### ILLINOIS MUNICIPAL RETIREMENT FUND Annual Actuarial Valuations

DECEMBER 31, 2005



Gabriel Roeder Smith & Company

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April 18, 2006

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

Ladies and Gentlemen:

The results of the **December 31, 2005 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 2007 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 2002-2004 experience.

The valuations were completed by qualified actuaries in accordance with accepted actuarial procedures prescribed by the Actuarial Standards Board. The qualified actuaries are members of the American Academy of Actuaries and are experienced in performing actuarial valuations of public employee retirement systems. 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

Mark Buis, ASA

BBM/MB:dm

#### INTRODUCTION

IMRF is established under statutes adopted by the Illinois General Assembly. It is a multiple employer defined benefit pension plan that, as of December 31, 2005, serves 3,188 active plans and 377,251 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 6.5% through May 31, 2006 and 7.5% thereafter; 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 0.21% 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 most employers with taxing authority, unfunded liabilities are being funded over 25 remaining years. For most other employers the remaining period is 5 years. A separate schedule applies to each year's new employers. Unfunded liabilities associated with the recent benefit changes for SLEP members (Public Act 94-712) are amortized over 30 years. The amortization policy is described on page D-10.

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

	Average Employer Contribution Rates Expressed as %'s of Active Member Pays			
	Regular	SLEP	ECO	
This Valuation Prior Valuation	9.72% 10.04%	18.42% 18.25%	41.30% 44.90%	

This year's valuation results were affected by:

- Benefit changes for SLEP employers in conjunction with Public Act 94-712.
- Increases in the covered population.
- ERI liabilities.
- Revised assumptions in conjunction with the 2002-2004 Experience Study.

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

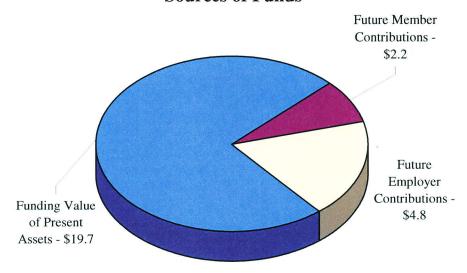
### SECTION A

Valuation Results

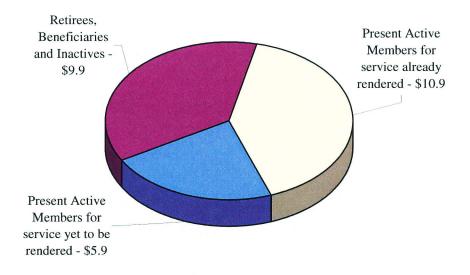
# FINANCING \$26.7 BILLION WORTH OF BENEFIT PROMISES TO PRESENT MEMBERS, RETIREES AND BENEFICIARIES DECEMBER 31, 2005

(AMOUNTS IN \$BILLIONS)

### **Sources of Funds**



#### **IMRF Obligations**



## ACTUARIAL BALANCE SHEET DECEMBER 31, 2005

**Funding Sources** 

	r unuing o	ources		
	Regular	SLEP	ECO	Total
Present Valuation Assets				
Member Contributions	\$ 3,517,526,363	\$ 203,532,854	\$ 20,782,262	\$ 3,741,841,479
Employer Assets	7,737,841,447	386,496,251	16,046,485	8,140,384,183
Retired Life Assets	7,348,267,408	524,514,703	93,353,118	7,966,135,229
Market Value Adjustment	(153,698,973)	(9,178,199)	(966,142)	(163,843,314)
Death and Disability Reserves				13,883,708
Total Present Assets	\$18,449,936,245	\$ 1,105,365,609	\$ 129,215,723	\$19,698,401,285
Future Assets				
Member Contributions	2,047,286,343	150,604,187	10,941,490	2,208,832,020
Employer Contributions				
Normal Costs	3,380,297,111	234,139,300	25,559,316	3,639,995,727
Unfunded Liability	800,264,764	213,916,442	102,478,351	1,116,659,557
Total Employer	4,180,561,875	448,055,742	128,037,667	4,756,655,284
Total Future Assets	6,227,848,218	598,659,929	138,979,157	6,965,487,304
<b>Total Funding Sources</b>	\$24,677,784,463	\$ 1,704,025,538	\$ 268,194,880	\$26,663,888,589

**Funding Uses** 

		5		
Funds Needed for	Regular	SLEP	ECO	Total
Active Members	\$15,504,299,188	\$ 1,123,807,279	\$ 151,775,105	\$16,779,881,572
Inactive Members	1,825,217,867	55,703,556	23,066,657	1,903,988,080
Retirees and Beneficiaries	7,348,267,408	524,514,703	93,353,118	7,966,135,229
Death and Disability Benefits				13,883,708
Total Actuarial Present Value	\$24,677,784,463	\$1,704,025,538	\$ 268,194,880	\$26,663,888,589

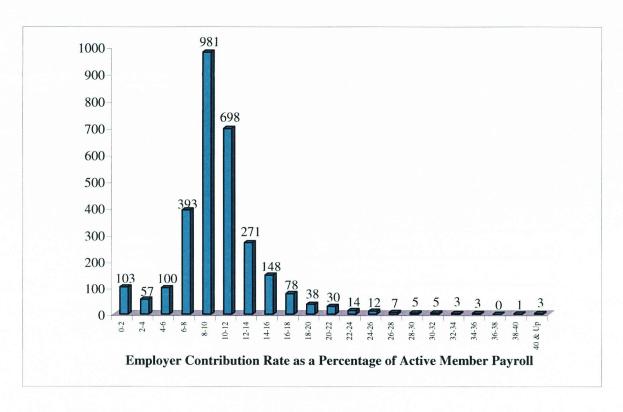
## DEVELOPMENT OF AVERAGE CONTRIBUTION RATES APPLICABLE TO CALENDAR YEAR 2007 (RESULTS AS OF DECEMBER 31, 2005)

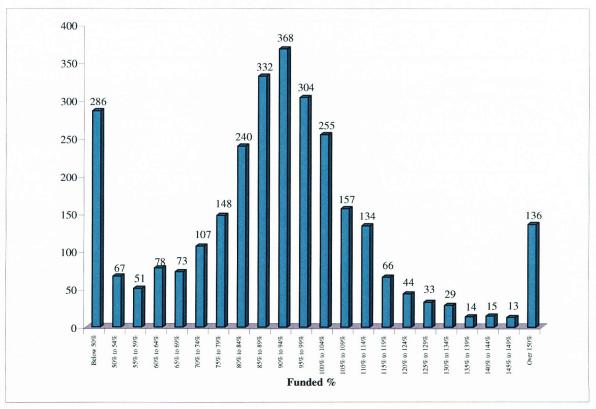
	% of Active Member Pays			
	Regular	SLEP	ECO	
Average Employer Contributions for				
Normal Cost				
Retirement	7.20 %	11.32 %	16.76 %	
\$3,000 Lump Sum Death Benefit	0.04 %	0.02 %	0.07 %	
Total & Permanent Disability Benefit	0.19 %	0.32 %	0.69 %	
Total Normal Cost	7.43 %	11.66 %	17.52 %	
Lump Sum Death-in-Service Benefits	0.23 %	0.24 %	0.23 %	
Temporary Disability	0.21 %	0.21 %	0.21 %	
13th Checks	0.62 %	0.62 %	0.62 %	
Unfunded (Overfunded) Liabilities (25/5 years)	0.88 %	4.22 %	22.69 %	
Early Retirement Incentive Liabilities	0.35 %	0.10 %	0.03 %	
SLEP Supplemental Liabilities	0.00 %	1.37 %	0.00 %	
Total Average Employer Rate	9.72 %	18.42 %	41.30 %	
Prior Year Averages	10.04 %	18.25 %	44.90 %	

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 2,950 Regular plans, 172 SLEP plans and 66 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. While most contribution rates are near the average, some employer rates are below 2% and some are over 40% of payroll.

