## CLERKS' OF COURT RETIREMENT \& RELIEF FUND

ACTUARIAL VALUATION AS OF JUNE 30, 2013

# G. S. CURRAN \& COMPANY, LTD. <br> Actuarial Services 

10555 N. Glenstone Place • Baton Rouge, Louisiana 70810 • (225)769-4825

Gary S. Curran, FCA, MAAA, ASA, EA
Gregory M. Curran, FCA, MAAA, ASA, EA
Consulting Actuary
October 8, 2013
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, 2013. 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 purposes of the report are to determine the actuarially required contribution for the retirement system for the fiscal year ending June 30, 2014, to recommend the net direct employer contribution rate for fiscal 2015, and to provide information for the system's financial statements. 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.

Please note that significant changes in the accounting standards affecting retirement systems have been approved by the Governmental Accounting Standards Board. These changes, which are included in GASB Statement 67 will not be effective until the June 30, 2014 valuation. This report was prepared in accordance with the currently effective GASB Statement 25 . GASB 67 will require the reporting of an alternative calculation of liabilities based upon a funding method and interest rate that may differ with those used for funding purposes. It is important to note that the liability numbers within this report, including the Frozen Unfunded Actuarial Accrued Liability, are not a reasonable approximation of the liability numbers that will be reported under GASB 67.

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.


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

| Valuation Date: | June 30, 2013 |  |  | ne 30, 2012 |
| :---: | :---: | :---: | :---: | :---: |
| Census Summary: Active Members (including DROP) |  | 2,248 |  | 2,269 |
| Retired Members and Survivors |  | 1,064 |  | 1,000 |
| Terminated Due a Deferred Benefit |  | 97 |  | 92 |
| Terminated Due a Refund |  | 410 |  | 387 |
| Payroll: | \$ | 86,935,230 | \$ | 87,238,557 |
| Benefits in Payment (excluding DROP accruals): | \$ | 23,983,008 | \$ | 21,372,675 |
| Funding Deposit Account Balance | \$ | 1,618,182 | \$ | 1,505,286 |
| Frozen Unfunded Actuarial Accrued Liability: | \$ | 87,579,997 | \$ | 87,771,278 |
| Market Value of Assets: | \$ | 443,430,781 | \$ | 390,272,342 |
| Actuarial Asset Value (AVA): | \$ | 423,354,992 | \$ | 401,136,469 |
| Actuarial Accrued Liability (as defined by GASB-25) | \$ | 510,934,989 | \$ | 488,907,747 |
| Ratio of Net AVA to GASB - 25 Accrued Liability: <br> ****************************************** | $\underset{* * * * * * * * *}{82.86 \%}$ |  |  | $\begin{aligned} & \text { 82.05\% } \\ & * * * * * * * * \end{aligned}$ |
|  | FISCAL 2014 |  |  | SCAL 2013 |
| Employer Normal Cost (July 1): | \$ | 18,096,106 | \$ | 17,760,193 |
| Amortization Cost (July 1): | \$ | 6,600,835 | \$ | 6,301,513 |
| Interest Adjusted Gross Employer Actuarially Required Contribution Including Estimated Administrative Costs: | \$ | 26,076,108 | \$ | 25,414,608 |
| Projected Ad Valorem Taxes and Revenue Sharing Funds | \$ | 9,588,051 | \$ | 8,897,817 |
| Net Direct Employer Actuarially Required Contributions | \$ | 16,488,057 | \$ | 16,516,791 |
| Actuarially Required Net Direct Employer Contribution Rate |  | 18.43\% |  | 18.45\% |
| Actual Net Direct Employer Contribution Rate: |  | $\begin{aligned} & 18.50 \% \\ & * * * * * * * * * * \end{aligned}$ |  | $\begin{aligned} & 17.25 \% \\ & * * * * * * * * * * * \end{aligned}$ |

Minimum Recommended Net Direct Contribution Rate: For Fiscal 2015: 18.50\%
Fiscal 2014: 18.50\%
Employee Contribution Rate: 8.25\% of payroll
Dedicated Funding: 0.25\% of ad valorem taxes plus revenue sharing funds
Actuarial Cost Method: Frozen Attained Age Normal Actuarial Cost Method
Valuation Interest Rate: 7.5\% (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 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: Changes were made to the method of valuing retirement in cases where members enter the DROP.

Method of Recognizing Gains and Losses: Under the Frozen Attained Age Normal Method, actuarial gains and losses are spread over future normal costs.

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## COMMENTS ON DATA

For the valuation, the administrative staff of the system furnished a census on magnetic diskette 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 2,248 active members in the system of whom 1,004 have vested retirement benefits including 125 participants in the Deferred Retirement Option Plan (DROP); 1,064 former system members or their beneficiaries are receiving retirement benefits. An additional 507 terminated members have contributions remaining on deposit with the system; of this number, 97 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 $\$ 443,430,781$ as of June 30, 2013. Net investment income for fiscal 2013 measured on a market value basis amounted to $\$ 50,509,835$. Contributions to the fund for the fiscal year totaled $\$ 31,860,135$; benefits and expenses amounted to $\$ 29,211,531$.

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.

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## 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.

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 the report are outlined on pages thirty-six through forty. In the aggregate the assumptions are within our "best estimate range" of future long-term experience for the fund.

The structure of assumptions related to the payment of benefits to current and prospective DROP participants was changed. For the prior year, all members who entered the DROP were assumed to participate for three years and to remain in service for one additional year at the completion of DROP at which time they were assumed to retire. The current valuation was based on the assumption that all members who enter the DROP will participate for three years; at the completion of participation $2 / 3$ of participants are assumed to retire and $1 / 3$ of participants are assumed to remain in service for four additional years and then retire. This change in assumptions produced an actuarial loss which resulted in an increase in the normal cost accrual rate of $0.2558 \%$.

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 2013 Regular Session of the Louisiana Legislature:

Act 170 allows statewide retirement system boards to make an irrevocable election to have future benefit increases for retirees that are now governed by R.S. 11:242 (Target Ratio Method) to apply a new method under R.S. 11:243. Under R.S. 11:243 systems may grant a Cost of Living Adjustment

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(COLA) if any of the following apply: a) The system has a funded ratio of $90 \%$ or more and has not granted a COLA in the most recent fiscal year; b) The system has a funded ratio of $80 \%$ or more and has not granted a COLA in either of the two most recent fiscal years; c) The system has a funded ratio of $70 \%$ or more and has not granted a COLA in any of the three most recent fiscal years.

Act 365 gives members of statewide retirement systems the option to purchase the accrual rate of the receiving system at time of transfer if said accrual rate is greater that the accrual rate of the transferring system. It also allows said members to execute a reverse transfer only one time, at the time of retirement or during active service if submitted to the receiving system on or before December 31, 2013.

