



CURRAN ACTUARIAL
— CONSULTING, LTD. —

**Annual Funding Valuation
December 31, 2022**

**Parochial Employees'
Retirement System
of Louisiana**



June 12, 2023

Board of Trustees
Parochial Employees' Retirement System
7905 Wrenwood Blvd.
Baton Rouge, LA 70809

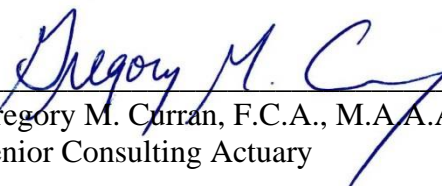
Ladies and Gentlemen:

We are pleased to present our report on the actuarial valuation of the Parochial Employees' Retirement System for the fiscal year ending December 31, 2022. 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 Parochial Employees' Retirement System. The primary purposes of the report are to determine the actuarially required contribution for the retirement system for the fiscal year ending December 31, 2023, and to recommend the net direct employer contribution rate for Fiscal 2024. 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 Parochial Employees' Retirement System 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 actuary is a member of the American Academy of Actuaries, has met the qualification standards for the American Academy of Actuaries to render the actuarial opinions incorporated in this report, and is available to provide further information or answer any questions with respect to this valuation.

Sincerely,

CURRAN ACTUARIAL CONSULTING, LTD.

By: 

Gregory M. Curran, F.C.A., M.A.A.A., A.S.A.
Senior Consulting Actuary

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SUMMARY OF VALUATION RESULTS
PAROCHIAL EMPLOYEES' RETIREMENT SYSTEM – PLAN A

Valuation Date:	December 31, 2022	December 31, 2021
Census Summary:		
Active Members	13,412	13,643
Retired Members and Survivors	8,284	8,096
Terminated Due a Deferred Benefit	956	901
Terminated Due a Refund	9,376	8,731
Payroll:	\$ 675,490,286	\$ 672,340,250
Benefits in Payment:	\$ 225,184,598	\$ 211,189,264
Present Value of Future Benefits:	\$ 5,684,306,785	\$ 5,531,290,870
Actuarial Accrued Liability (EAN):	\$ 4,580,134,176	\$ 4,426,022,763
Funding Deposit Account Credit Balance:	\$ 65,263,833	\$ 69,983,070
Actuarial Asset Value (AVA):	\$ 4,680,374,638	\$ 4,568,593,183
Market Value of Assets (MVA):	\$ 4,274,065,818	\$ 4,976,037,622
Ratio of AVA to Actuarial Accrued Liability (EAN):	102.19%	103.22%
	Fiscal 2022	Fiscal 2021
Market Rate of Return:	-12.1%	11.2%
Actuarial Rate of Return:	4.8%	10.6%
	Fiscal 2023	Fiscal 2022
Employers' Normal Cost (Mid-year):	\$ 59,577,707	\$ 55,348,150
Estimated Administrative Cost:	\$ 2,042,137	\$ 1,916,833
Offset for Projected Ad Valorem Tax Contributions:	\$ (9,745,516)	\$ (8,317,053)
Offset for Projected Revenue Sharing Funds:	<u>\$ (135,632)</u>	<u>\$ (135,557)</u>
Net Direct Employer Actuarially Required Contributions:	\$ 51,738,696	\$ 48,812,373
Projected Payroll:	\$ 691,101,703	\$ 687,202,977
Actual Employee Contribution Rate:	9.50%	9.50%
Actual Net Direct Employer Contribution Rate:	11.50%	11.50%
Actuarially Required Net Direct Employer Contribution Rate:	7.49%	7.10%
	Fiscal 2024	Fiscal 2023
Minimum Recommended Net Direct Employer Cont. Rate:	7.50%	7.00%

**SUMMARY OF VALUATION RESULTS
PAROCHIAL EMPLOYEES' RETIREMENT SYSTEM – PLAN B**

Valuation Date:	December 31, 2022	December 31, 2021
Census Summary:		
Active Members	2,314	2,367
Retired Members and Survivors	1,074	1,013
Terminated Due a Deferred Benefit	197	174
Terminated Due a Refund	2,021	1,914
Payroll:	\$ 116,672,661	\$ 115,392,433
Benefits in Payment:	\$ 16,194,352	\$ 14,395,520
Present Value of Future Benefits:	\$ 522,456,080	\$ 500,058,032
Actuarial Accrued Liability (EAN):	\$ 408,897,511	\$ 388,045,808
Funding Deposit Account Credit Balance:	\$ 5,727,180	\$ 5,194,363
Actuarial Asset Value (AVA):	\$ 428,173,067	\$ 412,987,548
Market Value of Assets (MVA):	\$ 390,726,543	\$ 449,392,040
Ratio of AVA to Actuarial Accrued Liability (EAN):	104.71%	106.43%
	Fiscal 2022	Fiscal 2021
Market Rate of Return:	-12.1%	11.2%
Actuarial Rate of Return:	4.8%	10.5%
	Fiscal 2023	Fiscal 2022
Employers' Normal Cost (Mid-year):	\$ 7,730,224	\$ 6,931,262
Estimated Administrative Cost:	\$ 352,724	\$ 328,982
Offset for Projected Ad Valorem Tax Contributions:	\$ (1,683,274)	\$ (1,427,440)
Offset for Projected Revenue Sharing Funds:	<u>\$ (23,427)</u>	<u>\$ (23,265)</u>
Net Direct Employer Actuarially Required Contributions:	\$ 6,376,247	\$ 5,809,539
Projected Payroll:	\$ 119,202,988	\$ 117,723,275
Actual Employee Contribution Rate:	3.00%	3.00%
Actual Net Direct Employer Contribution Rate:	7.50%	7.50%
Actuarially Required Net Direct Employer Contribution Rate:	5.35%	4.93%
	Fiscal 2024	Fiscal 2023
Minimum Recommended Net Direct Employer Cont. Rate:	5.25%	5.00%

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 a greater degree of certainty and accuracy to the results than warranted. 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 processes 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 is 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 director of the system furnished a census derived from the system's master data processing file indicating each active covered employee's sex, date of birth, service credit, annual salary, and accumulated contributions. Information on retirees detailing dates of birth of retirees and beneficiaries, as well as option categories and benefit amounts, was provided in like manner. In addition, data was supplied on former employees who are vested or who have contributions remaining on deposit. As illustrated in Exhibit IX, there are 13,412 active members in Plan A, of whom, 6,986 members, including 557 participants in the Deferred Retirement Option Plan (DROP), have vested retirement benefits; 8,284 former members of Plan A or their beneficiaries are receiving retirement benefits. An additional 10,332 former members of Plan A have contributions remaining on deposit with the system. This includes 956 former members who have vested rights or have filed reciprocal agreements for future retirement benefits. Census data on members of Plan B may be found in Exhibit XIX. There are 2,314 active members in Plan B, of whom, 1,168 members, including 54 DROP participants, have vested retirement benefits; 1,074 former members of Plan B or their beneficiaries are receiving retirement benefits. An additional 2,218 former members of Plan B have contributions remaining on deposit with the system. Of this number, 197 have vested rights or have filed reciprocal agreements for future retirement benefits. All individuals submitted were included in the valuation.

Census data submitted to our office is tested for errors. Several types of census data errors are possible; to ensure that the valuation results are as accurate as possible, a significant effort is made to identify and correct these errors. In order to minimize coverage errors (i.e., missing or duplicated individual records) the records are checked for duplicates, and a comparison of the current year's records to those submitted in prior years is made. Changes in status, new records, and previous records, which have no corresponding current record are identified. This portion of the review indicates the annual flow of members from one status to another and is used to check some of the actuarial assumptions, such as retirement rates, rates of withdrawal, and mortality. In addition, the census is checked for reasonableness in several areas, such as age, service, salary, and current benefits. The records identified by this review as questionable are checked against data from prior valuations; those not recently verified are included in a detailed list of items sent to the system's administrator for verification and/or correction. Once the identified data has been researched and verified or corrected, it is returned to us for use in the valuation. Occasionally some requested information is either unavailable or impractical to obtain. In such cases, values may be assigned to missing data. The assigned values are based on information from similar records or based on information implied from other data in the record. As a part of the 2020 actuarial valuation, our review found a significant number of members coded as active who had zero or low salary during the fiscal year. After a review of each such member's record, it was found that many of these individuals stopped contributing during the year. For those who did not contribute in December 2020, we elected to change their status to terminated. Those who did not have sufficient service credit to be considered as vested in a future benefit were treated as terminated due a refund. We also made significant changes to the tier assignment of members based on their dates of entry and service credit.

In addition to the statistical information provided on the system's participants, the system's administrative director 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 Plan A's assets was \$4,274,065,818 as of December 31, 2022. For Plan A, the net investment income for Fiscal 2022

measured on a market value basis amounted to a loss of \$595,615,733. Contributions to Plan A for the fiscal year totaled \$152,460,896; benefits and expenses amounted to \$258,816,967.

The net market value of Plan B's assets was \$390,726,543 as of December 31, 2022. For Plan B, the net investment income for Fiscal 2022 measured on a market value basis amounted to a loss of \$54,035,320. Contributions to Plan B for the fiscal year totaled \$14,196,721; benefits and expenses amounted to \$18,826,898.

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

Plan A was previously funded under the Frozen Attained Age Normal Cost Method. The Frozen Unfunded Accrued Liability was fully amortized in Fiscal 2012. Hence, for the Fiscal 2013 valuation, the system's funding method was changed to the Aggregate Actuarial Cost Method. Plan B is funded utilizing the Aggregate Actuarial Cost Method. This method does not develop an unfunded actuarial liability. Under the Aggregate 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 both plans, benefit and assumption changes are also spread over future normal costs. Effective with Fiscal 2008, for both Plans A and B, any excess funds collected pursuant to R. S. 11:105 or R. S. 11:107 are allocated to the Funding Deposit Account. The Funding Deposit Account credit balance as of the end of the prior fiscal year for Plans A and B was \$69,983,070 and \$5,194,363, respectively. Both accounts were increased with interest at the 6.40% valuation interest rate in effect during fiscal 2022. A freeze in the employer contribution rate in Plan A for Fiscal 2022 resulted in a contribution gain of \$31,278,879 as of December 31, 2022. A freeze in the employer contribution rate in Plan B for Fiscal 2022 resulted in a contribution gain of \$3,206,063 as of December 31, 2022. In addition, \$40,477,032 was withdrawn from the Funding Deposit Account as of December 31, 2022 for Plan A and \$3,005,685 was withdrawn from the Funding Deposit Account as of December 31, 2022 to pay for a cost of living increase payable on January 1, 2023. After accounting for the withdrawals to fund cost of living increases and adjusting the balance for interest, the resulting balances as of December 31, 2022 for Plans A and B were \$65,263,833 and \$5,727,180, respectively.

The current year actuarial assumptions utilized for this report are based on the results of an actuarial experience study for the period January 1, 2013 – December 31, 2017, unless otherwise specified in this report. This study included a review of all plan decrements in addition to salary scale experience and other demographic factors which impact plan costs. In determining the valuation interest rate, consideration was given to several factors. First, consensus estimates of rates of return, standard deviations, and correlation coefficients for asset classes derived from various asset consulting firms were developed. Secondly, projected long-term inflation estimates from a number of sources were reviewed. These factors were used to derive forward estimates of the Fund's portfolio earnings rate. Segal Marco Advisors submitted capital market assumptions for use in developing our consultant average assumptions which were used in our ongoing review of the Fund's valuation interest rate. The actuary's reasonable range for the assumption related to the assumed long-term expected rate of return was reviewed by developing 10,000 stochastic trials over the coming 30 years. These trials were developed

based upon the average arithmetic portfolio rate of return and an estimate of the portfolio's long-term standard deviation. The reasonable range was set based upon the 40th through 60th percentile of the geometric 30-year average rates of return taken from these trials. Our study performed in 2023 based upon the system's target asset allocation resulted in a reasonable range of 6.22% through 7.34% with a 50th percentile value of 6.78%. Therefore, the current assumed rate of return of 6.40% is toward the lower end of the 2023 reasonable range. Given the large changes in capital market assumptions over the past few years and the current assumption, we do not recommend that the Board consider any further changes in the valuation interest rate at this time.

Although the board of trustees has authority to grant ad hoc Cost of Living Adjustments (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. In addition, COLAs paid out of the Funding Deposit Account do not affect the actuarially required contributions to the system. 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 67 through 72. With the exception of an update in the option factors used to estimate benefits due spouses of members who die prior to retirement, all assumptions used are the same as those used in the 2020 valuation. All calculations, recommendations, and conclusions are based on the assumptions specified. To the extent that prospective experience differs from that assumed, adjustments to contribution levels will be required. Such differences will be revealed in future actuarial valuations.

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. Louisiana constitutional and statutory provisions greatly limit this risk by requiring that state and statewide plans maintain funding on an actuarial basis. The State Constitution sets forth general requirements with specific funding parameters specified in the state statutes.

All pension plans are subject to the uncertainty of asset performance. The total nominal rate of return on assets is comprised of the real rates of return earned on the portfolio of investments plus the underlying inflation rate. High levels of inflation are a risk to plan members in that they reduce purchasing power of plan benefits. Should the plan attempt to offset inflation by providing cost-of-living adjustments, costs will inevitably increase unless provisions are made to prefund such adjustments. Very low inflation will generally reduce the nominal rate of return on assets; deflation can potentially reduce the capital value of trust assets. During the decade preceding 2020, inflation levels remained in a fairly narrow range. Since 2020, inflation has significantly increased. So far, Federal Reserve efforts to fight inflation have not had the desired effect. Forecasters seem to believe that although long-term average rates of future inflation may be higher than projected in recent years, the impact of near-term inflation will not be significant. There is always the possibility that persistent high inflation will become a problem in the

future or that the country will experience a deflationary period; however, most expert opinion currently assesses these alternatives as unlikely in the near term.

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. Volatility of returns will be determined by both market conditions and the asset allocation of the investment portfolio. If the system's investment portfolio has a substantial allocation to assets that have low price stability, the risk of portfolio volatility will increase, although low correlations among asset classes can mitigate this risk. Another element of asset risk is reinvestment risk. Interest rate declines can subject pension plans to an increase in this risk. As fixed income securities mature, investment managers may be forced to reinvest funds at decreasing rates of return. For the foreseeable future it is unlikely, though not impossible, that interest rates will decline mitigating the reinvestment risk the plan currently faces.

The system is also exposed to risk related to cash flow. Where benefit payments exceed contributions to a plan, the plan will be required to use investment income or potentially investment capital to pay benefits. In cases where it is necessary to use investment income to pay retirement benefits, investment market downturns will place additional stress on the portfolio and make the recovery from such downturns more difficult since funds available for reinvestment are reduced by benefit payments. The historical cash flow demonstration given in this report illustrates the noninvestment cash flow and benefit payments of the system over the last 10 years. Currently, annual benefit payments exceed annual contributions to the plan for both Plans A and B. This is a result of the plan's maturity level and the reduction in required contributions. Future net noninvestment cash flows for the system will be determined based upon both the system's maturity and future contribution levels. Hence, increases in future contributions due to adverse actuarial experience will tend to mitigate the potential of negative cash flows arising from the natural maturation of the system whereas reduced contribution levels resulting from, positive experience will tend to increase the extent of negative cash flows. Absent a significant increase in the active membership of the system, the trend of higher proportion of retired membership will continue and the current trend toward higher level of negative noninvestment cash flows will continue.

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. In a general sense, the short-term effects of these risks on the cost structure of the plan are somewhat limited since changes in these factors tend to be gradual and follow long term secular trends. Final average compensation plans are also vulnerable to unexpectedly large increases in salary for individual members near retirement. The effect of such events frequently relates to pay plan revisions where salaries "catch-up" after a number of years of slow growth. Revisions of this type usually depend on general economic conditions and can result in liability losses. However, they generally are infrequent and are more of a short-term issue.

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. The risk associated with either of these factors can vary dependent upon the severity of the event and cannot be easily forecasted.

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 102.19% for Plan A and 104.71% for Plan B as of December 31, 2022. 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. Exhibits X and XX give a history of this value for the last ten years. However, the underlying trend is somewhat disguised since the system has significantly reduced the valuation interest rate over this period. Absent the reduction in this rate, the current ratio would be significantly higher. One additional risk measure is the sensitivity of the plan's cost structure to asset gains and losses. For Plan A, 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 0.77% for the fund. Similarly for Plan B, we have determined that the corresponding increase (reduction) in the actuarially required contribution as a percentage of projected payroll will be 0.41% for the fund.

Each pension plan has its own unique benefit structure and demographic profile. As a result, each plan will respond to changes in interest rates in a unique way. As the expected rate of return on investments changes and the interest rate used to discount plan liabilities is adjusted, the shift in plan liabilities will depend upon the duration of the liabilities (which can be understood as the plan's sensitivity to the change in the interest rate). A slightly different measure of the duration for the plan can also be understood as an indicator of the plan's maturity. When a pension plan is first established, all of the participants are active members; as members retire and the plan matures, the duration of the plan decreases. A determination of the liability duration gives some insight into the investment time horizon of the plan. Thus, the liability duration of a closed plan can be thought of as the weighted "center of gravity" of plan benefit cash flows with expected cash flows occurring both before and after the duration value. For open plans with a continuous flow of new entrants this measure is somewhat less informative since the duration horizon keeps changing as new members enter the plan. For this plan we have estimated the effective liability duration as 11.19 for Plan A and 11.43 for Plan B, when measured based on the interest sensitivity of each plan's entry-age normal accrued liability.

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 vulnerable 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 2022, this ratio is 33.34% for Plan A and 13.88% for Plan B; ten years ago this ratio was 20.51% for Plan A and 7.29% for Plan B.

One other area of exposure the plan faces is the possibility that plan assumptions will need to be revised to conform to changing actual or expected plan experience. Such assumption revisions may relate to economic or demographic factors. With regard to the economic assumptions, there is always the possibility that market expectations will require an adjustment to the assumed rate of return. Current market expectations are that in this area a decrease in the assumptions is more probable than an increase. The magnitude of any potential such change will be related to future capital market expectations. 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 2023 by 12.11% of payroll for Plan A and 7.16% of payroll for Plan B. Future adjustments to the future assumed rates of return may be required; however the likelihood of such an event is difficult to gauge since it requires assigning probabilities to future capital market scenarios.

Noneconomic assumptions such as mortality or other rates of decrement such as withdrawal, retirement, or disability are also subject to change. In general, such changes tend to affect plan costs less than adjustments to the assumed rates of return. Quantifying the probability or magnitude of such changes is beyond the scope of this report.

In summary, 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. 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, factors such as those outlined above have the potential on their own accord to pose a significant risk to future cost levels and solvency of the system.

CHANGES IN PLAN PROVISIONS

The following changes in plan provisions were enacted during the 2022 Regular Session of the Louisiana Legislature:

Act 248 contained legislative changes affecting the Municipal Employees' Retirement System and the Parochial Employees' Retirement System. The statutory change increased the amount of cash that the system may maintain in order to fund pensions, annuities, and other payments from one percent to ten percent of the system's assets.

ASSET EXPERIENCE

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

<u>Plan A</u>	<u>Market Value</u>	<u>Actuarial Value</u>
2013	18.1%	13.0%
2014	4.9%	10.5%
2015	-0.6%	7.3%
2016	7.7%	7.8%
2017	17.3%	8.6%
2018	-5.6%	4.7%
2019	17.8%	6.4%
2020	13.4%	9.7%
2021	11.2%	10.6%
2022	-12.1%	4.8%

<u>Plan B</u>	<u>Market Value</u>	<u>Actuarial Value</u>
2013	17.6%	12.8%
2014	4.9%	10.3%
2015	-0.7%	7.1%
2016	7.7%	7.5%
2017	17.4%	8.5%
2018	-5.7%	4.8%
2019	17.7%	6.4%
2020	13.5%	9.7%
2021	11.2%	10.5%
2022	-12.1%	4.8%

Geometric Average Market Rates of Return – Plan A

5-year average	(Fiscal 2018 – 2022)	4.3%
10-year average	(Fiscal 2013 – 2022)	6.7%
15-year average	(Fiscal 2008 – 2022)	5.6%
20-year average	(Fiscal 2003 – 2022)	6.8%
25-year average	(Fiscal 1998 – 2022)	6.3%
30-year average	(Fiscal 1993 – 2022)	7.2%

Geometric Average Market Rates of Return – Plan B

5-year average	(Fiscal 2018 – 2022)	4.2%
10-year average	(Fiscal 2013 – 2022)	6.7%
15-year average	(Fiscal 2008 – 2022)	5.7%
20-year average	(Fiscal 2003 – 2022)	6.7%
25-year average	(Fiscal 1998 – 2022)	6.4%
30-year average	(Fiscal 1993 – 2022)	7.0%

The market rate of return gives a measure of investment return on a total return basis and includes realized and unrealized capital gains and losses as well as interest income. This rate of return gives an indication of performance for an actively managed portfolio where securities are bought and sold with the objective of producing the highest total rate of return. During 2022, Plan A earned \$112,642,045 and Plan B earned \$10,265,703 of dividends, interest and other recurring income. In addition, Plan A had net realized and unrealized capital losses and other non-recurring income on investments of \$678,501,131 while the total of such losses for Plan B amounted to \$61,547,839. Investment expenses were \$29,756,647 for Plan A and \$2,753,184 for Plan B.

