

**SHERIFFS' PENSION & RELIEF FUND**

ACTUARIAL VALUATION AS OF  
JUNE 30, 2008

# G. S. CURRAN & COMPANY, LTD.

Actuarial Services

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Consulting Actuary

December 12, 2008

Board of Trustees  
Sheriffs Pension & Relief Fund  
1225 Nicholson Drive  
Baton Rouge, Louisiana 70802

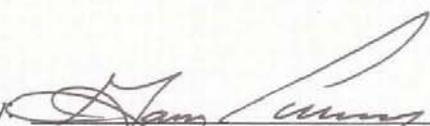
Ladies and Gentlemen:

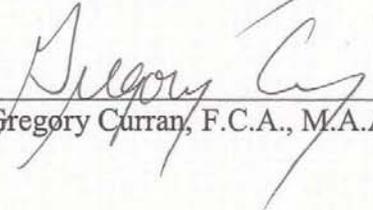
We are pleased to present our report on the actuarial valuation of the Sheriffs' Pension & Relief Fund for the fiscal year ending June 30, 2008. Our report is based on the actuarial assumptions specified and relies on the data supplied by the system's administrator and accountants. This report was prepared at the request of the Board of Trustees of the Sheriffs' Pension & Relief Fund. The primary purposes of the report are to determine the actuarially required contribution for the retirement system for the fiscal year ending June 30, 2009, to recommend the net direct employer contribution rate for fiscal 2010, and to provide information required for the system's financial statements. This report was prepared exclusively for the Sheriffs' Pension & Relief Fund for a specific limited purpose. It is not for the use or benefit of any third party for any purpose.

This report has been prepared in accordance with generally accepted actuarial principles and practices, and to the best of our knowledge and belief, fairly reflects the actuarial present values and costs stated herein. The undersigned actuaries are members of the American Academy of Actuaries and have met the qualification standards for the American Academy of Actuaries to render the actuarial opinions incorporated in this report, and are available to provide further information or answer any questions with respect to this valuation.

Sincerely,

G. S. CURRAN & COMPANY, LTD.

By:   
Gary Curran, F.C.A., M.A.A.A., A.S.A.

By:   
Gregory Curran, F.C.A., M.A.A.A., A.S.A.

## TABLE OF CONTENTS

<u>SUBJECT</u>	<u>PAGE</u>
Summary of Valuation Results .....	1
Comments on Data .....	2
Comments on Actuarial Methods and Assumptions .....	3
Changes in Plan Provisions .....	3
Asset Experience .....	4
Demographics and Liability Experience .....	5
Funding Analysis and Recommendations .....	5
Cost of Living Increases.....	8
Graphs.....	9
Exhibit I - Analysis of Actuarially Required Contributions .....	14
Exhibit II - Present Value of Future Benefits .....	15
Exhibit III - Schedule A - Market Value of Assets.....	16
Exhibit III - Schedule B – Actuarial Value of Assets .....	17
Exhibit IV - Present Value of Future Contributions .....	18
Exhibit V - Change in Frozen Unfunded Frozen Actuarial Accrued Liability.....	18
Exhibit VI - Analysis of Increase in Assets .....	19
Exhibit VII - Fund Balance .....	20
Exhibit VIII - Pension Benefit Obligation .....	20
Exhibit IX - Cost of Living Adjustments - Target Ratio .....	21
Exhibit X - Census Data .....	22
Exhibit XI - Year to Year Comparison .....	30
Summary of Principal Plan Provisions.....	32
Actuarial Assumptions .....	35
Glossary .....	39

## SUMMARY OF VALUATION RESULTS SHERIFFS' PENSION & RELIEF FUND

Valuation Date:	June 30, 2008	June 30, 2007
Census Summary: Active Members	14,038	13,530
Retired Members and Survivors	3,140	2,995
Terminated Due a Deferred Benefit	328	340
Terminated Due a Refund	4,156	3,939
Payroll:	\$ 537,082,456	\$ 481,418,484
Benefits in Payment:	\$ 64,309,772	\$ 55,471,909
Frozen Unfunded Accrued Liability	\$ 74,278,468	\$ 96,251,088
Actuarial Asset Value:	\$ 1,628,303,910	\$1,468,646,528
Market Value of Assets:	\$ 1,511,820,016	\$1,550,829,081
Actuarial Accrued Liabilities (As defined by GASB-25)	\$ 1,702,582,378	\$1,564,897,616
Ratio of Net AVA to GASB-25 Accrued Liability:	95.64%	93.85%
*****		
	FISCAL 2009	FISCAL 2008
Employer Normal Cost (July 1):	\$ 67,199,394	\$ 54,426,612
Amortization Cost (July 1):	\$ 6,827,821	\$ 6,596,929
Gross Employer Actuarially Required Contribution (Including Estimated Administrative Costs):	\$ 78,451,339	\$ 64,792,524
Projected Revenue Sharing, Ad Valorem, and Insurance Premium Taxes	\$ 29,074,911	\$ 26,521,286
Net Direct Actuarially Required Employer Contributions:	\$ 49,376,428	\$ 38,271,238
Actuarially Required Net Direct Contribution Rate:	8.92%	7.59%
Actual Net Direct Employer Contribution Rate:	11.00%	11.00%
*****		
Minimum Recommended Net Direct Employer Cont. Rate:	Fiscal 2010: 9.00%	Fiscal 2009: 7.50%
Employee Contribution Rate: 10% of payroll		
Dedicated Funding: 0.50% of ad valorem taxes plus revenue sharing funds and funds from the state's Insurance Premium Taxes as allocated by the Louisiana Public Retirement Systems' Actuarial Committee.		
Actuarial Cost Method: Frozen Attained Age Normal Actuarial Cost Method		
Valuation Interest Rate: 8% (Net of Investment Expense)		
Exclusions from Census: None		
Basis of Actuarial Asset Value: The actuarial value of assets is based on the market value of investment securities adjusted to average in asset earnings above or below the assumed rate of return over a four-year period. The actuarial value of assets is subject to a minimum of 90% of the market value of assets and a maximum of 110% of the market value of assets.		
Changes in Valuation Methods, Assumptions, and/or Amortization Periods: None		
Method of Recognizing Gains and Losses: Under the Frozen Attained Age Normal Method, actuarial gains and losses are spread over future normal costs.		

## COMMENTS ON DATA

For the valuation, the administrative staff of the system furnished a census on CD-ROM derived from the system's master data processing file indicating each active covered employee's sex, date of birth, service credit, annual salary, and accumulated contributions. Information on retirees detailing dates of birth of retirees and beneficiaries, as well as option categories and benefit amounts, was provided in like manner. In addition, data was supplied on former employees who are vested or who have contributions remaining on deposit. As illustrated in Exhibit X, there are 14,038 active members in the system of whom 3,635 have vested retirement benefits; 3,140 former system members or their beneficiaries are receiving retirement benefits. An additional 4,156 terminated members have contributions remaining on deposit with the system; of this number, 328 have vested rights for future retirement benefits. All individuals submitted were included in the valuation.

Census data submitted to our office is tested for errors. Several types of census data errors are possible; to ensure that the valuation results are as accurate as possible, a significant effort is made to identify and correct these errors. In order to minimize coverage errors (i.e., missing or duplicated individual records) the records are checked for duplicates, and a comparison of the current year's records to those submitted in prior years is made. Changes in status, new records, and previous records, which have no corresponding current record are identified. This portion of the review indicates the annual flow of members from one status to another and is used to check some of the actuarial assumptions, such as retirement rates, rates of withdrawal, and mortality. In addition, the census is checked for reasonableness in several areas, such as age, service, salary, and current benefits. The records identified by this review as questionable are checked against data from prior valuations; those not recently verified are included in a detailed list of items sent to the system's administrator for verification and/or correction. Once the identified data has been researched and verified or corrected, it is returned to us for use in the valuation. Occasionally some requested information is either unavailable or impractical to obtain. In such cases, values may be assigned to missing data. The assigned values are based on information from similar records or based on information implied from other data in the record.

In addition to the statistical information provided on the system's participants, the system's administrator furnished general information related to other aspects of the system's expenses, benefits and funding. Valuation asset values as well as income and expenses for the fiscal year were based on information furnished by the system's auditor, the firm of Duplantier, Hrapmann, Hogan & Maher, Certified Public Accountants. As indicated in the system's audit report, the net market value of the system's assets was \$1,511,820,016 as of June 30, 2008. Net investment losses for fiscal 2008 measured on a market value basis amounted to \$101,084,419. Contributions to the system for the fiscal year totaled \$145,658,087; benefits and expenses amounted to \$83,582,733.

Notwithstanding our efforts to review both census and financial data for apparent errors, we must rely upon the system's administrative staff and accountants to provide accurate information. Our review of submitted information is limited to validation of reasonableness and consistency. Verification of submitted data to source information is beyond the scope of our efforts.

## COMMENTS ON ACTUARIAL METHODS AND ASSUMPTIONS

This valuation is based on the Frozen Attained Age Normal actuarial cost method with the unfunded accrued liability frozen as of June 30, 1989. Under the provisions of Louisiana R.S. 11:103 the unfunded accrued liability which was determined to be \$69,702,461 as of June 30, 1989, was amortized over forty years with payments increasing at 3.50% per year. Payroll growth in excess of 3.50% per year will reduce future amortization payments as a percent of payroll; payroll growth less than 3.50% will increase future payments as a percent of payroll. Under the Frozen Attained Age Normal Cost Method, actuarial gains and losses are spread over future normal costs. Thus, favorable plan experience will lower future normal costs; unfavorable experience will cause future normal costs to increase. In addition, changes in benefits and assumptions are also spread over future normal costs as are contribution surpluses and shortfalls.

In any year in which the net direct employer contribution is scheduled to decrease, the board of trustees may freeze the net direct employer contribution rate and use the excess funds collected, if any, to reduce the frozen unfunded actuarial accrued liability. Notwithstanding such a decrease, payments are made according to the regular amortization schedule, thereby reducing the amortization period. In fiscal 2008 the excess contributions collected from the frozen employer contribution rate reduced the frozen unfunded actuarial accrued liability by \$22,548,024. Based upon the additional contributions collected during fiscal 2008, the current frozen unfunded actuarial accrued liability will be fully amortized by June 30, 2023.

The present value of benefits and liabilities listed in the report and used to determine costs includes the effect of Act 406 of the 2008 regular legislative session which provides for an actuarially reduced early retirement for members who retire with at least ten years of service credit and have reached an attained age of sixty. The effects of Act 230 of the 2007 legislative session which allowed members with 30 or more years of service to elect a fourth year of Back-DROP have also been included in this report.

The actuarial assumptions utilized for the report are outlined on pages thirty-five through thirty-eight. In the aggregate the assumptions represent our "best estimate" of future long-term experience for the fund. The assumptions are the same as those used for the prior year except for a change in the retirement eligibility age necessitated by Act 406. All calculations, recommendations, and conclusions are based on the assumptions specified. To the extent that prospective experience differs from that assumed, adjustments will be required to contribution levels. Such differences will be revealed in future actuarial valuations.

## CHANGES IN PLAN PROVISIONS

The following changes in plan provisions were enacted during the 2008 Regular Session of the Louisiana Legislature:

**Act 271** provides that, notwithstanding any other provision of law to the contrary, any retiree who returns to work full-time for a minimum of three years as an active contributing member of the fund may choose to have their benefits recalculated by repaying all retirement benefits received from the fund, plus interest at the board-approved actuarial valuation rate. The provisions of this act will apply only to members that have returned to work not later than December 31, 2008. The required payments will be paid in one lump-sum payment prior to subsequent retirement in order to be

eligible for a recalculation. Upon repayment of the required amount, the member will have restored all service credit earned and will be subject to the provisions of law that would have otherwise been applicable had they not previously retired for the purposes of calculation of retirement benefits.

**Act 406** provides that any active, contributing member who has completed ten years of service, has attained the age of sixty, and is not in a deferred retiree status, will be eligible for a reduced retirement benefit equal to the member's accrued regular retirement benefit reduced actuarially for each month or fraction thereof that retirement begins prior to the member's earliest normal retirement date assuming continuous service.

**Act 459** allows a member of the fund with a minimum of twelve years of service credit to purchase up to three years of permissive service credit. The service may be purchased only in full-month increments by paying the total cost of the actuarial value of benefits to be purchased. The request to purchase permissive service credit will be accompanied by the member's application for retirement from the fund. On the day the purchase is completed, the member will terminate employment and retire. The retirement will be effective on the next business day following the purchase.

The net effect of the above plan provision changes together with the effect of Act 230 of the 2007 legislative session was to increase the normal cost accrual rate by 0.2674%.

## **ASSET EXPERIENCE**

The actuarial and market rates of return for the past ten years are given below. The rates of return on assets were calculated by assuming a uniform distribution of income and expense throughout the fiscal year.

