, and liabilities for these employers are also included in this valuation report.

The effect of the 2008 market value decline is not fully reflected in this valuation because of the asset smoothing method that is in place. Approximately \$3.6 billion of 2008 market value loss will be recognized over the next several years. As that happens, contribution rates will increase.

Section A of this report describes this year's valuation results in depth.

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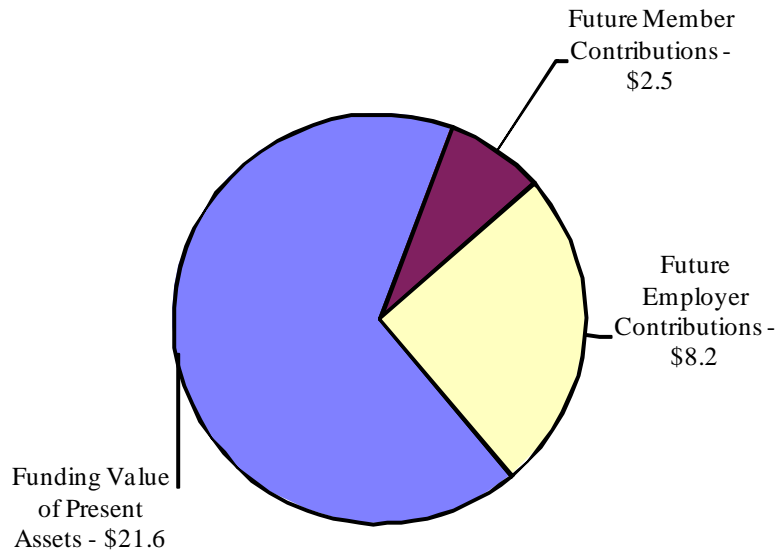
**SECTION A**  
VALUATION RESULTS

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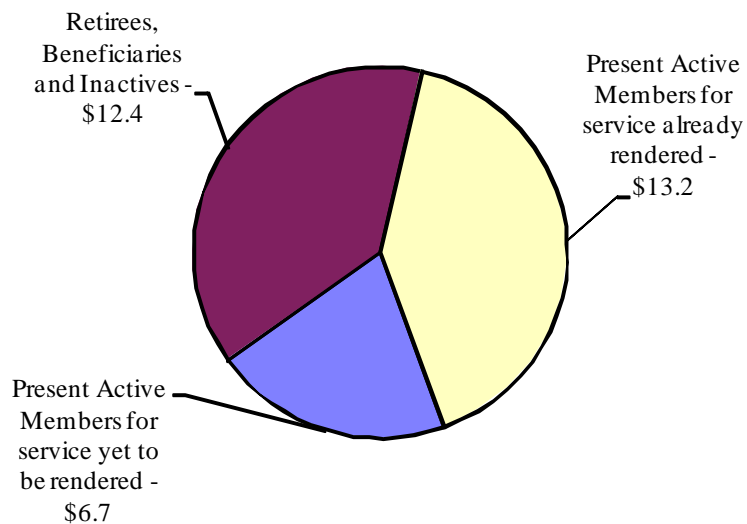
**FINANCING \$32.3 BILLION WORTH OF BENEFIT PROMISES  
TO PRESENT MEMBERS, RETIREES AND BENEFICIARIES  
DECEMBER 31, 2008  
(AMOUNTS IN \$BILLIONS)**

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**Sources of Funds**



**IMRF Obligations**



**ACTUARIAL BALANCE SHEET**  
**DECEMBER 31, 2008**

	<b>Funding Sources</b>			
	<b>Regular</b>	<b>SLEP</b>	<b>ECO</b>	<b>Total</b>
<b>Present Valuation Assets</b>				
Member Contributions	\$ 4,321,314,114	\$ 252,493,150	\$ 25,704,666	\$ 4,599,511,930
Employer Assets	3,239,856,091	71,774,911	(36,620,974)	3,275,010,028
Retired Life Assets	9,168,217,695	691,076,541	166,305,059	10,025,599,295
Market Value Adjustment	3,437,017,662	208,167,992	28,760,729	3,673,946,383
Death and Disability Reserves				26,985,876
<b>Total Present Assets</b>	<b>\$20,166,405,562</b>	<b>\$1,223,512,594</b>	<b>\$184,149,480</b>	<b>\$21,601,053,512</b>
<b>Future Assets</b>				
Member Contributions	2,324,367,954	178,164,310	11,257,321	2,513,789,585
Employer Contributions				
Normal Costs	3,898,837,774	284,350,224	25,876,826	4,209,064,824
Unfunded Liability	3,461,238,978	427,969,010	120,937,849	4,010,145,837
<b>Total Employer</b>	<b>7,360,076,752</b>	<b>712,319,234</b>	<b>146,814,675</b>	<b>8,219,210,661</b>
<b>Total Future Assets</b>	<b>9,684,444,706</b>	<b>890,483,544</b>	<b>158,071,996</b>	<b>10,733,000,246</b>
<b>Total Funding Sources</b>	<b>\$29,850,850,268</b>	<b>\$2,113,996,138</b>	<b>\$342,221,476</b>	<b>\$32,334,053,758</b>

	<b>Funding Uses</b>			
	<b>Regular</b>	<b>SLEP</b>	<b>ECO</b>	<b>Total</b>
<b>Funds Needed for</b>				
Active Members	\$18,363,460,427	\$1,359,725,168	\$150,397,476	\$19,873,583,071
Inactive Members	2,319,172,146	63,194,429	25,518,941	2,407,885,516
Retirees and Beneficiaries	9,168,217,695	691,076,541	166,305,059	10,025,599,295
Death and Disability Benefits				26,985,876
<b>Total Actuarial Present Value</b>	<b>\$29,850,850,268</b>	<b>\$2,113,996,138</b>	<b>\$342,221,476</b>	<b>\$32,334,053,758</b>



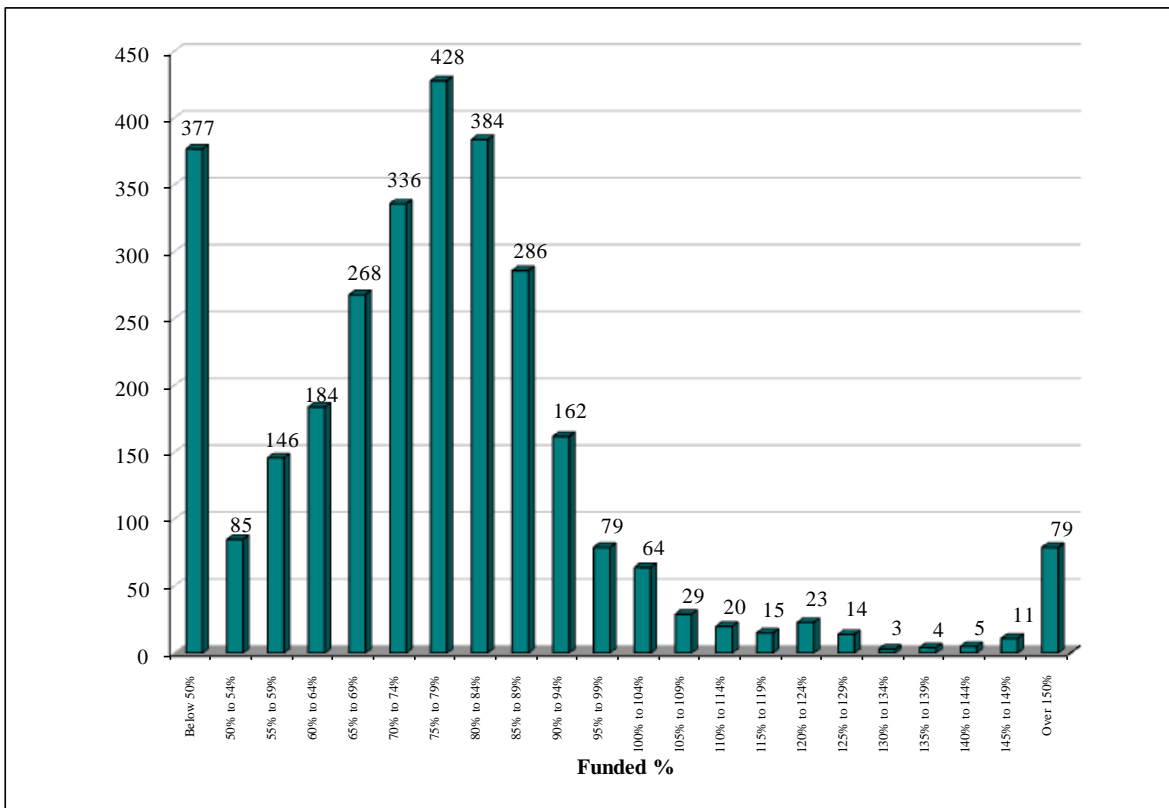
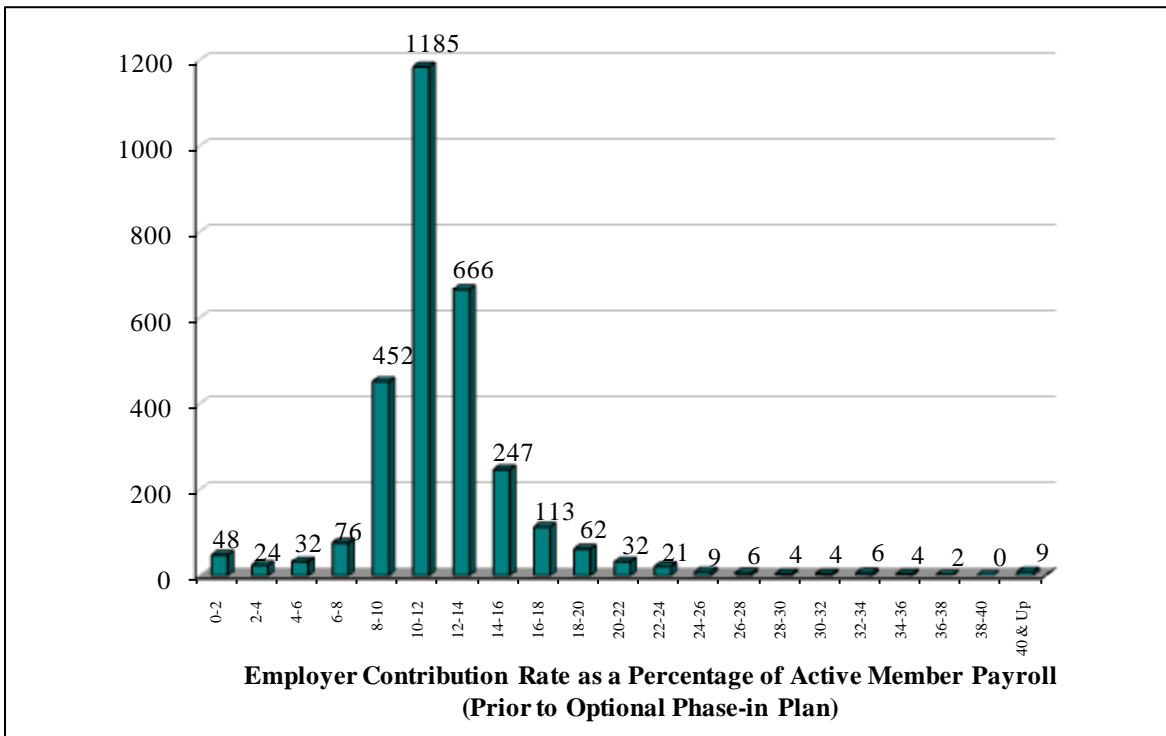
**DEVELOPMENT OF AVERAGE CONTRIBUTION RATES  
 APPLICABLE TO CALENDAR YEAR 2010  
 (RESULTS AS OF DECEMBER 31, 2008)**

	% of Active Member Pays		
	Regular	SLEP	ECO
Average Employer Contributions for Normal Cost			
Retirement	7.41 %	11.67 %	16.61 %
\$3,000 Lump Sum Death Benefit	0.04 %	0.02 %	0.07 %
Total & Permanent Disability Benefit	0.13 %	0.28 %	0.56 %
Total Normal Cost	7.58 %	11.97 %	17.24 %
Lump Sum Death-in-Service Benefits	0.17 %	0.17 %	0.17 %
Temporary Disability	0.15 %	0.15 %	0.15 %
13th Checks	0.62 %	0.62 %	0.62 %
Unfunded (Overfunded) Liabilities (30/10 years)	3.04 %	7.05 %	25.32 %
Early Retirement Incentive Liabilities	0.33 %	0.06 %	0.07 %
SLEP Supplemental Liabilities	0.00 %	1.61 %	0.00 %
<b>Total Average Employer Rate</b>	<b>11.89 %</b>	<b>21.63 %</b>	<b>43.57 %</b>
Prior Year Averages	9.27 %	18.65 %	42.77 %

Each participating employer pays the same normal cost rate (larger employers have the option of paying an individual normal cost rate) and the same rate for temporary disability benefits and 13th checks. Rates for lump sum death-in-service benefits, unfunded (overfunded) liabilities, and early retirement incentive liabilities are separately determined for each employer, and can vary widely. Because of this, the average contribution rates tell only part of the story. Pages A-4 through A-7 show the distribution of computed employer contribution rates, funding percents, and rate changes from the prior year among the 3,002 Regular plans, 186 SLEP plans and 67 ECO plans. IMRF staff reviews all of the computed rates and in some cases may make adjustments to those rates that are not reflected in this report. The rates shown in this report are prior to the optional phase-in plan where employers have the option to cap contribution rate increases at 10% of the 2009 rate. While most contribution rates are near the average, some employer rates are below 2% and some are over 40% of payroll.

