# CLERKS' OF COURT RETIREMENT & RELIEF FUND

ACTUARIAL VALUATION AS OF JUNE 30, 2014

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October 16, 2014

Board of Trustees Clerks' of Court Retirement and Relief Fund 11745 Bricksome Avenue, Suite B-1 Baton Rouge, Louisiana 70816

Ladies and Gentlemen:

We are pleased to present our report on the actuarial valuation of the Clerks' of Court Retirement and Relief Fund for the fiscal year ending June 30, 2014. Our report is based on the actuarial assumptions specified and relies on the data supplied by the system's administrators and accountants. This report was prepared at the request of the Board of Trustees of the Clerks' of Court Retirement and Relief Fund of the State of Louisiana. The primary purpose of this report is to determine the actuarially required contribution for the retirement system for the fiscal year ending June 30, 2015, and to recommend the net direct employer contribution rate for fiscal 2016. This report does not contain the information necessary for accounting disclosures as required by Governmental Accounting Standards Board (GASB) Statements 67 and 68; that information is included in a separate report. This report was prepared exclusively for the Clerks' of Court Retirement and Relief Fund for a specific limited purpose. It is not for the use or benefit of any third party for any purpose.

In our opinion, all of the assumptions on which this valuation is based are reasonable individually and in the aggregate. Both economic and demographic assumptions are based on our expectations for future experience for the fund. 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.

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

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## SUMMARY OF VALUATION RESULTS CLERKS' OF COURT RETIREMENT AND RELIEF FUND

Valuation Date:		June 30, 2014	June 30, 2013	
Census Summary:	Active Members (including DROP)	2,219	2,248	
ř	Retired Members and Survivors	1,108	1,064	
	Terminated Due a Deferred Benefit	88	97	
	Terminated Due a Refund	444	410	
Payroll:		\$ 88,522,141	\$ 86,935,230	
Benefits in Payment (ex	cluding DROP accruals):	\$ 26,301,025	\$ 23,983,008	
Funding Deposit Account	nt Balance	\$ 1,739,546	\$ 1,618,182	
Frozen Unfunded Actua	rial Accrued Liability:	\$ 87,052,600	\$ 87,579,997	
Market Value of Assets	(MVA):	\$ 518,993,448	\$ 443,430,781	
Actuarial Asset Value (A	AVA):	\$ 475,945,220	\$ 423,354,992	
Actuarial Accrued Liabi	lity (Entry Age Normal):	\$ 637,131,442	\$ 593,967,045	
	ntry Age Normal Accrued Liability):	 81.46%	 74.66%	
********	******************************	SCAL 2015	**************************************	*
Employers' Normal Cos	st (January 1):	\$ 17,699,273	\$ 18,096,106	
Amortization Cost (July	1):	\$ 6,809,901	\$ 6,600,835	
Interest Adjusted Actuar	rially Required Contributions			
Including Estimated Ad	ministrative Costs:	\$ 25,849,862	\$ 26,076,108	
Projected Ad Valorem a	nd Revenue Sharing	\$ 10,170,733	\$ 9,588,051	
Net Direct Employer Ac	ctuarially Required Contributions	\$ 15,679,129	\$ 16,488,057	
Actuarially Required Ne	et Direct Employer Contribution Rate	17.30%	18.43%	
Actual Net Direct Emple	oyer Contribution Rate:	19.00%	18.50%	

Minimum Recommended Net Employer Contribution Rate: Fiscal 2016: 17.25% Fiscal 2015: 18.50%

Employee Contribution Rate: 8.25%

Dedicated Funding: Maximum of 0.25% of ad valorem taxes plus revenue sharing funds

Actuarial Cost Method: Frozen Attained Age Normal Actuarial Cost Method

Valuation Interest Rate: 7.25% (Net of Investment Expense)

Census Exclusions: None

Basis of Actuarial Asset Value: The actuarial value of assets is based on the market value of assets adjusted to phase in

asset earnings above or below the assumed rate of return over a five-year period with limits set at 85% and 115% of the market value of assets. When the adjusted value falls outside of the limits, the actuarial value is set equal to the average of the limited and

adjusted value.

Changes in Valuation Methods, Assumptions, and/or Amortization Periods: The valuation interest rate was reduced from 7.5% to 7.25%. In addition, technical changes were made to the software modeling of plan benefits.

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 DVD 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 IX, there are 2,219 active members in the system of whom 1,007 members have vested retirement benefits including 130 participants in the Deferred Retirement Option Plan (DROP); 1,108 former members or their beneficiaries are receiving retirement benefits. An additional 532 terminated members have contributions remaining on deposit with the system; of this number, 88 have vested rights for future retirement benefits. All participant data is as of June 30, 2014. 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. For this valuation, the number of such records with imputed data is de minimis. 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, and L.L.P. As indicated in the system's audit report, the net market value of system's assets was \$518,993,448 as of June 30, 2014. Net investment income for fiscal 2014 measured on a market value basis amounted to \$72,622,374. Contributions to the system for the fiscal year totaled \$33,436,814; benefits and expenses amounted to \$30,496,521.

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 \$58,719,822 as of June 30, 1989, was frozen and amortized over forty years with payments increasing at 4.75% per year. 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 deposit the excess funds, if any, into the Funding Deposit Account. For fiscal years 1999 through 2002, the board did freeze the employer contribution rates. The additional payments of \$6,660,791 and the accrued interest thereon reduced the outstanding Unfunded Accrued Liability by \$9,536,353 as of June 30, 2005, and shortened the remaining amortization period to June 30, 2026. However, in 2006 a statutory change was made to reamortize the then existing balance of the Frozen Unfunded Accrued Liability through June 30, 2029.

The cost method used for this valuation generally produces normal costs which are level as a percentage of pay if assumptions are met and the composition of the active group with regard to age and service is stable. Overall costs may increase or decrease depending on payroll growth. Since payments on the Fund's unfunded actuarial accrued liability increase by 4.75% each year, payroll growth in excess of 4.75% per year will reduce future amortization payments as a percent of payroll; payroll growth less than 4.75% 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.

The current year actuarial assumptions utilized for this report (excluding mortality) are based on the results of an actuarial experience study for the period July 1, 2006 – June 30, 2010, unless otherwise specified in this report. In cases where benefit structures were changed after the study period, assumptions were based on estimates of future experience. In the case of mortality, the data from this plan was combined with three other statewide plans which have similar workforce composition in order to produce more credible experience. The aggregated data was collected over the period July 1, 2004 through June 30, 2009. The data was then assigned credibility weighting and combined with a standard table to produce current levels of mortality. This mortality was then projected forward to a period equivalent to the estimated duration of the fund's liabilities. Annuity values calculated based on this mortality were compared to those produced by using a setback of standard tables. The RP-2000 Combined Healthy Mortality Table (set back 3 years for males and 1 year for females) was selected for active members, healthy annuitants, and beneficiaries. The result of the procedure indicated that these tables would produce liability values approximating the appropriate generational mortality tables. The RP-2000 Disabled Lives Mortality Table was selected for disabled annuitants.

In determining the valuation interest rate consideration was given to several factors. First consensus estimates of rates of return, standard deviations, and correlation coefficients for asset classes derived from various asset consulting firms were developed. These factors were used to derive forward estimates of the Fund's portfolio earnings rate. Consideration was also given to the June 30, 2014 report of Summit Strategies Group on future expected rates of return for the current portfolio asset allocation. This report projected future arithmetic average portfolio nominal returns at 7.9% with a standard deviation of 10.8%. The derived risk adjusted geometric return from this report amounted to

7.3%. In addition, consideration was given to the board's desire to reduce risk for the Fund. As a result we have lowered the assumed rate of return from 7.5% to 7.25% for the June 30, 2014 valuation. The salary increase rate for the report is 5.75% based on forward estimates of future increases in pay resulting from three sources; inflation, merit, and productivity. An inflation rate of 2.75% was implicit in both the assumed rate of return and rate of salary increases.

Although the board of trustees has authority to grant ad hoc Cost of Living Increases (COLAs) under limited circumstances, these COLAs have not been shown to have a historical pattern, the amounts of the COLAs have not been relative to a defined cost-of-living or inflation index, and there is no evidence to conclude that COLAs will be granted on a predictable basis in the future. Therefore, for purposes of determining the present value of benefits, these COLAs were deemed not to be substantively automatic and the present value of benefits excludes COLAs not previously granted by the board of trustees.

The current year actuarial assumptions utilized for the report are outlined on pages thirty-seven through forty-one. With the exception of the reduction in the valuation interest rate from 7.50% to 7.25% and a modification in the software model of plan design, all assumptions were the same as those used in the fiscal 2013 valuation. All assumptions used are based on estimates of future long-term experience for the fund. 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. The net effect of the changes in assumptions on the normal cost accrual rate was an increase of 2.2745%.

#### CHANGES IN PLAN PROVISIONS

There were no changes to the system enacted during the 2014 Regular Session of the Louisiana Legislature.