	<u>Market Value</u>	<u>Actuarial Value</u>
1999	5.6%	9.7%
2000	5.2%	7.3%
2001	-0.8%	3.3%
2002	-3.0%	0.3%
2003	4.2%	0.0%
2004	8.4%	3.0%
2005	8.1%	6.1%
2006	8.5%	* 13.8%
2007	16.0%	10.2%
2008	-6.4%	6.5%

\* Includes effect of change in asset valuation method. Effective with 2006 valuation the method of calculating the actuarial value of assets was changed from a three-year smoothing of realized and unrealized capital gains and losses to a four-year smoothing of all investment returns above or below the current valuation interest rate.

The market rate of return gives a measure of investment return on a total return basis and includes realized and unrealized capital gains and losses as well as interest income and dividends. This rate of return gives an indication of performance for an actively managed portfolio where securities are bought and sold with the objective of producing the highest total rate of return. During 2008, the fund earned \$28,743,431 of dividends, interest, and other recurring income. This income was offset

by realized and unrealized capital losses of \$124,115,901 and investment expenses of \$5,711,949. The geometric mean of the market value rates of return measured over the last ten years was 4.4%.

The actuarial rate of return is presented for comparison to the assumed long-term rate of return of 8% used for the valuation. This rate is calculated based on the actuarial value of assets and all interest, dividends, and recognized capital gains as given in Exhibit VI. Investment income used to calculate this yield is based upon a smoothing of investment returns above or below the valuation interest rate over a four-year period. The difference between rates of return on an actuarial and market value basis results from the smoothing of investment income relative to the valuation interest rate. Yields in excess of the 8.0% assumption will reduce future costs; yields below 8.0% will increase future costs. For fiscal 2008, the system experienced net actuarial investment earnings of \$22,344,940 below the actuarial assumed earnings rate of 8.0%. This deficiency in earnings produced an actuarial loss, which increased the normal cost accrual rate by 0.4635%.

## **DEMOGRAPHICS AND LIABILITY EXPERIENCE**

A reconciliation of the census for the system is given in Exhibit X. The average active member is 43 years old with 8.3 years of service and an average salary of \$38,259. The system's active contributing membership increased during the fiscal year by 508 members. The plan has experienced an increase in the active plan population of 443 members over the last five years. A review of the active census by age indicates that over the last ten years the population in the under-forty age group has decreased while the proportion of active members over-forty increased. During this ten-year period the plan showed a slight decrease in the percentage of members with service less than five years.

The average service retiree is 67 years old with a monthly benefit of \$1,921. The retired population increased by 145 during the last fiscal year. Over the last five years the number of retirees increased by 815. During this same period, annual benefits in payment increased by \$28,927,977.

Plan liability experience for fiscal 2008 was unfavorable. Salary increases significantly above projected levels increased plan costs. Withdrawals below projections slightly increased costs. These increases in costs were offset by disabilities below projected levels, retirements below projected levels, and retiree deaths above projected levels. Overall, plan liability experience increased the normal cost accrual rate by 0.5539%.

## **FUNDING ANALYSIS AND RECOMMENDATIONS**

Actuarial funding of a retirement system is a process whereby funds are accumulated over the working lifetimes of employees in such a manner as to have sufficient assets available at retirement to pay for the lifetime benefits accrued by each member of the system. The required contributions are determined by an actuarial valuation based on rates of mortality, termination, disability, and retirement, as well as investment return and other statistical measures specific to the particular group. Each year a determination is made of two cost components, and the actuarially required contributions are based on the sum of these two components plus administrative expenses.

These two components are the normal cost and the amortization payment on the unfunded actuarial accrued liability. The normal cost refers to the portion of annual cost based on the salary of active participants. The term unfunded accrued liability (UAL) refers to the excess of the present value of

plan benefits over the sum of current assets and future normal costs. Each year the UAL grows with interest and is reduced by payments. Under the funding method used for the plan, changes in plan experience, benefits, or assumptions do not affect the frozen unfunded actuarial accrued liability. These items increase or decrease future normal costs.

In order to establish the actuarially required contribution in any given year, it is necessary to define the assumptions, funding method, and method of amortizing the UAL. Thus, the determination of what contribution is actuarially required depends upon the funding method and amortization schedules employed. Regardless of the method selected, the ultimate cost of providing benefits is dependent upon the benefits, expenses, and investment earnings. Only to the extent that some methods accumulate assets more rapidly and thus produce greater investment earnings does the funding method affect the ultimate cost.

The derivation of the actuarially required contribution for the current fiscal year is given in Exhibit I. The normal cost for fiscal 2009 as of July 1, 2008, is \$67,199,394. The amortization payment on the fund's frozen unfunded actuarial accrued liability as of July 1, 2008, is \$6,827,821. The total actuarially required contribution is determined by adjusting these two values for interest (since payments are made throughout the fiscal year) and adding estimated administrative expenses. As given on line 14 of Exhibit I the total actuarially required contribution for fiscal 2009 is \$78,451,339. When this amount is reduced by projected ad valorem tax contributions, revenue sharing funds, and insurance premium taxes the remaining portion to be funded by direct employer contributions for fiscal 2009 is \$49,376,428. This is 8.92% of projected payroll for the fiscal year.

Liability and asset experience as well as changes in assumptions and benefits can increase or lower plan costs. In addition to these factors, any COLA granted in the prior fiscal year will increase required contributions. New entrants to the system can also increase or lower costs as a percent of payroll depending upon their demographic distribution and other factors related to prior plan experience. Finally, contributions above or below requirements may reduce or increase future costs.

The effects of various factors on the fund's cost structure are outlined below:

Normal Cost Accrual Rate – Fiscal 2008	12.0157%
Factors Increasing the Normal Cost Accrual Rate:	
Changes in Benefits	0.2674%
Liability Experience	0.5539%
COLA Experience	0.4274%
Asset Experience	0.4635%
Factors Decreasing the Normal Cost Accrual Rate:	
New Members	0.4114%
Normal Cost Accrual Rate – Fiscal 2008	13.3165%

In addition to the above factors, payroll growth affects plan costs to the extent that payments on the system's unfunded liability are on a schedule that varies from actual trends in payroll growth or decline. If payroll changes at rates not consistent with the amortization schedule the result will be costs that change as a percentage of payroll. For fiscal 2008, the net effect of the change in payroll

on amortization costs was to decrease this cost by 0.08% of projected payroll. Required net direct employer contributions are also affected by the available ad valorem taxes, revenue sharing funds, and insurance premium taxes which the system receives each year. When these funds change as a percentage of payroll, net direct employer contributions are adjusted accordingly. We estimate that these funds collected in fiscal 2009 will increase by 0.01% of projected payroll.

Although the actuarially required net direct employer contribution rate for fiscal 2008 is 7.59%, the actual employer contribution rate for fiscal 2008 is 11.00% of payroll. Since the Board elected to freeze the rate at the previous year's level pursuant to R.S. 11:105, the net additional contributions made will be used to reduce the Fund's frozen unfunded accrued liability. Any contribution excess or shortfall will be combined with or offset against the additional contribution to determine the reduction in the frozen unfunded accrued liability. Based on the actuarially required contribution for fiscal 2009, we are recommending a minimum net direct employer contribution rate of 9.00% for fiscal 2010.

Again this fiscal year, under the provisions of R. S. 11:105, the Board of Trustees may maintain the net direct employer contribution rate for the preceding year and utilize the excess funds generated, if any, to reduce the system's Unfunded Accrued Liability. Because of the current state of the capital markets we do not believe a meaningful estimate can be made of the surplus funds if any that will be collected should the board elect to freeze the current employer contribution rate. It is quite possible that even maintaining the current contribution rate will be insufficient to insure that the contributions collected in fiscal 2010 will exceed the actuarially required contributions which will be determined in the fiscal 2009 valuation. In view of the current investment environment the board should strongly consider setting employer contribution rates at the highest level permitted by the statutes. Given the current asset performance substantial future increases in required contributions appear likely.

Recent capital market conditions have resulted in asset experience losses for the Fund that will likely significantly increase its cost structure. These market conditions may be temporary or may indicate that future return expectations should be reduced. In order to illustrate the impact of a reduction in return expectations, we have performed an alternative valuation at an assumed valuation interest rate of 7.5% with all other assumptions unchanged. Lowering the valuation interest rate by 0.50% would significantly increase required funding. The employer normal cost accrual rate would be increased by of 4.16%, although there would be a small offset resulting from lower amortization payments on the frozen unfunded accrued liability. The total employer actuarially required contribution would be increased by \$21,293,275 to \$99,744,614. The actuarially required net direct employer contribution rate for fiscal 2009 would increase from 8.92% to 12.77%. Based on these numbers, lowering the valuation interest rate from 8% to 7.50%, with all other assumptions unchanged, in fiscal 2009 would result in a recommended minimum net direct employer contribution rate of 13.00% for fiscal 2010. Whether or not the system's valuation interest rate will ultimately need to be adjusted will depend on the actual performance and future long-term expectation for the capital markets in general.

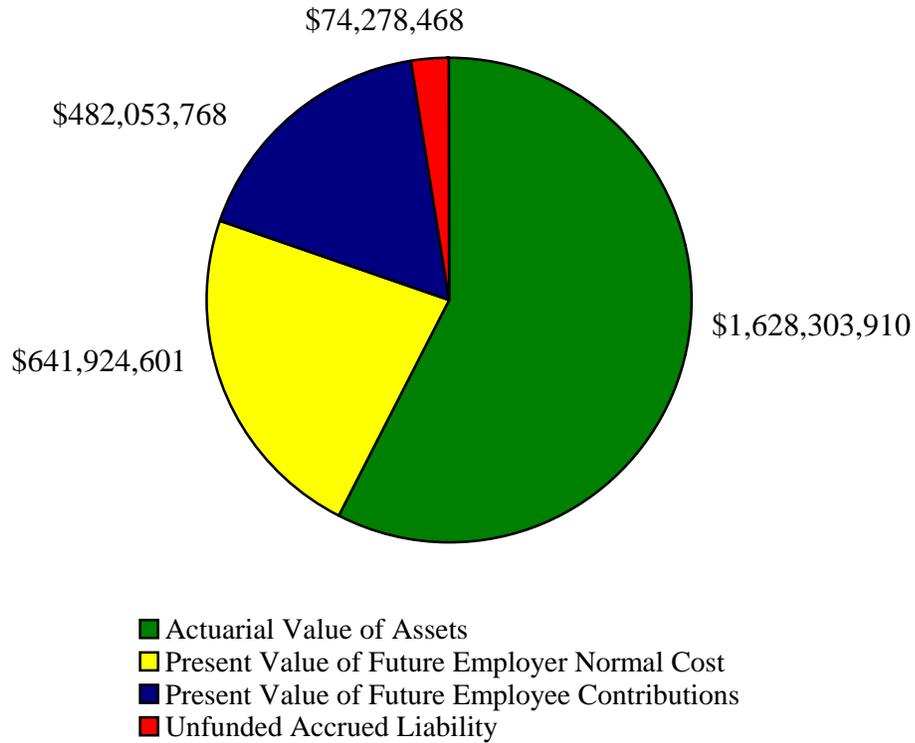
Please note that the above results are only intended to serve as an illustration of the impact of a change in the valuation interest rate. Any actual change in the valuation interest rate should only be effected with a review of all other plan assumptions. The impact of such other changes in assumptions are not reflected in the above the results.

## **COST OF LIVING INCREASES**

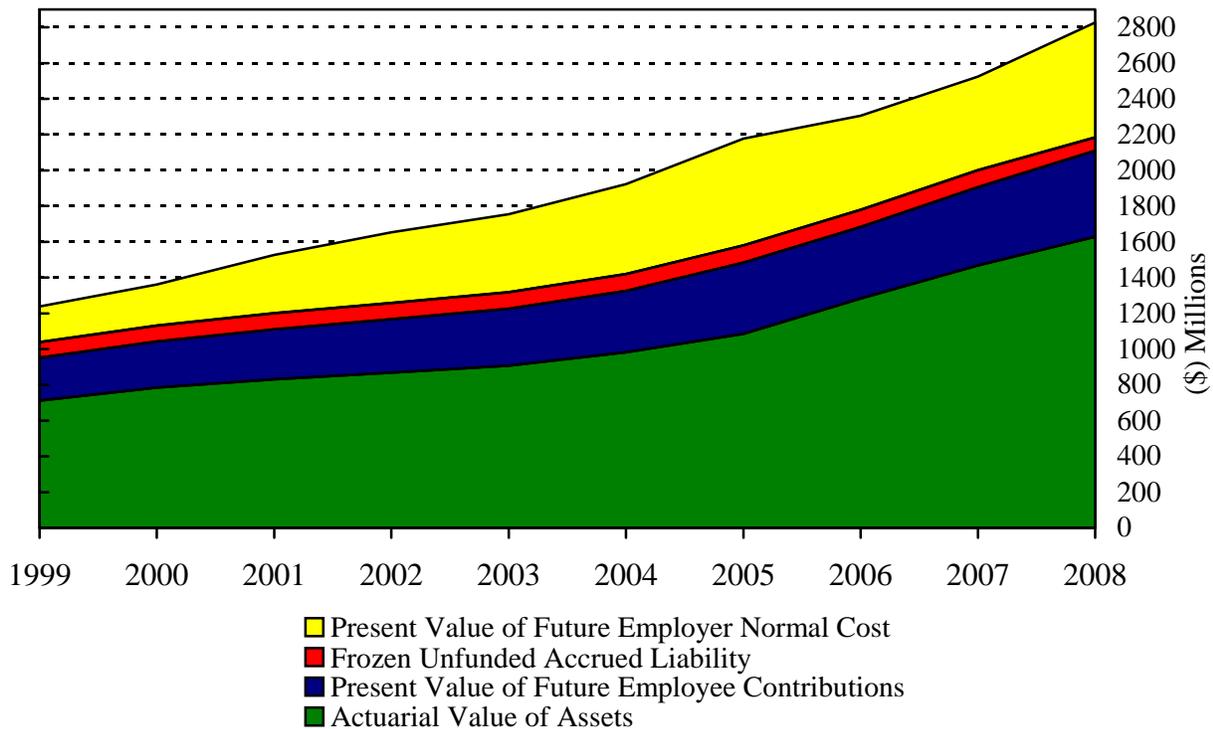
During fiscal 2008 the actual cost of living (as measured by the U. S. Department of Labor CPI-U) increased by 5.02%. Cost of living provisions for the system are detailed in R.S. 11:2178(K) and R.S. 11:246. The former statute allows the board to grant annual cost of living increases of between 2% and 3% of each retiree's benefit with a minimum benefit of \$20 per month.