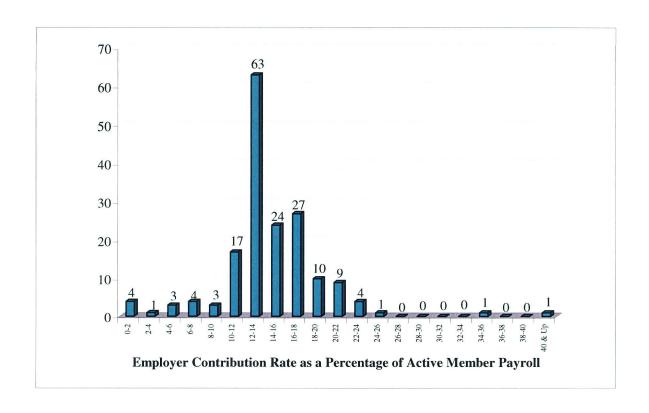
Employer contributions made during calendar year 2005 amounted to \$543 million. This compares with \$456 million in the previous year.

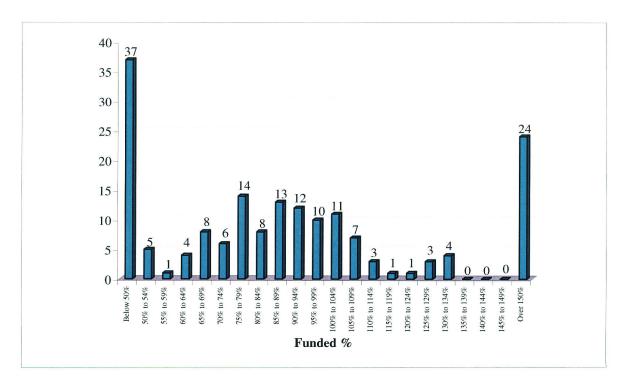
## EMPLOYER CONTRIBUTION RATES AND FUNDED PERCENTS 2,950 REGULAR EMPLOYERS AT DECEMBER 31, 2005



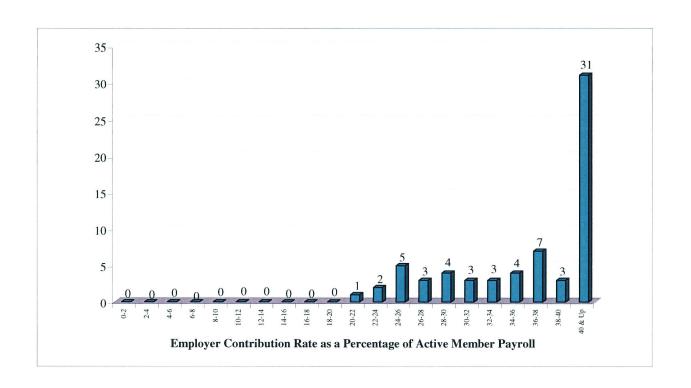


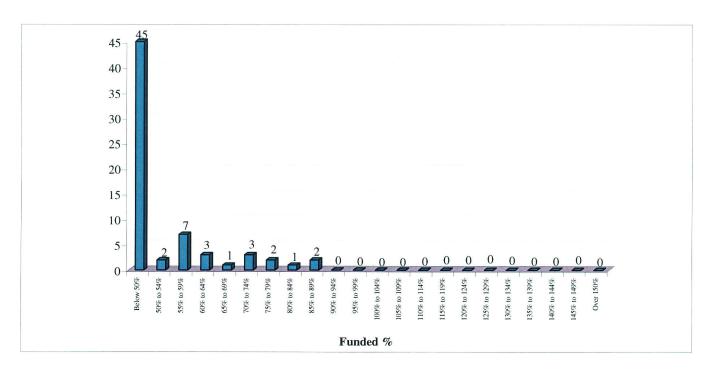
## EMPLOYER CONTRIBUTION RATES AND FUNDED PERCENTS 172 SLEP EMPLOYERS AT DECEMBER 31, 2005



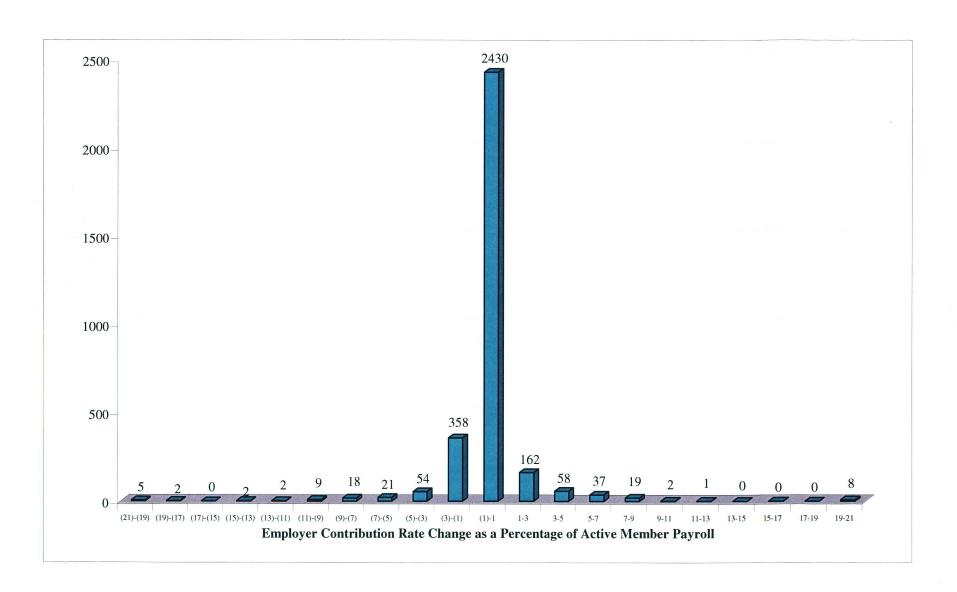


## EMPLOYER CONTRIBUTION RATES AND FUNDED PERCENTS 66 ECO EMPLOYERS AT DECEMBER 31, 2005





## EMPLOYER CONTRIBUTION RATE CHANGES - 2005 ACTUARIAL VALUATIONS 3,188 EMPLOYERS



#### HISTORICAL SUMMARY OF EMPLOYER RATES

			Employer Contribution Rate					
				ressed as %				
		Regular	Members	SLEP M		ECO M	lembers	
Rate Applies to Calendar	Rate Computed as of	Average     Normal   Total		Average Normal Total		Normal	Average Total	
Year	December 31	Cost	Rate	Cost	Total Rate	Cost	Rate	
1984	1982	2.97%	6.55%	3.90%	6.22%			
1985	1983	3.57%	7.35%	4.92%	7.03%			
1986	1984*	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*#	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*	8.24%	11.89%	10.31%	14.01%			
1993	1991*#	7.04%	10.58%	8.49%	12.01%			
1994	1992	7.33%	10.77%	8.87%	11.82%			
1995	1993*	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*	7.21%	9.64%	10.22%	13.94%			
1999	1997!	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*	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*	7.60%	7.82%	12.47%	16.29%	18.18%	44.90%	
2005	2003	7.61%	9.25%	12.48%	17.15%	1 <b>8.07</b> %	42.66%	
2006	2004	7.64%	10.04%	12.56%	18.25%	18.01%	44.90%	
2007	2005*#	7.43%	9.72%	11.66%	18.42%	17.52%	41.30%	

<sup>\*</sup> Assumption change

As shown above, the average employer contribution rates decreased this year for most employers. 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.