#### ASSET EXPERIENCE

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

	Market Value	Actuarial Value
2005	0.50/	7.00/
2005	8.7%	7.2%
2006	11.5%	* 16.7%
2007	14.3%	10.2%
2008	-6.3%	7.9%
2009	-19.3%	** -6.1%
2010	8.7%	4.1%
2011	22.1%	5.8%
2012	1.6%	1.6%

2013	12.9%	4.9%
2014	16.3%	11.7%

- \* Includes effect of change in asset valuation method. Effective with the 2006 valuation the method was changed from smoothing capital gains and losses over 3 years to smoothing investment earnings above or below the assumed rate of return over a five year period, subject to a limit of 90% to 110% of the market value of assets.
- \*\* Includes effect of change in asset valuation method. Effective with 2009 fiscal year, the corridor limits were increased to 85% to 115% of the market value of assets and the final asset value was determined by averaging the smoothed value with the corridor limit if the smoothed value extends beyond the corridor.

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 2014, the fund earned \$8,889,228 of dividends, interest and other recurring income. During the same period, the Fund had net realized and unrealized capital gains on investments of \$66,266,836. This income was offset by investment expenses of \$2,533,690. The geometric mean of the market value rates of return measured over the last ten years was 6.4%. For the last twenty years, the geometric mean returns was 7.6%.

The actuarial rate of return is presented for comparison to the assumed long-term rate of return of 7.5% used for the prior valuation. The current assumed rate of return is 7.25%. This rate is calculated based on the actuarial value of assets and the market value income adjusted for actuarial smoothing as given in Exhibit VI. Investment income used to calculate this yield is based upon a smoothing of investment income above or below the valuation interest rate over a five year period subject to limits as described in the section detailing actuarial assumptions. The difference between rates of return on an actuarial and market value basis results from the smoothing utilized. In the future, yields in excess of the 7.25% assumption will reduce future costs; yields below 7.25% will increase future costs. For fiscal 2014, the system experienced net actuarial investment earnings of \$17,790,042 more than the actuarial assumed earnings rate of 7.5% in effect for fiscal 2014 (Beginning with fiscal 2015, actuarial investment gains and losses will be measured against the 7.25% valuation interest rate). This surplus in earnings produced an actuarial gain, which decreased the normal cost accrual rate by 2.2687%.

### **DEMOGRAPHICS AND LIABILITY EXPERIENCE**

A reconciliation of the census for the system is given in Exhibit X. The average active member is 47 years old with 13.11 years of service and an annual salary of \$39,893. The system's active membership decreased during the fiscal year by 29 members. The plan has experienced a decrease in the active plan population of 152 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-fifty age group has decreased significantly while the proportion of active members over-fifty increased. Over the same ten-year period, the percentage of members with less than five years and the twenty to twenty-four year range has decreased. The percentage of members with service between five and twenty years increased while the percentage of members with at least twenty-five years has increased significantly.

The average regular retiree is 70 years old with a monthly benefit of \$2,047. The number of retirees and beneficiaries receiving benefits from the system increased by 44 during the fiscal year. Over the

last five years, the number of retirees has increased by 214; during this same period, annual benefits in payment increased by \$8,869,942.

Plan liability experience for fiscal 2014 was favorable. DROP entries, active retirements, and disabilities were below projected levels. Deaths were significantly above expected levels. In addition, salaries increased less than expected. These factors tend to reduce costs. Withdrawals below expected levels tend to increase costs. In aggregate, liability experience reduced the normal cost accrual rate by 0.6038%.

### 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 2015 as of July 1, 2014 is \$17,699,273. The amortization payment on the fund's frozen unfunded actuarial accrued liability as of July 1, 2014, is \$6,809,901. 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 15 of Exhibit I the total actuarially required contribution for fiscal 2015 is \$25,849,862. When this amount is reduced by projected tax contributions and revenue sharing funds, the resulting employers' net direct actuarially required contribution for fiscal 2015 is \$15,679,129 or 17.30% of projected payroll.

Liability and asset experience as well as changes in assumptions and benefits can increase or decrease 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 decrease 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:

Employer's Normal Cost Accrual Rate – Fiscal 2014	21.4916%
Factors Increasing the Normal Cost Accrual Rate:	
Assumption Changes	2.6796%
Cost of Living Increase	0.4834%
Factors Decreasing the Normal Cost Accrual Rate:	
Asset Experience Gain	2.2687%
Plan Liability Experience	0.6038%
New Members	0.6380%
Software Modifications	0.4051%
Contribution Gain	0.0341%
Employer's Normal Cost Accrual Rate – Fiscal 2015	20.7049%

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 2015, the net effect of the change in payroll on amortization costs was to increase such costs by 0.13% of payroll. Required net direct employer contributions are also affected by the available ad valorem taxes and revenue sharing funds 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 will increase by 0.50% of payroll in fiscal 2015

Although the actuarially required net direct employer contribution rate for fiscal 2015 is 17.30%; the actual employer contribution rate for fiscal 2015 is 19.00% of payroll. Since the contribution rate for fiscal 2015 was 19.00%, any surplus in employer contributions collected in the fiscal year will be dedicated to the Funding Deposit Account. R.S. 11:103 requires that the net direct employer contributions be rounded to the nearest 0.25%, hence we are recommending a minimum net direct employer contribution rate of 17.25% for fiscal 2016. R.S. 11:106 allows the board to set the employer contribution rate at a level not to exceed 3% above the minimum net direct employer contributions rate. If the contribution rate is set above the minimum recommended rate, the surplus contributions collected, if any, are credited to the Funding Deposit Account. For Fiscal 2014, the Funding Deposit Account increased due only to additional interest accrual from \$1,618,182 to \$1,739,546. The funds in this account can be used to reduce the unfunded liability of the fund, reduce future normal costs, or offset direct employer contribution increases.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, completion

of amortization payments or credit schedules, and changes in plan provisions or applicable law. Analysis of the effect of all these factors is beyond the scope of this report. We have, however, calculated the sensitivity of the plan's costs to two factors. First, we have determined that based on current assets and demographics, for each percentage earnings in a single year under (or over) the assumed rate of return on the actuarial value of assets, there will be a corresponding increase (or reduction) in the normal cost accrual rate of 0.61% for the fund. We have also determined that a 1% reduction in the valuation interest rate for the Fund would increase the actuarially required contribution rate for fiscal 2015 by 10.78% of payroll.

In addition to calculating the actuarially required contribution to the fund, we have also calculated the ratio of the system's assets to liabilities. When the market value of assets is divided by the entry age normal accrued liability for the fund the result is 81.46% as of June 30, 2014. This value in isolation does not give a measure of the ability of the fund to pay benefits in the future or indicate that future contributions are likely to be greater or less than current contributions. In addition, the ratio cannot be used to compare the relative strength of different retirement systems. However, the trend of this ratio over time can give some insight into the financial health of the plan. Even in this regard caution is warranted since market fluctuations in asset values and changes in plan assumptions can distort the underlying trends in this value.

#### COST OF LIVING INCREASES

During fiscal 2014, the actual cost of living (as measured by the US Department of Labor CPI-U) increased by 2.07%. Cost of living provisions for the system are detailed in R.S. 11:1549 and R.S. 11:246. The former statute allows the board to grant annual cost of living increases of 2.5% of each retiree's current benefit subject to a limit of \$40 per month. R.S. 11:246 provides cost of living increases to 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×(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.

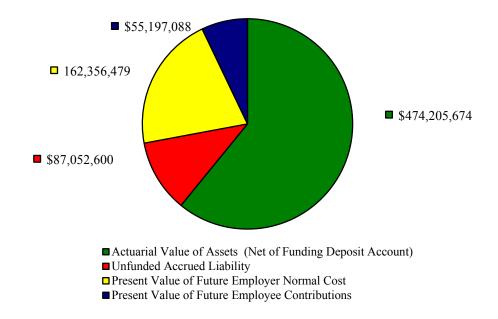
The provisions of R.S.11:1549 require that in order to grant an increase authorized by this section there must have been an increase in the CPI-U of more than 3% since the last such increase. The increase authorized by R. S. 11:246 may only be granted if the system's earnings exceed those which would be realized based on the valuation interest rate as applied to the actuarial value of assets in sufficient amount to offset the present value of the increase.

R.S. 11:243 sets forth the funding criteria necessary in order to grant cost of living adjustments to regular retirees and beneficiaries (who are neither the surviving spouse nor children of the retiree.) The criteria for the fund to qualify as eligible to grant any such increase is as follows: a funded ratio of at least 70% if the system has not granted a benefit increase to retirees, survivors, or beneficiaries in any of the three most recent fiscal years; a funded ratio of at least 80% if the system has not granted

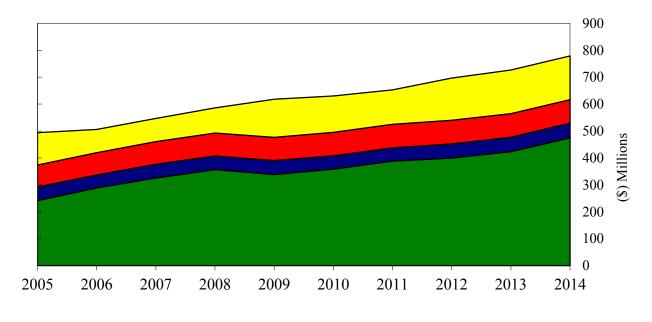
such an increase in any of the two most recent fiscal years; or a funded ratio of at least 90% if the system has not granted such an increase in the most recent fiscal year. The funded ratio at any fiscal year end is the ratio of the actuarial value of assets to the actuarial accrued liability under the funding method prescribed by the legislative auditor (currently the Projected Unit Credit Method for this system.)