## 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 |
| :---: | :---: | :---: |
|  |  |  |
| 2004 | $12.3 \%$ | $2.9 \%$ |
| 2005 | $8.7 \%$ | $7.2 \%$ |
| 2006 | $11.5 \%$ | $*$ |
| 2007 | $14.3 \%$ | $16.7 \%$ |
| 2008 | $-6.3 \%$ | $7.9 \%$ |
| 2009 | $-19.3 \%$ | $* *$ |
| 2010 | $8.7 \%$ | $-6.1 \%$ |
| 2011 | $22.1 \%$ | $4.1 \%$ |
| 2012 | $1.6 \%$ | $5.8 \%$ |
| 2013 | $12.9 \%$ | $1.6 \%$ |
|  |  | $4.9 \%$ |

* 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. 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 2013, the fund earned $\$ 8,965,986$ of dividends, interest and other recurring income. During the same period, the Fund had net realized and unrealized capital gains on investments of $\$ 43,665,465$. In addition, the Fund had $\$ 2,121,616$ of investment expense. The geometric mean of the market value rates of return measured over the last ten years was $6.0 \%$. For the last 20 years the geometric mean of the market value rates of return was $6.8 \%$.

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The actuarial rate of return is presented for comparison to the assumed long-term rate of return of $7.5 \%$ used for the valuation. 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. Yields in excess of the $7.5 \%$ assumption will reduce future costs; yields below $7.5 \%$ will increase future costs. For fiscal 2013, the system experienced net actuarial investment earnings of $\$ 10,612,843$ less than the actuarial assumed earnings rate of $7.5 \%$. This loss in earnings produced an actuarial loss, which increased the normal cost accrual rate by $1.4080 \%$. For future years, investment income above or below $7.5 \%$ will be smoothed over a five year period.

## 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 12.93 years of service and an annual salary of $\$ 38,672$. The system's active membership decreased during the fiscal year by 21 members. The plan has experienced a decrease in the active plan population of 160 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 fifteen 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 $\$ 1,943$. The number of retirees and beneficiaries receiving benefits from the system increased by 64 during the fiscal year. Over the last five years, the number of retirees has increased by 215 ; during this same period, annual benefits in payment increased by $\$ 8,121,715$.

Plan liability experience for fiscal 2013 was favorable. DROP entries 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 and active retirements were at expected levels. In aggregate, liability experience reduced the normal cost accrual rate by $0.6105 \%$.

## 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

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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 2014 as of July 1, 2013, is $\$ 18,096,106$. The amortization payment on the fund's frozen unfunded actuarial accrued liability as of July 1, 2013, is $\$ 6,600,835$. 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 2014 is $\$ 26,076,108$. When this amount is reduced by projected tax contributions and revenue sharing funds, the resulting employers' net direct actuarially required contribution for fiscal 2014 is $\$ 16,488,057$. This is $18.43 \%$ of the projected payroll for fiscal 2014.

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 2013
21.1887\%

Factors Increasing the Normal Cost Accrual Rate:

| Asset Experience | $1.4080 \%$ |
| :--- | :--- |
| Assumption Loss | $0.2558 \%$ |
| Contribution Loss | $0.1463 \%$ |

Factors Decreasing the Normal Cost Accrual Rate:
New Members 0.8967\%

Liability Experience 0.6105\%
Normal Cost Accrual Rate - Fiscal 2014
21.4916\%

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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 2014, the net effect of the change in payroll on amortization costs was to increase such costs by $0.35 \%$ 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 collected in fiscal 2014 will increase by $0.78 \%$ of payroll.

Although the actuarially required net direct employer contribution rate for fiscal 2014 is $18.43 \%$, the actual employer contribution rate for fiscal 2014 is $18.50 \%$ of payroll. Since the contribution rate for 2014 is $18.50 \%$, any excess in employer contributions collected in the fiscal year will decrease the Fund's normal cost accrual rate. We estimate that this excess will result in a decrease of $0.01 \%$ to the normal cost accrual rate in fiscal 2014. 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 $18.50 \%$ for fiscal 2015 . 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 contribution 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 2013, the Funding Deposit Account increased due only to additional interest accrual from \$1,505,286 to $\$ 1,618,182$. 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 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 $0.56 \%$ 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 2013 by $10.95 \%$.

## COST OF LIVING INCREASES

During fiscal 2013, the actual cost of living (as measured by the US Department of Labor CPI-U) increased by $1.75 \%$. 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. In order to grant such an increase there must have been an increase in the CPI-U of 3\% since the last such increase. 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. 11:246 only permits payment of such an increase if earnings exceed

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the system's valuation rate). R.S. 11:241 provides that cost of living benefits shall be in the form (unless the board otherwise specifies) of $\$ \mathrm{X} \times(\mathrm{A}+\mathrm{B})$ 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 $30^{\text {th }}$ 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. We have determined there has been more than a $3 \%$ increase in the CPI-U since the last COLA granted; therefore, the requirements of R.S. 11:1549 for the granting of a $2.5 \%$ COLA (limited to a maximum of $\$ 40$ per month) have been met. However, in order to grant any cost of living increase to regular retirees, the ratio of the plan's assets to benefit obligations must also meet the criteria established in either R. S. 11:242 or R. S. 11:243.

The provisions of 11:246 require that the system have investment earnings on the actuarial value of assets above the valuation interest rate in order to grant a COLA under that section. Since the rate of return measured on an actuarial basis was less than $7.50 \%$ for fiscal 2013, no COLA may be granted under this section.
R. S. 11:242 requires the system's funded ratio to exceed the target ratio as defined by that section. For fiscal 2013, the target ratio for the system under R. S. 11:242 was $95.85 \%$ and the system's funded ratio under the provisions of R. S. 11:242 was $71.76 \%$. Hence no COLA may be granted based on application of that section.

Should the Board of Trustees elect to have the system covered under the provisions of R. S. 11:243, the system would meet the funding requirements to grant a COLA under R. S. 11:241 or R. S. 11:1549 since the funded ratio of the system exceeds $70 \%$ and no COLA has been granted in any of the last three fiscal years and the CPI has increased by more than 3\% since the last COLA was granted. In addition to the funding and CPI requirements there may be other legal requirements which must be fulfilled before either of the above described COLA's can be granted.