Fifteen percent of employers experienced a rate decrease of more than 1% of payroll. Seventy-six percent of employers experienced either a change (up or down) of less than 1% of payroll. Nine percent of employers experienced a rate increase of greater than 1%. Of those, the majority were in the 1% to 3% increase range (please see page A-7).

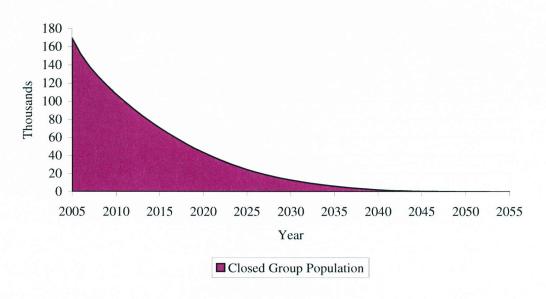
Most of the larger changes were for small employers (often employers covering only 1 or 2 employees), since the removal or addition of 1 employee can significantly impact the contribution rate. The actuary and IMRF staff review all of the large rate changes individually in order to determine the reasonableness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

<sup>#</sup> Benefit change

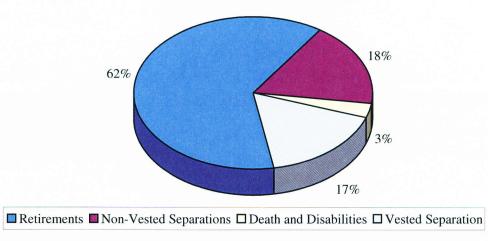
<sup>!</sup> Changed to payroll weighted average method

## EXPECTED DEVELOPMENT OF PRESENT POPULATION DECEMBER 31, 2005

#### **Closed Group Population Projection**



### **Expected Terminations from Active Employment For Current Active Members**



The charts show the expected future development of the present population in simplified terms. The retirement system presently covers 169,867 active members. Eventually, 18% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for a monthly benefit. About 79% 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

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.

	Unfunded Liability I	Development During
	2005	2004
Unfunded (Overfunded) Liability January 1	\$1,108,679,106	\$ 436,212,633
Assumed Net (Payments) Credits	(41,532,338)	(41,532,338)
Assumed Interest	81,612,241	31,177,228
Expected Unfunded Liability December 31	1,148,759,009	425,857,523
Increase/(Decrease) Due to Experience Study	(41,673,502)	0
Increase/(Decrease) Due to Benefit Changes	53,930,918	0
Loss/(Gain) Due to Investment Experience	(23,771,312)	478,548,470
Loss/(Gain) Due to Other Sources	(20,585,556)	204,273,113
Actual Unfunded Liability December 31	\$1,116,659,557	\$1,108,679,106

Assumed net (payments) credits appear unchanged from 2004. However, the accounting method was changed in 2005 to reflect the lag time between assumed and actual payments or credits. Changes due to other sources included the effect of differences between actual and assumed experience and the effect of new employers joining IMRF. These matters 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)
1983	\$ 2,780,217,771	\$ 1,821,146,853	\$ 959,070,918	\$1,487,069,292	65.5%	64.5%
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%

<sup>\*</sup> Assumption 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%.

<sup>#</sup> Benefit change

#### 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	Con	ditio	n Test

	Aggregate Actuarial Liabilities For				Porti	on of Act	uarial
	(1)	(2)	(3)		Liabil	Liabilities covered by	
			Non-Retired			Assets	
			Members				
Calendar	Non-Retired		(Employer	Actuarial			
Year	Contributions	Annuitants	Financed Portion)	Assets	(1)	(2)	(3)
1991*#	\$1,095,888,522	\$ 2,217,253,547	\$3,093,823,381	\$ 5,034,577,441	100%	100%	55.6%
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%

<sup>\*</sup> Assumption change

<sup>#</sup> Benefit change

### SECTION B

## Summary of Benefit Provisions and Valuation Data

## SUMMARY OF BENEFITS AND CONDITIONS EVALUATED DECEMBER 31, 2005

#### 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 Optional Formula:

Prior to June 1, 2006: 2-1/2% of FRE times each of the first 20 years of SLEP service, plus 2% of FRE times service over 20, but les than 30 years, plus 1% of FRE times service over 30 years. The maximum formula pension is 75% of FRE.

On or after June 1, 2006: 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, 2005

(CONTINUED)

#### 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. Effective June 1, 2006 for SLEP members, if the spouse of a member is more than five years younger than the retired member, the surviving spouse benefit is actuarially reduced.

#### **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 I 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, 2005

#### (CONTINUED)

#### 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) age 60, 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) age 60, 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 Check.

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, 2005** (CONCLUDED)

#### Member Contributions.

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

SLEP Members: 6 1/2% of earnings (5-3/4% base plus 3/4% for survivor benefits) through May 31, 2006 and 7 1/2% of earnings thereafter (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 and survivor contributions without interest plus accumulated 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 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. 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, 2005

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

				Average	:
		Valuation Payroll /	Pay/		
Member Status	No.	Benefits	Benefits	Age	Service
Active Members		4			
Regular	165,317	\$5,140,134,722	\$31,093	46.4	9.0
SLEP	3,972	209,269,410	52,686	40.5	11.3
ECO	578	25,181,811	43,567	54.5	11.6
Total Active	169,867	\$5,374,585,943	\$31,640	46.3	9.1
	4.844.8 4 44.00 45.00				
Inactive Members	455.000				
Regular	155,932			46.1	4.5
SLEP	1,015			43.9	9.0
ECO	147			52.4	10.5
(Inactive and Active)	(31,333)				
Total Inactive	125,761			46.1	4.5
Retirees & Beneficiaries	81,623	\$ 749,427,300	\$ 9,182	72.7	
Total Population	377,251 267,500				
Prior Year Total	367,590				

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.

Additional population statistics are presented on the following pages.