Because the level of the CPI-U at the end of the current fiscal year is not 3% higher than the fiscal year in which the most recent cost of living increase was granted, the board is precluded from granting a COLA pursuant to R.S. 11:1549. Notwithstanding the fact that the system is precluded from granting a COLA pursuant to R. S. 11:1549, sufficient investment earnings were earned to qualify under the provisions of R.S. 11:246. However, the plan fails to qualify under the requirement of R.S. 11:243 since the plan's funded ratio for COLAs is 74.80% and the fund granted a benefit increase to retirees, survivors, and beneficiaries of the fund within the prior fiscal year.

# **Components of Present Value of Future Benefits June 30, 2014**

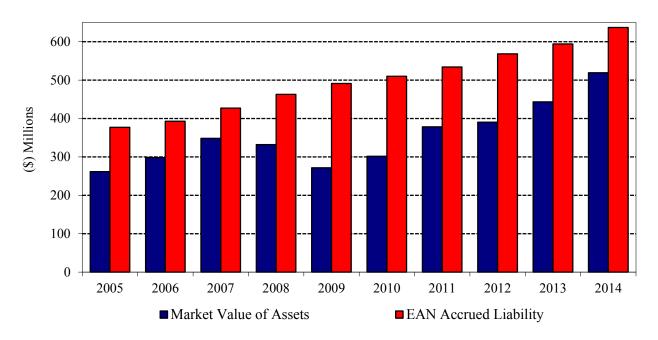


# **Components of Present Value of Future Benefits**

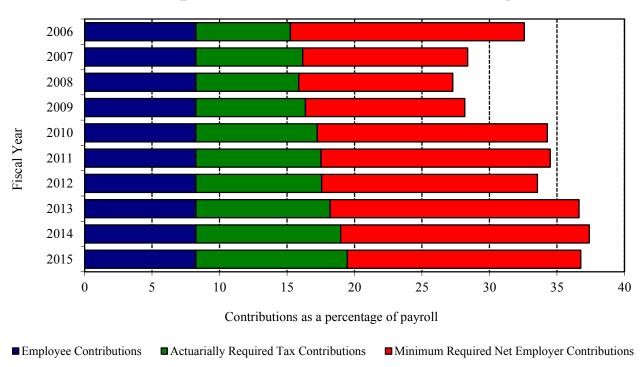


- □ Present Value of Future Employer Normal Cost
- Frozen Unfunded Accrued Liability
- Present Value of Future Employee Contributions
- Actuarial Value of Assets (Net of Funding Deposit Account)

# Market Value of Assets vs. EAN Accrued Liability

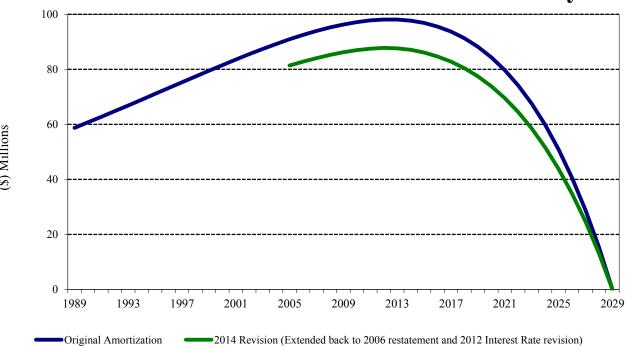


# **Components of Actuarial Funding**

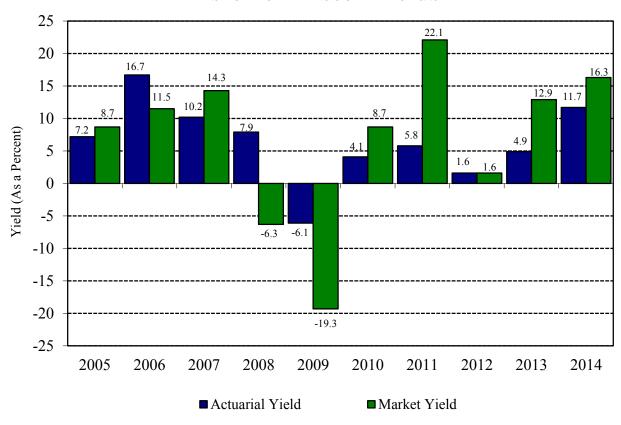


Actuarially Required Tax Contributions consist of the lesser of Actuarially Required Contributions and amount of taxes divided by the projected valuation payroll.

# Frozen Unfunded Actuarial Accrued Liability

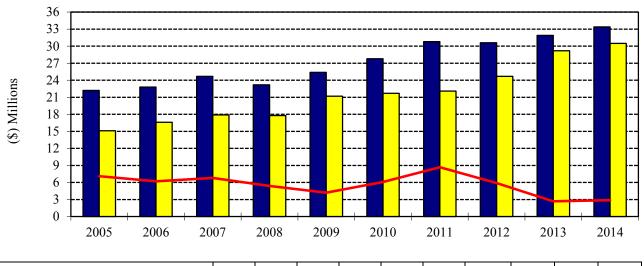


# **Historical Asset Yields**



-12-G. S. Curran & Company, Ltd.

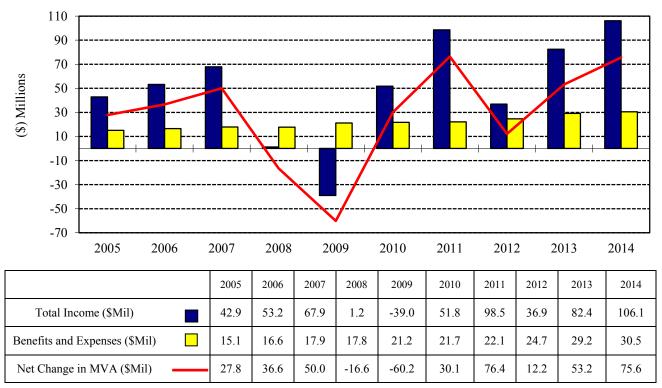
# **Net Non-Investment Income**



		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Non-Investment Income (\$Mil)		22.2	22.8	24.7	23.2	25.4	27.8	30.8	30.6	31.9	33.4
Benefits and Expenses (\$Mil)		15.1	16.6	17.9	17.8	21.2	21.7	22.1	24.7	29.2	30.5
Net Non-Investment Income (\$Mil)	_	7.1	6.2	6.8	5.4	4.2	6.1	8.7	5.9	2.7	2.9

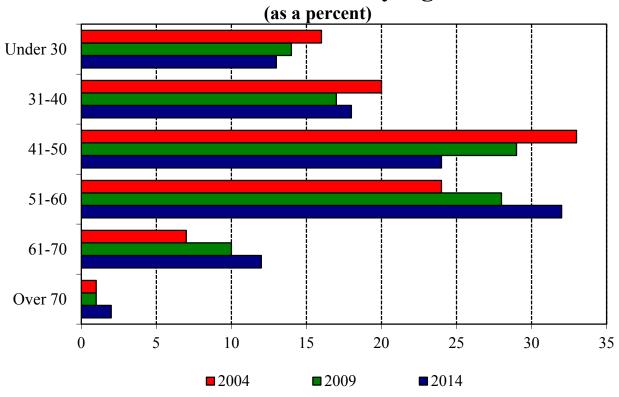
# **Total Income vs. Expenses**

(Based on Market Value of Assets)