The estimated impact of granting the COLA's described above are as follows:

|  | Increase In <br> Annual Benefits | Increase In <br> Present Value | Expected Increase in <br> Normal Cost Accrual Rate |
| :--- | :---: | :---: | :---: | :---: |
|  | $\$ 445,488$ | $\$ 3,790,830$ | $0.50 \%$ |

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## Components of Present Value of Future Benefits

 June 30, 2013

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


## Components of Present Value of Future Benefits



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



Components of Actuarial Funding


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

## Frozen Unfunded Actuarial Accrued Liability



Historical Asset Yields

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Net Non-Investment Income


|  |  | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Non-Investment Income (\$Mil) | $\square$ | 19.0 | 22.2 | 22.8 | 24.7 | 23.2 | 25.4 | 27.8 | 30.8 | 30.6 | 31.9 |
| Benefits and Expenses (\$Mil) | $\square$ | 13.4 | 15.1 | 16.6 | 17.9 | 17.8 | 21.2 | 21.7 | 22.1 | 24.7 | 29.2 |
| Net Non-Investment Income (\$Mil) |  | 5.6 | 7.1 | 6.2 | 6.8 | 5.4 | 4.2 | 6.1 | 8.7 | 5.9 | 2.7 |

Total Income vs. Expenses
(Based on Market Value of Assets)


|  |  | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Income (\$Mil) | $\square$ | 44.2 | 42.9 | 53.2 | 67.9 | 1.2 | -39.0 | 51.8 | 98.5 | 36.9 | 82.4 |
| Benefits and Expenses (\$Mil) | $\square$ | 13.4 | 15.1 | 16.6 | 17.9 | 17.8 | 21.2 | 21.7 | 22.1 | 24.7 | 29.2 |
| Net Change in MVA (\$Mil) |  | 30.8 | 27.8 | 36.6 | 50.0 | -16.6 | -60.2 | 30.1 | 76.4 | 12.2 | 53.2 |

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


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## EXHIBITS

## EXHIBIT I ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS

1. Present Value of Future Benefits ..... \$ 724,843,481
2. Present Value of Future Employee Contributions ..... \$ 53,537,913
3. Frozen Unfunded Actuarial Accrued Liability ..... 87,579,997
4. Actuarial Value of Assets ..... 423,354,992
5. Funding Deposit Account Credit Balance ..... 1,618,182
6. Present Value of Future Employer Normal Costs (1-2-3-4+5) ..... 161,988,761
7. Present Value of Future Salaries ..... \$ 753,729,448
8. Employer Normal Cost Accrual Rate (6 $\div 7$ ) ..... 21.491632\%
9. Projected Fiscal 2014 Salary for Current Membership ..... \$ 84,200,707
10. Employer Normal Cost as of July 1, 2013 (8 x 9) ..... \$ 18,096,106
11. Amortization Payment on remaining frozen Unfunded Accrued Liability of \$87,579,997 with Payments increasing at $4.75 \%$ per year. ..... \$ 6,600,835
12. TOTAL Employer Normal Cost and Amortization Payment $(10+11)$ ..... \$ 24,696,941
13. Employer Normal Cost and Amortization Payment Interest Adjusted for Midyear Payment ..... \$ 25,606,333
14. Estimated Administrative Cost for Fiscal 2014 ..... \$ ..... 469,775
15. TOTAL Employer Actuarially Required Contribution for Fiscal $2014(13+14)$ ..... \$ 26,076,108
16. Projected Ad Valorem Tax Contributions for Fiscal 2014 ..... \$ 9,267,993
17. Projected Revenue Sharing Funds for Fiscal 2014. ..... \$ ..... 320,058
18. Net Direct Employer Actuarially Required Contribution for Fiscal 2014 (15-16-17). ..... \$ ..... 16,488,057
19. Projected Payroll (July 1, 2013 to June 30, 2014) ..... \$ 89,461,611
20. Employer’s Minimum Net Direct Actuarially Required Contribution as a \% of Projected Payroll for Fiscal 2014 (18 $\div 19$ ) ..... 18.43\%
21. Actual Employer Contribution Rate for Fiscal 2014 ..... 18.50\%
22. Contribution Shortfall (Excess) as a \% of Payroll (20-21). ..... -0.07\%
23. Increase (Reduction) to Following Year Payment for Contribution Shortfall (Excess) ..... -0.01\%
24. Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2015 (20+23, Rounded to nearest 0.25\%) ..... 18.50\%

## G. S. Curran \& Company, Ltd.

## EXHIBIT II PRESENT VALUE OF FUTURE BENEFITS

## Present Value of Future Benefits for Active Members:

| Retirement Benefits | \$ 438,521,035 |
| :---: | :---: |
| Survivor Benefits | 6,383,677 |
| Disability Benefits | 4,850,210 |
| Vested Deferred Termination Benefits. | 20,212,100 |
| Contribution Refunds | 5,444,852 |

TOTAL Present Value of Future Benefits for Active Members

## Present Value of Future Benefits for Terminated Members:

> Terminated Vested Members Due Benefits at Retirement.... \$ 15,288,506

Terminated Members with Reciprocals
Due Benefits at Retirement ............................................... 98,399
Terminated Members Due a Refund ..................................... 1,671,947
TOTAL Present Value of Future Benefits for Terminated Members..................... \$ 17,058,852

Present Value of Future Benefits for Retirees:

| Maximum | 114,295,622 |
| :---: | :---: |
| Option 1 | 0 |
| Option 2 | 59,991,215 |
| Option 3 | 29,436,037 |
| Option 4 | 2,154,676 |
| Option 5 | 1,115,903 |

TOTAL Regular Retirees
\$ 206,993,453
Disability Retirees .................................................................. 2,964,405
Survivors \& Widows .............................................................. 15,024,009
Drop Account Balances Payable to Retirees ........................... 7,390,888
TOTAL Present Value of Future Benefits for Retirees \& Survivors ..................... \$
TOTAL Present Value of Future Benefits ................................................................... \$
232,372,755
\$ 724,843,481

## G. S. Curran \& Company, Ltd.

## EXHIBIT III - SCHEDULE A MARKET VALUE OF ASSETS

Current Assets:
Cash ..... \$
7,550,435
Contributions Receivable from Members ..... 460,192
Contributions Receivable from Employers ..... 1,039,246
Accrued Interest and Dividends ..... 515,099
Investments Receivable ..... 1,137,900
Miscellaneous Receivable ..... 19,303
TOTAL CURRENT ASSETS\$ 10,722,175
Equipment and Fixtures ..... \$ ..... 784,487
Investments at Market Value:
Commingled Funds ..... \$ 104,275,838
Equity Fund - International ..... 98,709,313
Marketable Securities ..... 86,886,179
Real Estate Funds ..... 41,042,518
Hedge Funds ..... 41,715,243
Master Limited Partnerships ..... 28,019,620
Index Bond Funds ..... 12,204,215
Cash Equivalents ..... 3,739,098
Mutual Funds ..... 685,846
TOTAL INVESTMENTS AT MARKET VALUE ..... \$ 417,277,870
Investments at Cost:
Mutual Funds ..... 16,229,921
TOTAL INVESTMENTS AT COST ..... \$ 16,229,921
TOTAL ASSETS ..... \$ 445,014,453
Current Liabilities:
Accounts Payable ..... 477,575
Investments Payable ..... 851,097
Deferred Rent ..... 255,000
TOTAL CURRENT LIABILITIES ..... \$ 1,583,672
NET MARKET VALUE OF ASSETS ..... \$ 443,430,781