# ACTIVE MEMBERS BY EMPLOYER TYPE DECEMBER 31, 2005 REGULAR, SLEP, ECO COMBINED

		Members			
	Rate		% of	Cumulative	
Type of Employer	Groups	Number	Total	Percent	Payroll
School Districts	872	76,687	45.6%	45.6%	\$1,793,037,096
Counties (Regular, SLEP,ECO)	268	31,997	18.8%	64.4%	1,174,116,270
Cities	288	20,533	12.1%	76.5%	874,113,859
Villages	428	15,341	9.0%	85.5%	708,750,639
Park Districts	195	6,939	4.1%	89.6%	237,512,621
Special Ed Districts	41	4,404	2.6%	92.2%	101,465,771
Townships	481	3,601	2.1%	94.3%	110,776,973
Library Districts	201	2,715	1.6%	95.9%	74,602,167
Forest Preserve Districts	13	978	0.6%	96.5%	39,336,275
Sanitary Districts	38	919	0.5%	97.0%	46,158,310
Consolidated Education Service Region	29	745	0.4%	97.4%	17,588,908
Towns	5	576	0.3%	97.7%	24,135,623
County Hospital Districts	3	536	0.3%	98.0%	17,905,354
Intergovernmental Coop	45	515	0.3%	98.3%	26,121,467
Mass Transit District (Taxing Authority)	4	489	0.3%	98.6%	19,210,830
Airport Authorities	12	273	0.2%	98.8%	11,980,116
Misc. Taxing Authority	7	266	0.2%	99.0%	13,333,063
Public Library System	8	252	0.1%	99.1%	9,152,150
Multi Co/Cons Health Dept.	4	236	0.1%	99.2%	6,698,369
Health Districts	4	224	0.1%	99.3%	7,473,924
Mass Transit Instrumentality	3	168	0.1%	99.4%	5,801,663
Vocational System	39	164	0.1%	99.5%	4,695,427
Fire Protection Districts	37	157	0.1%	99.6%	7,471,991
Miscellaneous Instrumentality	14	131	0.1%	99.7%	6,490,645
County Conservation Districts	4	121	0.1%	99.8%	4,332,155
Public Hopusing Authority	7	117	0.1%	99.9%	3,970,448
Joint Spec Rec Assns	11	116	0.1%	100.0%	4,429,680
Conservancy Districts	4	84	0.0%	100.0%	2,933,390
Joint Education Projects	8	82	0.0%	100.0%	2,019,493
Special Ed Coop/Districts	19	68	0.0%	100.0%	3,494,872
Public Housing Commission	7	67	0.0%	100.0%	2,419,820
Water District	10	56	0.0%	100.0%	2,064,597
County Road District	31	55	0.0%	100.0%	1,253,664
Tuberculosis Sanitarium Districts	1	54	0.0%	100.0%	2,399,426
Regional Planning Commission	1	38	0.0%	100.0%	2,127,978
Mosquito Abatement District	7	37	0.0%	100.0%	1,675,129
Educ Serv Centers	3	37	0.0%	100.0%	867,161
Water Supply/Sewr Comission	5	33	0.0%	100.0%	1,481,516
Township Cemetary	14	18	0.0%	100.0%	276,309
ROE Office	1	18	0.0%	100.0%	477,637
Multi Twp Assessment Districts	14	14	0.0%	100.0%	214,838
1	2	5	0.0%		
Drainage District Employers with no Active Members	4	J	U.U <i>70</i>	100.0%	178,800
or Members with no Asset Information	244	1	0.0%	100.0%	39,519
or Members with no Asset Information				100.076	
Totals	3,432	169,867	100.0%	100.0%	\$5,374,585,943

# ACTIVE REGULAR MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE DECEMBER 31, 2005

										tals
Attained		Y	ears of Ser	vice to Valu	iation Date					Valuation
Ages	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	No.		Payroll
15-19	379							379	\$	4,477,342
20-24	5,469	108						5,577		113,937,372
25-29	8,775	2,043	27					10,845		298,419,371
30-34	6,624	4,006	890	54				11,574		363,321,126
35-39	7,651	4,500	2,300	1,132	50			15,633		500,686,482
40-44	9,879	6,326	2,819	2,577	1,119	121		22,841		702,894,928
45-49	9,695	8,275	4,390	3,076	2,136	1,669	117	29,358		934,210,375
50	1,631	1,572	946	763	390	467	121	5,890		193,807,354
<b>5</b> 1	1,480	1,459	1,008	749	424	397	171	5,688		190,417,255
52	1,479	1,410	970	761	420	372	197	5,609		185,801,319
53	1,344	1,294	993	767	398	344	215	5,355		179,175,105
54	1,332	1,183	932	896	453	315	262	5,373		181,172,574
55	1,191	1,078	883	788	461	329	282	5,012		169,291,718
56	1,077	1,005	802	756	<b>41</b> 1	298	201	4,550		153,230,268
57	1,060	898	728	745	414	291	203	4,339		142,727,083
58	919	872	685	691	406	287	158	4,018		133,688,182
59	972	849	671	794	463	278	179	4,206		137,935,125
60	676	547	444	477	357	201	123	2,825		89,987,351
61	612	547	408	450	290	197	105	2,609		83,506,926
62	588	530	394	443	280	172	108	2,515		79,424,706
63	510	503	360	381	256	169	83	2,262		68,711,503
64	367	418	275	287	189	155	73	1,764		53,124,302
65	287	320	223	213	144	127	51	1,365		40,418,974
66	245	238	177	141	102	68	48	1,019		28,813,356
67	201	192	135	94	78	59	49	808		22,341,142
68	186	160	111	105	50	49	43	704		17,867,655
69	151	150	90	68	61	36	31	587		13,828,379
70	143	118	80	71	34	24	22	492		11,541,800
Over 70	458	526	362	311	189	129	145	2,120		45,375 <u>,</u> 649
Totals	65,381	41,127	22,103	17,590	9,575	6,554	2,987	165,317	\$	5,140,134,722

# ACTIVE SLEP MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE DECEMBER 31, 2005

	_								
Attained _		Y	ears of Serv	vice to Valu	ation Date				Valuation
Ages	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	No.	Payroll
15-19									
20-24	103							103	\$ 3,563,735
25-29	360	90						450	18,594,676
30-34	261	314	85	1				661	31,012,113
35-39	168	238	237	106	1			750	39,333,196
40-44	88	114	142	261	55	1		661	37,018,716
45-49	51	71	76	144	139	71	1	553	33,170,664
50	11	13	11	23	24	37	1	120	7,041,186
51	7	6	12	23	17	20		85	5,256,897
52	9	10	8	16	16	25	5	89	5,360,653
53	11	10	8	23	19	16	7	94	5,827,990
54	6	8	8	14	11	10	11	68	4,271,246
55	7	7	7	16	12	14	10	73	4,430,126
56	7	3	6	9	9	10	2	46	2,522,609
57	5	5	9	10	5	7	4	45	2,523,860
58	6	5	4	8	3	8	2	36	2,088,653
59	6	5	8	3	5	6	8	41	2,277,269
60	1	2	2	3	1	1	2	12	810,610
61	4	4	2	3		1	3	17	950,050
62	3	2	3	2	2			12	534,048
63	2	3	1	3	1	3	1	14	559,832
64	3		1	2	2			8	403,376
65	1	1	1	4	2	1	1	11	675,488
66	1	1	2	1			1	6	295,482
67			1	2		1		4	246,302
68			1	1	2		1	5	278,261
69				2				2	85,496
70	1		1					2	40,698
Over 70			1	2		1		4	96,178
Totals	1,122	912	637	682	326	233	60	3,972	\$209,269,410

