



Impact of 2008 Investment Returns on Employers' Rates, Reserve Balances and Funded Status

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What We'll Cover Today

- IMRF is a Defined Benefit Plan
- How 2008 Investment Returns Will Impact Employers
- Options for Dealing with “Rate Shock” from 2008 Investment Returns
- Impact beyond 2010



The Good News and the Bad News

- The good news for members and annuitants – IMRF is a defined benefit plan
- The bad news for employers – IMRF is a defined benefit plan
- In a defined benefit plan as contrasted with a defined contribution plan, the plan sponsor bears investment return risk.



How Do Investment Returns Impact Retiree and Member Benefits?

- Final benefits are based upon a formula that covers the final rate of earnings and years of service.
- IMRF's benefits are guaranteed by the Illinois Constitution and can only be changed prospectively by the Illinois legislature.



How are IMRF Benefits Funded?

- There are only three sources of funding
 - Member Contributions
 - Employer Contributions
 - Investment Income
- Since member contributions are fixed by statute and investment income varies based upon market returns, employer contributions need to fund the balance and thus are variable.



IMRF in Equilibrium

$$B = C + I - E$$

- Benefits = Final Rate of Earnings X Years of Service
- Contributions = 4.5% from Members and 8.37% from Employers for the Regular Plan
- Investment income (8% return on investments) less .5% for direct investment and administrative expenses



The Impact of Investment Returns on Employer Rates

- Changes in employer rates are impacted by:
 - Demographic factors such as mortality rates; age at retirement;
 - Benefit changes;
 - Wage inflation;
 - **But the most significant is investment returns.**



2008 Investment Returns

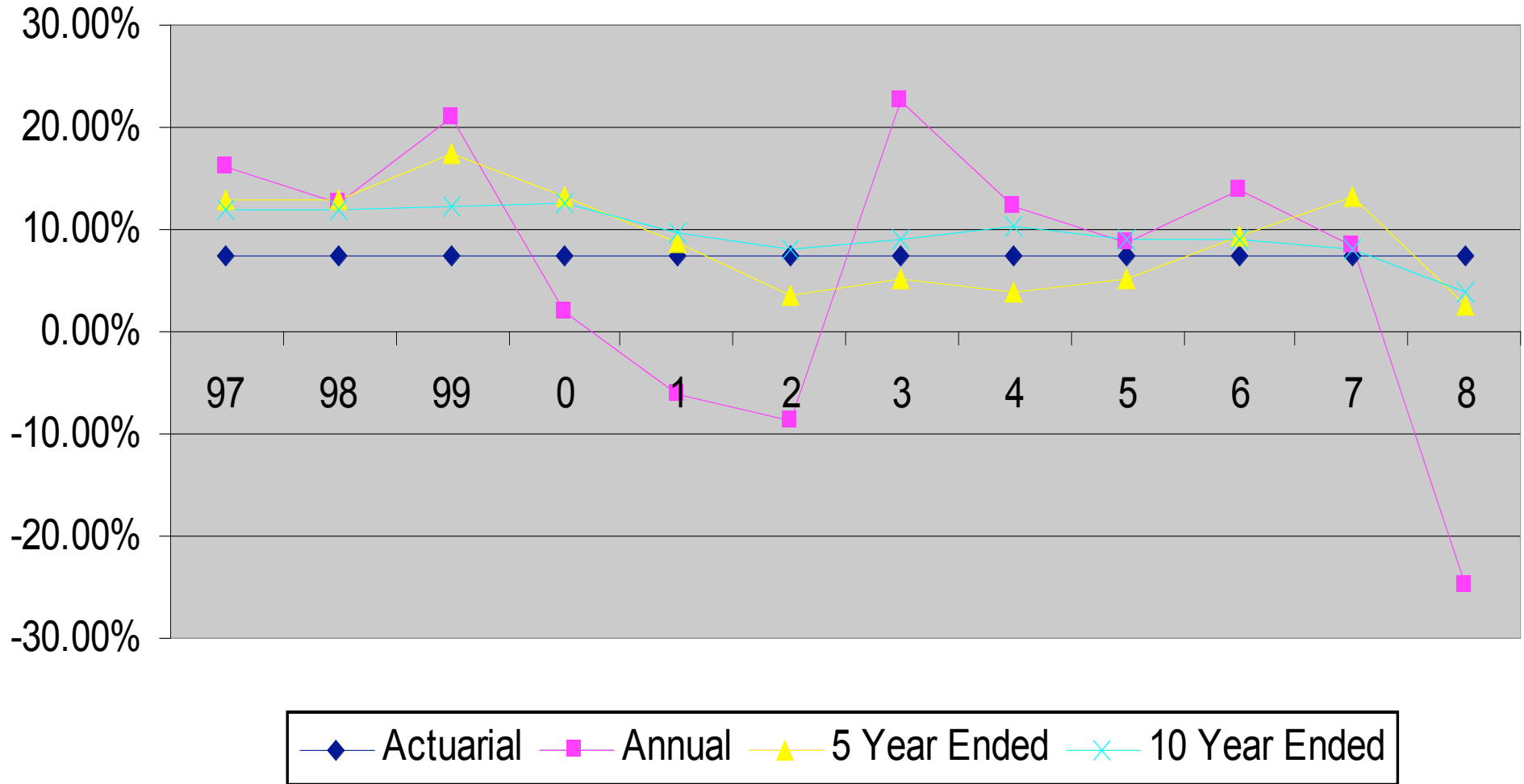
■ Dow Jones	-33.8%
■ S&P 500	-37.0%
■ NASDAQ	-40.5%
■ Wilshire 5000	-37.2%
■ MSCI EAFE	-43.4%
■ Barclay Aggregate	5.2%
■ Citigroup 90-Day T-Bill	1.8%