## G. S. Curran \& Company, Ltd.

## EXHIBIT III - SCHEDULE B ACTUARIAL VALUE OF ASSETS

Excess (Shortfall) of invested income for current and previous 4 years:
Fiscal year 2013 ..... \$
Fiscal year 2012 ..... (24,236,117)
Fiscal year 2011 ..... 43,260,541
Fiscal year 2010 ..... 1,998,685
Fiscal year 2009 ..... $(91,155,162)$
Total for five years ..... \$$(48,990,171)$
Deferral of excess (shortfall) of invested income:
Fiscal year 2013 (80\%) ..... \$ 16,913,506
Fiscal year 2012 (60\%) ..... $(14,541,670)$
Fiscal year 2011 (40\%) ..... 17,304,216
Fiscal year 2010 (20\%) ..... 399,737
Fiscal year 2009 ( 0\%) ..... 0
Total deferred for year ..... \$ 20,075,789
Market value of plan net assets, end of year ..... \$ 443,430,781
Preliminary actuarial value of plan assets, end of year ..... \$ 423,354,992
Actuarial value of assets corridor
85\% of market value, end of year ..... \$ 376,916,164
$115 \%$ of market value, end of year ..... \$ 509,945,398
Final actuarial value of plan net assets, end of year. ..... \$ 423,354,992

## G. S. Curran \& Company, Ltd.

## EXHIBIT IV <br> PRESENT VALUE OF FUTURE CONTRIBUTIONS

Employee Contributions to the Annuity Savings Fund ..... \$
53,537,913
Employer Normal Contributions to the Pension Accumulation Fund ..... 161,988,761
Employer Amortization Payments to the Pension Accumulation Fund ..... 87,579,997
Funding Deposit Account Credit Balance ..... $(1,618,182)$
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS ..... \$ ..... 301,488,489
EXHIBIT V
CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRUED LIABILITY
Prior Year Frozen Unfunded Accrued Liability
$\qquad$
Interest on Frozen Unfunded Accrued Liability ..... \$ 6,582,846
Employer Normal Cost for Prior Year ..... 17,760,193
Interest on the Normal Cost ..... 1,332,014
Administrative Expenses ..... 446,422
Interest on Expenses ..... 16,439
Contributions to Funding Deposit Account

$\qquad$ ..... 0
TOTAL Increases to Frozen Unfunded Accrued Liability ..... \$
26,137,914
Direct Employer Contributions ..... \$ 15,201,219
Interest on Employer Contributions ..... 559,740
Ad Valorem Taxes and Revenue Sharing Funds ..... 9,129,566
Interest on Ad Valorem Taxes and Revenue Sharing Funds. ..... 336,169
Contribution Shortfall ..... 1,025,582
Interest on Contribution Shortfall ..... 76,919
Withdrawals from Funding Deposit Account

$\qquad$ ..... 0
TOTAL Decreases to Frozen Unfunded Accrued Liability ..... \$ ..... 26,329,195
NET Change in Frozen Unfunded Accrued Liability ..... \$$(191,281)$
CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABILITY ... ..... \$
87,579,997

## G. S. Curran \& Company, Ltd.

## EXHIBIT VI <br> ANALYSIS OF INCREASE IN ASSETS

Actuarial Value of Assets: (June 30, 2012) ..... \$ 401,136,469
Income:
Member Contributions ..... \$ 6,735,892
Employer Contributions ..... 15,201,219
Ad Valorem Tax Funds ..... 8,808,707
Revenue Sharing Tax Funds ..... 320,859
Contributions for Purchased or Transferred Service. ..... 792,412
Miscellaneous Income ..... 1,046
SUBTOTAL of all contributions ..... \$
31,860,135
Net Appreciation in Fair Value of Investments ..... \$ 43,665,465
Dividends on Stock ..... 8,387,313
Interest Income578,673
Investment Expense ..... $(2,121,616)$
SUBTOTAL of all market investment income ..... \$ 50,509,835TOTAL Income\$ 82,369,970
Expenses:
Retirement and Survivor Benefits ..... \$ 23,138,013
Disability Benefits ..... 230,284
Refunds of Contributions ..... 907,758
DROP Disbursements ..... 4,202,079
Administrative Expenses ..... 446,422
Transfers to Another System ..... 286,975
TOTAL Expenses. ..... \$ ..... 29,211,531
Net Market Income for Fiscal 2013 (Income - Expenses) ..... \$ 53,158,439
Adjustment for Actuarial Smoothing ..... \$ $(30,939,916)$
Actuarial Value of Assets: (June 30, 2013) ..... \$ 423,354,992

## G. S. Curran \& Company, Ltd.

## EXHIBIT VII FUND BALANCE AND ASSET RECONCILIATION

Present Assets of the System Creditable to:
Annuity Savings Fund ..... \$ 62,892,727
Annuity Reserve Fund. ..... 224,981,867
Pension Accumulation Fund ..... 129,427,601
DROP Account. ..... 24,510,404
Funding Deposit Account ..... 1,618,182
NET MARKET VALUE OF ASSETS ..... \$ 443,430,781
ADJUSTMENT FOR ACTUARIAL SMOOTHING ..... $(20,075,789)$
NET ACTUARIAL VALUE OF ASSETS ..... \$ 423,354,992
EXHIBIT VIII PENSION BENEFIT OBLIGATION
Present Value of Credited Projected Benefits Payable to Current Employees ..... \$ 340,518,401
Present Value of Benefits Payable to Terminated Employees ..... 17,058,852
Present Value of Benefits Payable to Current Retirees and Beneficiaries ..... 232,372,755
TOTAL PENSION BENEFIT OBLIGATION ..... \$ 589,950,008
NET ACTUARIAL VALUE OF ASSETS ..... \$ 423,354,992
Ratio of Net Actuarial Value of Assets to Pension Benefit Obligation ..... 71.76\%

## G. S. Curran \& Company, Ltd.

## EXHIBIT IX COST OF LIVING ADJUSTMENTS - TARGET RATIO

Actuarial Value of Assets Divided by PBO as of Fiscal 1986 ..... 31.83\%
Amortization of Unfunded Balance over 30 years: ..... 61.35\%
Adjustments in Funded Ratio Due to Mergers or Changes in Assumption(s):
Changes for Fiscal 1988 ..... 5.90\%
Changes for Fiscal 1993 ..... (1.42\%)
Changes for Fiscal 1995 ..... (2.51\%)
Changes for Fiscal 1998 ..... (3.99\%)
Changes for Fiscal 2001 ..... (1.15\%)
Changes for Fiscal 2005 ..... (2.02\%)
Changes for Fiscal 2006 ..... 3.66\%
Changes for Fiscal 2009 ..... 8.36\%
Changes for Fiscal 2010 ..... (0.68\%)
Changes for Fiscal 2012 ..... (1.75\%)
Changes for Fiscal 2013 ..... (0.44\%)
TOTAL Adjustments ..... 3.96\%
Amortization of Adjustments in Funded Ratio over 30 years:
Changes for Fiscal 1988 ..... (4.92\%)
Changes for Fiscal 1993 ..... 0.95\%
Changes for Fiscal 1995 ..... 1.51\%
Changes for Fiscal 1998 ..... 2.00\%
Changes for Fiscal 2001 ..... 0.46\%
Changes for Fiscal 2005 ..... 0.54\%
Changes for Fiscal 2006 ..... (0.85\%)
Changes for Fiscal 2009 ..... (1.11\%)
Changes for Fiscal 2010 ..... 0.07\%
Changes for Fiscal 2012 ..... 0.06\%
Changes for Fiscal 2013 ..... 0.00\%
TOTAL Amortization of Adjustments ..... (1.29\%)
Target Ratio for Current Fiscal Year. ..... 95.85\%
Actuarial Value of Assets Divided by PBO as of Fiscal 2013 ..... 71.76\%