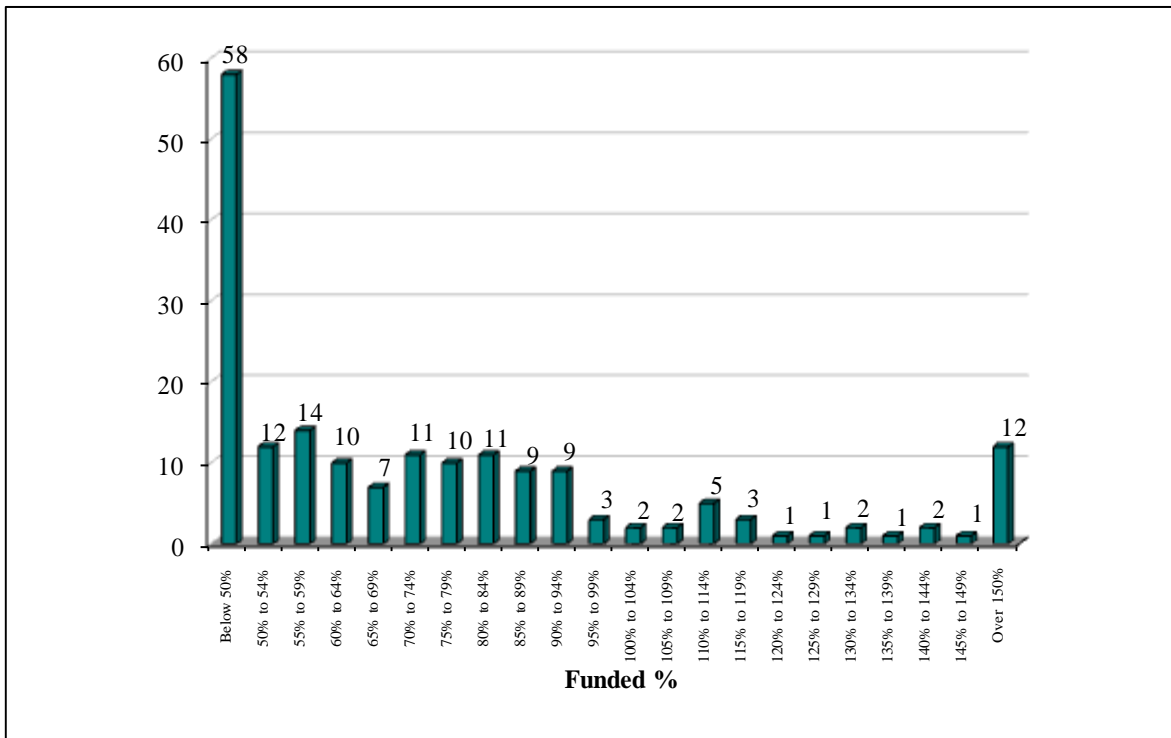
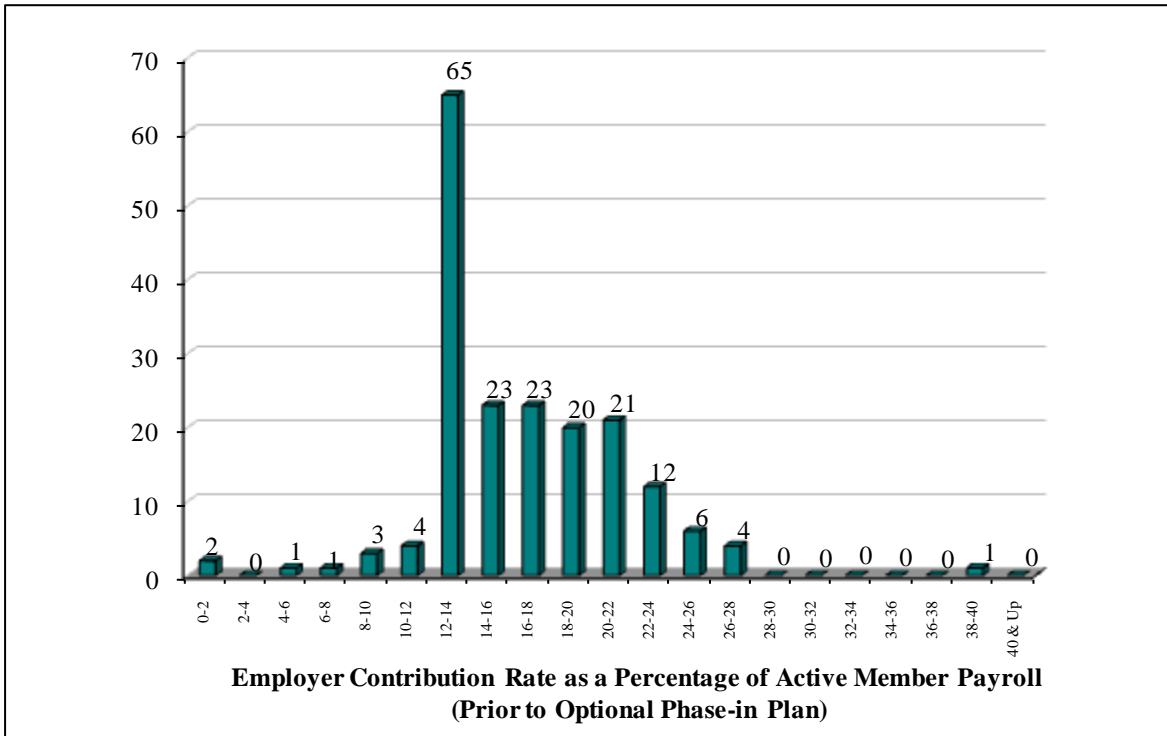
Employer contributions made during calendar year 2008 amounted to \$631 million. This compares with \$601 million in the previous year.

# EMPLOYER CONTRIBUTION RATES AND FUNDED PERCENTS 3,002 REGULAR EMPLOYERS AT DECEMBER 31, 2008

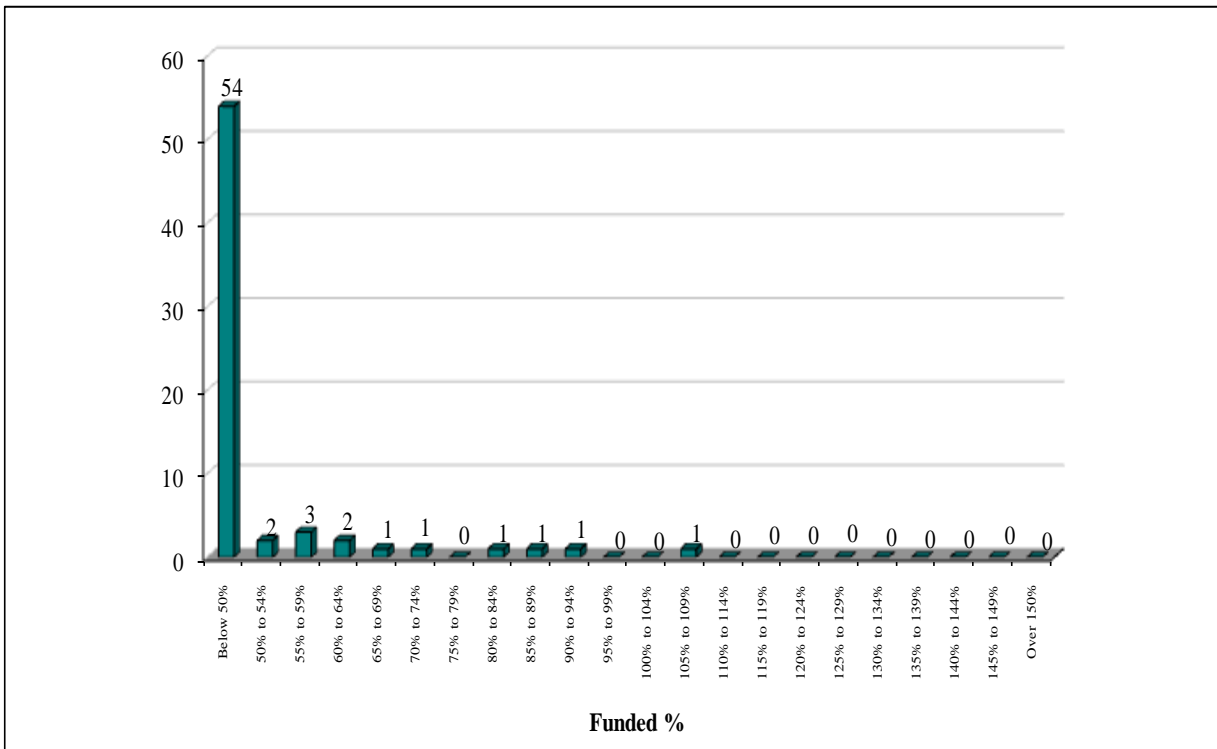
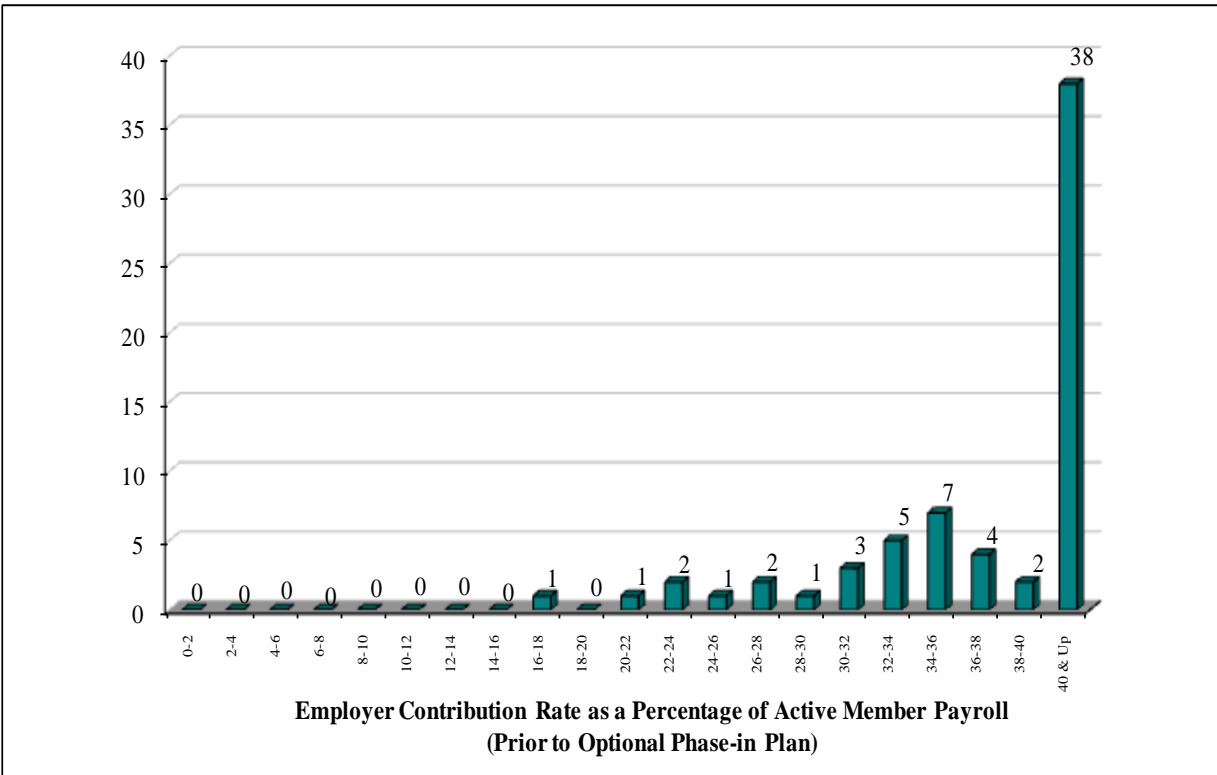


# EMPLOYER CONTRIBUTION RATES AND FUNDED PERCENTS

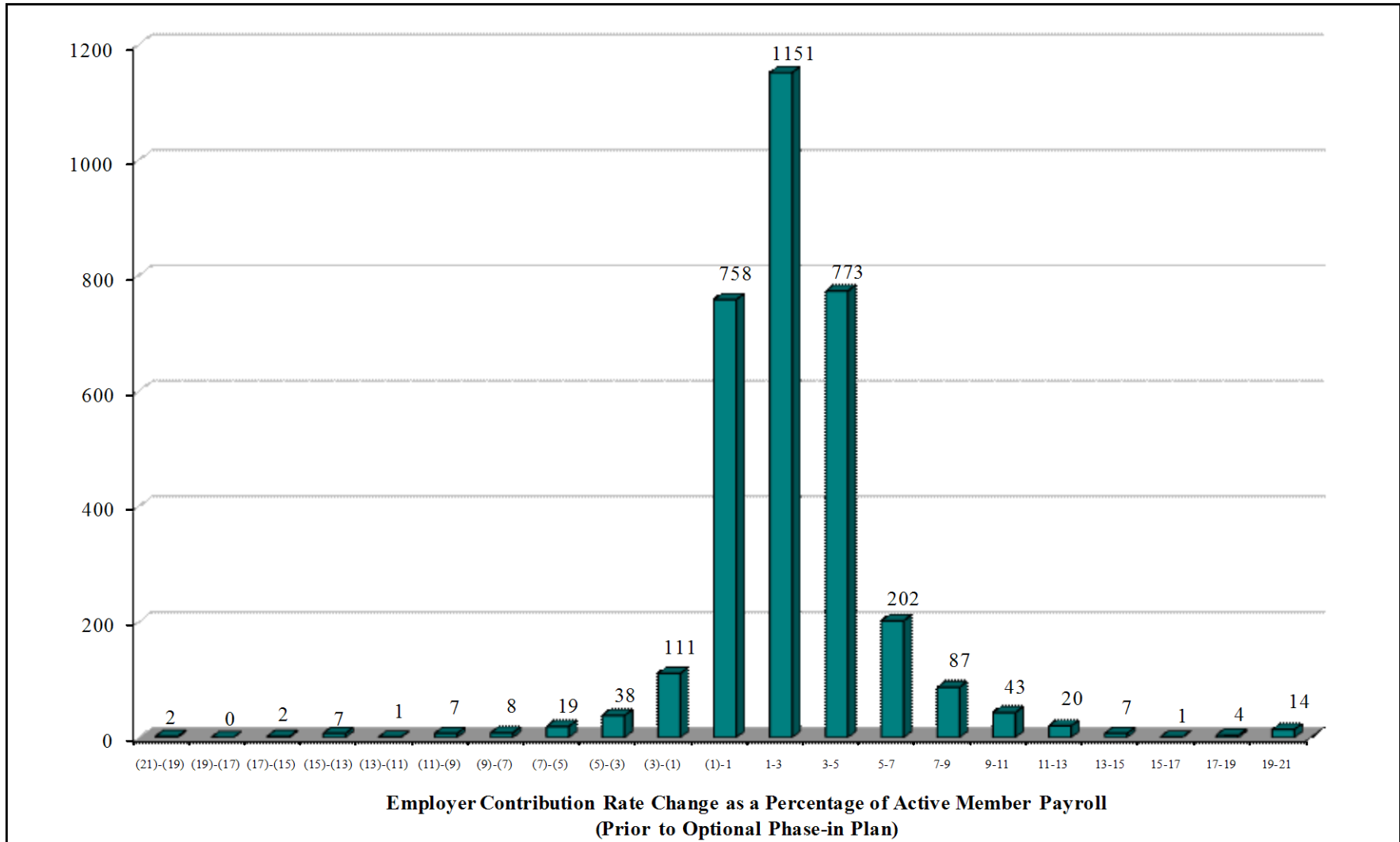
## 186 SLEP EMPLOYERS AT DECEMBER 31, 2008