R.S. 11:246 provides cost of living increases of retirees and beneficiaries over the age of 65 equal to 2% of the benefit in payment on October 1, 1977, or the date the benefit was originally received if retirement commenced after that date. R.S. 11:241 provides that cost of living benefits shall be in the form (unless the board otherwise specifies) of  $\$X \times (A+B)$  where X is at most \$1 and "A" represents the number of years of credited service accrued at retirement or at death of the member or retiree and "B" is equal to the number of years since retirement or since death of the member or retiree to June 30<sup>th</sup> of the initial year of such increase. The provisions of this subpart do not repeal provisions relative to cost of living adjustments contained within the individual laws governing systems; however, they are to be controlling in cases of conflict. All of the above provisions require that the system earn sufficient excess interest earnings to fund the increases. In addition, the ratio of the plan's assets to benefit obligations must meet the criteria established in R.S. 11:242. This section sets forth a minimum "target ratio" of the actuarial value of assets to the Pension benefit Obligation. We have determined that for fiscal 2008 the fund has not met the necessary target ratio and that the plan's investment experience was below assumptions. Therefore, the Fund is unable to grant COLAs to retirees at this time.

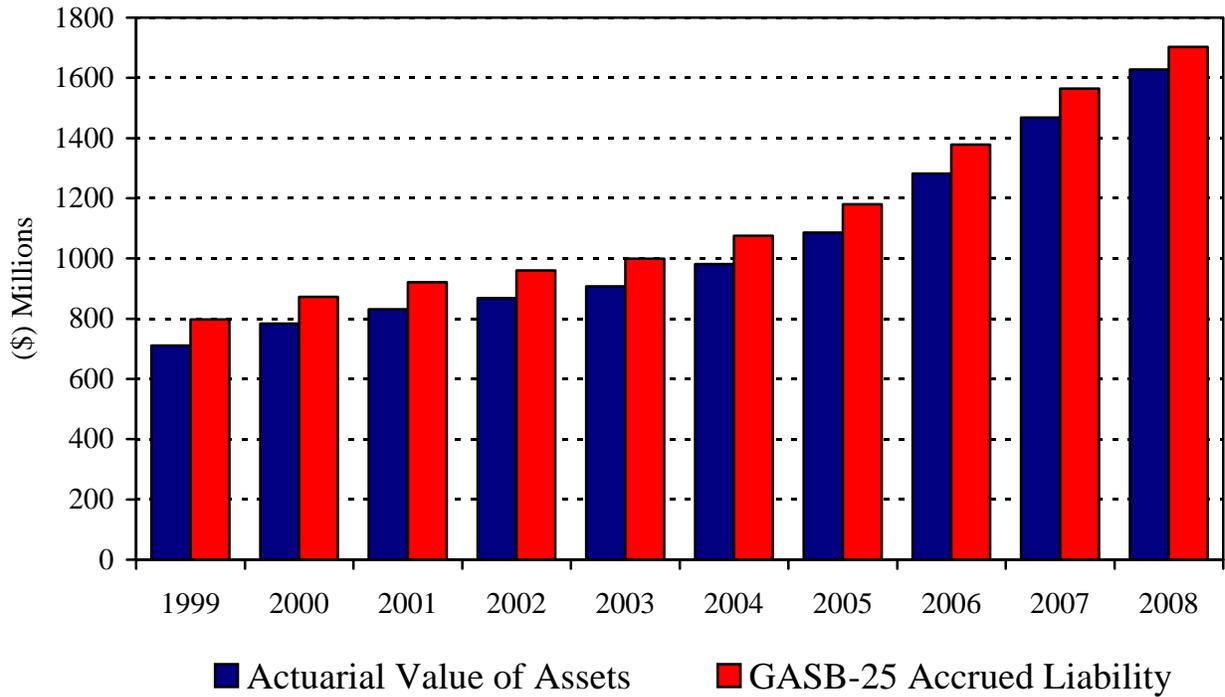
# Components of Present Value of Future Benefits June 30, 2008



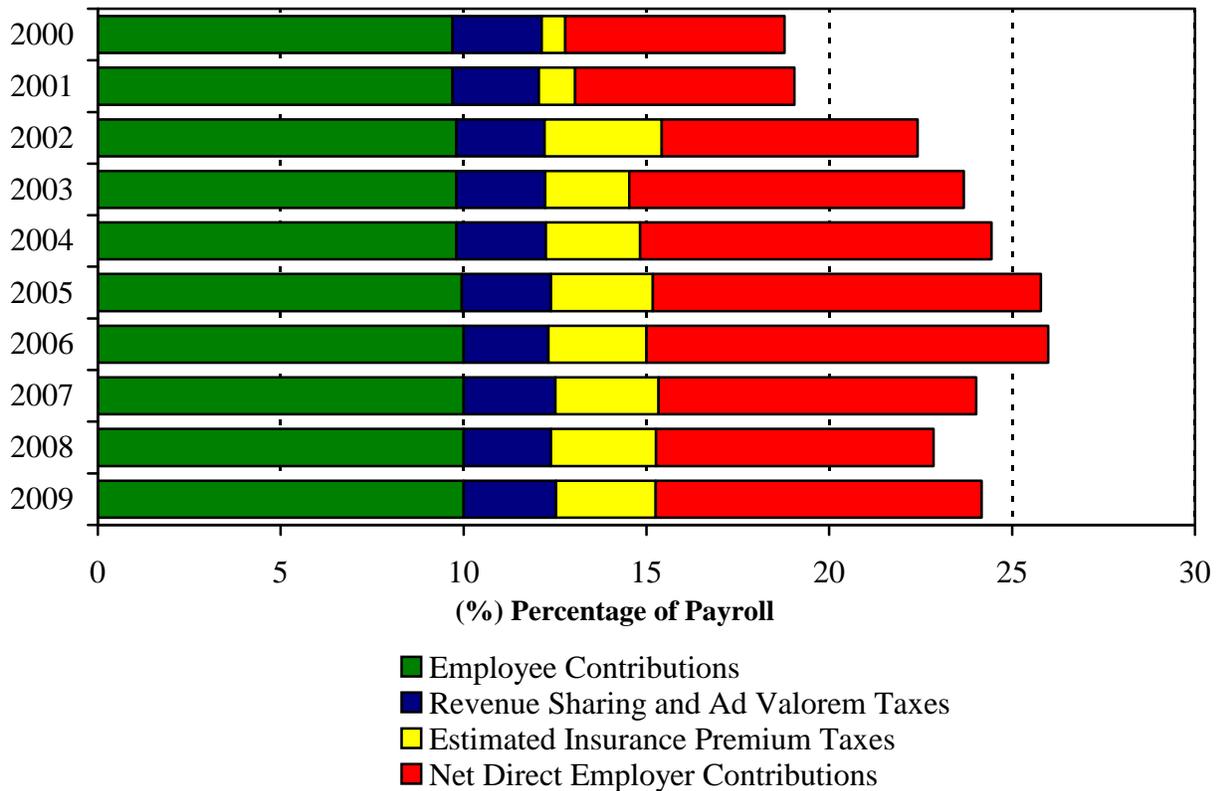
# Components of Present Value of Future Benefits



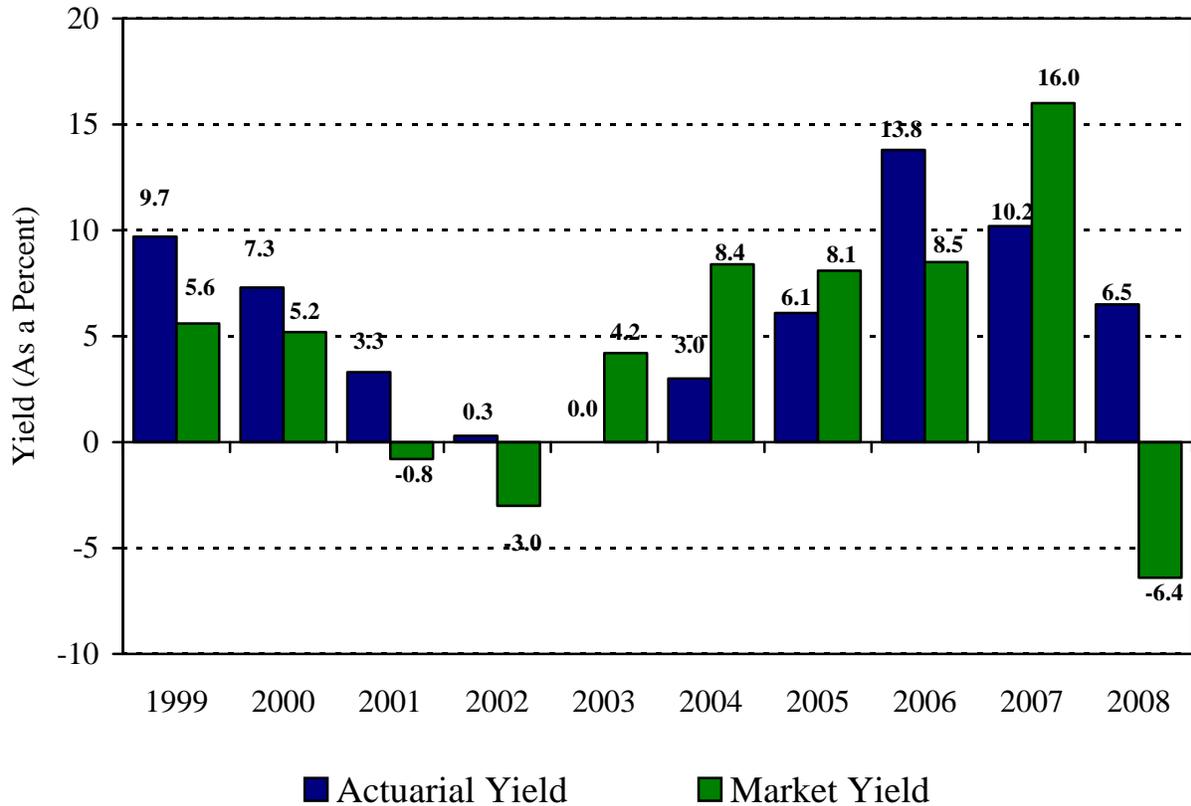
## Actuarial Value of Assets vs. GASB-25 Accrued Liability