### ACTIVE ECO REGULAR MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE DECEMBER 31, 2005

		Totals							
Attained		Yea	rs of Ser	vice to Va	luation D	ate			Valuation
Ages	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	No.	Payroll
20-24									
25-29									
30-34	5	3	1					9	\$ 451,496
35-39	11	12	3	1				27	1,651,669
40-44	18	12	6	5	2	2		45	2,389,266
45-49	24	29	13	9	9	5		89	4,298,552
50	7	4	4	2	1	2		20	886,149
51	5	4	5	3	6	1	3	27	1,619,164
52	9	4		7	2	4	1	27	1,399,392
53	6	3	5	4	2	3	1	24	1,200,032
54	3	3	3	3	1	2		15	699,910
55	5	4	2	2	3			16	686,244
56	5	7	2	3	2		1	20	861,007
57	4	7	5	3		3	1	23	699,534
58	6	6	3	4	1	2		22	862,530
59	6	4	1	3	2	1	1	18	719,944
60	4	3	1			1	1	10	328,423
61	2	1	2	4	2	1		12	484,618
62	4	1	3	3	2			13	556,341
63	6	3		2				11	227,645
64	1	1	1	1	1	2	2	9	405,891
65	2	6	2	1	1			12	296,604
66	3	4	1	1			1	10	291,193
67	2	1	2	2	3		1	11	256,114
68	1	4	2	1				8	110,455
69	3	2	2		1			8	105,980
70	2	2						4	62,230
Over 70	5	12	7	10	3	2	3	42	672,500
Totals	149	142	76	74	44	31	16	532	\$22,222,883

# ACTIVE ECO SLEP MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE DECEMBER 31, 2005

			ears of Ser				_	<u> </u>	Totals
Attained _			Valuation						
Ages	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	No.	Payroli
30-34									
35-39			1					1	\$ 62,478
40-44	3		1	2				6	311,963
45-49	4	1	1	<b>4</b>	1			6	351,250
50			1				1	2	96,620
51			1	1			1	1	60,419
52				1.	1		1	2	126,766
53				1	1		1	2	126,700
54	1			1			1	1	75,740
55	1			1	1		3	6	458,490
56	1			•	1		5	1	108,668
57	1		2	1				3	174,863
58		1		•			1	2	135,092
59		3				1	•	4	211,550
60		2				•	1	1	98,548
61	1					1	•	2	143,980
62	•					•	1	1	53,894
63		1					•	1	61,020
64	1	-	1					2	127,184
65	-		_				1	1	87,211
66							_	_	_ <b>, ,</b>
67									
68									
69									
70									
Over 70					1			1	87,189
Totals	12	6	6	6	4	2	10	46	\$2,958,928

## ALL ACTIVE MEMBERS BY YEARS OF SERVICE AND GENDER DECEMBER 31, 2005

Service	Acti	ve Member C	ount	Active Memb	er Pays
Years	Males	Females	Total	Total	Average
0	6,316	12,640	18,956	\$ 380,199,151	\$20,057
1	4,917	9,442	14,359	329,355,813	22,937
2	4,029	7,020	11,049	273,524,093	24,756
3	3,834	6,863	10,697	284,358,440	26,583
4	3,924	7,679	11,603	314,405,501	27,097
5	3,511	6,956	10,467	301,400,585	28,795
6	3,272	6,481	9,753	288,050,551	29,535
7	2,794	5,601	8,395	255,939,703	30,487
8	2,538	4,809	7,347	227,710,367	30,994
9	2,120	4,105	6,225	205,444,619	33,003
10	1,959	3,689	5,648	186,163,594	32,961
11	1,707	3,398	5,105	175,614,209	34,400
12	1,548	2,828	4,376	155,796,901	35,603
13	1,325	2,368	3,693	136,221,863	36,887
14	1,500	2,500	4,000	150,380,601	37,595
15 & Up	17,855	20,339	38,194	1,710,019,952	44,772
Totals	63,149	106,718	169,867	\$ 5,374,585,943	\$31,640

### INACTIVE REGULAR MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE DECEMBER 31, 2005

Attained		Years of Service to Valuation Date									
Ages	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	No.			
15-19	204							204			
20-24	3,737	4						3,741			
25-29	11,377	135	1					11,513			
30-34	13,410	420	43				6	13,879			
35-39	13,132	810	252	22	1		9	14,226			
40-44	12,626	1,170	523	197	41	10	29	14,596			
45-49	18,147	1,806	882	385	186	50	78	21,534			
50	2,482	417	209	92	62	19	19	3,300			
51	2,907	423	228	96	66	10	39	3,769			
52	2,613	446	229	123	68	23	21	3,523			
53	2,446	430	288	143	64	_ 20	21	3,412			
54	2,968	472	266	118	61	35	37	3,957			
55	2,588	421	247	103	49	29	20	3,457			
56	2,046	257	101	36	16	18	18	2,492			
57	1,971	227	84	33	20	12	10	2,357			
58	1,755	214	72	28	22	5	4	2,100			
59	1,861	213	94	21	14	8	9	2,220			
60	1,215	137	43	23	10	5	5	1,438			
61	1,081	115	51	26	9	4	7	1,293			
62	871	84	39	18	5	5	4	1,026			
63	965	100	22	9	9	5	7	1,117			
64	799	61	20	12	3	3	4	902			
65	629	42	11	10	8	8	5	713			
66	678	45	12	5	2		3	745			
67	414	31	5	3				453			
68	413	15	5	1	. 1	1	2	438			
69	350	23	3	3			1	380			
70	442	15	3	1	2			463			
Over 70	5,515	184	34	12	3	5	6	5,759			
Totals	109,642	8,717	3,767	1,520	722	275	364	125,007			

# INACTIVE SLEP MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE DECEMBER 31, 2005

Attained _	Years of Service to Valuation Date								
Ages	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	No.	
15-19									
20-24	7							7	
25-29	55	2						57	
30-34	60	14	1					75	
35-39	67	28	10	1			1	107	
40-44	49	15	20	6	2	1	1	94	
45-49	51	13	19	9	15	3	_	110	
50	6	2	3	2	2	1	1	17	
51	7	6	5	4	1			23	
52	16	5	4	2	1			28	
53	9	3	4	2	2			20	
54	8	3	4	3	1		1	20	
55	14	2	3		1			20	
56	9	1	1			2		13	
57	5		1			1		7	
58	4	2	1					7	
59	5							5	
60	2		2					4	
61	5				1			6	
62	5							5	
63	1							1	
64									
65	2		1					3	
66	1							1	
67	3							3	
68	1						1	2	
69									
70	2							2	
Over 70	8							8	
Totals	402	96	79	29	26	8	5	645	

# INACTIVE ECO MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE DECEMBER 31, 2005

Attained _	Years of Service to Valuation Date								
Ages	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	No.	
15.10									
15-19									
20-24									
25-29								_	
30-34	1	_						1	
35-39	2	3	1					6	
40-44	4	3	2					9	
45-49	14	8	3	2	1	1		29	
50		3	2	1				6	
51	2	1	2					5	
52		3	4	1	1			9	
53	1	2	1	2	2			8	
54	2	1	4	1	1			9	
55	1		1	1	1			4	
56	1		1					2	
57	3	1		1				5	
58	1							1	
59			1	1				2	
60	1							1	
61	2			2				4	
62									
63									
64	1				2			3	
65	1				_			1	
66	1	1						2	
67	-	-						_	
68									
69	1							1	
70	•							1	
Over 70	1							1	
Totals	40	26	22	12	8	1		109	