# EMPLOYER CONTRIBUTION RATES AND FUNDED PERCENTS 67 ECO EMPLOYERS AT DECEMBER 31, 2008



## EMPLOYER CONTRIBUTION RATE CHANGES - 2008 ACTUARIAL VALUATIONS 3,255 EMPLOYERS



## HISTORICAL SUMMARY OF EMPLOYER RATES

Rate Applies to Calendar Year	Rate Computed as of December 31	Employer Contribution Rate Expressed as % of Active Payroll					
		Regular Members		SLEP Members		ECO Members	
		Normal Cost	Average Total Rate	Normal Cost	Average Total Rate	Normal Cost	Average Total Rate
1985	1983	3.57%	7.35%	4.92%	7.03%		
1986	1984 <sup>1</sup>	2.59%	7.52%	3.93%	6.46%		
1987	1985	2.61%	7.34%	4.28%	6.66%		
1988	1986	2.51%	7.29%	4.40%	7.11%		
1989	1987 <sup>1,2</sup>	6.94%	12.17%	7.93%	13.01%		
1990	1988	6.94%	11.79%	7.90%	12.53%		
1991	1989	6.94%	11.60%	7.88%	12.02%		
1992	1990 <sup>1</sup>	8.24%	11.89%	10.31%	14.01%		
1993	1991 <sup>1,2</sup>	7.04%	10.58%	8.49%	12.01%		
1994	1992	7.33%	10.77%	8.87%	11.82%		
1995	1993 <sup>1</sup>	7.22%	10.19%	9.50%	12.00%		
1996	1994	7.22%	9.98%	9.51%	11.97%		
1997	1995	7.27%	9.61%	9.32%	11.43%		
1998	1996 <sup>1</sup>	7.21%	9.64%	10.22%	13.94%		
1999	1997 <sup>3</sup>	7.23%	9.03%	10.62%	14.65%	21.48%	36.14%
2000	1998	7.17%	8.16%	10.42%	14.28%	23.39%	41.38%
2001	1999 <sup>1</sup>	7.41%	6.64%	12.02%	14.86%	23.85%	42.58%
2002	2000	7.62%	5.87%	11.94%	14.13%	18.05%	38.46%
2003	2001	7.66%	6.22%	11.96%	14.04%	17.95%	40.37%
2004	2002 <sup>1</sup>	7.60%	7.82%	12.47%	16.29%	18.18%	44.90%
2005	2003	7.61%	9.25%	12.48%	17.15%	18.07%	42.66%
2006	2004	7.64%	10.04%	12.56%	18.25%	18.01%	44.90%
2007	2005 <sup>1,2</sup>	7.43%	9.72%	11.66%	18.42%	17.52%	41.30%
2008	2006	7.42%	9.47%	11.63%	19.33%	16.96%	41.80%
2009	2007	7.42%	9.27%	11.63%	18.65%	17.08%	42.77%
<b>2010</b>	<b>2008<sup>1,4</sup></b>	<b>7.58%</b>	<b>11.89%</b>	<b>11.97%</b>	<b>21.63%</b>	<b>17.24%</b>	<b>43.57%</b>

1 Assumption change

2 Benefit change

3 Changed to payroll weighted average method

4 Before optional phase-in plan

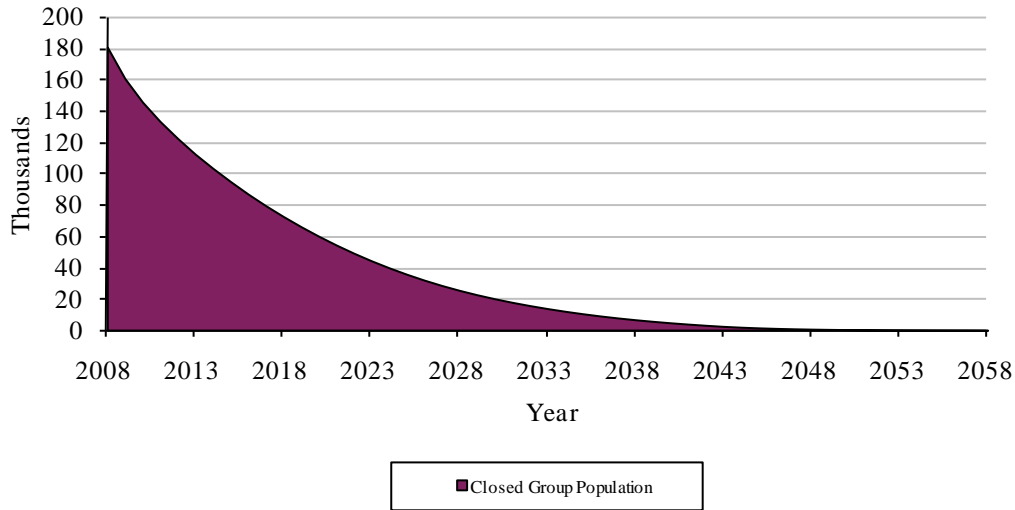
As shown above, the average employer contribution rates (prior to the optional phase-in plan) increased this year for regular, SLEP and ECO employers. This was primarily due to unfavorable investment performance. Generally, small fluctuations from year to year should be expected, for the average rate and for any large employer's rate. Small and very small employers will experience larger variations.

Most of the larger changes were for small employers (often employers covering only 1 or 2 employees), since the removal or addition of 1 employee can significantly impact the contribution rate. The actuary and IMRF staff review all of the large rate changes individually in order to determine the reasonableness of the change. In some cases, rates may be changed.

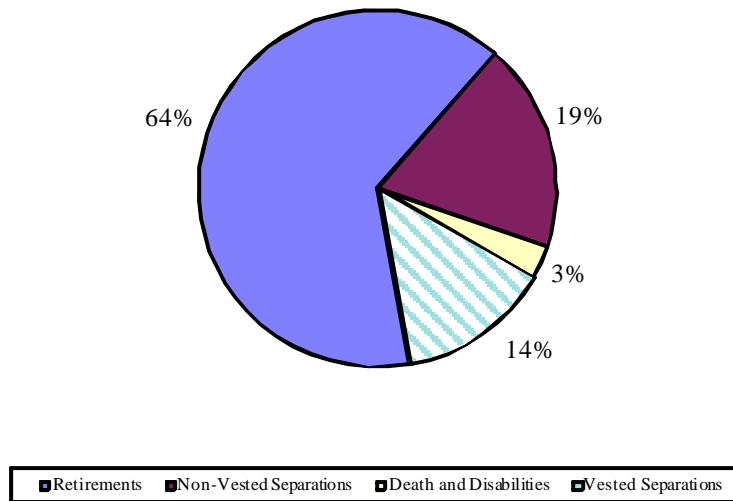
# EXPECTED DEVELOPMENT OF PRESENT POPULATION DECEMBER 31, 2008

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## Closed Group Population Projection



## Expected Terminations from Active Employment For Current Active Members



The charts above show the expected future development of the present population in simplified terms. The retirement system presently covers 180,615 active members. Eventually, 19% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for a monthly benefit. About 78% of the present population is expected to receive monthly retirement benefits either by retiring directly from active service, or by retiring from vested deferred status. Three percent of the present population is expected to become eligible for death-in-service or disability benefits. **Within 8 years, over half of the covered membership is expected to consist of new hires.**

## UNFUNDED ACTUARIAL ACCRUED LIABILITIES

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In a retirement system such as IMRF, where unfunded liabilities are being amortized as a level percent of active member payroll, unfunded liabilities are expected to rise in dollar amount for an extended period before finally beginning to decrease. This has to do with inflation and the related fact that the dollar is a yardstick whose length changes every year. The schedule below illustrates the development of the unfunded liability, based upon actuarial value of assets, during the year.

	<b>Unfunded Liability Development During</b>	
	<b>2008</b>	<b>2007</b>
Unfunded (Overfunded) Liability January 1	\$947,182,518	\$1,061,045,675
Assumed Net (Payments) Credits	(76,633,210)	(79,428,524)
Assumed Interest	68,199,579	76,635,755
Expected Unfunded Liability December 31	938,748,887	1,058,252,906
Increase/(Decrease) Due to Experience Study	(310,603,307)	0
Increase/(Decrease) Due to Benefit Changes	0	0
Loss/(Gain) Due to Investment Experience	3,331,548,206	(305,773,221)
Loss/(Gain) Due to Other Sources	50,452,051	194,702,833
Actual Unfunded Liability December 31	\$4,010,145,837	\$947,182,518

Changes due to other sources are discussed more completely in the separate Gain and Loss Analysis report.



## UNFUNDED ACTUARIAL ACCRUED LIABILITIES COMPARATIVE STATEMENT

Valuation Date	(1) Actuarial Accrued Liabilities (AAL)	(2) Valuation Assets	(3) Unfunded AAL	(4) Valuation Payroll	(5) Funded Ratio (2)/(1)	(6) Unfunded/ Payroll (3)/(4)
1984*	\$ 3,261,944,379	\$ 1,944,694,044	\$ 1,317,250,335	\$1,551,980,698	59.6%	84.9%
1985	3,609,515,653	2,248,747,268	1,360,768,385	1,660,500,587	62.3%	81.9%
1986	3,958,462,273	2,487,488,403	1,470,973,870	1,768,254,219	62.8%	83.2%
1987*#	4,516,366,654	2,757,918,614	1,758,448,040	1,869,513,284	61.1%	94.1%
1988	4,941,412,403	3,139,563,467	1,801,848,936	1,998,362,932	63.5%	90.2%
1989	5,429,420,300	3,589,732,873	1,839,687,427	2,141,472,213	66.1%	85.9%
1990*	6,234,602,259	4,468,795,967	1,765,806,292	2,303,544,906	71.7%	76.7%
1991*#	6,406,965,450	5,034,577,441	1,372,388,009	2,491,859,698	78.6%	55.1%
1992	6,954,483,358	5,615,583,858	1,338,899,500	2,634,441,716	80.7%	50.8%
1993*	7,509,766,239	6,396,329,900	1,113,436,339	2,709,280,078	85.2%	41.1%
1994	8,126,642,830	7,078,861,925	1,047,780,905	2,946,519,940	87.1%	35.6%
1995	8,823,697,487	8,034,030,783	789,666,704	3,095,916,750	91.1%	25.5%
1996*	9,778,592,519	9,076,261,663	702,330,856	3,084,086,668	92.8%	22.8%
1997	10,807,969,067	10,273,116,034	534,853,033	3,454,621,933	95.1%	15.5%
1998	11,860,879,198	11,636,495,534	224,383,665	3,696,047,942	98.1%	6.1%
1999*	13,005,023,293	13,520,192,111	(515,168,818)	3,952,129,535	104.0%	-
2000	14,153,055,774	15,169,369,271	(1,016,313,497)	4,184,702,169	107.2%	-
2001	15,318,517,575	16,305,022,254	(986,504,679)	4,503,092,615	106.4%	-
2002*	16,559,907,302	16,800,195,504	(240,288,202)	4,755,103,888	101.5%	-
2003	17,966,103,451	17,529,890,818	436,212,633	4,944,767,495	97.6%	8.8%
2004	19,424,667,016	18,315,987,910	1,108,679,106	5,161,127,432	94.3%	21.5%
2005 *#	20,815,060,842	19,698,401,285	1,116,659,557	5,374,585,943	94.6%	20.8%
2006	22,488,185,031	21,427,139,356	1,061,045,675	5,630,683,054	95.3%	18.8%
2007	24,221,543,716	23,274,361,198	947,182,518	5,931,443,117	96.1%	16.0%
2008 *	25,611,199,349	21,601,053,512	4,010,145,837	6,259,283,197	84.3%	64.1%

\* Assumption change

# Benefit change

While no one or two numeric indices can fully describe the financial condition of a retirement system, trends in both the Funded Ratio (column 5) and the Unfunded/Payroll Ratio (column 6) provide useful information. Unfunded accrued liabilities represent plan debt, while active member payroll represents the plan's capacity to service the debt. In a retirement system that is following the discipline of level percent of payroll financing, the Funded Ratio should gradually move toward 100% and the Unfunded/Payroll ratio should gradually move toward 0%.

## SHORT CONDITION TEST

If the contributions to IMRF are level in concept and soundly executed, the System will *pay all promised benefits when due -- the ultimate test of financial soundness*. Testing for level contribution rates is the *long-term test*.

A *short condition test* is one means of checking a system's progress under its funding program. In a short condition test, the plan's present assets (cash and investments) are compared with:

- 1) Member contributions on deposit;
- 2) The liabilities for future benefits to present retired lives;
- 3) The liabilities for service already rendered by active and inactive members.

In a system that has been following the discipline of level percent of payroll financing, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active and inactive members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the system.

### Short Condition Test

Calendar Year	Aggregate Actuarial Liabilities For			Actuarial Assets	Portion of Actuarial Liabilities covered by Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
	Non-Retired Contributions	Annuitants	Non-Retired Members (Employer Financed Portion)				
1992	\$1,218,238,446	\$2,421,564,751	\$3,314,680,161	\$ 5,615,583,858	100%	100%	59.6%
1993*	1,350,831,396	2,660,823,087	3,498,111,756	6,396,329,900	100%	100%	68.2%
1994	1,496,014,554	2,907,982,455	3,722,645,821	7,078,861,925	100%	100%	71.9%
1995	1,642,362,193	3,171,162,151	4,010,173,143	8,034,030,783	100%	100%	80.3%
1996*	1,782,293,677	3,588,320,471	4,407,978,361	9,076,261,663	100%	100%	84.1%
1997	1,933,512,014	3,995,946,514	4,878,510,539	10,273,116,034	100%	100%	89.0%
1998	2,086,679,470	4,485,651,306	5,288,548,422	11,636,495,534	100%	100%	95.8%
1999*	2,259,446,274	4,915,459,683	5,830,117,336	13,520,192,111	100%	100%	108.8%
2000	2,473,646,891	5,284,275,174	6,395,133,709	15,169,369,271	100%	100%	115.9%
2001	2,708,833,984	5,613,708,283	6,995,975,308	16,305,022,254	100%	100%	114.1%
2002*	2,950,041,671	6,050,882,416	7,558,983,215	16,800,195,504	100%	100%	103.2%
2003	3,186,234,066	6,674,490,186	8,105,379,199	17,529,890,818	100%	100%	94.6%
2004	3,423,785,725	7,332,542,340	8,668,338,951	18,315,987,910	100%	100%	87.2%
2005*#	3,688,148,208	7,966,135,229	9,160,777,405	19,698,401,285	100%	100%	87.8%
2006	3,960,880,175	8,652,328,762	9,874,976,094	21,427,139,356	100%	100%	89.3%
2007	4,248,399,825	9,400,832,984	10,572,310,907	23,274,361,198	100%	100%	91.0%
<b>2008 *</b>	<b>4,573,736,116</b>	<b>10,025,599,295</b>	<b>11,011,863,938</b>	<b>21,601,053,512</b>	<b>100%</b>	<b>100%</b>	<b>63.6%</b>