IMRF's 2008 Return

- IMRF's investment return for 2008 is estimated to be -24.8%.
- This translates into an investment loss of approximately \$6.1 billion.
- This contrasts with an expected actuarial assumed return of 7.5% or \$1.7 billion.
- IMRF's investment shortfall in 2008 is estimated to be approximately \$7.8 billion.

Analysis of IMRF Returns





Annualized Historical Investment Returns for IMRF as of December 31

	<u>2007</u>	<u>2008</u>
■ 1 Year	8.5%	-24.8%
■ 3 Year	10.3%	-2.4%
■ 5 Year	13.1%	2.6%
■ 10 Year	8.2%	3.9%
■ Since 1/1/95	10.4%	7.4%




IMRF's Long-Term Investment Return Assumption vs. Other Large Public Plans' Assumed Returns

Median Return

2007 NASRA Study of 101 Plans	8%
Illinois Plans	8.5%
IMRF's Assumption	7.5%

IMRF's Current and Target Asset Allocations versus Latest Wilshire Study Median

	<u>Current</u>	<u>Target</u>	<u>Wilshire</u>
■ Domestic Equity	31.6%	38%	
■ International Equity	13.1%	20%	
■ Alternative Investments	5.0%	6%	
■ Real Estate	<u>3.1%</u>	<u>6%</u>	
Equity-like	<u>52.8%</u>	<u>70%</u>	69%
■ Fixed Income	45.6%	29%	
■ Cash	<u>1.6%</u>	<u>1%</u>	
Fixed-like	47.2%	30%	31%



Is the Current Asset Allocation Right for IMRF?

- Annually IMRF's investment staff together with its independent investment consultants review the investment allocation policy to:
 - Determine the optimal weighting to the various asset classes
 - Maximize the investment return given the nature of our actuarial liabilities and funded status while assuming the appropriate amount of risk.
- The current target asset allocation was adopted by the Board in the third quarter of 2008.
- Based on information currently available most large pension systems have not made significant changes to their asset allocation strategies in reaction to the 2008 market returns.



What did a Negative 24.8% Return Mean for 2008?

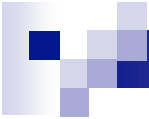
- As noted earlier the -24.8% return translates into an estimated loss of \$6.1 billion.
- After covering direct investment and administrative expenses of \$73 million and crediting \$1 billion of interest to annuitant and member reserves, we charged employer reserves \$7.1 billion.
- This charge represented approximately 67% of the opening employer reserve balance.