The actuarial rate of return is presented for comparison to the assumed long-term rate of return of 6.40% for Fiscal 2022. This rate is calculated based on the smoothed value of assets subject to constraints as given in Exhibit III-B for Plan A and Exhibit XIII-B for Plan B. Investment income used to calculate this yield is based upon a smoothing of investment income above or below the valuation interest rate. The difference between rates of return on an actuarial and market value basis results from the smoothing utilized. Yields in excess of the 6.40% assumption will reduce future costs; yields below 6.40% will increase future costs. Net actuarial investment earnings were less than the actuarial assumed earnings rate of 6.40%, used for Fiscal 2022, by \$70,901,822 for Plan A and were less than the actuarial assumed earnings rate of 6.40%, used for Fiscal 2022, by \$6,469,639 for Plan B. These earnings shortfalls for Plan A produced actuarial losses, which increased the normal cost accrual rate by 1.1721% and the earnings shortfalls for Plan B produced actuarial losses, which increased the normal cost accrual rate by 0.6262% for Plan B.

At the end of each fiscal year, a review of the data is made to identify current members of Plan A and Plan B who have consecutive service credit in both plans that have not been addressed in previous transfers of assets and liabilities between the Plan A and Plan B trust funds pursuant to the provisions of R.S. 11:2012. In the course of reviewing data for the December 31, 2022 valuation we found members of Plan A and Plan B with such service and recommend a liability transfer of \$14,666 be made from the Plan B trust to the Plan A trust for Fiscal 2022.

PLAN A – DEMOGRAPHICS AND LIABILITY EXPERIENCE

A reconciliation of the census for the plan is given in Exhibit IX. The average active member (including DROP participants) is 47 years old with 10.1 years of service and an annual salary of \$50,365. The plan's active membership, inclusive of DROP participants, decreased by 231 members during the fiscal year. The plan has experienced a decrease in the active plan population of 789 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 forty-one to fifty age group has declined while the population in the sixty-one to seventy age group has increased. Over the same ten-year period the population has remained relatively stable by service categories.

The average regular retiree is 72 years old with an annual benefit of \$29,346. The average age at retirement for regular retirees was 62. The number of retirees and beneficiaries receiving benefits from the system increased by 188 during the fiscal year; over the last five years the number of retirees has increased by 983 and benefit payments have increased by \$54,486,688.

Plan liability experience for Fiscal 2022 was favorable. Withdrawals and retiree deaths were above projected levels and disabilities and salary increases were below projected levels. All of these factors tend to decrease costs. Retirements and DROP entries above projected levels partially offset the cost savings. In aggregate, plan liability gains decreased the normal cost accrual rate by 0.6068%.

PLAN B – DEMOGRAPHICS AND LIABILITY EXPERIENCE

A reconciliation of the census for the plan is given in Exhibit XIX. The average active member (including DROP participants) is 47 years old with 9.9 years of service and an annual salary of \$50,420. The plan's active membership, inclusive of DROP participants, decreased by 53 members during the fiscal year. The plan has experienced a decrease in the active plan population of 145 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 forty-one to fifty age group has declined while the population in the over sixty age groups has increased. Over the same ten-year period the population with less than fifteen years of service credit declined. Other categories increased slightly.

The average regular retiree is 72 years old with an annual benefit of \$16,006. The average age at retirement for regular retirees was 64. The number of retirees and beneficiaries receiving benefits from the system increased by 61 during the fiscal year; over the last five years the number of retirees has increased by 219 and benefit payments have increased by \$5,764,053.

Plan liability experience for Fiscal 2022 was favorable. Withdrawals and retiree deaths were above projected levels and disabilities were below projected levels. All of these factors tend to decrease costs. Retirements and DROP entries above projected levels and salary increases slightly above projected levels partially offset the cost savings. In aggregate, plan liability gains decreased the normal cost accrual rate by 0.1618%.

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 the normal cost, and the actuarially required contributions are based on the sum of this value and administrative expenses. Under the funding method used for the plan, changes in plan experience, benefits, or assumptions increase or decrease future normal costs. In addition, excess or deficient contributions can decrease or increase future costs. The funding method used for both plans produce no unfunded actuarial accrued liability.

In order to establish the actuarially required contribution in any given year, it is necessary to define the assumptions and funding method. Thus, the determination of what contribution is actuarially required depends upon the funding method 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.

Under the provisions of R.S. 11:103, excess or deficient contributions typically decrease or increase future normal costs. However, if the minimum net direct employer contribution is scheduled to decrease, the board may maintain the contribution rate at some level above the minimum recommended rate. Pursuant to R. S. 11:105 and R. S. 11:107, such excess contributions are credited to the Funding Deposit Account.

For Plan A, the derivation of the actuarially required contribution for the current fiscal year is given in Exhibit I. The normal cost for Fiscal 2023 as of January 1, 2023 is \$57,758,110. The total actuarially required contribution is determined by adjusting the value for interest (since payments are made throughout the fiscal year) and adding estimated administrative expenses. As given on line 12 of Exhibit I the total actuarially required contribution for Fiscal 2023 is \$61,619,844. When this amount is reduced by projected tax contributions and revenue sharing funds, the resulting employers' net direct actuarially required contribution for Fiscal 2023 is \$51,738,696. This is 7.49% of the projected Plan A payroll for Fiscal 2023.

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

The effects of various factors on the cost structure for Plan A are outlined below:

Employer's Normal Cost Accrual Rate – Fiscal 2022	8.4991%
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Factors Increasing the Normal Cost Accrual Rate:

Asset Experience Loss	1.1721%
New Members	0.0387%
Cost of Living Increase (COLA)	0.6691%

Factors Decreasing the Normal Cost Accrual Rate:

Plan Liability Experience Gain	0.6068%
Withdrawal from FDA to fund COLA	0.6691%

Employer's Normal Cost Accrual Rate – Fiscal 2023	9.1031%
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Required net direct employer contributions are also affected by the available ad valorem taxes and revenue sharing funds which the system receives each year. When these funds change as a percentage of payroll, net direct employer contributions are adjusted accordingly. We estimate that for Plan A these funds collected in Fiscal 2023 will remain level as a percent of payroll. The net effect of the above changes in the cost structure of the system resulted in a minimum actuarially required net direct employer contribution rate for Fiscal 2023 for Plan A of 7.49%; the actual employer contribution rate for Fiscal 2023 is 11.50% of payroll. 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 for Plan A of 7.50% for Fiscal 2024.

For Plan B, the derivation of the actuarially required contribution for the current fiscal year is given in Exhibit XI. The normal cost for Fiscal 2023 as of January 1, 2023 is \$7,494,131. The total actuarially required contribution is determined by adjusting the value for interest (since payments are made throughout the fiscal year) and adding estimated administrative expenses. As given on line 12 of Exhibit XI the total actuarially required contribution for Fiscal 2023 is \$8,082,948. When this amount is reduced by projected tax contributions and revenue sharing funds, the resulting employers' net direct actuarially required contribution for Fiscal 2023 is \$6,376,247. This is 5.35% of the projected Plan B payroll for Fiscal 2023.

The effects of various factors on the cost structure for Plan B are outlined below:

Employer's Normal Cost Accrual Rate – Fiscal 2022	6.2678%
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Factors Increasing the Normal Cost Accrual Rate:

Asset Experience Loss	0.6262%
New Members	0.1602%
Cost of Living Increase (COLA)	0.2909%

Factors Decreasing the Normal Cost Accrual Rate:

Plan Liability Experience Gain	0.1618%
Withdrawal from FDA to fund COLA	0.2909%

Employer's Normal Cost Accrual Rate – Fiscal 2023	6.8924%
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We estimate that for Plan B the funds collected from ad valorem taxes and revenue sharing funds in Fiscal 2023 will increase by 0.20% of payroll. The net effect of the above changes in the cost structure of the system resulted in a minimum actuarially required net direct employer contribution rate for Fiscal 2023 for Plan B of 5.35%; the actual employer contribution rate for Fiscal 2023 is 7.50% of payroll. 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 for Plan B of 5.25% for Fiscal 2024.

For Plan A, the Board may set the net direct employer contribution at any rate between 7.50% and 11.50%. For Plan B, the board may set the rate at any rate between 5.25% and 7.50%. Should the net direct employer contribution rate be set at a level above the minimum rate under R.S. 11:107, the resulting additional contributions paid by the employers, if they exceed any potential contribution losses, would be added to the Funding Deposit Account for both Plans A and B.

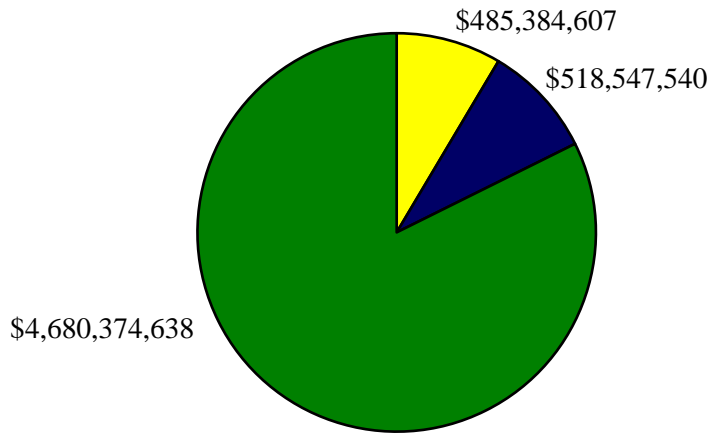
COST OF LIVING INCREASES

During calendar 2022 the actual cost of living (as measured by the U.S. Department of Labor CPI-U) increased by 6.45%. Cost of living provisions for the system are detailed in R.S. 11:1937 and R.S. 11:246. The former statute allows the board to use interest earnings in excess of the normal requirements to grant annual cost of living increases of up to 2.50% of the current benefit to retirees aged 62 or over, who have been retired at least one year. R.S. 11:246 provides cost of living increases to retirees and

beneficiaries over the age of 65 equal to 2% of the benefit in payment on October 1, 1977, or the date the benefit was originally received if retirement commenced after that date. R.S. 11:241 provides for cost-of-living benefits payable based on a formula equal to up to \$1 times the total of the number of years of credited service accrued at retirement or at death of the member or retiree plus the number of years since retirement or since death of the member or retiree to the system's fiscal year end preceding the payment of the benefit increase. The provisions of R.S. 11:241 do not repeal provisions relative to cost-of-living adjustments contained within the individual laws governing systems; however, they are to be controlling in cases of conflict.

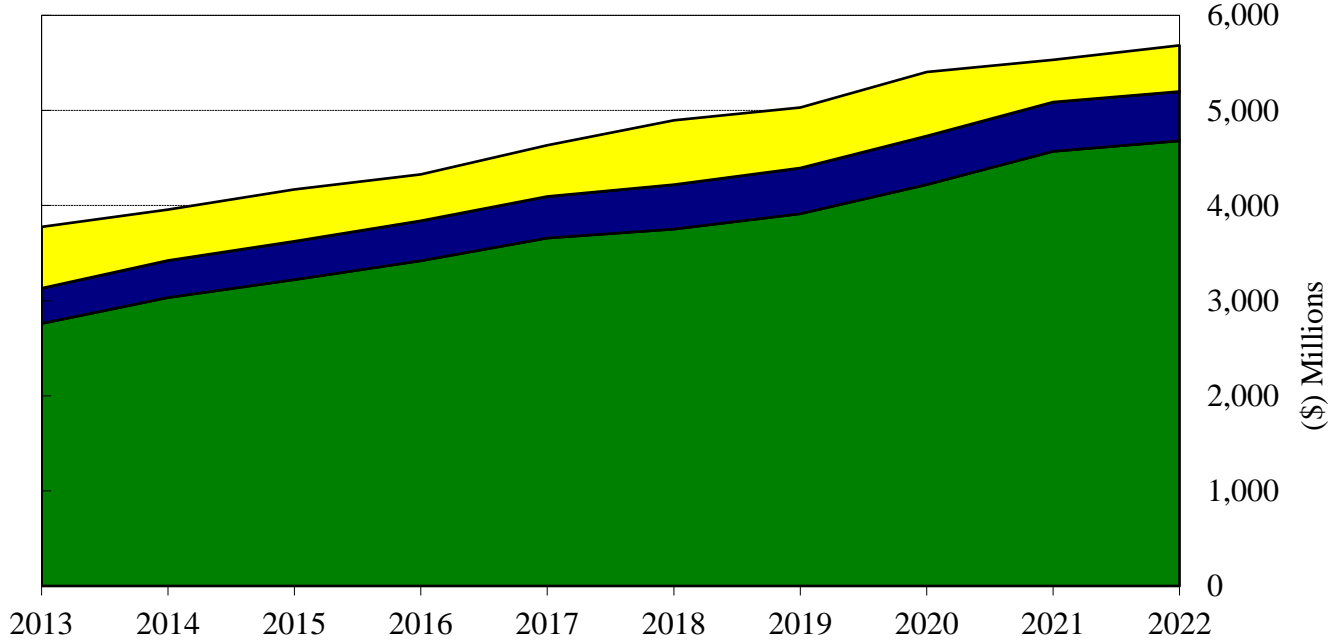
All of the above provisions require that the system earn sufficient excess interest earnings to fund the increases unless the Board funds a cost of living increase out of the Funding Deposit Account Credit Balance. For Fiscal 2022, despite having sufficient funds in the Funding Deposit Account since a COLA was granted effective January 1, 2023.

Plan A – Components of Present Value of Future Benefits December 31, 2022



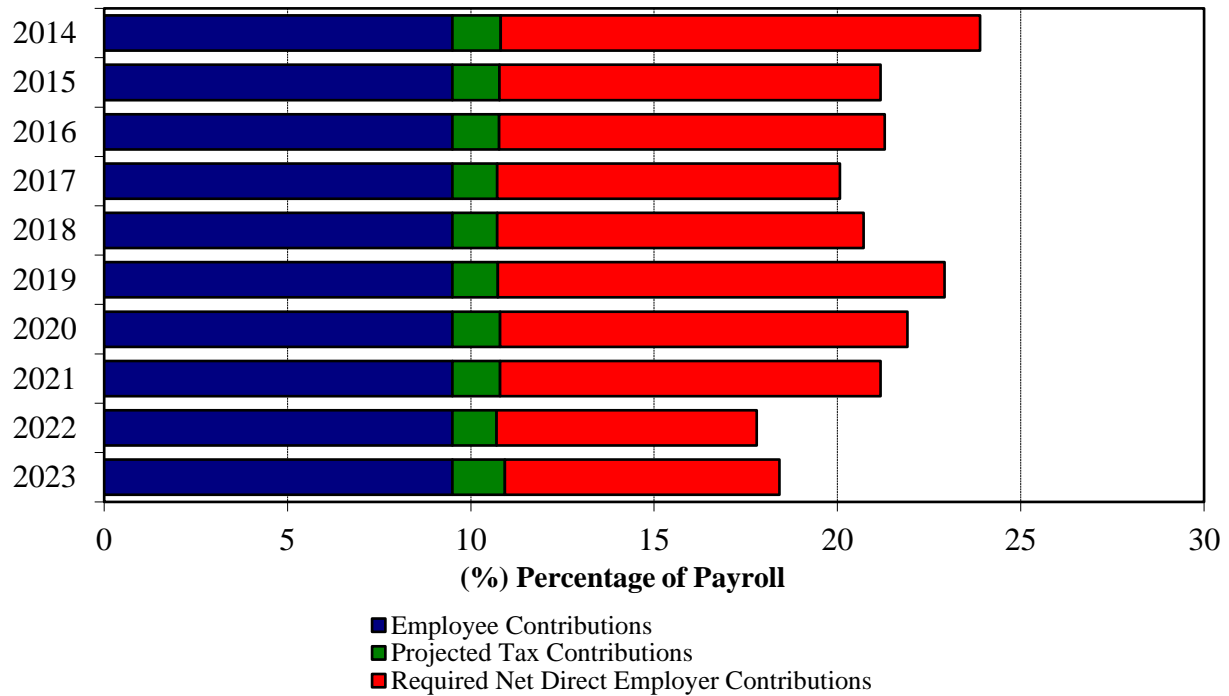
- Present Value of Future Employer Normal Cost (Net of Funding Deposit Account)
- Present Value of Future Employee Contributions
- Actuarial Value of Assets

Plan A – Components of Present Value of Future Benefits



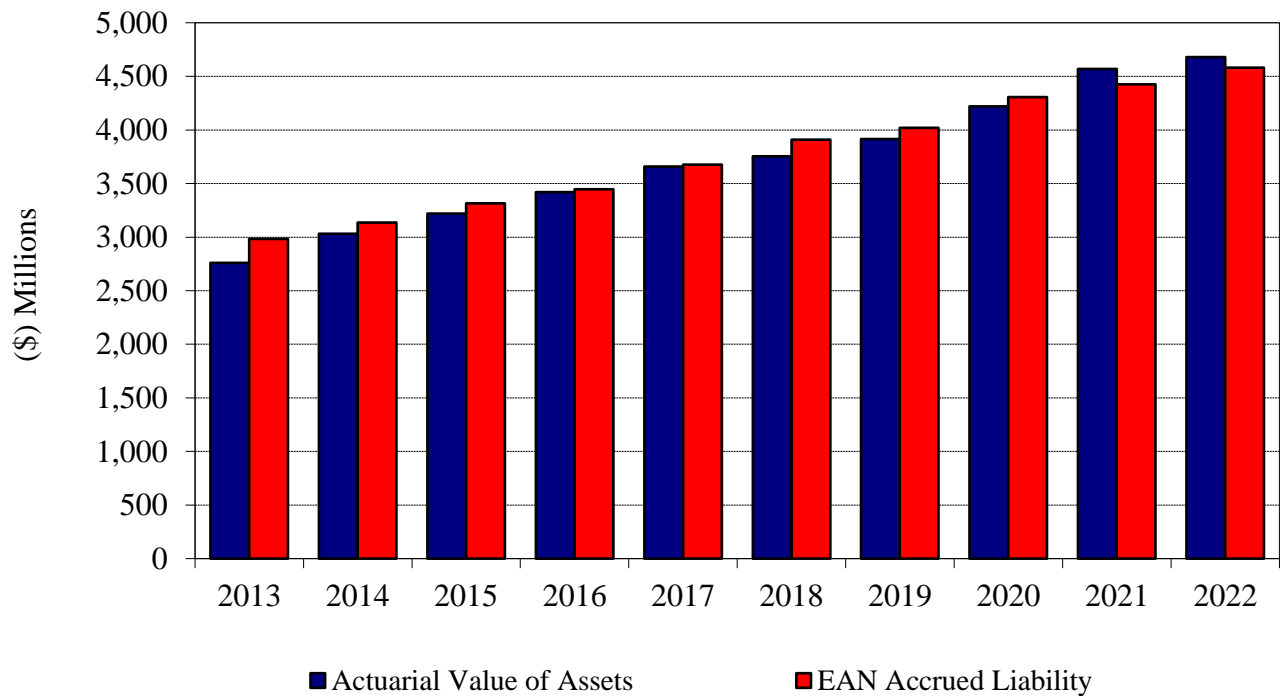
- Present Value of Future Employer Normal Cost (Net of Funding Deposit Account)
- Unfunded Accrued Liability
- Present Value of Future Employee Contributions
- Actuarial Value of Assets