\* Assumption change

# Benefit change

## SHORT CONDITION TEST

### Regular Members

Calendar Year	Aggregate Actuarial Liabilities For			Actuarial Assets	Portion of Actuarial Liabilities Covered by Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
	Non-Retired Contributions	Annuitants	Non-Retired Members (Employer Financed Portion)				
2004	\$3,218,950,781	\$6,775,766,071	\$8,033,013,628	\$17,183,420,531	100%	100%	89.5%
2005*#	3,467,051,885	7,348,267,408	8,459,755,550	18,462,949,189	100%	100%	90.4%
2006	3,722,403,708	7,943,908,035	9,079,788,372	20,063,069,197	100%	100%	92.5%
2007	3,992,763,009	8,599,825,860	9,769,922,388	21,779,613,412	100%	100%	94.0%
<b>2008 *</b>	<b>4,297,097,330</b>	<b>9,168,217,695</b>	<b>10,187,007,579</b>	<b>20,191,630,667</b>	<b>100%</b>	<b>100%</b>	<b>66.0%</b>

### SLEP Members

Calendar Year	Aggregate Actuarial Liabilities For			Actuarial Assets	Portion of Actuarial Liabilities Covered by Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
	Non-Retired Contributions	Annuitants	Non-Retired Members (Employer Financed Portion)				
2004	\$186,737,395	\$475,131,592	\$516,744,548	\$1,018,431,576	100%	100%	69.0%
2005*#	200,612,275	524,514,703	591,855,568	1,106,145,236	100%	100%	64.4%
2006	215,431,613	601,939,738	673,264,887	1,216,287,901	100%	100%	59.3%
2007	230,360,204	682,656,029	671,880,227	1,330,462,724	100%	100%	62.1%
<b>2008 *</b>	<b>251,078,170</b>	<b>691,076,541</b>	<b>711,187,062</b>	<b>1,225,043,022</b>	<b>100%</b>	<b>100%</b>	<b>39.8%</b>

### ECO Members

Calendar Year	Aggregate Actuarial Liabilities For			Actuarial Assets	Portion of Actuarial Liabilities Covered by Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
	Non-Retired Contributions	Annuitants	Non-Retired Members (Employer Financed Portion)				
2004	\$18,097,549	\$81,644,677	\$118,580,776	\$114,135,803	100%	100%	12.1%
2005*#	20,484,049	93,353,118	109,166,286	129,306,860	100%	100%	14.2%
2006	23,044,854	106,480,989	121,922,835	147,782,258	100%	100%	15.0%
2007	25,276,522	118,351,095	130,508,292	164,285,062	100%	100%	15.8%
<b>2008 *</b>	<b>25,560,616</b>	<b>166,305,059</b>	<b>113,669,297</b>	<b>184,379,823</b>	<b>100%</b>	<b>95%</b>	<b>0.0%</b>

\* Assumption change

# Benefit change

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**SECTION B**

**SUMMARY OF BENEFIT PROVISIONS  
AND VALUATION DATA**

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# SUMMARY OF BENEFITS AND CONDITIONS EVALUATED

## DECEMBER 31, 2008

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### Participating Employers

All counties and school districts, plus cities and villages and incorporated towns with a population of 5,000 or more (except certain governmental entities specifically excluded by the Pension Code) are required to participate. Other local government units may elect to participate.

### Membership

All appointed employees of a participating employer who are employed in a position normally requiring 600 hours (1,000 hours for certain employees hired after 1981) or more of work in a year are required to participate. Elected officials and hospital employees who satisfy requirements may also participate.

### Final Rate of Earnings (FRE)

**Retirement and Survivor Annuities: Regular and SLEP Members:** The average of earnings during the 48 consecutive month period within the last 10 years of IMRF service in which earnings were the highest. Earnings considered for each of the last 3 months cannot exceed the highest earnings in any of the first 45 months by more than 25%. Minimum FRE is \$125 per month. **ECO Members:** Original ECO Plan: Salary rate at date of termination or retirement. Revised Plan: Average of last four years for each office held.

**Death Benefits:** The greater of the above amount or the average of earnings over the last 12 months of service.

**Disability Benefits:** The average of earnings over the last 12 months of service (for ECO members, annualized salary on last day of ECO participation).

### Normal Retirement Pension Eligibility

**Regular Members:** Age 60 with 8 or more years of service or 35 or more years of service and age 55 or greater.

**SLEP Members:** Age 50 with 20 or more years of SLEP service.

**ECO Regular Members:** Age 55 with 8 or more years of service.

**ECO SLEP Members:** Age 50 with 20 or more years of SLEP service or age 55 with 8 or more years of any service.

### Normal Retirement Pension Amount

**Regular Members:** 1-2/3% of FRE times each of the first 15 years of service, plus 2% of FRE times service over 15 years. The maximum formula pension is 75% of FRE.

**SLEP Members:** 2-1/2% of FRE times all years of service. The maximum formula pension is 80% of FRE.

**ECO Members:** 3% of FRE times each of the first 8 years of service, plus 4% of FRE times each of the next 4 years of service, plus 5% of FRE times service over 12 years. For original ECO participants, one day of ECO service is required to qualify for this formula. For participants in the Revised Plan, 8 years of service credit per office is required to qualify for the ECO formula for that office. The maximum formula pension is 80% of FRE.

**Money Purchase Minimum Pension:** The amount that may be purchased by 2.4 times the member's accumulated contributions, including interest at 7.5%.

### Early Retirement (not applicable to SLEP optional benefits or to ECO service)

**Eligibility:** Attainment of age 55 with 8 or more years of service.

**Amount:** Normal pension amount reduced by 1/4% times the lesser of (i) the number of months to the member's attainment of age 60, or (ii) the number of months actual service is less than 35 years.

**Money Purchase Minimum Pension:** Same as normal retirement (see above).

# SUMMARY OF BENEFITS AND CONDITIONS EVALUATED

## DECEMBER 31, 2008

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### Early Retirement Incentive Program (ERI)

**Eligibility:** Attainment of age 50 with 20 or more years of service. The employer must adopt the program and members' retirement dates must be no later than 12 months after employer adoption.

**Amount:** Members may purchase from one month to five additional years of service. The service credit will be added to member's age (for eligibility purposes) and to service to determine the monthly benefit.

**Member Cost:** For each year of service credit purchased, members pay the current member contribution rate multiplied by the highest 12 consecutive months of salary (within ERI period).

### Vesting

A member with 8 or more years of service who leaves employment before being eligible for an immediate pension who does not withdraw accumulated contributions will be entitled to a deferred pension at pension eligibility. The amount of the pension will be based on service and FRE at time of employment termination, but will include the effect, if any, of the money purchase minimum pension. (These provisions apply to both ECO and non-ECO members.) A SLEP member with 20 or more years of service who leaves employment before being eligible for an immediate pension who does not withdraw accumulated contributions will be entitled to a deferred SLEP pension at pension eligibility otherwise they will only be entitled to a regular deferred pension at pension eligibility. A revised ECO member with 8 or more years of service with the same governmental entity who leaves employment before being eligible for an immediate pension who does not withdraw accumulated contributions will be entitled to an ECO deferred pension at pension eligibility otherwise they will only be entitled to a regular deferred pension at pension eligibility.

### Surviving Spouse Pension

#### *Regular and SLEP*

**Eligibility:** Married for one year prior to death of an active member or date of termination of service for a retiree or inactive member with 8 or more years of service.

**Amount:** 50% of the pension otherwise payable to the deceased member. In addition to this monthly amount, a lump sum benefit of \$3,000 is payable.

#### *ECO*

**Eligibility:** Married for one year prior to death of an active member or date of termination of service for a retiree or inactive member with 8 or more years of service.

**Amount:** 66 2/3% of the pension otherwise payable to the deceased member, beginning at age 50 (immediately if there are minor children).

**Minimum:** 10% of salary (30% with one minor child, 40% with two minor children, and 50% with three minor children).

If death occurs after termination of service, the total payment to the spouse and children is limited to 75% of the member's pension.

### Lump Sum Death-In-Service Benefit

**Less than 1 year of service:** Member contributions plus interest.

**More than 1 year of service** (or death in the line of duty): The sum of one times FRE and member contributions with interest.

These benefits are payable only if no surviving spouse pension is payable.

### Lump Sum Death-After Retirement Benefit

\$3,000. If there is no surviving spouse, any remainder of the deceased member's contributions and interest not paid out as a pension is also payable.

# SUMMARY OF BENEFITS AND CONDITIONS EVALUATED

## DECEMBER 31, 2008

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### Children's Benefits

#### *Regular and SLEP*

**Eligibility:** Death of a member eligible to retire who has no surviving spouse, or death of a surviving spouse's beneficiary.

**Amount:** Equal to spouse's pension, divided equally among surviving children and payable to age 18.

#### *ECO*

**Eligibility:** Death of a member with minor children and no eligible spouse.

**Amount:** 20% of salary to each child, to a maximum of 50% of salary, payable to age 18.

If death occurs after termination of service, the total payment to the surviving spouse and children is limited to 75% of the member's pension.

### Temporary Disability

**Eligibility:** Temporary disability for at least 30 days after one year of service and prior to age 70. Pre-existing conditions are excluded if service is under 5 years.

**Amount:** 50% of FRE less amounts payable from Social Security or Worker's Compensation.

**Duration:** Period equal to 1/2 credited service, not to exceed 30 months.

### Total and Permanent Disability

#### *Regular and SLEP*

**Eligibility:** Payable after temporary disability period to members who are totally and permanently disabled and unable to engage in any gainful occupation.

**Amount:** 50% of FRE less amounts payable by Social Security.

**Duration:** To the later of (i) Social Security age, or (ii) age at disability plus 5 years.

#### *ECO*

**Eligibility:** Payable to members who are totally and permanently disabled from performing the duties of their office while in service as an elected county officer.

**Amount:** The greater of 50% of FRE or the alternate formula pension amount earned to date.

**Duration:** To the later of (i) Social Security age, or (ii) age at disability plus 5 years.

IMRF service is credited during the disability period, except that under the revised ECO plan, the service that will be credited will be Regular or SLEP as appropriate, but not ECO.

### Post-Retirement Increases

Pensions are increased by 3% of their original amount on January 1 each year. The first increase is prorated by the number of months of retirement. Disability pensions are not increased until the January 1st following 30 months of disability. These provisions apply to both ECO and non-ECO members.

### 13th Payment

A lump sum payment is made to eligible retirees and surviving spouses on July 1st. The amount depends on funds available from a designated employer contribution of 0.62% of payroll. No specific 13<sup>th</sup> check amount is promised to any individual.

# SUMMARY OF BENEFITS AND CONDITIONS EVALUATED

## DECEMBER 31, 2008

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### Member Contributions

**Regular Members:** 4 1/2% of earnings (3-3/4% base plus 3/4% for survivor benefits).

**SLEP Members:** 7 1/2% of earnings (6-3/4% base plus 3/4% for survivor benefits).

**ECO Members:** (a) Past service: Regular members pay an additional 3% of the salary for the applicable period plus interest from the date of service to the payment date. SLEP members pay an additional 1% of salary for the applicable period plus interest from the date of service to the payment date. (The total rate is 7 1/2% for each past year purchased plus interest.)

(b) Future service: 7 1/2% of earnings during the period of elective participant. (Note: Continued classification as an ECO member is not a condition for continued elective participation in the ECO program for participants in the original ECO Plan.)

**Voluntary Additional:** Up to 10% of earnings.

**Refunds:** If membership terminates without eligibility for any other benefit, a refund of base (including SLEP and ECO increments) and survivor contributions without interest plus accumulated voluntary additional contributions with interest is payable. If membership terminates with eligibility for a deferred pension, a lump sum refund of base and survivor contributions without interest plus accumulated voluntary additional contributions with interest is payable if they terminate before age 55 otherwise a separation refund may be received if the member rolls over the refund into another defined benefit retirement plan for the purpose of purchasing service credit. Upon retirement of a member who does not have an eligible spouse, survivor benefit contributions are refunded with interest. If, upon a member's death, all of the member contributions with interest were not paid as a refund or pension, the beneficiary will receive any balance in the member's account.



## SUMMARY OF COVERED POPULATION DATA DECEMBER 31, 2008

Data on persons covered by IMRF were reported to the Actuary as follows:

Member Status	No.	Valuation Payroll/Benefits	Average		
			Pay/ Benefits	Age	Service
Active Members					
Regular	175,791	\$5,981,599,714	\$34,027	47.0	9.5
SLEP	4,314	253,504,094	58,763	40.6	11.5
ECO	510	24,179,389	47,411	54.6	12.9
Total Active	180,615	\$6,259,283,197	\$34,655	46.8	9.6
Inactive Members					
Regular	182,606			46.4	4.3
SLEP	1,218			43.2	8.2
ECO	170			53.8	11.3
(Inactive and Active)	(34,109)				
Total Inactive	149,885			46.4	4.3
Retirees & Beneficiaries	90,132	\$ 956,681,832	\$ 10,614	72.6	
<b>Total Population</b>	<b>420,632</b>				
Prior Year Total	398,659				

There are a number of situations where members may be counted more than once. In particular, there are some members who are inactive with at least one employer and active with another employer. In order to avoid counting such individuals more than once, the inactive count is reduced by the number of such people as shown above. Other situations involving people who are inactive with more than one employer can also lead to people being counted more than once in the totals above. Consequently, actual counts of people may be lower than the above counts would suggest.

Additional population statistics are presented on the following pages.