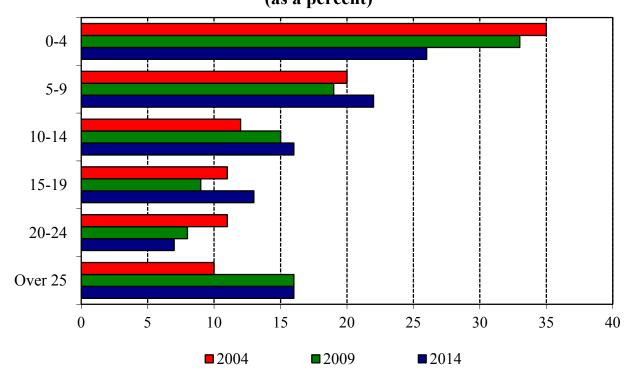


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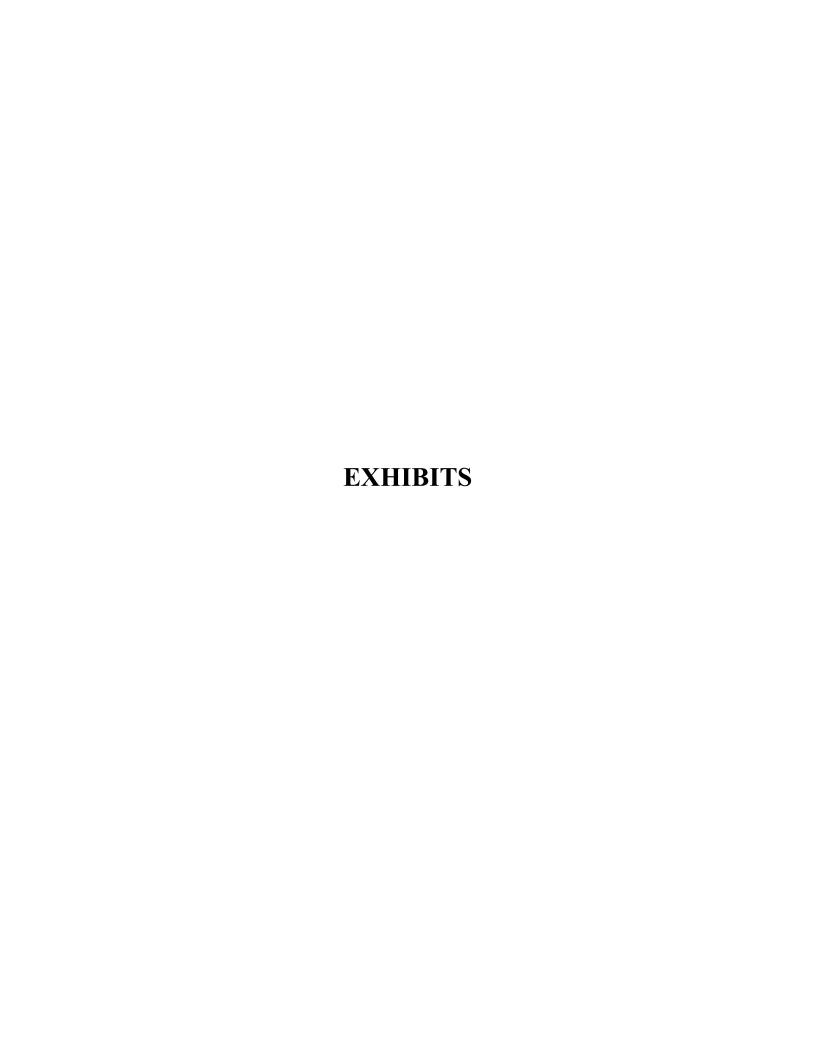
# Active – Census by Age



Active – Census by Service (as a percent)



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

1.	Present Value of Future Benefits	\$ 778,811,841
2.	Funding Deposit Account Credit Balance	\$ 1,739,546
3.	Frozen Unfunded Actuarial Accrued Liability	\$ 87,052,600
4.	Actuarial Value of Assets	\$ 475,945,220
5.	Present Value of Future Employee Contributions	\$ 55,197,088
6.	Present Value of Future Employer Normal Costs (1+2-3-4)	\$ 162,356,479
7.	Present Value of Future Salaries	\$ 784,145,976
8.	Employer Normal Cost Accrual Rate (6÷7)	20.704879%
9.	Projected Fiscal 2015 Salary for Current Membership	\$ 85,483,586
10.	Employer Normal Cost as of July 1, 2014 (8 x 9)	\$ 17,699,273
11.	Amortization Payment on remaining frozen Unfunded Accrued Liability of \$87,052,600 with Payments increasing at 4.75% per year	\$ 6,809,901
12.	TOTAL Employer Normal Cost and Amortization Payment (10 + 11)	\$ 24,509,174
13.	Normal Cost Adjusted for Midyear Payment	\$ 25,382,087
14.	Estimated Administrative Cost for Fiscal 2015	\$ 467,775
15.	GROSS Employer Actuarially Required Contribution for Fiscal 2015 (13 + 14)	\$ 25,849,862
16.	Projected Ad Valorem Tax Contributions for Fiscal 2015	\$ 9,850,885
17.	Projected Revenue Sharing Funds for Fiscal 2015	\$ 319,848
18.	Net Direct Employer Actuarially Required Contribution for Fiscal 2015 (15 – 16 – 17)	\$ 15,679,129
19.	Projected Payroll for Fiscal 2015	\$ 90,653,574
20.	Employers' Minimum Net Direct Actuarially Required Contribution as a % of Projected Payroll for Fiscal 2015 (18 ÷ 19)	17.30%
21.	Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2016 (20, Rounded to nearest 0.25%)	17.25%

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

## PRESENT VALUE OF FUTURE BENEFITS FOR ACTIVE MEMBERS:

Retirement Benefits Survivor Benefits Disability Benefits Vested Termination Benefits Refunds of Contributions	\$	463,838,254 6,915,683 4,151,222 21,544,006 5,474,416	
TOTAL Present Value of Future Benefits for Active Members			\$ 501,923,581
PRESENT VALUE OF FUTURE BENEFITS FOR TERMINATED	) MI	EMBERS:	
Terminated Vested Members Due Benefits at Retirement Terminated Members with Reciprocals	\$	15,189,349	
Due Benefits at Retirement		100,880 1,931,699	
TOTAL Present Value of Future Benefits for Terminated Membe	rs		\$ 17,221,928
PRESENT VALUE OF FUTURE BENEFITS FOR RETIREES:  Regular Retirees			
Maximum\$ 128,768,6 Option 1	549 0		
Option 2			
Option 3			
Option 4			
орион 3 1,230,1	02		
TOTAL Regular Retirees	\$	232,179,944	
Disability Retirees		3,116,776	
Survivors & Widows		15,953,467	
DROP Account Balances Payable to Retirees		8,416,145	
TOTAL Present Value of Future Benefits for Retirees & Survivor	rs		\$ 259,666,332
TOTAL Present Value of Future Benefits			\$ 778,811,841

## EXHIBIT III – SCHEDULE A MARKET VALUE OF ASSETS

CURRENT ASSETS:			
Cash in Banks	5,731,79	8	
Contributions and Taxes Receivable	1,516,50	2	
Accrued Interest and Dividends	552,33		
Investments Receivable	320,20		
Due to Plan A	2,76	1	
TOTAL CURRENT ASSETS		\$	8,123,597
Property Plant & Equipment		\$	863,365
INVESTMENTS:			
Equities \$	277,333,67	6	
Alternative Investments	81,752,04		
Fixed Income	62,053,57		
Real Estate	43,700,64		
Tactical Allocation	20,079,84		
DROP Balances Held Outside System Assets	18,636,18		
Cash Equivalents	7,644,21	0	
TOTAL INVESTMENTS		\$	511,200,184
TOTAL ASSETS		\$	520,187,146
CURRENT LIABILITIES:			
Accounts Payable	638,27	4	
Investments Payable	330,72	4	
Other Current Liabilities	224,70	0	
TOTAL CURRENT LIABILITIES		\$	1,193,698
MARKET VALUE OF ASSETS		\$	518,993,448

# EXHIBIT III – SCHEDULE B ACTUARIAL VALUE OF ASSETS

Excess (Shortfall) of invested income for current and previous 4 years:

Fiscal year 2014 Fiscal year 2013 Fiscal year 2012 Fiscal year 2011 Fiscal year 2010	39,256,798 21,141,882 (24,236,117) 43,260,541 1,998,685
Total for five years	\$ 81,421,789
Deferral of excess (shortfall) of invested income:	
Fiscal year 2014 (80%) Fiscal year 2013 (60%) Fiscal year 2012 (40%) Fiscal year 2011 (20%) Fiscal year 2010 ( 0%)	31,405,438 12,685,129 (9,694,447) 8,652,108 0
Total deferred for year	\$ 43,048,228
Market value of plan net assets, end of year	\$ 518,993,448
Preliminary actuarial value of plan assets, end of year	\$ 475,945,220
Actuarial value of assets corridor	
85% of market value, end of year	441,144,431 596,842,465
Final actuarial value of plan net assets, end of year	\$ 475,945,220

# EXHIBIT IV PRESENT VALUE OF FUTURE CONTRIBUTIONS

Employee Contributions to the Annuity Savings Fund	\$	55,197,088
Employer Normal Contributions to the Pension Accumulation Fund		162,356,479
Employer Amortization Payments to the Pension Accumulation Fund		87,052,600
Funding Deposit Account Credit Balance		(1,739,546)
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS	\$	302,866,621
EXHIBIT V CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRU	U <b>ED LIABILITY</b>	
Prior Year Frozen Unfunded Accrued Liability	\$	87,579,997
Interest on Frozen Unfunded Accrued Liability\$	6,568,500	
Employer Normal Cost for Prior Year.	18,096,106	
Interest on the Normal Cost	1,357,208	
Administrative Expenses	465,639	
Interest on Expenses	17,146	
TOTAL Interest Adjusted Actuarially Required Contributions	\$	26,504,599
Direct Employer Contributions\$	16,642,988	
Interest on Employer Contributions	612,829	
Ad Valorem Taxes and Revenue Sharing	9,687,222	
Interest on Ad Valorem Taxes and Revenue Sharing Funds	356,704	
Contribution Shortfall	(249,648)	
Interest on Contribution Shortfall	(18,099)	
TOTAL Interest Adjusted Employer Contributions	\$	27,031,996
NET Change in Frozen Unfunded Accrued Liability	\$	(527,397)
CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABIL	ITY \$	87,052,600