Plan A – Components of Actuarial Funding

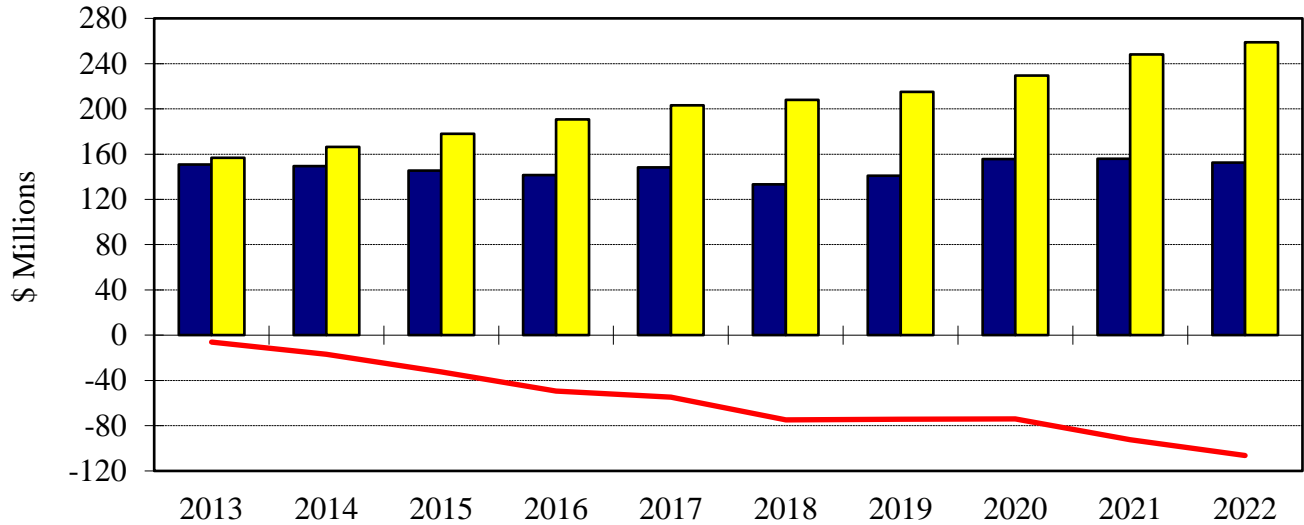


Projected Tax Contributions consist of Projected Ad Valorem and Revenue Sharing Funds as a percent of payroll

Plan A – Actuarial Value of Assets vs. EAN Accrued Liability

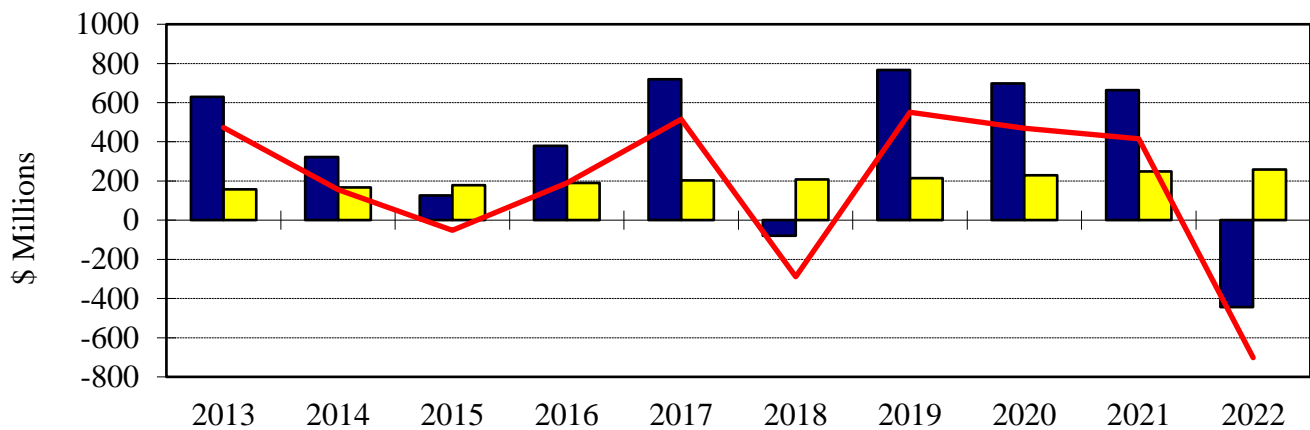


Plan A – Net Non-Investment Income



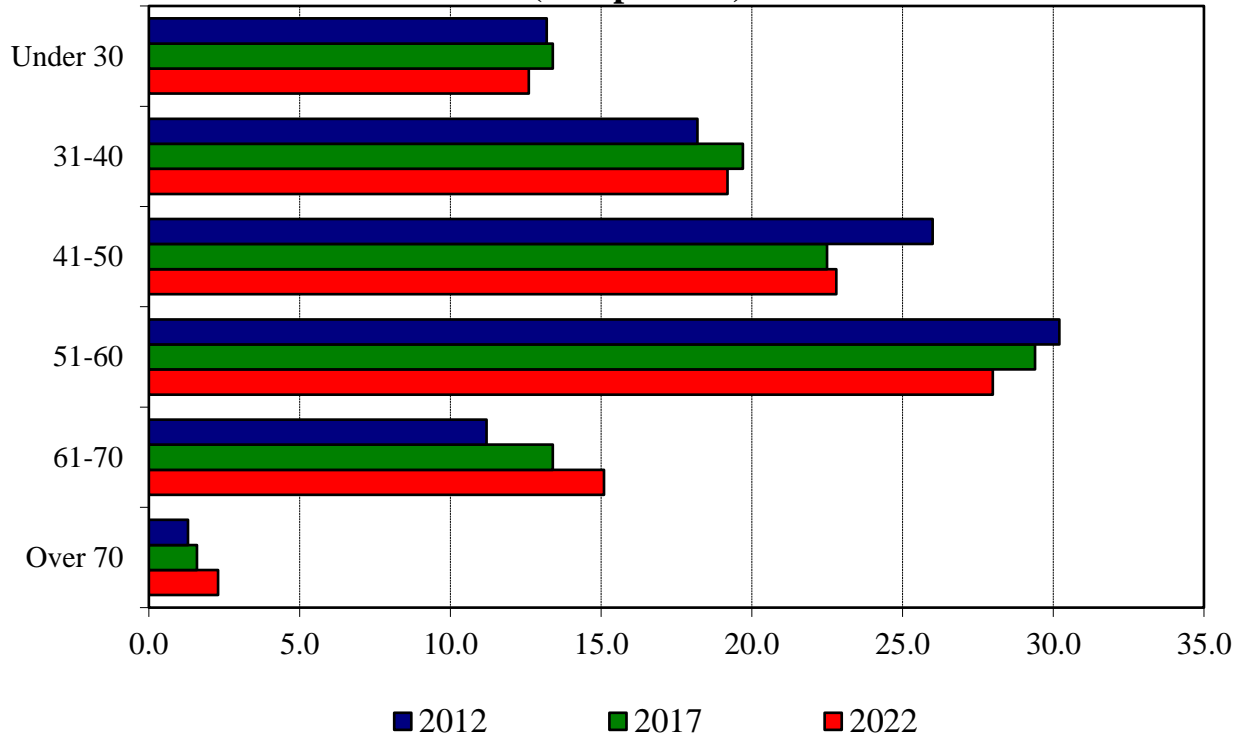
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Non-Investment Income (\$Mil)	■	149.8	149.4	145.6	141.4	148.4	133.2	140.9	155.6	155.9	152.5
Benefits and Expenses (\$Mil)	■	156.8	166.4	177.9	190.7	203.3	208.0	215.0	229.5	248.3	258.8
Net Non-Investment Income (\$Mil)	—	-7.0	-17.0	-32.3	-49.3	-54.9	-74.8	-74.1	-73.9	-92.4	-106.3

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

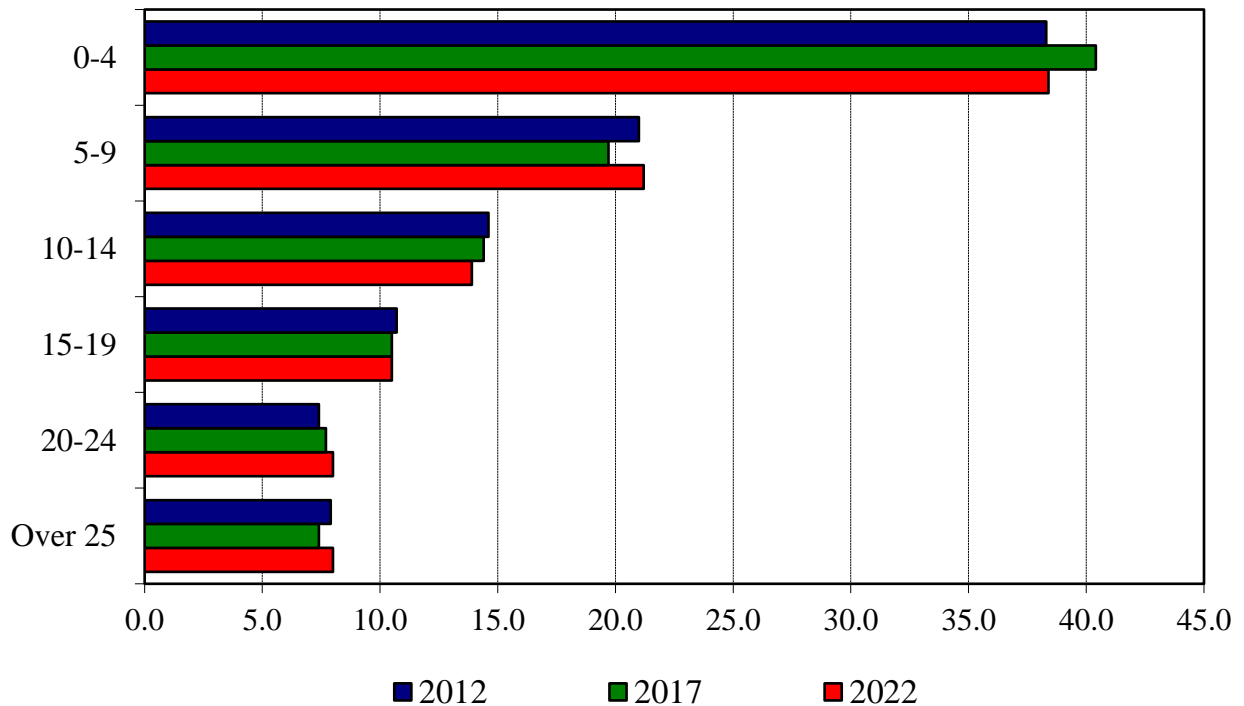


		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Income (\$Mil)	■	616.3	298.5	126.8	380.0	718.4	-80.1	765.9	698.7	663.3	-443.2
Benefits and Expenses (\$Mil)	■	156.8	166.4	177.9	190.7	203.3	208.0	215.0	229.5	248.3	258.8
Net Change in MVA (\$Mil)	—	459.5	132.1	-51.1	189.3	515.1	-288.1	550.9	469.2	415.0	-702.0

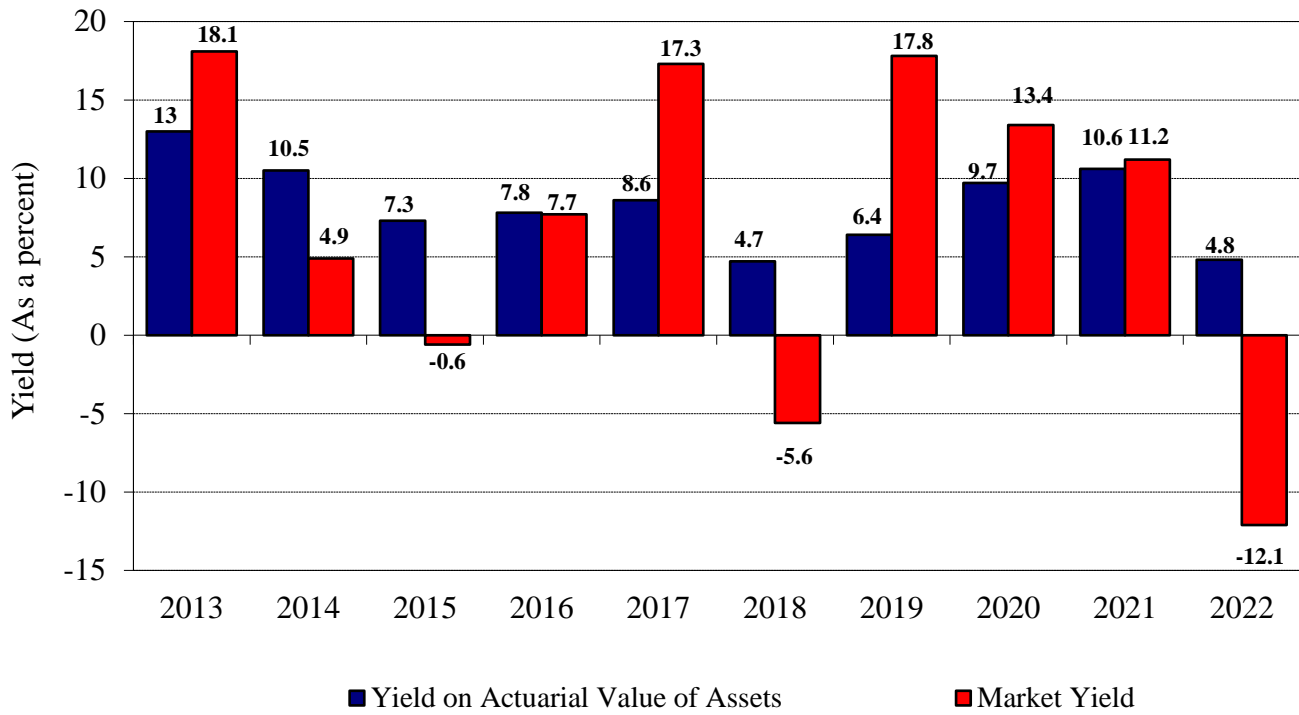
Plan A – Active – Census By Age (as a percent)



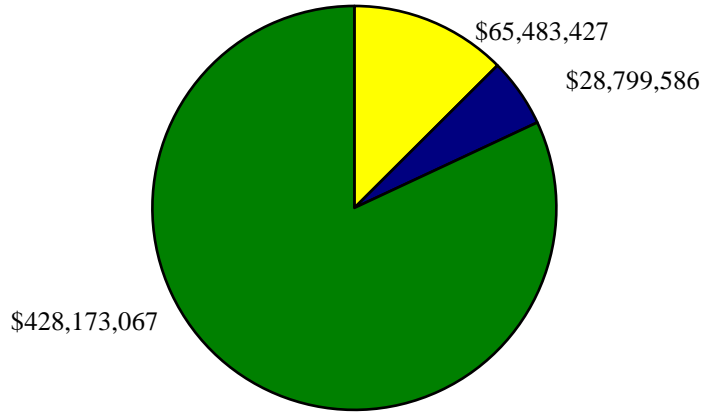
Plan A – Active – Census By Service (as a percent)



Plan A – Historical Asset Yield

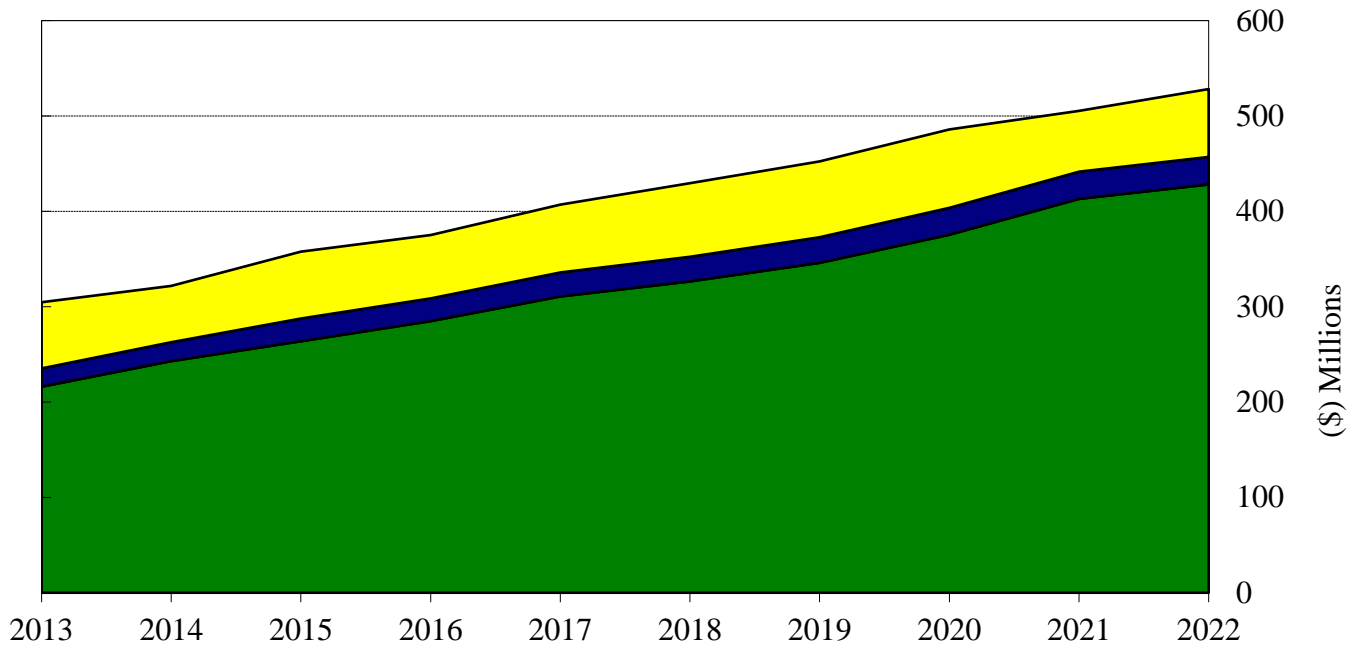


Plan B – Components of Present Value of Future Benefits December 31, 2022



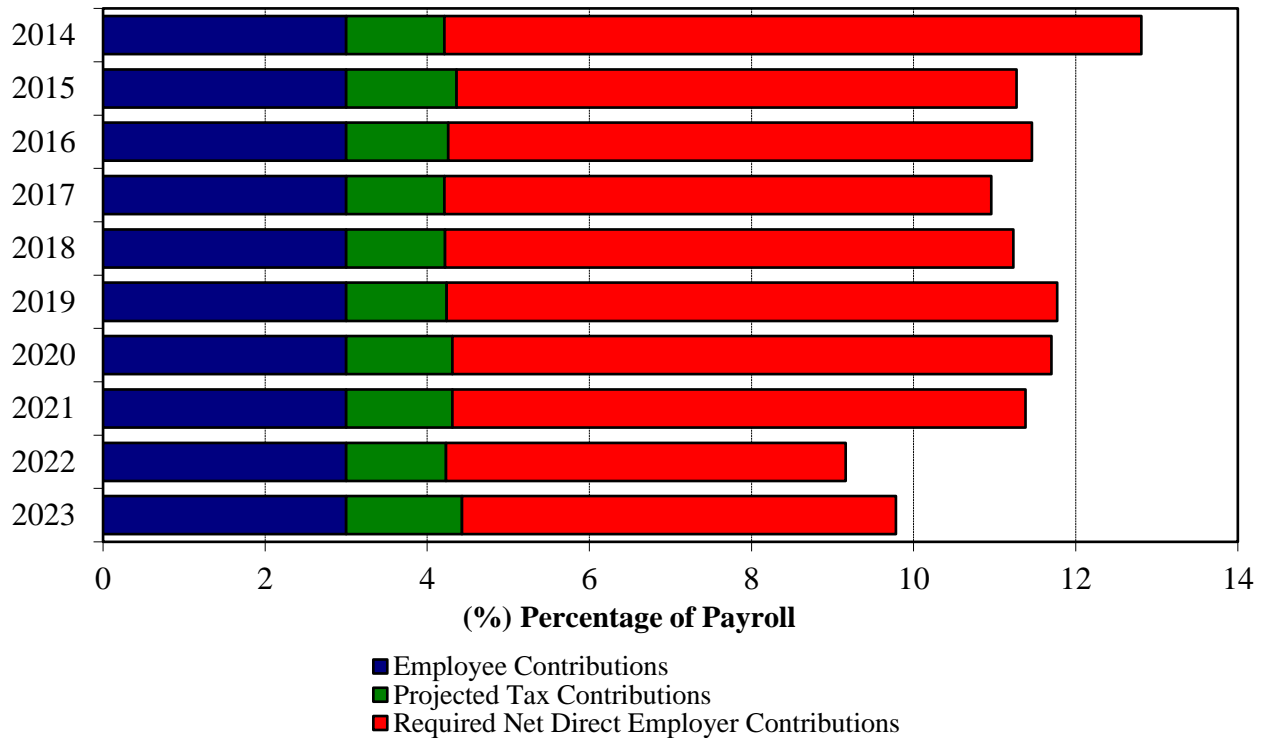
- Present Value of Future Employer Normal Cost (Net of Funding Deposit Account)
- Present Value of Future Employee Contributions
- Actuarial Value of Assets