24.8% versus 67%

(Dollars in Billions)

	<u>12/31/07</u>	<u>2008 Activity</u>	<u>12/31/08</u>	<u>% Change</u>
Net Assets	\$24.2	\$ (6.1)	\$18.1	(25.2)%
Reserves				
Member	\$ 4.2	\$.3	\$ 4.5	7.1%
Annuity	9.4	.7	10.1	7.4%
Employer	<u>10.6</u>	<u>(7.1)</u>	<u>3.5</u>	(67.0)%
	\$24.2	\$(6.1)	\$18.1	



IMRF's Current Actuarial Techniques That Significantly Impact Actuarial Funded Status and Employer Rates

- Five-year smoothing of market returns
 - Difference between assumed actuarial return and actual market return is spread over five years -- \$7.8 billion loss in 2008
- 15% Corridor
 - Actuarial value of assets must be within 15% of market value – For example, if market value is \$18 B, actuarial value must be between \$15.3 B and \$20.7 B
- Closed amortization method for over and under funding
 - For most taxing bodies, the amortization period is 22 years, reducing to 10; for non-taxing bodies, the amortization period is 10 reducing to 1 and then resetting at 5



The Impact on IMRF's Actuarial Return Using Current Actuarial Techniques

- While IMRF's 2008 investment return is estimated to be -24.8% on a market basis, it is estimated to be -10.6% on an actuarial basis.
- This difference is due to the use of the five-year smoothing method that spreads the difference between the assumed return and the actual return over five years coupled with the 15% corridor.
- Approximately \$2.7 billion of unrecognized losses which arose in 2008 would be recognized in the 2009 - 2012 period.
- These deferred losses would lower the actuarial returns causing upward pressure on employer rates through 2014.



The Impact on Funding Value Using IMRF's Current Actuarial Techniques

- The five-year smoothing, subject to the 15% corridor, delays the recognition of both market gains and losses.
- It is estimated that IMRF's actuarial funding value in total would decrease from 96.1% as of year-end 2007 to 80.2% as of year-end 2008.
- On a market value basis, it is estimated that IMRF's funding level would decrease from 100% as of 2007 to 69.7% as of year-end 2008.



Impact of 2008 Investment Returns on 2010 Employer Contribution Rates Using Current Actuarial Techniques

- Using current rate setting procedures, it is estimated that the average employer contribution for the regular plan would increase from 9.27% to 16.63%
- This 79% increase results in “rate shock”.



How Has IMRF Responded to 2010 “Rate Shock”?

The IMRF Board is reviewing a two-prong approach to deal with 2010 employer rates:

- Modifying two actuarial techniques:
 - Changing the amortization period for over and under funding to 30-year rolling for taxing bodies and 10-year rolling for non-taxing bodies;
 - Widening the 15% corridor to 20% which allows a greater amount of investment losses to be carried forward in the five year smoothing period.
- Adopting a Phase-In plan which would cap most employer rates at a fixed percentage.



What's the Estimated Impact on IMRF's Actuarial Return of the Modified Actuarial Techniques

- While IMRF's 2008 investment return remains -24.8% on a market basis, it is estimated that it would be -6.7% on an actuarial basis.
- The improvement is due to the widening of the corridor which increases the amount of deferred losses which are carried forward to future actuarial calculations.
- Approximately \$2.9 billion of unrecognized losses which arose in 2008 would be recognized in the 2009 - 2012 period for actuarial purposes.
- These deferred losses would cause upward pressure on employer rates through 2014.



What's the Estimated Impact on IMRF's Funded Status of the Modified Actuarial Techniques

- It is estimated that IMRF's **actuarial funding level** in total would decrease from 96.1% as of year-end 2007 to 83.7% as of year-end 2008. The higher actuarial funded status is due to the larger deferred losses from widening the corridor.
- Actuarial assets would be 20% higher than market value.
- For market value there are no deferred losses.
- The estimated **market funding level** would remain at 69.7% as of year-end.



What's the Estimated Impact on 2010 Employer Contribution Rates of the Modified Actuarial Techniques

- IMRF's rate setting procedures would include five-year smoothing of market returns with a 20% corridor and 30-year amortization for taxing bodies and 10-year amortization for non-taxing bodies for any under or over funded balance.
- Using these rate setting procedures, it is estimated that the average employer contribution for the regular plan would increase from 9.27% to 14.00%.
- This represents a 51% increase versus the 79% increase using the prior actuarial methods.



Maximizing Flexibility for Employers

- The IMRF Board realizes that a 51% increase would cause undue hardships for most employers.
- In order to be responsive, the IMRF Board is poised to adopt a Phase-In plan to address employer rate increases in 2010 and beyond.