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

Actuarial Value of Assets (June 30, 2013)		\$ 423,354,992
INCOME:		
Member Contributions	,850,006	
Employer Contributions	,642,988	
Irregular Contributions	256,598	
Tax Revenue	,687,222	
Total Contributions		\$ 33,436,814
Net Appreciation (Depreciation) of Investments \$ 66,	,266,836	
Interest & Dividends	,889,228	
Investment Expense (2)	,533,690)	
Net Investment Income		\$ 72,622,374
TOTAL Income		\$ 106,059,188
EXPENSES:		
Retirement Benefits	,239,803	
	,389,688	
	730,697	
J Company of the comp	670,694 465,639	
TOTAL Expenses		\$ 30,496,521
Net Market Value Income for Fiscal 2014 (Income - Expenses)		\$ 75,562,667
Unadjusted Fund Balance as of June 30, 2014		
(Fund Balance Previous Year + Net Income)		\$ 498,917,659
Adjustment for Actuarial Smoothing.		\$ (22,972,439)
Actuarial Value of Assets: (June 30, 2014)		\$ 475,945,220

## EXHIBIT VII PENSION BENEFIT OBLIGATION

Present Value of Credited Projected Benefits Payable to Current Employees	\$ 359,360,593
Present Value of Benefits Payable to Terminated Employees	17,221,928
Present Value of Benefits Payable to Current Retirees and Beneficiaries	259,666,332
TOTAL PENSION BENEFIT OBLIGATION	\$ 636,248,853
NET ACTUARIAL VALUE OF ASSETS	\$ 475,945,220
Ratio of Net Actuarial Value of Assets to Pension Benefit Obligation	74.80%
EXHIBIT VIII ENTRY AGE NORMAL ACCRUED LIABILITIES	
Accrued Liability for Active Employees	\$ 360,243,182
Accrued Liability for Terminated Employees	17,221,928
Accrued Liability for Current Retirees and Beneficiaries	259,666,332
TOTAL ENTRY AGE NORMAL ACCRUED LIABILITY	\$ 637,131,442
NET MARKET VALUE OF ASSETS	\$ 518,993,448
Ratio of Net Market Value of Assets to Entry Age Normal Accrued Liability	81.46%

## EXHIBIT IX CENSUS DATA

		Terminated with Funds			
	Active	on Deposit	DROP	Retired	Total
Number of members as of June 30, 2013	2,123	507	125	1,064	3,819
Additions to Census					
Initial membership	144	12			156
Omitted in error last year	1			(1)	
Death of another member				12	12
Adjustment for multiple records					
Change in Status during Year					
Actives terminating service	(70)	70			
Actives who retired	(35)			35	
Actives entering DROP	(51)		51		
Term. members rehired	13	(13)			
Term. members who retire		(10)		10	
Retirees who are rehired					
Refunded who are rehired		1			1
DROP participants retiring			(30)	30	
DROP returned to work	16		(16)		
Omitted in error last year					
Eliminated from Census					
Refund of contributions	(47)	(35)			(82)
Deaths	(5)			(42)	(47)
Included in error last year					
Adjustment for multiple records					
Number of members as of					
JUNE 30, 2014	2,089	532	130	1,108	3,859

#### ACTIVES CENSUS BY AGE:

Age	Number Male	Number Female	Total Number	Average Salary	Total Salary
16 - 20	0	7	7	18,825	131,775
21 - 25	11	7 0	81	21,789	1,764,938
26 - 30	33	159	192	27,226	5,227,440
31 - 35	32	170	202	30,724	6,206,293
36 - 40	28	160	188	35,372	6,650,020
41 - 45	36	188	224	39,219	8,785,164
46 - 50	48	255	303	40,459	12,259,058
51 - 55	49	367	416	43,778	18,211,560
56 - 60	45	246	291	47,362	13,782,215
61 - 65	4 0	135	175	47,197	8,259,404
66 - 70	22	75	97	47,596	4,616,848
71 - 75	12	21	33	59,453	1,961,965
76 - 80	3	4	7	76,337	534,361
81 - 85	0	3	3	43,700	131,100
TOTAL	359	1,860	2,219	39,893	88,522,141

THE ACTIVE CENSUS INCLUDES 1,007 ACTIVES WITH VESTED BENEFITS, INCLUDING 130 DROP PARTICIPANTS AND 88 ACTIVE FORMER DROP PARTICIPANTS.

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

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
36 - 40	0	2	2	15,923	31,845
41 - 45	2	11	13	14,735	191,558
46 - 50	4	22	26	21,429	557,155
51 - 55	8	35	43	22,348	960,972
56 - 60	1	1	2	1,255	2,510
61 - 65	0	1	1	4,350	4,350
71 - 75	0	1	1	2,970	2,970
TOTAL	15	73	88	19,902	1,751,360

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

Contribu	tio	ns Ranging		Total
From		To	Number	Contributions
0	-	99	57	2,140
100	-	499	83	23,807
500	-	999	52	38,698
1000	-	1999	55	77,374
2000	-	4999	73	235,251
5000	-	9999	62	459,192
10000	-	19999	49	699,157
20000	-	99999	13	390,169
		TOTAL	444	1,925,788

#### REGULAR RETIREES:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
51 - 55	0	8	8	24,676	197,411
56 - 60	13	132	145	31,010	4,496,486
61 - 65	25	173	198	27,963	5,536,666
66 - 70	33	144	177	24,819	4,393,044
71 - 75	25	148	173	22,737	3,933,505
76 - 80	24	97	121	19,816	2,397,784
81 - 85	23	62	85	17,981	1,528,390
86 - 90	9	43	52	19,259	1,001,460
91 - 99	1	15	16	29,107	465,705
TOTAL	153	822	975	24,565	23,950,451

### DISABILITY RETIREES:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
46 - 50	0	3	3	10,532	31,596
51 - 55	0	6	6	17,778	106,666
56 - 60	1	5	6	19,976	119,857
61 - 65	1	0	1	14,511	14,511
66 - 70	0	1	1	7,571	7,571
71 - 75	0	1	1	9,164	9,164
TOTAL	2	16	18	16,076	289,365

### SURVIVORS:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
0 - 25	1	0	1	4,176	4,176
26 - 30	1	1	2	11,189	22,378
36 - 40	1	1	2	8,322	16,643
46 - 50	1	1	2	4,892	9,784
51 - 55	1	2	3	13,675	41,025
56 - 60	3	2	5	12,632	63,162
61 - 65	3	6	9	30,768	276,911
66 - 70	9	3	12	21,878	262,532
71 - 75	6	10	16	16,597	265,549
76 - 80	3	18	21	18,219	382,594
81 - 85	5	12	17	19,500	331,502
86 - 90	3	14	17	15,388	261,591
91 - 99	1	7	8	15,420	123,358
TOTAL	38	77	115	17,924	2,061,205

ACTIVE MEMBERS:

	Total	11 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2219	Average Salary	18,825 21,789 27,226 30,724 35,312 39,219 40,459 41,362 47,197 47,197	39,893
	30&Over	1	2 2 2 3	30&Over	51,761 52,160 62,252 81,501 67,001 88,664	61,568
	25-29	1 8 4 8 1 1 1 8 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8	141	25-29	41,54 52,99 52,068 50,084 62,993	53,082
	20-24	2 2 4 4 4 1 1 2 2 2 3 8 8 5 5 6	160	20-24	45,232 446,102 44,532 49,215 53,043 67,930	49,558
ervice	15-19	8470441 80448877	285 ervice	15-19	40,056 44,770 44,770 42,22 47,524 39,760 37,68	42,863
s of s	10-14	4 4 7 7 4 4 4 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	350 rs of Ser	10-14	36,195 356,195 395,829 45,306 45,389 45,332 45,081 36,957	41,167
Completed Year	5   3	77 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	489 ed Yea	5   0	24,391 29,575 30,052 36,580 33,207 41,092 31,901 74,444	34,211
Comp	4	7 7 7 8 8 8 7 7 7 8 9 9 7 7 8 9 9 7 7 8 9 9 9 9	58 Complet	4	20,049 22,411 28,411 28,442 24,450 215,896 217,920 33,321 28,880 43,333	27,809
	m	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	 	m	22,315 24,272 30,842 31,520 27,544 31,423 30,885 31,416 26,977 56,700	28,688
	8	20 20 20 11 13 11 11	118 VE MEMBERS	8	22,233 25,638 25,638 26,303 35,872 45,809 29,597 28,620 20,651	29,524
	H	22 2 2 8 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	154 Y OF ACTIVE	H	18, 387 221, 8387 223, 654 223, 654 323, 654 330, 340 330, 340 111, 028	28,519
	0	3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	143 JAL SALARY	0	19,409 21,022 27,284 24,911 28,640 28,640 27,247 27,862 20,521	26,279
	Attained Ages	0 - 20 21 - 25 26 - 30 31 - 35 36 - 40 41 - 45 46 - 50 51 - 65 61 - 65 66 - 70 71 & Over	Totals AVERAGE ANNUAL	Attained Ages	0 - 20 21 - 25 26 - 30 31 - 35 36 - 40 41 - 45 46 - 50 51 - 55 56 - 60 61 - 65 66 - 70 71 & Over	Average

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TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