## G. S. Curran \& Company, Ltd.

EXHIBIT X CENSUS DATA

|  | Active | Terminated with Funds on Deposit | DROP | Retired | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number of members as of June 30, 2012 | 2,135 | 479 | 134 | 1,000 | 3,748 |
| Additions to Census <br> Initial membership <br> Death of another member <br> Omitted in error last year | 187 | 14 |  | 17 | $\begin{array}{r} 201 \\ 17 \end{array}$ |
| Change in Status during Year <br> Actives terminating service <br> Actives who retired <br> Actives entering DROP <br> Term. members rehired <br> Term. members who retire <br> Retirees who are rehired <br> Refunded who are rehired <br> DROP participants retiring <br> DROP returned to work <br> Omitted in error last year | (68) <br> (47) <br> (46) <br> 6 <br> 2 <br> 19 | 68 <br> (6) <br> (11) <br> 2 | 46 <br> (35) <br> (19) | 47 <br> 11 <br> 35 | 4 |
| Eliminated from Census <br> Refund of contributions <br> Deaths <br> Included in error last year <br> Adjustment for multiple records | (58) <br> (7) | (39) | (1) | (47) <br> 1 | (97) <br> (55) <br> 1 |
| Number of members as of June 30, 2013 | 2,123 | 507 | 125 | 1,064 | 3,819 |

## G. S. Curran \& Company, Ltd.

| Age | Number Male | Number Female | Total <br> Number | Average Salary | $\begin{array}{r} \text { Total } \\ \text { Salary } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16-20 | 2 | 3 | 5 | 20,217 | 101,085 |
| 21-25 | 18 | 77 | 95 | 22,460 | 2,133,737 |
| 26-30 | 35 | 153 | 188 | 26,424 | 4,967,714 |
| 31-35 | 34 | 168 | 202 | 30,934 | 6,248,647 |
| 36-40 | 25 | 161 | 186 | 34,303 | 6,380,372 |
| 41-45 | 38 | 203 | 241 | 37,216 | 8,968,978 |
| 46-50 | 47 | 270 | 317 | 39,761 | 12,604,103 |
| 51-55 | 55 | 368 | 423 | 42,628 | 18,031,527 |
| 56-60 | 45 | 240 | 285 | 47,375 | 13,501,867 |
| 61-65 | 37 | 145 | 182 | 41,942 | 7,633,400 |
| 66-70 | 23 | 61 | 84 | 48,150 | 4,044,565 |
| 71-75 | 13 | 19 | 32 | 59,935 | 1,917,906 |
| 76-80 | 3 | 2 | 5 | 54,185 | 270,926 |
| 81-85 | 0 | 3 | 3 | 43,468 | 130,403 |
| тотAL | 375 | 1,873 | 2,248 | 38,672 | 86,935,230 |

the active census includes 1,004 ACtIVES with Vested benefits, including 125 DROP PARTICIPANTS AND 90 ACTIVE FORMER DROP PARTICIPANTS.

TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

| Age | Number <br> Male | Number <br> Female | Total <br> Number | Average <br> Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | ---: |
| $31-35$ | 0 | 1 | 1 |  |  |
| $36-40$ | 0 | 3 | 3 | 13,607 | 13,607 |
| $41-45$ | 3 | 12 | 15 | 17,131 | 51,394 |
| $46-50$ | 5 | 29 | 34 | 21,973 | 254,592 |
| $51-55$ | 7 | 32 | 39 | 21,656 | 717,529 |
| $56-60$ | 1 | 1 | 3 | 5,237 | 844,600 |
| $61-65$ | 0 | 1 | 1 | 4,350 | 15,710 |
| $66-70$ | 0 | 81 | 97 | 2,970 | 4,350 |
| TOTAL | 16 |  | 19,637 | $1,904,752$ |  |

terminated members due a refund of contributions:

| Contributions Ranging |  |  |
| ---: | ---: | ---: |
| From | To |  |
| 0 | - | 99 |
| 100 | - | 499 |
| 500 | - | 999 |
| 1000 | - | 1999 |
| 2000 | - | 4999 |
| 5000 | - | 9999 |
| 10000 | - | 19999 |
| 20000 | - | 119999 |
|  |  | TOTAL |

Total Contributions

2,127
23,430
37,815
61,819
208,177
440,618
519,463
378,498
1,671,947

| Age | Number Male | Number <br> Female | Total <br> Number | Average <br> Benefit | $\begin{aligned} & \text { Total } \\ & \text { Benefit } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 51-55 | 2 | 7 | 9 | 24,416 | 219,741 |
| 56-60 | 12 | 127 | 139 | 28,385 | 3,945,509 |
| 61-65 | 20 | 167 | 187 | 27,162 | 5,079,358 |
| 66-70 | 32 | 139 | 171 | 23,586 | 4,033,199 |
| 71-75 | 23 | 133 | 156 | 21,728 | 3,389,619 |
| 76-80 | 28 | 95 | 123 | 18,335 | 2,255,191 |
| 81-85 | 23 | 60 | 83 | 18,596 | 1,543,445 |
| 86-90 | 10 | 42 | 52 | 17,940 | 932,877 |
| 91-99 | 1 | 13 | 14 | 26,622 | 372,714 |
| TOTAL | 151 | 783 | 934 | 23,310 | 21,771,653 |

DISABILITY RETIREES:

| Age | Number <br> Male | Number <br> Female | Total <br> Number | Average <br> Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | ---: |
| $41-45$ | 0 | 1 | 1 |  |  |
| $46-50$ | 0 | 2 | 2,725 | 12,725 |  |
| $51-55$ | 0 | 7 | 7 | 10,102 | 20,204 |
| $56-60$ | 1 | 1 | 16,319 | 114,234 |  |
| $66-70$ | 0 | 1 | 16 | 21,126 | 105,631 |
| $71-75$ | 2 | 18 | 7,219 | 7,219 |  |
| TOTAL | 2 |  | 18 | 8,693 | 17,385 |