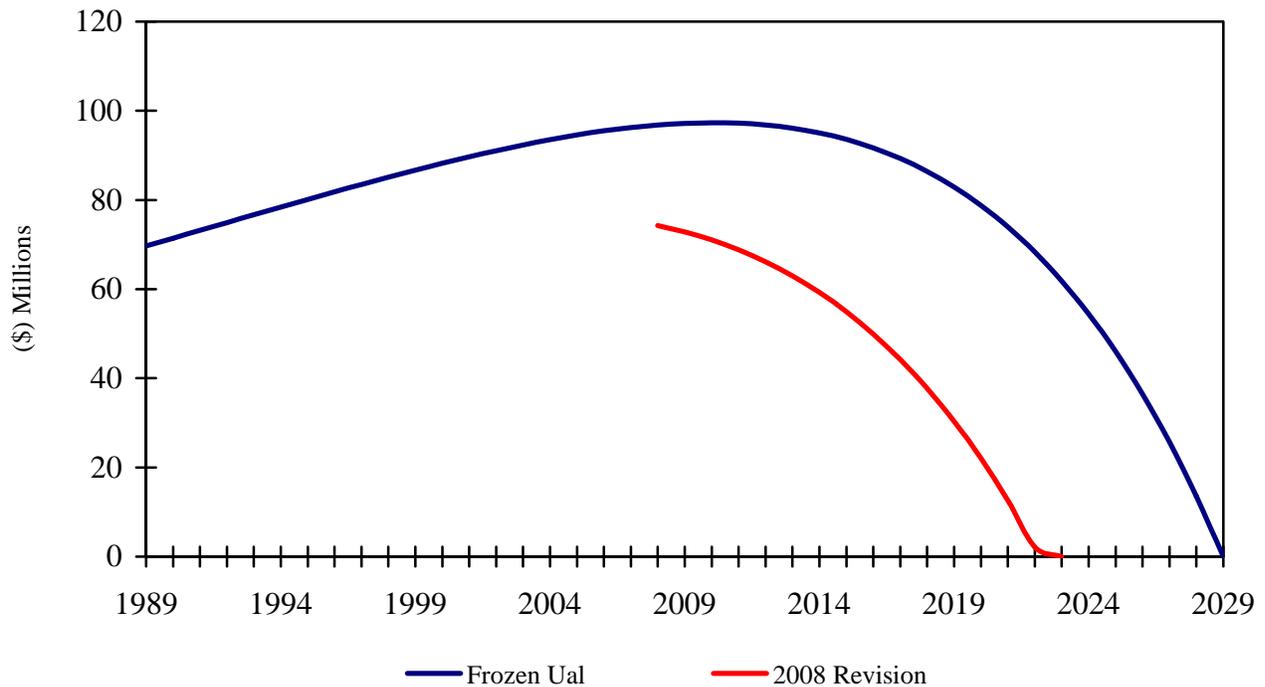
## Components of Actuarial Funding



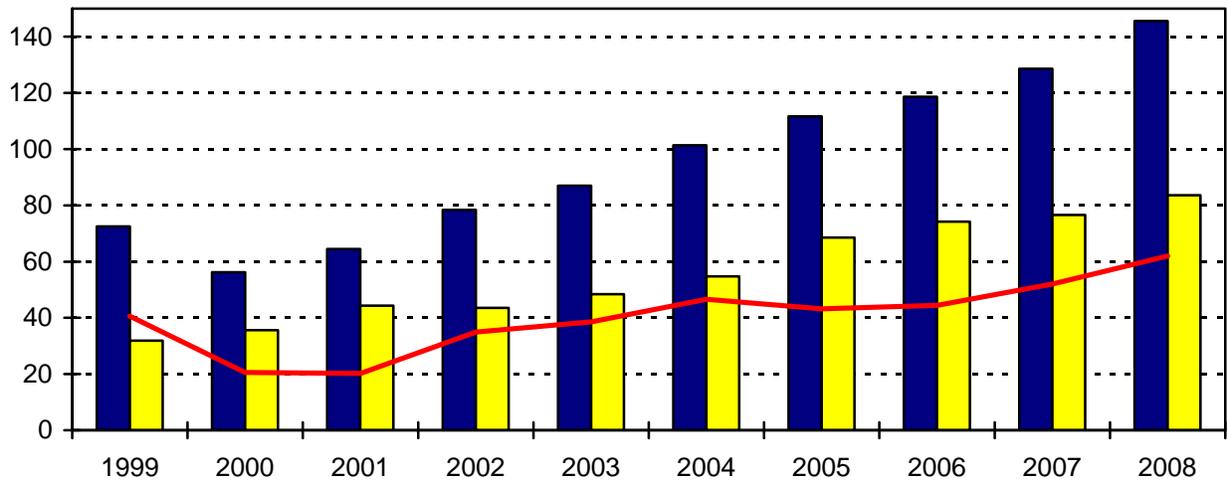
## Historical Asset Yields



## Frozen Unfunded Actuarial Accrued Liability

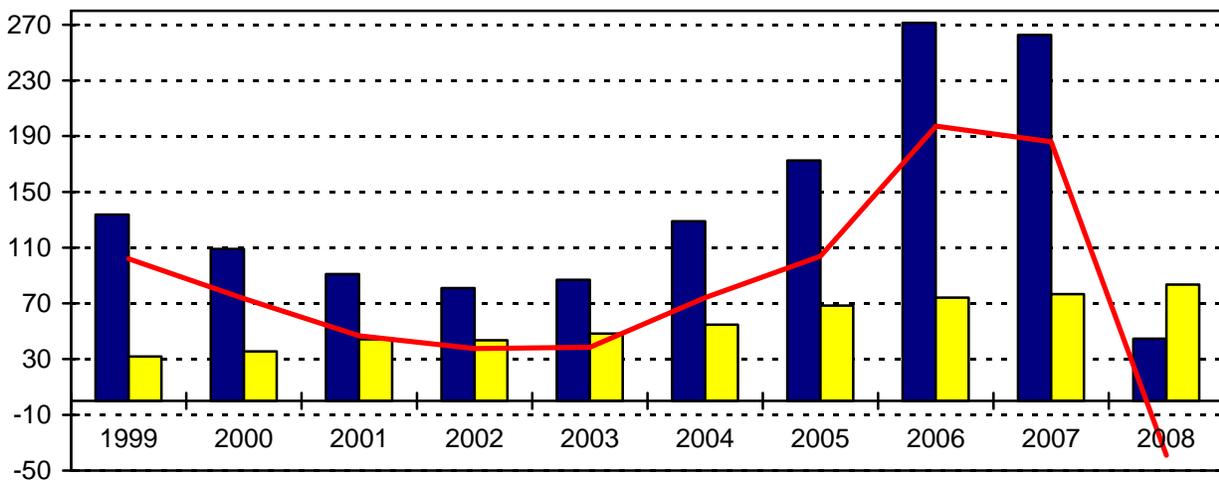


## Net Non-Investment Income



		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Non-Investment Income (\$Mil)	■	72.5	56.2	64.5	78.4	87.0	101.4	111.7	118.7	128.6	145.7
Benefits and Expenses (\$Mil)	■	31.9	35.6	44.3	43.5	48.4	54.8	68.5	74.2	76.6	83.6
Net Non-Investment Income (\$Mil)	—	40.6	20.6	20.2	34.9	38.6	46.6	43.2	44.5	52.0	62.1

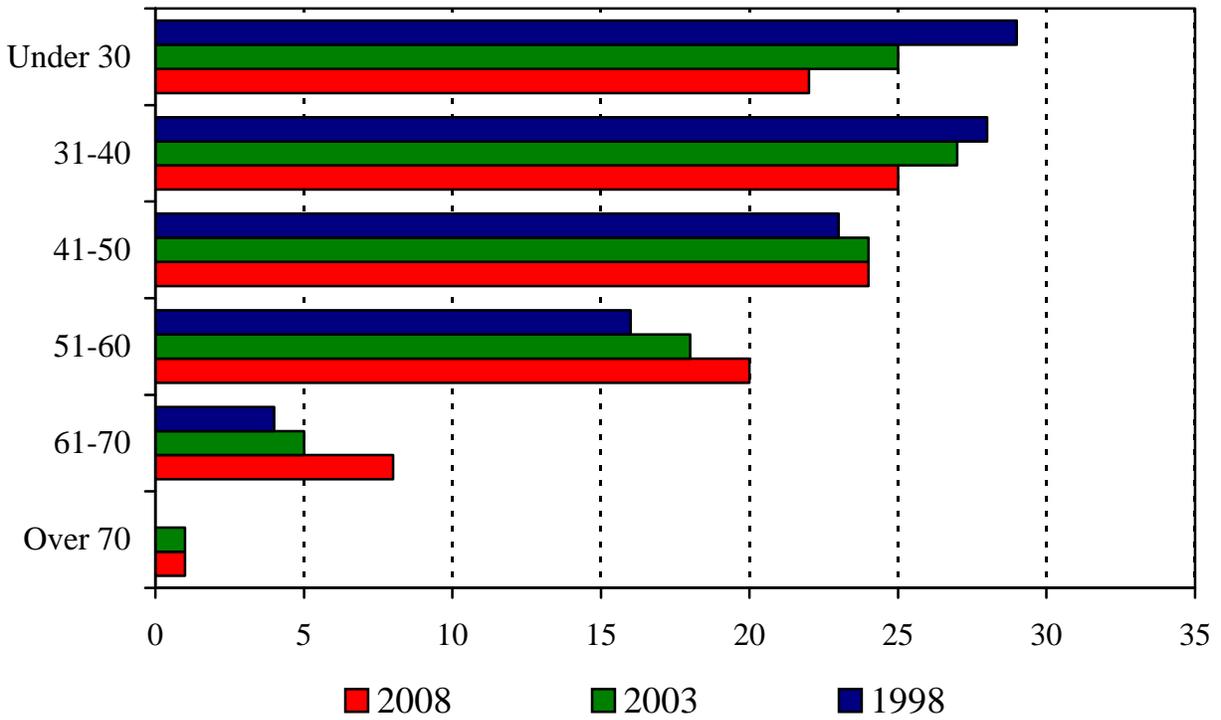
## Total Income vs. Expenses



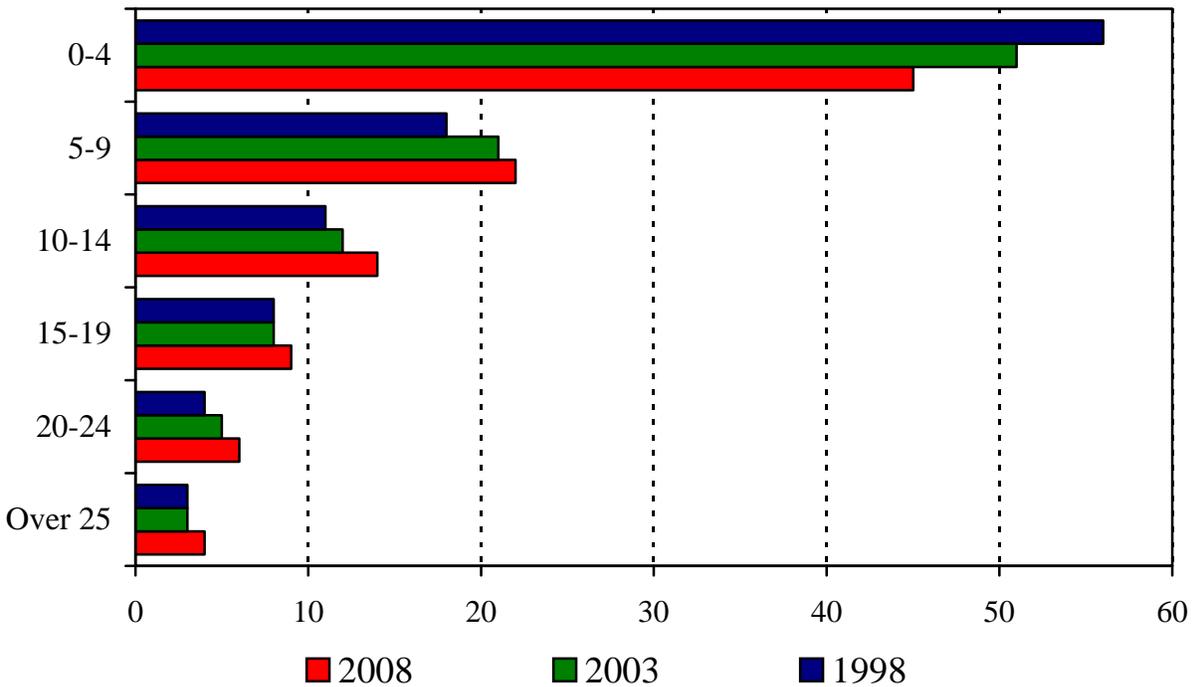
**(Based on Actuarial Value of Assets)**

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total Income (\$Mil)	■	133.8	109.0	91.0	81.1	87.0	129.0	172.4	271.3	262.6	243.2
Benefits and Expenses (\$Mil)	■	31.9	35.6	44.3	43.5	48.4	54.8	68.5	74.2	76.6	83.6
Net Change in AVA (\$Mil)	—	101.9	73.4	46.7	37.6	38.6	74.2	103.9	197.1	186.0	159.6