	Total	0 7 7 7 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	88		Average Benefit	15,923 14,735 21,429 22,348 1,255 4,350 2,970	19,902
	30&Over		0		30&Over		0
	25-29		0		25-29		0
lity	20-24		0	lity	20-24		0
t Eligibility	15-19	0	7	BENEFIT: nt Eligibility	15-19	15,923	15,923
Retirement	10-14	H 8	13	(1)	10-14	14,735	14,735
Until	5 - 9	26	26	RRED RET s Until	5 - 9	21,429	21,429
Years	4	11	11	DUE A DEFEI Year	4	21,782	21,782
	m	σ	σ	MEMBERS I	m	22,867	22,867
	N	7 11	∞	TERMINATED	8	20,304	17,840
	H	12	12	O F	□ □	24,031	24,031
	0	4 <sup>,</sup> H H H	7	NUAL BENEI	0	21,267 1,920 4,350 2,970	13,473
	Attained Ages	0 - 35 36 - 40 41 - 45 46 - 50 51 - 55 56 - 60 61 - 65 61 - 70 71 - 75	Totals	AVERAGE ANNUAL BENEFITS	Attained Ages	36 - 35 36 - 40 41 - 45 46 - 50 51 - 55 56 - 60 61 - 65 61 - 65 71 - 75	Average

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SERVICE RETIREES:

					Comp]	leted Yea	rs Since	Completed Years Since Retirement	Ļ			
Attained Ages	0	1	2	ю	7	5     9	10-14	15-19	20-24	25-29	30&Over	Total
0												0
51 - 55 56 - 60	დ ო ო	4 0	29	19	15	7	2					8 145
61 - 65	19	13	20	20	21	102	က					198
02 - 99	∞	17	10	7	11	63	56	4	1			177
71 - 75	4	11	Ŋ	2	2	34	53	49	2	Н	П	173
16 - 80	7	4		2	П	13	28	30	34	4		121
81 - 85		7				7	13	13	13	34	m	8 2
06 - 98		П		1		7	S	7	9	10	20	52
91 & Over		7						Н		2	80	16
Totals	74	0 6	6.4	57	23	228	160	104	55	5 4	3 2	975
AVERAGE ANNUAL BENEFITS PAYABLE	L BENEFIT	S PAYABL	TO SERV	ICE RETIREES:	Э							

RETIREES:	
SERVICE	
P	
PAYABLE	
BENEFITS	
ANNUAL	
AVERAGE	

Completed Years Since Retirement

Average 25-29 30%Over Benefit	24,676 31,010 27,963 24,819 901 10,045 22,737 047 6,709 17,981 424 11,835 19,259 498 14,695 29,107	204 12,014 24,565
20-24 25-	18,800 10,941 5,901 20,206 14,047 18,717 17,918 15,878 21,424	18,629 18,204
15-19	26,367 16,625 17,756 16,628 27,628 21,335	18,104
10-14	9,477 28,373 20,043 22,392 19,134 13,286 23,503	20,245
5	20,674 26,543 27,802 26,168 25,170 14,452 50,474	26,415
4,	27,414 24,391 24,858 16,396 14,699	24,406
m	27,681 36,881 16,211 31,104 15,681	28,587
~	29,939 30,510 23,955 53,360	31,012
	30,901 27,745 33,179 36,758 31,812 83,282 24,906	34,590
0	24,676 39,134 27,549 25,540 15,777 19,308	31,328
Attained Ages	0 - 50 51 - 55 56 - 60 61 - 65 66 - 70 71 - 75 76 - 80 81 - 85 86 - 90	Average

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DISABILITY RETIREES:

Completed Years Since Retirement

Total	0 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	18		Average Benefit	10,532 17,778 19,976 14,511 7,571 9,164	16,076
30&Over		0		30&Over		0
25-29		0		25-29		0
20-24		0	.)	20-24		0
15-19	н н	0	Retirement	15-19	7,842	7,706
10-14	77.1 1	g	Since	10-14	12,704 20,731 14,511 9,164	15,091
5	0 0	4	ES: Completed Years	5 - 9	9,934	19,894
4	0	0	RETIREES: Comp	4	21,510	21,510
m	н	П	ABILITY	<u>ب</u>	10,844	10,844
0	н	П	TO DIS	7	9,824	9,824
H	н	1	ITS PAYABLE	П	28,414	28,414
0	П	Н	JAL BENEFI	0	11,729	11,729
Attained Ages	0 - 45 46 - 50 51 - 55 56 - 60 61 - 65 66 - 70 71 - 75	Totals	AVERAGE ANNUAL BENEFITS	Attained Ages	46 - 45 46 - 45 51 - 55 56 - 60 61 - 65 66 - 70	∨er ∨er

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SURVIVING BENEFICIARIES OF FORMER MEMBERS:

	Total	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	115		Average Benefit	11,189 11,189 8,322 4,892 12,633 21,633 21,878 16,597 18,219 119,388
Completed Years Since Retirement	30&Over	11744	12		30&Over	2,487 6,885 14,256 13,916 9,980
	25-29	4 0 1) 4	19		25-29	14,060 15,015 16,288 20,859
	20-24	2 - 4 - 6 - 4	14	٠٠	20-24	14,897 7,223 13,621 10,382 17,608
	15-19	H H H 4 0 6 H	13	Retirement	15-19	4,271 31,223 19,131 17,825 30,641 23,969
	10-14	0 H H H 4 6 6 8 8	27	ars Since	10-14	4, 892 3, 160 6,626 112,921 112,241 102,241
	5     5	110 11 0114880	19	•• ₩	5	4,176 11,189 10,120 18,932 16,992 24,964 41,251 111,758 57,361
Comp	4	ч	1	FORM	4	48,960
	m	H	Н	VIVORS OF	m	15,609
	7	~	7	LE TO SURV	7	7,769
	H	H H Ø	4	ITS PAYABLE	H	29,131 76,556 20,056
	0	ਜ ਜ ਜ	м	UAL BENEFITS	0	6,523 6,143 30,000
	Attained Ages	0 - 20 21 - 25 26 - 30 31 - 35 36 - 40 41 - 45 46 - 50 51 - 55 56 - 60 61 - 65 66 - 70 71 - 75 76 - 80 81 - 85 86 - 90	Totals	AVERAGE ANNUAL	Attained Ages	20

17,924

11,123

16,379

13,791

20,246

15,798

24,481

48,960

15,609

7,769

36,450

14,222

Average

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## EXHIBIT X YEAR-TO-YEAR COMPARISON

	]	Fiscal 2014		Fiscal 2013		Fiscal 2012		Fiscal 2011
Number of Active Members Number of Retirees & Survivors Number of Terminated Due Deferred Benefits Number Terminated Due Refunds		2,219 1,108 88 444		2,248 1,064 97 410		2,269 1,000 92 387		2,326 975 88 372
Active Lives Payroll	\$	88,522,141	\$	86,935,230	\$	87,238,557	\$	87,403,148
Retiree Benefits in Payment	\$	26,301,025	\$	23,983,008	\$	21,372,677	\$	19,981,482
Market Value of Assets	\$	518,993,448	\$	443,430,781	\$	390,272,342	\$	378,083,955
EAN Accrued Liability	\$	637,131,442	\$	593,967,044	\$	568,108,691	\$	534,191,730
Ratio of MVA to EAN Accrued Liability		81.46%		74.66%		68.70%		70.78%
Actuarial Value of Assets	\$	475,945,220	\$	423,354,992	\$	401,136,469	\$	388,757,787
Frozen Unfunded Actuarial Accrued Liability	\$	87,052,600	\$	87,579,997	\$	87,771,278	\$	87,493,460
Present Value of Future Employer Normal Cost	\$	162,356,479	\$	161,988,761	\$	156,709,315	\$	127,887,962
Present Value of Future Employee Contrib.	\$	55,197,088	\$	53,537,913	\$	52,501,678	\$	49,250,744
Funding Deposit Account Balance	\$	1,739,546	\$	1,618,182	\$	1,505,286	\$	603,658
Present Value of Future Benefits	\$	778,811,841	\$	724,843,481	\$	696,613,454	\$	652,786,295
***********	<b>*</b> **	*******	***	*****	***	*****	****	*****
	]	Fiscal 2015		Fiscal 2014		Fiscal 2013		Fiscal 2012
Employee Contribution Rate		8.25%		8.25%		8.25%		8.25%
Estimated Tax Contribution as % of Payroll		11.22%		10.72%		9.94%		9.31%
Actuarially Required Net Direct Employer Contribution Rate		17.30%		18.43%		18.45%		16.21%
Actual Employer Contribution Rate		19.00%		18.50%		17.25%		17.25%