Plan B – Components of Present Value of Future Benefits



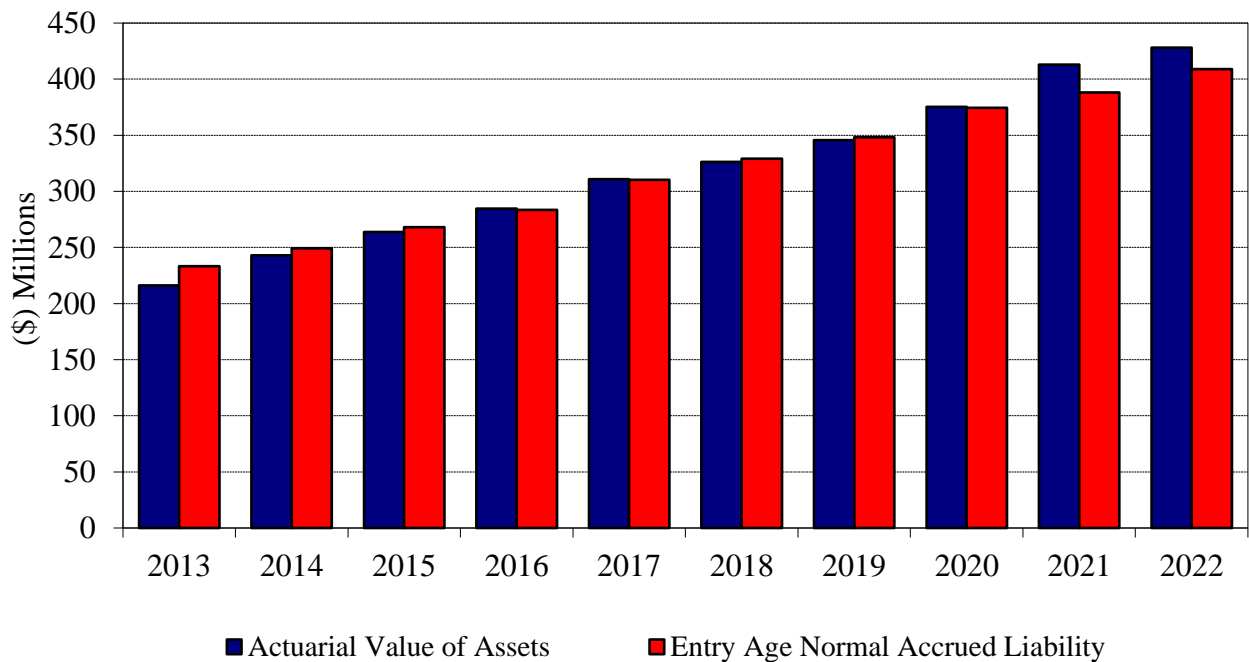
- Present Value of Future Employer Normal Cost (Net of Funding Deposit Account)
- Present Value of Future Employee Contributions
- Actuarial Value of Assets

Plan B – Components of Actuarial Funding

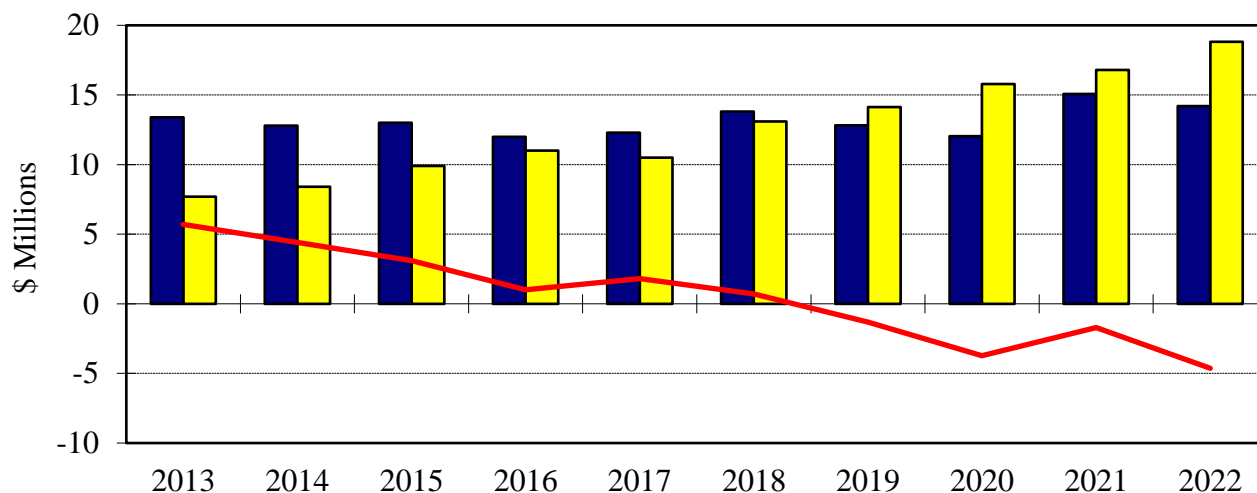


Projected Tax Contributions consist of Projected Ad Valorem and Revenue Sharing Funds as a percent of payroll

Plan B – Actuarial Value of Assets vs. EAN Accrued Liability

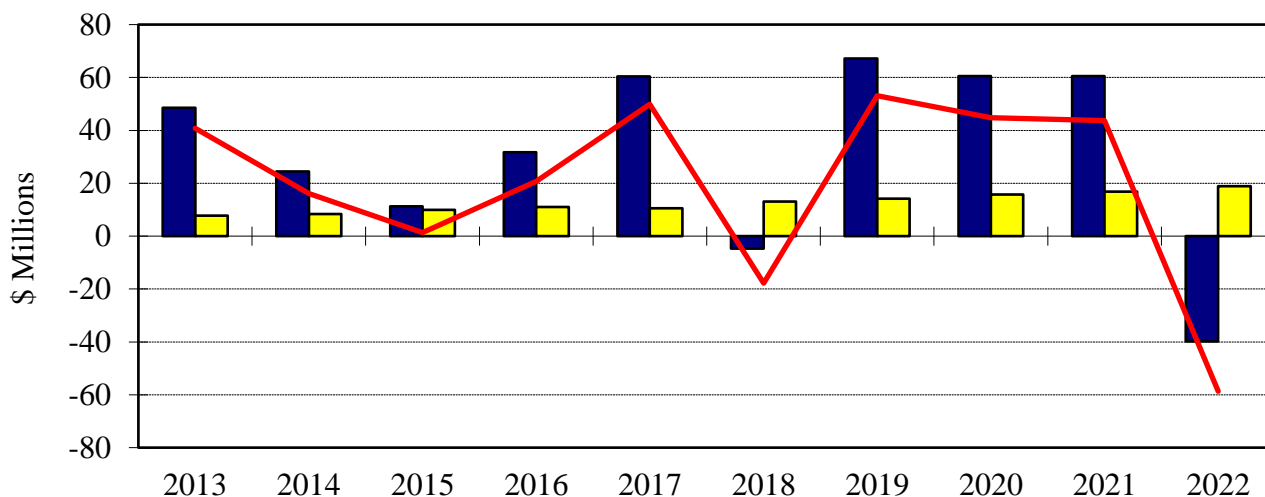


Plan B – Net Non-Investment Income



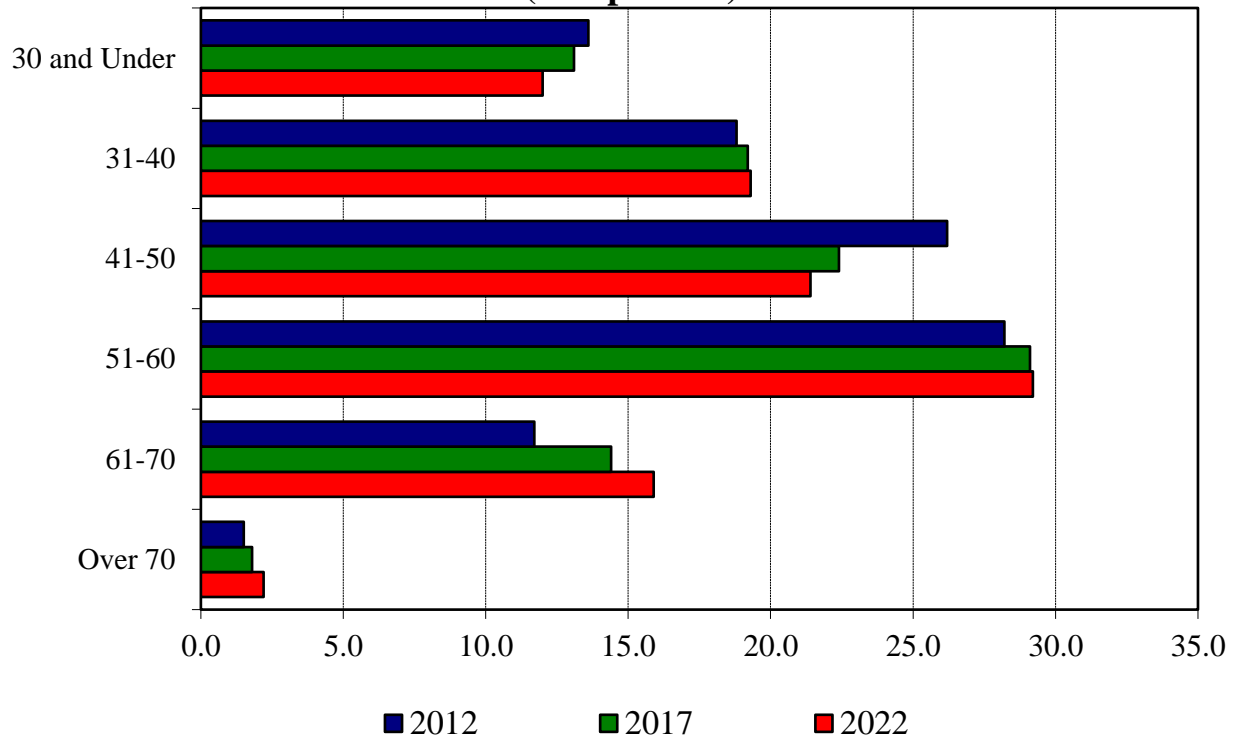
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Non-Investment Income (\$Mil)	■	13.4	12.8	13.3	12.0	12.3	13.8	12.8	12.0	15.1	14.2
Benefits and Expenses (\$Mil)	■	7.7	8.4	9.9	11.0	10.5	13.1	14.1	15.8	16.8	18.8
Net Non-Investment Income (\$Mil)	—	5.7	4.4	3.4	1.0	1.8	0.7	-1.3	-3.8	-1.7	-4.6

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

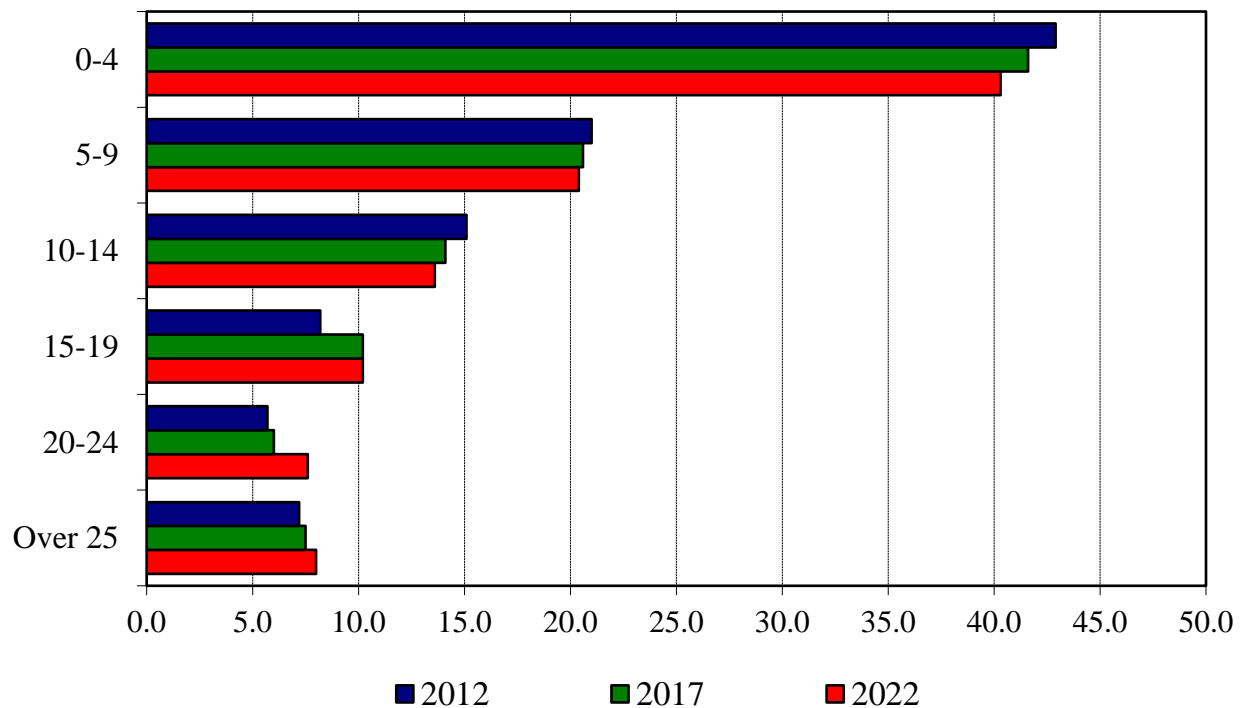


		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Income (\$Mil)	■	48.5	24.5	11.5	31.7	60.4	-4.7	67.2	60.5	60.5	-39.8
Benefits and Expenses (\$Mil)	■	7.7	8.4	9.9	11.0	10.5	13.1	14.1	15.8	16.8	18.8
Net Change in MVA (\$Mil)	—	40.8	16.1	1.6	20.7	49.9	-17.8	53.1	44.7	43.7	-58.6

Plan B – Active – Census By Age (as a percent)



Plan B – Active – Census By Service (as a percent)



Plan B – Historical Asset Yield

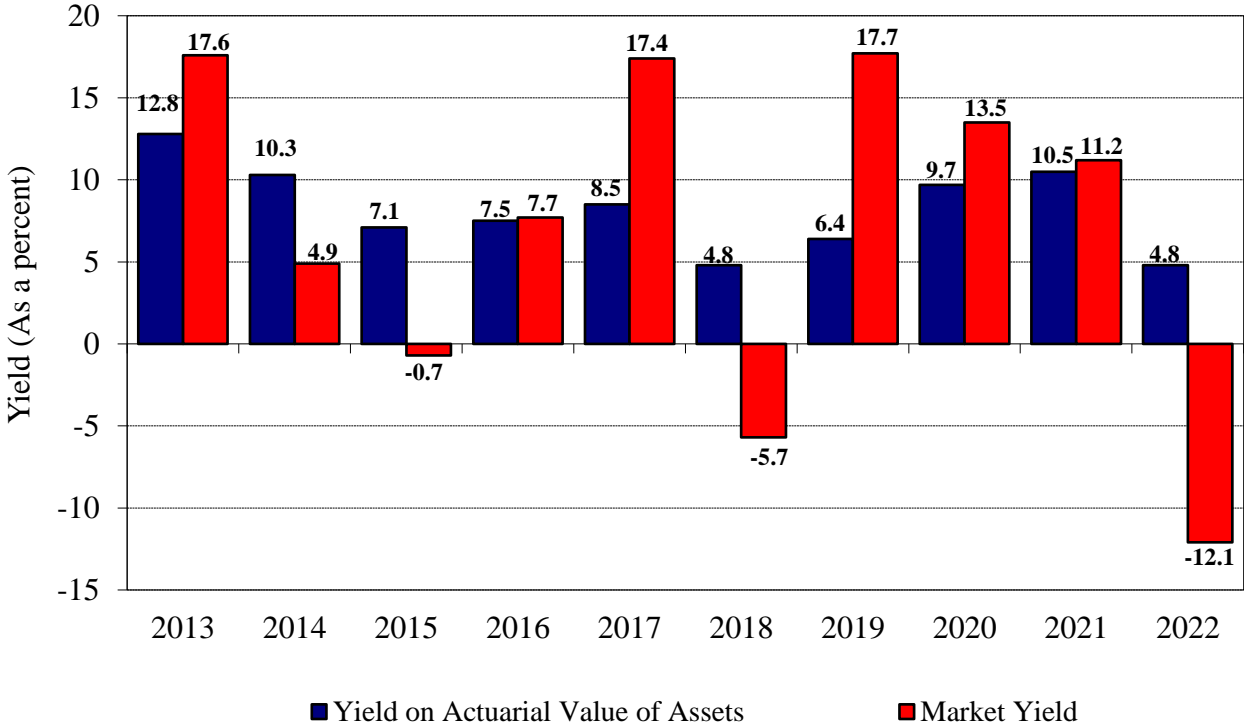


EXHIBIT I
PLAN A: ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS

1. Present Value of Future Benefits	\$ 5,684,306,785
2. Funding Deposit Account Credit Balance	\$ 65,263,833
3. Actuarial Value of Assets	\$ 4,680,374,638
4. Present Value of Future Employee Contributions	\$ 518,547,540
5. Present Value of Future Employer Normal Costs (1 + 2 – 3 – 4).....	\$ 550,648,440
6. Present Value of Future Salaries	\$ 6,049,023,329
7. Employer Normal Cost Accrual Rate (5 ÷ 6)	9.103097%
8. Projected Fiscal 2023 Salary for Current Membership.....	\$ 634,488,573
9. Employer Normal Cost as of January 1, 2023 (7 × 8)	\$ 57,758,110
10. Employer Normal Cost Interest Adjusted for Mid-year Payment	\$ 59,577,707
11. Estimated Administrative Cost for Fiscal 2023	\$ 2,042,137
12. TOTAL Administrative and Interest Adjusted Actuarial Costs (10 + 11).....	\$ 61,619,844
13. Offset for Projected Ad Valorem Tax Contributions for Fiscal 2023.....	\$ (9,745,516)
14. Offset for Projected Revenue Sharing Funds for Fiscal 2023.....	\$ (135,632)
15. Employers' Minimum Net Direct Actuarially Required Contribution for Fiscal 2023 (12 + 13 + 14)	\$ 51,738,696
16. Projected Payroll for Fiscal 2023	\$ 691,101,703
17. Employers' Minimum Net Direct Actuarially Required Contribution as a % of Projected Payroll for Fiscal 2023 (15 ÷ 16)	7.49%
18. Board Approved Employer Contribution Rate for Fiscal 2023	11.50%
19. Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2024 (17, Rounded to Nearest 0.25%)	7.50%

EXHIBIT II
PLAN A: PRESENT VALUE OF FUTURE BENEFITS

PRESENT VALUE OF FUTURE BENEFITS FOR ACTIVE MEMBERS:

Retirement Benefits	\$ 2,859,905,617
Survivor Benefits.....	50,844,410
Disability Benefits.....	122,857,804
Vested Termination Benefits.....	121,816,422
Refunds of Contributions	78,210,820

TOTAL Present Value of Future Benefits for Active Members..... \$ 3,233,635,073

PRESENT VALUE OF FUTURE BENEFITS FOR TERMINATED MEMBERS:

Terminated Vested Members Due Benefits at Retirement..	\$ 122,118,560
Terminated Members with Reciprocal Due Benefits at Retirement	349,175
Terminated Members Due a Refund	20,331,524

TOTAL Present Value of Future Benefits for Terminated Members..... \$ 142,799,259

PRESENT VALUE OF FUTURE BENEFITS FOR RETIREES:

Regular Retirees	
Maximum.....	\$ 973,573,642
Option 1	1,724,811
Option 2	752,198,009
Option 3	322,705,601
Option 4	72,077,547

TOTAL Regular Retirees \$ 2,122,279,610

Disability Retirees 35,594,553

Survivors & Widows 148,793,377

Reserve for Accrued Retiree DROP Account Balances..... 1,204,913

TOTAL Present Value of Future Benefits for Retirees & Survivors..... \$ 2,307,872,453

TOTAL Present Value of Future Benefits..... \$ 5,684,306,785

**EXHIBIT III – SCHEDULE A
PLAN A: MARKET VALUE OF ASSETS**

CURRENT ASSETS:

Cash in Banks	\$ 105,259,108
Contributions and Taxes Receivable.....	34,420,244
Accrued Interest and Dividends.....	2,168,071
Investments Receivable	248,592
Due (to)/from other Funds	2,264,118
Liability Transfer (to)/from Plan B.....	14,666
Deferred Outflows of Resources.....	33,342
Other Current Assets.....	13

TOTAL CURRENT ASSETS..... \$ 144,408,154

Property Plant & Equipment..... \$ 506,965

INVESTMENTS:

Cash Equivalents.....	\$ 35,152,680
Equities	2,048,071,880
Fixed Income	1,311,651,783
Real Estate	286,355,995
Alternative Investments	476,158,350

TOTAL INVESTMENTS..... \$ 4,157,390,688

TOTAL ASSETS

\$ 4,302,305,807

CURRENT LIABILITIES:

Accounts Payable.....	\$ 2,439,399
Benefits Payable.....	20,411,514
Refunds Payable.....	2,037,472
Investments Payable.....	2,654,952
Other Post-Employment Benefits Payable.....	454,181
Deferred Inflows of Resources	242,471

TOTAL CURRENT LIABILITIES

\$ 28,239,989

MARKET VALUE OF ASSETS..... \$ 4,274,065,818

**EXHIBIT III – SCHEDULE B
PLAN A: ACTUARIAL VALUE OF ASSETS**

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

Fiscal year 2022	\$ (910,731,525)
Fiscal year 2021	218,362,291
Fiscal year 2020	279,534,404
Fiscal year 2019	397,226,316
Fiscal year 2018	(469,282,812)
Total for five years	\$ (484,891,326)

Deferral of excess (shortfall) of invested income:

Fiscal year 2022 (80%)	\$ (728,585,220)
Fiscal year 2021 (60%)	131,017,375
Fiscal year 2020 (40%)	111,813,762
Fiscal year 2019 (20%)	79,445,263
Fiscal year 2018 (0%)	0
Total deferred for year	\$ (406,308,820)

Market value of plan net assets, end of year..... \$ 4,274,065,818

Preliminary actuarial value of plan assets, end of year \$ 4,680,374,638

Actuarial value of assets corridor

85% of market value, end of year \$ 3,632,955,945

115% of market value, end of year \$ 4,915,175,691

Final actuarial value of plan net assets, end of year \$ 4,680,374,638

EXHIBIT IV
PLAN A: PRESENT VALUE OF FUTURE CONTRIBUTIONS

Employee Contributions to the Annuity Savings Fund	\$ 518,547,540
Employer Normal Contributions to the Pension Accumulation Fund	550,648,440
Funding Deposit Account Debit / (Credit) Balance	(65,263,833)
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS	\$ 1,003,932,147

EXHIBIT V
PLAN A: RECONCILIATION OF CONTRIBUTIONS

Employer Normal Cost for Prior Year.....	\$ 53,657,730
Interest on the Normal Cost.....	3,434,096
Administrative Expenses	1,754,688
Interest on Expenses	55,280
TOTAL Interest Adjusted Actuarially Required Employer Contributions	\$ 58,901,794
Direct Employer Contributions.....	\$ 78,108,350
Interest on Employer Contributions.....	2,460,706
Ad Valorem Taxes and Revenue Sharing.....	9,318,063
Interest on Ad Valorem Taxes and Revenue Sharing Funds.....	293,554
TOTAL Interest Adjusted Employer Contributions	\$ 90,180,673
CONTRIBUTION SURPLUS (DEFICIENCY)	\$ 31,278,879

EXHIBIT VI
PLAN A: ANALYSIS OF CHANGE IN ASSETS

Actuarial Value of Assets (December 31, 2021)		\$ 4,568,593,183
INCOME:		
Member Contributions	\$ 61,063,549	
Employer Contributions	78,108,350	
Irregular Contributions	248,718	
Ad Valorem and Revenue Sharing Funds	9,318,063	
Transfers from other Systems.....	2,481,737	
Other Income	1,240,479	
Total Contributions		\$ 152,460,896
Net Depreciation in Fair Value of Investments	\$ (678,576,114)	
Interest & Dividends	112,642,045	
Class Action Settlement	74,983	
Investment Expense	(29,756,647)	
Net Investment Income		\$ (595,615,733)
TOTAL Income		\$ (443,154,837)
EXPENSES:		
Retirement Benefits	\$ 217,109,755	
DROP Disbursements	20,491,832	
Refunds of Contributions.....	14,426,798	
Transfers to other Systems.....	5,048,560	
Transfer from Plan B to Plan A	(14,666)	
Administrative Expenses	1,754,688	
TOTAL Expenses		\$ 258,816,967
Net Market Value Income for Fiscal 2022 (Income - Expenses)		\$ (701,971,804)
Unadjusted Fund Balance as of December 31, 2022 (Fund Balance Previous Year + Net Income).....		\$ 3,866,621,379
Adjustment for Actuarial Smoothing.....		\$ 813,753,259
Actuarial Value of Assets: (December 31, 2022).....		\$ 4,680,374,638

**EXHIBIT VII
PLAN A: FUNDING DEPOSIT ACCOUNT**

Funding Deposit Account Balance as of December 31, 2021	\$ 69,983,070
Interest on Opening Balance at 6.40%	4,478,916
Contributions to the Funding Deposit Account	31,278,879
Withdrawals from the Funding Deposit Account	(40,477,032)
Funding Deposit Account Balance as of December 31, 2022	\$ 65,263,833

**EXHIBIT VIII – SCHEDULE A
PLAN A: PENSION BENEFIT OBLIGATION**

Present Value of Credited Projected Benefits Payable to Current Employees.....	\$ 2,019,665,949
Present Value of Benefits Payable to Terminated Employees	142,799,259
Present Value of Benefits Payable to Current Retirees and Beneficiaries	2,307,872,453
TOTAL PENSION BENEFIT OBLIGATION.....	\$ 4,470,337,661
NET ACTUARIAL VALUE OF ASSETS	\$ 4,680,374,638
Ratio of Net Actuarial Value of Assets to Pension Benefit Obligation.....	104.70%

**EXHIBIT VIII – SCHEDULE B
PLAN A: ENTRY AGE NORMAL ACCRUED LIABILITIES**

Accrued Liability for Active Employees	\$ 2,129,462,464
Accrued Liability for Terminated Employees	142,799,259
Accrued Liability for Current Retirees and Beneficiaries	2,307,872,453
TOTAL ENTRY AGE NORMAL ACCRUED LIABILITY	\$ 4,580,134,176
NET ACTUARIAL VALUE OF ASSETS	\$ 4,680,374,638
Ratio of Net Actuarial Value of Assets to Entry Age Normal Accrued Liability	102.19%

**EXHIBIT IX
PLAN A: CENSUS DATA**

	Active	Terminated with Funds on Deposit	DROP	Retired	Total
Number of members as of December 31, 2021	13,115	9,632	528	8,096	31,371
Additions to Census					
Initial membership	1,741	247			1,988
Death of another member				85	85
Omitted in error last year		1			1
Adjustment for multiple records		5			5
Change in Status during Year					
Actives terminating service	(837)	837			
Actives who retired	(230)			230	
Actives entering DROP	(236)		236		
Term. members rehired	61	(61)			
Term. members who retire		(50)		50	
Retirees who are rehired	1			(1)	
Refunded who are rehired	27	22			49
DROP participants retiring			(133)	133	
DROP returned to work	67		(67)		
Eliminated from Census					
Refund of contributions	(827)	(282)			(1,109)
Deaths	(27)	(19)	(7)	(304)	(357)
Included in error last year					
Adjustment for multiple records				(5)	(5)
Number of members as of December 31, 2022	12,855	10,332	557	8,284	32,028

Plan A Actives Census By Age:

Age	Number Male	Number Female	Total Number	Average Salary	Total Salary
16 - 20	67	24	91	29,788	2,710,753
21 - 25	326	260	586	34,240	20,064,897
26 - 30	490	521	1,011	40,685	41,132,111
31 - 35	551	683	1,234	44,686	55,142,192
36 - 40	590	750	1,340	50,528	67,707,817
41 - 45	684	876	1,560	53,008	82,692,991
46 - 50	671	826	1,497	54,350	81,361,330
51 - 55	878	973	1,851	54,034	100,016,118
56 - 60	983	923	1,906	54,040	102,999,781
61 - 65	708	745	1,453	51,900	75,409,980
66 - 70	291	283	574	54,898	31,511,397
71 - 75	133	90	223	50,109	11,174,308
76 - 80	43	22	65	46,026	2,991,697
81 - 85	11	6	17	31,901	542,312
86 - 90	2	2	4	8,151	32,602
Total	6,428	6,984	13,412	50,365	675,490,286

The active census includes 6,986 actives with vested benefits, including 557 DROP participants and 310 active former DROP participants.

Plan A Drop Participants:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
46 - 50	2	4	6	66,232	397,393
51 - 55	20	24	44	59,061	2,598,686
56 - 60	66	66	132	52,730	6,960,373
61 - 65	111	148	259	34,348	8,896,028
66 - 70	45	47	92	30,336	2,790,951
71 - 75	14	5	19	23,510	446,686
76 - 80	4	0	4	25,920	103,679
81 - 85	1	0	1	10,015	10,015
Total	263	294	557	39,863	22,203,811

Plan A Terminated Members Due a Deferred Retirement Benefit:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
26 - 30	1	2	3	9,890	29,671
31 - 35	12	26	38	10,639	404,283
36 - 40	30	59	89	14,632	1,302,214
41 - 45	47	73	120	18,149	2,177,935
46 - 50	56	85	141	20,616	2,906,862
51 - 55	67	123	190	21,923	4,165,316
56 - 60	94	128	222	20,731	4,602,227
61 - 65	45	53	98	13,587	1,331,538
66 - 70	23	17	40	11,754	470,152
71 - 75	2	5	7	10,375	72,628
76 - 80	2	2	4	4,257	17,029
81 - 85	1	2	3	3,868	11,603
86 - 90	1	0	1	37,920	37,920
Total	381	575	956	18,336	17,529,378

Plan A Terminated Members Due a Refund of Contributions:

Contributions Ranging		Number	Total Contributions
From	To		
0	- 99	4,588*	127,491*
100	- 499	1,468	362,769
500	- 999	694	504,597
1,000	- 1,999	610	876,431
2,000	- 4,999	844	2,725,942
5,000	- 9,999	571	4,067,978
10,000	- 19,999	422	5,988,075
20,000	- 99,999	178	5,317,927
100,000	& Above	1	111,459
Total		9,376	20,082,669

* Includes 3,311 members due a refund who were not included in the data provided to the actuary since they are maintained external to the system's database. Excludes \$248,855 due to deceased members.

Plan A Regular Retirees:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
46 - 50	1	0	1	49,651	49,651
51 - 55	30	17	47	58,739	2,760,725
56 - 60	189	167	356	50,985	18,150,487
61 - 65	547	569	1,116	39,188	43,733,841
66 - 70	873	877	1,750	30,331	53,079,092
71 - 75	810	771	1,581	26,284	41,554,969
76 - 80	550	499	1,049	23,719	24,880,996
81 - 85	312	295	607	21,167	12,848,469
86 - 90	158	156	314	17,587	5,522,299
91 - 95	50	88	138	15,195	2,096,887
96 - 100	8	13	21	12,094	253,984
101 - 105	2	3	5	10,007	50,037
Total	3,530	3,455	6,985	29,346	204,981,437

Plan A Disability Retirees:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
41 - 45	1	1	2	26,182	52,363
46 - 50	7	8	15	19,345	290,169
51 - 55	24	14	38	20,109	764,152
56 - 60	43	33	76	16,565	1,258,912
61 - 65	28	16	44	13,668	601,373
66 - 70	8	5	13	13,394	174,118
Total	111	77	188	16,708	3,141,087

Plan A Survivors:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
0 - 20	4	8	12	19,776	237,312
21 - 25	1	0	1	9,892	9,892
26 - 30	0	3	3	7,684	23,053
31 - 35	2	2	4	23,130	92,520
36 - 40	1	3	4	18,161	72,645
41 - 45	1	3	4	5,761	23,045
46 - 50	4	5	9	13,660	122,940
51 - 55	2	17	19	19,865	377,432
56 - 60	8	39	47	19,534	918,114
61 - 65	13	88	101	20,278	2,048,050
66 - 70	29	119	148	19,405	2,871,988
71 - 75	15	172	187	15,943	2,981,258
76 - 80	24	177	201	14,324	2,879,189
81 - 85	17	177	194	12,842	2,491,436
86 - 90	3	104	107	11,833	1,266,147
91 - 95	4	51	55	9,512	523,150
96 - 100	0	11	11	10,028	110,303
101 - 105	0	4	4	3,400	13,600
Total	128	983	1,111	15,357	17,062,074

Plan A Active Members:

Completed Years of Service

Attained Ages	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	Total
0 - 20	74	17	-	-	-	-	-	-	91
21 - 25	281	295	10	-	-	-	-	-	586
26 - 30	287	512	205	7	-	-	-	-	1,011
31 - 35	236	446	389	156	7	-	-	-	1,234
36 - 40	150	396	369	274	135	16	-	-	1,340
41 - 45	185	406	318	240	247	147	17	-	1,560
46 - 50	171	343	276	202	205	194	97	9	1,497
51 - 55	163	382	373	263	222	213	168	67	1,851
56 - 60	120	347	372	294	249	237	176	111	1,906
61 - 65	55	174	360	259	203	173	135	94	1,453
66 - 70	17	56	131	119	96	55	54	46	574
71 & Over	5	34	35	50	47	38	36	64	309
Total	1,744	3,408	2,838	1,864	1,411	1,073	683	391	13,412

Plan A Average Annual Salary of Active Members:

Completed Years of Service

Attained Ages	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	Average
0 - 20	29,464	31,202	-	-	-	-	-	-	29,788
21 - 25	33,380	34,720	44,277	-	-	-	-	-	34,240
26 - 30	35,782	42,151	43,651	47,563	-	-	-	-	40,685
31 - 35	36,467	42,754	48,569	52,338	58,500	-	-	-	44,686
36 - 40	38,054	43,714	53,197	58,227	59,402	67,841	-	-	50,528
41 - 45	40,261	46,258	51,770	56,256	63,373	66,025	67,108	-	53,008
46 - 50	38,756	45,117	49,817	55,447	64,388	69,051	72,011	80,969	54,350
51 - 55	37,989	43,953	49,276	54,559	61,836	62,352	75,277	69,402	54,034
56 - 60	37,647	46,535	48,540	53,168	56,124	60,971	70,018	71,157	54,040
61 - 65	35,422	44,588	49,572	48,305	52,284	58,452	61,000	67,932	51,900
66 - 70	30,525	50,167	53,805	55,282	54,675	53,781	65,577	61,045	54,898
71 & Over	28,369	37,288	38,438	49,018	46,969	45,935	52,748	57,548	47,705
Average	36,432	43,358	49,613	54,010	58,862	62,194	68,478	66,890	50,365

Plan A Terminated Members Due A Deferred Retirement Benefit:

Years until Retirement Eligibility

Attained Ages	0 - 1	1 - 2	2 - 3	3 - 5	5 - 10	10 - 15	15 - 20	Over 20	Total
0 - 30	-	-	-	-	-	-	-	3	3
31 - 35	-	-	-	-	-	-	-	38	38
36 - 40	-	-	-	-	-	-	2	87	89
41 - 45	-	-	-	-	-	8	61	51	120
46 - 50	-	-	-	-	9	79	43	10	141
51 - 55	2	2	1	16	113	45	11	-	190
56 - 60	42	25	36	65	48	6	-	-	222
61 - 65	47	14	9	17	11	-	-	-	98
66 - 70	36	4	-	-	-	-	-	-	40
71 & Over	15	-	-	-	-	-	-	-	15
Total	142	45	46	98	181	138	117	189	956

Plan A Average Annual Benefits of Terminated Members Due A Deferred Retirement Benefit:

Years until Retirement Eligibility

Attained Ages	0 - 1	1 - 2	2 - 3	3 - 5	5 - 10	10 - 15	15 - 20	Over 20	Average
0 - 30	-	-	-	-	-	-	-	9,890	9,890
31 - 35	-	-	-	-	-	-	-	10,639	10,639
36 - 40	-	-	-	-	-	-	23,873	14,419	14,632
41 - 45	-	-	-	-	-	30,362	21,061	12,752	18,149
46 - 50	-	-	-	-	24,738	23,209	16,653	13,465	20,616
51 - 55	58,048	107,141	25,413	26,521	23,623	12,996	11,902	-	21,923
56 - 60	19,900	26,583	21,567	24,222	14,403	9,945	-	-	20,731
61 - 65	16,594	9,752	10,015	10,309	13,610	-	-	-	13,587
66 - 70	11,944	10,038	-	-	-	-	-	-	11,754
71 & Over	9,279	-	-	-	-	-	-	-	9,279
Average	16,204	23,456	19,390	22,184	20,625	19,717	18,628	13,087	18,336

Plan A Service Retirees:

Completed Years Since Retirement

Attained Ages	0 - 1	1 - 2	2 - 3	3 - 5	5 - 10	10 - 15	15 - 20	Over 20	Total
0 - 50	-	1	-	-	-	-	-	-	1
51 - 55	16	16	9	5	1	-	-	-	47
56 - 60	64	47	61	79	90	15	-	-	356
61 - 65	139	157	126	196	352	113	21	12	1,116
66 - 70	114	156	170	277	635	265	99	34	1,750
71 - 75	27	46	57	136	582	463	193	77	1,581
76 - 80	16	17	28	33	180	321	304	150	1,049
81 - 85	2	5	7	5	47	94	175	272	607
86 - 90	1	2	2	5	17	31	32	224	314
91 & Over	-	-	-	-	1	3	8	152	164
Total	379	447	460	736	1,905	1,305	832	921	6,985

Plan A Average Annual Benefits Payable To Service Retirees:

Completed Years Since Retirement

Attained Ages	0 - 1	1 - 2	2 - 3	3 - 5	5 - 10	10 - 15	15 - 20	Over 20	Average
0 - 50	-	49,651	-	-	-	-	-	-	49,651
51 - 55	68,414	50,256	64,877	47,321	41,500	-	-	-	58,739
56 - 60	49,835	49,946	51,018	50,863	53,430	44,974	-	-	50,985
61 - 65	32,462	33,455	35,645	34,274	48,001	44,805	29,242	15,576	39,188
66 - 70	23,832	25,743	25,009	25,501	30,983	42,550	35,333	17,141	30,331
71 - 75	25,379	25,353	26,823	21,770	23,421	26,628	38,536	23,587	26,284
76 - 80	21,361	21,963	32,294	28,763	22,615	21,373	23,510	28,226	23,719
81 - 85	25,390	23,969	28,880	21,895	21,026	20,949	20,516	21,392	21,167
86 - 90	21,011	10,667	15,286	26,217	19,265	14,071	16,884	17,921	17,587
91 & Over	-	-	-	-	19,176	29,387	11,696	14,474	14,640
Average	33,277	31,656	32,836	30,145	31,736	29,653	27,549	20,470	29,346

Plan A Disability Retirees:

Completed Years Since Retirement

Attained Ages	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	Total
0 - 30	-	-	-	-	-	-	-	-	-
31 - 35	-	-	-	-	-	-	-	-	-
36 - 40	-	-	-	-	-	-	-	-	-
41 - 45	-	-	2	-	-	-	-	-	2
46 - 50	4	6	2	3	-	-	-	-	15
51 - 55	-	12	16	5	4	1	-	-	38
56 - 60	1	19	25	15	7	6	3	-	76
61 - 65	4	12	11	4	2	2	5	4	44
66 - 70	-	6	2	2	-	1	-	2	13
71 - 75	-	-	-	-	-	-	-	-	-
76 - 80	-	-	-	-	-	-	-	-	-
81 & Over	-	-	-	-	-	-	-	-	-
Total	9	55	58	29	13	10	8	6	188

Plan A Average Annual Benefits Payable To Disability Retirees:

Completed Years Since Retirement

Attained Ages	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	Average
0 - 30	-	-	-	-	-	-	-	-	-
31 - 35	-	-	-	-	-	-	-	-	-
36 - 40	-	-	-	-	-	-	-	-	-
41 - 45	-	-	26,182	-	-	-	-	-	26,182
46 - 50	30,960	15,266	18,004	12,908	-	-	-	-	19,345
51 - 55	-	23,918	20,915	15,302	14,783	6,857	-	-	20,109
56 - 60	23,049	17,503	18,121	18,298	13,400	9,747	7,849	-	16,565
61 - 65	10,172	17,666	16,718	15,355	10,525	8,348	8,297	6,038	13,668
66 - 70	-	17,240	13,896	10,263	-	6,361	-	7,999	13,394
71 - 75	-	-	-	-	-	-	-	-	-
76 - 80	-	-	-	-	-	-	-	-	-
81 & Over	-	-	-	-	-	-	-	-	-
Average	20,842	18,665	18,754	16,264	13,383	8,839	8,129	6,692	16,708

Plan A Surviving Beneficiaries of Former Members:

Completed Years Since Retirement

Attained Ages	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	Total
0 - 30	-	8	5	-	2	-	1	-	16
31 - 35	-	1	1	2	-	-	-	-	4
36 - 40	-	1	2	-	-	1	-	-	4
41 - 45	-	-	1	1	-	-	2	-	4
46 - 50	-	1	3	3	1	-	-	1	9
51 - 55	-	3	9	3	3	1	-	-	19
56 - 60	5	9	8	10	9	4	2	-	47
61 - 65	9	24	25	22	16	2	2	1	101
66 - 70	3	16	48	36	25	10	8	2	148
71 - 75	1	6	34	57	46	20	18	5	187
76 - 80	-	5	17	40	67	39	24	9	201
81 & Over	-	3	11	32	63	74	80	108	371
Total	18	77	164	206	232	151	137	126	1,111

Plan A Average Annual Benefits Payable To Survivors of Former Members:

Completed Years Since Retirement

Attained Ages	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	Average
0 - 30	-	20,133	18,168	-	6,004	-	6,348	-	16,891
31 - 35	-	14,261	63,598	7,331	-	-	-	-	23,130
36 - 40	-	32,634	16,527	-	-	6,958	-	-	18,161
41 - 45	-	-	5,412	6,549	-	-	5,542	-	5,761
46 - 50	-	7,527	28,662	6,017	4,365	-	-	7,009	13,660
51 - 55	-	30,644	22,029	20,354	6,524	6,600	-	-	19,865
56 - 60	26,973	24,302	15,979	24,023	14,040	11,606	11,838	-	19,534
61 - 65	16,802	23,359	24,601	20,388	14,711	9,857	6,378	4,800	20,278
66 - 70	13,438	16,451	20,330	24,746	17,886	18,857	7,150	4,412	19,405
71 - 75	23,995	21,600	18,919	16,523	15,042	13,008	13,326	10,123	15,943
76 - 80	-	24,959	14,168	12,959	15,079	13,217	14,438	13,655	14,324
81 & Over	-	35,734	9,074	11,323	10,594	12,275	12,838	11,412	11,872
Average	19,466	22,228	19,389	17,002	13,856	12,929	12,587	11,322	15,357

EXHIBIT X
PLAN A: YEAR-TO-YEAR COMPARISON

	Fiscal 2022	Fiscal 2021	Fiscal 2020	Fiscal 2019
Number of Active Members	13,412	13,643	13,750	14,042
Number of Retirees & Survivors	8,284	8,096	7,873	7,651
Number of Terminated Due Deferred Benefits	956	901	849	818
Number Terminated Due Refunds	9,376	8,731	8,351	7,967
Active Lives Payroll	\$ 675,490,286	\$ 672,340,250	\$ 666,414,649	\$ 634,490,049
Retiree Benefits in Payment	\$ 225,184,598	\$ 211,189,264	\$ 201,085,695	\$ 185,969,386
Market Value of Assets	\$ 4,274,065,818	\$ 4,976,037,622	\$ 4,561,001,343	\$ 4,091,788,575
Entry Age Normal (EAN) Accrued Liability	\$ 4,580,134,176	\$ 4,426,022,763	\$ 4,306,898,028	\$ 4,019,234,688
Ratio of AVA to EAN Accrued Liability	102.19%	103.22%	97.95%	97.41%
Actuarial Value of Assets	\$ 4,680,374,638	\$ 4,568,593,183	\$ 4,218,785,899	\$ 3,915,328,623
Present Value of Future Employer Normal Cost	\$ 550,648,440	\$ 514,180,024	\$ 725,789,884	\$ 717,931,079
Present Value of Future Employee Contrib.	\$ 518,547,540	\$ 518,500,733	\$ 513,701,674	\$ 480,272,531
Funding Deposit Account Credit Balance	\$ 65,263,833	\$ 69,983,070	\$ 55,177,473	\$ 83,972,205
Frozen Unfunded Actuarial Accrued Liability	\$ 0	\$ 0	\$ 0	\$ 0
Present Value of Future Benefits	\$ 5,684,306,785	\$ 5,531,290,870	\$ 5,403,099,984	\$ 5,029,560,028

	Fiscal 2023	Fiscal 2022	Fiscal 2021	Fiscal 2020
Employee Contribution Rate	9.50%	9.50%	9.50%	9.50%
Projected Tax Contribution as % of Payroll	1.43%	1.23%	1.30%	1.30%
Actuarially Required Net Direct Employer Contribution Rate	7.49%	7.10%	10.38%	11.11%
Actual Employer Contribution Rate	11.50%	11.50%	12.25%	12.25%

Fiscal 2018	Fiscal 2017	Fiscal 2016	Fiscal 2015	Fiscal 2014	Fiscal 2013
14,027	14,201	14,330	14,232	14,061	13,866
7,467	7,301	7,050	6,783	6,523	6,242
813	709	703	678	660	683
7,845	7,482	7,329	7,182	7,026	7,109
\$ 615,887,352	\$ 605,199,478	\$ 599,421,070	\$ 577,600,460	\$ 566,547,812	\$ 543,669,542
\$ 177,804,484	\$ 170,697,910	\$ 157,140,568	\$ 146,994,479	\$ 137,309,161	\$ 124,299,785
\$ 3,540,960,468	\$ 3,829,020,281	\$ 3,313,917,014	\$ 3,124,593,132	\$ 3,175,649,999	\$ 3,043,479,814
\$ 3,908,729,734	\$ 3,676,214,901	\$ 3,446,813,538	\$ 3,316,128,533	\$ 3,133,179,431	\$ 2,984,143,643
96.03%	99.49%	99.20%	97.11%	96.80%	92.49%
\$ 3,753,426,178	\$ 3,657,539,805	\$ 3,419,149,648	\$ 3,220,157,028	\$ 3,032,888,183	\$ 2,760,148,403
\$ 756,070,638	\$ 604,529,232	\$ 555,155,571	\$ 592,955,250	\$ 560,647,763	\$ 651,806,943
\$ 466,755,194	\$ 437,372,887	\$ 422,091,697	\$ 405,879,187	\$ 389,156,042	\$ 370,352,485
\$ 78,847,141	\$ 66,910,393	\$ 68,896,088	\$ 49,644,401	\$ 23,781,823	\$ 4,918,053
\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
\$ 4,897,404,869	\$ 4,632,531,531	\$ 4,327,500,828	\$ 4,169,347,064	\$ 3,958,910,165	\$ 3,777,389,778

Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016	Fiscal 2015	Fiscal 2014
9.50%	9.50%	9.50%	9.50%	9.50%	9.50%
1.24%	1.22%	1.22%	1.27%	1.28%	1.32%
12.18%	9.99%	9.35%	10.52%	10.40%	13.07%
11.50%	11.50%	12.50%	13.00%	14.50%	16.00%

EXHIBIT XI
PLAN B: ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS

1. Present Value of Future Benefits	\$ 522,456,080
2. Funding Deposit Account Credit Balance	\$ 5,727,180
3. Actuarial Value of Assets	\$ 428,173,067
4. Present Value of Future Employee Contributions	\$ 28,799,586
5. Present Value of Future Employer Normal Costs (1 + 2 – 3 – 4).....	\$ 71,210,607
6. Present Value of Future Salaries	\$ 1,033,170,524
7. Employer Normal Cost Accrual Rate (5 ÷ 6)	6.892435%
8. Projected Fiscal 2023 Salary for Current Membership.....	\$ 108,729,802
9. Employer Normal Cost as of January 1, 2023 (7 × 8)	\$ 7,494,131
10. Employer Normal Cost Interest Adjusted for Mid-year Payment	\$ 7,730,224
11. Estimated Administrative Cost for Fiscal 2023	\$ 352,724
12. TOTAL Administrative and Interest Adjusted Actuarial Costs (10 + 11).....	\$ 8,082,948
13. Offset for Projected Ad Valorem Tax Contributions for Fiscal 2023.....	\$ (1,683,274)
14. Offset for Projected Revenue Sharing Funds for Fiscal 2023.....	\$ (23,427)
15. Employers' Minimum Net Direct Actuarially Required Contribution for Fiscal 2023 (12 + 13 + 14)	\$ 6,376,247
16. Projected Payroll for Fiscal 2023.....	\$ 119,202,988
17. Employers' Minimum Net Direct Actuarially Required Contribution as a % of Projected Payroll for Fiscal 2023 (15 ÷ 16)	5.35%
18. Board Approved Employer Contribution Rate for Fiscal 2023	7.50%
19. Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2024 (17, Rounded to Nearest 0.25%)	5.25%

EXHIBIT XII
PLAN B: PRESENT VALUE OF FUTURE BENEFITS

PRESENT VALUE OF FUTURE BENEFITS FOR ACTIVE MEMBERS:

Retirement Benefits	\$ 302,018,358
Survivor Benefits	6,122,145
Disability Benefits	15,179,360
Vested Termination Benefits	13,184,653
Refunds of Contributions	4,228,683
 TOTAL Present Value of Future Benefits for Active Members.....	 \$ 340,733,199

PRESENT VALUE OF FUTURE BENEFITS FOR TERMINATED MEMBERS:

Terminated Vested Members Due Benefits at Retirement	\$ 14,259,214
Terminated Members with Reciprocals	
Due Benefits at Retirement	111,864
Terminated Members Due a Refund	1,428,991
 TOTAL Present Value of Future Benefits for Terminated Members	 \$ 15,800,069

PRESENT VALUE OF FUTURE BENEFITS FOR PENSIONERS:

Regular Retirees by Option Selected:

Maximum.....	\$ 64,450,613
Option 1	232,603
Option 2	66,437,833
Option 3	17,688,135
Option 4	2,011,951
 TOTAL Regular Retirees.....	 \$ 150,821,135
 TOTAL Disability Retirees.....	 \$ 3,045,974
 TOTAL Survivors & Widows	 \$ 11,804,244
 Reserve for Accrued Retiree DROP Account Balances	 \$ 251,459
 TOTAL Present Value of Future Benefits for Retirees & Survivors.....	 \$ 165,922,812
 TOTAL Present Value of Future Benefits.....	 \$ 522,456,080

**EXHIBIT XIII – SCHEDULE A
PLAN B: MARKET VALUE OF ASSETS**

CURRENT ASSETS:

Cash in Banks	\$ 42,267,024
Contributions and Taxes Receivable.....	3,545,519
Accrued Interest and Dividends.....	183,609
Investments Receivable	21,493
Due (to)/from other Funds	(2,264,118)
Liability Transfer (to)/from Plan A.....	(14,666)
Other Current Assets.....	17,036

TOTAL CURRENT ASSETS..... \$ 43,755,897

Property Plant & Equipment..... \$ 76,033

INVESTMENTS:

Cash Equivalents.....	\$ 2,948,181
Equities	169,747,518
Fixed Income	109,663,991
Real Estate	24,943,341
Alternative Investments	41,583,581

TOTAL INVESTMENTS..... \$ 348,886,612

TOTAL ASSETS \$ 392,718,542

CURRENT LIABILITIES:

Benefits Payable	\$ 1,453,665
Accounts Payable.....	203,410
Investments Payable	97,988
Refunds Payable	236,936

TOTAL CURRENT LIABILITIES \$ 1,991,999

MARKET VALUE OF ASSETS..... \$ 390,726,543

EXHIBIT XIII – SCHEDULE B
PLAN B: ACTUARIAL VALUE OF ASSETS

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

Fiscal year 2022	\$ (82,650,543)
Fiscal year 2021	19,533,805
Fiscal year 2020	25,162,835
Fiscal year 2019	34,442,464
Fiscal year 2018	(40,486,193)
Total for five years	\$ (43,997,632)

Deferral of excess (shortfall) of invested income:

Fiscal year 2022 (80%)	\$ (66,120,434)
Fiscal year 2021 (60%)	11,720,283
Fiscal year 2020 (40%)	10,065,134
Fiscal year 2019 (20%)	6,888,493
Fiscal year 2018 (0%)	0
Total deferred for year	\$ (37,446,524)

Market value of plan net assets, end of year..... \$ 390,726,543

Preliminary actuarial value of plan assets, end of year \$ 428,173,067

Actuarial value of assets corridor

85% of market value, end of year	\$ 332,117,562
115% of market value, end of year	\$ 449,335,524

Final actuarial value of plan net assets, end of year \$ 428,173,067

EXHIBIT XIV
PLAN B: PRESENT VALUE OF FUTURE CONTRIBUTIONS

Employee Contributions to the Annuity Savings Fund	\$ 28,799,586
Employer Normal Contributions to the Pension Accumulation Fund.....	71,210,607
Funding Deposit Account Debit / (Credit) Balance	(5,727,180)
 TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS	 \$ 94,283,013

EXHIBIT XV
PLAN B: RECONCILIATION OF CONTRIBUTIONS

Employer Normal Cost for Prior Year.....	\$ 6,719,570
Interest on Normal Cost.....	430,052
Administrative Expenses	301,427
Interest on Expenses	9,496
 TOTAL Interest Adjusted Actuarially Required Employer Contributions	 \$ 7,460,545
 Direct Employer Contributions.....	 \$ 8,747,104
Interest on Employer Contributions.....	275,567
Ad Valorem Taxes and Revenue Sharing Funds	1,593,729
Interest on Taxes and Revenue Sharing Funds.....	50,208
 TOTAL Interest Adjusted Employer Contributions	 \$ 10,666,608
 CONTRIBUTION SURPLUS (DEFICIENCY)	 \$ 3,206,063

EXHIBIT XVI
PLAN B: ANALYSIS OF CHANGE IN ASSETS

Actuarial Value of Assets (December 31, 2021)	\$	412,987,548
INCOME:		
Member Contributions	\$	3,472,402
Employer Contributions		8,747,104
Ad Valorem Taxes and Revenue Sharing		1,593,729
Transfers (to)/from Plan A		1,385,061
Transfers from other Systems.....		(1,127,262)
Other Income		125,687
Total Contributions	\$	14,196,721
Net Depreciation in Fair Value of Investments	\$	(61,554,724)
Interest & Dividends.....		10,265,703
Class Action Settlement.....		6,885
Investment Expense		(2,753,184)
Net Investment Income	\$	(54,035,320)
TOTAL Income	\$	(39,838,599)
EXPENSES:		
Retirement Benefits	\$	15,382,411
DROP Disbursements.....		2,000,527
Refunds of Contributions.....		785,357
Transfers to other Systems.....		357,176
Administrative Expenses		301,427
TOTAL Expenses	\$	18,826,898
Net Market Value Income for Fiscal 2022 (Income - Expenses)	\$	(58,665,497)
Unadjusted Fund Balance as of December 31, 2022 (Fund Balance Previous Year + Net Income).....	\$	354,322,051
Adjustment for Actuarial Smoothing.....	\$	73,851,016
Actuarial Value of Assets (December 31, 2022)	\$	428,173,067

EXHIBIT XVII
PLAN B: FUNDING DEPOSIT ACCOUNT

Funding Deposit Account Balance as of December 31, 2021	\$ 5,194,363
Interest on Opening Balance at 6.40%	332,439
Contributions to the Funding Deposit Account	3,206,063
Withdrawals from the Funding Deposit Account	(3,005,685)
Funding Deposit Account Balance as of December 31, 2022	\$ 5,727,180

EXHIBIT XVIII – SCHEDULE A
PLAN B: PENSION BENEFIT OBLIGATION

Present Value of Credited Projected Benefits Payable to Current Employees.....	\$ 204,705,432
Present Value of Benefits Payable to Terminated Employees	15,800,069
Present Value of Benefits Payable to Current Retirees and Beneficiaries	165,922,812
 TOTAL PENSION BENEFIT OBLIGATION	 \$ 386,428,313
 NET ACTUARIAL VALUE OF ASSETS	 \$ 428,173,067
 Ratio of Net Actuarial Value of Assets to Pension Benefit Obligation.....	 110.80%

EXHIBIT XVIII – SCHEDULE B
PLAN B: ENTRY AGE NORMAL ACCRUED LIABILITIES

Accrued Liability for Active Employees	\$ 227,174,630
Accrued Liability for Terminated Employees	15,800,069
Accrued Liability for Current Retirees and Beneficiaries	165,922,812
 TOTAL ENTRY AGE NORMAL ACCRUED LIABILITY	 \$ 408,897,511
 NET ACTUARIAL VALUE OF ASSETS	 \$ 428,173,067
 Ratio of Net Actuarial Value of Assets to Entry Age Normal Accrued Liability	 104.71%

**EXHIBIT XIX
PLAN B: CENSUS DATA**

	Active	Terminated with Funds on Deposit	DROP	Retired	Total
Number of members as of December 31, 2021	2,310	2,088	57	1,013	5,468
Additions to Census					
Initial membership	315	35			350
Death of Another Member			(1)	5	4
Omitted in error last year					
Adjustment for multiple records					
Change in Status during Year					
Actives terminating service	(165)	165			
Actives who retired	(64)			64	
Actives entering DROP	(25)		25		
Term. members rehired	10	(10)			
Term. members who retire		(12)		12	
Retirees who are rehired					
Refunded who are rehired	2	10			12
DROP participants retiring			(13)	13	
DROP returned to work	14		(14)		
Eliminated from Census					
Refund of contributions	(131)	(57)			(188)
Deaths	(6)	(1)		(33)	(40)
Included in error last year					
Adjustment for multiple records					
Number of members as of December 31, 2022	2,260	2,218	54	1,074	5,606

Plan B Actives Census By Age:

Age	Number Male	Number Female	Total Number	Average Salary	Total Salary
16 - 20	6	8	14	29,444	412,209
21 - 25	37	53	90	34,972	3,147,498
26 - 30	83	90	173	41,762	7,224,844
31 - 35	82	131	213	48,042	10,233,039
36 - 40	79	155	234	48,028	11,238,563
41 - 45	90	143	233	53,049	12,360,399
46 - 50	104	158	262	55,844	14,631,119
51 - 55	161	156	317	52,653	16,690,892
56 - 60	188	171	359	51,603	18,525,463
61 - 65	150	111	261	54,017	14,098,536
66 - 70	67	40	107	50,263	5,378,101
71 - 75	27	11	38	51,766	1,967,109
76 - 80	8	2	10	67,283	672,832
81 - 85	3	0	3	30,686	92,057
Total	1,085	1,229	2,314	50,420	116,672,661

The active census includes 1,168 actives with vested benefits, including 54 DROP participants and 65 active former DROP participants.