Maximizing Flexibility in Dealing with the Consequences of 2008 Investment Returns via a Phase-In Plan

- Most employers' rate increase would be capped at a fixed percentage, excludes ERI and SLEP enhancement costs.
 - For example, *if a 10% cap is approved*, an employer with a 10% rate for 2009 would have an 11% rate for 2010.
- Employers who were over funded in 2007 but are under funded as of December 2008 would have to pay the full cost of the IMRF program.
 - The full cost of the program in 2009 was 8.37%, 12.58% and 18.02% for the Regular, SLEP and ECO plans, respectively.



Maximizing Flexibility in Dealing with the Consequences of 2008 Investment Returns

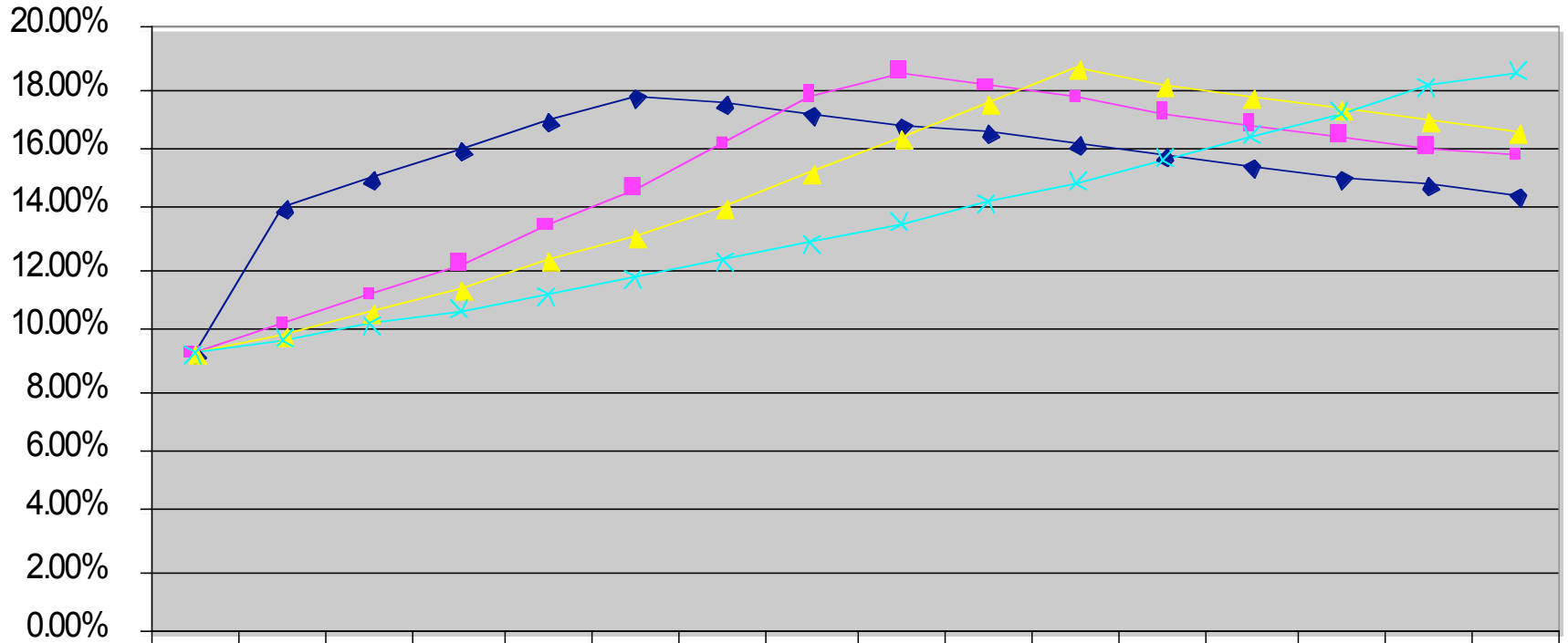
- Future rapid amortization of over funding would begin at the 120% actuarial funded level.
- Employers would be encouraged to contribute the full actuarially required contribution if possible.
- The IMRF Board would review the phase-in plan annually and it would be subject to modification based on future investment returns and other relevant factors.




Average Employer Rate Projection for Regular Plan

- There is a two-year lag between investment returns and their incorporation into employer contribution rates.
- Assuming investment returns of 7.5% for 2009 through 2022 and actuarial liabilities growing consistent with the actuarial payroll inflation assumption, the following slide compares the actuarially required contribution (**ARC**) rate utilizing the modified actuarial techniques with optional phase-in rates with a 10%, 7.5% and 5% cap.
- This slide indicates that the lower the phase-in cap the higher the ultimate employer rate.