SURVIVORS:

| Age | Number Male | Number <br> Female | Total <br> Number | Average <br> Benefit | $\begin{gathered} \text { Total } \\ \text { Benefit } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0-25 | 2 | 0 | 2 | 3,768 | 7,535 |
| 26-30 | 0 | 1 | 1 | 17,950 | 17,950 |
| 31-35 | 0 | 1 | 1 | 9,834 | 9,834 |
| 41-45 | 0 | 1 | 1 | 2,781 | 2,781 |
| 46-50 | 1 | 2 | 3 | 3,955 | 11,866 |
| 51-55 | 0 | 2 | 2 | 13,916 | 27,831 |
| 56-60 | 3 | 4 | 7 | 18,742 | 131,194 |
| 61-65 | 5 | 3 | 8 | 26,732 | 213,858 |
| 66-70 | 5 | 8 | 13 | 22,447 | 291,806 |
| 71-75 | 7 | 11 | 18 | 16,561 | 298,106 |
| 76-80 | 3 | 10 | 13 | 18,299 | 237,884 |
| 81-85 | 4 | 18 | 22 | 17,700 | 389,392 |
| 86-90 | 3 | 12 | 15 | 13,891 | 208,358 |
| 91-99 | 1 | 5 | 6 | 14,260 | 85,562 |
| TOTAL | 34 | 78 | 112 | 17,267 | 1,933,957 |

ACTIVE MEMBERS:

| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-20 | 5 |  |  |  |  |  |  |  |  |  |  | 5 |
| 21-25 | 35 | 29 | 12 | 4 | 6 | 9 |  |  |  |  |  | 95 |
| 26-30 | 28 | 26 | 25 | 13 | 20 | 71 | 5 |  |  |  |  | 188 |
| 31-35 | 25 | 14 | 18 | 8 | 13 | 76 | 43 | 5 |  |  |  | 202 |
| 36-40 | 14 | 12 | 7 | 8 | 9 | 47 | 51 | 34 | 4 |  |  | 186 |
| 41-45 | 23 | 8 | 11 | 3 | 8 | 66 | 54 | 45 | 21 | 2 |  | 241 |
| 46-50 | 18 | 15 | 11 | 7 | 14 | 53 | 60 | 51 | 23 | 42 | 23 | 317 |
| 51-55 | 19 | 15 | 14 | 14 | 11 | 56 | 63 | 51 | 49 | 52 | 79 | 423 |
| 56-60 | 10 | 8 | 6 | 4 | 8 | 43 | 41 | 36 | 29 | 37 | 63 | 285 |
| 61-65 | 4 | 4 | 3 | 7 | 6 | 37 | 45 | 26 | 14 | 15 | 21 | 182 |
| 66-70 | 1 | 2 | 2 |  | 1 | 22 | 13 | 8 | 13 | 9 | 13 | 84 |
| 71 \& Over | 1 |  | 1 |  |  | 5 | 9 | 6 | 2 | 3 | 13 | 40 |
| Totals | 183 | 133 | 110 | 68 | 96 | 485 | 384 | 262 | 155 | 160 | 212 | 2248 |


|  | 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 | 20,217 |  |  |  |  |  |  |  |  |  |  | 20,217 |
| 21-25 | 21,675 | 22,298 | 21,170 | 19,777 | 25,500 | 26,927 |  |  |  |  |  | 22,460 |
| 26-30 | 23,343 | 23,568 | 25,710 | 26,531 | 25,089 | 29,055 | 29,797 |  |  |  |  | 26,424 |
| 31-35 | 24,699 | 31,873 | 29,068 | 26,553 | 28,606 | 31,323 | 35,127 | 37,283 |  |  |  | 30,934 |
| 36-40 | 23,114 | 24,807 | 28,343 | 28,740 | 30,627 | 32,355 | 39,762 | 37,351 | 59,166 |  |  | 34,303 |
| 41-45 | 29,448 | 26,469 | 25,260 | 36,434 | 25,388 | 34,117 | 40,990 | 43,218 | 44,746 | 69,991 |  | 37,216 |
| 46-50 | 37,022 | 31,693 | 30,158 | 24,865 | 30,441 | 31,767 | 38,603 | 41,700 | 52,153 | 51,648 | 45,000 | 39,761 |
| 51-55 | 32,154 | 42,601 | 25,647 | 21,493 | 45,313 | 35,790 | 38,165 | 41,858 | 44,801 | 53,590 | 51,871 | 42,628 |
| 56-60 | 27,990 | 21,965 | 36,031 | 38,537 | 31,685 | 39,376 | 42,250 | 48,892 | 49,741 | 56,496 | 58,794 | 47,375 |
| 61-65 | 24,507 | 26,104 | 24,811 | 29,663 | 32,298 | 40,652 | 37,038 | 38,778 | 57,286 | 50,147 | 58,182 | 41,942 |
| 66-70 | 34,175 | 18,444 | 45,996 |  | 26,783 | 36,578 | 43,160 | 56,159 | 50,996 | 56,679 | 66,662 | 48,150 |
| 71 \& Over | 72,739 |  | 24,408 |  |  | 42,467 | 30,143 | 43,443 | 81,677 | 38,565 | 92,213 | 57,981 |
| Average | 26,742 | 27,417 | 27,219 | 26,653 | 30,251 | 33,733 | 38,679 | 42,523 | 49,303 | 53,527 | 57,189 | 38,672 |

terminated members doe a deferred retirement benefit:

| $\begin{gathered} \text { Attained } \\ \text { Ages } \end{gathered}$ | Years Until Retirement Eligibility |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 31-35 |  |  |  |  |  |  |  |  | 1 |  |  | 1 |
| 36-40 |  |  |  |  |  |  |  | 3 |  |  |  | 3 |
| 41-45 |  |  |  |  |  |  | 15 |  |  |  |  | 15 |
| 46-50 |  |  |  |  |  | 34 |  |  |  |  |  | 34 |
| 51-55 | 5 | 8 | 10 | 7 | 9 |  |  |  |  |  |  | 39 |
| 56-60 | 1 | 1 |  | 1 |  |  |  |  |  |  |  | 3 |
| 61-65 | 1 |  |  |  |  |  |  |  |  |  |  | 1 |
| 66-70 | 1 |  |  |  |  |  |  |  |  |  |  | 1 |
| 71 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Totals | 8 | 9 | 10 | 8 | 9 | 34 | 15 | 3 | 1 | 0 | 0 | 97 |


| Attained Ages | Years Until Retirement Eligibility |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Average Benefit |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 31-35 |  |  |  |  |  |  |  |  | 13,607 |  |  | 13,607 |
| 36-40 |  |  |  |  |  |  |  | 17,131 |  |  |  | 17,131 |
| 41-45 |  |  |  |  |  |  | 16,973 |  |  |  |  | 16,973 |
| 46-50 |  |  |  |  |  | 21,104 |  |  |  |  |  | 21,104 |
| 51-55 | 20,689 | 22,332 | 21,457 | 20,304 | 22,867 |  |  |  |  |  |  | 21,656 |
| 56-60 | 13,200 | 1,920 |  | 590 |  |  |  |  |  |  |  | 5,237 |
| 61-65 | 4,350 |  |  |  |  |  |  |  |  |  |  | 4,350 |
| 66-70 | 2,970 |  |  |  |  |  |  |  |  |  |  | 2,970 |
| 71 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Average | 15,496 | 20,064 | 21,457 | 17,840 | 22,867 | 21,104 | 16,973 | 17,131 | 13,607 | 0 | 0 | 19,637 |