## Active – Census By Age (as a percent)



## Active – Census By Service (as a percent)



# **EXHIBITS**

**EXHIBIT I**  
**ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS**

1. Present Value of Future Benefits.....	\$ 2,826,560,747
2. Unfunded Actuarial Accrued Liability .....	\$ 74,278,468
3. Actuarial Value of Assets .....	\$ 1,628,303,910
4. Present Value of Future Employee Contributions.....	\$ 482,053,768
5. Present Value of Future Employer Normal Costs (1 – 2 – 3 - 4) .....	\$ 641,924,601
6. Present Value of Future Salaries .....	\$ 4,820,537,681
7. Employer Normal Cost Accrual Rate (5 ÷ 6).....	13.316452%
8. Projected Fiscal 2009 Salary for Current Membership .....	\$ 504,634,376
9. Employer Normal Cost as of July 1, 2008 (7 x 8).....	\$ 67,199,394
10. Amortization Payment on Frozen Unfunded Accrued Liability of \$ 74,278,468 with Payments increasing at 3.5% per year.....	\$ 6,827,821
11. Total Employer Normal Cost & Amortization Payment (9 + 10).....	\$ 74,027,215
12. Normal Cost and Amortization Payment Interest Adjusted for Midyear Payment.....	\$ 76,931,339
13. Estimated Administrative Cost for Fiscal 2009 .....	\$ 1,520,000
14. Gross Employer Actuarially Required Contribution for Fiscal 2009 (12 + 13).....	\$ 78,451,339
15. Projected Income from Ad Valorem Taxes for Fiscal 2009.....	\$ 13,568,163
16. Projected Income from Revenue Sharing Funds for Fiscal 2009.....	\$ 434,780
17. GROSS Employer Actuarially Required Contribution to be funded by direct employer contributions and Insurance Premium Taxes for Fiscal 2009 (14 - 15 - 16).....	\$ 64,448,396
18. Estimated Insurance Premium Taxes due for fiscal 2009 .....	\$ 15,071,968
19. Employer's Net Direct Actuarially Required Contribution (17 – 18).....	\$ 49,376,428
20. Projected Payroll (July 1, 2008 through June 30, 2009) .....	\$ 553,286,720
21. Net Direct Employer Actuarially Required Contribution as a % of Projected Payroll for Fiscal 2009 (19 ÷ 20).....	8.92%
22. Actual Employer Contribution Rate for Fiscal 2009.....	11.00%
23. Recommended Net Direct Employer Contribution Rate for 2010 (Rounded to nearest .25%) .....	9.00%

**EXHIBIT II**  
**PRESENT VALUE OF FUTURE BENEFITS**

Present Value of Future Benefits for Active Members:

Retirement Benefits .....	\$ 1,851,534,291
Survivor Benefits .....	121,585,314
Disability Benefits .....	74,320,297
Vested Deferred Termination Benefits .....	59,031,256
Contribution Refunds.....	71,296,319

TOTAL Present Value of Future Benefits for Active Members ..... \$ 2,177,767,477

Present Value of Future Benefits for Terminated Members:

Terminated Vested Members Due Benefits at Retirement .....	\$ 30,004,747
Terminated Members with Reciprocals Due Benefits at Retirement ...	658,628
Terminated Members Due a Refund.....	10,603,545

TOTAL Present Value of Future Benefits for Terminated Members ..... \$ 41,266,920

Present Value of Future Benefits for Pensioners:

Regular Retirees

Maximum .....	\$ 138,747,345
Option 1.....	57,090,222
Option 2.....	98,693,842
Option 2a.....	104,078,350
Option 3.....	26,308,741
Option 3a.....	40,880,569
Option 4.....	1,047,782
Option 5.....	33,670,508

TOTAL Regular Retirees ..... \$ 500,517,359

Disability Retirees ..... 22,106,587

Survivors & Widows..... 75,006,183

Annuities Certain Payable to Retirees..... 3,491,904

DROP and Back-DROP Account Balances ..... 6,404,317

TOTAL Present Value of Future Benefits for Pensioners ..... \$ 607,526,350

TOTAL Present Value of Future Benefits ..... \$ 2,826,560,747

**EXHIBIT III – Schedule A  
MARKET VALUE OF ASSETS**

Current Assets:

Cash in Banks .....	\$ 8,998,680
Contributions Receivable from Members.....	3,269,230
Contributions Receivable from Employers .....	3,596,750
Accrued Interest and Dividends on Investments .....	4,207,821
Sold Investment Receivables.....	44,190,558
Miscellaneous Receivables.....	220,675

TOTAL CURRENT ASSETS ..... \$ 64,483,714

Property, Plant and Equipment (Net of accumulated depreciation)..... \$ 3,018,188

Investments:

Common Stock .....	\$ 757,759,595
U. S. Government Obligations and Mortgage Backed Securities .....	199,581,635
International Equities.....	219,477,951
Corporate Bonds .....	199,151,377
Cash Equivalents.....	48,503,880
Diversified Alternatives.....	70,484,905
Foreign Government Bonds.....	7,073,919

TOTAL INVESTMENTS..... \$ 1,502,033,262

TOTAL ASSETS..... \$ 1,569,535,164

Current Liabilities:

Purchased Investments Payables .....	\$ 54,562,407
Refunds Payable .....	1,495,137
Accounts Payable .....	1,502,880
Accrued Leave Payables.....	113,996
Pensions Payable .....	29,047
Other Payables.....	11,681

TOTAL CURRENT LIABILITIES..... \$ 57,715,148

NET MARKET VALUE OF ASSETS..... \$ 1,511,820,016

**EXHIBIT III – Schedule B  
ACTUARIAL VALUE OF ASSETS**

Excess (Shortfall) of invested income  
for current and previous 3 years:

Fiscal year 2008 .....	\$ (227,585,992)
Fiscal year 2007 .....	105,612,001
Fiscal year 2006 .....	5,598,399
Fiscal year 2005 .....	<u>697,413</u>
Total for four years .....	\$ (115,678,179)

Deferral of excess (shortfall) of invested income:

Fiscal year 2008 (75%) .....	\$ (170,689,494)
Fiscal year 2007 (50%) .....	52,806,000
Fiscal year 2006 (25%) .....	1,399,600
Fiscal year 2005 (0%) .....	<u>0</u>
Total deferred for year .....	\$ (116,483,894)

Market value of plan net assets, end of year ..... \$ 1,511,820,016

Preliminary actuarial value of plan assets, end of year ..... \$ 1,628,303,910

Actuarial value of assets corridor

90% of market value, end of year .....	\$ 1,360,638,014
110% of market value, end of year .....	\$ 1,663,002,018

Final actuarial value of plan net assets, end of year ..... \$ 1,628,303,910

**EXHIBIT IV**  
**PRESENT VALUE OF FUTURE CONTRIBUTIONS**

Employee Contributions to the Annuity Savings Fund.....	\$ 482,053,768
Employer Normal Contributions to the Pension Accumulation Fund .....	641,924,601
Employer Amortization Payments to the Pension Accumulation Fund.....	74,278,468
 TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS .....	 \$ 1,198,256,837

**EXHIBIT V**  
**CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRUED LIABILITY**

Prior Year Frozen Unfunded Accrued Liability.....	\$ 96,251,088
Interest on Frozen Unfunded Accrued Liability .....	\$ 7,700,087
Normal Cost for Prior Year .....	54,426,612
Interest on the Normal Cost .....	4,354,129
Administrative Expense .....	1,583,618
Interest on Administrative Expenses.....	62,129
 TOTAL Increases to Frozen Unfunded Accrued Liability .....	 \$ 68,126,575
Direct Employer Contributions .....	\$ 59,110,932
Interest on Employer Contributions .....	2,318,951
Ad Valorem, Revenue Sharing, and Insurance Premium Taxes....	27,587,058
Interest on Taxes .....	1,082,254
 TOTAL Decreases to Frozen Unfunded Accrued Liability .....	 \$ 90,099,195
 CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABILITY .....	 \$ 74,278,468

**EXHIBIT VI**  
**ANALYSIS OF INCREASE IN ASSETS**

Actuarial Value of Assets (June 30, 2007).....		\$ 1,468,646,528
Income:		
Member Contributions .....	\$ 53,736,431	
Employer Contributions.....	59,110,932	
Ad Valorem Taxes .....	12,560,401	
Revenue Sharing Funds .....	571,369	
Funds Transferred into the System.....	5,223,486	
Other .....	180	
State Insurance Premium Taxes .....	14,455,288	
Total Contribution Income.....		\$ 145,658,087
Interest Income .....	\$ 25,663,503	
Dividend Income .....	3,079,928	
Net Change in Fair Values of Investments.....	(124,115,901)	
Investment Expense .....	(5,711,949)	
Total Investment Income.....		\$ (101,084,419)
TOTAL Income.....		\$ 44,573,668
Expenses:		
Retirement Benefits.....	\$ 69,105,180	
Refunds of Contributions .....	12,021,680	
Administrative Expenses & Depreciation .....	1,583,618	
Funds Transferred To Another System .....	872,255	
TOTAL Expenses.....		\$ 83,582,733
Net Market Income for Fiscal 2008 (Income - Expenses) .....		\$ (39,009,065)
Adjustment for Actuarial Smoothing .....		\$ 198,666,447
Actuarial Value of Assets (June 30, 2008).....		\$ 1,628,303,910

**EXHIBIT VII  
FUND BALANCE**

Present Assets of the System Creditable to:

Annuity Savings Fund.....	\$ 346,359,095
Annuity Reserve Fund.....	601,122,033
Pension Accumulation Fund .....	556,331,801
DROP and Back-DROP Accounts .....	8,007,087
 MARKET VALUE OF ASSETS.....	 \$ 1,511,820,016
ADJUSTMENT FOR ACTUARIAL SMOOTHING .....	116,483,894
ACTUARIAL VALUE OF ASSETS .....	\$ 1,628,303,910

**EXHIBIT VIII  
PENSION BENEFIT OBLIGATION**

Present Value of Credited Projected Benefits Payable to Current Employees .....	\$ 1,185,576,709
Present Value of Benefits Payable to Terminated Employees .....	41,266,920
Present Value of Benefits Payable to Current Retirees and Beneficiaries .....	607,526,350
 TOTAL PENSION BENEFIT OBLIGATION .....	 1,834,369,979
ACTUARIAL VALUE OF ASSETS .....	1,628,303,910
 Ratio of Net Actuarial Value of Assets to Pension Benefit Obligation.....	 88.77%

**EXHIBIT IX**  
**COST OF LIVING ADJUSTMENTS - TARGET RATIO**

Actuarial Value of Assets Divided by PBO as of Fiscal 1986:.....	51.50%
Amortization of Unfunded Balance over 30 years:.....	35.57%

Adjustments in Funded Ratio Due to Mergers or Changes in Assumption(s):

Changes for Fiscal 1988 .....	9.71%
Changes for Fiscal 1994 .....	(2.60%)
Changes for Fiscal 1996 .....	2.93%
Changes for Fiscal 1997 .....	(3.69%)
Changes for Fiscal 1998 .....	(3.72%)
Changes for Fiscal 2000 .....	0.13%
Changes for Fiscal 2001 .....	(2.09%)
Changes for Fiscal 2003 .....	1.34%
Changes for Fiscal 2005 .....	(0.19%)
Changes for Fiscal 2006 .....	5.34%

TOTAL Adjustments..... 7.16%

Amortization of Adjustments in Funded Ratio over 30 years:

Changes for Fiscal 1988 .....	(6.47%)
Changes for Fiscal 1994 .....	1.21%
Changes for Fiscal 1996 .....	(1.17%)
Changes for Fiscal 1997 .....	1.35%
Changes for Fiscal 1998 .....	1.24%
Changes for Fiscal 2000 .....	(0.03%)
Changes for Fiscal 2001 .....	0.49%
Changes for Fiscal 2003 .....	(0.22%)
Changes for Fiscal 2005 .....	0.02%
Changes for Fiscal 2006 .....	(0.36%)

TOTAL Amortization of Adjustments..... (3.94%)

Target Ratio for Current Fiscal Year..... 90.29%

Actuarial Value of Assets Divided by PBO as of Fiscal 2008..... 88.77%

**EXHIBIT X  
CENSUS DATA**

	<b>Active</b>	<b>Terminated with Funds on Deposit</b>	<b>DROP</b>	<b>Retired</b>	<b>Total</b>
Number of members as of June 30, 2007	13,530	4,279	0	2,995	20,804
Additions to Census					
Initial membership	1,987	189			2,176
Death of another member	(12)	(2)		14	
Omitted in error last year					
Change in Status during Year					
Actives terminating service	(439)	439			
Actives who retired	(179)			179	
Suspended Benefits Reinstated				4	4
Term. members rehired	111	(111)			
Term. members who retire		(23)		23	
Retirees who are rehired	7			(7)	
Refunded who are rehired	94	26			120
DROP participants retiring					
DROP returned to work					
Omitted in error last year					
Eliminated from Census					
Refund of contributions	(1,056)	(305)			(1,361)
Deaths	(6)	(10)		(65)	(81)
Included in error last year					
Adjustment for multiple records	1	2		(3)	
Number of members as of June 30, 2008	14,038	4,484	0	3,140	21,662

**ACTIVES CENSUS BY AGE:**

Age	Number Male	Number Female	Total Number	Average Salary	Total Salary
16 - 20	81	35	116	22,613	2,623,159
21 - 25	802	434	1,236	29,521	36,488,033
26 - 30	1,140	602	1,742	34,483	60,068,648
31 - 35	1,105	524	1,629	37,716	61,438,574
36 - 40	1,254	625	1,879	39,644	74,490,618
41 - 45	1,124	655	1,779	40,825	72,628,316
46 - 50	956	672	1,628	41,798	68,047,300
51 - 55	888	600	1,488	41,724	62,085,720
56 - 60	827	417	1,244	41,266	51,335,090
61 - 65	544	228	772	39,651	30,610,446
66 - 70	252	83	335	33,591	11,253,117
71 - 75	128	17	145	33,288	4,826,761
76 - 80	25	8	33	25,644	846,245
81 - 85	10	1	11	27,621	303,835
86 - 90	1	0	1	36,594	36,594
<b>TOTAL</b>	<b>9,137</b>	<b>4,901</b>	<b>14,038</b>	<b>38,259</b>	<b>537,082,456</b>

THE ACTIVE CENSUS INCLUDES 3,635 ACTIVES WITH VESTED BENEFITS, INCLUDING 28 ACTIVE FORMER DROP PARTICIPANTS. THERE ARE NO CURRENT DROP PARTICIPANTS.

**TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:**

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
31 - 35	2	1	3	18,248	54,744
36 - 40	31	8	39	16,621	648,206
41 - 45	69	19	88	16,442	1,446,881
46 - 50	67	18	85	17,491	1,486,776
51 - 55	63	22	85	15,965	1,357,038
56 - 60	9	2	11	6,167	67,841
61 - 65	8	3	11	9,291	102,201
66 - 70	3	0	3	5,059	15,177
71 - 75	1	0	1	1,881	1,881
76 - 80	1	0	1	399	399
81 - 85	1	0	1	2,081	2,081
<b>TOTAL</b>	<b>255</b>	<b>73</b>	<b>328</b>	<b>15,803</b>	<b>5,183,225</b>

**TERMINATED MEMBERS DUE A REFUND OF CONTRIBUTIONS:**

Contributions Ranging From	To	Number	Total Contributions
0	99	1,170	49,065
100	499	1,219	307,030
500	999	443	316,440
1000	1999	331	481,849
2000	4999	366	1,180,593
5000	9999	277	1,977,585
10000	19999	242	3,431,813
20000	99999	108	2,859,170
<b>TOTAL</b>		<b>4,156</b>	<b>10,603,545</b>

**REGULAR RETIREES:**

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
41 - 45	1	0	1	10,823	10,823
46 - 50	5	1	6	41,679	250,071
51 - 55	82	29	111	33,060	3,669,665
56 - 60	285	109	394	29,345	11,562,119
61 - 65	372	148	520	23,747	12,348,616
66 - 70	395	119	514	21,874	11,243,066
71 - 75	259	100	359	17,270	6,199,879
76 - 80	166	48	214	20,181	4,318,780
81 - 85	88	43	131	19,767	2,589,463
86 - 90	30	16	46	16,234	746,746
91 - 99	4	1	5	18,341	91,707
<b>TOTAL</b>	<b>1,687</b>	<b>614</b>	<b>2,301</b>	<b>23,047</b>	<b>53,030,935</b>

**DISABILITY RETIREES:**

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
26 - 30	0	1	1	11,462	11,462
31 - 35	0	1	1	18,221	18,221
36 - 40	4	3	7	11,472	80,306
41 - 45	10	3	13	16,309	212,018
46 - 50	16	5	21	16,792	352,628
51 - 55	23	7	30	17,989	539,662
56 - 60	26	5	31	12,775	396,016
61 - 65	15	3	18	11,811	212,601
66 - 70	12	4	16	11,101	177,614
71 - 75	9	2	11	11,876	130,635
76 - 80	9	2	11	12,773	140,507
81 - 85	3	0	3	13,094	39,281
<b>TOTAL</b>	<b>127</b>	<b>36</b>	<b>163</b>	<b>14,178</b>	<b>2,310,951</b>

**SURVIVORS:**

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
0 - 25	19	39	58	4,571	265,130
26 - 30	0	3	3	6,998	20,993
31 - 35	2	7	9	14,067	126,607
36 - 40	1	7	8	14,935	119,479
41 - 45	2	11	13	13,445	174,786
46 - 50	4	19	23	14,158	325,632
51 - 55	1	31	32	16,592	530,934
56 - 60	2	53	55	18,392	1,011,562
61 - 65	3	66	69	16,710	1,152,995
66 - 70	1	78	79	13,222	1,044,562
71 - 75	4	84	88	13,396	1,178,873
76 - 80	2	84	86	15,527	1,335,334
81 - 85	1	85	86	11,603	997,875
86 - 90	2	42	44	10,422	458,580
91 - 99	0	23	23	9,763	224,544
<b>TOTAL</b>	<b>44</b>	<b>632</b>	<b>676</b>	<b>13,266</b>	<b>8,967,886</b>

ACTIVE MEMBERS:

Completed Years of Service

Attained Ages	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30&Over	Total
0 - 20	96	18	2									116
21 - 25	531	358	172	92	51	32						1,236
26 - 30	376	320	218	198	143	462	24	1				1,742
31 - 35	230	217	120	104	91	565	291	11				1,629
36 - 40	223	197	126	112	81	453	449	227	11			1,879
41 - 45	192	165	99	94	85	351	330	286	166	11		1,779
46 - 50	131	114	79	73	75	330	235	211	217	150	13	1,628
51 - 55	110	96	74	56	59	314	225	170	165	135	84	1,488
56 - 60	101	78	80	82	52	272	219	120	115	61	64	1,244
61 - 65	51	51	35	50	38	185	134	90	72	35	31	772
66 - 70	28	29	22	16	11	80	61	43	25	13	7	335
71 & Over	16	15	10	4	14	45	49	15	8	8	6	190
Totals	2085	1658	1037	881	700	3089	2017	1174	779	413	205	14038

AVERAGE ANNUAL SALARY OF ACTIVE MEMBERS:

Completed Years of Service

Attained Ages	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30&Over	Average Salary
0 - 20	21,693	26,169	34,813									22,613
21 - 25	25,882	30,360	32,719	33,890	37,736	37,685	40,885	17,159				29,521
26 - 30	28,375	31,735	34,480	35,992	37,000	39,636	40,885	51,736				34,483
31 - 35	25,804	32,513	33,911	35,967	36,469	40,938	46,806	51,736				37,716
36 - 40	27,926	30,492	33,968	38,334	35,817	40,899	45,143	50,611	45,155			39,644
41 - 45	26,099	30,641	33,093	37,696	37,894	39,771	44,477	49,870	54,154	57,404		40,825
46 - 50	28,315	28,914	31,872	33,768	33,251	37,782	41,914	48,388	53,290	58,370	55,230	41,798
51 - 55	28,914	31,569	30,110	36,158	33,796	36,058	40,312	46,241	49,435	57,130	65,536	41,724
56 - 60	29,898	31,791	31,768	33,355	31,158	38,456	41,574	46,933	49,585	57,140	71,161	41,266
61 - 65	25,061	29,428	29,714	29,719	36,746	34,511	39,742	48,101	50,999	54,804	73,549	39,651
66 - 70	20,654	24,705	26,067	25,227	23,988	32,668	35,849	37,991	48,061	53,003	56,147	33,591
71 & Over	20,889	23,742	23,046	25,112	26,317	27,106	33,657	37,757	43,058	42,720	83,697	31,650
Average	26,747	30,756	32,759	35,229	35,419	38,719	43,002	48,185	51,511	56,983	68,061	38,259

TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

Attained Ages	Years Until Retirement Eligibility											Total
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30&Over	
0 - 30												0
31 - 35									3			3
36 - 40								39				39
41 - 45							83	5				88
46 - 50						82	3					85
51 - 55	11	21	17	13	14	9						85
56 - 60	4	1	1	2	3							11
61 - 65	11											11
66 - 70	3											3
71 - 75	1											1
76 - 80	1											1
81 - 85	1											1
86 & Over												0
Totals	32	22	18	15	17	91	86	44	3	0	0	328

AVERAGE ANNUAL BENEFITS OF TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

Attained Ages	Years Until Retirement Eligibility											Average Benefit
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30&Over	
0 - 30												0
31 - 35									18,248			18,248
36 - 40								16,621				16,621
41 - 45							17,205	3,766				16,442
46 - 50						17,971	4,380					17,491
51 - 55	17,896	19,360	16,346	15,522	16,578	4,649						15,965
56 - 60	10,102	6,373	2,418	4,111	3,474							6,167
61 - 65	9,291											9,291
66 - 70	5,059											5,059
71 - 75	1,881											1,881
76 - 80	399											399
81 - 85	2,081											2,081
86 & Over												0
Average	11,219	18,770	15,573	14,001	14,266	16,654	16,758	15,160	18,248	0	0	15,803

**SERVICE RETIREES:**

Attained Ages	Completed Years Since Retirement											Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30&Over		
0 - 50	4	3											7
51 - 55	33	27	20	21	8	2							111
56 - 60	65	76	82	61	50	58	2						394
61 - 65	46	44	48	78	71	200	32	1					520
66 - 70	34	19	38	62	35	195	108	21	2				514
71 - 75	3	11	9	14	13	113	90	77	28	1			359
76 - 80	3	7	3	5	3	30	47	57	45	13	1		214
81 - 85		1	2	4		5	15	30	37	33	4		131
86 - 90								5	17	6	18		46
91 & Over									1	2	2		5
<b>Totals</b>	<b>188</b>	<b>188</b>	<b>202</b>	<b>245</b>	<b>180</b>	<b>603</b>	<b>294</b>	<b>191</b>	<b>130</b>	<b>55</b>	<b>25</b>		<b>2301</b>

**AVERAGE ANNUAL BENEFITS PAYABLE TO SERVICE RETIREES:**

Attained Ages	Completed Years Since Retirement											Average Benefit	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30&Over		
0 - 50	38,402	35,762											37,271
51 - 55	32,759	33,987	28,728	39,819	26,439	24,352							33,060
56 - 60	28,266	29,540	30,641	32,314	27,509	27,238	20,412						29,345
61 - 65	23,770	25,025	23,735	29,191	25,628	21,730	17,285	19,284					23,747
66 - 70	23,670	21,200	20,995	32,404	21,825	20,732	17,644	23,190	14,754				21,874
71 - 75	15,742	28,167	16,091	27,059	23,592	18,570	15,553	13,937	15,232	14,623			17,270
76 - 80	30,202	14,836	19,795	24,882	24,796	32,965	19,231	18,267	14,966	19,186	9,210		20,181
81 - 85		78,922	17,024	17,225		19,007	20,673	24,216	20,421	14,183	13,094		19,767
86 - 90								17,576	20,787	14,154	12,253		16,234
91 & Over									24,982	18,145	15,218		18,342
<b>Average</b>	<b>27,170</b>	<b>28,013</b>	<b>26,052</b>	<b>31,287</b>	<b>25,286</b>	<b>21,890</b>	<b>17,392</b>	<b>17,984</b>	<b>17,411</b>	<b>15,514</b>	<b>12,503</b>		<b>23,047</b>

DISABILITY RETIREES:

Attained Ages	Completed Years Since Retirement											Total			
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30&Over				
0 - 30	1														1
31 - 35			1												1
36 - 40		2	1												7
41 - 45	3	2	2	2	1	5	1								13
46 - 50	2	1	2	2	4	5	6		1						21
51 - 55	3	2	1	3	1	12	1	5	2						30
56 - 60	1		1	3	3	7	13	1	1	2					31
61 - 65	1			3	1	1	8	5	2						18
66 - 70		1		1	1	1	2	6	2	2					16
71 - 75			1	1	1		1		2	1					11
76 - 80				1				1	2	1					11
81 - 85									2	6					11
86 & Over								1	1	1					3
Totals	11	8	4	15	11	32	32	21	13	12	4				163

AVERAGE ANNUAL BENEFITS PAYABLE TO DISABILITY RETIREES:

Attained Ages	Completed Years Since Retirement											Average Benefit			
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30&Over				
0 - 30	11,462														11,462
31 - 35			18,221												18,221
36 - 40		9,529	14,947	13,171	15,342	12,720	7,239								11,472
41 - 45	27,298	17,192	12,431	16,918	17,697	11,107									16,309
46 - 50	26,928	29,966	30,486	16,918	21,109	14,847	13,412		9,475						16,792
51 - 55	21,818	13,703	13,538	30,486	21,109	19,144	10,530	11,421	11,667						17,989
56 - 60	13,603		14,678	14,678	10,859	16,111	11,162	11,714	13,635	11,285					12,775
61 - 65	11,157		11,932	11,932	11,932	9,582	13,010	10,630	11,348						11,811
66 - 70		13,576	13,631	13,631	7,594	8,410	7,073	9,696	18,876	12,165					11,101
71 - 75			13,792	9,269	5,820	5,820	15,261	14,103	14,103	9,941	11,029				11,876
76 - 80				6,063			11,246	13,070	14,290	11,321					12,773
81 - 85							14,020	14,634	10,627						13,094
86 & Over															0
Average	21,584	15,549	15,124	16,633	14,486	15,718	11,481	11,235	13,528	12,767	11,102				14,178