	Fiscal 2010		Fiscal 2009		Fiscal 2008		Fiscal 2007		Fiscal 2006		Fiscal 2005
	2,330 929 97 360		2,371 894 101 338		2,408 849 101 303		2,364 825 102 266		2,227 817 100 274		2,386 776 92 204
\$	86,484,686	\$	85,840,893	\$	83,637,009	\$	78,384,249	\$	70,935,731	\$	73,542,403
\$	18,640,843	\$	17,431,083	\$	15,861,293	\$	15,032,502	\$	14,133,920	\$	12,936,610
\$	301,692,473	\$	271,624,094	\$	331,865,504	\$	348,448,803	\$	298,451,085	\$	261,821,679
\$	510,100,152	\$	491,201,447	\$	462,678,491	\$	426,870,491	\$	392,726,956	\$	376,850,079
	59.14%		55.30%		71.73%		81.63%		76.00%		69.48%
\$	358,981,529	\$	338,755,452	\$	356,502,864	\$	325,278,452	\$	288,606,478	\$	241,537,822
9	86,953,999	\$	86,185,073	\$	85,215,896	\$	84,072,966	\$	82,780,287	\$	81,359,582
\$	135,032,044	\$	141,512,187	\$	93,305,942	\$	85,994,867	\$	86,249,033	\$	119,947,430
\$	49,677,464	\$	51,983,870	\$	50,730,673	\$	51,293,939	\$	48,105,080	\$	50,894,701
\$	558,943	\$	517,540	\$	0	\$	0	\$	0	\$	0
\$	630,086,093	\$	617,919,042	\$	585,755,375	\$	546,640,224	\$	505,740,878	\$	493,739,535
**	******	***	*****	***	******	****	*****	***	******	****	*****
	Fiscal 2011		Fiscal 2010		Fiscal 2009		Fiscal 2008		Fiscal 2007		Fiscal 2006
	8.25%		8.25%		8.25%		8.25%		8.25%		8.25%
	9.27%		8.99%		8.12%		7.62%		7.92%		7.00%
	16.98%		17.05%		11.80%		11.41%		12.22%		16.57%
	17.25%		14.75%		11.75%		11.75%		16.75%		15.75%

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### **SUMMARY OF PRINCIPAL PLAN PROVISIONS**

The Clerks' of Court Retirement and Relief Fund is a defined benefit pension plan which 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 – Members include the clerk of the supreme court, each of the courts of appeal, each of the district courts, and each of the city and traffic courts in cities having a population in excess of four hundred thousand, and the employees of such clerks, who work an average of more than twenty hours per week, and the employees of the Louisiana Clerks of Court Association, the Louisiana Clerks' of Court Retirement and Relief Fund, and the Louisiana Clerks of Court Insurance Fund.

CONTRIBUTION RATES – Under the provisions of R.S. 11:62 and 11:103, the fund is financed by employee contributions of 8.25% of salary and employer contributions as determined annually by the Public Retirement System's Actuarial Committee. In any fiscal year during which the net direct employer contribution rates would otherwise be decreased, the board of trustees is authorized to set the employer contribution rate at any point between the previous year's employer contribution rate and the decreased rate that would otherwise occur. Also, the board of trustees is authorized to require a net direct contribution rate of up to three percent more than the rate determined under R.S. 11:103. Any excess funds resulting from the additional contributions will credited to the Funding Deposit Account defined in R.S. 11:107.1. In addition, the fund is due 0.25% of ad valorem taxes shown to be collected by the tax rolls of each parish and revenue sharing funds as appropriated each year by the legislature as stipulated in R.S. 11:82.

CONTRIBUTION REFUNDS – Upon withdrawal from service, members not entitled to a retirement allowance are paid a refund of accumulated contributions upon request. Receipt of such a refund cancels all accrued rights in the system.

RETIREMENT BENEFITS – Members with twelve or more years of creditable service may retire at age fifty-five (age sixty if they are hired on or after January 1, 2011). The retirement allowance is equal to three percent of the member's monthly average final compensation multiplied by the number of years of creditable service, not to exceed one hundred percent of monthly average final compensation. The retirement benefit accrual rate is increased to 3 1/3% for all service credit accrued after June 30, 1999 (for members hired prior to January 1, 2011). For members whose first employment making them eligible for system membership began before July 1, 2006 and who retire prior to January 1, 2011, monthly average final compensation is based on the highest thirty-six consecutive months, with a limit of increase of 10% in each of the last three years of measurement. For members whose first employment making them eligible for system membership began on or after July 1, 2006, monthly average final compensation is based on the highest compensated sixty consecutive months or successive joined months if service was interrupted, with a limit increase of 10% in each of the last five years of measurement. For members who were employed prior to July 1, 2006 and who retire after December 31, 2010, the period of final average compensation is thirty-six months plus the number of whole months elapsed since January 1, 2011, not to exceed sixty months.

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 designated beneficiary will continue to receive the same reduced benefit.

**Option 3** – Upon retirement, the member receives a reduced benefit. Upon the member's death, the designated beneficiary will receive one-half of the member's reduced benefit.

**Option 4** – Upon retirement, the member elected to receive a board approved benefit which is actuarially equivalent to the maximum benefit.

**Option 5** – Upon retirement, the member receives 90% of the maximum benefit. Upon the death of the member, the spouse receives one-half of the reduced benefit.

A member may also elect to receive an actuarially reduced benefit which provides for an automatic 2 ½% annual compound increase in monthly retirement benefits based on the reduced benefit and commencing on the later of age fifty-five or retirement anniversary; this COLA is in addition to any ad hoc COLAs which are payable.

DISABILITY BENEFITS – Disability benefits are awarded to active members who are totally and permanently disabled as a result of injuries sustained in the line of duty or to active members with ten or more years of creditable service who are totally disabled due to any cause. A member who is officially certified as totally and permanently disabled by the State Medical Disability Board will be paid monthly disability retirement benefits equal to the greater of forty percent of their monthly average final compensation or seventy-five percent of their monthly regular retirement benefit computed as per R.S. 11:1521(C).

SURVIVOR BENEFITS – Upon the death of any active contributing member with less than five years of creditable service, his accumulated contributions are paid to his designated beneficiary. Upon the death of any active contributing member with five or more years of service, automatic option 2 benefits are payable to the surviving spouse. These benefits are based on the retirement benefits accrued at the member's date of death with option factors used as if the member had continued in service to earliest normal retirement age. Benefit payments commence on the date a member would have first become eligible for normal retirement assuming continued service until that time. In lieu of a deferred survivor benefit, the surviving spouse may elect benefits payable immediately with benefits reduced one-quarter of 1% for each month by which payments commence in advance of member's earliest normal retirement age. If a member has no surviving spouse, the surviving minor children under eighteen or disabled children are paid one-half of the member's accrued retirement benefit in equal shares. Upon the death of any former member with less than twelve years of service, the designated beneficiary may receive his accumulated contributions. Upon the death of any former member with twelve or more years of service, automatic option 2 benefits are payable to the surviving spouse with payments to commence on the member's retirement eligibility date. In lieu of periodic payments, the surviving spouse or children may receive a refund of the member's accumulated contributions.

DEFERRED RETIREMENT OPTION PLAN - In lieu of terminating employment and accepting a service retirement allowance, any member of the system who is eligible for a service retirement allowance may elect to participate in the Deferred Retirement Option Plan for up to thirty-six months and defer the receipt of benefits. Upon commencement of participation in the plan, active membership in the system terminates and the participant's contributions cease; however, employer contributions Compensation and creditable service remain as they existed on the effective date of commencement of participation in the plan. The monthly retirement benefits that would have been payable, had the member elected to cease employment and receive a service retirement allowance, are paid into the Deferred Retirement Option Plan account. Upon termination of employment at the end of the specified period of participation, a participant in the program may receive, at his option, a lump sum payment from the account equal to the payments to the account, or a true annuity based upon his account (subject to approval by the Board of Trustees); in addition, the member receives the monthly benefits that were paid into the fund during the period of participation. If employment is not terminated at the end of the participation period, payments into the account cease and the member resumes active contributing membership in the system. Interest is paid on DROP account balances for members who complete their DROP participation but do not terminate employment. The interest earnings are based on the actual rate of return on funds in such accounts. These interest accruals cease upon termination of employment. Upon termination, the member receives a lump sum payment from the DROP fund equal to the payments made to that fund on his behalf, or a true annuity based on his account (subject to approval by the Board of Trustees). The monthly benefit payments that were being paid into the DROP fund are paid to the retiree and an additional benefit based on his additional service rendered since termination of DROP participation is calculated using the normal method of benefit computation. Prior to January 1, 2011, the average compensation used to calculate the additional benefit is that used to calculate the original benefit unless his period of additional service is at least thirty-six months; effective January 1, 2011 the average compensation for members whose additional service is less than thirty-six months is equal to the lesser of the amount used to calculate his original benefit or the compensation earned in the period of additional service divided by the number of months of additional service. For former DROP participants who retire after December 31, 2010, the period used to determine final average compensation for post-DROP service is thirty-six months plus the number of whole months elapsed from January 1, 2011 to the date of DROP entry. In no event can the entire monthly benefit amount paid to the retiree exceed 100% of the average compensation used to compute the additional benefit. If a participant dies during the period of participation in the program, a lump sum payment equal to his account balance is paid to his named beneficiary or, if none, to his estate.

COST OF LIVING INCREASES – The board of trustees is authorized to grant retired members and widows of members who have been retired for at least one full calendar year an annual cost of living increase of 2.50% of their benefit (not to exceed forty dollars per month), and all retired members and widows who are sixty-five years of age and older a 2% increase in their original benefit (or their benefit as of October 1, 1977, if they retired prior to that time). In order to grant the 2.50% COLA the increase in the Consumer Price Index must have exceeded 3% since the last COLA granted. In order for the board to grant either of these increases, the system must meet certain other criteria detailed in the statute related to funding status. In lieu of granting the above cost of living increases, the board of trustees may grant a cost of living increase in the form of \$X×(A+B). In this formula, X is any amount up to one dollar per month. "A" represents the number of years of credited service at retirement or death, and "B" is equal to the number of years since retirement or since death of the member or retiree through June 30<sup>th</sup> of the initial year of such increase.