## RETIREES AND BENEFICIARIES DECEMBER 31, 2005

**Annual Amounts by Form of Payment** 

		TAMINUG	ii Pamouaiis	by Politi of Layi	HICHL	
	R	egular	Level Pay	ment Option		Total
Type of Retirement	No.	Amount	No.	Amount	No.	Amount
Normal or Early						
Joint and 50% Survivor	37,020	\$370,738,980	14,905	\$160,172,484	51,925	\$530,911,464
Straight Life	12,614	120,147,672	3,737	44,109,024	16,351	164,256,696
Total	49,634	490,886,652	18,642	204,281,508	68,276	695,168,160
Disability	604	3,779,856	-	0	604	3,779,856
Surviving Beneficiaries	10,988	45,622,200	659	4,179,324	11,647	49,801,524
Voluntary Contributions	1,096	677,760	-	0	1,096	677,760
Grand Total	62,322	\$540,966,468	19,301	\$208,460,832	81,623	\$749,427,300

Voluntary Contributions includes annuitization of certain surviving spouse and SLEP refund amounts. 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.

# RETIREES AND BENEFICIARIES BY ATTAINED AGE DECEMBER 31, 2005

A	ttain	ed		Number		Annual
	Ages	;	Males	Females	Total	Benefits
U	nder	20	2	8	10	\$ 20,448
20	-	24	9	9	18	61,416
25	-	29	1	4	5	12,408
30	-	34	7	6	13	51,756
35	-	39	10	14	24	109,080
40	-	44	21	43	64	287,220
45	-	49	52	96	148	797,316
50	-	54	512	267	779	21,004,680
55	-	59	2,613	4,002	6,615	104,928,588
60	_	64	3,471	7,436	10,907	132,166,596
65	-	69	4,496	9,598	14,094	142,230,456
70	-	74	4,541	9,293	13,834	128,239,596
75	-	79	4,331	9,142	13,473	102,798,036
80	-	84	3,482	7,721	11,203	71,071,044
85	-	89	1,870	5,036	6,906	33,342,456
90	-	94	671	2,189	2,860	10,445,868
9	5 & T	Jр	128	542	670	1,860,336
	Total	  s	26,217	55,406	81,623	\$749,427,300

## RETIREES AND BENEFICIARIES BY YEAR OF RETIREMENT DECEMBER 31, 2005

7	Year of			Number	Annual	
Re	tiremen	ıt –	Males	Females	Total	Benefits
	2005		2,016	3,462	5,478	\$ 67,037,856
	2004		1,978	3,482	5,460	69,763,080
	2003		2,051	3,447	5,498	66,963,504
	2002		1,694	3,122	4,816	53,878,152
	2001		1,506	2,863	4,369	43,397,160
	2000		1,286	2,722	4,008	39,440,592
	1999		1,547	2,826	4,373	46,897,932
	1998		1,515	2,747	4,262	49,108,044
	1997		1,340	2,713	4,053	42,257,136
	1996		1,149	2,557	3,706	37,694,940
	1995		1,034	2,337	3,371	28,641,192
	1994		931	2,125	3,056	25,851,480
	1993		892	1,983	2,875	23,063,532
	1992		821	1,768	2,589	20,658,732
	1991		709	1,669	2,378	17,670,816
	1990		716	1,610	2,326	16,933,488
1985	-	1989	2,887	6,986	9,873	63,709,476
1980	-	1984	1,460	4,004	5,464	26,624,172
1975	-	1979	574	2,060	2,634	7,970,832
1970	-	1974	101	733	834	1,682,568
1965	-	1969	8	141	149	138,876
Be	Before 1965		2	49	51	43,740
	Total		26,217	55,406	81,623	\$749,427,300

### DATA REPORTED FOR ACTUARIAL VALUATIONS **COMPARATIVE SUMMARY**

		Active Members							
			Average						
Date	Total		Annual Pay		Nun	ıber	Ratio:		
December 31	Count	Number	Age	Serv.	Pay	Increase	Inactive	Retired	Act/Ret.
1983	198,249	107,178	43.0	6.8	\$13,825	-	54,471	36,600	2.90
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

Changed method of recording earnings for 1996 valuation. Restated subsequent to release of 2000 valuation.

### SECTION C

Financial Data

### DEVELOPMENT OF FUNDING VALUE OF RETIREMENT SYSTEM ASSETS

Year Ended December 31	2003	2004	2005	2006	2007	2008
A. Funding Value Beginning of Year	\$ 16,800,195,506	\$ 17,529,890,818	\$ 18,315,987,910			
B. Market Value End of Year	16,349,040,059	18,315,987,910	19,793,486,534			
C. Market Value Beginning of Year	13,496,215,283	16,349,040,059	18,315,987,910			
D. Non-Investment/Administrative Net Cash Flow	(121,204,498)	(48,285,542)	(14,512,800)			
E. Investment Return E1. Market Total: B-C- D E2. Assumed Rate of Return	2,974,029,274 7.50% <b>1,255,469,494</b>	2,015,233,393 7.50% <b>1,312,931,104</b>	1,492,011,424 7.50% <b>1,373,154,863</b>		Sche	duledduled
E3. Assumed Amount of Return E4. Return Subject to Phase In: E1-E3	1,718,559,780	702,302,289	118,856,561		Joine	duica
F. Phased-In Recognition of Investment Return F1. Current year: 0.20xE4 F2. First Prior Year F3. Second Prior Year F4. Third Prior Year F5. Fourth Prior Year F6. Total Scheduled Phase in of gain/(loss)	 343,711,956 (515,135,167) (428,515,358) (153,262,372) 348,631,257 (404,569,684)	140,460,458 343,711,956 (515,135,167) (428,515,358) (153,262,372) (612,740,483)	23,771,312 - - - - - - 23,771,312	Unknown \$ 23,771,312 - - - - 23,771,312	Unknown Unknown \$ 23,771,312 - - 23,771,312	Unknown Unknown Unknown \$ 23,771,312
<ul> <li>G. Acceptable Phase in of Investment Return</li> <li>G1. Projected Funding Value without Phase-in: A+D+E3</li> <li>G2. Limit on Phase in: B-G1</li> <li>G3. Acceptable Phase in Amount</li> </ul>		<b>18,794,536,380</b> (478,548,470) (478,548,470)	<b>19,674,629,973</b> 118,856,561 23,771,312			
H. Funding Value End of Year: A+D+E3+G3	\$17,529,890,818	\$18,315,987,910	\$19,698,401,285			
I. Difference Between Market and Funding Value	(1,180,850,759)	-	95,085,249	71,313,936	47,542,624	23,771,312
J. Recognized Rate of Return	5.1 %	4.8 %	7.6 %			
K. Market Rate of Return	22.1 %	12.3 %	8.1 %			
L. Ratio of Funding Value to Market Value	107.2 %	100.0 %	99.5 %			