SERVICE RETIREES：

| $\begin{gathered} \text { Attained } \\ \text { Ages } \end{gathered}$ | 0 | 1 | 2 | 3 | 4 | 5－9 | 10－14 | 15－19 | 20－24 | 25－29 | $30 \& O v e r$ | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0－50 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 51－55 | 9 |  |  |  |  |  |  |  |  |  |  | 9 |
| 56－60 | 34 | 35 | 24 | 22 | 15 | 6 | 3 |  |  |  |  | 139 |
| 61－65 | 12 | 16 | 18 | 22 | 18 | 92 | 9 |  |  |  |  | 187 |
| 66－70 | 19 | 9 | 6 | 5 | 15 | 55 | 54 | 7 | 1 |  |  | 171 |
| 71－75 | 8 | 4 | 4 | 3 | 8 | 26 | 53 | 45 | 3 | 1 | 1 | 156 |
| 76－80 | 3 |  | 4 | 1 | 2 | 13 | 32 | 25 | 35 | 8 |  | 123 |
| 81－85 | 3 |  | 1 |  | 2 | 7 | 11 | 11 | 16 | 31 | 1 | 83 |
| 86－90 |  |  |  |  | 1 | 1 | 3 | 7 | 5 | 14 | 21 | 52 |
| 91 \＆Over | 2 |  |  |  |  |  |  | 1 | 1 | 4 | 6 | 14 |
| Totals | 90 | 64 | 57 | 53 | 61 | 200 | 165 | 96 | 61 | 58 | 29 | 934 |


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average annual benefits payable to disability retirees: Completed Years Since Retirement

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18,674

13,518

12,555


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$21,144 \quad 13,518$
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21, 144
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10,646



SURVIVING BENEFICIARIES OF FORMER MEMBERS:

| Attained Ages | Completed Years Since Retirement |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| 0-20 |  |  |  |  |  | 1 |  |  |  |  |  | 1 |
| 21-25 |  |  |  |  |  | 1 |  |  |  |  |  | 1 |
| 26-30 |  |  |  |  |  | 1 |  |  |  |  |  | 1 |
| 31-35 |  |  |  |  |  | 1 |  |  |  |  |  | 1 |
| 36-40 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 41-45 |  |  |  |  |  |  | 1 |  |  |  |  | 1 |
| 46-50 |  |  |  |  |  |  | 3 |  |  |  |  | 3 |
| 51-55 |  |  |  |  | 1 |  |  | 1 |  |  |  | 2 |
| 56-60 | 1 |  |  |  | 1 | 1 | 3 |  | 1 |  |  | 7 |
| 61-65 | 1 |  | 1 |  |  | 5 | 1 |  |  |  |  | 8 |
| 66-70 | 2 | 1 |  | 1 | 1 | 1 | 4 | 1 | 1 | 1 |  | 13 |
| 71-75 |  |  |  |  | 1 | 5 | 4 | 4 | 2 | 1 | 1 | 18 |
| 76-80 |  |  |  |  | 1 | 1 | 4 | 3 | 2 | 1 | 1 | 13 |
| 81-85 |  |  |  |  |  |  | 3 | 4 | 5 | 9 | 1 | 22 |
| 86-90 |  |  |  |  |  |  | 1 | 1 | 1 | 7 | 5 | 15 |
| 91 \& Over |  |  |  |  |  |  |  |  | 2 |  | 4 | 6 |
| Totals | 4 | 1 | 1 | 1 | 5 | 17 | 24 | 14 | 14 | 19 | 12 | 112 |



## EXHIBIT XI YEAR-TO-YEAR COMPARISON

Fiscal 2013
Number of Active Members
Number of Retirees \& Survivors
Number of Terminated Due Deferred Benefits

Fiscal 2012

| 2,248 | 2,269 | 2,326 | 2,330 |
| ---: | ---: | ---: | ---: |
| 1,064 | 1,000 | 975 | 929 |
| 97 | 92 | 88 | 97 |
| 410 | 387 | 372 | 360 |


| Active Lives Payroll | \$ | 86,935,230 | \$ | 87,238,557 | \$ | 87,403,148 | \$ | 86,484,686 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Retiree Benefits in Payment | \$ | 23,983,008 | \$ | 21,372,677 | \$ | 19,981,482 | \$ | 18,640,843 |
| Market Value of Assets | \$ | 443,430,781 | \$ | 390,272,342 | \$ | 378,083,955 | \$ | 301,692,473 |
| Ratio of Actuarial Value of Assets to GASB-25 Accrual Liability |  | 82.86\% |  | 82.05\% |  | 81.63\% |  | 80.50\% |
| Actuarial Value of Assets | \$ | 423,354,992 | \$ | 401,136,469 | \$ | 388,757,787 | \$ | 358,981,529 |
| Frozen Unfunded Actuarial Accrued Liability | \$ | 87,579,997 | \$ | 87,771,278 | \$ | 87,493,460 | \$ | 86,953,999 |
| Present Value of Future Employer Normal Cost | \$ | 161,988,761 | \$ | 156,709,315 | \$ | 127,887,962 | \$ | 135,032,044 |
| Present Value of Future Employee Contributions | \$ | 53,537,913 | \$ | 52,501,678 | \$ | 49,250,744 | \$ | 49,677,464 |
| Funding Deposit Account Balance | \$ | 1,618,182 | \$ | 1,505,286 | \$ | 603,658 | \$ | 558,943 |
| Present Value of Future Benefits | \$ | 724,843,481 | \$ | 696,613,454 | \$ | 652,786,295 | \$ | 630,086,093 |

Fiscal 2014

Employee Contribution Rate
Proj. Tax Contribution as \% of Projected Payroll

Minimum Actuarially Req'd Net Direct Employer

Actual Net Direct Employer Contribution Rate
8.25\%
10.72\%
18.43\%
18.50\%

Fiscal 2013
8.25\%
9.94\%
18.40\%
17.25\%

Fiscal 2012

| $8.25 \%$ | $8.25 \%$ |
| :---: | :---: |
| $9.31 \%$ | $9.27 \%$ |
| $16.21 \%$ | $16.98 \%$ |
| $17.25 \%$ | $17.25 \%$ |