## **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 which 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
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 Method with

allocation based on earnings. The actuarial accrued liabilities utilized to calculate the frozen unfunded accrued liability were calculated on the Projected Unit Credit Cost Method. Changes in assumptions and plan benefits are funded through adjustments to future

normal costs

VALUATION INTEREST RATE: 7.25% (Net of Investment Expense)

ACTUARIAL ASSET VALUES: Assets are valued at market value adjusted to defer

four-fifths of all earnings above or below the valuation interest rate in the valuation year, three-fifths of all earnings above or below the valuation interest rate in the prior year, two-fifths of all earnings above or below the valuation interest rate from two years prior, and one-fifth of all earnings above or below the valuation interest rate from three years prior. The resulting smoothed values are subject to a corridor of 85% to 115% of the market value of assets. If the smoothed value falls outside the corridor, the actuarial value is set equal to the average

of the corridor limit and the smoothed value.

Note: All deferrals are based on the valuation interest rate in

effect as of the beginning of the fiscal year for each

individual year.

ANNUAL SALARY INCREASE RATE: 5.75% (2.75% inflation / 3.00% merit)

ACTIVE MEMBER, ANNUITANT, AND

BENEFICIARY MORTALITY:

RP 2000 Combined Healthy Table set back 3 years

for males and 1 year for females

RETIREE COST OF LIVING INCREASE:

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. DROP participants are assumed to retire after one year of post-DROP service. Rates of retirement for Tier 3 are the same as those for Tier 1 and 2 except as follows: Rates at age 55 through 59 are zero; the rate at age 60 is 0.2.

**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	0.180	10	0.030
1	0.140	11	0.030
2	0.110	12	0.030
3	0.090	13	0.030
4	0.080	14	0.030
5	0.060	15	0.030
6	0.060	16	0.030
7	0.050	17	0.030
8	0.030	18	0.015
9	0.030	>18	0.015

Note: Withdrawal rates for members eligible to retire are assumed to be zero.

RATES OF DROP ENTRY:

The table of these rates is included later in the report. These rates apply only to those individuals eligible to enter the DROP plan. Rates of Drop entry for Tier 3 are the same as those for Tier 1 and 2 except as follows: Rates at age 55 through 59 are zero; the rate at age 60 is 0.4.

DROP PARTICIPATION: All persons who enter the DROP are assumed to

participate for the full 3 year period and 2/3 are assumed to retire at the end of DROP participation with 1/3 assumed to work 4 years post DROP and

then retire.

RETIREMENT RATES FOR ACTIVE

FORMER DROP PARTICIPANTS: The rate for all ages is assumed to be 17%.

MARRIAGE STATISTICS: 80% 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:

Member's	% With	Number of	Average
<u>Age</u>	Children	<u>Children</u>	<u>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

DISABILITY RATES: 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. The table of these rates

is included later in the report.

SERVICE RELATED DISABILITIES: 10% of total disabilities

VESTING ELECTING PERCENTAGE: 80% of those vested elect deferred benefits in lieu of

contribution refunds.

# ACTUARIAL TABLES AND RATES

Age	Male Mortality Rates	Female Mortality Rates	Retirement Rates	DROP Entry Rates	Disability Rates	Post 1/1/2011 Hires Retirement Rates	Post 1/1/2011 Hires DROP Entry Rates
18	0.00027	0.00018	0.00000	0.00000	0.00030	0.00000	0.00000
19	0.00028	0.00019	0.00000	0.00000	0.00030	0.00000	0.00000
20	0.00030	0.00019	0.00000	0.00000	0.00030	0.00000	0.00000
21	0.00032	0.00019	0.00000	0.00000	0.00030	0.00000	0.00000
22	0.00033	0.00019	0.00000	0.00000	0.00030	0.00000	0.00000
23	0.00035	0.00019	0.00000	0.00000	0.00030	0.00000	0.00000
24	0.00036	0.00020	0.00000	0.00000	0.00030	0.00000	0.00000
25	0.00037	0.00020	0.00000	0.00000	0.00030	0.00000	0.00000
26	0.00037	0.00021	0.00000	0.00000	0.00030	0.00000	0.00000
27	0.00038	0.00021	0.00000	0.00000	0.00030	0.00000	0.00000
28	0.00038	0.00022	0.00000	0.00000	0.00030	0.00000	0.00000
29	0.00038	0.00024	0.00000	0.00000	0.00030	0.00000	0.00000
30	0.00038	0.00025	0.00000	0.00000	0.00030	0.00000	0.00000
31	0.00039	0.00026	0.00000	0.00000	0.00030	0.00000	0.00000
32	0.00041	0.00031	0.00000	0.00000	0.00030	0.00000	0.00000
33	0.00044	0.00035	0.00000	0.00000	0.00030	0.00000	0.00000
34	0.00050	0.00039	0.00000	0.00000	0.00034	0.00000	0.00000
35	0.00056	0.00044	0.00000	0.00000	0.00038	0.00000	0.00000
36	0.00063	0.00047	0.00000	0.00000	0.00042	0.00000	0.00000
37	0.00070	0.00051	0.00000	0.00000	0.00048	0.00000	0.00000
38	0.00077	0.00055	0.00000	0.00000	0.00054	0.00000	0.00000
39	0.00084	0.00060	0.00000	0.00000	0.00062	0.00000	0.00000
40	0.00090	0.00065	0.00000	0.00000	0.00070	0.00000	0.00000
41	0.00096	0.00071	0.00000	0.00000	0.00078	0.00000	0.00000
42	0.00102	0.00077	0.00000	0.00000	0.00088	0.00000	0.00000
43	0.00108	0.00085	0.00000	0.00000	0.00100	0.00000	0.00000
44	0.00114	0.00094	0.00000	0.00000	0.00114	0.00000	0.00000
45	0.00122	0.00103	0.00000	0.00000	0.00130	0.00000	0.00000
46	0.00130	0.00112	0.00000	0.00000	0.00146	0.00000	0.00000
47	0.00140	0.00122	0.00000	0.00000	0.00166	0.00000	0.00000
48	0.00151	0.00133	0.00000	0.00000	0.00188	0.00000	0.00000
49	0.00162	0.00143	0.00000	0.00000	0.00214	0.00000	0.00000
50	0.00173	0.00155	0.00000	0.00000	0.00244	0.00000	0.00000
51	0.00186	0.00168	0.00000	0.00000	0.00276	0.00000	0.00000
52	0.00200	0.00185	0.00000	0.00000	0.00314	0.00000	0.00000
53	0.00214	0.00202	0.00000	0.00000	0.00356	0.00000	0.00000
54	0.00245	0.00221	0.00000	0.00000	0.00404	0.00000	0.00000
55	0.00267	0.00242	0.20000	0.40000	0.00460	0.00000	0.00000
56	0.00292	0.00272	0.06500	0.20000	0.00522	0.00000	0.00000
57	0.00320	0.00309	0.06500	0.20000	0.00592	0.00000	0.00000
58 59	0.00362 0.00420	0.00348 0.00392	0.06500 0.06500	0.20000 0.20000	0.00674 0.00976	0.00000	0.00000
60	0.00420	0.00392	0.06500	0.20000	0.00976	0.00000	0.00000
61	0.00469	0.00506	0.06500	0.28000	0.00976	0.20000	0.40000
62	0.00595	0.00581	0.06500	0.28000	0.00976	0.06500	0.28000
63	0.00393	0.00666	0.06500	0.28000	0.00976	0.06500	0.28000
64	0.00768	0.00765	0.15000	0.40000	0.00976	0.06500 0.15000	0.28000 0.40000
65	0.00768	0.00763	0.15000	0.40000	0.00976	0.15000	0.40000
66	0.01001	0.00802	0.15000	0.40000	0.00976	0.15000	0.24000
67	0.01001	0.01095	0.15000	0.40000	0.00976	0.15000	0.24000
68	0.01128	0.01093	0.15000	0.40000	0.00976	0.15000	0.24000
69	0.01274	0.01210	0.15000	0.40000	0.00976	0.15000	0.24000
70	0.01607	0.01344	0.15000	0.40000	0.00976	0.15000	0.4000
71	0.01787	0.01486	0.15000	0.40000	0.00976	0.15000	0.40000
72	0.01787	0.01858	0.15000	0.40000	0.00976	0.15000	0.40000
73	0.01980	0.02067	0.15000	0.40000	0.00976	0.15000	0.40000
74	0.02221	0.02297	0.15000	0.40000	0.00976	0.15000	0.40000
75	0.02728	0.02546	0.15000	0.40000	0.00976	0.15000	0.40000
, 5	0.02120	0.02340	0.15000	0.10000	0.00710	0.15000	0.70000

# PRIOR YEAR ASSUMPTIONS

VALUATION INTEREST RATE: 7.5% (Net of Investment Expense)

## **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