**ACTIVE MEMBERS BY EMPLOYER TYPE**  
**DECEMBER 31, 2008**  
**REGULAR, SLEP, ECO COMBINED**

Type of Employer	Rate Groups	Members			Payroll
		Number	% of Total	Cumulative Percent	
School Districts	867	84,149	46.9%	46.9%	\$2,132,889,088
Counties (Regular, SLEP,ECO)	269	32,814	18.2%	65.1%	1,336,077,032
Cities	294	20,902	11.6%	76.7%	1,002,109,211
Villages	448	15,791	8.7%	85.4%	821,780,348
Park Districts	198	7,649	4.2%	89.6%	277,736,510
Special Ed Districts	42	4,461	2.5%	92.1%	113,011,732
Townships	490	3,736	2.1%	94.2%	127,547,761
Library Districts	213	2,887	1.6%	95.8%	89,083,697
Forest Preserve Districts	13	1,024	0.6%	96.4%	45,782,355
Sanitary Districts	38	942	0.5%	96.9%	52,738,141
Consolidated Education Service Region	29	856	0.5%	97.4%	21,267,866
Towns	5	664	0.4%	97.8%	30,564,682
Intergovernmental Coop	51	622	0.3%	98.1%	35,068,454
County Hospital Districts	3	559	0.3%	98.4%	22,005,199
Mass Transit District (Taxing Authority)	4	542	0.3%	98.7%	23,583,586
Airport Authorities	13	274	0.2%	98.9%	13,314,171
Misc. Taxing Authority	8	261	0.1%	99.0%	15,299,661
Health Districts	4	256	0.1%	99.1%	9,254,818
Public Library System	8	249	0.1%	99.2%	9,978,741
Multi Co/Cons Health Dept.	4	243	0.1%	99.3%	7,788,980
Mass Transit Instrumentality	3	199	0.1%	99.4%	7,097,321
Fire Protection Districts	50	197	0.1%	99.5%	10,194,496
Joint Spec Rec Assns	13	168	0.1%	99.6%	7,185,542
Vocational System	39	150	0.1%	99.7%	4,804,205
Miscellaneous Instrumentality	15	138	0.1%	99.8%	7,581,685
County Conservation Districts	4	131	0.1%	99.9%	5,490,694
Public Housing Authority	7	117	0.1%	100.0%	4,129,976
Conservancy Districts	4	83	0.0%	100.0%	3,384,554
Regional Planning Commission	1	70	0.0%	100.0%	4,344,502
Joint Education Projects	7	66	0.0%	100.0%	1,763,059
Public Housing Commission	7	65	0.0%	100.0%	2,587,690
Special Ed Coop/Districts	17	62	0.0%	100.0%	3,882,532
Water District	11	60	0.0%	100.0%	2,394,654
County Road District	31	58	0.0%	100.0%	1,433,374
Educ Serv Centers	3	41	0.0%	100.0%	1,200,666
Water Supply/Sewr Commission	5	35	0.0%	100.0%	1,664,043
Mosquito Abatement District	7	32	0.0%	100.0%	1,714,910
ROE Office	1	28	0.0%	100.0%	831,831
Township Cemetery	13	16	0.0%	100.0%	299,289
Multi Twp Assessment Districts	13	13	0.0%	100.0%	212,210
Drainage District	2	5	0.0%	100.0%	203,931
Tuberculosis Sanitarium Districts	1	0	0.0%	100.0%	-
Employers with no Active Members or no Asset Information	234	0	0.0%	100.0%	-
<b>Totals</b>	<b>3,489</b>	<b>180,615</b>	<b>100.0%</b>	<b>100.0%</b>	<b>\$6,259,283,197</b>

**ACTIVE REGULAR MEMBERS  
BY ATTAINED AGE AND YEARS OF SERVICE  
DECEMBER 31, 2008**

Attained Ages	Years of Service to Valuation Date							Totals	
	0-7	8-9	10-14	15-19	20-24	25-29	30 & Up	No.	Valuation Payroll
15-19	339							339	\$ 4,328,968
20-24	5,881							5,881	124,320,870
25-29	11,589	338	71					11,998	347,184,611
30-34	9,493	1,594	1,148	30				12,265	420,321,521
35-39	10,112	1,701	2,668	934	65	2		15,482	536,062,931
40-44	12,269	2,071	3,152	2,137	1,041	58	5	20,733	705,475,523
45-49	14,111	3,129	4,902	2,813	2,359	1,290	151	28,755	997,080,831
50	2,613	658	1,132	648	470	410	163	6,094	214,181,701
51	2,505	661	1,265	751	528	437	224	6,371	232,214,098
52	2,390	692	1,278	819	532	471	309	6,491	236,883,721
53	2,158	569	1,239	838	525	379	376	6,084	222,938,832
54	1,937	555	1,189	845	585	375	370	5,856	220,051,177
55	1,878	511	1,163	833	530	330	369	5,614	206,654,471
56	1,809	457	1,108	801	517	318	311	5,321	196,136,575
57	1,765	432	935	831	577	285	351	5,176	191,727,026
58	1,568	384	858	743	536	313	301	4,703	172,846,290
59	1,418	366	776	722	495	306	268	4,351	159,022,335
60	1,356	338	668	645	534	247	256	4,044	145,158,564
61	1,224	305	619	556	456	248	198	3,606	129,217,775
62	1,251	272	613	536	486	242	194	3,594	126,382,969
63	803	181	340	325	303	165	132	2,249	75,802,414
64	656	177	342	285	206	152	123	1,941	66,793,517
65	641	166	262	234	216	112	83	1,714	56,516,751
66	583	130	236	181	160	101	77	1,468	46,348,794
67	426	108	179	131	113	59	61	1,077	31,072,532
68	341	80	142	99	81	54	47	844	24,088,843
69	294	54	132	104	44	51	42	721	20,396,117
70	234	46	99	72	36	25	33	545	14,488,654
Over 70	933	252	447	315	216	130	181	2,474	57,901,303
<b>Totals</b>	<b>92,577</b>	<b>16,227</b>	<b>26,963</b>	<b>17,228</b>	<b>11,611</b>	<b>6,560</b>	<b>4,625</b>	<b>175,791</b>	<b>\$5,981,599,714</b>

**ACTIVE SLEP MEMBERS  
BY ATTAINED AGE AND YEARS OF SERVICE  
DECEMBER 31, 2008**

Attained Ages	Years of Service to Valuation Date							Totals	
	0-7	8-9	10-14	15-19	20-24	25-29	30 & Up	No.	Valuation Payroll
15-19									
20-24	120							120	\$ 4,838,708
25-29	544	7	2					553	24,875,510
30-34	391	105	98	1				595	31,046,268
35-39	292	99	331	84	3			809	46,961,812
40-44	170	51	188	248	106	3		766	48,705,758
45-49	87	35	111	137	193	57	4	624	41,540,255
50	13	3	16	20	21	17	6	96	6,287,650
51	12	2	6	15	26	17	4	82	5,592,143
52	11	1	7	14	29	20	10	92	6,381,198
53	17	4	11	17	15	10	12	86	5,433,524
54	17	3	6	13	15	10	8	72	4,656,588
55	10	4	9	10	15	8	12	68	4,594,084
56	20	5	10	13	13	7	8	76	5,305,770
57	7	4	8	9	11	6	6	51	3,189,138
58	9	4	5	10	7	8	6	49	3,263,437
59	7	2	5	5	8	7	3	37	2,457,525
60	8	4	4	6	6	3	6	37	2,319,593
61	5	2	3	2	4	5	3	24	1,538,838
62	6	3	5	5	1	4	6	30	1,754,155
63	2		3	1	2		2	10	811,959
64	3			3		1	1	8	489,198
65	1		2	1				4	213,856
66	1		1		1		2	5	209,155
67	3		1	1	1			6	317,474
68	2					1		3	199,241
69	2		2				1	5	292,479
70				1				1	34,924
Over 70	1		1	2			1	5	193,854
<b>Totals</b>	<b>1,761</b>	<b>338</b>	<b>835</b>	<b>618</b>	<b>477</b>	<b>184</b>	<b>101</b>	<b>4,314</b>	<b>\$253,504,094</b>

**ACTIVE ECO REGULAR MEMBERS  
BY ATTAINED AGE AND YEARS OF SERVICE  
DECEMBER 31, 2008**

Attained Ages	Years of Service to Valuation Date							Totals	
	0-7	8-9	10-14	15-19	20-24	25-29	30 & Up	No.	Valuation Payroll
20-24									
25-29	2							2	\$ 24,948
30-34	7	2						9	444,782
35-39	19	1	3					23	1,437,371
40-44	15	7	5	4	2			33	2,010,342
45-49	27	3	8	8	6	5	2	59	2,436,236
50	4	3	2	2	1	2		14	989,860
51	7	1	6	2	4	2	2	24	1,156,701
52	9	2	7	6	5	1	4	34	1,743,353
53	4	1	5	6	1		1	18	914,093
54	7	1	1	6	5	5	3	28	2,016,562
55	7	1	2	4	2	3	3	22	882,158
56	8	1	2	7	1	4		23	1,221,357
57	6	1	3	4		1	1	16	715,617
58	5	1	2		3	1		12	501,832
59	4	2	7	4	2			19	774,266
60	4	1	8	2	2	1	2	20	786,680
61	6	1	4	2		3	1	17	718,915
62	6		4		1	1	1	13	500,569
63	2	2				1	1	6	202,124
64	4		1	1	2	1	1	10	435,366
65			3	2	4			9	436,660
66	3		1				1	5	165,111
67	2			2			1	5	49,433
68	4	1	2		1	1		9	197,319
69	4		1					5	70,150
70	2		2			2		6	158,034
Over 70	8	3	9	7	3		2	32	495,576
<b>Totals</b>	<b>176</b>	<b>35</b>	<b>88</b>	<b>69</b>	<b>45</b>	<b>34</b>	<b>26</b>	<b>473</b>	<b>\$21,485,415</b>

**ACTIVE ECO SLEP MEMBERS  
BY ATTAINED AGE AND YEARS OF SERVICE  
DECEMBER 31, 2008**

Attained Ages	Years of Service to Valuation Date							Totals	
	0-7	8-9	10-14	15-19	20-24	25-29	30 & Up	No.	Valuation Payroll
40-44	1	1	1					3	\$ 200,282
45-49	5			1	1			7	418,497
51		1	1					2	126,687
52	2					1		3	180,867
53			1				1	2	111,076
55	1							1	56,503
56				1			1	2	140,373
57		1						1	71,254
58	1		1		1		3	6	538,438
59	1							1	117,769
60	1			1				2	167,272
61			1					1	54,566
62			2					2	103,173
63							1	1	113,697
64						1		1	96,149
68							1	1	104,833
Over 70						1		1	92,538
<b>Totals</b>	<b>12</b>	<b>3</b>	<b>7</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>7</b>	<b>37</b>	<b>\$2,693,974</b>

**ALL ACTIVE MEMBERS BY YEARS OF SERVICE AND GENDER  
DECEMBER 31, 2008**

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Service Years	Active Member Count			Active Member Pays	
	Males	Females	Total	Total	Average
0	6,456	12,621	19,077	\$ 407,666,944	\$21,370
1	5,548	11,103	16,651	402,085,924	24,148
2	4,447	8,796	13,243	350,894,691	26,497
3	3,975	7,230	11,205	319,662,877	28,529
4	3,260	5,925	9,185	277,773,951	30,242
5	2,944	4,973	7,917	247,397,149	31,249
6	2,875	5,159	8,034	260,539,377	32,430
7	3,152	6,063	9,215	301,872,746	32,759
8	2,887	5,679	8,566	296,420,200	34,604
<b>Sub-Total</b>	<b>35,544</b>	<b>67,549</b>	<b>103,093</b>	<b>2,864,313,859</b>	<b>27,784</b>
9	2,692	5,344	8,036	286,548,757	35,658
10	2,311	4,655	6,966	252,670,744	36,272
11	2,130	4,041	6,171	228,888,834	37,091
12	1,845	3,567	5,412	211,036,822	38,994
13	1,656	3,198	4,854	188,541,964	38,843
14	1,510	2,980	4,490	180,133,489	40,119
15 & Up	18,737	22,856	41,593	2,047,148,728	49,219
<b>Totals</b>	<b>66,425</b>	<b>114,190</b>	<b>180,615</b>	<b>\$6,259,283,197</b>	<b>\$34,655</b>

**INACTIVE REGULAR MEMBERS  
BY ATTAINED AGE AND YEARS OF SERVICE  
DECEMBER 31, 2008**

Attained Ages	Years of Service to Valuation Date							Totals No.
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	
15-19	166							166
20-24	3,927	6						3,933
25-29	14,606	146						14,752
30-34	15,281	524	36				4	15,845
35-39	16,489	880	204	31		1	11	17,616
40-44	14,840	1,204	489	107	91	5	18	16,754
45-49	19,984	1,896	906	383	162	47	60	23,438
50	3,314	446	227	78	51	21	20	4,157
51	3,302	493	262	106	47	28	30	4,268
52	3,412	541	257	138	77	32	36	4,493
53	2,880	512	282	120	82	43	26	3,945
54	3,311	526	291	115	78	25	52	4,398
55	3,083	442	224	90	49	18	21	3,927
56	2,588	298	123	52	16	8	9	3,094
57	2,940	311	109	35	24	13	14	3,446
58	2,529	276	93	43	15	14	10	2,980
59	2,160	215	63	27	10	15	11	2,501
60	2,023	184	49	25	17	15	6	2,319
61	1,747	158	48	17	18	6	5	1,999
62	1,777	145	43	18	10	5	6	2,004
63	1,069	87	20	16	7	1	5	1,205
64	949	71	37	16	7	6	4	1,090
65	819	75	16	7	3	4	2	926
66	864	62	13	4	2	3	2	950
67	774	45	7	6	2	1		835
68	522	33	1	3	1		3	563
69	636	31	5	1	1		1	675
70	417	19	3	1	2		1	443
Over 70	6,029	124	38	14	5	1	8	6,219
<b>Totals</b>	<b>132,438</b>	<b>9,750</b>	<b>3,846</b>	<b>1,453</b>	<b>777</b>	<b>312</b>	<b>365</b>	<b>148,941</b>



**INACTIVE SLEP MEMBERS  
BY ATTAINED AGE AND YEARS OF SERVICE  
DECEMBER 31, 2008**

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Attained Ages	Years of Service to Valuation Date							Totals No.
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	
15-19								
20-24	13							13
25-29	119	1						120
30-34	87	18						105
35-39	96	21	10	2			1	130
40-44	54	13	18	3	4	1	1	94
45-49	60	10	23	7	17	3	1	121
50	12	6	5	2	2			27
51	11	2	1	3	1			18
52	15	2	6	5				28
53	8	2	2	2			1	15
54	6	7	5	4	1			23
55	23	7	3	2		2	1	38
56	7	2	4		1			14
57	7	1	1				2	11
58	9	1						10
59	10	1				1		12
60	4							4
61		1						1
62	6							6
63	2							2
64	4				1			5
65	4							4
66	1							1
67	2							2
68	2						1	3
69								
70	3							3
Over 70	7						1	8
<b>Totals</b>	<b>572</b>	<b>95</b>	<b>78</b>	<b>30</b>	<b>27</b>	<b>7</b>	<b>9</b>	<b>818</b>

**INACTIVE ECO MEMBERS  
BY ATTAINED AGE AND YEARS OF SERVICE  
DECEMBER 31, 2008**

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Attained Ages	Years of Service to Valuation Date						Totals No.
	0-4	5-9	10-14	15-19	20-24	25-29	
15-19							
20-24							
25-29							
30-34							
35-39	1	2					3
40-44	2	4	2		1		9
45-49	5	11	5	3	2	1	27
50	3	1	2		1		7
51	5	1	1				7
52	5	3	1	2			11
53		3	3	2		1	9
54	2	3	2			1	8
55	2	2	3	2	1		10
56	2	1					3
57			1		1		2
58							
59	1						1
60	4	1		1			6
61	1	1			1		3
62	2						2
63	1	1					2
64	2			2			4
65							
66	1						1
67							
68	1	1					2
69	3						3
70					1		1
Over 70	2	3					5
<b>Totals</b>	<b>45</b>	<b>38</b>	<b>20</b>	<b>12</b>	<b>8</b>	<b>3</b>	<b>126</b>

**RETIRES AND BENEFICIARIES  
DECEMBER 31, 2008**

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Type of Retirement	Annual Amounts by Form of Payment					
	Regular		Level Payment Option		Total	
	No.	Amount	No.	Amount	No.	Amount
Normal or Early						
Joint and 50% Survivor	42,395	\$483,955,452	15,254	\$193,710,360	57,649	\$677,665,812
Straight Life	14,192	156,346,476	3,979	57,062,520	18,171	213,408,996
<b>Total</b>	<b>56,587</b>	<b>640,301,928</b>	<b>19,233</b>	<b>250,772,880</b>	<b>75,820</b>	<b>891,074,808</b>
Disability	593	4,029,864	-	0	593	4,029,864
Surviving Beneficiaries	11,408	55,649,088	633	4,789,344	12,041	60,438,432
Voluntary Contributions	1,678	1,138,728	-	0	1,678	1,138,728
<b>Grand Total</b>	<b>70,266</b>	<b>\$701,119,608</b>	<b>19,866</b>	<b>\$255,562,224</b>	<b>90,132</b>	<b>\$956,681,832</b>

Voluntary Contributions includes annuitization of certain surviving spouse and SLEP refund amounts. Of the 1,678 retirees listed as receiving Voluntary contribution, 1,641 retirees are also in receipt of a separate retirement benefit.

Thirteenth Check amounts are not included in the above figures.

In the above chart, “Regular” refers to all forms of payment other than the level payment option. It does not connote “Regular” as opposed to SLEP and ECO.

**RETIRES AND BENEFICIARIES  
BY ATTAINED AGE  
DECEMBER 31, 2008**

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Attained Ages	Number			Annual Benefits
	Males	Females	Total	
Under 20	4	7	11	\$ 21,948
20 - 24	5	8	13	28,812
25 - 29	6	8	14	56,400
30 - 34	5	4	9	50,232
35 - 39	16	14	30	138,432
40 - 44	16	32	48	232,056
45 - 49	43	96	139	907,584
50 - 54	397	259	656	19,298,760
55 - 59	2,983	4,094	7,077	123,927,624
60 - 64	4,410	8,645	13,055	189,059,388
65 - 69	5,186	11,316	16,502	188,275,836
70 - 74	4,924	10,460	15,384	161,352,996
75 - 79	4,258	9,062	13,320	120,614,004
80 - 84	3,647	8,008	11,655	86,750,520
85 - 89	2,188	5,763	7,951	47,735,076
90 - 94	753	2,620	3,373	15,255,912
95 & Up	168	727	895	2,976,252
<b>Totals</b>	<b>29,009</b>	<b>61,123</b>	<b>90,132</b>	<b>\$956,681,832</b>

**RETIREES AND BENEFICIARIES BY YEAR OF RETIREMENT  
DECEMBER 31, 2008**

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Year of Retirement	Number			Annual Benefits
	Males	Females	Total	
2008	2,093	3,606	5,699	\$ 80,534,640
2007	2,264	4,088	6,352	81,712,884
2006	2,089	3,712	5,801	74,880,876
2005	2,015	3,645	5,660	69,889,212
2004	1,849	3,305	5,154	70,241,460
2003	1,890	3,277	5,167	66,950,724
2002	1,548	2,937	4,485	53,373,732
2001	1,365	2,689	4,054	41,610,564
2000	1,152	2,559	3,711	38,452,764
1999	1,410	2,643	4,053	45,839,040
1998	1,378	2,552	3,930	48,554,556
1997	1,184	2,499	3,683	41,619,576
1996	1,004	2,351	3,355	36,682,584
1995	897	2,133	3,030	27,555,588
1994	781	1,932	2,713	24,555,264
1993	749	1,791	2,540	21,912,048
1992	674	1,594	2,268	19,341,372
1991	572	1,457	2,029	16,167,564
1990 - 1994	590	1,424	2,014	15,781,704
1985 - 1989	2,199	5,908	8,107	54,835,584
1980 - 1984	972	3,141	4,113	20,381,892
1975 - 1979	298	1,387	1,685	4,879,656
1970 - 1974	32	404	436	832,908
1965 - 1969	4	66	70	76,368
Before 1965	0	23	23	19,272
<b>Total</b>	<b>29,009</b>	<b>61,123</b>	<b>90,132</b>	<b>\$956,681,832</b>

**DATA REPORTED FOR ACTUARIAL VALUATIONS  
COMPARATIVE SUMMARY**

Date December 31	Total Count	Active Members					Number		Ratio: Act/Ret.
		Number	Average		Annual Pay	Pay Increase	Inactive	Retired	
			Age	Serv.					
1984	183,483	105,658	43.1	7.2	\$14,689	6.2 %	38,762	39,063	2.70
1985	187,886	107,708	43.1	7.2	15,417	5.0 %	39,315	40,863	2.60
1986	193,006	110,285	43.1	7.3	16,033	4.0 %	39,921	42,800	2.60
1987	203,499	112,611	43.0	7.1	16,602	3.5 %	46,199	44,689	2.50
1988	208,237	115,050	43.1	7.2	17,370	4.6 %	47,305	45,882	2.50
1989	221,145	118,670	43.1	7.2	18,046	3.9 %	53,470	49,005	2.40
1990	228,964	121,234	43.3	7.3	19,000	5.3 %	57,016	50,714	2.40
1991	237,731	125,559	43.4	7.4	19,846	4.5 %	59,775	52,397	2.40
1992	242,730	126,557	43.7	7.7	20,816	4.9 %	61,964	54,209	2.30
1993	245,409	122,361	44.2	8.2	22,142	6.4 %	66,735	56,313	2.20
1994	265,456	133,803	43.8	7.8	22,021	(0.5)%	73,972	57,681	2.30
1995	262,232	136,617	43.8	8.2	22,661	2.9 %	65,914	59,701	2.29
1996	249,291	139,525	44.0	8.3	22,104	3.5 %*	48,274	61,492	2.27
1997	290,804	143,999	44.1	8.2	23,991	8.5 %	81,919	64,886	2.22
1998	303,869	148,610	44.3	8.2	24,871	3.7 %	88,173	67,086	2.22
1999	317,616	153,910	44.4	8.6	25,678	3.2 %	94,576	69,130	2.23
2000	330,313	157,836	44.6	8.2	26,514	3.4 %	102,082	70,395+	2.24
2001	343,842	163,886	44.9	8.3	27,477	3.9 %	108,338	71,618	2.29
2002	353,897	166,365	45.3	8.5	28,582	4.0 %	113,524	74,008	2.25
2003	361,010	166,439	45.7	8.8	29,709	3.9 %	118,093	76,478	2.18
2004	367,590	167,030	46.0	9.0	30,899	4.0 %	121,543	79,017	2.11
2005	377,251	169,867	46.3	9.1	31,640	2.4 %	125,761	81,623	2.08
2006	387,665	173,068	46.5	9.4	32,535	2.8 %	130,239	84,358	2.05
2007	398,659	176,495	46.7	9.5	33,607	3.3 %	134,687	87,477	2.02
2008	420,632	180,615	46.8	9.6	34,655	3.1 %	149,885	90,132	2.00

\* Changed method of recording earnings for 1996 valuation.

+ Restated subsequent to release of 2000 valuation.

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**SECTION C**  
**FINANCIAL DATA**

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## DEVELOPMENT OF FUNDING VALUE OF RETIREMENT SYSTEM ASSETS

Year Ended December 31	2006	2007	2008	2009	2010	2011	2012
A. Funding Value Beginning of Year	\$19,698,401,285	\$21,427,139,356	\$23,274,361,198				
B. Market Value End of Year	22,452,233,908	24,211,466,304	18,000,877,927				
C. Market Value Beginning of Year	19,793,486,534	22,452,233,908	24,211,466,304				
D. Non-Investment/Administrative Net Cash Flow	(10,466,016)	(63,216,222)	(84,179,826)				
E. Investment Return							
E1. Market Total: B-C-D	2,669,213,390	1,822,448,618	(6,126,408,551)				
E2. Assumed Rate of Return	7.50%	7.50%	7.50%				
<b>E3. Assumed Amount of Return</b>	<b>1,476,987,621</b>	<b>1,604,664,843</b>	<b>1,742,420,346</b>	-----Scheduled-----			
E4. Return Subject to Phase-In: E1-E3	1,192,225,769	217,783,775	(7,868,828,897)				
F. Phased-In Recognition of Investment Return							
F1. Current year: 0.20 x E4	238,445,154	43,556,755	(1,573,765,779)	Unknown	Unknown	Unknown	Unknown
F2. First Prior Year	23,771,312	238,445,154	-	(900,043,896)	Unknown	Unknown	Unknown
F3. Second Prior Year	-	23,771,312	-	-	(900,043,896)	Unknown	Unknown
F4. Third Prior Year	-	-	-	-	-	(900,043,896)	Unknown
F5. Fourth Prior Year	-	-	-	-	-	-	(900,043,897)
F6. Funding Corridor Adjustment			(1,757,782,426)				
<b>F7. Total Scheduled Phase-in of gain/(loss)</b>	<b>262,216,466</b>	<b>305,773,221</b>	<b>(3,331,548,206)</b>	(900,043,896)	(900,043,896)	(900,043,896)	(900,043,897)
G. Acceptable Phase-in of Investment Return							
G1. Projected Funding Value without Phase-in: A+D+E3	<b>21,164,922,890</b>	<b>22,968,587,977</b>	<b>24,932,601,718</b>				
G2. Limit on Phase-in: B-G1	1,287,311,018	1,242,878,327	(6,931,723,791)				
G3. Acceptable Phase-in Amount	262,216,466	305,773,221	(3,331,548,206)				
<b>H. Funding Value End of Year: A+D+E3+G3</b>	<b>\$21,427,139,356</b>	<b>\$23,274,361,198</b>	<b>\$21,601,053,512</b>				
I. Difference Between Market and Funding Value	1,025,094,552	937,105,106	(3,600,175,585)	(2,700,131,689)	(1,800,087,793)	(900,043,897)	-
J. Recognized Rate of Return	8.8%	8.9%	-6.8%				
K. Market Rate of Return	13.5%	8.1%	-25.3%				
L. Ratio of Funding Value to Market Value	95.4%	96.1%	120.0%				

The Funding Value of Assets recognizes assumed investment return (line E3) fully each year. Differences between actual and assumed investment return (line E4) are phased-in over a closed 5-year period subject to a 20% corridor. The acceptable phase-in amount (Item G3) is the minimum of Items F6 and G2, if G2 is positive. If G2 is negative, the acceptable phase-in amount is the greater of Items F6 and G2.



## DEVELOPMENT OF MARKET VALUE ADJUSTMENT

In a single employer plan, the Market Value Adjustment would normally be the difference between the funding value of assets and the market value of assets. In IMRF, because of the need to allocate the Market Value Adjustment in an equitable manner among participating employers, certain extra steps are taken as shown below.

	Year Ended December 31	
	2008	2007
1. Funding Value of End of Year	\$21,601,053,512	\$ 23,274,361,198
2. Amounts not used in rate calculations		
a. Suspended Annuity Reserve	21,386,109	19,429,494
b. Disability Benefit Reserve	14,553,142	13,484,446
c. Death Benefit Reserve	12,432,734	12,063,023
d. Supplemental Benefit Reserve	2,530,205	2,265,480
e. Cases removed from rate calculations*	32,696,157	35,027,496
f. Estimated pending reserve transfers	-	-
g. Total	83,598,347	82,269,939
3. Remaining amount to allocate: (1)-(2g)	21,517,455,165	23,192,091,259
4. Total reported negative reserves	(2,305,729)	(970,489)
5. Amount available to positive reserves: (3)-(4)	21,519,760,894	23,193,061,748
6. Total Market Value of reported positive reserves	17,845,814,511	24,199,445,935
<b>7. Market Value Adjustment: (5)-(6)</b>	<b>\$ 3,673,946,383</b>	<b>\$ (1,006,384,187)</b>

\* Employers that are not included on the asset tape submitted to the actuary. In general, these employers have no active members and no employer assets, but may have retired lives and/or inactive members.

The Market Value Adjustment is allocated among all employers that have a positive reserve balance (member plus employer plus retired life reserves), in proportion to each employer's reserve balance.

Even in years when the Funding Value of Assets equals the Market Value of Assets, a market value adjustment can be made due to the following reasons:

- Differences between the earnings and experience reserve and the investment loss reserve from the financial statements.
- Differences between employee contribution amounts in the financial statements versus data tapes.
- Differences between employer contribution amounts in the financial statements versus data tapes.

## REPORTED MARKET VALUES

	Market Value		Percentage of Total	
	2008	2007	2008	2007
<b>Investment portfolio</b>				
Fixed income	\$ 8,230,507,317	\$ 8,564,830,151	46.0%	35.6%
Short term	264,527,261	67,344,460	1.5%	0.3%
Foreign exchange contracts	4,313,809	387,785	0.0%	0.0%
Stocks	6,172,070,093	10,315,644,106	34.5%	42.8%
Bond funds	-	-	0.0%	0.0%
Stock funds and index funds	1,739,454,400	3,428,779,420	9.7%	14.2%
Options	-	-	0.0%	0.0%
Real estate	540,411,951	737,334,583	3.0%	3.1%
Alternative investments	885,209,922	816,702,900	4.9%	3.4%
Master trust reserve fund	555,596,933	772,102,278	3.1%	3.2%
Cash	-	-	0.0%	0.0%
Due from brokers	-	-	0.0%	0.0%
Due (to) brokers	(561,202,245)	(693,828,773)	(3.1)%	(2.9)%
Accrued investment income	73,181,047	82,107,383	0.4%	0.3%
<b>Total Invested Assets</b>	<b>\$17,904,070,487</b>	<b>\$24,091,404,293</b>	100.0%	100.0%
<b>Receivables</b>	<b>130,526,637</b>	<b>120,377,802</b>		
<b>Cash</b>	<b>26,759,985</b>	<b>28,784,955</b>		
<b>Fixed Assets</b>	<b>2,369,362</b>	<b>511,368</b>		
<b>Total Market Value</b>	<b>\$18,063,726,470</b>	<b>\$24,241,078,416</b>		
<b>Liabilities</b>				
Benefits & vouchers payable	35,145,686	29,612,112		
Securities Lending Payable	27,702,857			
<b>Total Liabilities</b>	<b>62,848,543</b>	<b>29,612,112</b>		
<b>Nets Assets Available for Benefits</b>	<b>\$18,000,877,927</b>	<b>\$24,211,466,304</b>		

Amounts on this page are preliminary year-end numbers and may not agree with final audited numbers reported by IMRF, but are shown for completeness.

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**SECTION D**

**ACTUARIAL METHODS AND ASSUMPTIONS**

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**SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS  
USED FOR IMRF ACTUARIAL VALUATIONS  
ASSUMPTIONS ADOPTED BY RETIREMENT BOARD  
AFTER CONSULTING WITH ACTUARY**

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**Economic Assumptions**

*The investment return rate* assumed in the valuations was 7.5% per year, compounded annually (net after administrative expenses).