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 15% 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
	2005	2004
1. Funding Value of End of Year	\$19,698,401,285	\$18,315,987,910
2. Amounts not used in rate calculations		
a. Suspended Annuity Reserve	12,079,742	9,041,984
b. Disability Benefit Reserve	8,270,298	7,215,198
c. Death Benefit Reserve	5,613,410	7,145,173
d. Supplemental Benefit Reserve	1,528,266	1,474,009
e. Cases removed from rate calculations*	33,184,846	29,328,555
f. Estimated pending reserve transfers	-	-
g. Total	60,676,562	54,204,919
3. Remaining amount to allocate: (1)-(2g)	19,637,724,723	18,261,782,991
4. Total reported negative reserves	(1,054,706)	(940,342)
5. Amount available to positive reserves: (3)-(4)	19,638,779,429	18,262,723,333
6. Total Market Value of reported positive reserves	19,802,622,743	18,291,393,514
7. Market Value Adjustment: (5)-(6)	\$ (163,843,314)	\$ (28,670,181)

<sup>\*</sup> Employers that are not included on the asset tape submitted to the actuary. 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
	2005	2004	2005	2004
Investment portfolio				
Fixed income	\$ 6,375,200,727	\$ 5,729,186,329	32.4%	31.4%
Short term	69,246,920	214,288,637	0.4%	1.2%
Foreign exchange contracts	391,664	(3,994,252)	0.0%	0.0%
Stocks	8,774,382,786	8,140,487,433	44.6%	44.7%
Bond funds	- -	-	0.0%	0.0%
Stock funds and Index Funds	3,079,406,258	2,880,597,176	15.6%	15.8%
Options	-	-	0.0%	0.0%
Real estate	640,566,463	622,868,727	3.3%	3.4%
Alternative investments	631,190,170	562,257,119	3.2%	3.1%
Master trust reserve fund	501,342,148	356,444,981	2.5%	2.0%
Cash	- -	, , <u>-</u>	0.0%	0.0%
Due from brokers	-	· -	0.0%	0.0%
Due (to) brokers	(443,938,729)	(364,932,619)	(2.3)%	(2.0)%
Accrued investment income	54,755,405	69,450,787	0.3%	0.4%
<b>Total Invested Assets</b>	19,682,543,812	18,206,654,318	100.0%	100.0%
Receivables	113,024,533	97,959,434		
Cash	20,555,316	30,213,744		
Fixed Assets	637,131	725,366		
Total Market Value	19,816,760,792	18,335,552,862		
Liabilities				
Benefits & vouchers payable	23,274,258	19,564,951		
Total Liabilities	23,274,258	19,564,951		
Nets Assets Available for				
Benefits	\$19,793,486,534	\$18,315,987,910		

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.

### SECTION D

Actuarial Methods and Assumptions

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

### **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 macro economic 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 macro economic 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. With the exception of mortality tables, the non-economic assumptions are based upon experience during the 2002-2004 period (please see report dated December 5, 2005), and were first used in the December 31, 2005 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 (CONTINUED)

#### **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 15% 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.

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

### ACTUARIAL ASSUMPTIONS DECEMBER 31, 2005

### PROBABILITIES OF AGE & SERVICE RETIREMENT

	Reg	gular	Regular	· & ECO
Age at	Reduc	ed Early	No	rmal
Retirement	Males	Females	Males	Females
50				
51				
52				
53				
54				
55	6.5%	6.5%	35%	35%
56	6.5%	6.5%	30%	30%
57	6.5%	6.5%	30%	30%
58	6.5%	6.5%	30%	30%
59	6.5%	6.5%	30%	30%
60			10%	10%
61			10%	10%
62			25%	20%
63			20%	20%
64			20%	20%
65			35%	25%
66			30%	20%
67			25%	20%
68			18%	18%
69			18%	18%
70-79			18%	18%
80 & Over			100%	100%

For ECO members, retirement probabilities were ten percentage points higher than otherwise indicated on this schedule.

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

## ACTUARIAL ASSUMPTIONS DECEMBER 31, 2005

### PROBABILITIES OF SEPARATION FROM ACTIVE MEMBER STATUS

	% Separating Next Year						
	Reg	ular	EC	SLEP &			
Service	Males	Females	Males	Females	ECO-SLEP		
0	25.0%	28.0%	25.0%	28.0%	16.0%		
1	18.0%	20.0%	18.0%	20.0%	10.0%		
2	13.0%	15.0%	13.0%	15.0%	8.0%		
3	10.5%	11.5%	10.5%	11.5%	6.0%		
4	8.5%	9.5%	8.5%	9.5%	5.0%		
5	7.0%	8.0%	7.0%	8.0%	4.5%		
6	6.0%	7.0%	6.0%	7.0%	4.0%		
7	5.5%	6.5%	5.5%	6.5%	N.A.		
					7 or More		
Age	8 or More Ye	ars of Service	8 or More Ye	ars of Service	Years of Service		
30	5.5%	6.5%	5.0%	2.0%	3.4%		
35	4.4%	5.8%	5.0%	2.0%	2.5%		
40	3.4%	4.8%	5.0%	2.0%	2.1%		
45	2.8%	4.3%	5.0%	2.0%	1.8%		
50	2.5%	3.7%	5.0%	2.0%	1.8%		

# ACTUARIAL ASSUMPTIONS DECEMBER 31, 2005 ACTIVE MEMBER PROBABILITIES OF DEATH AND DISABILITY

	% Dying					
Sample	Regular	· & ECO	SLEP			
Ages	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%		

		% Disabled								
Sample	Reg	ular	EC	ECO		LEP	ECO-SLEP			
Ages	Male	Female	Male	Female	Male	Female	Male	Female		
20	0.01%	0.01%	0.02%	0.01%	0.01%	0.03%	0.03%	0.03%		
25	0.01%	0.01%	0.02%	0.01%	0.03%	0.05%	0.05%	0.05%		
30	0.02%	0.01%	0.03%	0.02%	0.04%	0.08%	0.08%	0.08%		
35	0.03%	0.02%	0.06%	0.03%	0.06%	0.11%	0.11%	0.11%		
40	0.05%	0.03%	0.09%	0.05%	0.09%	0.17%	0.17%	0.17%		
	20124			i						
45	0.09%	0.04%	0.14%	0.07%	0.13%	0.24%	0.24%	0.24%		
50	0.13%	0.06%	0.22%	0.12%	0.20%	0.36%	0.36%	0.36%		
55	0.20%	0.10%	0.34%	0.18%	0.27%	0.50%	0.50%	0.50%		
60	0.26%	0.17%	0.43%	0.32%	0.25%	0.46%	0.46%	0.46%		
65	0.28%	0.20%	0.46%	0.38%	0.17%	0.30%	0.30%	0.30%		
		1.7-4.								
70	0.24%	0.17%	0.39%	0.32%	0.10%	0.18%	0.18%	0.18%		
75	0.17%	0.12%	0.28%	0.23%	0.03%	0.05%	0.05%	0.05%		
80	0.14%	0.10%	0.23%	0.19%	0.00%	0.00%	0.00%	0.00%		