Comparison of ARC to Various Phase-In %'s



	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
◆ ARC	9.27	14.00	15.01	15.98	16.90	17.75	17.50	17.20	16.86	16.50	16.14	15.79	15.46	15.13	14.82	14.53
■ 10% Phase-In	9.27	10.17	11.15	12.24	13.43	14.75	16.19	17.78	18.52	18.09	17.66	17.24	16.84	16.46	16.09	15.74
▲ 7.5% Phase-In	9.27	9.94	10.67	11.44	12.28	13.18	14.14	15.18	16.30	17.50	18.67	18.21	17.76	17.34	16.93	16.54
✕ 5% Phase-In	9.27	9.72	10.19	10.69	11.20	11.75	12.32	12.92	13.55	14.22	14.91	15.64	16.41	17.22	18.06	18.53



Financial Accounting Impact of Choosing the Phase-In Rate

- Under generally accepted accounting principles for governmental entities, sponsors of defined benefit pension plans who contribute less than the ARC are required to record a net pension obligation on their books for the difference between what they contribute and what the ARC would require.
- This accounting provision will impact IMRF employers in 2010.
- Sponsors' auditors should be able to assist in recording this additional expense.
- IMRF staff will be available to provide needed information.



Next Steps by IMRF Board

- At its January 23rd meeting the Board deferred finalizing its approach for moderating the impact of 2008 investment returns on rates in 2010 and beyond.
- The Board is soliciting additional input from IMRF stakeholders on its revised approach as outlined in this presentation.
- Written feedback on the proposed actuarial changes, the aspects of the proposed phase-in plan, the cap percentage or other suggestions are welcome.
- The Board intends to finalize its decision on its approach at its February 27th meeting.



Stakeholder Input

- In order to include stakeholder input in the decision making process, we will need to receive it by February 13, 2009.
- Written comments can be addressed to:

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Oak Brook, Illinois 60523-2337

or

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Preliminary 2010 Phase-In Rate Notices

- Preliminary 2010 phase-in rate notices will be available during the week of March 2, 2009 following the February Board meeting.
- These rates will follow the procedures adopted by the Board at its February meeting.
- While we believe that these rates will be close to the finalized phase-in rates, they will be subject to change based upon the finalized actuarial information that will be available in April 2009
- These notices **will not** include preliminary ARC rates.
- Any employers who are still over funded as of December 31, 2008 will not participate in the phase-in plan; IMRF will not know who is still over funded until it receives the actuarial information for 2008.



Employer Reserve Statements

- IMRF will provide employer reserve statements in late February to all employers.
- Statements show employer funds on deposit for current employees and current year activity.
 - Employer retirement contributions
 - Charges for interest @ 7.5% and residual investment loss
 - Adjustments, if any
 - Reductions for 2008 retirees
- Employers will see dramatic decreases in their reserve balance; charges for interest and the 2008 investment loss will average 67%.



Preliminary Rate Notices for 2010

- Preliminary rate notices will be available in mid April 2009; final notices will be available in November 2009.
- These preliminary rate notices will show the full actuarial required contribution (ARC) rate and the finalized phase-in rate.
- Any employers still over funded as of December 2008 will not be offered a phase-in rate.
- IMRF employers will be encouraged to contribute the full ARC rate for 2010.
- IMRF employers will be given the option to contribute based on the full ARC rate, the phase-in rate or some rate between the two.
- IMRF will assume the phase-in rate is selected unless employers contact us with a different rate by August 31, 2009.



Individual Employer Funded Status

- GASB disclosures which show the funded status of each employer plan for the last ten years will be available in April.
- This disclosure will show the **actuarial** funded status reflecting the smoothing of investment returns and the impact of the corridor which limits the actuarial value of assets versus their market value.
- There will be a footnote on this schedule that discloses the funded status on a market basis.
- Both the actuarial and market funded status will show marked decreases.



How Can Pension Costs be Controlled in the Future?

- Many suggested solutions focus on modifying actuarial assumptions, principles and techniques such as increasing the amortization period for under funding, lengthening the actuarial smoothing period, changing the actuarial cost method to back load costs, setting a statutory employer rate or a statutory cap on employer rate increases.
- While these types of changes can effect the timing of when pension costs are recognized, they do not change the amount since the ultimate costs equal the benefits paid.
- Since most of these changes tend to push cost recognition into the future, they increase long-term costs while raising intergenerational equity concerns.
- The only variable that will impact costs in the long term is the level of benefits provided. Changing the benefits provided would require a legislative change.