**SURVIVING BENEFICIARIES OF FORMER MEMBERS:**

**Completed Years Since Retirement**

Attained Ages	Completed Years Since Retirement											Total
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30&Over	
0 - 20	3	4	5	4	7	18	1	1				43
21 - 25	2	2	1		2	6	2	1	1			15
26 - 30	1					2						3
31 - 35	1	4			1	3						9
36 - 40		3				3	1				1	8
41 - 45		1	2	1	1	5	2		1			13
46 - 50	2	1	2	2	1	5	8	2				23
51 - 55	2	1	1	1	6	10	4	2	3	2		32
56 - 60	6	6	3	4	2	11	13	8	2			55
61 - 65	9	4	6	5	4	21	13	4	2			69
66 - 70	5	6	5	9	7	16	18	7	4	1		79
71 - 75	4	7	5	9	7	20	18	10	7		1	88
76 - 80	2	3	4	4	6	20	18	14	7	3		86
81 - 85	1	2	3	3	2	21	17	14	10	9		86
86 - 90	2	2	2	1	5	8	4	3	7	3		44
91 & Over		1	1		3	3	4	8	1	2		23
<b>Totals</b>	<b>38</b>	<b>44</b>	<b>40</b>	<b>40</b>	<b>48</b>	<b>172</b>	<b>123</b>	<b>71</b>	<b>47</b>	<b>24</b>	<b>29</b>	<b>676</b>

**AVERAGE ANNUAL BENEFITS PAYABLE TO SURVIVORS OF FORMER MEMBERS:**

**Completed Years Since Retirement**

Attained Ages	Completed Years Since Retirement											Average Benefit
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30&Over	
0 - 20	6,413	4,740	6,168	3,834	5,198	4,380	3,610	3,353				4,804
21 - 25		3,261	3,717		3,160	4,476	4,076	3,353	3,650			3,905
26 - 30	10,251					5,371						6,998
31 - 35	3,846	16,920			17,377	12,568	14,127				5,044	14,068
36 - 40		21,682				11,754	14,387		6,520			14,935
41 - 45		15,038	19,692	14,348	10,069	12,131	14,387					13,445
46 - 50	26,083	31,277	15,247	13,920	11,723	12,815	10,592	11,663				14,158
51 - 55	17,526	10,723	45,016	14,686	22,202	15,456	15,287	13,703	13,111	4,900		16,592
56 - 60	10,147	28,245	35,895	28,922	15,512	17,469	14,556	15,696	9,924			18,392
61 - 65	22,649	22,886	23,161	11,285	11,208	15,004	18,641	5,437	9,853	7,560		16,710
66 - 70	29,477	16,586	12,267	14,062	13,859	10,594	13,032	11,816	13,752	4,725	7,781	13,222
71 - 75	17,878	12,386	20,444	11,872	16,033	19,069	12,386	17,833	15,078	9,940	9,866	13,396
76 - 80	5,576	5,804	18,490	4,487	12,198	12,576	10,708	11,461	13,729	10,536	8,874	11,603
81 - 85	9,747		10,728		11,963	10,976	14,148	9,795	12,484	8,846	7,291	10,422
86 - 90			24,503			10,834	10,940	8,683	6,060	11,200	6,463	9,763
<b>Average</b>	<b>16,868</b>	<b>16,225</b>	<b>17,802</b>	<b>13,168</b>	<b>13,477</b>	<b>12,717</b>	<b>12,984</b>	<b>12,518</b>	<b>12,710</b>	<b>9,081</b>	<b>8,238</b>	<b>13,266</b>

**EXHIBIT XI**  
**YEAR -TO-YEAR COMPARISON**

	Fiscal 2008	Fiscal 2007	Fiscal 2006	Fiscal 2005
Number of Active Members	14,038	13,530	12,835	13,863
Number of Retirees and Survivors	3,140	2,995	2,859	2,693
Number Terminated Due Deferred Benefits	328	340	329	279
Number Terminated Due Refund	4,156	3,939	3,722	3,152
Active Lives Payroll	\$ 537,082,456	\$ 481,418,484	\$ 436,370,158	\$ 432,019,757
Retiree Benefits in Payment	\$ 64,309,775	\$ 55,471,909	\$ 50,612,587	\$ 45,968,384
Market Value of Assets	\$1,511,820,016	\$1,550,829,081	\$1,288,100,175	\$1,144,751,928
Ratio of AVA to GASB-25 Accrued Liability	95.64%	93.85%	93.07%	91.99%
Accrued Liability (as Defined by GASB-25)	\$1,702,582,378	\$1,564,897,616	\$1,378,133,705	\$1,180,095,189
Actuarial Value of Assets	\$1,628,303,910	\$1,468,646,528	\$1,282,638,484	\$1,085,515,384
Frozen Unfunded Actuarial Accrued Liability	\$ 74,278,468	\$ 96,251,088	\$ 95,495,221	\$ 94,579,805
Present Value of Future Employer Normal Cost	\$ 641,924,601	\$ 524,216,581	\$ 527,090,828	\$ 598,357,461
Present Value of Future Employee Contributions	\$ 482,053,768	\$ 436,275,292	\$ 400,515,989	\$ 399,070,734
Present Value of Future Benefits	\$2,826,560,747	\$2,525,389,489	\$2,305,740,522	\$2,177,523,384

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	Fiscal 2009	Fiscal 2008	Fiscal 2007	Fiscal 2006
Employee Contribution Rate	10.00%	10.00%	10.00%	10.00%
Projected Ad Valorem and Revenue Sharing Funds as a % of Projected Payroll	2.53%	2.39%	2.47%	2.32%
Estimated Insurance Premium Taxes as a % of Projected Payroll	2.72%	2.87%	2.77%	2.68%
Actuarially Required Net Direct Employer Contributions as a % of Projected Payroll	8.92%	7.59%	8.69%	10.99%
Actual Net Direct Employer Contribution Rate	11.00%	11.00%	11.00%	10.75%

Fiscal 2004	Fiscal 2003	Fiscal 2002	Fiscal 2001	Fiscal 2000	Fiscal 1999
13,657	13,595	13,267	12,898	12,331	12,085
2,488	2,325	2,195	2,128	1,953	1,849
299	280	263	234	206	202
2,977	2,793	2,560	2,312	2,116	1,800
\$ 406,020,215	\$ 383,388,474	\$ 360,267,884	\$ 337,229,788	\$ 311,639,821	\$ 293,919,047
\$ 39,124,305	\$ 35,381,798	\$ 32,217,500	\$ 30,310,754	\$ 26,177,028	\$ 23,572,480
\$1,017,722,292	\$ 894,112,820	\$ 820,104,918	\$ 810,072,839	\$ 796,524,139	\$ 737,107,846
91.30%	90.76%	90.51%	90.26%	89.89%	89.13%
\$1,075,107,796	\$ 999,746,836	\$ 959,788,254	\$ 920,761,605	\$ 872,527,063	\$ 797,565,970
\$ 981,583,851	\$ 907,401,749	\$ 868,729,107	\$ 831,080,974	\$ 784,304,316	\$ 710,868,457
\$ 93,523,945	\$ 92,345,087	\$ 91,059,147	\$ 89,680,631	\$ 88,222,747	\$ 86,697,513
\$ 503,285,937	\$ 435,520,804	\$ 393,484,597	\$ 326,385,219	\$ 230,534,416	\$ 200,030,290
\$ 344,408,426	\$ 319,054,283	\$ 298,862,302	\$ 279,892,787	\$ 258,653,567	\$ 241,065,033
\$1,922,802,159	\$1,754,321,923	\$1,652,135,153	\$1,527,039,611	\$1,361,715,046	\$1,238,661,293

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Fiscal 2005	Fiscal 2004	Fiscal 2003	Fiscal 2002	Fiscal 2001	Fiscal 2000
10.00%/9.80%*	9.80%	9.80%	9.80%	9.70%	9.70%
2.44%	2.45%	2.43%	2.41%	2.36%	2.44%
2.78%	2.58%	2.30%	3.21%	0.99%	0.64%
10.62%	9.61%	9.15%	7.00%	6.00%	6.00%
9.75%	9.25%	7.75%	7.00%	6.00%	5.00%

\* Increase effective October 1, 2004

## **SUMMARY OF PRINCIPAL PLAN PROVISIONS**

The Sheriffs' Pension & Relief Fund is a defined benefit pension plan that provides retirement allowances and other benefits. The following summary of plan provisions is for general informational purposes only and does not constitute a guarantee of benefits.

**MEMBERSHIP-** Any sheriff elected or deputy employed, who is otherwise eligible for membership must become a participating member of the fund. All salaried employees of the Sheriffs' Pension and Relief Fund and the Louisiana Sheriffs' Association who meet certain requirements are also eligible to become members of the retirement system.

**CONTRIBUTION RATES** - The fund is financed by a combination of employee contributions, employer contributions, dedicated ad valorem taxes, revenue sharing funds, and insurance premium taxes. The employee contribution rate is 10.0% of salary. Gross employer contributions are determined by actuarial valuation and are subject to change each year in accordance with R. S. 11:103. Also, the fund annually receives revenue sharing funds and ad valorem taxes equal to 0.5% of the aggregate amount of the tax shown to be collected by the tax roll of each respective parish, and additional funds as indicated by valuation and apportioned by the Public Employees' Retirement Systems' Actuarial Committee from available insurance premium taxes described in R. S. 22:1419.

**CONTRIBUTION REFUNDS** - Upon withdrawal from service, members not entitled to a retirement allowance who have remained out of service for a period of thirty days are paid a refund of accumulated contributions upon request. Receipt of such a refund cancels all accrued benefits in the system.

**NORMAL RETIREMENT BENEFITS** – Members with twelve years of creditable service may retire at age fifty-five; members with thirty years of creditable service may retire at any age. The retirement allowance is equal to three and one-third percent of the member's average final compensation multiplied by his years of creditable service, not to exceed (after reduction for optional payment form) 100% of average final compensation.

**EARLY RETIREMENT BENEFITS** – Active, contributing members with at least ten years of creditable service may retire at age sixty. The accrued normal retirement benefit is reduced actuarially for each month or fraction thereof that retirement begins prior the member's earliest normal retirement date assuming continuous service. In addition, members with twenty or more years of service may retire with a reduced retirement at age fifty.

**FINAL AVERAGE COMPENSATION** – For a member whose first employment making him eligible for membership in the system began on or before June 30, 2006, final average compensation is based on the average monthly earnings during the highest thirty-six consecutive months or joined months if service was interrupted. The earnings to be considered for each twelve month period within the thirty-six month period shall not exceed 125% of the preceding twelve month period.

For a member whose first employment making him eligible for membership in the system began after June 30, 2006, final average compensation is based on the average monthly earnings during the highest sixty consecutive months or joined months if service was interrupted.

**OPTIONAL ALLOWANCES** - Members may receive their benefits as a life annuity, or in lieu of such receive a reduced benefit according to the option selected, which is the actuarial equivalent of the maximum benefit.

**Option 1** - If the member dies before he has received in annuity payments the present value of his member's annuity as it was at the time of retirement, the balance is paid to his beneficiary.

**Option 2** - Upon retirement, the member receives a reduced benefit. Upon the member's death, the spouse to whom the member was married and living with at the time of retirement will continue to receive the same reduced benefit.

**Option 2A** - Upon retirement, the member receives a reduced benefit. Upon the member's death, the spouse to whom the member was married and living with at the time of retirement will continue to receive the same reduced benefit. If the member's spouse dies before the member, the member's benefit will revert to the maximum.

**Option 3** - Upon retirement, the member receives a reduced benefit. Upon the member's death, the spouse to whom the member was married and living with at the time of retirement will receive one-half of the member's reduced benefit.

**Option 3A** - Upon retirement, the member receives a reduced benefit. Upon the member's death, the spouse to whom the member was married and living with at the time of retirement will receive one-half of the member's reduced benefit. If the member's spouse dies before the member, the member's benefit will revert to the maximum.

**Option 4** - Upon retirement, the member elects to receive a board-approved benefit that is actuarially equivalent to the maximum benefit.

**Option 5** - Upon retirement, the member may receive ninety percent of the maximum benefit. Upon the member's death, if survived by a surviving spouse to whom the member was married and living with at the time of retirement, fifty percent of the member's benefit shall be paid to the spouse during said spouse's lifetime.

**DISABILITY BENEFITS** - Ten years of creditable service are required in order to be eligible for disability benefits when a non-service related disability is incurred; there are no service requirements for a service related disability. Totally disabled members receive the lesser of their accrued retirement benefit (with a minimum of 45%) or their accrued retirement benefit assuming continued service to their earliest normal retirement age. Members who become partially disabled receive 75% of the amount payable for total disability.

**SURVIVOR BENEFITS** - Survivor benefits for death solely as a result of injuries received in the line of duty are based on the following. For a spouse alone, a sum equal to 50% of the member's final average compensation with a minimum of \$150 per month. If a spouse is entitled to benefits and has a child or children under eighteen years of age (or over said age if physically or mentally incapacitated and dependent upon the member at the time of his death), an additional sum of 15% of

the member's final average compensation is paid to each child with total benefits paid to spouse and children not to exceed 100%. If a member dies with no surviving spouse, surviving children under age eighteen receive monthly benefits of 15% of the member's final average compensation up to a maximum of 60% of final average compensation if there are more than four children. If a member is eligible for normal retirement at the time of death, the surviving spouse receives an automatic option 2 benefit; the additional benefit payable to children is the same as those available for members who die in the line of duty. In lieu of receiving option 2 benefits, the surviving spouse may receive a refund of the member's accumulated contributions. Benefits payable to surviving children are extended through age twenty-two, if the child is a full time student in good standing enrolled at a board approved or accredited school, college, or university.

**Back-DROP** – In lieu of receiving a service retirement allowance any member of the fund who has more than sufficient service for a regular service retirement may elect to receive a “Back-DROP” benefit. The Back-DROP benefit is based upon the Back-DROP period selected and the final average compensation prior to the period selected. The Back-DROP period is the lesser of three years or the service accrued between the time a member first becomes eligible for retirement and his actual date of retirement. Members who have thirty or more years of service may elect a Back-DROP period not to exceed the lesser of forty-eight months or the number of months of creditable service accrued after the member first became eligible for regular retirement. At retirement the member’s maximum monthly retirement benefit is based upon his service, final average compensation, and plan provisions in effect on the last day of creditable service immediately prior to the commencement of the Back-DROP period. In addition to the monthly benefit at retirement, the member receives a lump-sum payment equal to the maximum monthly benefit as calculated above multiplied by the number of months in the Back-DROP period. In addition, the member’s Back-DROP account is credited with employee contributions received by the retirement fund during the Back-DROP period. Any DROP or Back-DROP balances left on deposit are managed by a third party, fixed income investment manager. Participants have the option to opt out of this program and take a distribution, if eligible, or to rollover the assets to another qualified plan.

**COST OF LIVING INCREASES** - The board of trustees is authorized to grant retired members and widows of members who have retired an annual cost of living increase of between 2% and 3% of their current benefit, (not less than twenty dollars per month). When such a cost of living increase is granted in any fiscal year, no such cost-of-living increase may be granted in the immediately following fiscal year. Members retiring on or after July 1, 2007, who have not attained the age of sixty years, may not receive this cost-of-living increase until they have been retired for three years. Those who have attained the age of sixty years may not receive this cost-of-living increase until they have been retired for one year. Different waiting periods applied to retirements prior to July 1, 2007. In addition, the board may grant retired members and widows who are sixty-five years of age and older a 2% increase in their original benefit (or the benefit being received on October 1, 1977 if retirement had commenced prior to that date). In order for the board to grant either of these increases the system must meet certain criteria in the statutes related to funding status and interest earnings. In lieu of these cost of living adjustments the board may also grant an increase in the form of “ $X \times (A+B)$ ” where “X” is any amount up to \$1 per month and “A” is equal to the number of years of credited service accrued at retirement or at death of the member or retiree, and “B” is equal to the number of years since retirement or since death of the member or retiree to June thirtieth of the initial year of such increase. The board may only grant such COLA’s in years in which the fund meets certain funding and investment earnings targets.

## ACTUARIAL ASSUMPTIONS

In determining actuarial costs, certain assumptions must be made regarding future experience under the plan. These assumptions include the rate of investment return, mortality of plan members, rates of salary increase, rates of retirement, rates of termination, rates of disability, and various other factors that have an impact on the cost of the plan. To the extent that future experience varies from the assumptions selected for valuation, future costs will be either higher or lower than anticipated. The following chart illustrates the effect of emerging experience on the plan.

Factor	Increase in Factor Results in
Investment Earnings Rate	Decrease in Cost
Annual Rate of Salary Increase	Increase in Cost
Rates of Retirement	Increase in Cost
Rates of Termination	Decrease in Cost
Rates of Disability	Increase in Cost
Rates of Mortality	Decrease in Cost

**ACTUARIAL COST METHOD:** Frozen Attained Age Normal actuarial cost method with allocation based on earnings. The frozen actuarial accrued liabilities were calculated on the projected unit credit cost method.

**VALUATION INTEREST RATE:** 8%

**ACTUARIAL ASSET VALUES:** Invested assets are valued at market value adjusted to defer three-fourths of all earnings above or below the valuation interest rate in the valuation year, two-fourths of all earnings above or below the valuation interest rate in the prior year, and one-fourth of all earnings above or below the valuation interest rate from two years prior. The actuarial value of assets is also subject to minimum and maximum values such that it will not be less than 90% or more than 110% of the market value.

**ANNUAL SALARY INCREASE RATE:** 6% (3.25% Inflation; 2.75% Merit)

**ANNUITANT MORTALITY:** 1983 Group Annuity Basic Mortality Table (Female mortality equal to male mortality set back six years)

**Back-DROP:** Members eligible for Back-DROP are assumed to take the benefit with the greatest present value.

RETIREE COST OF LIVING INCREASES: The present value of future retirement benefits is based on benefits currently being paid by the system and includes previously granted cost of living increases. The present values do not include provisions for potential future increases not yet authorized by the Board of Trustees.

RATES OF RETIREMENT: The table of these rates is included later in the report. These rates apply only to those individuals eligible to retire. Retirement rates for members who have completed DROP participation and are currently active are 0.3.

RETIREMENT LIMITATIONS: Projected retirement benefits are not subjected to IRS Section 415 limits.

RATES OF WITHDRAWAL: The rates of withdrawal are applied based upon completed years of service according to the following table:

Service	Factor	Service	Factor
<1	0.260	15	0.025
1	0.170	16	0.025
2	0.130	17	0.025
3	0.120	18	0.025
4	0.100	19	0.015
5	0.080	20	0.015
6	0.070	21	0.015
7	0.070	22	0.015
8	0.060	23	0.015
9	0.040	24	0.015
10	0.040	25	0.015
11	0.040	26	0.015
12	0.040	27	0.015
13	0.025	28	0.015
14	0.025	29	0.015

Note: The withdrawal rate for individuals eligible to retire is assumed to be zero.

MARRIAGE STATISTICS: 85% of the members are assumed to be married; husbands are assumed to be three years older than wives.

FAMILY STATISTICS: Assumptions utilized in determining the costs of various survivor benefits as listed below, are derived from the information provided in the 2000 U. S. Census:

<u>Member's Age</u>	<u>% With Children</u>	<u>Number of Children</u>	<u>Average Age</u>
25	62%	1.7	6
35	82%	2.1	10
45	66%	1.8	13
55	19%	1.4	15
65	2%	1.4	15

DISABLED LIVES MORTALITY: RP-2000 Disabled Lives Mortality Tables for Males and Females

SERVICE RELATED DEATHS: 15% of total deaths

RATES OF DISABILITY: 20% of the disability rates used for the 21<sup>st</sup> valuation of the Railroad Retirement System for individuals with 10 – 19 years of service.

PARTIAL DISABILITIES: 20% of Total Disabilities

SERVICE RELATED DISABILITIES: 20% of Total Disabilities

VESTING ELECTING PERCENTAGE: 60% of those members under age 50 who are terminated vested elect deferred benefits in lieu of contribution refunds. 80% of those who are at least age 50 who are terminated vested elect deferred benefits in lieu of contribution refunds.

## ACTUARIAL TABLES AND RATES

Age	Mortality Rates	Retirement Rates	Disability Rates
18	0.00039	0.00000	0.00030
19	0.00040	0.00000	0.00030
20	0.00042	0.00000	0.00030
21	0.00043	0.00000	0.00030
22	0.00045	0.00000	0.00030
23	0.00047	0.00000	0.00030
24	0.00049	0.00000	0.00030
25	0.00052	0.00000	0.00030
26	0.00054	0.00000	0.00030
27	0.00057	0.00000	0.00030
28	0.00060	0.00000	0.00030
29	0.00064	0.00000	0.00030
30	0.00067	0.00000	0.00030
31	0.00072	0.00000	0.00030
32	0.00076	0.00000	0.00030
33	0.00081	0.00000	0.00030
34	0.00087	0.00000	0.00030
35	0.00095	0.00000	0.00034
36	0.00101	0.00000	0.00038
37	0.00107	0.00000	0.00042
38	0.00115	0.00000	0.00048
39	0.00125	0.00000	0.00054
40	0.00138	0.00000	0.00062
41	0.00152	0.00000	0.00070
42	0.00170	0.00000	0.00078
43	0.00191	0.00000	0.00088
44	0.00215	0.00000	0.00100
45	0.00243	0.00000	0.00114
46	0.00275	0.16000	0.00130
47	0.00310	0.16000	0.00146
48	0.00349	0.16000	0.00166
49	0.00390	0.16000	0.00188
50	0.00434	0.07000	0.00214
51	0.00480	0.07000	0.00244
52	0.00528	0.07000	0.00276
53	0.00578	0.07000	0.00314
54	0.00629	0.07000	0.00356
55	0.00681	0.16000	0.00404
56	0.00735	0.16000	0.00460
57	0.00793	0.16000	0.00522
58	0.00858	0.16000	0.00592
59	0.00932	0.16000	0.00674
60	0.01018	0.16000	0.00976
61	0.01118	0.16000	0.00976
62	0.01237	0.16000	0.00976
63	0.01377	0.16000	0.00976
64	0.01541	0.16000	0.00976
65	0.01732	0.26000	0.00976

## GLOSSARY

**Accrued Benefit** – The pension benefit that an individual has earned as of a specific date based on the provisions of the plan and the individual's age, service, and salary as of that date.

**Actuarial Accrued Liability** – The actuarial present value of benefits payable to members of the fund less the present value of future normal costs attributable to the members.

**Actuarial Assumptions** - Assumptions as to the occurrence of future events affecting pension costs. These assumptions include rates of mortality, withdrawal, disablement, and retirement. Also included are rates of investment earnings, changes in compensation, as well as statistics related to marriage and family composition.

**Actuarial Cost Method** – A procedure for determining the portion of the cost of a pension plan to be allocated to each year. Each cost method allocates a certain portion of the actuarial present value of benefits between the actuarial accrued liability and future normal costs. Once this allocation is made, a determination of the normal cost attributable to a specific year can be made along with the payment to amortize any unfunded actuarial accrued liability. To the extent that a particular funding method allocates a greater (lesser) portion of the actual present value of benefits to the actuarial accrued liability it will allocate less (more) to future normal costs.

**Actuarial Equivalence** – Payments or receipts with equal actuarial value on a given date when valued using the same set of actuarial assumptions.

**Actuarial Gain (Loss)** – The financial effect on the fund of the difference between the expected and actual experience of the fund. The experience may be related to investment earnings above (or below) those expected or changes in the liability structure due to fewer (or greater) than the expected numbers of retirements, deaths, disabilities, or withdrawals. In addition, other factors such as pay increases above (or below) those forecast can result in actuarial gains or losses. The effect of such gains (or losses) is to decrease (or increase) future costs.

**Actuarial Present Value** - The value, as of a specified date, of an amount or series of amounts payable or receivable thereafter, with each amount adjusted to reflect the time value of money (through accrual of interest) and the probability of payments. For example: if \$600 invested today will be worth \$1,000 in 10 years and there is a 50% probability that a person will live 10 years, then the actuarial present value of \$1,000 payable to that person if he should survive 10 years is \$300.

**Actuarial Value of Assets** - The value of cash, investments, and other property belonging to the pension plan as used by the actuary for the purpose of the actuarial valuation. This may correspond to the book value, market value, or some modification involving either or both book and market value. Adjustments to market values are often made to reduce the volatility of asset values.

**Asset Gain (Loss)** - That portion of the actuarial gain attributable to investment performance above (below) the expected rate of return in the actuarial assumptions.

**Amortization Payment** - That portion of the pension plan contribution designated to pay interest and reduce the outstanding principal balance of unfunded actuarial accrued liability. If the amortization payment is less than the accrued interest on the unfunded actuarial accrued liability the outstanding principal balance will increase.

**Contribution Shortfall (Excess)** - The difference between contributions recommended in the prior valuation and the actual amount received.

**Decrements** – Events which result in the termination of membership in the system such as retirement, disability, withdrawal, or death.

**Employer Normal Cost** - That portion of the normal cost not attributable to employee contributions. It includes both direct contributions made by the employer and contributions from other non-employee sources such as revenue sharing and revenues related to taxes.

**Funded Ratio** – A measure of the ratio of assets to liabilities of the system according to a specific definition of those two values. Typically the assets used in the measure are the actuarial value of assets; the liabilities are defined by reference to some recognized actuarial funding method. Thus the funded ratio of a plan depends not only on the financial strength of the plan but also on the funding method used to determine the liabilities and the asset valuation method used to determine the assets in the ratio.

**Normal Cost** - That portion of the actuarial present value of pension plan benefits and expenses allocated to a valuation year by the actuarial cost method. This is analogous to one year's insurance premium.

**Pension Benefit Obligation** - The actuarial present value of benefits earned or credited to date based on the members expected final average compensation at retirement. For current retirees or terminated members this is equivalent to the actuarial present value of their accrued benefit.

**Projected Benefits** – The benefits expected to be paid in the future based on the provisions of the plan and the actuarial assumptions. The projected values are based on anticipated future advancement in age and accrual of service as well as increases in salary paid to the participant.

**Unfunded Actuarial Accrued Liability** - The excess of the actuarial accrued liability over the actuarial value of assets.

**Vested Benefits** - Benefits that the members are entitled to even if they withdraw from service.

## NOTES