The **Wage Inflation Rate** assumed in this valuation was 4.00% per year. The Wage Inflation Rate is defined to be the portion of total pay increases for an individual that are due to macroeconomic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes rated to individual merit and seniority effects.

No specific **Price Inflation** assumption is required to perform this valuation, since there are no benefits that are linked to price increases. However, a price inflation assumption on the order of 3.0% to 3.5% would be consistent with the other economic assumptions.

The assumed **real rate of return** over wage inflation is defined to be the portion of total investment return that is more than the assumed total wage growth rate. Considering other economic assumptions, the 7.5% investment return rate translates to an assumed real rate of return over wage inflation of 3.5%. The assumed real rate of return over price inflation would be higher – on the order of 4.0% to 4.5%, considering both an inflation assumption and an average expense provision.

The Active Member Population is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at the wage inflation rate – 4.00% per year.

*Pay increase assumptions* for individual active members are shown for sample ages on page D-7. Part of the assumption for each age is for merit and/or seniority increase, and the other 4.00% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

The *number of active members* is assumed to continue at the present number.

**Non-Economic Assumptions**

Non-economic (decrement) assumptions include rates of mortality before and after retirement, rates of disability, rates of retirement, rates of other separation from employment and probabilities of an active member being married. The non-economic assumptions are based upon experience during the 2005-2007 period (please see report dated October 16, 2008), and were first used in the December 31, 2008 valuation. Decrement assumptions are shown for sample ages beginning on page D-3.

**SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS  
USED FOR IMRF ACTUARIAL VALUATIONS  
ASSUMPTIONS ADOPTED BY RETIREMENT BOARD AFTER CONSULTING  
WITH ACTUARY**

---

**Actuarial Valuation Method**

*An aggregate entry age actuarial cost method of valuation* was used in determining most liabilities and normal cost. This means that an individual entry-age employer normal cost was determined for each benefit group (Regular, SLEP, ECO) as a percent-of-payroll. The so determined normal cost was assumed to apply to each employer, regardless of the demographics of the specific employer. Larger employers have the option of an individual normal cost rate. The aggregate normal cost rate is then multiplied by the present value of future salary to determine the present value of future normal cost for each employer. The actuarial accrued liability is then calculated by subtracting the present value of future normal cost and present value of future employee contributions from the present value of future benefits.

Differences in the past between assumed experience and actual experience (“actuarial gains and losses”) become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments (principal & interest) which are level percent of payroll contributions.

Liabilities for lump sum death benefits and temporary disability benefits were determined using a term cost approach. Under this approach, the funding objective is to receive contributions each year that approximately equal the benefits being paid.

*Employer contributions* were assumed to be *paid in equal installments* throughout the year.

*Present assets (cash & investments) at funding value* are shown on page C-1.

**Actuarial Valuation Method**

The Funding Value of Assets (developed on page C-1) recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased-in over a closed 5-year period subject to a 20% corridor. The method also limits the adjustment to the expected actuarial return to the maximum amount of unrecognized gains or losses not yet reflected in the actuarial value of assets. In any year in which the actuarial value minus the market value of assets switches from a positive value to a negative value, or vice-versa, any prior gain/loss bases are wiped out and the smoothing mechanism restarts.

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The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).

**ACTUARIAL ASSUMPTIONS**  
**DECEMBER 31, 2008**  
**PROBABILITIES OF AGE & SERVICE RETIREMENT**

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Age at Retirement	Regular		Regular		SLEP		ECO-Regular		ECO-SLEP
	Reduced Early		Normal		Normal		Normal		Normal
	Males	Females	Males	Females	Service less than 32 years	Service 32 years or more	Males	Females	Males & Females
50					23%	55%			23%
51					18%	55%			18%
52					13%	55%			13%
53					8%	55%			8%
54					23%	55%			23%
55	7.5%	6.5%	35%	30%	23%	55%	30%	30%	23%
56	7.5%	6.5%	30%	25%	18%	55%	25%	25%	18%
57	7.5%	6.5%	28%	25%	23%	55%	25%	25%	23%
58	7.5%	6.5%	28%	25%	33%	55%	25%	25%	33%
59	7.5%	6.5%	28%	20%	13%	55%	25%	25%	13%
60			12%	10%	8%	55%	5%	5%	8%
61			12%	10%	8%	55%	5%	5%	8%
62			22%	20%	23%	55%	20%	15%	23%
63			20%	20%	18%	55%	15%	15%	18%
64			20%	20%	18%	55%	15%	15%	18%
65			30%	25%	23%	55%	30%	20%	23%
66			30%	25%	23%	55%	25%	15%	23%
67			25%	20%	23%	55%	20%	15%	23%
68			20%	18%	23%	55%	13%	13%	23%
69			20%	18%	23%	55%	13%	13%	23%
70			20%	18%	100%	100%	13%	13%	100%
71-79			18%	18%	100%	100%	13%	13%	100%
80 & Over			100%	100%	100%	100%	100%	100%	100%

For terminated vested members, all members were assumed to retire at age 60 or attained age if later.

**ACTUARIAL ASSUMPTIONS**  
**DECEMBER 31, 2008**  
**PROBABILITIES OF SEPARATION FROM ACTIVE MEMBER STATUS**

---

Service	% Separating Next Year					
	Regular		ECO		SLEP	ECO-SLEP
	Males	Females	Males	Females		
0	25.0%	29.5%	20.0%	20.0%	17.5%	16.0%
1	19.0%	21.5%	12.0%	15.0%	12.0%	10.0%
2	13.5%	16.0%	10.0%	10.0%	8.0%	8.0%
3	11.0%	12.5%	9.0%	9.0%	7.0%	6.0%
4	9.0%	10.5%	8.0%	8.0%	6.0%	5.0%
5	7.5%	8.5%	7.0%	7.0%	5.0%	4.5%
6	6.2%	7.0%	6.0%	6.0%	4.5%	4.0%
7	5.8%	6.5%	5.5%	5.0%	N/A	N/A
Age	8 or More Years of Service		8 or More Years of Service		7 or More Years of Service	7 or More Years of Service
30	4.7%	6.5%	4.5%	1.8%	3.7%	1.5%
35	3.8%	5.3%	4.5%	1.8%	2.2%	1.5%
40	3.0%	4.2%	4.5%	1.8%	1.8%	1.5%
45	2.5%	3.7%	4.5%	1.8%	1.8%	1.5%
50	2.3%	3.2%	4.5%	1.8%	1.8%	1.5%

**ACTUARIAL ASSUMPTIONS**  
**DECEMBER 31, 2008**  
**ACTIVE MEMBER PROBABILITIES OF DEATH AND DISABILITY**

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Sample Ages	% Dying			
	Regular & ECO		SLEP	
	Male	Female	Male	Female
20	0.03%	0.01%	0.04%	0.02%
25	0.03%	0.01%	0.05%	0.02%
30	0.04%	0.02%	0.06%	0.03%
35	0.04%	0.02%	0.06%	0.04%
40	0.05%	0.04%	0.08%	0.05%
45	0.08%	0.05%	0.12%	0.07%
50	0.13%	0.07%	0.19%	0.11%
55	0.22%	0.11%	0.33%	0.17%
60	0.40%	0.22%	0.60%	0.33%
65	0.73%	0.43%	1.09%	0.65%
70	1.19%	0.69%	1.78%	1.03%
75	1.86%	1.13%	2.79%	1.70%
80	3.10%	1.97%	4.65%	2.95%

Sample Ages	% Disabled							
	Regular		ECO		SLEP		ECO-SLEP	
	Male	Female	Male	Female	Male	Female	Male	Female
20	0.01%	0.00%	0.01%	0.01%	0.01%	0.02%	0.02%	0.02%
25	0.01%	0.00%	0.01%	0.01%	0.02%	0.04%	0.04%	0.04%
30	0.01%	0.01%	0.02%	0.01%	0.03%	0.06%	0.06%	0.06%
35	0.02%	0.01%	0.04%	0.02%	0.04%	0.09%	0.09%	0.09%
40	0.04%	0.02%	0.06%	0.04%	0.07%	0.13%	0.13%	0.13%
45	0.06%	0.03%	0.09%	0.06%	0.10%	0.19%	0.19%	0.19%
50	0.09%	0.04%	0.14%	0.09%	0.14%	0.28%	0.28%	0.28%
55	0.15%	0.07%	0.22%	0.15%	0.19%	0.39%	0.39%	0.39%
60	0.19%	0.12%	0.28%	0.26%	0.18%	0.36%	0.36%	0.36%
65	0.20%	0.14%	0.30%	0.30%	0.12%	0.24%	0.24%	0.24%
70	0.17%	0.12%	0.26%	0.26%	0.07%	0.14%	0.14%	0.14%
75	0.12%	0.08%	0.18%	0.18%	0.02%	0.04%	0.04%	0.04%
80	0.10%	0.07%	0.15%	0.15%	0.00%	0.00%	0.00%	0.00%



**ACTUARIAL ASSUMPTIONS  
DECEMBER 31, 2008  
RETIREE, BENEFICIARY, TERMINATED VESTED  
AND DISABLED LIFE MORTALITY**

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Sample Ages	% Dying Next Year			
	Non-Disabled Lives		Disabled Lives	
	Males	Females	Males	Females
40	0.1179%	0.0674%	0.2837%	0.1357%
45	0.1736%	0.0924%	0.4867%	0.2179%
50	0.2837%	0.1357%	0.8774%	0.4217%
55	0.4867%	0.2179%	1.5988%	0.8204%
60	0.8774%	0.4217%	2.6103%	1.3043%
65	1.5988%	0.8204%	4.0932%	2.1552%
70	2.6103%	1.3043%	6.8230%	3.7426%
75	4.0932%	2.1552%	10.6964%	6.4351%
80	6.8230%	3.7426%	16.8224%	11.0452%

Sample Ages	Life Expectancy Years			
	Non-Disabled Retired Lives		Disabled Lives	
	Males	Females	Males	Females
40	39.2	45.0	29.8	35.4
45	34.5	40.2	25.3	30.6
50	29.8	35.4	21.0	26.0
55	25.3	30.6	17.1	21.7
60	21.0	26.0	13.6	17.7
65	17.1	21.7	10.5	14.0
70	13.6	17.7	7.9	10.6
75	10.5	14.0	5.8	7.8
80	7.9	10.6	4.1	5.6

For non-disabled lives, the mortality rates are the 1994 Group Annuity Mortality Table for Males multiplied by 110% and the 1994 Group Annuity Mortality Table for Females multiplied by 95%. For disabled lives, the mortality rates are the rates applicable to non-disabled lives set forward 10 years.

**ACTUARIAL ASSUMPTIONS**  
**DECEMBER 31, 2008**  
**PAY INCREASES FOR REGULAR AND ECO ACTIVE MEMBERS**

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% Increase in Pay Next Year					
6 or More Years Service				Additional Increase For Those With Less Than 6 Years of Service	
Age	Merit & Longevity	Economic	Total	Service	% Increase
25	2.0%	4.0%	6.0%	0	7.0%
30	1.7%	4.0%	5.7%	1	5.0%
35	1.2%	4.0%	5.2%	2	3.5%
40	0.9%	4.0%	4.9%	3	3.0%
45	0.7%	4.0%	4.7%	4	2.0%
50	0.6%	4.0%	4.6%	5	1.5%
55	0.5%	4.0%	4.5%		
60	0.4%	4.0%	4.4%		

For a person with 6 or more years of service, the assumed pay increase during the coming year is found in the 6 or more years of service total column. For a person with less than 6 years of service, the % increase from the less than 6 years column that corresponds to the person's service is added to the increase from the 6 or more years of service total column that corresponds to the person's age to get the total assumed increase. For example, a 40-year-old with 8 years of service is assumed to get a 4.9% pay increase during the coming year. But a 40-year-old with 4 years of service is assumed to get a 6.9% increase (4.9% + 2.0%).

**ACTUARIAL ASSUMPTIONS**  
**DECEMBER 31, 2008**  
**PAY INCREASES FOR SLEP AND ECO-SLEP ACTIVE MEMBERS**

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<b>% Increase in Pay Next Year</b>			
<b>Years of Service</b>			
<b>Service</b>	<b>Economic</b>	<b>Merit &amp; Longevity</b>	<b>% Total Increase</b>
1	4.0%	12.0%	16.0%
2	4.0%	9.0%	13.0%
3	4.0%	4.3%	8.3%
4	4.0%	3.5%	7.5%
5	4.0%	2.3%	6.3%
6	4.0%	2.0%	6.0%
7	4.0%	1.0%	5.0%
8	4.0%	1.0%	5.0%
9	4.0%	1.0%	5.0%
10	4.0%	0.5%	4.5%
11	4.0%	0.5%	4.5%
12	4.0%	0.5%	4.5%
13	4.0%	0.5%	4.5%
14	4.0%	0.5%	4.5%
15	4.0%	0.5%	4.5%
16	4.0%	0.5%	4.5%
17	4.0%	0.5%	4.5%
18	4.0%	0.5%	4.5%
19	4.0%	0.5%	4.5%
20	4.0%	0.5%	4.5%
21	4.0%	0.5%	4.5%
22	4.0%	0.5%	4.5%
23	4.0%	0.5%	4.5%
24	4.0%	0.5%	4.5%
25	4.0%	0.5%	4.5%
26	4.0%	0.5%	4.5%
27	4.0%	0.5%	4.5%
28	4.0%	0.5%	4.5%
29	4.0%	0.5%	4.5%
30	4.0%	0.5%	4.5%

## MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

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<b>Expenses:</b>	Assumed investment return is net of administrative and investment expenses.
<b>Marriage Assumption:</b>	80% of male and 70% of female participants are assumed to be married for purposes of death-in-service and death after retirement benefits. Male spouse are assumed to be three years older than female spouses for active member valuation purposes.
<b>Pay Increase Timing:</b>	Beginning of (Calendar) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
<b>Decrement Timing:</b>	Decrements of all types are assumed to occur mid-year.
<b>Eligibility Testing:</b>	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
<b>Benefit Service:</b>	Exact fractional service on the decrement date is used to determine the amount of benefit payable.
<b>Decrement Relativity:</b>	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
<b>Incidence of Contributions:</b>	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
<b>Normal Form of Benefit:</b>	The assumed normal form of benefit is a 50% joint and survivor benefit for Regular and SLEP members and 66 2/3% for ECO members. Factors for determining optional forms of payment are loaded 120% of the standard mortality rates.
<b>Surviving Spouse Refunds:</b>	For those individuals who are not assumed to be married at retirement, the surviving spouse contributions are assumed to be refunded.
<b>SLEP Refunds:</b>	SLEP participants who are assumed to retire with insufficient service to qualify for SLEP benefits are assumed to receive a refund of their SLEP contributions.
<b>SLEP Conversions:</b>	It was assumed that all active participants in the SLEP program will convert all eligible service (up to 10 years). Additionally, it was assumed that these members would contribute the difference in both member and employer rates for each year converted.
<b>ECO Conversions:</b>	It is assumed that active participants in the ECO program will convert all eligible service up to the point the maximum ECO benefit would be achieved.
<b>Final Rate of Earnings (FRE):</b>	The FRE is determined by projecting the current salary to retirement and averaging the salary over the appropriate number of years. The current FRE is used if this produces a higher value.

## MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

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**Refunds for Terminated Vested Members:**

Members are assumed to elect annuities.

**Other:**

Disability decrements operate during retirement eligibility.

**Contingency Reserve:**

A contingency reserve of 0.25% of payroll is added to the normal cost to account for various factors (changes in FRE, date adjustments, rehires, service purchases, etc.)

**FINANCING UNFUNDED ACCRUED LIABILITIES  
AND FULL FUNDING CREDITS  
DECEMBER 31, 2008 VALUATIONS**

---

The following procedures were applied to financing liabilities in the valuation.

**Financing Periods if employer is less than 120% funded on a market basis.**

1. Instrumentalities: 10-year rolling period.
2. Early Retirement Incentive Plan liabilities: a period up to 10 years selected by the Employer upon adoption of ERI.
3. For taxing bodies (Regular, SLEP, and ECO rate Groups): 30-year rolling period.

**Financing Period if employer is over 120% funded on a market basis.**

4. Irrespective of the size of the employer or the funding level, grant the employer an option to amortize overfunding over 120% over a 5-year period.
5. For employers with 50 or more employees, grant the employer an option to adopt a minimum contribution rate until the overfunding is reduced to 120%.
6. Irrespective of the size of the employer, surplus in a plan can be used to satisfy early retirement incentive costs so long as the reserve balance does not drop below 120%.

SLEP supplemental liabilities attributable to Public Act 94-712 were financed over 27 years for most employers (two employers were financed over 37 years). The mass production valuation applies rules 1 through 3. For rules 4 through 6, the period provided on the IMRF rate tape is used for valuation purposes and IMRF staff reviews each case individually to see if changes are needed to comply with Board policy. Employers also have the option to phase into a rate change that is more than 10% higher than the prior year (provided they pay the full cost for current service).

# SELECTION OF ASSUMPTIONS USED IN ACTUARIAL VALUATIONS

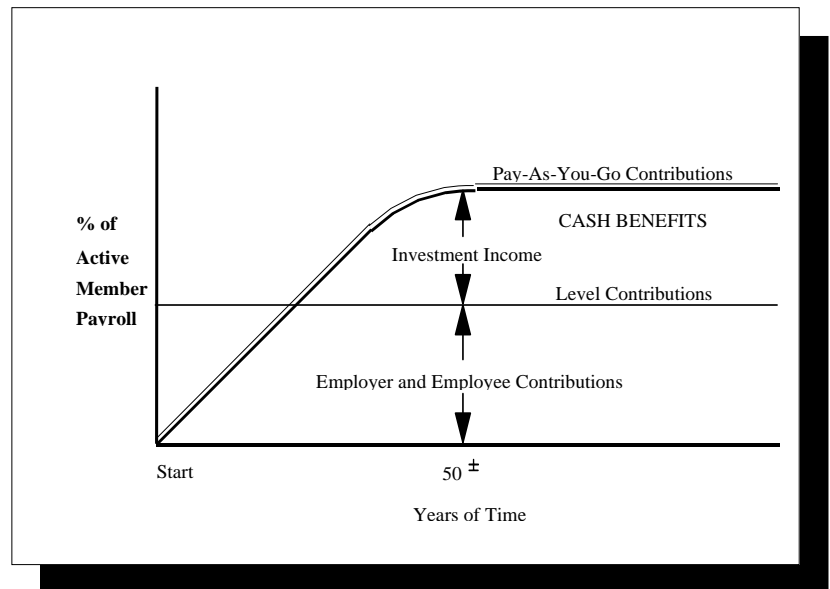
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## Economic Assumptions

Investment return  
Pay increases to individual employees:  
the portion for economic changes  
Active member group size and  
total payroll growth

## Demographic Assumptions

Actual ages at service retirement  
Pay increases to individual members:  
the portion for merit & seniority  
Disability while actively employed  
Separations before retirement  
Mortality after retirement  
Mortality before retirement



## RELATIONSHIP BETWEEN THE BOARD AND THE ACTUARY

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The actuary should have the primary responsibility for choosing the *demographic* assumptions used in the actuarial valuation, making use of specialized training and experience.

The actuary and other professionals can provide guidance concerning the choice of suitable economic assumptions, but the basis of the economic assumptions is expected market returns for various asset classes and the assumed rate of inflation (a quantity which defies accurate prediction). Given an assumed rate of future inflation, it is very important that this rate be applied in a consistent manner in deriving the assumed rate of investment return, the economic portion of the assumption on pay increases to individual employees, and the assumed rate of growth of active member payroll. Consistent application of assumptions is an area in which the actuary has specialized training.

A sound procedure is that the actuary suggests reasonable alternatives for economic assumptions, followed by discussion involving the actuary, the Board of Trustees, and other professionals, and the Board then makes a final choice from the various reasonable alternatives.

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**SECTION E**  
**FINANCIAL PRINCIPLES**

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## FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES OF IMRF

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***Promises Made, and To Be Paid For:*** As each year is completed, IMRF in effect hands an “IOU” to each member then acquiring a year of service credit. The “IOU” says: “The Illinois Municipal Retirement Fund owes you one year’s worth of retirement benefits, payments in cash commencing when you retire.”

The related *key financial questions* are:

***Which generation of taxpayers contributes the money to cover the IOU?***

***The present taxpayers***, who receive the benefit of the member’s present year of service? ***Or the future taxpayers***, who happen to be in Illinois at the time the IOU becomes a cash demand, years and often decades later?

***The law governing IMRF financing intends that this year’s taxpayers contribute the money to cover the IOUs being handed out this year.*** With this financial objective, ***the employer contribution rate is expected to remain approximately level from generation to generation of taxpayers.***

There are systems which have a design for deferring contributions to future taxpayers. Lured by a lower contribution rate now, they put aside the consequence that the contribution rate must then relentlessly grow to a level much higher than would be required if a level contribution pattern were followed.

An inevitable by-product of the level-cost design is the accumulation of reserve assets, for decades, and the income produced when the assets are invested. ***Investment income*** ultimately becomes ***the 3rd and largest contributor*** for benefits to members, and is interlocked with the contribution amounts required from members and employers.

Translated to actuarial terminology, this level-cost objective means that the contribution rates must total at least the following:

Normal Cost (the cost of members’ service being rendered this year)

... plus ...

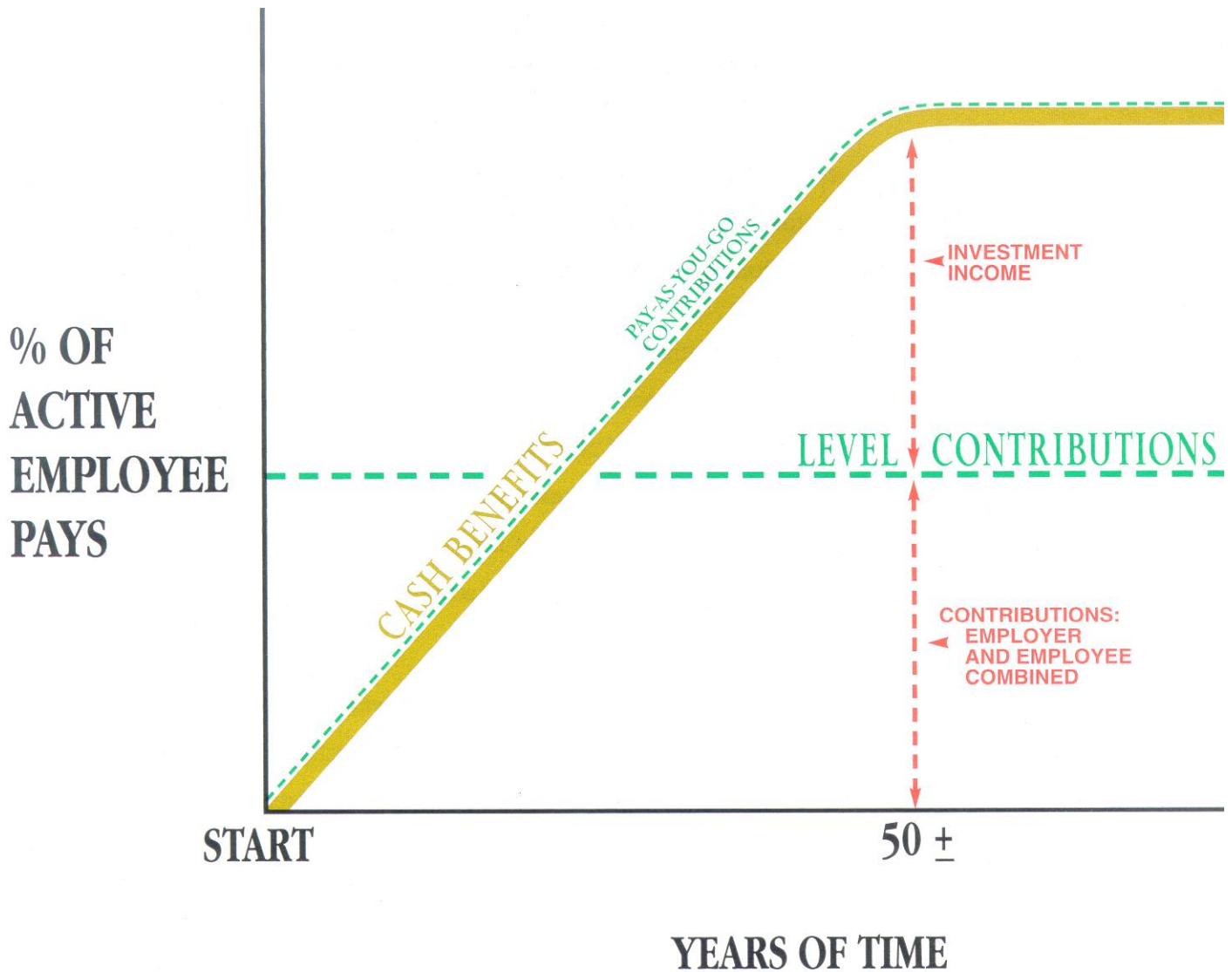
Interest at the assumed real rate of return on Unfunded Actuarial Accrued Liabilities (unfunded actuarial accrued liabilities are the difference between: accrued liabilities for service already rendered; and the accrued assets of IMRF).

***Computing Contributions to Support Fund Benefits:*** From a given schedule of benefits and from member and asset data, the actuary calculates the contribution rates to support the benefits by means of ***an actuarial valuation and a funding method.***

An actuarial valuation has a number of ingredients such as: the rate of investment return which plan assets will earn; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of pay increases; and the assumed age or ages at actual retirement. These rates cannot be known today. Consequently, in an actuarial valuation, assumptions must be made as to what the above rates will be for the next year and for decades in the future. The assumptions are established by the Board of Trustees after receiving the advice of the actuary.

***Reconciling Differences Between Assumed Experience and Actual Experience:*** Once actual experience has occurred and has been observed, it will not coincide exactly with assumed experience, regardless of the skill of the actuary and the many calculations made. The future cannot be predicted.

IMRF copes with these continually changing differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is ***continuing adjustments in financial position.*** Once every three years, an Experience Study is conducted to fully review differences between actual and assumed experience and recommend changes to our assumed experience, where appropriate.



**CASH BENEFITS LINE.** This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

**LEVEL CONTRIBUTION LINE.** Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

Economic Risk Areas

- Rates of investment return
- Rates of pay increase
- Changes in active member group size

Non-Economic Risk Areas

- Ages at actual retirement
- Rates of mortality
- Rates of withdrawal of active members (turnover)
- Rates of disability

## THE ACTUARIAL VALUATION PROCESS

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*The financing diagram* on the opposite page shows the relationship between *the two fundamentally different philosophies of paying* for retirement benefits: the method where contributions match cash benefit payments (or barely exceed cash benefit payments, as in the Federal Social Security program) which is thus an *increasing contribution method*; and, the *level contribution method* which attempts to equalize contributions between the generations.

*The actuarial valuation* is the mathematical process by which the level contribution rate is determined. The activity constituting the valuation may be summarized as follows:

A. *Census Data*, including:

- Retired lives now receiving benefits
- Former members with vested benefits not yet payable
- Active members

B. + *Asset data* (cash & investments)

C. + *Benefit provisions* that establish eligibility and amounts of payments to members

D. + *Assumptions concerning future experience* in various risk areas

E. + *The funding method* for employer contributions (the long-term, planned pattern for employer contributions)

F. + *Mathematically combining the assumptions, the funding method, and the data*

G. = Determination of:

- Plan Financial position and/or
- New Employer Contribution Rates

## GLOSSARY

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**Actuarial Accrued Liability** - The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost (employer and employee). Sometimes referred to as “accrued liability” or “past service liability.”

**Accrued Service** - The service credited under the plan which was rendered before the date of the actuarial valuation.

**Accumulated Benefit Obligation** - The actuarial present value of vested and non-vested benefits based on service to date and past and current salary levels.

**Actuarial Assumptions** - Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

**Actuarial Cost Method** - A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future plan benefits” between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

**Actuarial Equivalent** - A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

**Actuarial Present Value** - The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Actuarial Present Value of Credited Projected Benefits or Pension Benefit Obligation** - The present value of future benefits based on service to date and the effect of projected salary increases.

**Actuary** - A person who is trained in the applications of probability and compound interest to problems in business and finance that involve payment of money in the future, contingent upon the occurrence of future events. Most actuaries in the United States are Members of the American Academy of Actuaries. The Society of Actuaries is an international research, education and membership organization for actuaries in the life and health insurance, employee benefits, and pension fields. It administers a series of examinations leading initially to Associateship and the designation A.S.A. and ultimately to Fellowship with the designation F.S.A.

**Amortization** - Paying off an interest-bearing liability by means of periodic payments, as opposed to paying it off with a lump sum payment.

**Experience Gain (Loss)** - A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

**ERI** - Early Retirement Incentive Plan.

**Funded Percent** - A measure of the ratio of the funding value of assets to the actuarial accrued liability.

**Normal Cost** - The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost.” Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

**Plan Termination Liability** - The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a “going concern” basis and is not normally determined in a routine actuarial valuation.

**Reserve Account** - An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

**Unfunded Actuarial Accrued Liability** - The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability.”

**Valuation Assets** - The value of current plan assets recognized for valuation purposes.