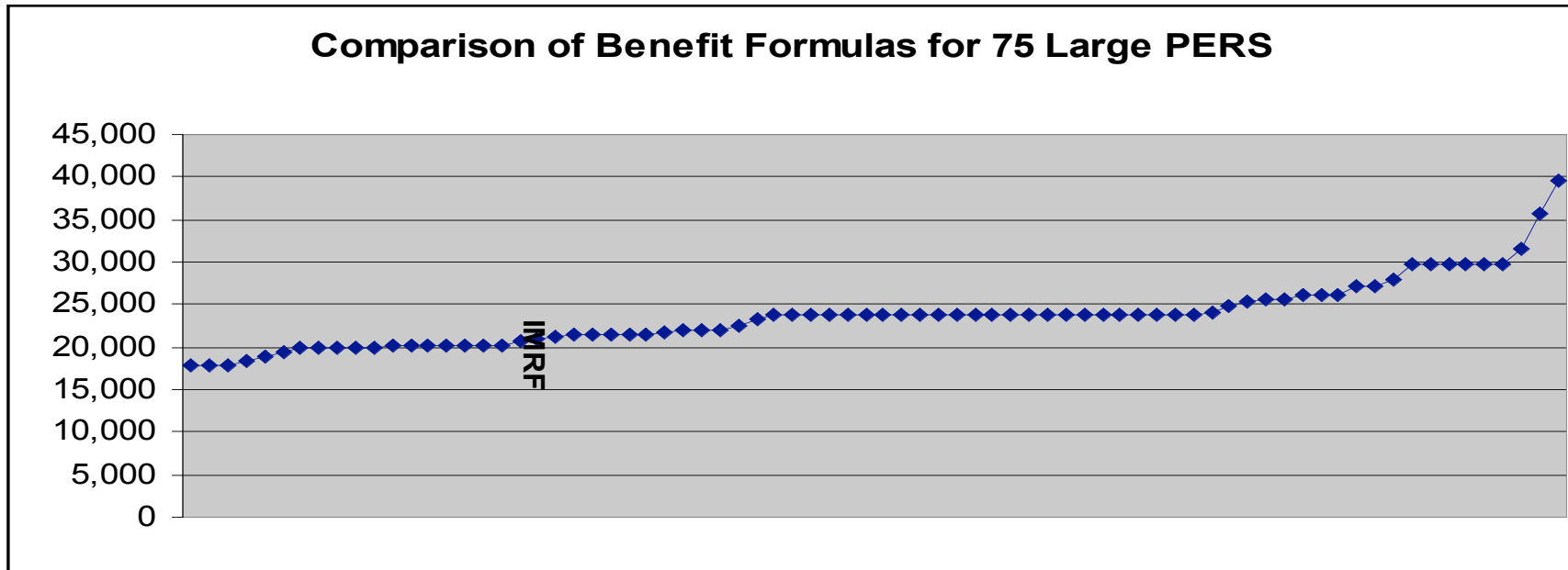


Are IMRF Benefits Reasonable?

Initial Average Monthly Benefit for Regular Plan Retirees

	<u>Average Benefit All IMRF Retirees</u>	<u>Average Benefit Excluding School District Retirees</u>
2008	\$1,393	\$1,743
2007	\$1,154	\$1,548
2006	\$1,137	\$1,493
2005	\$1,063	\$1,362

Are IMRF Benefits Reasonable?



Average 2008 IMRF Benefit for Regular Plan, excluding school districts

Final Rate of Earnings \$56,465

Years of Service 21

Average Benefit \$23,926

Median Benefit \$23,715

IMRF Benefit \$20,920



How Could Benefit Changes be Made?

- Any changes to the IMRF benefit structure require legislative action.
- Given the “constitutional protection” provisions, it may be difficult to change benefits for existing active members or the rate for active member contributions.



Future Communications

- In February employers will receive their 2008 reserve statements.
- In March employers will receive preliminary phase-in rate notices.
- In April employers will receive their preliminary rate notices which will provide both the ARC rate and finalized phase-in rate.
- In April employers will receive GASB disclosure information on their funded status
- In late April IMRF will present two webinars in which actual year-end financial and actuarial data for IMRF on a whole and its estimated impact on individual employers will be discussed.



Questions

- I can be reached at:
 - 630-368-5345
 - rdecleene@imrf.org

Thank you for coming!