Plan B Drop Participants:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
56 - 60	3	6	9	34,485	310,369
61 - 65	20	13	33	23,403	772,301
66 - 70	3	5	8	12,527	100,218
71 - 75	3	1	4	15,855	63,420
Total	29	25	54	23,080	1,246,308

Plan B Terminated Members Due a Deferred Retirement Benefit:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
26 - 30	0	1	1	5,004	5,004
31 - 35	0	10	10	7,059	70,589
36 - 40	10	10	20	8,951	179,017
41 - 45	12	17	29	8,861	256,975
46 - 50	4	14	18	12,889	231,993
51 - 55	10	27	37	12,596	466,064
56 - 60	19	22	41	13,332	546,594
61 - 65	14	15	29	7,277	211,022
66 - 70	4	6	10	8,809	88,093
71 - 75	1	1	2	7,888	15,775
Total	74	123	197	10,513	2,071,126

Plan B Terminated Members Due a Refund of Contributions:

Contributions Ranging		Number	Total Contributions
From	To		
0	- 99	1,126*	29,749*
100	- 499	384	96,066
500	- 999	143	102,863
1,000	- 1,999	151	221,902
2,000	- 4,999	152	479,763
5,000	- 9,999	63	409,705
10,000	- 19,999	7	81,350
Total		2,021	1,421,398

* Includes 718 members due a refund who were not included in the data provided to the actuary since they are maintained external to the system's database. Excludes \$7,593 due to deceased members.

Plan B Regular Retirees:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
56 - 60	14	13	27	33,947	916,566
61 - 65	64	61	125	20,192	2,524,016
66 - 70	131	127	258	17,469	4,506,956
71 - 75	113	99	212	15,509	3,287,993
76 - 80	78	73	151	12,478	1,884,120
81 - 85	52	35	87	10,397	904,524
86 - 90	19	24	43	11,732	504,484
91 - 95	1	7	8	8,729	69,833
96 - 100	0	2	2	7,405	14,809
Total	472	441	913	16,006	14,613,301

Plan B Disability Retirees:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
36 - 40	1	0	1	7,401	7,401
41 - 45	1	0	1	8,117	8,117
46 - 50	3	1	4	8,708	34,832
51 - 55	1	1	2	15,994	31,988
56 - 60	5	5	10	10,590	105,897
61 - 65	4	3	7	8,216	57,509
66 - 70	0	1	1	6,465	6,465
Total	15	11	26	9,700	252,209

Plan B Survivors:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
36 - 40	0	1	1	4,844	4,844
41 - 45	0	3	3	9,447	28,340
46 - 50	1	0	1	2,463	2,463
51 - 55	0	2	2	12,885	25,770
56 - 60	1	2	3	6,202	18,607
61 - 65	2	15	17	10,928	185,776
66 - 70	4	18	22	10,412	229,062
71 - 75	3	18	21	9,670	203,063
76 - 80	2	30	32	11,822	378,289
81 - 85	0	23	23	8,128	186,950
86 - 90	0	7	7	7,206	50,442
91 - 95	0	3	3	5,079	15,236
Total	13	122	135	9,843	1,328,842

Plan B Active Members:

Attained Ages	Completed Years of Service								Total
	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	
0 - 20	11	3	-	-	-	-	-	-	14
21 - 25	41	47	2	-	-	-	-	-	90
26 - 30	53	88	32	-	-	-	-	-	173
31 - 35	34	79	76	20	4	-	-	-	213
36 - 40	43	78	54	32	24	3	-	-	234
41 - 45	31	52	53	41	34	21	1	-	233
46 - 50	29	72	42	47	33	33	6	-	262
51 - 55	30	65	59	45	38	33	31	16	317
56 - 60	31	67	72	48	44	43	32	22	359
61 - 65	10	44	53	50	30	28	17	29	261
66 - 70	2	20	20	22	17	8	13	5	107
71 & Over	-	4	7	11	11	4	3	11	51
Total	315	619	470	316	235	173	103	83	2,314

Plan B Average Annual Salary of Active Members:

Attained Ages	Completed Years of Service								Average
	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	
0 - 20	29,588	28,913	-	-	-	-	-	-	29,444
21 - 25	33,968	35,698	38,509	-	-	-	-	-	34,972
26 - 30	40,408	41,755	44,025	-	-	-	-	-	41,762
31 - 35	41,733	48,564	49,760	51,572	41,088	-	-	-	48,042
36 - 40	37,486	42,969	53,060	58,927	54,517	71,909	-	-	48,028
41 - 45	47,055	48,942	53,090	60,293	50,909	61,058	57,829	-	53,049
46 - 50	40,026	46,372	59,494	77,198	55,747	53,227	68,056	-	55,844
51 - 55	35,489	51,092	49,639	59,715	51,115	56,449	63,346	57,528	52,653
56 - 60	39,440	43,590	46,253	52,672	53,227	60,394	69,095	62,448	51,603
61 - 65	37,731	41,114	52,960	58,238	61,578	48,684	59,172	68,173	54,017
66 - 70	43,675	37,040	48,278	59,470	41,669	51,685	67,407	55,584	50,263
71 & Over	-	47,412	54,644	64,753	51,738	49,866	86,390	38,165	53,569
Average	38,927	44,413	50,764	60,650	52,989	56,013	65,847	59,868	50,420

Plan B Terminated Members Due A Deferred Retirement Benefit:

Years until Retirement Eligibility

Attained Ages	0 - 1	1 - 2	2 - 3	3 - 5	5 - 10	10 - 15	15 - 20	Over 20	Total
0 - 30	-	-	-	-	-	-	-	1	1
31 - 35	-	-	-	-	-	-	-	10	10
36 - 40	-	-	-	-	-	-	-	20	20
41 - 45	-	-	-	-	-	-	10	19	29
46 - 50	-	-	-	-	2	10	4	2	18
51 - 55	-	-	-	3	21	11	2	-	37
56 - 60	8	7	4	13	7	2	-	-	41
61 - 65	12	5	5	4	3	-	-	-	29
66 - 70	8	2	-	-	-	-	-	-	10
71 & Over	2	-	-	-	-	-	-	-	2
Total	30	14	9	20	33	23	16	52	197

Plan B Average Annual Benefits of Terminated Members Due A Deferred Retirement Benefit:

Years until Retirement Eligibility

Attained Ages	0 - 1	1 - 2	2 - 3	3 - 5	5 - 10	10 - 15	15 - 20	Over 20	Average
0 - 30	-	-	-	-	-	-	-	5,004	5,004
31 - 35	-	-	-	-	-	-	-	7,059	7,059
36 - 40	-	-	-	-	-	-	-	8,951	8,951
41 - 45	-	-	-	-	-	-	10,017	8,253	8,861
46 - 50	-	-	-	-	27,097	13,567	8,279	4,506	12,889
51 - 55	-	-	-	10,695	14,000	11,081	9,044	-	12,596
56 - 60	16,268	14,002	15,260	15,782	6,115	4,715	-	-	13,332
61 - 65	7,981	8,827	5,585	6,982	5,088	-	-	-	7,277
66 - 70	8,661	9,402	-	-	-	-	-	-	8,809
71 & Over	7,888	-	-	-	-	-	-	-	7,888
Average	10,366	11,497	9,885	13,259	12,311	11,608	9,461	8,085	10,513

Plan B Service Retirees:

Completed Years Since Retirement

Attained Ages	0 - 1	1 - 2	2 - 3	3 - 5	5 - 10	10 - 15	15 - 20	Over 20	Total
0 - 50	-	-	-	-	-	-	-	-	-
51 - 55	-	-	-	-	-	-	-	-	-
56 - 60	8	5	5	9	-	-	-	-	27
61 - 65	32	25	22	23	19	3	-	1	125
66 - 70	32	29	14	58	97	15	10	3	258
71 - 75	8	8	10	30	84	53	17	2	212
76 - 80	2	4	3	6	36	52	39	9	151
81 - 85	-	-	5	3	9	14	30	26	87
86 - 90	-	-	-	-	3	6	6	28	43
91 & Over	-	-	-	-	-	-	-	10	10
Total	82	71	59	129	248	143	102	79	913

Plan B Average Annual Benefits Payable To Service Retirees:

Completed Years Since Retirement

Attained Ages	0 - 1	1 - 2	2 - 3	3 - 5	5 - 10	10 - 15	15 - 20	Over 20	Average
0 - 50	-	-	-	-	-	-	-	-	-
51 - 55	-	-	-	-	-	-	-	-	-
56 - 60	32,319	38,850	39,279	29,708	-	-	-	-	33,947
61 - 65	19,540	19,381	20,322	20,496	22,716	19,877	-	4,489	20,192
66 - 70	17,445	14,205	19,144	15,849	20,253	18,509	8,951	5,923	17,469
71 - 75	19,484	15,766	22,857	11,425	15,033	14,188	23,412	10,959	15,509
76 - 80	7,563	32,104	9,249	13,287	13,703	11,744	11,147	10,486	12,478
81 - 85	-	-	11,944	7,233	13,571	10,229	9,424	10,578	10,397
86 - 90	-	-	-	-	14,040	13,947	7,683	11,878	11,732
91 & Over	-	-	-	-	-	-	-	8,464	8,464
Average	19,672	18,948	20,806	16,296	17,405	13,474	12,265	10,517	16,006

Plan B Disability Retirees:

Completed Years Since Retirement

Attained Ages	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	Total
0 - 30	-	-	-	-	-	-	-	-	-
31 - 35	-	-	-	-	-	-	-	-	-
36 - 40	-	1	-	-	-	-	-	-	1
41 - 45	-	1	-	-	-	-	-	-	1
46 - 50	-	2	1	-	1	-	-	-	4
51 - 55	-	-	2	-	-	-	-	-	2
56 - 60	1	3	2	2	2	-	-	-	10
61 - 65	2	-	1	3	1	-	-	-	7
66 - 70	-	-	-	1	-	-	-	-	1
71 - 75	-	-	-	-	-	-	-	-	-
76 - 80	-	-	-	-	-	-	-	-	-
81 & Over	-	-	-	-	-	-	-	-	-
Total	3	7	6	6	4	-	-	-	26

Plan B Average Annual Benefits Payable To Disability Retirees:

Completed Years Since Retirement

Attained Ages	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	Average
0 - 30	-	-	-	-	-	-	-	-	-
31 - 35	-	-	-	-	-	-	-	-	-
36 - 40	-	7,401	-	-	-	-	-	-	7,401
41 - 45	-	8,117	-	-	-	-	-	-	8,117
46 - 50	-	9,921	9,697	-	5,293	-	-	-	8,708
51 - 55	-	-	15,994	-	-	-	-	-	15,994
56 - 60	8,570	12,563	10,318	13,349	6,153	-	-	-	10,590
61 - 65	7,206	-	7,975	9,885	5,468	-	-	-	8,216
66 - 70	-	-	-	6,465	-	-	-	-	6,465
71 - 75	-	-	-	-	-	-	-	-	-
76 - 80	-	-	-	-	-	-	-	-	-
81 & Over	-	-	-	-	-	-	-	-	-
Average	7,661	10,436	11,716	10,469	5,767	-	-	-	9,700

Plan B Surviving Beneficiaries of Former Members:

Completed Years Since Retirement

Attained Ages	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	Total
0 - 30	-	-	-	-	-	-	-	-	-
31 - 35	-	-	-	-	-	-	-	-	-
36 - 40	-	-	1	-	-	-	-	-	1
41 - 45	-	-	1	-	1	-	1	-	3
46 - 50	-	-	-	-	1	-	-	-	1
51 - 55	-	2	-	-	-	-	-	-	2
56 - 60	-	-	2	1	-	-	-	-	3
61 - 65	1	4	4	3	4	-	1	-	17
66 - 70	1	2	1	7	7	4	-	-	22
71 - 75	-	2	3	6	2	6	2	-	21
76 - 80	-	-	3	9	12	6	2	-	32
81 & Over	-	-	2	2	10	6	6	7	33
Total	2	10	17	28	37	22	12	7	135

Plan B Average Annual Benefits Payable To Survivors of Former Members:

Completed Years Since Retirement

Attained Ages	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	Over 30	Average
0 - 30	-	-	-	-	-	-	-	-	-
31 - 35	-	-	-	-	-	-	-	-	-
36 - 40	-	-	4,844	-	-	-	-	-	4,844
41 - 45	-	-	12,772	-	12,078	-	3,490	-	9,447
46 - 50	-	-	-	-	2,463	-	-	-	2,463
51 - 55	-	12,885	-	-	-	-	-	-	12,885
56 - 60	-	-	6,154	6,299	-	-	-	-	6,202
61 - 65	24,781	8,781	12,739	8,904	10,066	-	7,939	-	10,928
66 - 70	19,083	8,006	11,929	10,331	11,665	7,018	-	-	10,412
71 - 75	-	10,804	12,855	9,873	12,332	8,489	4,028	-	9,670
76 - 80	-	-	8,012	10,350	11,021	18,961	7,541	-	11,822
81 & Over	-	-	13,813	5,361	8,304	7,724	6,591	6,478	7,655
Average	21,932	9,851	10,767	9,587	10,173	10,869	6,176	6,478	9,843

EXHIBIT XX
PLAN B: YEAR-TO-YEAR COMPARISON

	Fiscal 2022	Fiscal 2021	Fiscal 2020	Fiscal 2019
Number of Active Members	2,314	2,367	2,387	2,462
Number of Retirees & Survivors	1,074	1,013	985	942
Number of Terminated Due Deferred Benefits	197	174	158	152
Number Terminated Due Refunds	2,021	1,914	1,841	1,769
Active Lives Payroll	\$ 116,672,661	\$ 115,392,433	\$ 114,185,471	\$ 111,568,953
Retiree Benefits in Payment	\$ 16,194,352	\$ 14,395,520	\$ 13,557,343	\$ 12,183,667
Market Value of Assets	\$ 390,726,543	\$ 449,392,040	\$ 405,656,961	\$ 360,893,172
Entry Age Normal (EAN) Accrued Liability	\$ 408,897,511	\$ 388,045,808	\$ 374,570,332	\$ 348,089,703
Ratio of AVA to EAN Accrued Liability	104.71%	106.43%	100.20%	99.34%
Actuarial Value of Assets	\$ 428,173,067	\$ 412,987,548	\$ 375,316,220	\$ 345,786,489
Present Value of Future Employer Normal Cost	\$ 71,210,607	\$ 63,846,141	\$ 87,209,842	\$ 86,369,014
Present Value of Future Employee Contrib.	\$ 28,799,586	\$ 28,418,706	\$ 28,295,937	\$ 27,007,067
Funding Deposit Account Credit Balance	\$ 5,727,180	\$ 5,194,363	\$ 4,881,920	\$ 6,928,047
Present Value of Future Benefits	\$ 522,456,080	\$ 500,058,032	\$ 485,940,079	\$ 452,234,523
	Fiscal 2023	Fiscal 2022	Fiscal 2021	Fiscal 2020
Employee Contribution Rate	3.00%	3.00%	3.00%	3.00%
Projected Tax Contribution as % of Payroll	1.43%	1.23%	1.31%	1.31%
Actuarially Required Net Direct Employer Contribution Rate	5.35%	4.93%	7.07%	7.39%
Actual Employer Contribution Rate	7.50%	7.50%	7.50%	7.50%

Fiscal 2018	Fiscal 2017	Fiscal 2016	Fiscal 2015	Fiscal 2014	Fiscal 2013
2,429	2,459	2,415	2,413	2,321	2,288
896	855	792	747	714	688
154	142	138	139	135	135
1,708	1,637	1,608	1,554	1,531	1,550
\$ 105,914,905	\$ 103,056,369	\$ 100,932,377	\$ 98,127,898	\$ 91,698,297	\$ 89,168,260
\$ 11,243,992	\$ 10,430,299	\$ 9,070,674	\$ 8,150,177	\$ 7,448,991	\$ 6,779,114
\$ 307,800,757	\$ 325,626,878	\$ 275,756,021	\$ 255,103,397	\$ 253,501,744	\$ 237,412,166
\$ 329,243,218	\$ 307,480,656	\$ 283,598,901	\$ 267,985,810	\$ 249,207,071	\$ 233,321,224
99.11%	101.09%	100.38%	98.46%	97.50%	92.60%
\$ 326,300,632	\$ 310,818,392	\$ 284,685,809	\$ 263,849,591	\$ 242,977,968	\$ 216,066,754
\$ 83,679,498	\$ 76,666,027	\$ 71,874,582	\$ 74,851,929	\$ 61,503,111	\$ 71,374,679
\$ 25,843,520	\$ 24,893,108	\$ 24,084,343	\$ 23,527,632	\$ 19,608,454	\$ 19,192,399
\$ 6,220,583	\$ 5,361,971	\$ 5,602,259	\$ 4,622,489	\$ 2,281,164	\$ 2,126,959
\$ 429,603,067	\$ 407,015,556	\$ 375,042,475	\$ 357,606,663	\$ 321,808,369	\$ 304,506,873

Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016	Fiscal 2015	Fiscal 2014
3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
1.24%	1.22%	1.21%	1.26%	1.36%	1.21%
7.53%	7.01%	6.75%	7.20%	6.91%	8.60%
7.50%	7.50%	8.00%	8.00%	9.00%	9.25%

SUMMARY OF PRINCIPAL PLAN PROVISIONS

All members of the Parochial Employees' Retirement System are participants in either Plan A or Plan B according to the provisions of the agreement entered into by their employer. All employees of a participating employer must participate in the same plan. The principal provisions of each plan are given below. The following summary of plan provisions is for general informational purposes only and does not constitute a guarantee of benefits.

PLAN A PROVISIONS:

CONTRIBUTION RATES – The Plan A fund is financed by employee contributions at a rate determined by the Board subject to the statutory range of 8% through 11% of each member's earnings and employer contributions as determined by the Public Retirement Systems' Actuarial Committee. In addition, each sheriff and ex-officio tax collector deducts one-fourth of one percent of the aggregate amount of the tax shown to be collected by the tax roll of each respective parish, excepting Orleans Parish and East Baton Rouge Parish, and remits the money to the system on an annual basis. The system also receives revenue sharing funds each year as appropriated by the legislature. In any fiscal year in which employer contribution rate as actuarially determined is scheduled to decrease, the Board of Trustees may elect to maintain the existing rate or any rate between the existing and minimum rates.

RETIREMENT BENEFITS – Members hired on or before December 31, 2006, with seven years of creditable service may retire at age sixty-five; ten years of creditable service may retire at age sixty; members with twenty-five years of service may retire at age fifty-five; members with thirty years of service may retire regardless of age. Members hired on or after January 1, 2007, with seven years of creditable service may retire at age sixty-seven; ten years of creditable service may retire at age sixty-two; members with thirty years of service may retire at age fifty-five. The retirement allowance is equal to three percent of the member's final compensation multiplied by his years of creditable service; however, any employee who was a member of the supplemental plan only prior to the revision date has the benefit earned for service credited prior to the revision date on the basis of one percent of final compensation plus two dollars per month for each year of service credited prior to the revision date, and three percent of final compensation for each year of service credited after the revision date. All accumulated annual leave for which payment cannot be made in accordance with law and all unused sick leave accumulated at the time of retirement is included in the member's creditable service for retirement computation purposes. The retirement allowance may not exceed the greater of one hundred percent of member's final salary or final compensation. Final compensation for members hired before January 1, 2007 refers to the highest 36 months of consecutive or joined service; final compensation for members hired after December 31, 2006 refers to the highest 60 months of consecutive or joined service.

DISABILITY BENEFITS – Five years of creditable service are required in order to be eligible for disability benefits for members hired on or before December 31, 2006. Seven years of creditable service are required in order to be eligible for disability benefits for members hired on or after January 1, 2007. Disabled members receive a normal retirement allowance if eligible. Otherwise, the member receives the lesser of three percent of compensation multiplied by his years of service, not to be less than fifteen years, or the accrual percentage as defined for retirement benefits multiplied by final compensation multiplied by years of service assuming continued service to age sixty for members hired on or before December 31, 2006 or age sixty-two for members hired on or after January 1, 2007.

SURVIVOR BENEFITS – Five years of creditable service is required in order to be eligible for survivor benefits. If a member is eligible for normal retirement at the time of death, the surviving spouse receives an automatic option 2 benefit. If the member was not eligible for a normal retirement, the surviving unmarried spouse with minor children receives sixty percent of final compensation. If the member was not eligible for a normal retirement, the surviving unmarried spouse with no minor children receives forty percent of final compensation payable upon the attainment of age sixty by the spouse, or upon becoming disabled. Minor children with no unmarried spouse receive thirty percent of final compensation each, not to exceed a total of sixty percent of final compensation.

CONTRIBUTION REFUNDS – Upon withdrawal from service, members not entitled to a retirement allowance are paid a refund of accumulated contributions upon request. Receipt of such a refund cancels all accrued rights in the system. If a member receives a refund of contributions and is subsequently rehired on or after January 1, 2007, the provisions applicable to members initially hired on or after January 1, 2007 will apply.

PLAN B PROVISIONS:

CONTRIBUTION RATES – The Plan B fund is financed by employee contributions at a rate determined by the Board subject to the statutory range of 3% through 5% of each member's earnings and employer contributions as determined by the Public Retirement Systems' Actuarial Committee. In addition, each sheriff and ex officio tax collector deducts one-fourth of one percent of the aggregate amount of the tax shown to be collected by the tax roll of each respective parish excepting, Orleans Parish and East Baton Rouge Parish, and remits the money to the system on an annual basis. The system also receives revenue sharing funds each year as appropriated by the legislature. In any fiscal year in which the employer contribution rate as actuarially determined is scheduled to decrease, the Board of Trustees may elect to maintain the existing rate or any rate between the existing and minimum rates.

RETIREMENT BENEFITS: – Members hired on or before December 31, 2006, with seven years of creditable service may retire at age sixty-five; ten years of creditable service may retire at age sixty; members with thirty years of service may retire at age fifty-five. Members hired on or after January 1, 2007, with seven years of creditable service may retire at age sixty-seven; ten years of creditable service may retire at age sixty-two; members with thirty years of service may retire at age fifty-five. The retirement allowance is equal to two percent of the member's final compensation multiplied by the years of creditable service. All accumulated annual leave for which payment cannot be made in accordance with law and all unused sick leave accumulated at the time of retirement is included in the member's creditable service for retirement computation purposes. Final compensation for members hired before January 1, 2007 refers to the highest 36 months of consecutive or joined service; final compensation for members hired after December 31, 2006 refers to the highest 60 months of consecutive or joined service.

DISABILITY BENEFITS – Five years of creditable service is required in order to be eligible for disability benefits for members hired on or before December 31, 2006. Seven years of creditable service is required in order to be eligible for disability benefits for members hired on or after January 1, 2007. Disabled members receive a normal retirement allowance, if eligible. Otherwise, the member receives the lesser of two percent of compensation multiplied by the years of service, not to be less than fifteen years, or two percent of final compensation multiplied by the years of service assuming continued service to age sixty for members hired on or before December 31, 2006 or age sixty-two for members hired on or after January 1, 2007.

SURVIVOR BENEFITS – The surviving spouse of a member who was eligible for normal retirement at the time of death receives an automatic option 2 benefit. The surviving spouse of a member with ten or more years of creditable service and not eligible for normal retirement at the time of death receives an option 2 benefit payable at attainment of age fifty by the spouse.

CONTRIBUTION REFUNDS – Upon withdrawal from service, members not entitled to a retirement allowance are paid a refund of accumulated contributions upon request. Receipt of such a refund cancels all accrued rights in the system. If a member receives a refund of contributions and is subsequently rehired on or after January 1, 2007, the provisions applicable to members initially hired on or after January 1, 2007 will apply.

PROVISIONS APPLICABLE TO BOTH PLAN A AND B:

OPTIONAL ALLOWANCES – Upon application for retirement any member may elect to receive their benefit in a retirement allowance payable throughout their life, or he may elect at that time to receive the actuarial equivalent of their retirement allowance in a reduced retirement allowance payable throughout life. A retiree cannot change the designation of beneficiary.

Option 2 – Upon retirement, the member receives a reduced benefit. Upon the member's death, the surviving spouse will continue to receive the same reduced benefit.

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

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

DEFERRED RETIREMENT OPTION PLAN:

In lieu of terminating employment and accepting a service retirement allowance, any member of Plan A or Plan B who is eligible for a normal retirement may elect to participate in the Deferred Retirement Option Plan (DROP) for up to three years and defer the receipt of benefits. In terms of DROP eligibility, any member whose service, when combined with service in any other state or statewide public retirement system exceeds thirty years will be eligible to include reciprocally recognized service credit. Upon commencement of participation in the plan, employer contributions are payable but employee contributions cease. The monthly retirement benefits that would have been payable, had the person elected to cease employment and receive a service retirement allowance, are paid into the DROP fund. This fund does earn interest once the member terminates participation in DROP but continues their employment. The interest rate is based upon the rate of return of a short-term U.S. Treasury security, a group of short-term U.S. Treasury Securities, or an index of short-term U.S. Treasury securities to be selected by the board of trustees. This interest is to be credited to the individual's account balance on an annual basis. Additionally, no cost-of-living increases are payable to the participants until employment which made them eligible to become members of the system has been terminated for at least one full year.

Upon termination of employment prior to, or at the end of, the specified period of participation, a participant in the plan may receive, at his option, a lump sum from the account equal to the payments

into the account, a true annuity based upon his account balance in that fund, or any other method of payment if approved by the board of trustees. The monthly benefits that were being paid into the Deferred Retirement Option Plan fund will begin to be paid to the retiree. If a participant dies during the participation in the plan, a lump sum equal to his account balance in the plan fund shall be paid to his named beneficiary or, if none, to his estate. If employment is not terminated at the end of the three years, payments into the plan fund cease and the person resumes active contributing membership in the system. Additional accrued benefits are based on final average compensation used to calculate the member's original benefit unless the additional period of service is at least thirty-six months for those individuals hired on or before December 31, 2006; or at least sixty months for those individuals hired on or after January 1, 2007.

COST OF LIVING INCREASES – Under R.S. 11:246, the Board of Trustees is authorized to grant retired members, and widows of members, who have been retired for at least one full year an annual cost of living increase of two percent of their original benefit and all retired members and widows who are sixty-five years of age and older a two percent increase in their original benefit (or their benefit as of October 1, 1977, if they retired prior to that time). Under R.S. 11:1937, the Board of Trustees is authorized to grant retired members and widows of members who have been retired for at least one full year an annual cost of living increase of up to two and one-half percent of the member's current benefit to those age sixty-two and over. In order for the Board to grant either of these increases the system must meet certain criteria detailed in the statute related to funding status and interest earnings on investments. In lieu of other cost of living increases the Board may grant an increase to retirees in the form " $X \times (A \& B)$ " where "A" is equal to the number of years of credited service accrued as retirement or death of the member or retiree and "B" is equal to the number of years since death of the member or retiree to June 30 of the initial year of increase and "X" is equal to any amount available for funding such increase up to a maximum of \$1.00.

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.

<u>Factor</u>	<u>Increase in Factor Results in</u>
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

The following assumptions apply to both Plan A and Plan B unless stated otherwise.

ACTUARIAL COST METHOD: Plan A: The Aggregate Actuarial Cost Method with allocation based on earnings. The normal cost is interest adjusted for midyear payment.

Plan B: The Aggregate Actuarial Cost Method with allocation based on earnings. The normal cost is interest adjusted for midyear payment.

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

VALUATION INTEREST RATE: 6.40%

ANNUAL SALARY INCREASE RATE: 4.75% (2.45% Merit / 2.30% Inflation) for Plan A
4.25% (1.95% Merit / 2.30% Inflation) for Plan B

ACTIVE MEMBER MORTALITY: Pub-2010 Public Retirement Plans Mortality Table for General Employees multiplied by 130% for males and 125% for females, each with full generational projection using the MP2018 scale.

ANNUITANT AND
BENEFICIARY MORTALITY

Pub-2010 Public Retirement Plans Mortality Table for General Healthy Retirees multiplied by 130% for males and 125% for females, each with full generational projection using the MP2018 scale

DISABLED LIVES MORTALITY:

Pub-2010 Public Retirement Plans Mortality Table for General Disabled Retirees multiplied by 130% for males and 125% for females, each with full generational projection using the MP2018 scale

RETIREE COST OF LIVING INCREASE:

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

RATES OF RETIREMENT:

The table of these rates is included later in the report. All eligible persons age 85 and over in both plans are assumed to retire immediately. These rates apply only to those individuals eligible to retire.

RATES OF WITHDRAWAL:

The rates of withdrawal are applied based upon completed years of service:

PLAN A:

<u>Service</u>		<u>Service</u>	
<u>Duration ≤</u>	<u>Factor</u>	<u>Duration ≤</u>	<u>Factor</u>
1	0.21	17	0.02
2	0.18	18	0.02
3	0.16	19	0.02
4	0.13	20	0.02
5	0.11	21	0.01
6	0.09	22	0.01
7	0.08	23	0.01
8	0.07	24	0.02
9	0.06	25	0.02
10	0.05	26	0.02
11	0.04	27	0.01
12	0.04	28	0.01
13	0.04	29	0.01
14	0.03	30	0.01
15	0.03	>30	0.01
16	0.03		

PLAN B	<u>Service</u>		<u>Service</u>	
	<u>Duration ≤</u>	<u>Factor</u>	<u>Duration ≤</u>	<u>Factor</u>
	1	0.21	17	0.02
	2	0.18	18	0.02
	3	0.15	19	0.01
	4	0.13	20	0.01
	5	0.10	21	0.01
	6	0.08	22	0.01
	7	0.07	23	0.01
	8	0.06	24	0.01
	9	0.05	25	0.02
	10	0.05	26	0.02
	11	0.04	27	0.02
	12	0.04	28	0.02
	13	0.04	29	0.01
	14	0.03	30	0.01
15	0.03	>30	0.01	
16	0.02			

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 used in determining the cost of various survivor benefits are listed below:

<u>Age at</u>	<u>% with</u>	<u># of</u>	<u>Average</u>
<u>Death</u>	<u>Children</u>	<u>Children</u>	<u>Age</u>
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

VESTING ELECTING PERCENTAGE: The percent of those who are vested at termination and elect deferred benefits in lieu of contribution refunds are as follows:

Plan A:	Under Age 40:	30%
	Age 40 – 49:	45%
	Above Age 49:	60%
Plan B:	Under Age 40:	45%
	Age 40 – 49:	45%
	Above Age 49:	55%

SICK AND ANNUAL LEAVE: (Tier 1 members)	Retirees were assumed to convert 1.44 months for Plan A and 0.6 months for Plan B of sick and annual leave to retirement credit for each ten years of service credit.
RATES OF DROP ENTRY:	The table of these rates is included later in the report. These rates apply only to those individuals eligible to enter the DROP plan.
DROP PARTICIPATION:	All members who enter the DROP plan are assumed to participate for the full 3 year period and 50% are assumed to retire at the end of DROP participation with 50% assumed to work 2 years post DROP and then retire.
DISABILITY RATES:	40% of the disability rates used for the 21st valuation of the Railroad Retirement System for individuals with 10-19 years of service for Plan A. 40% of the disability rates used for the 21st valuation of the Railroad Retirement System for individuals with 10-19 years of service for Plan B. A table of these rates is included later in the report.
RETIREMENT RATES FOR ACTIVE FORMER DROP PARTICIPANTS	The table of these rates is included later in the report. All eligible persons age 85 and over in both plans are assumed to retire immediately. These rates only apply to members who return to work after completing the DROP plan and then subsequently retire.

ACTUARIAL TABLES AND RATES – PLAN A

Age	Remarriage Rates	Tier 1 Retirement Rates	Tier 2 Retirement Rates	Tier 1 DROP Entry Rates	Tier 2 DROP Entry Rates	Post-DROP Retirement Rates	Base Disability Rates
18	0.06124	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
19	0.06124	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
20	0.06124	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
21	0.05818	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
22	0.05524	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
23	0.05242	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
24	0.04971	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
25	0.04566	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
26	0.04335	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
27	0.04114	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
28	0.03902	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
29	0.03698	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
30	0.03502	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
31	0.03314	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
32	0.03134	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
33	0.02961	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
34	0.02795	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
35	0.02636	0.00000	0.00000	0.00000	0.00000	0.00000	0.0017
36	0.02483	0.00000	0.00000	0.00000	0.00000	0.00000	0.0019
37	0.02336	0.00000	0.00000	0.00000	0.00000	0.00000	0.0021
38	0.02195	0.00000	0.00000	0.00000	0.00000	0.00000	0.0024
39	0.02060	0.00000	0.00000	0.00000	0.00000	0.00000	0.0027
40	0.01930	0.00000	0.00000	0.00000	0.00000	0.00000	0.0031
41	0.01805	0.00000	0.00000	0.00000	0.00000	0.00000	0.0035
42	0.01686	0.00000	0.00000	0.00000	0.00000	0.00000	0.0039
43	0.01571	0.00000	0.00000	0.00000	0.00000	0.00000	0.0044
44	0.01461	0.00000	0.00000	0.00000	0.00000	0.00000	0.0050
45	0.01355	0.00000	0.00000	0.00000	0.00000	0.00000	0.0057
46	0.01253	0.09000	0.00000	0.27000	0.00000	0.38000	0.0065
47	0.01156	0.09000	0.00000	0.27000	0.00000	0.38000	0.0073
48	0.01063	0.09000	0.00000	0.27000	0.00000	0.38000	0.0083
49	0.00973	0.08000	0.00000	0.45000	0.00000	0.38000	0.0094
50	0.00887	0.07000	0.00000	0.47000	0.00000	0.38000	0.0107
51	0.00804	0.06000	0.00000	0.43000	0.00000	0.38000	0.0122
52	0.00725	0.08000	0.00000	0.42000	0.00000	0.38000	0.0138
53	0.00649	0.10000	0.00000	0.44000	0.00000	0.38000	0.0157
54	0.00576	0.12000	0.00000	0.41000	0.00000	0.38000	0.0178
55	0.00000	0.12000	0.12000	0.35000	0.35000	0.36000	0.0202
56	0.00000	0.10000	0.10000	0.28000	0.28000	0.33000	0.0230
57	0.00000	0.09000	0.09000	0.23000	0.23000	0.32000	0.0261
58	0.00000	0.08000	0.08000	0.19000	0.19000	0.32000	0.0296
59	0.00000	0.08000	0.08000	0.18000	0.18000	0.32000	0.0337
60	0.00000	0.08000	0.08000	0.17000	0.17000	0.31000	0.0488
61	0.00000	0.08000	0.08000	0.17000	0.17000	0.28000	0.0488
62	0.00000	0.08000	0.08000	0.16000	0.16000	0.25000	0.0488
63	0.00000	0.09000	0.09000	0.15000	0.15000	0.25000	0.0488
64	0.00000	0.11000	0.11000	0.14000	0.14000	0.26000	0.0488
65	0.00000	0.13000	0.14000	0.12000	0.12000	0.28000	0.0488
66	0.00000	0.15000	0.16000	0.10000	0.10000	0.27000	0.0488
67	0.00000	0.14000	0.15000	0.08000	0.08000	0.25000	0.0488
68	0.00000	0.13000	0.14000	0.08000	0.08000	0.23000	0.0488
69	0.00000	0.12000	0.13000	0.10000	0.09000	0.21000	0.0488
70	0.00000	0.12000	0.12000	0.12000	0.10000	0.22000	0.0488
71	0.00000	0.10000	0.11000	0.11000	0.11000	0.23000	0.0488
72	0.00000	0.08000	0.10000	0.10000	0.10000	0.22000	0.0488
73	0.00000	0.08000	0.11000	0.09000	0.09000	0.17000	0.0488
74	0.00000	0.10000	0.12000	0.07000	0.08000	0.13000	0.0488
75	0.00000	0.13000	0.14000	0.06000	0.06000	0.13000	0.0488

ACTUARIAL TABLES AND RATES – PLAN B

	Remarriage Rates	Tier 1 Retirement Rates	Tier 2 Retirement Rates	Tier 1 DROP Entry Rates	Tier 2 DROP Entry Rates	Post-DROP Retirement Rates	Base Disability Rates
18	0.06124	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
19	0.06124	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
20	0.06124	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
21	0.05818	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
22	0.05524	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
23	0.05242	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
24	0.04971	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
25	0.04566	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
26	0.04335	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
27	0.04114	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
28	0.03902	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
29	0.03698	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
30	0.03502	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
31	0.03314	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
32	0.03134	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
33	0.02961	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
34	0.02795	0.00000	0.00000	0.00000	0.00000	0.00000	0.0015
35	0.02636	0.00000	0.00000	0.00000	0.00000	0.00000	0.0017
36	0.02483	0.00000	0.00000	0.00000	0.00000	0.00000	0.0019
37	0.02336	0.00000	0.00000	0.00000	0.00000	0.00000	0.0021
38	0.02195	0.00000	0.00000	0.00000	0.00000	0.00000	0.0024
39	0.02060	0.00000	0.00000	0.00000	0.00000	0.00000	0.0027
40	0.01930	0.00000	0.00000	0.00000	0.00000	0.00000	0.0031
41	0.01805	0.00000	0.00000	0.00000	0.00000	0.00000	0.0035
42	0.01686	0.00000	0.00000	0.00000	0.00000	0.00000	0.0039
43	0.01571	0.00000	0.00000	0.00000	0.00000	0.00000	0.0044
44	0.01461	0.00000	0.00000	0.00000	0.00000	0.00000	0.0050
45	0.01355	0.00000	0.00000	0.00000	0.00000	0.00000	0.0057
46	0.01253	0.00000	0.00000	0.00000	0.00000	0.00000	0.0065
47	0.01156	0.00000	0.00000	0.00000	0.00000	0.00000	0.0073
48	0.01063	0.00000	0.00000	0.00000	0.00000	0.00000	0.0083
49	0.00973	0.00000	0.00000	0.00000	0.00000	0.00000	0.0094
50	0.00887	0.00000	0.00000	0.00000	0.00000	0.00000	0.0107
51	0.00804	0.00000	0.00000	0.00000	0.00000	0.00000	0.0122
52	0.00725	0.00000	0.00000	0.00000	0.00000	0.00000	0.0138
53	0.00649	0.00000	0.00000	0.00000	0.00000	0.00000	0.0157
54	0.00576	0.00000	0.00000	0.00000	0.00000	0.00000	0.0178
55	0.00000	0.08000	0.08000	0.31000	0.31000	0.02000	0.0202
56	0.00000	0.09000	0.09000	0.31000	0.31000	0.02000	0.0230
57	0.00000	0.09000	0.09000	0.27000	0.27000	0.02000	0.0261
58	0.00000	0.07000	0.07000	0.25000	0.25000	0.12000	0.0296
59	0.00000	0.06000	0.06000	0.23000	0.23000	0.24000	0.0337
60	0.00000	0.07000	0.07000	0.20000	0.20000	0.31000	0.0488
61	0.00000	0.09000	0.09000	0.15000	0.15000	0.33000	0.0488
62	0.00000	0.10000	0.11000	0.11000	0.11000	0.31000	0.0488
63	0.00000	0.10000	0.11000	0.10000	0.09000	0.26000	0.0488
64	0.00000	0.11000	0.13000	0.10000	0.09000	0.22000	0.0488
65	0.00000	0.15000	0.16000	0.09000	0.09000	0.20000	0.0488
66	0.00000	0.19000	0.18000	0.07000	0.07000	0.19000	0.0488
67	0.00000	0.20000	0.19000	0.04000	0.05000	0.20000	0.0488
68	0.00000	0.17000	0.17000	0.03000	0.04000	0.17000	0.0488
69	0.00000	0.13000	0.15000	0.03000	0.04000	0.14000	0.0488
70	0.00000	0.10000	0.15000	0.04000	0.05000	0.17000	0.0488
71	0.00000	0.10000	0.15000	0.04000	0.07000	0.25000	0.0488
72	0.00000	0.12000	0.15000	0.05000	0.08000	0.31000	0.0488
73	0.00000	0.15000	0.16000	0.04000	0.08000	0.29000	0.0488
74	0.00000	0.19000	0.16000	0.02000	0.05000	0.22000	0.0488
75	0.00000	0.21000	0.17000	0.01000	0.01000	0.21000	0.0488

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.

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.