SHERIFFS' PENSION & RELIEF FUND

ACTUARIAL VALUATION AS OF
JUNE 30, 2016

G. S. CURRAN & COMPANY, LTD.

Actuarial Services

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December 8, 2016

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

Ladies and Gentlemen:

We are pleased to present our report on the actuarial valuation of the Sheriffs' Pension & Relief Fund for the fiscal year ending June 30, 2016. 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 Sheriffs' Pension & 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 2017, and to recommend the net direct employer contribution rate for Fiscal 2018. 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 Sheriffs' Pension & 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.

By: _____ _____

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

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SUMMARY OF VALUATION RESULTS
SHERIFFS' PENSION & RELIEF FUND

Valuation Date:		June 30, 2016	June 30, 2015
Census Summary:	Active Members	14,684	14,689
	Retired Members and Survivors	5,014	4,766
	Terminated Due a Deferred Benefit	389	354
	Terminated Due a Refund	5,690	5,374
Payroll:		$ 669,735,563	$ 656,499,456
Benefits in Payment:		$ 137,218,247	$ 126,604,621
Present Value of Future Benefits:		$ 4,749,629,209	$ 4,486,718,249
Actuarial Accrued Liability (EAN):		$ 3,545,155,452	$ 3,328,125,306
Frozen Unfunded Actuarial Accrued Liability:		$ 50,003,403	$ 54,953,449
Funding Deposit Account Credit Balance:		$ 30,142,795	$ 0
Actuarial Value of Assets (AVA):		$ 3,049,411,053	$ 2,822,174,398
Market Value of Assets (MVA):		$ 2,910,465,956	$ 2,882,373,570
Ratio of AVA to Actuarial Accrued Liability (EAN):		86.02%	84.80%

	Fiscal 2016	Fiscal 2015
Market Rate of Return:	-0.4%	3.8%
Actuarial Rate of Return:	6.6%	10.4%

	Fiscal 2017	Fiscal 2016
Employers' Normal Cost (Mid-year):	$ 97,310,989	$ 93,207,759
Amortization Cost (Mid-year):	$ 9,055,871	$ 8,798,295
Estimated Administrative Cost:	$ 1,768,771	$ 1,729,758
Projected Ad Valorem Tax Contributions:	$ 20,165,258	$ 20,200,569
Projected Revenue Sharing Funds:	$ 420,747	$ 421,429
Expected Insurance Premium Taxes Due:	$ 19,090,190	$ 18,605,064
Net Direct Employer Actuarially Required Contributions:	$ 68,459,436	$ 64,508,750
Projected Payroll:	$ 690,024,707	$ 676,382,757
Actual Employee Contribution Rate:	10.25%	10.25%
Actual Net Direct Employer Contribution Rate:	13.25%	13.75%
Actuarially Required Net Direct Employer Contribution Rate:	9.92%	9.54%

	Fiscal 2018	Fiscal 2017
Minimum Recommended Net Direct Employer Cont. Rate:	10.00%	9.50%

GENERAL COMMENTS

The values and calculations in this report were determined by applying statistical analysis and projections to system data and the assumptions listed. There is sometimes a tendency for readers to either dismiss results as mere "guesses" or alternatively ascribe absolute accuracy. In fact, neither of these descriptions is valid. Actuarial calculations by their very nature involve estimations. As such, it is likely that eventual results will differ from those presented. The degree to which such differences evolve will depend on several factors including the completeness and accuracy of data used; the degree to which assumptions approximate future experience, and the extent to which the mathematical model accurately describes the plan's design and future outcomes.

Data quality varies from system to system and year to year. The data inputs involve both asset information and census information of plan participants. In both cases, the actuary must rely on third parties; nevertheless, steps are taken to reduce the probability and degree of errors. The development of assumptions is primarily the task of the actuary; however, information and advice from plan administrators, staff and other professionals may be factored into the formation of assumptions. The process of setting assumptions is based primarily on analysis of past trends, but modification of historical experience is often required when the actuary has reason to believe that future circumstances may vary significantly from the past. Setting assumptions includes but is not limited to collecting past plan experience and studying general population demographics and economic factors from the past. The actuary will also consider current and future macro-economic and financial expectations as well as factors that are likely to impact the particular group under consideration. Hence, assumptions will also reflect the actuary's judgment in such areas as expectation of population increase and turnover for the plan in view of the particular factors which impact participants. Thus, the process of setting assumptions is not mere "guess work" but rather a process of mathematical analysis of past experience and of those factors likely to impact the future.

One area where the actuary is limited in his ability to develop accurate estimates is the projection of future investment earnings. The difficulties here are significant. First, the future is rarely like the past, and the data points available to develop stochastic trials are far fewer than the number required for statistical significance. In this area, some guess work is inevitable. However, there are tools available to lay a foundation for making estimates with an expectation of reliability. Although past data is limited, that which is available is likely to provide some insight into the future. This data consists of general economic and financial values such as past rates of inflation, rates of return variance, and correlations of returns among various asset classes along with the actual asset experience of the plan. In addition, the actuary can review the current asset market environment as well as economic forecasts from governmental and investment research groups to form a reasonable opinion with regard to probable future investment experience for the plan.

All of the above process would be in vain if the assumption process was static, and the plan would have to deal with the consequences of actual experience differing from assumptions after forty or fifty years of compounded errors. Fortunately, actuarial funding methods for pension plans all allow for periodic corrections of assumptions to conform with reality as it unfolds. This process of repeated correction of estimates produces results which although imperfect are nevertheless a reasonable approach to determine the level of funding and to provide for the future benefits of plan participants.

COMMENTS ON DATA

For the valuation, the administrative staff of the system furnished a census on electronic media 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 14,684 active members in the system, of whom 4,772 members have vested retirement benefits; 5,014 former members or their beneficiaries are receiving retirement benefits. An additional 6,079 terminated members have contributions remaining on deposit with the system; of this number, 389 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. 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, L.L.P. As indicated in the system's audit report, the net market value of system's assets was $2,910,465,956 as of June 30, 2016. Net investment income for Fiscal 2016 measured on a market value basis amounted to a loss of $12,277,606. Contributions to the system for the fiscal year totaled $209,730,603; benefits and expenses amounted to $169,360,611.

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

COMMENTS ON ACTUARIAL METHODS AND ASSUMPTIONS

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

Prior to the passage of Act 247 in the 2009 legislative session, in any year in which the net direct employer contribution was scheduled to decrease, the Board of Trustees could freeze the net direct employer contribution rate and use the excess funds collected, if any, to reduce the frozen unfunded actuarial accrued liability. Notwithstanding such a decrease, payments were made according to the regular amortization schedule, thereby reducing the amortization period. In Fiscal 2008 the excess contributions collected from the frozen employer contribution rate reduced the frozen unfunded actuarial accrued liability by $22,548,024. Based upon the additional contributions collected during Fiscal 2008, the current frozen unfunded actuarial accrued liability will be fully amortized by June 30, 2023. Subsequent to June 30, 2008, any surplus contributions collected as a result of R. S. 11:2175.1 are credited to the Funding Deposit Account. The funds may then be used, at the discretion of the Board, to reduce the Unfunded Accrued Liability, reduce future normal costs, as an offset to direct employer contributions, or to provide funding for a cost of living increase.

For Fiscal 2017, the Board of Trustees set the employer contribution rate to 13.25%, which was above the minimum recommended net direct employer contribution rate of 9.50%. If this produces a contribution excess during Fiscal 2017, the excess contributions will be deposited into the funding deposit account as of June 30, 2017.

The current year actuarial assumptions utilized for this report are based on the results of an actuarial experience study for the period July 1, 2009 – June 30, 2014, unless otherwise specified in this report. In reviewing the valuation interest rate, consideration was given to several factors. First, we considered consensus estimates of rates of return, standard deviations, and correlation coefficients for asset classes derived from various asset consulting firms. These factors were used to derive forward estimates of the Fund's portfolio. The valuation interest rate was reduced from 7.60% to 7.50% as a part of the Board approved a plan to reduce the valuation interest to 7.50% over a five year period. An inflation rate of 2.875% was implicit in both the assumed rate of return and rate of salary increases. Additional details are given in the complete Experience Report for fiscal years 2010 through 2014. With the exception of a change in the valuation interest rate, all assumptions utilized are the same as those used for the prior year.

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-eight through forty-two. All assumptions 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 plan assumptions on the normal cost accrual rate was an increase of 0.8947%.

RISK FACTORS

Defined benefit pension plans are subject to a number of risks. These can be related either to plan assets or liabilities. In order to pay benefits, the plan must have sufficient assets. Several factors can lead to asset levels which are below those required to pay promised benefits. The first risk in this regard is the failure to contribute adequate funds to the plan. In some ways, this is the greatest risk, since other risks can usually be addressed by adequate actuarial funding.

All pension plans are subject to asset performance risk. Asset performance is comprised of the real rates of return earned on the portfolio of investments plus the underlying inflation rate. High levels of inflation or deflation can present the plan with problems by either reducing the purchasing power of plan benefits or impairing asset values in the trust. Asset performance over the long run depends not only on average returns but also on the volatility of returns. Two portfolios of identical size with identical average rates of return will accumulate different levels of assets if the volatility of returns differs since increased volatility reduces the accumulation of assets. Another element of asset risk is reinvestment risk. Recent interest rate declines have subjected pension plans to an increase in this risk. As fixed income securities have matured, investment managers have been forced to reinvest funds at decreasing rates of return. For pension plans which require significant net cash flow above contributions to fund benefit payments, the risk of insufficient liquidity is another risk component which can create problems if it becomes necessary to sell securities under unfavorable market conditions in order to raise cash necessary to pay retirement benefits. Even for individual securities, insolvency and performance risk can subject a plan to stress if these investments comprise a significant portion of plan assets. Security insolvency or severe underperformance can result in steep increases in sponsor contributions where individual investments comprise more than a de minimis amount of the investment portfolio.

In addition to asset risk, the plan is also subject to risks related to liabilities. These risks include longevity risk (the risk that retirees will live longer than expected), termination risk (the risk that fewer than the anticipated number of members will terminate service prior to retirement), and other factors that may have an impact on the liability structure of the plan. Final average compensation plans are vulnerable to unexpectedly large increases in salary for individual members near retirement. Conversely, in cases where plans have large unfunded liabilities, payroll contraction is a risk insofar as contributions which are typically reported as a percentage of payroll may increase as payrolls decline.

Liability risk also includes items such as data errors. Significant errors in plan data can distort or disguise plan liabilities. When data corrections are made, the plan may experience unexpected increases or decreases in liabilities. Even natural disasters and dislocations in the economy or other

unforeseen events can present risks to the plan. These events can affect member payroll and plan demographics, both of which impact costs.

Recommended actuarial contributions are based on expectations related to asset and liability performance; all of the above mentioned factors can produce unexpected changes in the future cost structures of the plan. For this reason, future costs may differ significantly from current levels. Ordinarily, variations in these factors will offset to some extent. However, even with the expectation that not all variations in costs will likely travel in the same direction, certain factors have the potential on their own accord to pose a significant risk to future cost levels and solvency.

Beyond identifying risk categories, it is possible to quantify some risk factors. One fairly well known risk metric is the funded ratio of the plan. The rate is given as plan assets divided by plan liabilities. However, the definition of each of these terms may vary. The two typical alternatives used for assets are the market and actuarial value of assets. There are a number of alternative measures of liability depending on the funding method employed. The Governmental Accounting Standards Board (GASB) specifies that for financial reporting purposes, the funded ratio is determined by using the market value of assets divided by the entry age normal accrued liability. This value is given in the system's financial report. Alternatively, we have calculated the ratio of the actuarial value of assets to the entry age normal accrued liability based on the funding methodology used to fund the plan. The ratio is 86.02% as of June 30, 2016. This value gives some indication of the financial strength of the plan; however, it does not guarantee the ability of the fund to pay benefits in the future or indicate that in the future, contributions are likely to be less than or greater than current contributions. In addition, the ratio cannot be used in isolation 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 underlying trends in this value. One additional risk measure is the sensitivity of the plan's cost structure to asset gains and losses. For this plan, we have determined that based on current assets and demographics, for each percentage under (over) the assumed rate of return on the actuarial value of assets, there will be a corresponding increase (reduction) in the actuarially required contribution as a percentage of projected payroll of 0.45% for the fund.

The ability of a system to recover from adverse asset or liability performance is related to the maturity of the plan population. In general, plans with increasing active membership are less sensitive to asset and liability gains and losses than mature plans since changes in plan costs can be partially allocated to new members. If the plan has a large number of active members compared to retirees, asset or liability losses can be more easily addressed. As more members retire, contributions can only be collected from a smaller segment of the overall plan population. Often, population ratios of actives to annuitants are used to measure the plan's ability to adjust or recover from adverse events since contributions are made by or on behalf of active members but not for retirees. Thus, if the plan suffers a mortality loss through increased longevity, this will affect both actives and retirees, but the system can only fund this loss by contributions related to active members. A measure of risk related to plan maturity is the ratio of total benefit payments to active payroll. For Fiscal 2016, this ratio is 20.49%; ten years ago this ratio was 11.60%.

One other area of risk is the risk that plan assumptions will need to be revised to conform to changing actual or expected plan experience. Such assumption revisions could relate to demographic or economic factors. With regard to the economic assumptions, we have determined that a reduction in the valuation interest rate by 1% (without any change to other collateral factors) would increase the actuarially required employer contribution rate for Fiscal 2017 by 9.23% of payroll.

There is a risk that future actuarial measurements may differ significantly from current measurements presented in this report due to factors such as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, and changes in plan provisions or applicable law. Analysis of the effect of all these factors and additional risk metrics is beyond the scope of this report.

CHANGES IN PLAN PROVISIONS

The following changes to the system were enacted during the 2016 Regular Session of the Louisiana Legislature:

ACT 176 provides that the actuarial note for any bill prefiled at least 45 days prior to a regular session of the legislature shall be completed and filed at least five days prior to the convening of that session.

ACT 410 requires the executive director or person holding the equivalent position of each state or statewide retirement system to file a Tier 2.1 personal financial statement.

ACT 323 provides that for the Sheriffs Pension and Relief Fund when a member dies in the line of duty because of an intentional violent act the surviving spouse or minor children or both shall be eligible to receive death benefit as follows: the surviving spouse shall be eligible to receive the greater of 50% of the member's final average compensation (FAC) or a reduced benefit as if the member had retired on the date of death. If the member leaves a child or children in addition to the surviving spouse, the child or children shall be eligible to receive a benefit equaling the difference between the benefit received by the spouse and 100% of the member's FAC.

It also provides that when a child reaches the age of 18, the benefit shall cease unless the child is enrolled as a full-time student in good standing at a board-approved or accredited school, college, or university and is under the age of 23. In addition it provides that in the event of the death of the surviving spouse while any eligible surviving child or children are still eligible to receive a benefit, the surviving spouse's portion of the death benefit shall be divided equally amongst all eligible children. The act also provides that if there is no surviving spouse, any child or children shall be eligible to receive 100% of the member's FAC divided equally among the surviving children.

ACT 460 requires that at least every five years the legislative auditor report to the legislature comparative summaries of each system's reported actuarial assumptions and funded ratio and his findings as to the appropriateness of each system's assumptions.

ACT 621 places a member of the House Committee on Retirement appointed by the speaker of the House of Representatives as a trustee on each of the boards of the state and statewide retirement systems, instead of the chairman of the House Committee on Retirement.

ASSET EXPERIENCE

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

	Market Value	Actuarial Value
2007	16.0%	10.2%
2008	-6.4%	6.5%
2009	-17.4%	-5.0% *
2010	10.9%	5.8%
2011	20.2%	5.0%
2012	-0.2%	2.3%
2013	12.9%	5.5%
2014	17.9%	11.6%
2015	3.8%	10.4%
2016	-0.4%	6.6%

* 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 fiscal 2016, the fund earned $36,006,396 of dividends, interest and other recurring income. Net income was decreased by realized and unrealized capital losses of $37,459,188. Investment expenses reduced income by $10,824,814. The geometric mean of the market value rates of return measured over the last ten years was 5.1%. For the last twenty-five years, the geometric mean return was 6.7%.

The actuarial rate of return is presented for comparison to the assumed long-term rate of return. As of June 30, 2012, the valuation interest rate was 8.0%. In response to a review of the assumed long term rate of return performed in the course of the development of the 2012 valuation, a recommendation was made to lower the valuation interest rate from 8.0% to 7.5%. The Board of Trustees approved a plan to reduce the valuation interest rate over five years by reducing the assumption by 0.10% each year from Fiscal 2013 through Fiscal 2017. The assumed rate of return for Fiscal 2017 is 7.5%. This rate is calculated based on the actuarial value of assets and all interest, dividends, and recognized capital gains as given in Exhibit VI. Investment income used to calculate this yield is based upon smoothing earnings above or below the valuation interest rate over a five-year period, subject to constraints as outlined in the section in the report describing actuarial assumptions. (Since the valuation interest rate was changed effective June 30, 2016, the amount smoothed each year was based on a valuation interest rate of 7.5% for Fiscal 2017, 7.6% for Fiscal 2016, 7.8% for Fiscal 2015, 7.9% for Fiscal 2013, and 8.0% for all prior years.) The difference between rates of return on an actuarial and market value basis results from the smoothing of gains or losses on investments relative to the valuation interest rate over the five-year period. Yields in excess of the valuation interest rate assumption will reduce future costs; yields below the assumption will increase future costs. For Fiscal 2016, the system experienced net actuarial investment losses of $29,124,561 below the actuarial assumed earnings rate of 7.60% in effect for Fiscal 2016 (Beginning with Fiscal 2017, actuarial

investment gains and losses will be measured against the 7.50% valuation interest rate). This shortfal in earnings produced an actuarial loss, which increased the normal cost accrual rate by 0.4311%

DEMOGRAPHICS AND LIABILITY EXPERIENCE

A reconciliation of the census for the system is given in Exhibit IX. The average active member is 43 years old with 9.52 years of service and an average salary of $45,610. The system's active contributing membership decreased during the fiscal year by 5 members. The plan has experienced a decrease in the active plan population of 70 members over the last five years. A review of the active census by age indicates that over the last ten years the population in the under-forty age group has slightly decreased while the proportion of active members over-forty increased. During this ten-year period the plan showed a decrease in the percentage of members with service less than ten years and a corresponding increase in all other service groups.

The average service retiree is 68 years old with a monthly benefit of $2,494. The retired population increased by 248 during the last fiscal year. Over the last five years the number of retirees increased by 1,298. During this same period, annual benefits in payment increased by $53,476,997 (i.e. by 64%).

Plan liability experience for Fiscal 2016 was favorable. Salary increases and disabilities were below projected levels and retiree deaths were above projected levels. These factors tend to reduce costs. Partially offsetting these factors were withdrawals below expected levels and retirements above projected levels. Overall, plan liability gains decreased the normal cost accrual rate by 0.3952%.

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 2017 as of July 1, 2016 is $93,855,052. The amortization payment on the fund's frozen unfunded actuarial accrued liability as of July 1, 2016, is $8,734,258. 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 16 of Exhibit I the total actuarially required contribution for Fiscal 2017 is $108,135,631. When this amount is reduced by projected ad valorem tax contributions, revenue sharing funds, and insurance premium taxes the remaining portion to be funded by direct employer contributions for Fiscal 2017 is $68,459,436 or 9.92% of projected payroll.

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:

Employer's Normal Cost Accrual Rate – Fiscal 2016	14.2801%
Factors Increasing the Normal Cost Accrual Rate:	
Assumption Changes	0.8947%
Asset Experience Loss	0.4311%
Factors Decreasing the Normal Cost Accrual Rate:	
Plan Liability Experience Gain	0.3952%
New Members	0.5877%
Employer's Normal Cost Accrual Rate – Fiscal 2017	14.6230%

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 2017, the net effect of the change in payroll on amortization costs was to increase such costs by 0.01% of projected payroll. (Note: This value also includes the effect of the reduction in the valuation interest rate). Required net direct employer contributions are also affected by the available ad valorem taxes, revenue sharing funds, and insurance premium taxes which the system receives each year. When these funds change as a percentage of payroll, net direct employer contributions are adjusted accordingly. We estimate that these funds will decrease by 0.05% of payroll in Fiscal 2017.

The balance in the Funding Deposit Account was zero as of June 30, 2015. Since the net direct employer contribution rate for Fiscal 2016 was set above the minimum actuarially required net direct employer contribution rate, $30,142,795 were added to the funding deposit account as of June 30, 2016.

Although the actuarially required net direct employer contribution rate for Fiscal 2016 was 9.54%, the Board voted to maintain the employer contribution at 13.75%. For Fiscal 2016, this system

experienced a contribution gain of $30,142,795. In accordance with R. S. 11:107, these additional contributions were credited to the system's Funding Deposit Account as of June 30, 2016. Although the actuarially required net direct employer contribution rate for Fiscal 2017 is 9.92%; the actual employer contribution rate for Fiscal 2017 is 13.25% of payroll. Since the contribution rate for Fiscal 2017 was held at 13.25% by the Board, any surplus in employer contributions collected during the fiscal year will be credited to the Funding Deposit Account.

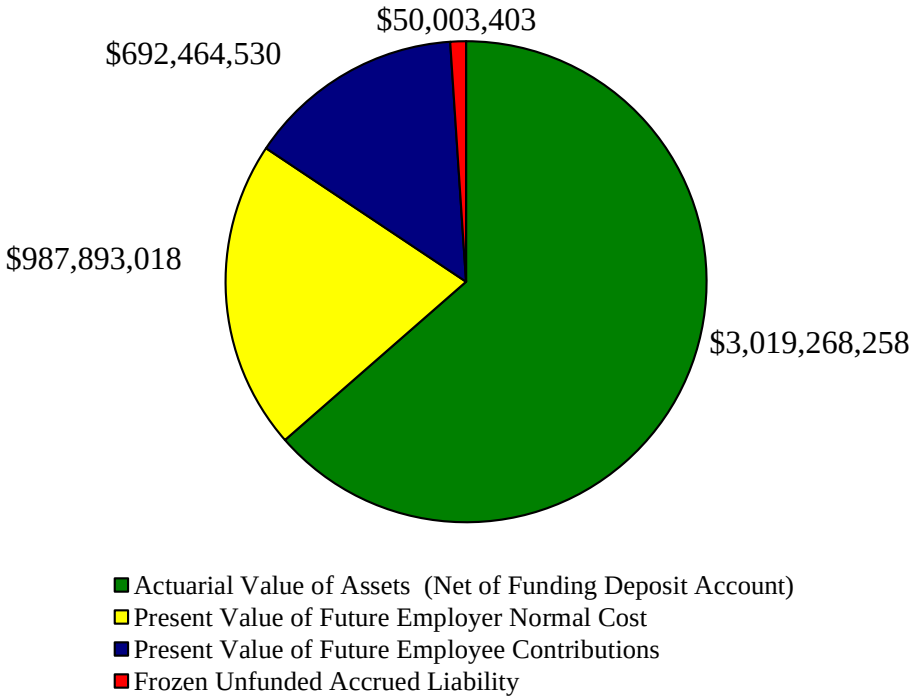
R.S. 11:103 requires that the net direct employer contributions be rounded to the nearest 0.25%, hence we are recommending a minimum net direct employer contribution rate of 10.00% for Fiscal 2018. Under the provisions of RS 11:105 and RS 11:107, the Board of Trustees may maintain the net direct employer contribution at any level between the minimum recommended employer contribution rate of 10.00% and the current level of 13.25%. If the Board sets the net direct employer contribution rate above the minimum rate, any excess funds collected will be deposited in the Funding Deposit Account. Funds in this account can be used to reduce either future required contributions in a particular year or the normal cost accrual rate. In addition, if the system may grant a cost of living increase to retirees, such increase may be paid from funds in the Funding Deposit Account.

COST OF LIVING INCREASES

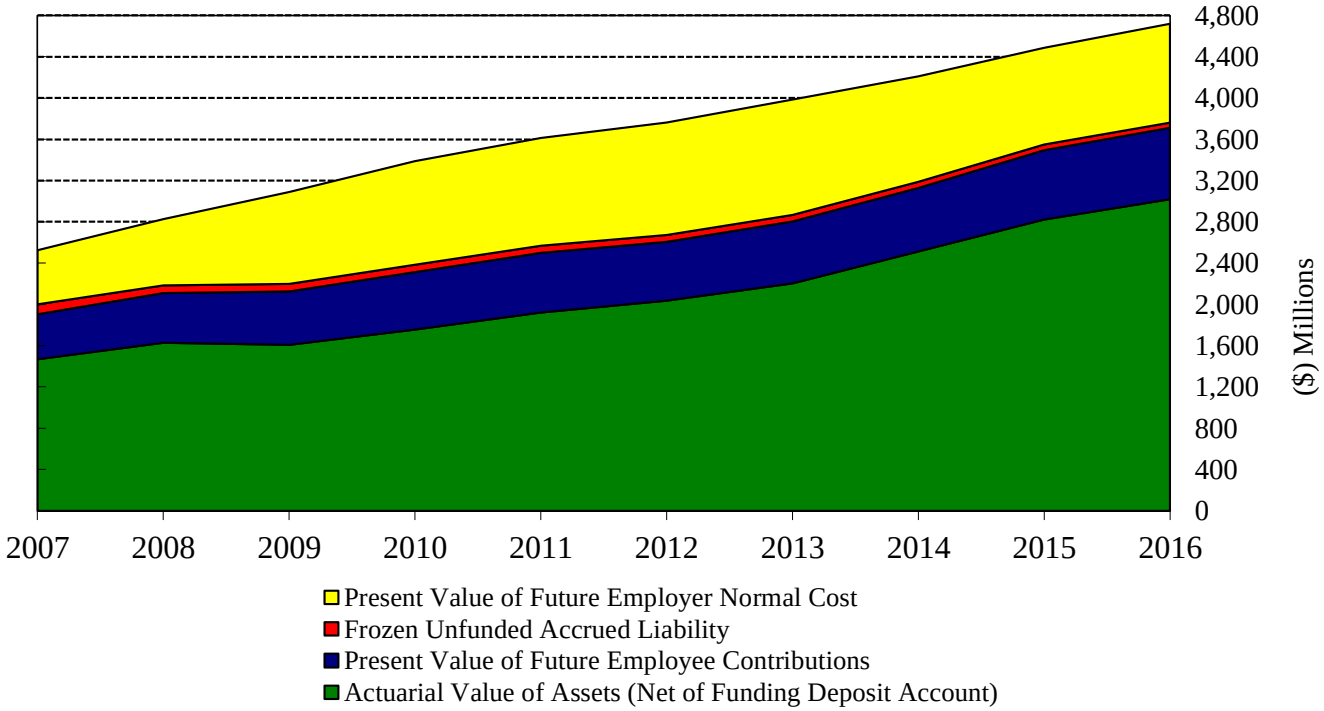
During Fiscal 2016, the actual cost of living (as measured by the US Department of Labor CPI-U) increased by 1.01%. Cost of living provisions for the system are detailed in R.S. 11:2178 and R.S. 11:246. R.S. 11:2178 details the provisions applicable to system retirees subject to certain limitations relative to the age and elapsed time since retirement. The permissible COLA is based on the members' current benefit and is subject to various percentage and dollar minimums and maximums. R.S. 11:246 provides cost of living increases for retirees and beneficiaries age 65 and over equal to 2% of the benefit 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 30th 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 above provisions require that the system's investments produce sufficient excess interest earnings to fund the increases or that such an increase be paid for by funds from the Funding Deposit Account. For fiscal 2016, the fund did not earn excess interest; however, the current balance in the Funding Deposit Account as of June 30, 2016 is $30,142,795. 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).

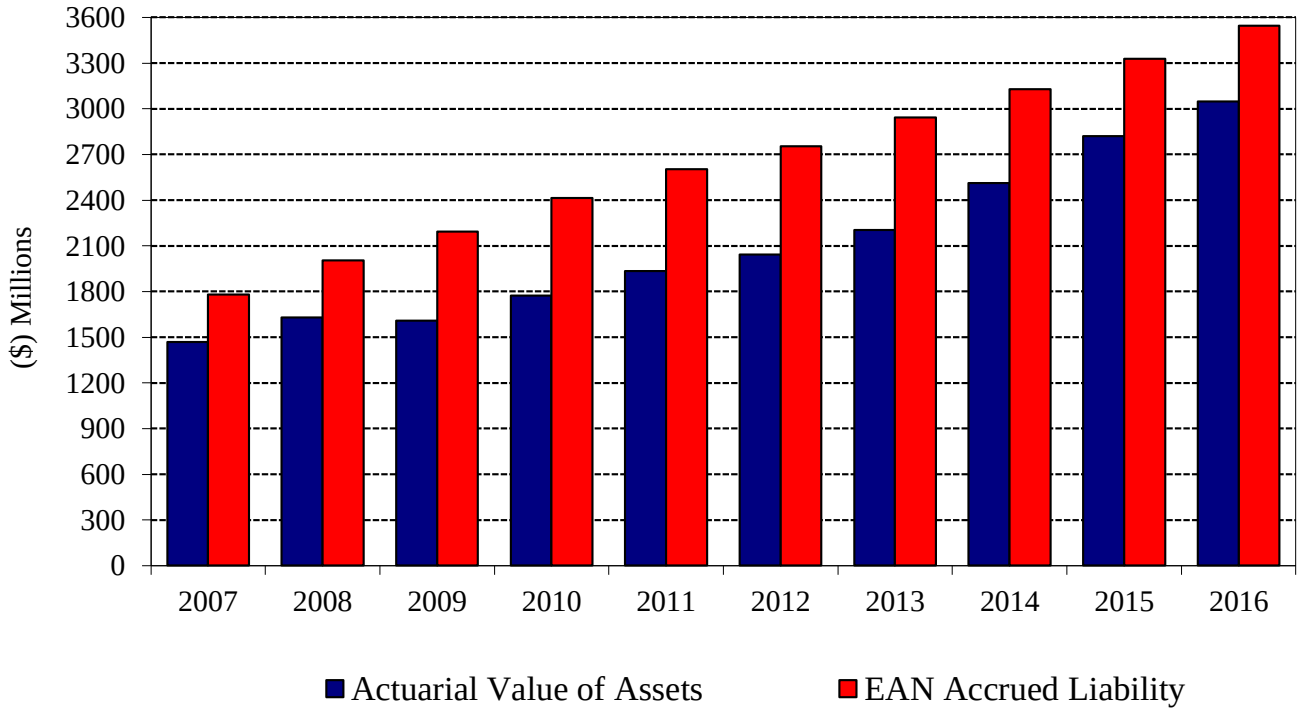
Components of Present Value of Future Benefits
June 30, 2016



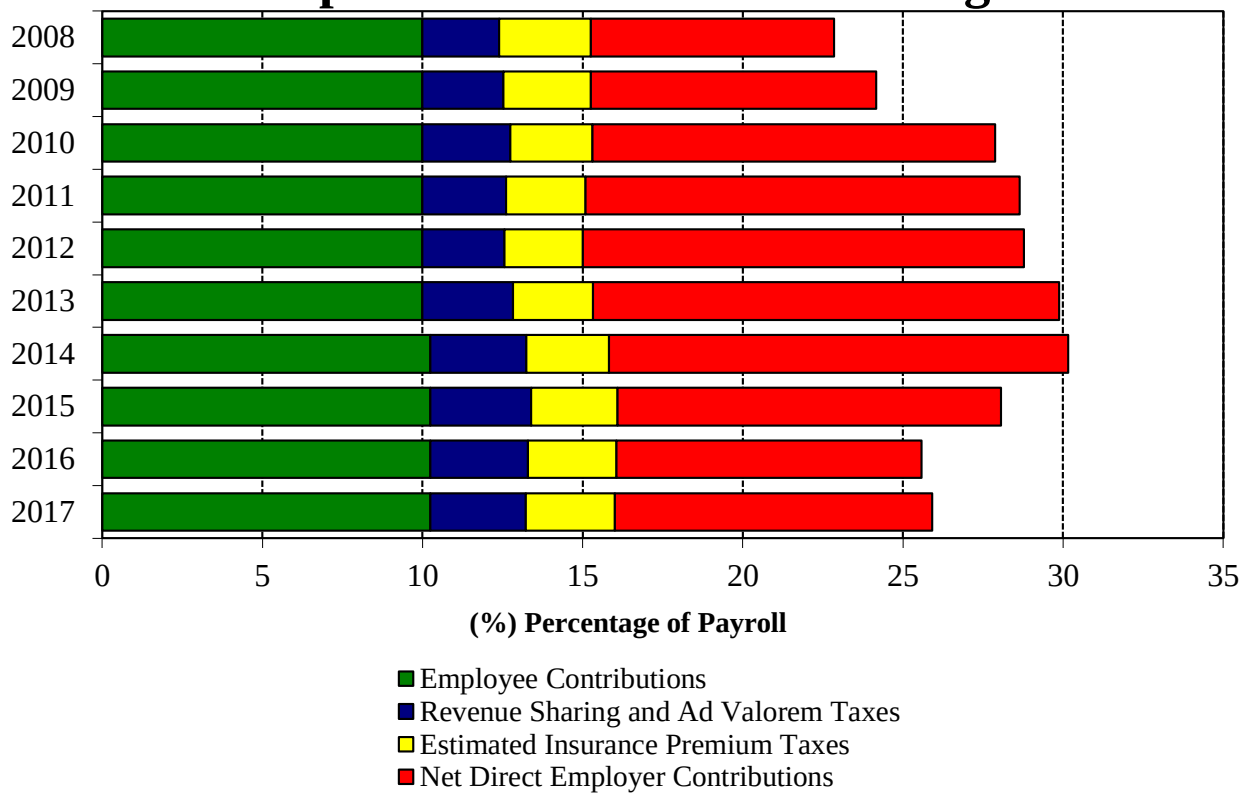
Components of Present Value of Future Benefits



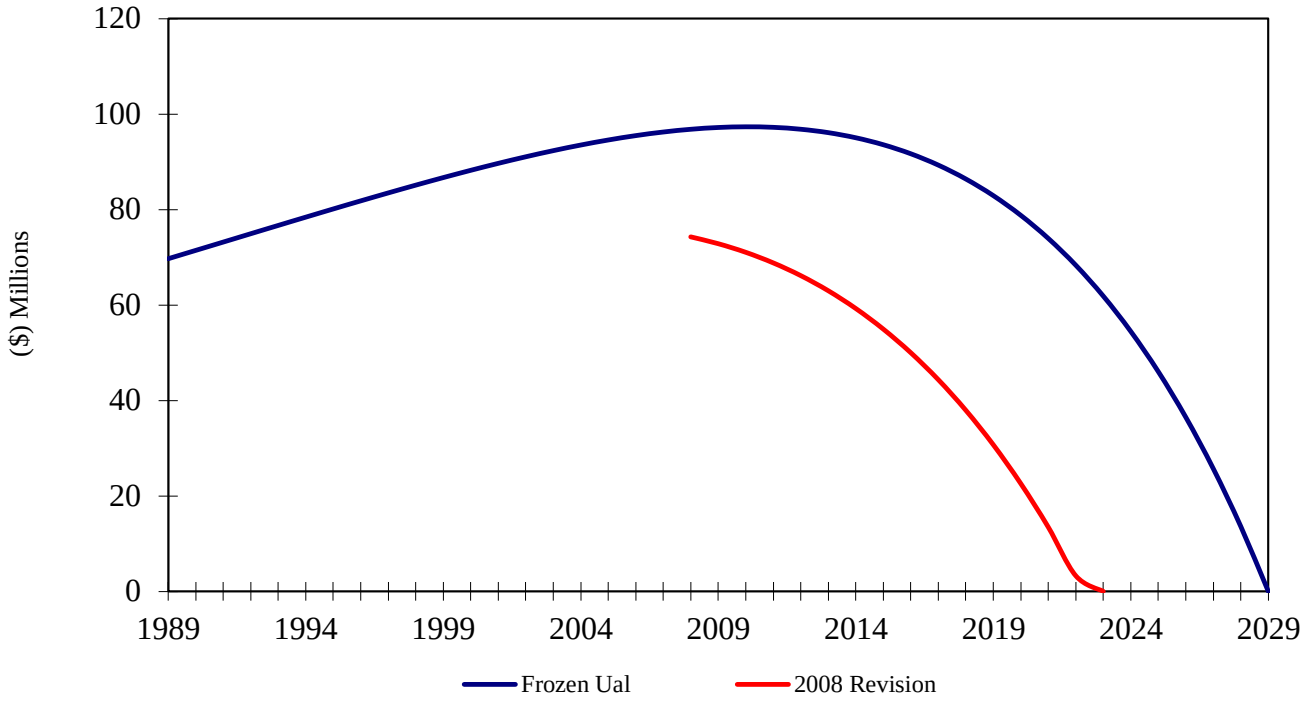
Actuarial Value of Assets vs. EAN Accrued Liability



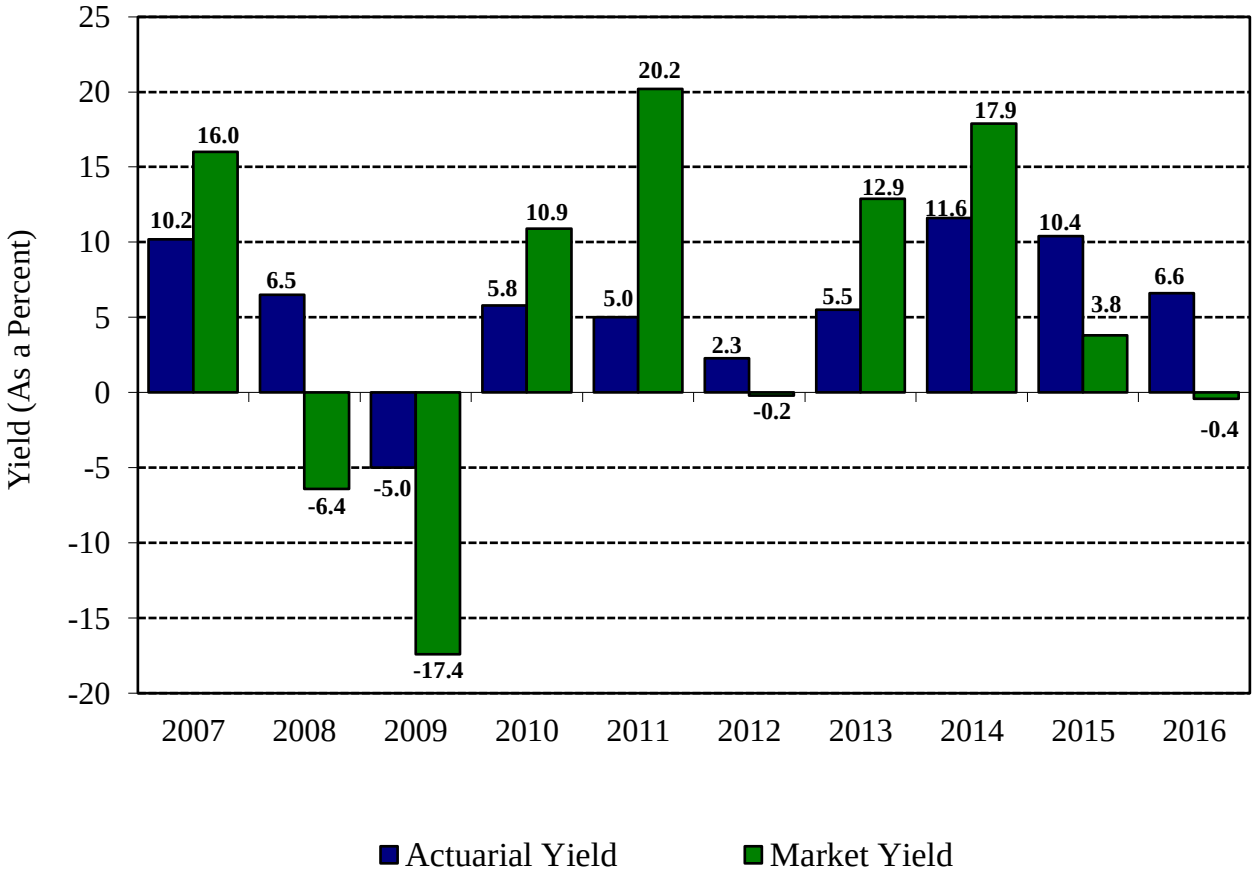
Components of Actuarial Funding



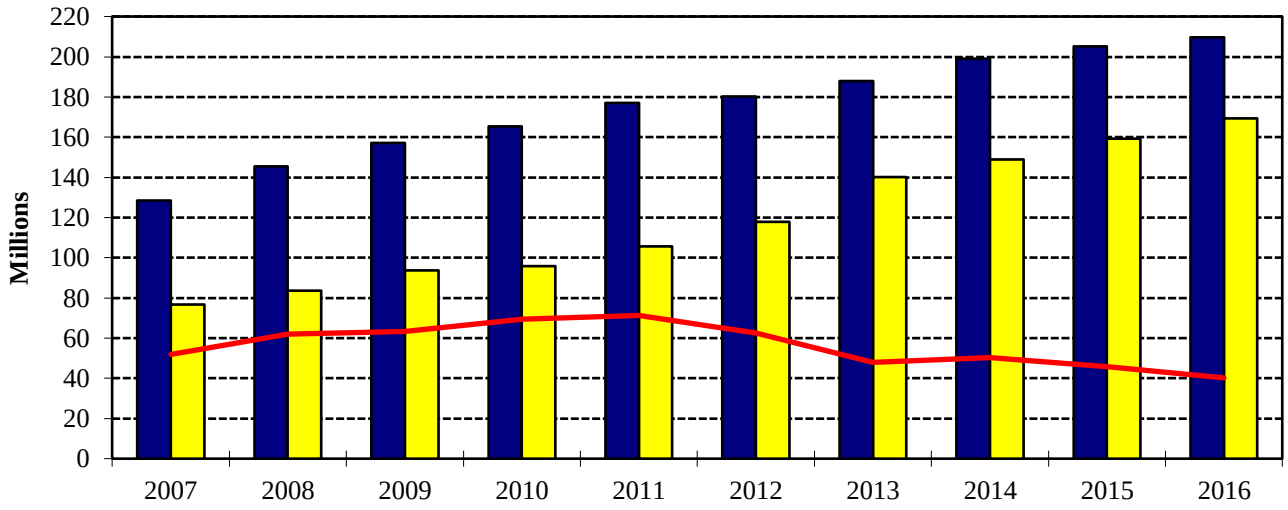
Frozen Unfunded Actuarial Accrued Liability



Historical Asset Yields

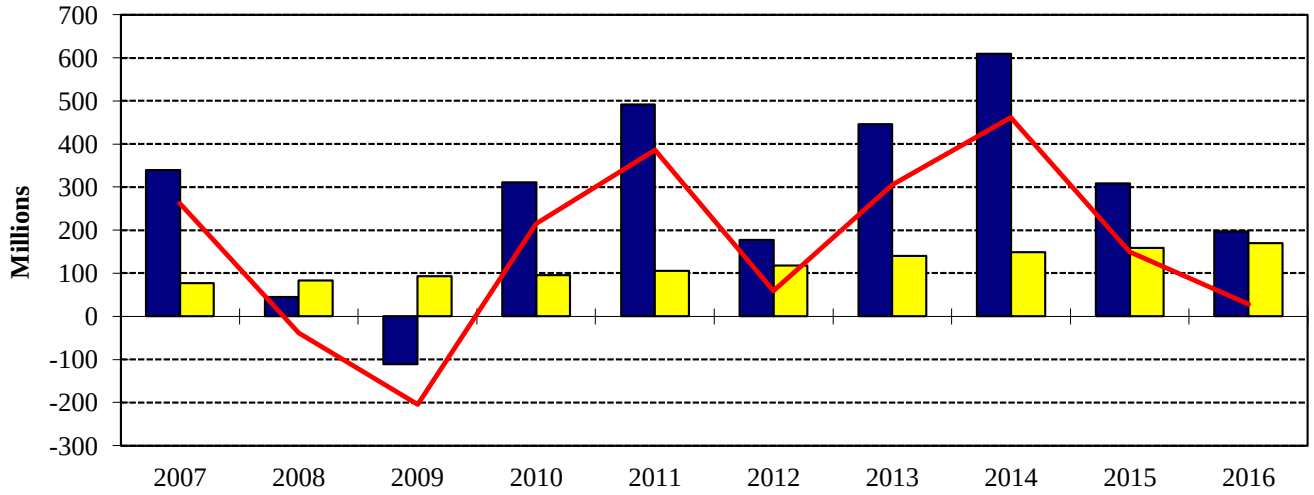


Net Non-Investment Income



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Non-Investment Income ($Mil)	128.6	145.7	157.1	165.3	177.0	180.2	188.1	199.2	205.2	209.7
Benefits and Expenses ($Mil)	76.6	83.6	93.8	95.8	105.6	117.8	140.2	149.0	159.3	169.4
Net Non-Investment Income ($Mil)	52.0	62.1	63.3	69.5	71.4	62.4	47.9	50.2	45.9	40.3

Total Income vs. Expenses

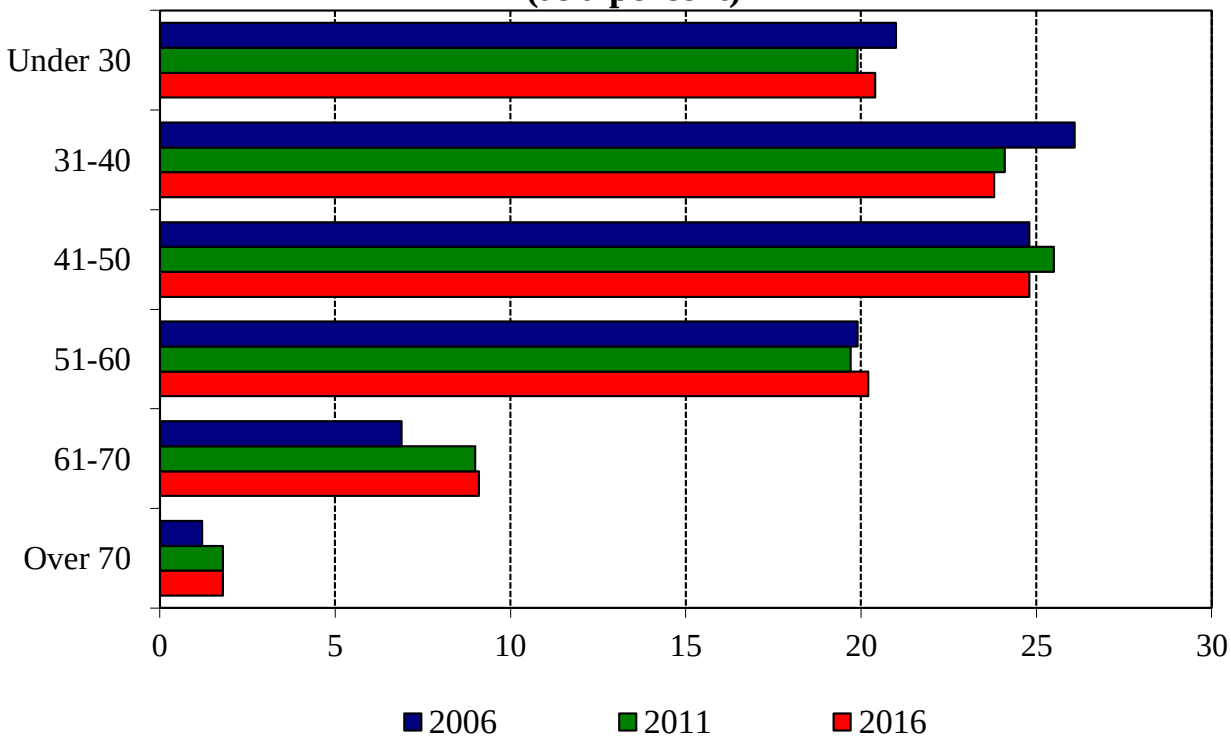


(Based on Market Value of Assets)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total Income ($Mil)	339.3	44.6	-111.0	311.0	491.3	176.9	445.4	609.8	308.6	197.5
Benefits and Expenses ($Mil)	76.6	83.6	93.8	95.8	105.6	117.8	140.2	149.0	159.3	169.4
Net Change in MVA ($Mil)	262.7	-39.0	-204.8	215.2	385.7	59.1	305.2	460.8	149.3	28.1

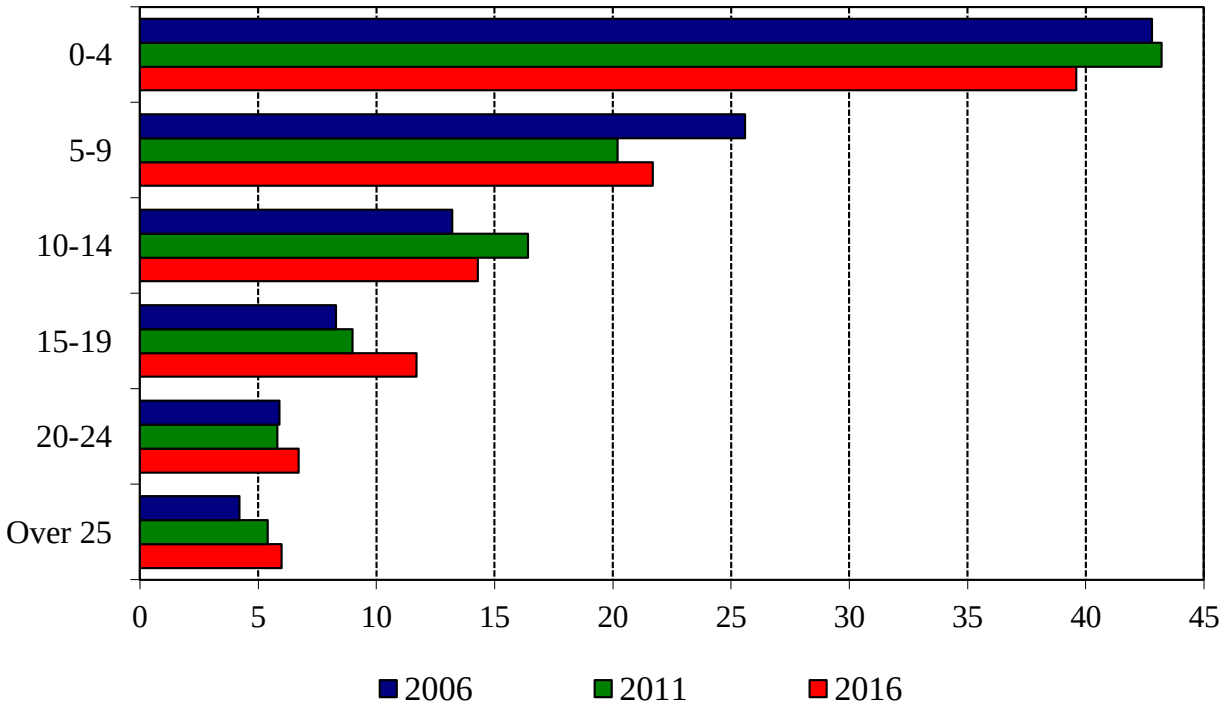
Active – Census By Age

(as a percent)



Active – Census By Service

(as a percent)



EXHIBITS

EXHIBIT I
ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS

1.	Present Value of Future Benefits	$	4,749,629,209
2.	Funding Deposit Account Credit Balance	$	30,142,795
3.	Unfunded Actuarial Accrued Liability	$	50,003,403
4.	Actuarial Value of Assets	$	3,049,411,053
5.	Present Value of Future Employee Contributions	$	692,464,530
6.	Present Value of Future Employer Normal Costs (1 + 2 – 3 – 4 – 5)	$	987,893,018
7.	Present Value of Future Salaries	$	6,755,761,549
8.	Employer Normal Cost Accrual Rate (6 ÷ 7)		14.622970%
9.	Projected Fiscal 2017 Salary for Current Membership	$	641,833,031
10.	Employer Normal Cost as of July 1, 2016 (8 × 9)	$	93,855,052
11.	Employer Normal Cost Interest Adjusted for Mid-year Payment	$	97,310,989
12.	Amortization Payment on Remaining Frozen Unfunded Accrued Liability with Payments increasing at 3.50% per year	$	8,734,258
13.	Amortization Payment Interest Adjust for Mid-year Payment	$	9,055,871
14.	TOTAL Employer Normal Cost and Amortization Payment (12 + 13)	$	106,366,860
15.	Estimated Administrative Cost for Fiscal 2017	$	1,768,771
16.	GROSS Employer Actuarially Required Contribution for Fiscal 2017 (14 + 15)	$	108,135,631
17.	Projected Ad Valorem Tax Contributions for Fiscal 2017	$	20,165,258
18.	Projected Revenue Sharing Funds for Fiscal 2017	$	420,747
19.	GROSS Employer Actuarially Required Contribution to be Funded by Direct Employer Contributions and Insurance Premium Taxes for Fiscal 2017 (16 – 17 – 18)	$	87,549,626
20.	Estimated Insurance Premium Taxes due for Fiscal 2017	$	19,090,190
21.	Employer's Net Direct Actuarially Required Contribution (19 – 20)	$	68,459,436
22.	Projected Payroll for Fiscal 2017	$	690,024,707
23.	Employers' Minimum Net Direct Actuarially Required Contribution as a % of Projected Payroll for Fiscal 2017 (21 ÷ 22)		9.92%
24.	Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2018 (23, Rounded to nearest 0.25%)		10.00%

EXHIBIT II
PRESENT VALUE OF FUTURE BENEFITS

PRESENT VALUE OF FUTURE BENEFITS FOR ACTIVE MEMBERS:

Retirement Benefits	$ 2,986,388,561	
Survivor Benefits	113,638,762	
Disability Benefits	14,421,543	
Vested Termination Benefits	72,957,214	
Refunds of Contributions	77,511,893	
TOTAL Present Value of Future Benefits for Active Members		$ 3,264,917,973

PRESENT VALUE OF FUTURE BENEFITS FOR TERMINATED MEMBERS:

Terminated Vested Members		
Due Benefits at Retirement	$ 61,279,524	
Terminated Members with Reciprocals		
Due Benefits at Retirement	955,728	
Terminated Members Due a Refund	19,876,346	
TOTAL Present Value of Future Benefits for Terminated Members		$ 82,111,598

PRESENT VALUE OF FUTURE BENEFITS FOR RETIREES:

Regular Retirees			
Maximum	$ 356,678,784		
Option 1	126,698,522		
Option 2	503,971,228		
Option 3	169,263,534		
Option 4	2,312,149		
Option 5	43,096,282		
TOTAL Regular Retirees		$ 1,202,020,499	
Disability Retirees		34,743,814	
Survivors & Widows		127,714,671	
Annuities Certain Payable to Retirees		25,459,950	
DROP and Back-DROP Account Balances		12,660,704	
TOTAL Present Value of Future Benefits for Retirees & Survivors			$ 1,402,599,638
TOTAL Present Value of Future Benefits			$ 4,749,629,209

EXHIBIT III – SCHEDULE A
MARKET VALUE OF ASSETS

CURRENT ASSETS:			
Cash in Banks	$	11,932,993	
Contributions and Taxes Receivable		11,051,007	
Accrued Interest and Dividends		4,706,945	
Investments Receivable		122,807,111	
Other Income		5,612,637	
TOTAL CURRENT ASSETS			$ 156,110,693
Property Plant & Equipment			$ 2,253,794
INVESTMENTS:			
Cash Equivalents	$	79,242,144	
Equities		1,654,452,466	
Fixed Income		824,819,736	
Alternative Investments		408,812,526	
Collateral for Securities Lending		32,460,530	
TOTAL INVESTMENTS			$ 2,999,787,402
TOTAL ASSETS			$ 3,158,151,889
CURRENT LIABILITIES:			
Accounts Payable	$	2,768,066	
Benefits Payable		21,983	
Refunds Payable		1,020,090	
Investments Payable		209,681,190	
Securities Lending Obligations		32,451,728	
Other Current Liabilities		1,742,876	
TOTAL CURRENT LIABILITIES			$ 247,685,933
MARKET VALUE OF ASSETS			$ 2,910,465,956

EXHIBIT III – SCHEDULE B
ACTUARIAL VALUE OF ASSETS

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

Fiscal year 2016	$	(232,843,968)
Fiscal year 2015		(108,809,371)
Fiscal year 2014		231,506,629
Fiscal year 2013		100,065,241
Fiscal year 2012		(158,417,021)
Total for five years	$	(168,498,490)

Deferral of excess (shortfall) of invested income:

Fiscal year 2016 (80%)	$	(186,275,174)
Fiscal year 2015 (60%)		(65,285,623)
Fiscal year 2014 (40%)		92,602,652
Fiscal year 2013 (20%)		20,013,048
Fiscal year 2012 (0%)		0
Total deferred for year	$	(138,945,097)

Market value of plan net assets, end of year	$	2,910,465,956
Preliminary actuarial value of plan assets, end of year	$	3,049,411,053

Actuarial value of assets corridor

85% of market value, end of year	$	2,473,896,063
115% of market value, end of year	$	3,347,035,849
Final actuarial value of plan net assets, end of year	$	3,049,411,053

EXHIBIT IV
PRESENT VALUE OF FUTURE CONTRIBUTIONS

Employee Contributions to the Annuity Savings Fund	$	692,464,530
Employer Normal Contributions to the Pension Accumulation Fund		987,893,018
Employer Amortization Payments to the Pension Accumulation Fund		50,003,403
Funding Deposit Account Credit Balance		(30,142,795)
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS	$	1,700,218,156

EXHIBIT V
CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRUED LIABILITY

Prior Year Frozen Unfunded Accrued Liability		$	54,953,449
Interest on Frozen Unfunded Accrued Liability	$ 4,176,462		
TOTAL Interest Adjusted Cost Elements		$	4,176,462
Amortization Payment on the Unfunded Accrued Liability	$ 8,481,885		
Interest on Amortization Payment	644,623		
Withdrawals from Funding Deposit Account	0		
TOTAL Interest Adjusted Employer Contributions		$	9,126,508
NET Change in Frozen Unfunded Accrued Liability		$	(4,950,046)
CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABILITY		$	50,003,403

EXHIBIT VI
ANALYSIS OF INCREASE IN ASSETS

Actuarial Value of Assets (June 30, 2015)		$ 2,822,174,398
INCOME:		
Member Contributions	$ 70,094,659	
Employer Contributions	93,996,292	
Irregular Contributions	6,794,166	
Ad Valorem Taxes and Revenue Sharing	20,240,422	
Insurance Premium Taxes	18,605,064	
Total Contributions		$ 209,730,603
Net (Depreciation) of Investments	$ (37,459,188)	
Interest & Dividends	35,996,966	
Miscellaneous Income	9,430	
Investment Expense	(10,824,814)	
Net Investment Income		$ (12,277,606)
TOTAL Income		$ 197,452,997
EXPENSES:		
Retirement Benefits	$ 149,210,559	
Refunds of Contributions	16,239,719	
Transfers to Other Systems	2,133,390	
Administrative Expenses	1,776,943	
TOTAL Expenses		$ 169,360,611
Net Market Value Income for Fiscal 2016 (Income – Expenses)		$ 28,092,386
Unadjusted Fund Balance as of June 30, 2016 (Fund Balance Previous Year + Net Income)		$ 2,850,266,784
Adjustment for Actuarial Smoothing		$ 199,144,269
Actuarial Value of Assets (June 30, 2016)		$ 3,049,411,053

EXHIBIT VII
FUNDING DEPOSIT ACCOUNT

Funding Deposit Account Balance as of June 30, 2015	$	0
Contributions to the Funding Deposit Account		30,142,795
Withdrawals from the Funding Deposit Account		0
Interest on Opening Balance at 7.60%		0
Funding Deposit Account Balance as of June 30, 2016	$	30,142,795

EXHIBIT VIII – Schedule A
PENSION BENEFIT OBLIGATION

Present Value of Credited Projected Benefits Payable to Current Employees	$	1,831,973,860
Present Value of Benefits Payable to Terminated Employees		82,111,598
Present Value of Benefits Payable to Current Retirees and Beneficiaries		1,402,599,638
TOTAL PENSION BENEFIT OBLIGATION	$	3,316,685,096
NET ACTUARIAL VALUE OF ASSETS	$	3,049,411,053
Ratio of Net Actuarial Value of Assets to Pension Benefit Obligation		91.94%

EXHIBIT VIII – Schedule B
ENTRY AGE NORMAL ACCRUED LIABILITIES

Accrued Liability for Active Employees	$	2,060,444,216
Accrued Liability for Terminated Employees		82,111,598
Accrued Liability for Current Retirees and Beneficiaries		1,402,599,638
TOTAL ENTRY AGE NORMAL ACCRUED LIABILITY	$	3,545,155,452
NET ACTUARIAL VALUE OF ASSETS	$	3,049,411,053
Ratio of Net Actuarial Value of Assets to Entry Age Normal Accrued Liability		86.02%

EXHIBIT IX
CENSUS DATA

	Active	Terminated with Funds on Deposit	Retired	Total
Number of members as of June 30, 2015	14,689	5,728	4,766	25,183
Additions to Census				
Initial membership	1,619	222		1,841
Omitted in error last year				
Death of another member			55	55
Adjustment for multiple records		1		1
Change in Status during Year				
Actives terminating service	(519)	519		
Actives who retired	(344)		344	
Actives entering DROP				
Term. members rehired	92	(92)		
Term. members who retire		(27)	27	
Retirees who are rehired	4		(4)	
Refunded who are rehired	62	17		79
DROP participants retiring				
DROP returned to work				
Omitted in error last year				
Eliminated from Census				
Refund of contributions	(894)	(283)		(1,177)
Deaths	(24)	(6)	(165)	(195)
Included in error last year				
Adjustment for multiple records	(1)		(9)	(10)
Number of members as of June 30, 2016	14,684	6,079	5,014	25,777

ACTIVES CENSUS BY AGE:

Age	Number Male	Number Female	Total Number	Average Salary	Total Salary
16 - 20	86	27	113	28,795	3,253,780
21 - 25	736	431	1,167	33,710	39,339,242
26 - 30	1,094	619	1,713	39,046	66,885,870
31 - 35	1,238	609	1,847	43,754	80,813,275
36 - 40	1,039	605	1,644	46,976	77,228,769
41 - 45	1,135	620	1,755	48,744	85,544,912
46 - 50	1,240	641	1,881	51,048	96,021,020
51 - 55	1,014	664	1,678	51,353	86,170,040
56 - 60	749	539	1,288	48,099	61,952,051
61 - 65	544	313	857	48,014	41,148,081
66 - 70	331	142	473	44,025	20,823,737
71 - 75	133	41	174	42,523	7,398,998
76 - 80	65	13	78	33,013	2,575,036
81 - 85	12	1	13	35,380	459,946
86 - 90	2	0	2	34,717	69,434
91 - 95	1	0	1	51,372	51,372
TOTAL	9,419	5,265	14,684	45,610	669,735,563

THE ACTIVE CENSUS INCLUDES 4,772 ACTIVES WITH VESTED BENEFITS 2 ACTIVE FORMER DROP PARTICIPANTS.

TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
31 - 35	5	2	7	19,882	139,175
36 - 40	25	15	40	22,643	905,731
41 - 45	43	20	63	24,250	1,527,757
46 - 50	91	33	124	25,580	3,171,873
51 - 55	99	30	129	21,265	2,743,246
56 - 60	5	4	9	12,961	116,653
61 - 65	6	1	7	9,350	65,451
66 - 70	3	1	4	14,259	57,035
71 - 75	1	2	3	10,554	31,661
81 - 85	1	0	1	1,881	1,881
86 - 90	2	0	2	1,240	2,480
TOTAL	281	108	389	22,527	8,762,943

TERMINATED MEMBERS DUE A REFUND OF CONTRIBUTIONS:

Contributions Ranging From		To	Number	Total Contributions
0	-	99	1,340	57,325
100	-	499	1,572	402,526
500	-	999	699	505,104
1000	-	1999	558	798,559
2000	-	4999	611	1,978,194
5000	-	9999	343	2,406,811
10000	-	19999	296	4,219,068
20000	-	99999	271	8,286,675
TOTAL			5,690	18,654,262

REGULAR RETIREES:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
41 - 45	1	0	1	35,179	35,179
46 - 50	4	1	5	54,022	270,109
51 - 55	89	40	129	48,680	6,279,714
56 - 60	359	212	571	39,594	22,608,064
61 - 65	565	290	855	33,544	28,680,509
66 - 70	653	291	944	29,732	28,066,837
71 - 75	508	199	707	24,617	17,404,237
76 - 80	303	105	408	21,852	8,915,684
81 - 85	161	64	225	18,796	4,229,070
86 - 90	73	22	95	18,947	1,799,999
91 - 99	17	14	31	18,055	559,691
TOTAL	2,733	1,238	3,971	29,929	118,849,093

DISABILITY RETIREES:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
26 - 30	2	0	2	15,055	30,110
31 - 35	0	1	1	9,977	9,977
36 - 40	3	1	4	17,350	69,399
41 - 45	11	4	15	22,824	342,357
46 - 50	13	6	19	18,254	346,824
51 - 55	19	9	28	24,500	686,008
56 - 60	18	12	30	20,226	606,786
61 - 65	28	12	40	15,598	623,912
66 - 70	18	5	23	12,931	297,421
71 - 75	12	3	15	13,415	201,231
76 - 80	9	3	12	12,062	144,744
81 - 85	3	2	5	14,883	74,414
86 - 90	3	0	3	11,322	33,966
91 - 99	1	0	1	14,371	14,371
TOTAL	140	58	198	17,583	3,481,520

SURVIVORS:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
0 - 25	10	27	37	6,856	253,679
26 - 30	1	1	2	9,032	18,063
31 - 35	0	3	3	16,314	48,941
36 - 40	0	8	8	18,989	151,914
41 - 45	3	14	17	20,366	346,215
46 - 50	0	14	14	31,711	443,953
51 - 55	4	38	42	19,571	821,989
56 - 60	4	54	58	21,887	1,269,423
61 - 65	5	96	101	22,401	2,262,510
66 - 70	2	114	116	19,315	2,240,540
71 - 75	10	139	149	18,200	2,711,757
76 - 80	6	100	106	13,979	1,481,785
81 - 85	2	94	96	14,548	1,396,598
86 - 90	1	57	58	16,968	984,137
91 - 99	0	38	38	12,003	456,130
TOTAL	48	797	845	17,619	14,887,634

ACTIVE MEMBERS:

Attained Ages	Completed Years of Service											
	0	1	2	3	4	5- 9	10-14	15-19	20-24	25-29	30&Over	Total
0 - 20	88	24	1									113
21 - 25	449	341	202	99	56	20						1,167
26 - 30	305	334	266	190	160	438	20					1,713
31 - 35	194	187	154	123	131	675	363	20				1,847
36 - 40	131	134	83	78	70	430	420	285	13			1,644
41 - 45	126	109	91	93	56	370	278	424	193	15		1,755
46 - 50	108	104	82	78	48	337	248	326	344	198	8	1,881
51 - 55	98	69	88	74	49	282	236	228	209	219	126	1,678
56 - 60	87	78	64	61	43	253	204	217	103	87	91	1,288
61 - 65	40	45	44	61	28	187	168	115	82	45	42	857
66 - 70	31	24	15	26	22	127	103	60	35	18	12	473
71 & Over	14	13	8	20	11	70	53	45	11	11	12	268
Totals	1,671	1,462	1,098	903	674	3,189	2,093	1720	990	593	291	1,4684

AVERAGE ANNUAL SALARY OF ACTIVE MEMBERS:

Attained Ages	Completed Years of Service											Average Salary
	0	1	2	3	4	5- 9	10-14	15-19	20-24	25-29	30&Over	
0 - 20	28,746	29,078	26,308									28,795
21 - 25	30,171	33,765	35,894	39,280	40,571	43,375						33,710
26 - 30	31,330	34,772	39,100	40,168	42,641	45,409	48,624					39,046
31 - 35	32,986	36,032	38,489	40,544	42,649	46,719	51,326	50,392				43,754
36 - 40	33,836	36,469	39,280	38,676	41,477	46,501	52,024	56,517	59,712			46,976
41 - 45	32,089	35,769	39,405	40,700	43,104	45,517	50,720	56,808	60,924	68,773		48,744
46 - 50	33,834	36,455	36,743	37,373	40,423	43,214	51,397	55,858	62,871	65,721	68,457	51,048
51 - 55	31,753	32,090	36,733	39,736	43,593	42,845	49,848	52,117	59,511	66,931	77,064	51,353
56 - 60	32,482	32,485	36,519	41,332	38,229	41,122	45,622	51,854	59,729	68,200	77,378	48,099
61 - 65	30,903	33,377	31,431	39,886	47,023	42,373	44,527	54,479	57,982	69,663	88,537	48,014
66 - 70	33,425	30,587	31,823	33,973	41,951	39,587	47,366	49,353	52,505	62,591	78,179	44,025
71 & Over	31,964	30,219	27,098	40,502	39,069	32,092	39,295	43,093	46,249	54,245	73,680	39,384
Average	31,609	34,553	37,441	39,659	42,119	44,332	49,600	54,484	60,458	66,600	78,488	45,610

TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

Attained Ages	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									7			7
36 - 40								40				40
41 - 45							61	2				63
46 - 50						120	4					124
51 - 55	13	26	31	28	28	3						129
56 - 60	6		1		2							9
61 - 65	7											7
66 - 70	4											4
71 - 75	3											3
76 - 80												0
81 - 85	1											1
86 - 90	2											2
91 & Over												0
Totals	36	26	32	28	30	123	65	42	7	0	0	389

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

Attained Ages	Years Until Retirement Eligibility											Average Benefit
	0	1	2	3	4	5- 9	10-14	15-19	20-24	25-29	30&Over	
0 - 30												0
31 - 35									19,882			19,882
36 - 40								22,643				22,643
41 - 45							24,457	17,939				24,250
46 - 50						26,163	8,082					25,580
51 - 55	25,026	23,682	17,274	22,217	21,284	16,206						21,265
56 - 60	17,249		872		6,143							12,962
61 - 65	9,350											9,350
66 - 70	14,259											14,259
71 - 75	10,554											10,554
76 - 80												0
81 - 85	1,881											1,881
86 - 90	1,240											1,240
91 & Over												0
Average	16,315	23,682	16,762	22,217	20,275	25,920	23,449	22,419	19,882	0	0	22,527

SERVICE RETIREES:

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 - 50	4	2										6
51 - 55	48	38	20	9	9	5						129
56 - 60	129	117	84	101	49	86	3	1	1			571
61 - 65	75	82	81	106	73	339	96	3				855
66 - 70	64	55	64	112	70	266	275	35	3			944
71 - 75	18	31	32	56	29	170	207	144	20			707
76 - 80	9	8	20	18	16	49	109	107	48	23	1	408
81 - 85	5	2	6	6	8	24	23	66	32	40	13	225
86 - 90	1	2			1	5	7	12	20	21	26	95
91 & Over							1		4	10	16	31
Totals	353	337	307	408	255	944	721	368	128	94	56	3,971

AVERAGE ANNUAL BENEFITS PAYABLE TO SERVICE RETIREES:

Attained Ages	Completed Years Since Retirement											Average Benefit
	0	1	2	3	4	5- 9	10-14	15-19	20-24	25-29	30&Over	
0 - 50	51,798	49,047										50,881
51 - 55	47,445	53,919	43,841	58,930	38,588	39,790						48,680
56 - 60	41,311	39,666	36,883	42,344	38,631	37,724	35,133	15,246	5,288			39,594
61 - 65	28,054	30,548	34,302	40,778	34,914	32,782	33,770	22,339				33,544
66 - 70	29,009	24,580	28,841	36,312	27,799	30,394	29,601	20,571	18,202			29,732
71 - 75	17,776	21,269	25,071	30,299	28,675	25,964	26,132	19,939	20,002			24,617
76 - 80	15,179	25,799	18,822	25,976	15,430	25,707	25,489	20,945	17,417	15,614	7,607	21,852
81 - 85	22,460	26,461	21,323	19,137	23,176	20,941	27,731	18,963	16,481	12,527	16,558	18,796
86 - 90	10,729	24,072			6,651	7,693	21,765	24,733	20,832	18,387	17,081	18,947
91 & Over							17,923		21,527	19,917	16,031	18,055
Average	34,997	34,455	32,267	37,930	31,394	30,567	28,410	20,280	18,172	15,377	16,490	29,929

DISABILITY RETIREES:

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 - 30	1	1										2
31 - 35						1						1
36 - 40	2					2						4
41 - 45	5	1	1	2	1	1	3	1				15
46 - 50	2			3	3	7	1	2	1			19
51 - 55	4	1	1	4	3	8	3	4				28
56 - 60		1	1	4	2	7	5	4	3	3		30
61 - 65	2	1				10	6	11	5	3	2	40
66 - 70		2	1		1	4	4	6	3	2		23
71 - 75						1	3	3	3	4	1	15
76 - 80				1			1		2	5	3	12
81 - 85										1	4	5
86 - 90							1				2	3
91 & Over										1		1
Totals	16	7	4	14	10	41	27	31	17	19	12	198

AVERAGE ANNUAL BENEFITS PAYABLE TO DISABILITY RETIREES:

Attained Ages	Completed Years Since Retirement											Average Benefit
	0	1	2	3	4	5- 9	10-14	15-19	20-24	25-29	30&Over	
0 - 30	12,652	17,457										15,055
31 - 35						9,977						9,977
36 - 40	22,791					11,909						17,350
41 - 45	35,298	16,167	27,787	15,493	22,880	13,014	15,226	9,358				22,824
46 - 50	43,925			18,176	18,063	15,489	13,200	10,606	7,420			18,254
51 - 55	34,869	47,036	28,590	31,343	24,847	24,148	10,424	11,634				24,500
56 - 60		10,461	14,808	34,768	20,165	24,847	17,800	19,227	11,010	9,749		20,226
61 - 65	20,597	12,040				11,714	31,130	13,790	10,132	13,201	12,402	15,598
66 - 70		17,537	19,746		15,573	16,692	16,222	7,899	9,430	9,846		12,931
71 - 75						12,956	11,769	18,659	11,387	13,199	10,032	13,415
76 - 80				21,690			9,500		7,966	11,618	13,178	12,062
81 - 85										17,274	14,285	14,883
86 - 90							6,215				13,876	11,322
91 & Over										14,371		14,371
Average	31,453	19,748	22,732	26,546	20,751	17,542	17,846	13,196	9,970	12,162	13,272	17,583

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		4	5	4	2	12	6					33
21 - 25	1		1				2					4
26 - 30				1			1					2
31 - 35				1		1		1				3
36 - 40			1	2		4		1				8
41 - 45		1	1	1	1	6	5	1			1	17
46 - 50		3	3		1	2	2	3				14
51 - 55	2	2		2	1	10	11	6	4	3	1	42
56 - 60	2	4	5	8	1	13	10	6	7	2		58
61 - 65		2	5	3	7	22	26	15	10	5	6	101
66 - 70	1	1	5	6	3	24	31	23	11	3	8	116
71 - 75		3	3	2	2	31	32	42	22	8	4	149
76 - 80		1		2		7	12	31	29	12	12	106
81 - 85		1	1		1	3	3	15	21	21	30	96
86 - 90						1	2	6	10	12	27	58
91 & Over								2	1	3	32	38
Totals	6	22	30	32	19	136	143	152	115	69	121	845

AVERAGE ANNUAL BENEFITS PAYABLE TO SURVIVORS OF FORMER MEMBERS:

Attained Ages	Completed Years Since Retirement											Average Benefit
	0	1	2	3	4	5- 9	10-14	15-19	20-24	25-29	30&Over	
0 - 20		7,605	10,034	6,553	5,858	5,804	6,854					6,948
21 - 25	5,279		6,132				6,488					6,097
26 - 30				14,227			3,836					9,031
31 - 35				18,609		25,826		4,506				16,314
36 - 40			25,150	22,077		18,004		10,595				18,989
41 - 45		34,402	61,421	12,074	18,183	22,265	14,473	9,012			5,170	20,366
46 - 50		44,622	55,623		22,898	27,952	15,574	11,090				31,711
51 - 55	20,117	36,170		30,697	20,588	25,148	18,588	11,005	13,201	15,675	5,624	19,571
56 - 60	21,662	17,277	43,392	23,647	14,334	27,104	20,829	11,871	11,352	12,594		21,887
61 - 65		38,815	23,140	33,905	29,324	26,846	25,822	17,459	12,457	10,107	10,539	22,401
66 - 70	14,277	5,344	18,756	21,100	43,188	18,991	24,183	16,984	13,167	16,499	10,067	19,315
71 - 75		17,273	15,865	31,071	7,189	23,092	19,170	16,538	17,234	12,696	7,802	18,200
76 - 80		16,152		16,166		16,199	13,167	14,602	13,622	12,403	13,781	13,979
81 - 85		4,744	3,226		5,361	39,825	23,686	17,212	14,461	13,656	11,470	14,548
86 - 90						7,902	12,875	22,617	26,530	17,774	12,452	16,968
91 & Over								14,788	26,758	17,845	10,821	12,003
Average	17,186	22,537	26,233	21,520	23,278	21,793	20,025	15,907	15,405	14,148	11,386	17,619

EXHIBIT X
YEAR-TO-YEAR COMPARISON

	Fiscal 2016	Fiscal 2015	Fiscal 2014	Fiscal 2013
Number of Active Members	14,684	14,689	14,575	14,559
Number of Retirees & Survivors	5,014	4,766	4,510	4,293
Number of Terminated Due Deferred Benefits	389	354	362	343
Number Terminated Due Refunds	5,690	5,374	5,150	5,069
Active Lives Payroll	$ 669,735,563	$ 656,499,456	$ 634,536,119	$ 622,720,506
Retiree Benefits in Payment	$ 137,218,242	$ 126,604,621	$ 114,122,739	$ 105,832,204
Market Value of Assets	$ 2,910,465,956	$ 2,882,373,570	$ 2,733,132,117	$ 2,272,263,124
Actuarial Value of Assets	$ 3,049,411,053	$ 2,822,174,398	$ 2,513,293,197	$ 2,203,646,722
EAN Accrued Liability	$ 3,545,155,452	$ 3,328,125,306	$ 3,129,132,635	$ 2,942,457,560
Ratio of AVA to EAN Accrued Liability	86.02%	84.80%	80.32%	74.89%
Frozen Unfunded Actuarial Accrued Liability	$ 50,003,403	$ 54,953,449	$ 59,264,382	$ 62,983,756
Present Value of Future Employer Normal Cost	$ 987,893,018	$ 937,016,484	$ 1,022,657,685	$ 1,125,270,083
Present Value of Future Employee Contrib.	$ 692,464,530	$ 672,573,918	$ 616,003,094	$ 600,569,823
Funding Deposit Account Balance	$ 30,142,795	$ 0	$ 0	$ 3,689,049
Present Value of Future Benefits	$ 4,749,629,209	$ 4,486,718,249	$ 4,211,218,358	$ 3,998,781,335

	Fiscal 2017	Fiscal 2016	Fiscal 2015	Fiscal 2014
Employee Contribution Rate	10.25%	10.25%	10.25%	10.25%
Estimated Tax Contribution as a % of Payroll	2.98%	3.05%	3.04%	2.99%
Estimated Insurance Taxes as a % of Payroll	2.77%	2.75%	2.70%	2.59%
Actuarially Required Net Direct Employer Contribution Rate	9.92%	9.54%	12.07%	14.33%
Actual Employer Contribution Rate	13.25%	13.75%	14.25%	14.50% §

† 12.00% paid directly by employers with additional 0.75% allocated from the Funding Deposit Account
‡ 12.50% paid directly by employers with additional 1.25% allocated from the Funding Deposit Account
* 13.25% paid directly by employers with additional 0.50% allocated from the Funding Deposit Account
§ 13.89% paid directly by employers with additional 0.61% allocated from the Funding Deposit Account

Fiscal 2012	Fiscal 2011	Fiscal 2010	Fiscal 2009	Fiscal 2008	Fiscal 2007
14,231	14,754	14,711	14,396	14,038	13,530
3,922	3,716	3,510	3,369	3,140	2,995
350	323	325	306	328	340
5,056	4,743	4,727	4,435	4,156	3,939
$ 611,139,881	$ 623,084,570	$ 603,250,449	$ 577,078,980	$ 537,082,456	$ 481,418,484
$ 90,894,373	$ 83,741,250	$ 76,379,208	$ 71,517,150	$ 64,309,775	$ 55,471,909
$ 1,967,024,952	$ 1,907,946,452	$ 1,522,233,162	$ 1,306,974,663	$ 1,511,820,016	$ 1,550,829,081
$ 2,042,809,526	$ 1,935,179,988	$ 1,773,450,705	$ 1,608,228,363	$ 1,628,303,910	$ 1,468,646,528
$ 2,752,868,402	$ 2,603,584,473	$ 2,415,074,197	$ 2,192,263,534	$ 2,003,918,104	$ 1,780,867,852
74.21%	74.33%	73.43%	73.36%	81.26%	82.47%
$ 66,156,793	$ 68,826,417	$ 71,042,296	$ 72,846,699	$ 74,278,468	$ 96,251,088
$ 1,089,982,874	$ 1,044,434,589	$ 1,003,967,230	$ 890,632,040	$ 641,924,601	$ 524,216,581
$ 570,327,767	$ 578,341,253	$ 557,530,584	$ 517,818,601	$ 482,053,768	$ 436,275,292
$ 6,448,956	$ 13,680,020	$ 17,151,710	$ 15,881,213	$ 0	$ 0
$ 3,762,828,004	$ 3,613,102,227	$ 3,388,839,105	$ 3,073,644,490	$ 2,826,560,747	$ 2,525,389,489

Fiscal 2013	Fiscal 2012	Fiscal 2011	Fiscal 2010	Fiscal 2009	Fiscal 2008
10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
2.82%	2.56%	2.61%	2.75%	2.53%	2.39%
2.51%	2.44%	2.48%	2.55%	2.72%	2.87%
14.55%	13.78%	13.56%	12.58%	8.92%	7.59%
13.75% *	13.75% ‡	12.75% †	11.00%	11.00%	11.00%

SUMMARY OF PRINCIPAL PLAN PROVISIONS

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

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

CONTRIBUTION RATES – Under the provisions of R.S. 11:62, 11:82 and 11:103, the fund is financed by a combination of employee contributions, employer contributions, dedicated ad valorem taxes, revenue sharing funds, and insurance premium taxes. The employee contribution rate is determined by the Board of Trustees but cannot be less than 9.8% or more than 10.25% of earnable compensation. Gross employer contributions are determined by actuarial valuation and are subject to change each year in accordance with R. S. 11:103 and R. S. 11:105. Any excess funds resulting from additional contributions will be credited to the Funding Deposit Account defined in R.S. 11:2175.1. Also, the fund annually receives revenue sharing funds and ad valorem taxes equal to 0.5% of the aggregate amount of the tax shown to be collected by the tax roll of each respective parish, and additional funds as indicated by valuation and apportioned by the Public Employees' Retirement Systems' Actuarial Committee from available insurance premium taxes described in R.S. 22:1476(A)(3)..

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

NORMAL RETIREMENT BENEFITS – For members whose first employment making them eligible for membership in the system began on or before December 31, 2011: Members with twelve years of creditable service may retire at age fifty-five; members with thirty years of creditable service may retire at any age. The retirement allowance is equal to three and one-third percent of the member's average final compensation multiplied by his years of creditable service, not to exceed (after reduction for optional payment form) 100% of average final compensation.

For members whose first employment making them eligible for membership in the system began on or after January 1, 2012: Members with twelve years of creditable service may retire at age sixty-two; members with twenty years of service may retire at age sixty; members with thirty years of creditable service may retire at age fifty-five. The benefit accrual rate for such members with less than thirty years of service is three percent; for members with thirty or more years of service, the accrual rate is three and one-third percent. The retirement allowance is equal to the benefit accrual rate times the member's average final compensation multiplied by his years of creditable service, not to exceed (after reduction for optional payment form) 100% of average final compensation.

EARLY RETIREMENT BENEFITS – For members whose first employment making them eligible for membership in the system began on or before December 31, 2011: Active, contributing members with at least ten years of creditable service may retire at age sixty. The accrued normal retirement benefit is

reduced actuarially for each month or fraction thereof that retirement begins prior the member's earliest normal retirement date assuming continuous service.

For all members: Members with twenty or more years of service may retire with a reduced retirement at age fifty.

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

For a member whose first employment making him eligible for membership in the system began after June 30, 2006 and prior to July 1, 2013, final average compensation is based on the average monthly earnings during the highest sixty consecutive months or joined months if service was interrupted.

For a member whose first employment making him eligible for membership in the system began on or after July 1, 2013, final average compensation is based on the average monthly earnings during the highest sixty consecutive months or joined months if service was interrupted. The earnings to be considered for each twelve month period within the thirty-six month period shall not exceed 115% of the preceding twelve month period.

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

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

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

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

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

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

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

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

A member may also elect to receive an actuarially reduced benefit which provides for an automatic 2½% 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. Back-DROP participants are not eligible for this benefit.

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

SURVIVOR BENEFITS – Survivor benefits for death solely as a result of injuries received in the line of duty are based on the following. For a spouse alone, a sum equal to 50% of the member's final average compensation with a minimum of $150 per month. If a spouse is entitled to benefits and has a child or children under eighteen years of age (or over said age if physically or mentally incapacitated and dependent upon the member at the time of his death), an additional sum of 15% of the member's final average compensation is paid to each child with total benefits paid to spouse and children not to exceed 100%. If a member dies with no surviving spouse, surviving children under age eighteen receive monthly benefits of 15% of the member's final average compensation up to a maximum of 60% of final average compensation if there are more than four children. If a member is eligible for normal retirement at the time of death, the surviving spouse receives an automatic option 2 benefit; the additional benefit payable to children is the same as those available for members who die in the line of duty. In lieu of receiving option 2 benefits, the surviving spouse may receive a refund of the member's accumulated contributions. Benefits payable to surviving children are extended through age twenty-three, if the child is a full time student in good standing enrolled at a Board approved or accredited school, college, or university.

Back-DROP – In lieu of receiving a service retirement allowance any member of the fund who has more than sufficient service for a regular service retirement may elect to receive a "Back-DROP" benefit. The Back-DROP benefit is based upon the Back-DROP period selected and the final average compensation prior to the period selected. The Back-DROP period is the lesser of three years or the service accrued between the time a member first becomes eligible for retirement and his actual date of retirement. Members who have thirty or more years of service may elect a Back-DROP period not to exceed the lesser of forty-eight months or the number of months of creditable service accrued after the member first became eligible for regular retirement. At retirement the member's maximum monthly retirement benefit is based upon his service, final average compensation, and plan provisions in effect on the last day of creditable service immediately prior to the commencement of the Back-DROP period. In addition to the monthly benefit at retirement, the member receives a lump-sum payment equal to the maximum monthly benefit as calculated above multiplied by the number of months in the Back-DROP period. In addition, the member's Back-DROP account is credited with employee contributions received by the retirement fund during the Back-DROP period.

FUNDING DEPOSIT ACCOUNT – If the contribution rate is set above the minimum recommended rate pursuant to RS 11:105, the surplus contributions collected, if any, are credited to the Funding Deposit Account defined in R.S. 11:2175.1. For any fiscal year ending on or after December 31, 2008, in which the Board of Trustees elects or previously elected to set the net direct employer contribution rate higher than the minimum recommended rate, all surplus funds collected by the system shall be credited to the system's funding deposit account. The funds in the account earn interest annually at the Board-approved actuarial valuation interest rate, and such interest is credited to the account at least once a year. The Board of Trustees may in any fiscal year direct that funds from the account be charged for the following purposes: (1) to reduce the unfunded accrued liability; (2) to reduce the present value of future normal costs; (3) to pay all or a portion of any future net direct employer contributions; and (4) to provide for permanent benefit increases as provided for in R.S. 11.2178(K). In no event shall the funds charged from the account exceed the outstanding account balance. If the Board of Trustees of the system elects to utilize funds from the funding deposit account to pay all or a portion of any future net direct employer contributions, the percent reduction in the minimum recommended employer contribution rate otherwise applicable is determined by dividing the interest-adjusted value of the charges from the funding deposit account by the projected payroll for the fiscal year for which the contribution rate is to be reduced. For funding purposes, any asset value utilized in the calculation of the actuarial value of assets of a system excludes the funding deposit account balance as of the asset determination date for such calculation. For all purposes other than funding, the funds in the account are considered assets of the system.

COST OF LIVING INCREASES – The Board of Trustees is authorized to grant retired members and widows of members who have retired an annual cost of living increase of up to 2½% of their current benefit, not to exceed five percent of the average monthly benefit in payment to service retirees at the end of the preceding fiscal year. Members retiring on or after July 1, 2007, who have not attained the age of sixty years, may not receive this cost-of-living increase until they have been retired for three years. Those who have attained the age of sixty years may not receive this cost-of-living increase until they have been retired for one year. Different waiting periods applied to retirements prior to July 1, 2007. In addition, the Board may grant retired members and widows who are sixty-five years of age and older a 2% increase in their original benefit (or the benefit being received on October 1, 1977 if retirement had commenced prior to that date). In order for the Board to grant either of these increases the system must meet certain criteria in the statutes related to funding status and interest earnings. In lieu of these cost of living adjustments the Board may also grant an increase in the form of "X×(A+B)" where "X" is any amount up to $1 per month and "A" is equal to the number of years of credited service accrued at retirement or at death of the member of retiree, and "B" is equal to the number of years since retirement or since death of the member or retiree to June thirtieth of the initial year of such increase. The Board may only grant such COLA's in years in which the fund meets certain funding and investment earnings targets.

ACTUARIAL ASSUMPTIONS

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

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

ACTUARIAL COST METHOD:	Frozen Attained Age Normal actuarial cost method with allocation based on earnings. The frozen actuarial accrued liabilities were calculated on the projected unit credit cost method.
VALUATION INTEREST RATE:	7.5%
ACTUARIAL ASSET VALUES:	Invested 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.
ANNUAL SALARY INCREASE RATE:	5.5% (2.875% Inflation; 2.625% Merit)
ACTIVE MEMBER, ANNUTITANT, AND BENEFICIARY MORTALITY:	RP-2000 Combined Healthy with Blue Collar Adjustment Sex Distinct Tables Projected to 2028 for males and set forward 1 year and Projected to 2028 for females. (Projections based on Scale AA as published by the Society of Actuaries)

Back-DROP: Members eligible for Back-DROP are assumed to elect benefits which have a present value of ½% less than the maximum possible present value based on a comparison to available back DROP benefits and regular retirement benefits.

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

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

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

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

Service	Factor
<1	0.210
1	0.160
2	0.120
3	0.110
4	0.090
5	0.080
6-7	0.060
8-9	0.040
10-15	0.030
16-18	0.020
>18	0.010

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

MARRIAGE STATISTICS: 70% 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 2010 U. S. Census:

Member's Age	% With Children	Number of Children	Average Age
25	70%	1.84	5
35	86%	2.13	9
45	75%	1.70	12
55	22%	1.42	14
65	4%	1.45	15

DISABLED LIVES MORTALITY: RP-2000 Disabled Lives Mortality Tables set back 5 years for males and set back 3 years for females.

SERVICE RELATED DEATHS: 15% of total deaths

RATES OF DISABILITY: 12% of the disability rates used for the 21st valuation of the Railroad Retirement System for individuals with 10 – 19 years of service.

SERVICE RELATED DISABILITIES: 20% of Total Disabilities

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

ACTUARIAL TABLES AND RATES

Age	Disability Rates	Retirement Rates	Remarriage Rates	Male Mortality Rates	Female Mortality Rates	Male Disabled Mortality Rates	Female Disabled Mortality Rates
18	0.00018	0.00000	0.06124	0.00018	0.00012	0.02257	0.00745
19	0.00018	0.00000	0.06124	0.00019	0.00012	0.02257	0.00745
20	0.00018	0.00000	0.06124	0.00020	0.00012	0.02257	0.00745
21	0.00018	0.00000	0.05818	0.00021	0.00012	0.02257	0.00745
22	0.00018	0.00000	0.05524	0.00023	0.00013	0.02257	0.00745
23	0.00018	0.00000	0.05242	0.00024	0.00013	0.02257	0.00745
24	0.00018	0.00000	0.04971	0.00026	0.00014	0.02257	0.00745
25	0.00018	0.00000	0.04566	0.00028	0.00015	0.02257	0.00745
26	0.00018	0.00000	0.04335	0.00032	0.00016	0.02257	0.00745
27	0.00018	0.00000	0.04114	0.00033	0.00017	0.02257	0.00745
28	0.00018	0.00000	0.03902	0.00034	0.00018	0.02257	0.00745
29	0.00018	0.00000	0.03698	0.00036	0.00022	0.02257	0.00745
30	0.00018	0.00000	0.03502	0.00063	0.00026	0.02257	0.00745
31	0.00018	0.00000	0.03314	0.00070	0.00029	0.02257	0.00745
32	0.00018	0.00000	0.03134	0.00076	0.00032	0.02257	0.00745
33	0.00018	0.00000	0.02961	0.00082	0.00035	0.02257	0.00745
34	0.00018	0.00000	0.02795	0.00089	0.00038	0.02257	0.00745
35	0.00020	0.00000	0.02636	0.00094	0.00041	0.02257	0.00745
36	0.00023	0.00000	0.02483	0.00100	0.00045	0.02257	0.00745
37	0.00025	0.00000	0.02336	0.00105	0.00048	0.02257	0.00745
38	0.00029	0.00000	0.02195	0.00107	0.00052	0.02257	0.00745
39	0.00032	0.00000	0.02060	0.00108	0.00058	0.02257	0.00745
40	0.00037	0.00000	0.01930	0.00109	0.00064	0.02257	0.00745
41	0.00042	0.00000	0.01805	0.00111	0.00070	0.02257	0.00745
42	0.00047	0.00000	0.01686	0.00114	0.00077	0.02257	0.00745
43	0.00053	0.00000	0.01571	0.00117	0.00084	0.02257	0.00745
44	0.00060	0.00000	0.01461	0.00120	0.00088	0.02257	0.00745
45	0.00068	0.00000	0.01355	0.00124	0.00092	0.02257	0.00745
46	0.00078	0.14000	0.01253	0.00128	0.00096	0.02257	0.00745
47	0.00088	0.14000	0.01156	0.00131	0.00103	0.02257	0.00745
48	0.00100	0.14000	0.01063	0.00135	0.00110	0.02257	0.00745
49	0.00113	0.14000	0.00973	0.00140	0.00121	0.02257	0.00818
50	0.00128	0.05000	0.00887	0.00145	0.00134	0.02257	0.00896
51	0.00146	0.05000	0.00804	0.00160	0.00151	0.02385	0.00978
52	0.00166	0.05000	0.00725	0.00170	0.00172	0.02512	0.01063
53	0.00188	0.05000	0.00649	0.00187	0.00195	0.02640	0.01154
54	0.00214	0.05000	0.00576	0.00207	0.00223	0.02769	0.01248
55	0.00242	0.14000	0.00000	0.00245	0.00258	0.02897	0.01346
56	0.00276	0.14000	0.00000	0.00299	0.00295	0.03027	0.01446
57	0.00313	0.14000	0.00000	0.00348	0.00330	0.03156	0.01550
58	0.00355	0.14000	0.00000	0.00407	0.00374	0.03286	0.01654
59	0.00404	0.14000	0.00000	0.00462	0.00430	0.03415	0.01760
60	0.00586	0.14000	0.00000	0.00526	0.00504	0.03544	0.01865
61	0.00586	0.14000	0.00000	0.00617	0.00589	0.03673	0.01971
62	0.00586	0.14000	0.00000	0.00706	0.00693	0.03803	0.02077
63	0.00586	0.14000	0.00000	0.00829	0.00794	0.03933	0.02184
64	0.00586	0.14000	0.00000	0.00931	0.00904	0.04067	0.02294
65	0.00586	0.21000	0.00000	0.01047	0.01029	0.04204	0.02408
66	0.00586	0.21000	0.00000	0.01217	0.01149	0.04347	0.02529
67	0.00586	0.21000	0.00000	0.01355	0.01279	0.04498	0.02660
68	0.00586	0.21000	0.00000	0.01461	0.01424	0.04658	0.02803
69	0.00586	0.21000	0.00000	0.01613	0.01619	0.04831	0.02959
70	0.00586	0.21000	0.00000	0.01753	0.01752	0.05017	0.03132
71	0.00586	0.21000	0.00000	0.01921	0.01949	0.05221	0.03323
72	0.00586	0.21000	0.00000	0.02108	0.02100	0.05445	0.03533
73	0.00586	0.21000	0.00000	0.02319	0.02315	0.05691	0.03764
74	0.00586	0.21000	0.00000	0.02558	0.02467	0.05961	0.04014
75	0.00586	0.21000	0.00000	0.02906	0.02698	0.06258	0.04285

PRIOR YEAR ASSUMPTIONS

VALUATION INTEREST RATE: 7.6%

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