# ACTUARIAL ASSUMPTIONS DECEMBER 31, 2005 RETIREE, BENEFICIARY, TERMINATED VESTED AND DISABLED LIFE MORTALITY

	% Dying Next Year					
	Non-Disal	bled Lives	Disable	d Lives		
Sample Ages	Males	Females	Males	Females		
40	0.1179%	0.0617%	0.2837%	0.1242%		
45	0.1736%	0.0847%	0.4867%	0.1996%		
50	0.2837%	0.1242%	0.8774%	0.3862%		
55	0.4867%	0.1996%	1.5988%	0.7513%		
60	0.8774%	0.3862%	2.6103%	1.1945%		
65	1.5988%	0.7513%	4.0932%	1.9737%		
70	2.6103%	1.1945%	6.8230%	3.4275%		
75	4.0932%	1.9737%	10.6964%	5.8932%		
80	6.8230%	3.4275%	16.8224%	10.1151%		

	Life Expectancy Years					
	Non-Disabled	Retired Lives	Disable	d Lives		
Sample Ages	Males	Females	Males	Females		
40	39.2	45.8	29.8	36.2		
45	34.5	41.0	25.3	31.4		
50	29.8	36.2	21.0	26.8		
55	25.3	31.4	17.1	22.4		
60	21.0	26.8	13.6	18.4		
65	17.1	22.4	10.5	14.6		
70	13.6	18.4	7.9	11.2		
75	10.5	14.6	5.8	8.3		
80	7.9	11.2	4.1	6.0		

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 87%. For disabled lives, the mortality rates are the rates applicable to non-disabled lives set forward 10 years.

## ACTUARIAL ASSUMPTIONS DECEMBER 31, 2005 PAY INCREASES FOR REGULAR AND ECO ACTIVE MEMBERS

	% Increase in Pay Next Year								
** ***			Additional Incre	ase For Those With					
	6 or More Y	ears Service		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%		1				
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, 2005 PAY INCREASES FOR SLEP AND ECO-SLEP ACTIVE MEMBERS

	% Increase in Pay Next Year						
Years of Service							
		Merit &	% Total				
Service	Economic	Longevity	Increase				
1	4.0%	10.0%	14.0%				
2	4.0%	8.0%	12.0%				
3	4.0%	4.0%	8.0%				
4	4.0%	3.0%	7.0%				
5	4.0%	2.0%	6.0%				
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

Expenses Assumed investment return is net of administrative and

investment expenses.

Marriage Assumption 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.

Pay Increase Timing 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.

Decrement Timing Decrements of all types are assumed to occur mid-year.

Eligibility Testing 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.

Benefit Service Exact fractional service on the decrement date is used to

determine the amount of benefit payable.

Decrement Relativity Decrement rates are used directly from the experience

study, without adjustment for multiple decrement table

effects.

Incidence of Contributions 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.

Normal Form of Benefit 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.

Surviving Spouse Refunds For those individuals who are not assumed to be married

at retirement, the surviving spouse contributions are

assumed to be refunded.

SLEP Refunds 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.

ECO Conversions 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.

Final Rate of Earnings (FRE)

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.

Refunds for Terminated Vested Members Members are assumed to elect annuities.

Other Disability decrements operate during retirement eligibility.

## FINANCING UNFUNDED ACCRUED LIABILITIES AND FULL FUNDING CREDITS DECEMBER 31, 2005 VALUATIONS

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

#### Financing Periods if employer is less than 90% funded on an actuarial basis.

- 1. Instrumentalities: Remaining period from original 10 years; rolling 5 years if period is already used up.
- 2. Early Retirement Incentive Plan liabilities: a period up to 10 years selected by the Employer upon adoption of ERI.
- 3. For existing taxing bodies (Regular, SLEP, and ECO rate Groups): 25 years, reducing one year annually until the remaining period is 10 years, after which time the remaining period will be a rolling 10 years.
- 4. Employers joining IMRF in 2005: 30 Years; reducing one year each valuation until it reaches 10 years, after which time the remaining period will be a rolling 10 years.

#### Financing Period if employer is between 90% and 100% funded on an actuarial basis:

- 5. If Market Value of the entity's plan assets is less than the actuarial value of the entity's plan assets: Do not provide for a reduction in employer contribution rates. Follow the amortization rules for employers which are less than 90% funded on an actuarial basis (see above).
- 6. If Market Value of the entity's plan assets is greater than the actuarial value of the entity's plan assets: At the option of the employer, amortize the unfunded liability using the market value in lieu of the actuarial value.
- 7. Early Retirement Incentive Plan liabilities: a period up to 10 years selected by the Employer upon adoption of ERI.

### Financing Period if employer is over 100% funded on an actuarial basis.

- 8. Irrespective of the size of the employer or the funding level, grant the employer an option to amortize overfunding over a 5-year period.
- 9. For employers with 50 or more employees, grant the employer an option to adopt a minimum contribution rate until the overfunding is eliminated.
- 10. 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 100%.

SLEP supplemental liabilities attributable to Public Act 94-712 were financed over 30 years. The mass production valuation applies rules 1 through 5. For rules 6 through 10, 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.

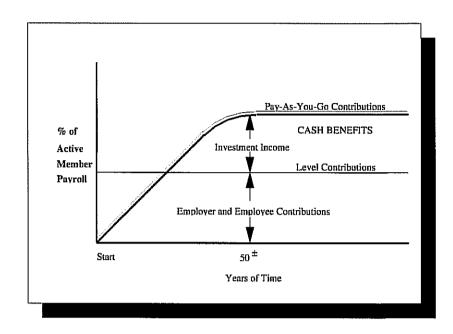
### SELECTION OF ASSUMPTIONS USED IN ACTUARIAL VALUATIONS

### **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

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.

### SECTION E

Financial Principles

### FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES OF IMRF

**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 ...

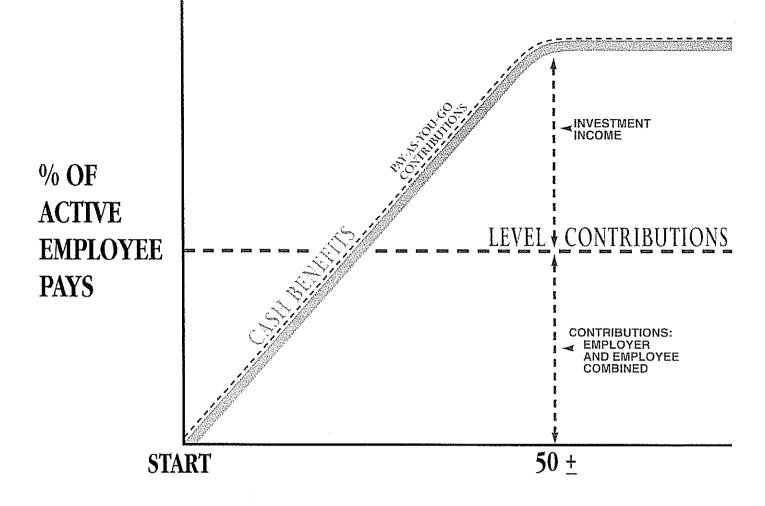
Interest at the assumed real rate of return on Unfunded Actuarial Accrued Liabilities (unfunded actuarial accrued liabilities are the difference between: accrued liabilities for service already rendered; and the accrued assets of IMRF).

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 very 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.



### YEARS OF TIME

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

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**

**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.