## G. S. Curran \& Company, Ltd.

|  | Fiscal 2009 |  | Fiscal 2008 |  | Fiscal 2007 |  | Fiscal 2006 |  | Fiscal 2005 |  | Fiscal 2004 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2,371 |  | 2,408 |  | 2,364 |  | 2,227 |  | 2,386 |  | 2,356 |
|  | 894 |  | 849 |  | 825 |  | 817 |  | 776 |  | 743 |
|  | 101 |  | 101 |  | 102 |  | 100 |  | 92 |  | 83 |
|  | 338 |  | 303 |  | 266 |  | 274 |  | 204 |  | 221 |
| \$ | 85,840,893 | \$ | 83,637,009 | \$ | 78,384,249 | \$ | 70,935,731 | \$ | 73,542,403 | \$ | 70,699,191 |
| \$ | 17,431,083 | \$ | 15,861,293 | \$ | 15,032,502 | \$ | 14,133,920 | \$ | 12,936,610 | \$ | 11,863,330 |
| \$ | 271,624,094 | \$ | 331,865,504 | \$ | 348,448,803 | \$ | 298,451,085 | \$ | 261,821,679 | \$ | 234,052,785 |
|  | 79.72\% |  | 80.71\% |  | 79.46\% |  | 77.71\% |  | 74.80\% |  | 73.10\% |
| \$ | 338,755,452 | \$ | 356,502,864 | \$ | 325,278,452 | \$ | 288,606,478 | \$ | 241,537,822 | \$ | 218,345,837 |
| \$ | 86,185,073 | \$ | 85,215,896 | \$ | 84,072,966 | \$ | 82,780,287 | \$ | 81,359,582 | \$ | 80,357,648 |
| \$ | 141,512,187 | \$ | 93,305,942 | \$ | 85,994,867 | \$ | 86,249,033 | \$ | 119,947,430 | \$ | 100,729,458 |
| \$ | 51,983,870 | \$ | 50,730,673 | \$ | 51,293,939 | \$ | 48,105,080 | \$ | 50,894,701 | \$ | 46,759,949 |
| \$ | 517,540 | \$ | 0 | \$ | 0 | \$ | 0 | \$ | 0 | \$ | 0 |
| \$ | 617,919,042 | \$ | 585,755,375 | \$ | 546,640,224 | \$ | 505,740,878 | \$ | 493,739,535 | \$ | 446,192,892 |

Fiscal 2010 Fiscal 2009 Fiscal 2008 Fiscal $2007 \quad$ Fiscal $2006 \quad$ Fiscal 2005

| $8.25 \%$ | $8.25 \%$ | $8.25 \%$ | $8.25 \%$ | $8.25 \%$ | $8.25 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $8.99 \%$ | $8.12 \%$ | $7.62 \%$ | $7.92 \%$ | $7.00 \%$ | $7.10 \%$ |
| $17.05 \%$ | $11.80 \%$ | $11.41 \%$ | $12.22 \%$ | $16.57 \%$ | $15.73 \%$ |
| $14.75 \%$ | $11.75 \%$ | $11.75 \%$ | $16.75 \%$ | $15.75 \%$ | $14.50 \%$ |

## G. S. Curran \& Company, Ltd.

## 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 - 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. 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. 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. 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.

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 $31 / 3 \%$ 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 thirtysix 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.

## G. S. Curran \& Company, Ltd.

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 $2 \frac{1}{2} \%$ 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.

## G. S. Curran \& Company, Ltd.

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 continue. 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 $\$ \mathrm{X} \times(\mathrm{A}+\mathrm{B})$. 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 $30^{\text {th }}$ of the initial year of such increase.

## G. S. Curran \& Company, Ltd.

## 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

Investment Earnings Rate
Annual Rate of Salary Increase
Rates of Retirement
Rates of Termination
Rates of Disability
Rates of Mortality
ACTUARIAL COST METHOD:

## VALUATION INTEREST RATE:

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, threefifths 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.

## G. S. Curran \& Company, Ltd.

ACTIVE MEMBER, ANNUITANT, AND BENEFICIARY MORTALITY:

RETIREE COST OF LIVING INCREASE:

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.

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.

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.

## G. S. Curran \& Company, Ltd.

## 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 <br> Age | \% With <br> Children | Number of <br> Children | Average <br> Age |
| :--- | :---: | :---: | :---: |
| $\frac{\text { Che }}{25}$ | $62 \%$ | $\frac{1.7}{}$ | 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 $21^{\text {st }}$ 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.

## G. S. Curran \& Company, Ltd.

ACTUARIAL TABLES AND RATES

| Age | Male <br> Mortality Rates | Female <br> Mortality Rates | Retirement Rates | DROP <br> 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 | 0.00362 | 0.00348 | 0.06500 | 0.20000 | 0.00674 | 0.00000 | 0.00000 |
| 59 | 0.00420 | 0.00392 | 0.06500 | 0.20000 | 0.00976 | 0.00000 | 0.00000 |
| 60 | 0.00469 | 0.00444 | 0.06500 | 0.20000 | 0.00976 | 0.20000 | 0.40000 |
| 61 | 0.00527 | 0.00506 | 0.06500 | 0.28000 | 0.00976 | 0.06500 | 0.28000 |
| 62 | 0.00595 | 0.00581 | 0.06500 | 0.28000 | 0.00976 | 0.06500 | 0.28000 |
| 63 | 0.00675 | 0.00666 | 0.06500 | 0.28000 | 0.00976 | 0.06500 | 0.28000 |
| 64 | 0.00768 | 0.00765 | 0.15000 | 0.40000 | 0.00976 | 0.15000 | 0.40000 |
| 65 | 0.00876 | 0.00862 | 0.15000 | 0.40000 | 0.00976 | 0.15000 | 0.40000 |
| 66 | 0.01001 | 0.00971 | 0.15000 | 0.40000 | 0.00976 | 0.15000 | 0.24000 |
| 67 | 0.01128 | 0.01095 | 0.15000 | 0.40000 | 0.00976 | 0.15000 | 0.24000 |
| 68 | 0.01274 | 0.01216 | 0.15000 | 0.40000 | 0.00976 | 0.15000 | 0.24000 |
| 69 | 0.01441 | 0.01344 | 0.15000 | 0.40000 | 0.00976 | 0.15000 | 0.24000 |
| 70 | 0.01607 | 0.01486 | 0.15000 | 0.40000 | 0.00976 | 0.15000 | 0.40000 |
| 71 | 0.01787 | 0.01674 | 0.15000 | 0.40000 | 0.00976 | 0.15000 | 0.40000 |
| 72 | 0.01980 | 0.01858 | 0.15000 | 0.40000 | 0.00976 | 0.15000 | 0.40000 |
| 73 | 0.02221 | 0.02067 | 0.15000 | 0.40000 | 0.00976 | 0.15000 | 0.40000 |
| 74 | 0.02457 | 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 |

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## PRIOR YEAR ASSUMPTIONS

DROP PARTICIPATION: All persons who enter the DROP are assumed to participate for the full 3 year period and retire after one full year of Post-DROP participation.

## 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.

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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.

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## NOTES:

