CURRAN ACTUARIAL
CONSULTING, LTD.

Annual Funding Valuation
June 30, 2022

Louisiana State Police Retirement System

CURRAN ACTUARIAL
— CONSULTING, LTD. —

September 14, 2022

Board of Trustees
Louisiana State Police Retirement System
9224 Jefferson Highway
Baton Rouge, Louisiana 70809

Ladies and Gentlemen:

We are pleased to present our report on the actuarial valuation of the Louisiana State Police Retirement System for the fiscal year ending June 30, 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 Louisiana State Police Retirement System. The primary purposes of the report are to determine the actuarially required contribution for the retirement system for the fiscal year ending June 30, 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 Louisiana State Police 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 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

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SUMMARY OF VALUATION RESULTS
LOUISIANA STATE POLICE RETIREMENT SYSTEM

Valuation Date:		June 30, 2022	June 30, 2021
Census Summary:	Active Members	914	951
	Retired Members and Survivors	1,355	1,295
	Terminated Due a Deferred Benefit	32	37
	Terminated Due a Refund	200	183
Payroll:		$ 72,075,629	$ 75,908,386
Benefits in Payment:		$ 72,704,372	$ 64,716,052
Valuation Interest Rate:		6.95%	6.95%
Present Value of Future Benefits		$ 1,543,559,092	$ 1,490,842,416
Actuarial Accrued Liability (EAN):		$ 1,371,245,509	$ 1,314,386,755
Unfunded Actuarial Accrued Liability:		$ 302,965,699	$ 295,150,724
Experience Account:		$ 0	$ 9,497,110
Actuarial Value of Assets:		$ 1,068,279,810	$ 1,019,236,031
Market Value of Assets (Includes Experience Account):		$ 997,876,785	$ 1,159,337,587
Ratio of AVA to Actuarial Accrued Liability:		77.91%	77.54%

	Fiscal 2022	Fiscal 2021
Market Rate of Return (Excluding Money Market DROP funds):	-12.37%	32.10%
Actuarial Rate of Return (Excluding Money Market DROP funds):	6.76%	11.38%
Non-Money Market DROP Account Interest Credit Rate:	6.26%	10.88%

	Fiscal 2023	Fiscal 2022
Employers' Normal Cost (Mid-year):	$ 15,172,311	$ 16,011,252
Amortization Cost (Mid-year):	$ 33,499,763	$ 29,995,343
Projected Administrative Expenses:	$ 1,269,385	$ 1,223,042
Insurance Premium Taxes	$ (1,500,000)	$ (1,500,000)
Net Direct Employer Actuarially Required Contributions:	$ 48,441,459	$ 45,729,637
Projected Payroll:	$ 71,937,646	$ 75,555,357
Actuarially Required Net Direct Employer Contribution Rate:	67.3%	60.5%
Actual Employee Contribution Rate:		
Employees whose first state service occurred before January 1, 2011:	8.5%	8.5%
Employees whose first state service occurred on or after January 1, 2011:	9.5%	9.5%
Actual Net Direct Employer Contribution Rate:	62.9%	58.8%

	Fiscal 2024	Fiscal 2023
Minimum Recommended Net Direct Employer Cont. Rate:	70.4%	62.9%

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 to ascribe a greater degree of accuracy to the results than is warranted. In fact, neither of these assessments 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 the data utilized, 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 with regard to future changes in plan population and decrements 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 efforts 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. However, actuarial funding methods for pension plans all allow for periodic corrections of assumptions to conform with reality as it unfolds. This process of repeated correction of estimates produces results which although imperfect are nevertheless a reasonable approach to determine the contribution levels which will provide for the future benefits of plan participants.

COMMENTS ON DATA

For the valuation, the system's administration 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, sex, as well as 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 VIII, there are 914 active contributing members in the system of whom 602 have vested retirement benefits; 1,355 former members or their beneficiaries are receiving retirement benefits. An additional 232 terminated members have contributions remaining on deposit with the system; of this number 32 have vested rights for future retirement benefits**.**

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. 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 that 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 administrative staff for verification and/or correction. Once the identified data has been researched and verified or corrected, it is returned to us for use in the valuation. Occasionally some requested information is either unavailable or impractical to obtain. In such cases, values may be assigned to missing data. The assigned values are based on information from similar records or based on information implied from other data in the record.

In addition to the statistical information provided on the system's participants, the system's administrator furnished general information related to other aspects of the system's expenses, benefits and funding. Valuation asset values as well as income and expenses for the fiscal year were based on information furnished by the firm of Ericksen Krentel. As indicated in the system's financial statements, the net market value of system's assets was $997,876,785 as of June 30, 2022. Net investment income for Fiscal 2022 measured on a market value basis amounted to a loss of $142,247,737. Contributions to the system for the fiscal year totaled $59,818,704; benefits and expenses amounted to $79,031,769.

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

COMMENTS ON ACTUARIAL METHODS AND ASSUMPTIONS

This valuation is based on the Individual Entry Age Normal actuarial cost method. The unfunded accrued liability is amortized with level payments over various periods as specified in R.S. 11:102. Amortization bases for actuarial asset and liability gains or losses (except as noted below) or changes in assumptions were generally amortized over 30 years prior to Fiscal 2018. Since the funded ratio of the plan (based on the actuarial value of assets) exceeded 70% in Fiscal 2017, such amortization periods for new amortization bases beginning with the Fiscal 2018 valuation are set to twenty years as specified in the statutes. All contribution shortfalls and excesses are amortized as a level dollar amount over 5 years. Since the passage of Act 95 of 2016, in each valuation, the first $5,000,000 of any asset gain (adjusted pro-rata for increases in the Actuarial Value of Assets) has been used to immediately reduce the system's oldest outstanding positive amortization base (without immediate reamortization). The statutes state that after the system's funded percentage reaches 80%, the remaining balance of the bases that have been reduced by such gains will be reamortized over the remainder of the amortization period originally established for each base. R.S. 11:102.4 further states that beginning with Fiscal 2020 and every fifth year thereafter, the remaining liability of such bases net of all payments made since the last reamortization will be reamortized with annual level-dollar payments over the remainder of the amortization period originally established. Therefore, in the 2020 valuation the amortization of loss bases that had been previously reduced due to Act 95 of 2016 were reamortized through the completion of the original amortization period. Details related to the reductions in the oldest positive amortization bases due to the application of the priority allocations are shown in Exhibit V-D. The 1995, 1997, 1999, 2001 and 2002 Experience Loss bases have been affected. Over the past few years, the 1995, 1997, 1999 and 2001 Experience Loss bases have been fully liquidated years earlier than originally planned due to the application of the priority allocations as well as continued payments on fully liquidated bases. The reamortization provision effective in Fiscal 2020 resulted in no future payments for those loss bases affected by the priority allocations prior to Fiscal 2020. Application of the 2021 priority allocation fully offset the 2001 Experience Loss base and slightly reduced the 2002 Experience Loss base. Because of asset experience losses in Fiscal 2022, no further reduction due to a priority allocation was made to the 2002 Experience Loss base. However, the system's funded ratio is below 80% and the statute does not provide for reamortization of bases reduced by the priority allocation until 2025, thus, the payments on the 2001 and 2002 Experience Loss bases remain unchanged despite the prior priority allocation. This results in an additional offset to the 2002 Experience Loss base as shown in Exhibit V-D.

Because the system's valuation interest rate was lowered to 6.95% within the 2021 actuarial valuation, the payments on the system's unfunded accrued liability were adjusted to account for the change in interest rate. This change caused payments on bases lowered by the priority allocation to be determined based on the original balance prior to impact of past priority allocations.

In each year, fifty percent of the asset gains which exceed the adjusted $5,000,000 threshold (priority amount) are used to fund the system's Experience Account which may be allocated to future permanent benefit increases (commonly referred to as cost-of-living adjustments), subject to certain limitations. Following the June 30, 2015, valuation, all allocations to the Experience Account have been amortized as a loss with level payments over ten years.

In addition to such deposits to the Experience Account, each year the balance in the account is credited with investment earnings or debited with investment losses, shown in this report as the rate of return on the Actuarial Value of Assets. The balance in the account cannot exceed the reserve necessary to grant one (two if the system is funded 80% or greater) permanent benefit increases as otherwise authorized by law. Any funds credited to the Experience Account offset those allocated to the Investment Gain/Loss Experience. The funding methodology for the plan includes the system's "Experience Account" in the Actuarial Value of Assets.

The Priority Amount, which represents the maximum amount of system returns in excess of the system's actuarially assumed rate of return that may be applied to the oldest outstanding positive amortization base, has been set at the following levels since its creation:

Fiscal 2015 -	$5,000,000
Fiscal 2016 -	$5,497,148
Fiscal 2017 -	$6,056,800
Fiscal 2018 -	$6,633,747
Fiscal 2019 -	$6,980,899
Fiscal 2020 -	$7,273,861
Fiscal 2021 -	$7,969,006
Fiscal 2022 -	$8,352,460

A liability is recognized for the existing balance in the Experience Account together with the present value of future contributions to the account up to the maximum permissible value of the account based upon current account limitations. This is in recognition of the fact that the legal mechanism for credits to the Experience Account are substantively automatic up to the limit set on the account balance. However, contributions to this account in excess of the account limit will require a legislative act. Although the board of trustees has authority to recommend ad hoc Permanent Benefit Increases (PBIs) be approved by the legislature under limited circumstances, these PBIs have not shown to have a historical pattern, the amounts of the PBIs have not been set relative to a defined cost-of-living or inflation index, and there is no evidence to conclude that PBIs will be granted on a predictable basis in the future. Therefore, for purposes of determining the present value of benefits, these PBIs were deemed not to be substantively automatic, and the present value of benefits excludes PBIs beyond the current account limitations of the Experience Account. Since a liability for future PBIs up to the authorized Experience Account balance has been included in the system's accrued liabilities, the assets in the Experience Account were included in the actuarial value of assets for funding purposes.

A plan experience study was performed in 2018 to review the assumptions used in the actuarial valuation. This study was performed based on the actuarial data for the Fiscal 2012 through Fiscal 2017 valuation. The assumptions used in the Fiscal 2018 actuarial valuation were set based upon that study. Since the implementation of these new assumptions within the 2018 valuation, there have been two changes in plan assumptions. Within the 2019 valuation a change was made to model future handicapped child survivor benefits. Within the 2021 valuation, the valuation interest rate was lowered from 7.0% to 6.95%. There was no change in liability assumptions within this valuation.

RISK FACTORS

Defined benefit pension plans are subject to a number of risks. These can be related either to plan assets or liabilities. 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. As the plan attempts to offset inflation by providing permanent benefit increases, 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 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 steeply decline, which mitigates 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 graph and demonstration given in this report illustrates the noninvestment cash flow and benefit payments of the system over the last 10 years. Only recently have annual benefit payments exceeded annual contributions to the plan. Future net noninvestment cash flows for the system will be determined based upon both the system 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 proportions of retired membership will continue and the current trend toward higher levels of negative noninvestment cash flows will continue in the near future.

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 77.91% as of June 30, 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. Exhibit IX gives a history of this value for the last ten years. One additional risk measure is the sensitivity of the plan's cost structure to asset gains and losses. We have determined that based on current assets and demographics, for each percentage under the assumed rate of return on the actuarial value of assets, there will be a corresponding increase in the actuarially required contribution as a percentage of projected payroll of 1.35% for the fund. For earnings above the assumed rate of return, the reduction in costs will generally be less than this amount due to the priority allocation and the allocation of a portion of investment gains to the Experience Account.

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 10.72.

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 101%; ten years ago this ratio was 66%.

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 24.9% of payroll. However, after accounting for the effect of the contribution shortfall, the recommended employer contribution rate for Fiscal 2024 would increase by 30.2%. Further 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 legislative changes directly affecting the retirement system were enacted during the 2022 Regular Session of the Louisiana Legislature.

Act 247 clarifies the legal language related to the New State Police Retirement Plan in a number of areas, including Initial Benefit Option and Back-DROP. It also clarifies that the New State Police Plan benefits are based on a 60-month final average compensation. Under this plan, a child of a deceased member with physical or mental disabilities must be totally and permanently disabled. Also, the statutes were updated to clarify that certain survivor benefits are subject to the system's overall limit of 100% of the member's average compensation.

Act 289 authorized a permanent benefit increase (PBI) equal to 2% of the benefit in payment for qualifying retirees and beneficiaries who have been retired for at least one year as of July 1, 2022. To qualify, retirees and beneficiaries would have to be at least age 60 at the time of the PBI. The PBI was payable on benefits up to $68,312 per year. The act also authorized a supplemental PBI for retirees and beneficiaries who attained the age of 65 and who retired on or before June 30, 2001.

ASSET EXPERIENCE

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

	Market Value †	Actuarial Value †
2013	13.92%	16.77%
2014	17.93%	12.48%
2015	3.00%	10.66%
2016	-1.63%	6.23%
2017	14.62%	8.23%
2018	9.40%	8.22%
2019	4.12%	6.26%
2020	1.15%	5.56%
2021	32.10%	11.38%
2022	-12.37%	6.76%

† Rates of return calculated based on assets inclusive of Experience Account but exclusive of money market DROP assets and income.

Geometric Average Market Rates of Return

5-year average	(Fiscal 2018 – 2022)	5.93%
10-year average	(Fiscal 2013 – 2022)	7.60%
15-year average	(Fiscal 2008 – 2022)	5.36%
20-year average	(Fiscal 2003 – 2022)	6.44%
25-year average	(Fiscal 1998 – 2022)	6.03%
30-year average	(Fiscal 1993 – 2022)	7.04%

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. The rate of return is calculated on assets invested in the system’s portfolio. DROP assets invested in money market investments have been excluded from the rate of return calculation. 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, the fund earned $9,627,425 of dividends, interest and other recurring income. In addition, the Fund had net realized and unrealized capital losses on investments of $148,826,032. Fund investment expenses totaled $3,049,130.

The actuarial rate of return is presented for comparison to the assumed long-term rate of return of 6.95% for Fiscal 2022. DROP accounts that are credited with earnings based on the actual rate of return of the system should be credited with 6.26% (i.e. 6.76% less 0.5% as detailed in the prior provision of R.S. 11:1312 as authorized by Section 4 of Act 480 of the 2009 Regular Legislative Session). The actuarial rate of return is calculated based on the actuarial value of assets net of DROP assets invested in money market accounts and includes all interest, dividends, and recognized capital gains as given in Exhibit VI net of money market income earned by DROP assets. Investment income used to calculate this yield is based upon a smoothing of investment returns above or below the valuation interest rate over a five-year period, subject to constraints. The difference between rates of return on an actuarial and market value basis results from the smoothing of gains or losses on investments relative to the valuation interest rate. In the future, yields in excess of the 6.95% assumption will reduce future costs; yields below 6.95% will increase future costs. For Fiscal 2022, the system experienced actuarial investment earnings of $1,919,205 below the actuarial assumed earnings rate of 6.95%.

Since the system experienced asset experience losses, no funds were available in Fiscal 2022 to apply against the oldest outstanding positive base or to add funds to the Experience Account.

DEMOGRAPHICS AND LIABILITY EXPERIENCE

The average active contributing member is 43 years old with 15.2 years of service credit and an annual salary of $78,857. The system's active contributing membership experienced a decrease of 37 members during Fiscal 2022; over the last five years, the number of active contributing members decreased by 215.

The average service retiree is 66 years old with a monthly benefit of $5,098. The average age of a regular retiree at retirement is 51. The number of retirees and beneficiaries receiving benefits from the system as shown in the report increased by 60 during the fiscal year; over the last five years, the number of retirees and beneficiaries receiving benefits from the system increased by 181. Over the last five years, annual benefits in payment increased by $25,374,603.

Liability experience for the year was unfavorable. The total number of retirements were slightly above projected levels while the number of retiree deaths were below projected levels. These tend to increase plan costs. Offsetting these factors were withdrawals above projected levels and salary increases below projected levels. Despite these factors, the main reason for unfavorable liability experience was the application of an additional liability of $12,054,612 to account for the future automatic filling of the Experience Account.

Net plan liability experience losses totaled $19,293,207. The interest adjusted amortization payment on this loss was $1,754,138, or 2.44% of projected payroll.

FUNDING ANALYSIS AND RECOMMENDATIONS

Actuarial funding of a retirement system is a process whereby funds are accumulated over the working lifetimes of employees in such a manner as to have sufficient assets available at retirement to pay for the lifetime benefits accrued by each member of the system. The required contributions are determined by an actuarial valuation based on rates of mortality, termination, disability, and retirement, as well as investment return and other statistical measures specific to the particular group. Each year a determination is made of two cost components, and the actuarially required contributions are based on the sum of these two components. These two components are the normal cost and the amortization payments on the unfunded actuarial accrued liability. The normal cost refers to the annual cost for active members allocated to each year by the particular cost method utilized. The term unfunded accrued liability (UAL) refers to the excess of the present value of plan benefits over the sum of current assets and future normal costs. Each year the UAL grows with interest and is reduced by payments. In addition, it may be increased or diminished by plan experience, changes in assumptions, or changes in benefits including COLA's. Contributions in excess of or less than the actuarially required amount can also decrease or increase the UAL balance. New entrants to the system can also increase or lower costs as a percent of payroll depending upon their demographic distribution. Finally, payroll growth affects plan costs since payments on the system's unfunded accrued liability are on a fixed, level dollar schedule. If payroll increases, these costs are reduced as a percentage of payroll. Conversely, if payroll decreases, these costs are increased as a percentage of payroll.

In order to establish the actuarially required contribution in any given year, it is necessary to define the assumptions, funding method, and method of amortizing the UAL. Thus, the determination of what contribution is actuarially required depends upon the funding method and amortization schedules employed. Given the current balance on the UAL of $302,965,699, the method of amortizing the UAL has a material impact on employer costs. 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.

An explanation of the change in costs related to asset and liability gains and losses as well as changes in demographics and assumptions is given in prior sections of the report. In addition to these components, variances in contribution levels and payroll also affect costs. For Fiscal 2022 contributions totaled $2,890,239 more than required; the interest-adjusted amortization credit based on the contribution surplus for Fiscal 2023 is $680,702, or 0.95% of projected payroll. In addition, for Fiscal 2023 the net effect of the change in payroll on amortization costs was to increase such costs by 2.00% of projected payroll.

A reconciliation of the change in costs is given below. Values listed in dollars are interest adjusted for payment throughout the fiscal year. Percentages are based on the projected payroll for Fiscal 2023 except for those items labeled Fiscal 2022.

	Dollars	Percentage of Payroll
Employer Normal Cost for Fiscal 2022	$ 16,011,252	21.19%
Cost of Demographic and Salary Changes	$ (838,941)	(0.10%)
Employer Normal Cost for Fiscal 2023	$ 15,172,311	21.09%
UAL Payments for Fiscal 2022	$ 29,995,343	39.70%
Change due to change in payroll	N/A	2.00%
Change due to elimination of Amortization Credits/Payments	$ 2,256,490	3.14%
Additional Amortization Expenses for Fiscal 2023:		
Liability Experience Loss	$ 1,754,138	2.44%
Asset Experience Loss	$ 174,494	0.24%
Contribution Surplus	$ (680,702)	(0.95%)
Total Amortization Expense for Fiscal 2023	$ 33,499,763	46.57%
Insurance Premium Taxes	$ (1,500,000)	(2.09%)
Projected Adminstrative Expenses for Fiscal 2023	$ 1,269,385	1.76%
Total Normal Cost & Amortization Payments	$ 48,441,459	67.33%

The derivation of the actuarially required contribution for the current fiscal year is given in Exhibit I. The employer's normal cost for Fiscal 2023, interest adjusted for mid-year payment is $15,172,311. The amortization payments on the system's unfunded actuarial accrued liability total $33,499,763. The total actuarially required contribution is determined by adding these two values together with administrative expenses. The net direct actuarially required employer contribution for Fiscal 2023 is determined based on the sum of employer normal cost, amortization payments on the unfunded actuarial accrued liability, and estimated administrative expenses offset by projected insurance premium taxes collections allocated to the Fund for Fiscal 2023. As given in line 14 of Exhibit I, the net actuarially required employer contribution for Fiscal 2023 is $48,441,459, or 67.3% of projected payroll.

Since the actual employer contribution rate for Fiscal 2023 is 62.9% of payroll, there will be a contribution deficit of 4.4% of payroll. This deficit will increase the actuarially required contribution recommended for Fiscal 2024. In order to determine a minimum recommended net direct employer contribution rate for Fiscal 2024, the Employer Normal Cost and Amortization Payments were estimated for Fiscal 2024 and adjusted for the impact of the estimated contribution shortfall for Fiscal 2023. As given in line 25 of Exhibit I, the estimated actuarially required net direct employer contribution for Fiscal 2024 is $51,946,923, or 70.4% of projected payroll.

PERMANENT BENEFIT INCREASES

During Fiscal 2022, the actual cost of living (as measured by the US Department of Labor CPI-U) increased by 9.1%. Permanent Benefit Increase (PBI) provisions for the system are detailed in R.S. 11:1332 within the statutes relative to the Experience Account. Act 214 of the 2018 Regular Session of the Louisiana Legislature changed the limitation for adding funds to the Experience Account, allowing the Board to fund not only the basic permanent benefit increase but also the supplemental permanent benefit increase described in R. S. 11:1332(F). The Experience Account cannot be credited with funds that would cause the balance in the account to exceed the reserve of one "standard" permanent benefit increase defined in R.S. 11:1332(C) plus the cost of a "supplemental" permanent benefit increase defined in R.S. 11:1332(F) if the system is less than 80% funded or two permanent benefit increases if the system is at least 80% funded. R.S. 11:1332(C) sets forth the basis for determining the maximum percentage increase in the benefits permissible for the "standard" permanent benefit increase. The maximum percentage increase is based upon the funded percentage of the system as of the most recent actuarial valuation. In addition, other restrictions related to the system's actuarial rate of return and the timing of the most recent such increase may apply. A table of permissible increase rates is given below:

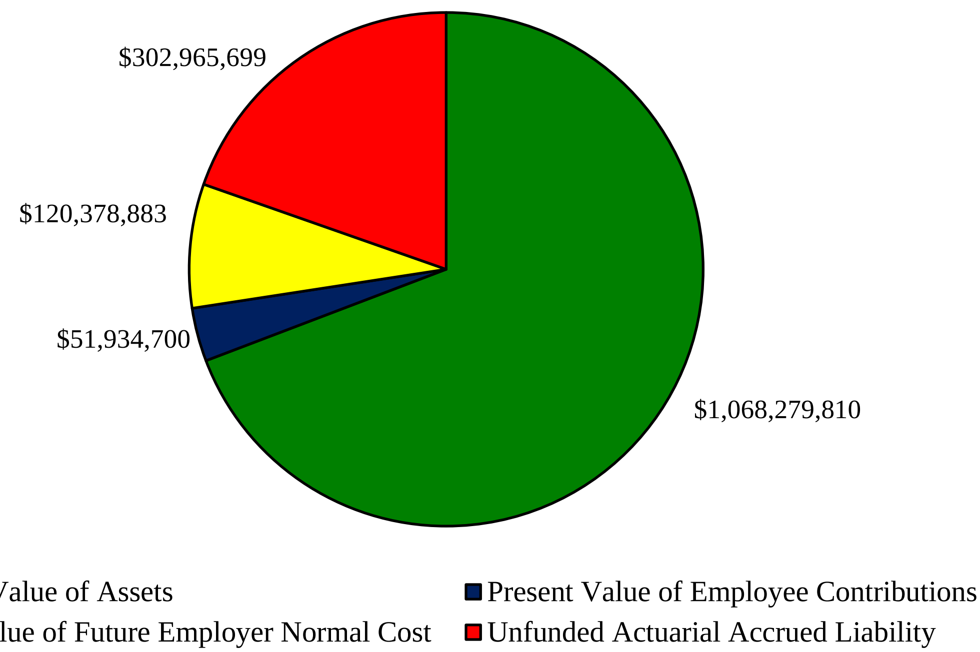
Funded Percentage of the System	Maximum Percent PBI
At least 80%	3.0%
At least 75% but less than 80%	2.5%
At least 65% but less than 75%	2.0%
At least 55% but less than 65%	1.5%
Less than 55%	No COLA permitted

In addition, if the fund is less than 85% funded and the legislature granted a permanent benefit increase in the preceding fiscal year, no increase may be granted.

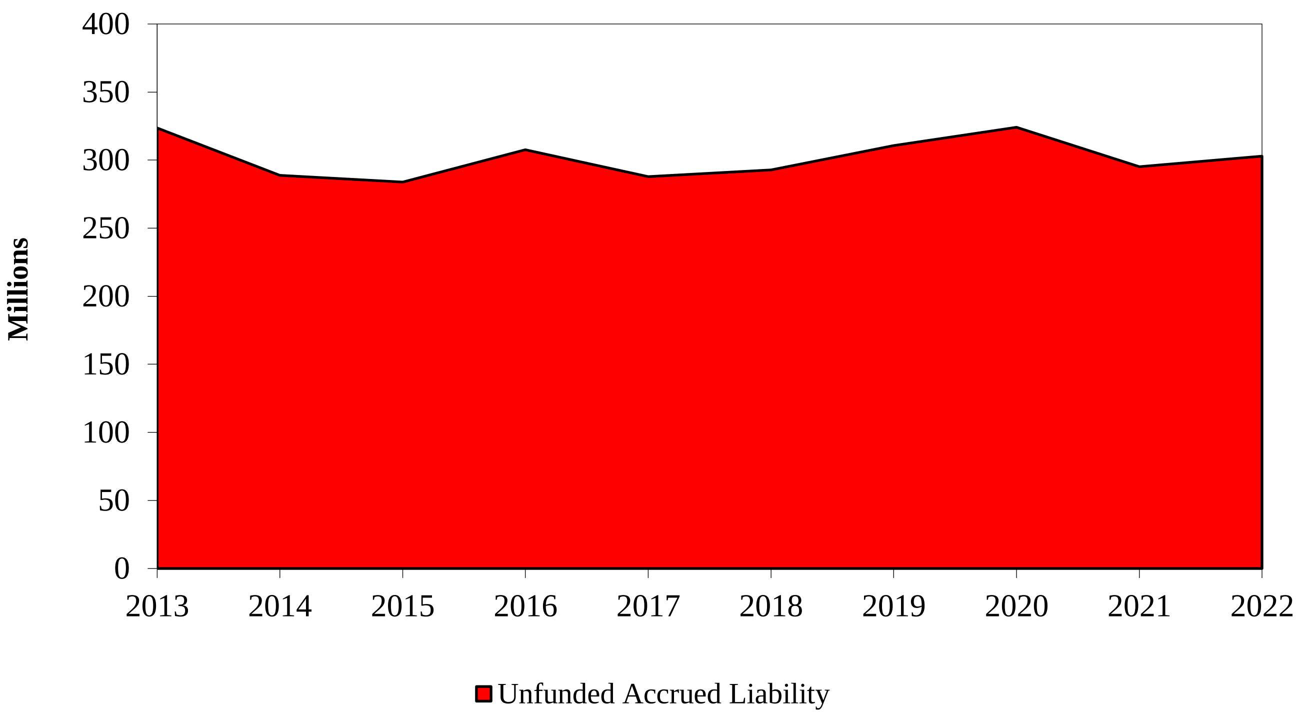
If there are sufficient funds in the Experience Account and the system meets the necessary criteria to grant a permanent benefit increase, the Board of Trustees may recommend to the President of the Senate and the Speaker of the House of Representatives that the system be permitted to grant a permanent benefit increase. The standard permanent benefit increase is based on the benefit in payment at the time the increase is approved with a maximum adjustment based on the first $60,000 of benefits, where the $60,000 limit is increased annually by the consumer price index for all urban consumers from July 1, 2015, through the end of the fiscal year of valuation. No permanent benefit increase can be paid in an amount greater than the increase in the Consumer Price Index for all urban consumers during the twelve-month period ending on the system's valuation date. Permanent benefit increases may be provided only to retirees who have received benefits for at least one full year. In addition, non-disabled retirees may only receive a permanent benefit increase if they have attained age sixty.

As authorized by Act 289, the system granted a 2% standard PBI according to R.S. 11:1332(C) plus a 2% supplemental PBI according to R.S. 11:1332(F) as of July 1, 2022. The system does not meet the requirements under R.S. 11:1332 to be permitted to grant an additional permanent benefit increase as of July 1, 2023.

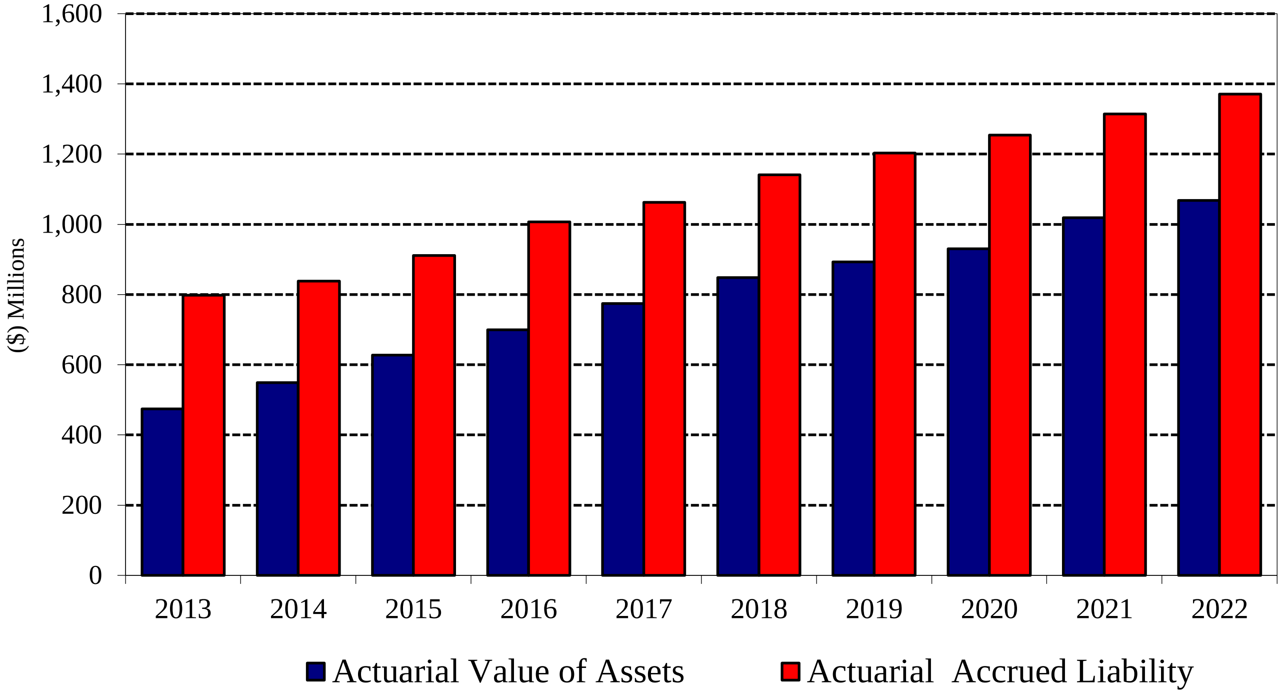
Components of Present Value of Future Benefits
June 30, 2022



Unfunded Accrued Liability

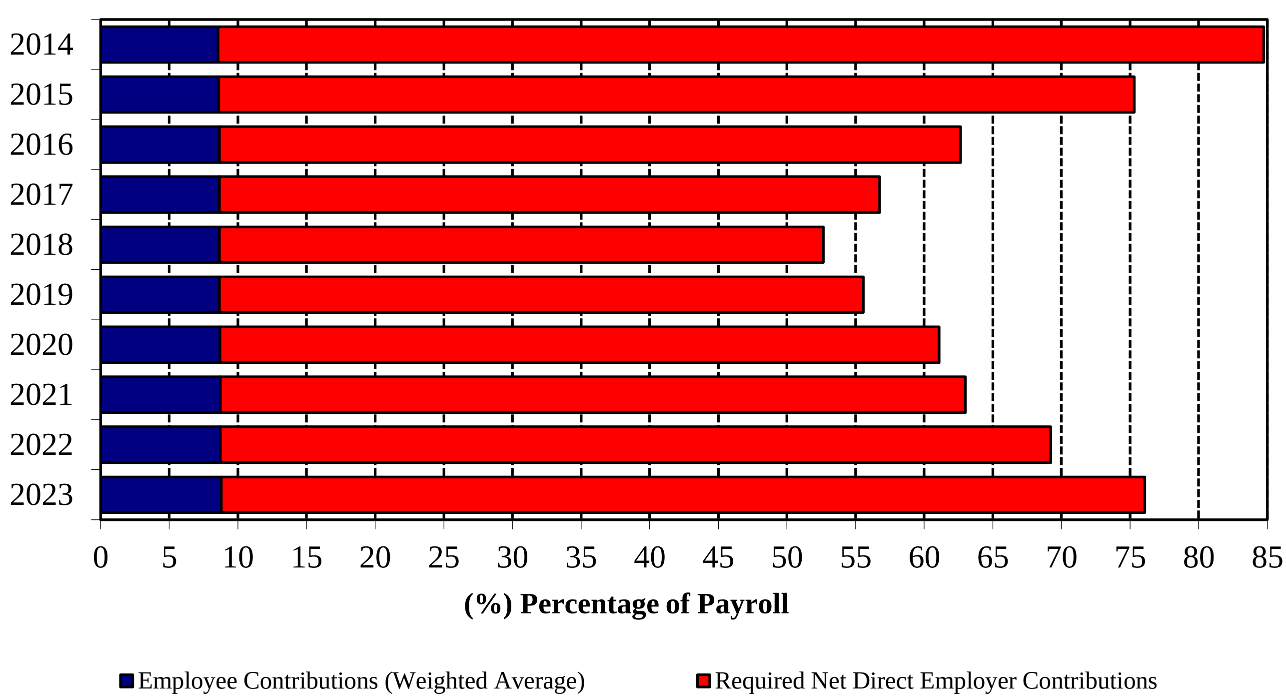


Actuarial Value of Assets vs. Actuarial Accrued Liability



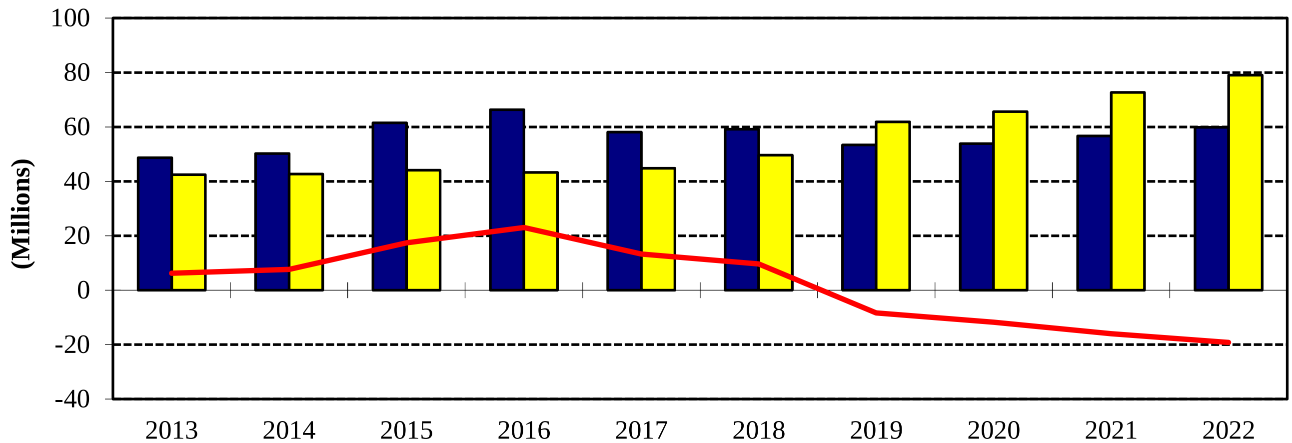
Actuarial Value of Assets includes the balance of the Experience Account beginning with Fiscal 2017.

Components of Actuarial Funding



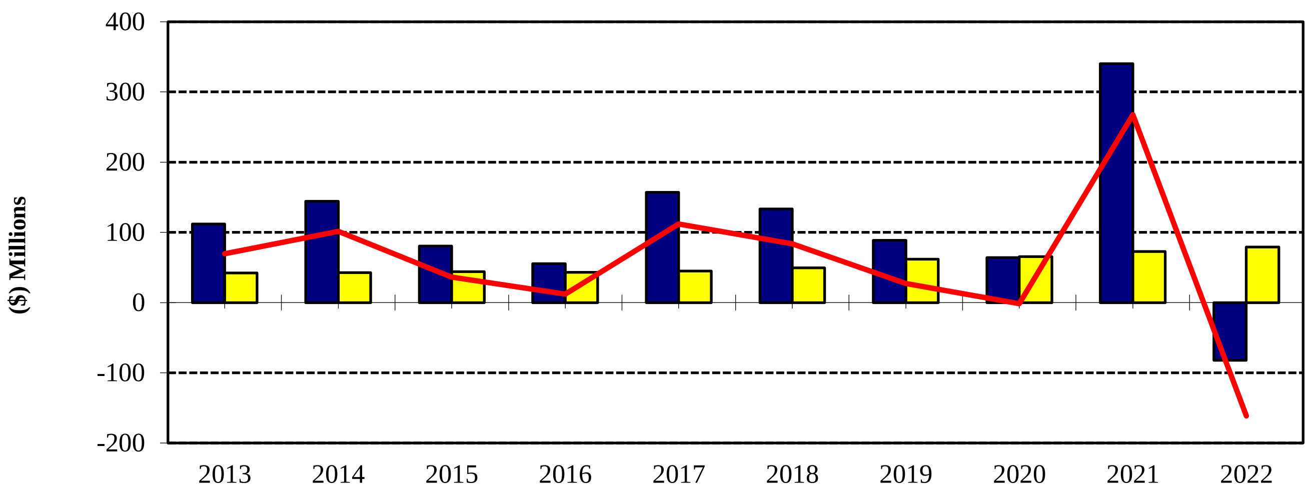
(2015 and later employee contribution level is a weighted average of rates paid by employees in different tiers. Counts by tier unavailable prior to 2015)

Net Non-Investment Income



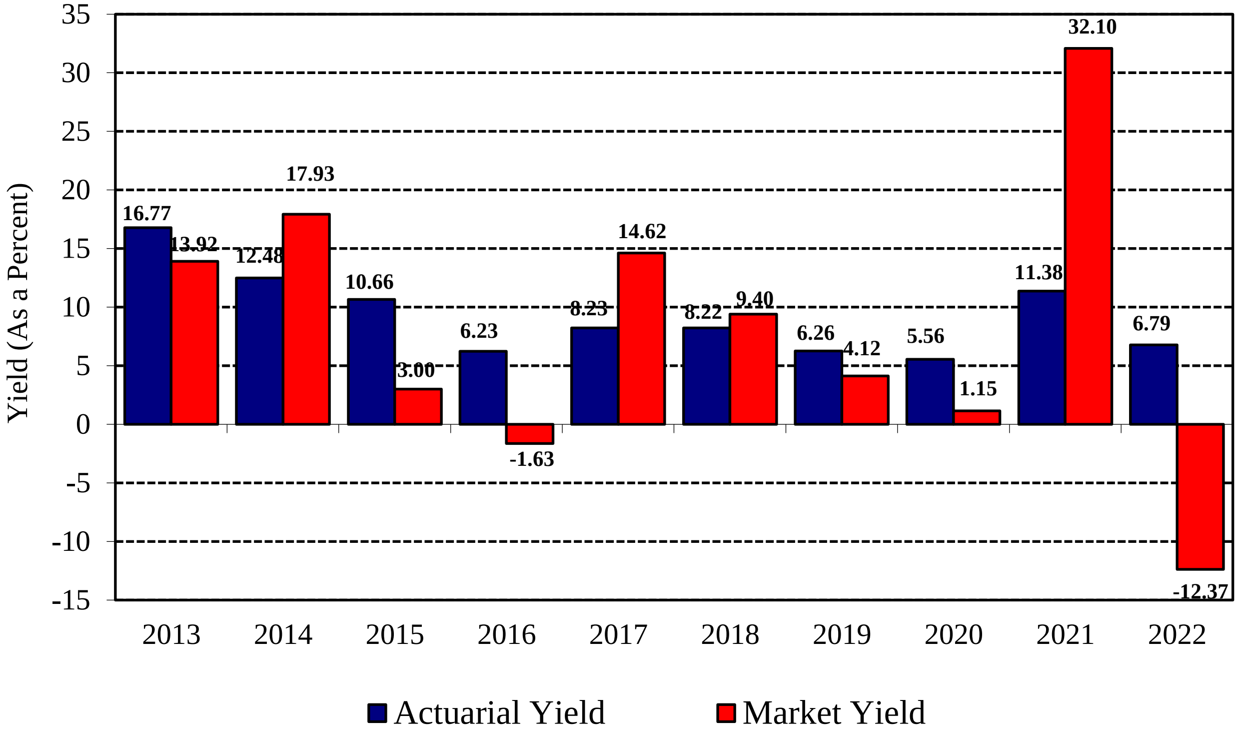
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Non-Investment Income ($Mil)	48.6	50.2	61.5	66.3	58.1	59.2	53.4	53.8	56.7	59.8
Benefits and Expenses ($Mil)	42.4	42.6	44.1	43.2	44.9	49.6	61.8	65.6	72.7	79.0
Net Non-Investment Income ($Mil)	6.2	7.6	17.4	23.0	13.2	9.6	-8.4	-11.8	-16.0	-19.2

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



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Income ($Mil)	111.9	144.3	80.4	55.4	157.0	133.2	88.9	64.0	340.3	-82.4
Benefits and Expenses ($Mil)	42.4	42.6	44.1	43.2	44.9	49.6	61.8	65.6	72.7	79.0
Net Change in MVA ($Mil)	69.5	101.7	36.3	12.1	112.1	83.6	27.1	-1.6	267.6	-161.4

Historical Asset Yields



EXHIBITS

EXHIBIT I
ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS

1.	Normal Cost of Retirement Benefits	$	18,516,860
2.	Normal Cost of Death Benefits	$	372,495
3.	Normal Cost of Disability Benefits	$	1,306,333
4.	Normal Cost of Deferred Retirement Benefits	$	475,578
5.	Normal Cost of Contribution Refunds	$	269,378
6.	TOTAL Normal Cost as of July 1, 2022 (1 + 2 + 3 + 4 + 5)	$	20,940,644
7.	TOTAL Normal Cost Interest Adjusted for Midyear Payment	$	21,656,109
8.	Adjustment to Total Normal Cost for Employee Portion	$	6,483,798
9.	TOTAL Employer Normal Cost Adjusted for Midyear Payment (7 – 8)	$	15,172,311
10.	Amortization Payments on Unfunded Accrued Liability (Midyear)	$	33,499,763
11.	Projected Administrative Expenses for Fiscal 2023	$	1,269,385
12.	Gross Employer Required Contribution (9 + 10 + 11)	$	49,941,459
13.	Projected Insurance Premium Taxes due in Fiscal 2023	$	(1,500,000)
14.	Net Direct Actuarially Required Employer Contribution for Fiscal 2023 (12 + 13)	$	48,441,459
15.	Projected Payroll for Contributing Members (Fiscal 2023)	$	71,937,646
16.	Net Direct Actuarially Required Employer Contribution as a Percentage of Projected Payroll for Fiscal 2023 (14 ÷ 15)		67.3%
17.	Actual Net Direct Employer Contribution Rate for Fiscal 2023		62.9%
18.	Projected Fiscal 2023 Contribution Loss (Gain) as a % of Payroll (16 – 17)		4.4%
19.	Projected Fiscal 2023 Employer Contribution Shortfall (Surplus) (15 × 18)	$	3,165,256
20.	Amortization of Interest Adjusted Fiscal 2023 Employer Contribution Shortfall (Surplus) Based on Midyear Payment in Fiscal 2024	$	770,943
21.	Estimated Fiscal 2024 Employer Normal Cost Adjusted for Midyear Payment	$	15,551,619
22.	Estimated Fiscal 2024 Amortization Payments on Fiscal 2022 UAL	$	35,823,241
23.	Estimated Fiscal 2024 Administrative Expenses	$	1,301,120
24.	Projected Insurance Premium Taxes due in Fiscal 2024	$	(1,500,000)
25.	Estimated Actuarially Net Direct Required Employer Contributions for Fiscal 2024 (20 + 21 + 22 + 23 + 24)	$	51,946,923
26.	Estimated Payroll for Contributing Members (Fiscal 2024)	$	73,736,087
27.	Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2024 (25 ÷ 26, Rounded to nearest 0.10%)		70.4%

EXHIBIT II
PRESENT VALUE OF FUTURE BENEFITS

PRESENT VALUE OF FUTURE BENEFITS FOR ACTIVE MEMBERS:

Retirement Benefits	$	624,674,535		
Survivor Benefits		6,625,639		
Disability Benefits		26,717,504		
Vested Termination Benefits		5,768,266		
Refunds of Contributions		1,250,104		
TOTAL Present Value of Future Benefits for Active Members			$	665,036,048

PRESENT VALUE OF FUTURE BENEFITS FOR TERMINATED MEMBERS:

Terminated Vested Members Due Benefits at Retirement	$	11,610,378		
Terminated Members with Reciprocals Due Benefits at Retirement		0		
Terminated Members Due a Refund		701,305		
TOTAL Present Value of Future Benefits for Terminated Members			$	12,311,683

PRESENT VALUE OF FUTURE BENEFITS FOR RETIREES:

Regular Retirees	$	740,299,781		
Disability Retirees		18,880,751		
Survivors & Widows		70,765,728		
Liability Attributable to the Experience Account		12,054,612		
Estimated DROP Account Balances Payable to Retirees		24,210,489		
TOTAL Present Value of Future Benefits for Retirees & Survivors			$	866,211,361

TOTAL Present Value of Future Benefits	$	1,543,559,092

EXHIBIT III – SCHEDULE A
MARKET VALUE OF ASSETS

CURRENT ASSETS:				
Cash in Banks	$	162,854		
Contributions Receivable		2,982,052		
Accrued interest and dividends		340,084		
Other Current Assets		1,018		
TOTAL CURRENT ASSETS			$	3,486,008
Property Plant & Equipment			$	1,201,721
INVESTMENTS:				
Short-term investments	$	18,784,532		
Equities		578,085,632		
Fixed Income		207,451,013		
Alternative Investments		191,505,415		
Collateral for Securities Lending		46,646,393		
TOTAL INVESTMENTS			$	1,042,472,985
DEFERRED OUTFLOWS OF RESOURCES			$	830,187
TOTAL ASSETS			$	1,047,990,901
CURRENT LIABILITIES:				
Accounts Payable	$	893,039		
Securities Lending Obligations		46,646,393		
Other Post-Employment Benefits		628,172		
Other Current Liabilities		1,603,449		
TOTAL CURRENT LIABILITIES			$	49,771,053
DEFERRED INFLOWS OF RESOURCES			$	343,063
TOTAL LIABILITIES			$	50,114,116
MARKET VALUE OF ASSETS			$	997,876,785

EXHIBIT III – SCHEDULE B
ACTUARIAL VALUE OF ASSETS

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

Fiscal year 2022	$ (222,160,845)
Fiscal year 2021	221,767,002
Fiscal year 2020	(51,903,672)
Fiscal year 2019	(24,865,406)
Fiscal year 2018	18,881,595
Total for five years	$ (58,281,326)

Deferral of excess (shortfall) of invested income:

Fiscal year 2022 (80%)	$ (177,728,676)
Fiscal year 2021 (60%)	133,060,201
Fiscal year 2020 (40%)	(20,761,469)
Fiscal year 2019 (20%)	(4,973,081)
Fiscal year 2018 (0%)	0
Total deferred for year	$ (70,403,025)

Market value of plan net assets, end of year	$ 997,876,785
Preliminary actuarial value of plan assets, end of year	$ 1,068,279,810
Actuarial value of assets corridor	
85% of market value, end of year	$ 848,195,267
115% of market value, end of year	$ 1,147,558,303
Final actuarial value of plan net assets, end of year	$ 1,068,279,810

† Excess (shortfall) of actual investment income versus expected investment income is calculated based on assets and income adjusted to exclude the money market DROP accounts.

EXHIBIT IV
PRESENT VALUE OF FUTURE CONTRIBUTIONS

Employee Contributions to the Annuity Savings Fund	$	51,934,700
Employer Normal Contributions to the Pension Accumulation Fund		120,378,883
Employer Amortization Payments to the Pension Accumulation Fund		302,965,699
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS	$	475,279,282

EXHIBIT V – SCHEDULE A
ACTUARIAL ACCRUED LIABILITIES

LIABILITY FOR ACTIVE MEMBERS				
Accrued Liability for Retirement Benefits	$	472,697,606		
Accrued Liability for Survivor Benefits		3,595,082		
Accrued Liability for Disability Benefits		15,570,942		
Accrued Liability for Vested Termination Benefits		2,043,090		
Accrued Liability for Refunds of Contributions		(1,184,255)		
TOTAL Actuarial Accrued Liability for Active Members			$	492,722,465
LIABILITY FOR TERMINATED MEMBERS			$	12,311,683
LIABILITY FOR RETIREES AND SURVIVORS			$	866,211,361
TOTAL ACTUARIAL ACCRUED LIABILITY			$	1,371,245,509
ACTUARIAL VALUE OF ASSETS			$	1,068,279,810
UNFUNDED ACTUARIAL ACCRUED LIABILITY			$	302,965,699

EXHIBIT V – SCHEDULE B
CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY

PRIOR YEAR UNFUNDED ACCRUED LIABILITY			$	295,150,724
Interest on Unfunded Accrued Liability	$	20,512,975		
Asset Experience Loss		1,919,205		
Liability Experience Loss		19,293,207		
TOTAL Additions to UAL			$	41,725,387
Contribution Excess with Accrued Interest		2,890,239		
Interest Adjusted Amortization Payments		31,020,173		
TOTAL Reductions to UAL			$	33,910,412
NET Change in Unfunded Accrued Liability			$	7,814,975
CURRENT YEAR UNFUNDED ACCRUED LIABILITY			$	302,965,699

EXHIBIT V – SCHEDULE C
AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
June 30, 2022

FISCAL YEAR	DESCRIPTION	AMORT. PERIOD	INITIAL BALANCE	YEARS REMAINING	REMAINING BALANCE	AMORT. PAYMENTS
1994	Experience Gain	20	(1,381,660)	7	(706,682)	(122,392)
1996	Experience Gain	20	(9,762,782)	7	(4,993,385)	(864,819)
1998	Experience Gain	20	(2,444,207)	7	(1,250,142)	(216,516)
2000	Experience Gain	20	(21,262,939)	7	(10,875,387)	(1,883,541)
2001	Experience Loss	20	14,218,540	7	0	1,245,391
2002	Experience Loss	20	36,882,500	7	† 17,532,269	3,267,173
2003	Liability Assumption Loss	24	14,644,647	11	9,619,955	1,196,535
2003	Experience Loss	20	60,111,382	7	30,745,258	5,324,863
2004	Experience Loss	20	16,579,889	7	8,480,141	1,468,701
2005	Experience Loss	20	14,086,441	7	7,204,815	1,247,823
2006	Experience Gain	20	(11,718,142)	7	(5,993,494)	(1,038,031)
2007	Experience Loss	20	13,788,779	7	7,052,565	1,221,455
2008	Liability Assumption Loss	29	9,487,421	16	7,328,475	722,961
2008	Experience Loss	20	29,944,312	7	15,315,660	2,652,565
2009	Liability Assumption Loss	30	1,032,469	17	815,405	77,820
2009	Experience Loss	30	74,940,622	17	59,185,042	5,648,492
2010	Experience Loss	30	26,844,661	18	21,820,742	2,020,977
2011	Experience Loss	30	28,079,134	19	23,428,285	2,111,515
2012	Experience Loss	30	7,358,996	20	6,287,599	552,782
2013	Change in Method Gain	30	(12,256,998)	21	(10,701,395)	(919,735)
2013	Liability Assumption Loss	30	26,210,291	21	22,883,795	1,966,754
2013	Experience Gain	30	(25,552,458)	21	(22,309,450)	(1,917,392)
2014	Experience Gain	30	(1,327,488)	22	(1,183,157)	(99,599)
2015	Experience Loss	30	22,863,386	23	20,766,272	1,715,193
2016	Experience Loss	30	46,924,931	24	43,366,399	3,519,864
2017	Change in Model	30	(5,046,395)	25	(4,738,643)	(378,491)
2017	Liability Assumption Loss	30	5,260,562	25	4,939,750	394,553
2017	Asset Assumption Gain	30	(5,260,562)	25	(4,939,750)	(394,553)
2017	Liability Experience Loss	30	6,707,700	25	6,298,636	503,092
2017	Asset Experience Gain	30	(8,661,909)	25	‡ (8,133,665)	(649,662)
2017	Gains Allocated to Exp. Account	10	970,763	5	566,591	129,033
2017	Priority Excess Allocation	30	6,056,800	25	5,687,430	454,273
2017	Contribution Gain	5	(9,572,640)	0	0	0
2018	Asset Experience Gain	20	(9,489,939)	16	‡ (8,460,876)	(834,674)
2018	Gains Allocated to Exp. Account	10	1,428,096	6	968,981	189,784
2018	Priority Excess Allocation	20	6,633,747	16	5,914,401	583,461
2018	Liability Experience Gain	20	(4,765,728)	16	(4,248,944)	(419,162)
2018	Contribution Gain	5	(9,859,043)	1	(2,246,716)	(2,246,716)
2018	Liability Assumption Loss	20	31,066,762	16	27,697,964	2,732,431
2019	Asset Experience Loss	20	6,255,910	17	5,764,476	550,149
2019	Liability Experience Loss	20	14,797,428	17	13,635,013	1,301,296
2019	Contribution Gain	5	(175,367)	2	(77,313)	(39,955)
2019	Liability Assumption Loss	20	46,005	17	42,392	4,046
2020	Asset Experience Loss	20	12,800,034	18	12,152,000	1,125,485
2020	Liability Experience Loss	20	5,965,187	18	5,663,184	524,509
2020	Contribution Gain	5	(460,495)	3	(294,674)	(104,894)

(Continued on next page)

EXHIBIT V – SCHEDULE C (Continued)
AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
June 30, 2022

FISCAL YEAR	DESCRIPTION	AMORT. PERIOD	INITIAL BALANCE	YEARS REMAINING	REMAINING BALANCE	AMORT. PAYMENTS
2021	Asset Experience Gain	20	(40,388,905)	19	‡ (39,398,309)	(3,550,841)
2021	Gains Allocated to Exp. Account	10	7,601,224	9	7,049,765	1,009,578
2021	Priority Excess Allocation	20	7,969,006	19	7,773,555	700,605
2021	Liability Experience Loss	20	3,077,350	19	3,001,874	270,549
2021	Contribution Gain	5	(820,781)	4	(677,912)	(186,922)
2021	Liability Assumption Loss	20	7,057,836	19	6,884,733	620,498
2022	Asset Experience Loss	20	1,919,205	20	1,919,205	168,729
2022	Liability Experience Loss	20	19,293,207	20	19,293,207	1,696,186
2022	Contribution Gain	5	(2,890,239)	5	(2,890,239)	(658,213)

TOTAL Unfunded Actuarial Accrued Liability	$ 302,965,699
TOTAL Fiscal 2023 Amortization Payments at Beginning of Year	$ 32,393,013
TOTAL Fiscal 2023 Amortization Payments Adjusted to Mid-Year	$ 33,499,763

† Balance reduced by application of investment gains assigned by Act 399 of 2014.

‡ Asset Experience Gain is the gross gain on assets and includes those gains allocated to the Experience Account and the Priority Allocation to the oldest outstanding positive base.

EXHIBIT V – SCHEDULE D
AMORTIZATION BASE ADJUSTMENTS

1995 Experience Loss:

Outstanding Balance of 1995 Experience Loss (as of June 30, 2016)	$	15,968,624
Accumulated Priority Allocations as of June 30, 2016	$	(6,056,900)
Amortization Payment on the 1995 Experience Loss (July 1, 2016)	$	(1,785,663)
Interest on the Net Amortization Base to June 30, 2017	$	568,824
Net Balance of the 1995 Experience Loss as of June 30, 2017	$	8,694,885
Priority Allocation Applied to 1995 Liability Experience Loss - June 30, 2017	$	(6,056,800)
Outstanding Balance of 1995 Experience Loss (as of June 30, 2017)	$	2,638,085
Amortization Payment on the 1995 Experience Loss (July 1, 2017)	$	(1,785,663)
Interest on the Net Amortization Base to June 30, 2018	$	59,670
Net Balance of the 1995 Experience Loss as of June 30, 2018	$	912,092
Priority Allocation Applied to 1995 Experience Loss - June 30, 2018	$	(912,092)
Outstanding Balance of the 1995 Experience Loss (as of June 30, 2018)	$	0

1997 Experience Loss:

Outstanding Balance of 1997 Experience Loss (as of June 30, 2017)	$	3,324,613
Amortization Payment on the 1997 Experience Loss (July 1, 2017)	$	(391,192)
Interest on the Net Amortization Base to June 30, 2018	$	205,339
Net Balance of the 1997 Experience Loss as of June 30, 2018	$	3,138,760
Priority Allocation Applied to 1997 Experience Loss - June 30, 2018	$	(3,138,760)
Outstanding Balance of the 1997 Experience Loss (as of June 30, 2018)	$	0

1999 Experience Loss:

Outstanding Balance of 1999 Experience Loss (as of June 30, 2017)	$	9,362,648
Amortization Payment on the 1999 Experience Loss (July 1, 2017)	$	(1,101,660)
Interest on the Net Amortization Base to June 30, 2018	$	578,269
Net Balance of the 1999 Experience Loss as of June 30, 2018	$	8,839,257
Priority Allocation Applied to 1999 Experience Loss - June 30, 2018	$	(2,582,895)
Outstanding Balance of the 1999 Experience Loss (as of June 30, 2018)	$	6,256,362
Amortization Payment on the 1999 Experience Loss (July 1, 2018)	$	(1,101,660)
Amortization Payment on the 1995 Experience Loss (July 1, 2018)	$	(1,785,663)
Amortization Payment on the 1997 Experience Loss (July 1, 2018)	$	(391,192)
Interest on the Net Amortization Base to June 30, 2019	$	208,449
Net Balance of the 1999 Experience Loss as of June 30, 2019	$	3,186,296
Priority Allocation Applied to 1999 Experience Loss - June 30, 2019	$	0
Outstanding Balance of the 1999 Experience Loss (as of June 30, 2019)	$	3,186,296
Amortization Payment on the 1999 Experience Loss (July 1, 2019)	$	(1,101,660)
Amortization Payment on the 1995 Experience Loss (July 1, 2019)	$	(1,785,663)
Portion of Amortization Payment on the 1997 Experience Loss (July 1, 2019)	$	(298,973)
Interest on the Net Amortization Base to June 30, 2020	$	0
Net Balance of the 1999 Experience Loss as of June 30, 2020	$	0

EXHIBIT V – SCHEDULE D (CONTINUED)
AMORTIZATION BASE ADJUSTMENTS

2001 Experience Loss:

Outstanding Balance of 2001 Experience Loss (as of June 30, 2019)	$	9,479,559
Remainder from payment on 1997 Liability Experience Loss (July 1, 2019)	$	(92,219)
Amortization Payment on the 2001 Liability Experience Loss (July 1, 2019)	$	(1,261,379)
Interest on the Net Amortization Base to June 30, 2020	$	568,817
Net Balance of the 2001 Experience Loss as of June 30, 2020	$	8,694,778
Amortization Payment on the 2001 Experience Loss (July 1, 2020)	$	(1,247,225)
Interest on the Net Amortization Base to June 30, 2021	$	521,329
Priority Allocation Portion Applied to 2001 Experience Loss (June 30, 2021)	$	(7,968,882)
Outstanding Balance of the 2001 Experience Loss (as of June 30, 2021)	$	0

2002 Experience Loss:

Outstanding Balance of 2002 Experience Loss (as of June 30, 2021)	$	20,905,646
Priority Allocation Portion Applied to 2002 Experience Loss (June 30, 2021)	$	(124)
Net Balance of the 2002 Liability Experience Loss as of June 30, 2021	$	20,905,522
Amortization Payment on the 2002 Experience Loss (July 1, 2021)	$	(3,267,173)
Amortization Payment on the 2001 Experience Loss (July 1, 2021)	$	(1,245,391)
Interest on the Net Amortization Base to June 30, 2022	$	1,139,311
Net Balance of the 2002 Liability Experience Loss as of June 30, 2022	$	17,532,269

EXHIBIT VI
ANALYSIS OF CHANGE IN ASSETS

Actuarial Value of Assets (June 30, 2021)		$ 1,019,236,031
INCOME:		
Member Contributions	$ 6,650,448	
Employer Contributions	44,385,359	
Irregular Contributions	3,228,281	
Motor Vehicle Fees	4,054,616	
Insurance Premium Taxes	1,500,000	
Total Contributions		$ 59,818,704
Net Depreciation of Investments	$ (148,826,032)	
Interest & Dividends	9,571,820	
Miscellaneous Income	55,605	
Investment Expense	(3,049,130)	
Net Investment Income		$ (142,247,737)
TOTAL Income		$ (82,429,033)
EXPENSES:		
Retirement Benefits	$ 77,827,514	
Refunds of Contributions	104,876	
Transfers to Other Systems	73,831	
Administrative Expenses	1,025,548	
TOTAL Expenses		$ 79,031,769
Net Market Value Income for Fiscal 2022 (Income – Expenses)		$ (161,460,802)
Unadjusted Fund Balance as of June 30, 2022 (Fund Balance Previous Year + Net Income)		$ 857,775,229
Income Adjustment for Actuarial Smoothing		$ 210,504,581
Actuarial Value of Assets: (June 30, 2022)		$ 1,068,279,810

EXHIBIT VII
EXPERIENCE ACCOUNT

1.	Experience Account Balance – June 30, 2021	$	9,497,110
2.	Investment Gain, if any	$	0
3.	Priority Allocation to Reduce Oldest Positive UAL Base	$	0
4.	Residual Investment Gain, if any (2 – 3)	$	0
5.	Investment Gain to Allocate to the Experience Account (50% × 4)	$	0
6.	Credit for Positive Investment Returns on AVA basis, if applicable	$	642,005
7.	Total Preliminary Credits to be Allocated to Experience Account (5 + 6)	$	642,005
8.	Debit for Negative Investment Returns on AVA basis, if applicable	$	0
9.	Present Value of Permanent Benefit Increase Paid July 1, 2022	$	(10,157,159)
10.	Total Preliminary Debits to be Allocated to Experience Account (8 + 9)	$	(10,157,159)
11.	Total Net Credit/Debit to be Allocated to Experience Account (7 + 10)	$	(9,515,154)
12.	Limit to the Experience Account Balance – June 30, 2022 (Present Value of PBI at CPI-U for Fiscal 2022 or 2.50%)	$	12,054,612
13.	Experience Account Balance – June 30, 2022 (Lesser of 1+11 &12 - at least 0)	$	0

EXHIBIT VIII
CENSUS DATA

	Active	Terminated with Funds on Deposit	Retired	Total
Number of members as of June 30, 2021	951	220	1,295	2,466
Additions to Census				
Initial membership	50	12		62
Omitted in error last year				
Death of another member			13	13
Adjustment for multiple records				
Change in Status during Year				
Actives terminating service	(15)	15		
Actives who retired	(71)		71	
Actives entering DROP				
Term. members rehired	1	(1)		
Term. members who retire		(10)	10	
Retirees who are rehired				
Refunded who are rehired				
DROP participants retiring				
DROP returned to work				
Omitted in error last year				
Eliminated from Census				
Refund of contributions	(1)	(4)		(5)
Deaths	(1)		(32)	(33)
Included in error last year				
Adjustment for multiple records			(2)	(2)
Number of members as of June 30, 2022	914	232	1,355	2,501

Actives Census By Age:

Age	Number Male	Number Female	Total Number	Average Salary	Total Salary
21 - 25	15	2	17	48,375	822,367
26 - 30	78	8	86	52,801	4,540,898
31 - 35	103	5	108	56,101	6,058,951
36 - 40	136	5	141	65,088	9,177,472
41 - 45	182	13	195	80,265	15,651,636
46 - 50	175	8	183	94,660	17,322,851
51 - 55	132	7	139	101,893	14,163,171
56 - 60	39	1	40	96,248	3,849,906
61 - 65	5	0	5	97,675	488,377
Total	865	49	914	78,857	72,075,629

Terminated Members Due a Deferred Retirement Benefit:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
36 - 40	3	0	3	30,985	92,954
41 - 45	10	0	10	33,393	333,930
46 - 50	15	2	17	35,153	597,604
51 - 55	2	0	2	41,433	82,866
Total	30	2	32	34,605	1,107,354

Terminated Members Due a Refund of Contributions:

Contributions Ranging				
From		**To**	**Number**	**Total Contributions**
0	-	99	78	3,488
100	-	499	69	17,564
500	-	999	17	11,062
1,000	-	1,999	5	6,541
2,000	-	4,999	8	23,695
5,000	-	9,999	5	36,823
10,000	-	19,999	2	31,358
20,000	-	99,999	15	464,976
100,000	&	Above	1	105,798
Total			200	701,305

Regular Retirees:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
46 - 50	28	0	28	90,093	2,522,598
51 - 55	163	8	171	85,156	14,561,639
56 - 60	147	7	154	85,360	13,145,443
61 - 65	110	2	112	73,174	8,195,470
66 - 70	160	2	162	59,468	9,633,783
71 - 75	193	1	194	41,659	8,081,941
76 - 80	120	1	121	35,537	4,299,963
81 - 85	54	1	55	29,576	1,626,687
86 - 90	24	0	24	25,302	607,245
91 - 95	4	0	4	17,487	69,947
96 - 100	1	0	1	17,415	17,415
Total	1,004	22	1,026	61,172	62,762,131

Disability Retirees:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
41 - 45	3	1	4	31,319	125,277
46 - 50	6	0	6	41,538	249,230
51 - 55	5	1	6	36,420	218,520
56 - 60	5	0	5	30,273	151,364
61 - 65	4	1	5	32,106	160,530
66 - 70	6	1	7	24,859	174,015
71 - 75	11	1	12	24,716	296,593
76 - 80	8	1	9	25,512	229,608
81 - 85	4	0	4	30,132	120,528
86 - 90	1	0	1	42,460	42,460
Total	53	6	59	29,968	1,768,125

Survivors:

Age	Number Male	Number Female	Total Number	Average Benefit	Total Benefit
0 - 20	1	0	1	86,708	86,708
21 - 25	3	0	3	66,554	199,661
31 - 35	0	1	1	54,150	54,150
36 - 40	0	2	2	40,648	81,296
41 - 45	0	1	1	72,883	72,883
46 - 50	2	5	7	59,378	415,644
51 - 55	1	4	5	38,586	192,932
56 - 60	0	8	8	60,243	481,944
61 - 65	0	20	20	47,042	940,849
66 - 70	0	27	27	30,233	816,302
71 - 75	1	38	39	28,780	1,122,438
76 - 80	0	48	48	24,573	1,179,508
81 - 85	0	50	50	25,700	1,285,004
86 - 90	1	39	40	22,437	897,472
91 - 95	0	13	13	20,126	261,643
96 - 100	0	5	5	17,136	85,682
Total	9	261	270	30,275	8,174,116

Active Members:

Attained Ages	Completed Years of Service 0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 & Over	Total
0 - 20	-	-	-	-	-	-	-	-	-
21 - 25	12	5	-	-	-	-	-	-	17
26 - 30	18	52	16	-	-	-	-	-	86
31 - 35	14	24	50	19	1	-	-	-	108
36 - 40	4	14	32	62	29	-	-	-	141
41 - 45	2	8	17	47	83	37	1	-	195
46 - 50	-	2	6	10	37	97	31	-	183
51 - 55	-	1	6	6	21	42	60	3	139
56 - 60	-	-	2	2	9	6	18	3	40
61 - 65	-	-	-	-	1	3	-	1	5
66 - 70	-	-	-	-	-	-	-	-	-
71 & Over	-	-	-	-	-	-	-	-	-
Total	50	106	129	146	181	185	110	7	914

Average Annual Salary of Active Members:

Attained Ages	Completed Years of Service 0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 & Over	Total
0 - 20	-	-	-	-	-	-	-	-	-
21 - 25	46,610	52,609	-	-	-	-	-	-	48,375
26 - 30	46,610	53,692	56,870	-	-	-	-	-	52,801
31 - 35	46,610	53,916	57,861	60,971	60,921	-	-	-	56,101
36 - 40	46,610	53,675	58,730	67,473	75,066	-	-	-	65,088
41 - 45	46,610	53,988	62,174	73,376	84,110	95,964	89,125	-	80,265
46 - 50	-	54,096	58,711	73,438	82,602	98,965	112,005	-	94,660
51 - 55	-	55,347	60,075	73,709	85,619	104,892	111,653	134,172	101,893
56 - 60	-	-	58,674	73,216	80,275	99,884	105,076	124,326	96,248
61 - 65	-	-	-	-	85,669	102,653	-	94,748	97,675
66 - 70	-	-	-	-	-	-	-	-	-
71 & Over	-	-	-	-	-	-	-	-	-
Total	46,610	53,735	58,677	69,271	82,217	99,800	110,471	124,320	78,857

Terminated Members Due A Deferred Retirement Benefit:

Attained Ages	Years until Retirement Eligibility 0 - 1	1 - 2	2 - 3	3 - 5	5 - 10	10 - 15	15 - 20	20 & Over	Total
0 - 30	-	-	-	-	-	-	-	-	-
31 - 35	-	-	-	-	-	-	-	-	-
36 - 40	-	-	-	-	-	3	-	-	3
41 - 45	-	-	-	1	8	1	-	-	10
46 - 50	5	5	2	5	-	-	-	-	17
51 - 55	2	-	-	-	-	-	-	-	2
56 - 60	-	-	-	-	-	-	-	-	-
61 - 65	-	-	-	-	-	-	-	-	-
66 - 70	-	-	-	-	-	-	-	-	-
71 & Over	-	-	-	-	-	-	-	-	-
Total	7	5	2	6	8	4	-	-	32

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

Attained Ages	Years until Retirement Eligibility 0 - 1	1 - 2	2 - 3	3 - 5	5 - 10	10 - 15	15 - 20	20 & Over	Total
0 - 30	-	-	-	-	-	-	-	-	-
31 - 35	-	-	-	-	-	-	-	-	-
36 - 40	-	-	-	-	-	30,985	-	-	30,985
41 - 45	-	-	-	15,584	36,647	25,174	-	-	33,393
46 - 50	35,417	47,461	15,817	30,317	-	-	-	-	35,153
51 - 55	41,433	-	-	-	-	-	-	-	41,433
56 - 60	-	-	-	-	-	-	-	-	-
61 - 65	-	-	-	-	-	-	-	-	-
66 - 70	-	-	-	-	-	-	-	-	-
71 & Over	-	-	-	-	-	-	-	-	-
Total	37,136	47,461	15,817	27,861	36,647	29,532	-	-	34,605

Service Retirees:

Attained Ages	Completed Years Since Retirement 0 - 1	1 - 2	2 - 3	3 - 5	5 - 10	10 - 15	15 - 20	20 & Over	Total
0 - 50	16	9	1	2	-	-	-	-	28
51 - 55	43	34	27	57	10	-	-	-	171
56 - 60	18	20	16	55	29	16	-	-	154
61 - 65	2	6	5	16	16	54	13	-	112
66 - 70	-	-	2	3	10	51	68	28	162
71 - 75	-	-	-	-	-	17	43	134	194
76 - 80	-	-	-	-	-	2	10	109	121
81 - 85	-	-	-	-	-	-	-	55	55
86 - 90	-	-	-	-	-	-	-	24	24
91 & Over	-	-	-	-	-	-	-	5	5
Total	79	69	51	133	65	140	134	355	1,026

Average Annual Benefits Payable To Service Retirees:

Attained Ages	Completed Years Since Retirement 0 - 1	1 - 2	2 - 3	3 - 5	5 - 10	10 - 15	15 - 20	20 & Over	Total
0 - 50	88,014	92,246	102,079	91,039	-	-	-	-	90,093
51 - 55	90,632	92,630	79,391	82,713	65,686	-	-	-	85,156
56 - 60	95,923	98,870	104,435	94,634	55,375	59,984	-	-	85,360
61 - 65	108,819	93,923	102,206	102,278	66,021	62,582	63,926	-	73,174
66 - 70	-	-	101,848	90,591	78,568	68,097	60,895	27,101	59,468
71 - 75	-	-	-	-	-	77,167	66,086	29,317	41,659
76 - 80	-	-	-	-	-	43,597	77,330	31,555	35,537
81 - 85	-	-	-	-	-	-	-	29,576	29,576
86 - 90	-	-	-	-	-	-	-	25,302	25,302
91 & Over	-	-	-	-	-	-	-	17,472	17,472
Total	91,768	94,501	90,810	90,299	63,150	65,794	64,081	29,431	61,172

Disability Retirees:

Attained Ages	Completed Years Since Retirement 0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 & Over	Total
0 - 30	-	-	-	-	-	-	-	-	-
31 - 35	-	-	-	-	-	-	-	-	-
36 - 40	-	-	-	-	-	-	-	-	-
41 - 45	-	2	2	-	-	-	-	-	4
46 - 50	1	1	4	-	-	-	-	-	6
51 - 55	-	-	2	3	-	1	-	-	6
56 - 60	-	-	-	1	1	1	2	-	5
61 - 65	-	-	-	1	1	1	1	1	5
66 - 70	-	-	-	-	-	-	1	6	7
71 - 75	-	-	-	-	-	-	2	10	12
76 - 80	-	-	-	-	-	-	1	8	9
81 & Over	-	-	-	-	-	-	1	4	5
Total	1	3	8	5	2	3	8	29	59

Average Annual Benefits Payable To Disability Retirees:

Attained Ages	Completed Years Since Retirement 0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 & Over	Total
0 - 30	-	-	-	-	-	-	-	-	-
31 - 35	-	-	-	-	-	-	-	-	-
36 - 40	-	-	-	-	-	-	-	-	-
41 - 45	-	37,654	24,985	-	-	-	-	-	31,319
46 - 50	55,782	32,298	40,288	-	-	-	-	-	41,538
51 - 55	-	-	33,076	37,613	-	39,530	-	-	36,420
56 - 60	-	-	-	37,853	28,075	20,325	32,556	-	30,273
61 - 65	-	-	-	49,860	40,896	32,469	15,978	21,327	32,106
66 - 70	-	-	-	-	-	-	40,452	22,261	24,859
71 - 75	-	-	-	-	-	-	22,552	25,149	24,716
76 - 80	-	-	-	-	-	-	28,104	25,188	25,512
81 & Over	-	-	-	-	-	-	26,452	34,134	32,598
Total	55,782	35,869	34,659	40,110	34,486	30,775	27,650	25,670	29,968

Surviving Beneficiaries of Former Members:

Attained Ages	Completed Years Since Retirement								
	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 & Over	Total
0 - 30	1	1	1	-	-	-	1	-	4
31 - 35	-	-	-	1	-	-	-	-	1
36 - 40	-	2	-	-	-	-	-	-	2
41 - 45	-	-	1	-	-	-	-	-	1
46 - 50	-	4	-	1	1	1	-	-	7
51 - 55	-	-	-	1	-	1	-	3	5
56 - 60	-	3	1	1	1	2	-	-	8
61 - 65	-	-	3	3	2	2	4	6	20
66 - 70	-	-	-	-	4	3	4	16	27
71 - 75	-	-	-	-	2	7	4	26	39
76 - 80	-	-	-	-	1	1	4	42	48
81 & Over	-	-	-	-	-	-	5	103	108
Total	1	10	6	7	11	17	22	196	270

Average Annual Benefits Payable To Survivors of Former Members:

Attained Ages	Completed Years Since Retirement								
	0 - 1	1 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 & Over	Total
0 - 30	86,708	111,369	57,401	-	-	-	30,891	-	71,592
31 - 35	-	-	-	54,150	-	-	-	-	54,150
36 - 40	-	40,648	-	-	-	-	-	-	40,648
41 - 45	-	-	72,883	-	-	-	-	-	72,883
46 - 50	-	72,184	-	48,369	53,283	25,257	-	-	59,378
51 - 55	-	-	-	85,561	-	43,225	-	21,382	38,586
56 - 60	-	78,480	60,666	66,205	64,246	27,693	-	-	60,243
61 - 65	-	-	65,924	81,959	69,264	33,321	37,223	23,857	47,042
66 - 70	-	-	-	-	66,273	40,075	29,972	19,444	30,233
71 - 75	-	-	-	-	55,213	44,021	30,863	22,324	28,780
76 - 80	-	-	-	-	70,296	52,463	31,564	22,155	24,573
81 & Over	-	-	-	-	-	-	44,216	22,415	23,424
Total	86,708	71,684	64,787	71,452	63,806	39,491	35,021	22,133	30,275

EXHIBIT IX
YEAR-TO-YEAR COMPARISON

	Fiscal 2022	Fiscal 2021	Fiscal 2020	Fiscal 2019
Number of Active Members	914	951	1,029	1,033
Number of Retirees & Survivors	1,355	1,295	1,268	1,239
Number of Terminated Due Deferred Benefits	32	37	38	44
Number Terminated Due Refunds	200	183	179	170
Active Lives Payroll	$ 72,075,629	$ 75,908,386	$ 80,281,571	$ 79,742,159
Retiree Benefits in Payment	$ 72,704,372	$ 64,716,050	$ 59,283,227	$ 54,960,399
Market Value of Assets (Includes Side Funds)	$ 997,876,785	$ 1,159,337,587	$ 891,750,736	$ 893,350,033
Ratio of Actuarial Value of Assets to Actuarial Accrued Liability	77.91%	77.54%	74.16%	74.19%
Actuarial Accrued Liability (EAN)	$ 1,371,245,509	$ 1,314,386,755	$ 1,254,441,437	$ 1,203,479,513
Actuarial Value of Assets †	$ 1,068,279,810	$ 1,019,236,031	$ 930,326,943	$ 892,857,106
UAL (Funding Excess)	$ 302,965,699	$ 295,150,724	$ 324,114,494	$ 310,622,407
Experience Account	$ 0	$ 9,497,110	$ 2,195,198	$ 2,079,574

	Fiscal 2023	Fiscal 2022	Fiscal 2021	Fiscal 2020
Employee Contribution Rate For Employees Hired Before July 1, 2010	8.50%	8.50%	8.50%	8.50%
Employee Contribution Rate For Employees Hired On Or After July 1, 2010	9.50%	9.50%	9.50%	9.50%
Actuarially Required Employer Contribution as a Percentage of Projected Payroll	67.30%	60.50%	52.40%	46.90%
Actual Employer Contribution as a Percentage of Projected Payroll	62.90%	58.80%	52.40%	49.10%

† Prior to 2017, AVA was net of Experience Account

Fiscal 2018	Fiscal 2017	Fiscal 2016	Fiscal 2015	Fiscal 2014	Fiscal 2013
1,129	1,071	1,041	991	956	933
1,174	1,155	1,220	1,224	1,229	1,234
44	43	41	41	34	37
169	139	N/A	N/A	N/A	N/A
$ 85,349,504	$ 84,059,551	$ 75,969,718	$ 64,632,596	$ 54,331,845	$ 51,261,574
$ 47,329,769	$ 43,286,212	$ 41,866,788	$ 41,737,344	$ 40,440,528	$ 39,770,484
$ 866,309,038	$ 782,572,348	$ 670,423,169	$ 659,126,281	$ 622,793,610	$ 521,130,665
74.34%	72.91%	69.45%	68.85%	65.53%	59.44%
$ 1,141,255,546	$ 1,062,446,959	$ 1,006,626,437	$ 910,845,343	$ 837,940,546	$ 797,839,506
$ 848,456,307	$ 774,664,801	$ 699,121,700	$ 627,083,218	$ 549,075,148	$ 474,235,310
$ 292,799,239	$ 287,782,158	$ 307,504,737	$ 283,762,125	$ 288,865,398	$ 323,604,196
$ 1,957,062	$ 5,260,562	$ 3,963,595	$ 12,416,791	$ 12,069,552	$ 18,164,123

Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016	Fiscal 2015	Fiscal 2014
8.50%	8.50%	8.50%	8.50%	8.50%	8.50%
9.50%	9.50%	9.50%	9.50%	9.50%	9.50%
44.00%	48.10%	54.00%	66.70%	76.20%	70.60%
43.10%	47.40%	51.20%	60.80%	75.30%	70.00%

SUMMARY OF PRINCIPAL PLAN PROVISIONS

The Louisiana State Police Retirement System (LSPRS) was established by Act 293 of the 1938 Legislative Session, for the purpose of providing retirement allowances and other benefits as described under R.S. 11:1301 – 11:1345. The following summary of plan provisions covers many of the most important plan provisions covering LSPRS but is not a description of every plan provision and should only be used for general informational purposes. This summary does not constitute a guarantee of benefits. The provisions contained within this section are as of June 30, 2022.

MEMBERSHIP:

Sworn, commissioned law enforcement officers of the Division of State Police of the Department of Public Safety who have completed the State Police Training Academy Course of Instruction on the Effective Date of the Fund and those subsequently employed who did not withdraw employee contributions. Also, any state police employee who is a sworn, commissioned law enforcement officer of the office of state police, who serves in an active capacity in an unclassified position in the Department of Public Safety and Corrections, and who has previously contributed to this system, shall be eligible to continue contributing and accruing service credit in this system. In addition, the secretary and deputy secretary of the Department of Public Safety, provided they are sworn, commissioned State Police officers who have graduated from the State Police Academy.

CONTRIBUTION RATES:

Employees whose first employment making them eligible for membership in one of Louisiana's state retirement systems occurred on or before December 31, 2010 contribute 8.50% of salary and employees whose first employment making them eligible for membership in one of Louisiana's state retirement systems occurred on or after January 1, 2011 contribute 9.50% of salary. Employers contribute an actuarially determined "normal contribution" rate plus "accrued liability contribution" rate.

CONTRIBUTION REFUNDS:

Upon withdrawal from service, members not entitled to a retirement allowance may receive a refund of accumulated contributions.

FINAL AVERAGE COMPENSATION:

For members employed prior to September 8, 1978, the average final salary is the average salary including any additional pay or salary provided by the legislature over and above that set by the Civil Service Commission, received for the year ending on the last day of the month immediately preceding the date of retirement or date of death or for any one-year period, whichever is the greatest.

For members employed on or after September 8, 1978, and on or before December 31, 2010, the average final salary is the average salary including any additional pay or salary provided by the legislature over and above that set by the Civil Service Commission, received for the thirty-six month period ending on the last day of the month immediately preceding the date of retirement or date of death or for any thirty-six consecutive months, whichever is the greatest. The earnings to be considered exclude overtime, expenses, and clothing allowances. The earnings to be considered for the thirteenth through the twenty-fourth month shall not exceed one hundred twenty-five percent of the earnings of the first through the twelfth month. The earnings to be considered for the final twelve months shall not exceed one hundred twenty-five percent of the earnings of the thirteenth through the twenty-fourth month.

For members employed on or after January 1, 2011 the average final salary is the average annual earned compensation of a member for the sixty highest months of successive employment, or for the highest sixty successive joined months of employment where interruption of service occurred; The earnings to be considered for the thirteenth through the twenty-fourth month shall not exceed one hundred fifteen percent of the earnings of the first through the twelfth month. The earnings to be considered for the twenty-fifth through the thirty-sixth month shall not exceed one hundred fifteen percent of the earnings of the thirteenth through the twenty-fourth month. The earnings to be considered for the thirty-seventh through the forty-eighth month shall not exceed one hundred fifteen percent of the earnings of the twenty-fifth through the thirty-sixth month. The earnings for the final twelve months shall not exceed one hundred fifteen percent of the earnings of the thirty-seventh through the forty-eighth month.

VESTED WITHDRAWAL BENEFITS:

Members with sufficient service credit who terminate employment prior to reaching retirement eligibility age may elect to leave accumulated contributions on deposit and receive a retirement allowance based on the creditable service and accrual rate for their period of membership upon reaching their retirement eligibility age.

For members whose first employment making them eligible for membership in one of Louisiana’s state retirement systems occurred on or before December 31, 2010, who have ten or more years of creditable service, may elect to leave accumulated contributions on deposit and after withdrawal from service receive a retirement allowance based on the creditable service and accrual rate for their period of membership upon reaching age fifty.

For members whose first employment making them eligible for membership in one of Louisiana’s state retirement systems occurred on or after January 1, 2011, who have twelve or more years of creditable service, may elect to leave accumulated contributions on deposit and after withdrawal from service receive a retirement allowance based on the creditable service and accrual rate for their period of membership upon reaching age fifty-five.

NORMAL RETIREMENT BENEFITS:

Any member of the system whose initial date of employment was prior to September 8, 1978, regardless of age, who has credit for at least twenty years of service shall be paid a monthly benefit equal to the sum of three and one-third percent multiplied by the member's monthly average salary, and further multiplied by the number of years of service credited to the member's account, but the total annual benefit shall not exceed one hundred percent of the member's final average annual salary.

Any member of the system, whose first employment making him eligible for membership in one of the state systems occurred on or before December 31, 2010, and who has attained age fifty and who has credit for at least ten years of service shall be paid a monthly benefit equal to the sum of three and one-third percent multiplied by the member's monthly average salary, and further multiplied by the number of years of service credited to the member's account, but the total annual benefit shall not exceed one hundred percent of the member's final average annual salary.

Any member of the system whose initial date of employment occurred on or after September 8, 1978, and whose first employment making him eligible for membership in one of the state systems occurred on or before December 31, 2010, who has credit for at least twenty-five years of service, regardless of age, shall be paid a monthly benefit equal to the sum of three and one-third percent multiplied by the member's monthly average salary, and further multiplied by the number of years of service credited to the member's account, but the total annual benefit shall not exceed one hundred percent of the member's final average annual salary.

Any member of the system whose first employment making him eligible for membership in one of the state systems occurred on or after January 1, 2011, shall become a member of the New State Police Retirement Plan of the system as a condition of employment.

Any member of the New State Police Retirement Plan shall be eligible for retirement if he has:

(1) Twenty-five years or more of service, at any age.
(2) Twelve years or more of service, at age fifty-five or thereafter.
(3) Twenty years of service credit at any age, exclusive of military service and unused annual and sick leave, but any person retiring under this Paragraph shall have his benefit, inclusive of military service credit and allowable unused annual and sick leave, actuarially reduced from the earliest age that he would normally become eligible for a regular retirement if he had continued in service to that age. Members retiring under the twenty year at any age rule may not participate in Back-DROP or the Initial Benefit Option.

INITIAL BENEFIT OPTION: In lieu of receiving a regular retirement benefit according to the relevant benefit computation rules, a member who does not retire under the Back-DROP may elect to receive a reduced retirement benefit plus an initial lump sum payment of up to thirty-six times the member’s maximum monthly retirement benefit. The reduced retirement benefit plus initial lump sum payment will be determined to be actuarially equivalent to the member’s regular retirement benefit computed based on the relevant benefit computation rules.

BACK-DEFERRED RETIREMENT OPTION PLAN (BACK-DROP):

In lieu of receiving a normal retirement benefit, a member (1) who has accrued more service credit than the minimum required for eligibility for a normal retirement benefit and (2) who has attained an age that is greater than the minimum required for eligibility for a normal retirement benefit, if applicable, may elect to retire and have his benefits structured, calculated, and paid as provided in the Back-Deferred Retirement Option Program. At the time of retirement, a member who elects to receive a Back-DROP benefit shall select a period that shall not exceed the lesser of thirty-six months or the number of months of creditable service accrued after the member first attained eligibility. The period shall be comprised of the most recent calendar days corresponding to the member's employment for which service credit accrued. For purposes of Back-DROP, creditable service will be reduced by the Back-DROP period and shall not include reciprocal service credit. The sum of the Back-DROP period and the accrued service credit used to calculate the member’s monthly benefit shall not exceed thirty years. Final average compensation shall be calculated by excluding all earnings during Back-DROP. Employee contributions received by the retirement system during the Back-DROP period shall, at the member's election, be refunded to the member without interest or deposited directly into the member's Back-DROP account. Employer contributions and any interest that has accrued on employer and employee contributions received during the period shall be retained by the system and shall not be refunded to the member or to the employer. The member's maximum monthly retirement benefit payable shall be equal to the Back-DROP monthly benefit. In addition to the monthly benefit, the member shall be paid a lump-sum benefit equal to the Back-DROP maximum monthly retirement benefit multiplied by the number of months selected as the Back-DROP period. The Back-DROP lump sum shall, at the member's election, be distributed to the member or transferred to an individual account for self-directed investments. Such account shall be credited with interest at the actual rate of return earned on such account balance investments. Permanent benefit increases shall not be payable on the member's Back-DROP lump sum.

ACCUMULATION OF SICK AND ANNUAL LEAVE:

A member may convert unused sick and annual leave to retirement credit on the basis of one workday for each eight hours of unused leave. Such converted leave shall not be used to determine eligibility for retirement. A member who has sick and annual leave that if converted to retirement credit would exceed one hundred percent of the member's average compensation may receive a lump sum payment equal to the additional leave's actuarial value.

DISABILITY BENEFITS:

The board of trustees shall award disability benefits to any sworn, commissioned law enforcement officer of the office of state police who is eligible and who has been officially certified as having a disability by the State Medical Disability Board.

Any member whose first employment making him eligible for membership in one of the state systems occurred on or before December 31, 2010, who applies for retirement due to a total and permanent disability caused solely as the result of injuries sustained in the performance of his official duties shall receive a disability benefit equal to fifty percent of his average salary, plus one and one-half percent of his average salary for each year of service credit in excess of ten years. Such benefit shall not exceed one hundred percent of the member's average salary.

Any member whose first employment making him eligible for membership in one of the state systems occurred on or before December 31, 2010, who applies for retirement due to a total and permanent disability caused not as a result of injuries sustained in the performance of his official duties with at least five years of service credit shall receive a disability benefit equal to fifty percent of his average salary plus one and one-half percent for each year of service credit in excess of ten years. Such benefit shall not exceed one hundred percent of the member's average salary.

Any member whose first employment making him eligible for membership in one of the state systems occurred on or before December 31, 2010, who applies for retirement due to a total and permanent disability caused solely as the result of injuries sustained in the performance of official duties including loss of limb, loss of organ, total loss of sight or hearing, paralysis, or permanent damage to the brain or spinal cord, shall receive a disability benefit equal to one hundred percent of his average annual salary, or thirty-six thousand dollars annually, whichever is greater.

Any member whose first employment making him eligible for membership in one of the state systems occurred on or after January 1, 2011, who applies for retirement due to a total and permanent disability resulting solely from injuries sustained in the performance of his official duties, shall receive a disability benefit equal to seventy-five percent of his average compensation regardless of years of service.

Any member whose first employment making him eligible for membership in one of the state systems occurred on or after January 1, 2011, who applies for retirement due to a total and permanent disability caused as the result of any other reason, a member with at least ten years of service credit shall receive a disability benefit equal to fifty percent of his average salary plus one and one-half percent for each year of service credit in excess of ten years. Such benefit shall not exceed one hundred percent of the member's average salary.

SURVIVOR BENEFITS:

For members whose first employment making them eligible for membership in one of the state systems occurred on or before December 31, 2010:

The surviving spouse of any such sworn commissioned law enforcement officer of the office of state police of the Department of Public Safety and Corrections who is killed in the discharge of his duties, or dies from immediate effects of any injury received as the result of an act of violence occurring while engaged in the discharge of his duties, shall receive a benefit equal to seventy-five percent of the salary being received by the employee at the time of the decedent's death or injury, provided the surviving spouse was married to the decedent at the time of the event which resulted in the officer's death. If there is no surviving spouse, surviving minor children shall receive the benefit until reaching eighteen years of age, or twenty-three years of age if a student.

The surviving spouse of any such sworn commissioned law enforcement officer of the office of state police of the Department of Public Safety and Corrections whose death occurs other than in the line of duty shall receive a monthly benefit according to the following table:

Deceased officer’s Service Credit	Percent of Final Salary Survivor Benefit
Less than 5 years	25%
At least 5, but less than 10	30%
At least 10, but less than 15	40%
At least 15, but less than 20	50%

If the officer dies with at least 20 years of service, the surviving spouse shall receive a monthly benefit equal to the amount that the employee would have received had the employee elected to retire at the time of his death.

The surviving spouse of any employee whose death occurs other than in the line of duty shall cease receiving benefits while remarried, if remarried before age fifty-five.

Upon the death of an employee where there is no surviving spouse, or if the spouse has remarried and forfeited his or her benefit, the minor children of the deceased shall receive a monthly benefit equal to the greater of 1) 60% of the average salary of the deceased member, or 2) The pension that would have been received by the surviving spouse. Such minor child benefits are divided equally and cease as each minor child reaches eighteen years of age, or twenty-three years of age if a student. Children with a total physical or mental disability may receive benefits beyond age eighteen (or twenty-three).

In the event of the death of member where there is no surviving spouse and no minor children, a monthly pension of twenty-five percent of the average salary of the deceased employee shall be paid to the parent(s) if either of them derives their main support from the employee.

In the event of death of a former employee with at least ten years of service credit, the qualified surviving spouse shall receive a pension equal to the monthly retirement pay that would have been payable to the decedent. In the event of death of a retired employee, the qualified surviving spouse shall receive a pension equal to the monthly retirement pay that was being paid to the decedent on the date of death. (Surviving spouse benefits cease upon remarriage in some cases) If there is no surviving spouse eligible to receive benefits, the minor children of the decedent shall be entitled to share equally in a benefit equal to the greater of the spousal benefit or 60% of the average salary. If there is no surviving spouse or minor children, the qualifying parent(s) of the decedent may be entitled to benefits.

For members whose first employment making them eligible for membership in one of the state systems occurred on or after January 1, 2011:

If a member's death occurs in the line of duty or is a direct result of an injury sustained while in the line of duty, a monthly benefit equal to eighty percent of the member's average compensation will be shared equally by the surviving spouse, qualified minor children, or qualified disabled children.

Upon the death of a member with at least five years of service credit (two of which were earned immediately prior to death unless the member had at least twenty years) other than in the line of duty, the surviving spouse with a minor child or child with a disability, shall receive fifty percent of the benefit to which the member would have been entitled if he had retired on the date of death, or $600 per month, whichever is greater. (Spousal benefits cease upon remarriage in some cases)

In addition, qualifying children receive fifty percent of the benefit to which the spouse would be entitled, up to a maximum 100% to all children.

A surviving spouse without a minor child or a child with a disability, shall receive a benefit based on the decedent's years of service credit earned to the date of death using the applicable accrual rate, or $600 per month, whichever is greater. (Spousal benefits cease upon remarriage in some cases)

In the event of death of a member with no surviving spouse or child due benefits, the accumulated contributions are payable to the designated beneficiaries, or estate.

Upon the death of a former member who terminated prior to attaining the requisite age for retirement eligibility with at least twelve years of service credit and contributions on deposit, the surviving spouse shall receive a monthly benefit equal to fifty percent of the benefit that would have been payable to the decedent.

Upon the death of a retired employee, the surviving spouse shall receive a monthly benefit equal to seventy-five percent of the benefit that was being paid to the decedent on the date of death provided the surviving spouse was married to the decedent for at least two years prior to the decedent's death.

Upon the death of a former member or retired employee with no surviving spouse, or if the spouse has remarried and forfeited his benefit, the minor children shall be entitled to fifty percent of the monthly retirement benefit that would have been payable to the decedent or was being paid to the decedent on the date of death. If there are no qualified children, the parents of the decedent may be entitled to a benefit under certain circumstances.

PERMANENT BENEFIT INCREASES:

Act 333 of 2007 established an Experience Account to be used to pay permanent benefit increases (PBIs). The Experience Account is credited with 50% of the investment experience gain in excess of $5 million (indexed based on increases in the actuarial value of assets after June 30, 2015) along with that portion of the net investment income, if any, attributable to the prior year balance, subject to maximum accumulation limitation based upon the Plan's funded percentage. The account is also debited with that portion of the system's net investment loss, if any, attributable to the prior year balance. In no event may the amount in the experience account fall below zero. Once the balance of the Experience Account accumulates a sum sufficient to grant retirees a PBI, the Board may recommend that the legislature grant a PBI on benefits up to $60,000 (indexed), not to exceed the lesser of the CPI-U or a percentage determined based on the funded level percentage attained by the system as described in R. S. 11:1332, provided a PBI had not been granted in the prior year. Benefits are restricted to disability retires and those retirees and beneficiaries who have attained the age of 60 and have been retired for at least one year. Maximum limitations are outlined in ACT 399 of 2014. In addition, the Experience Account statute outlines a supplemental permanent benefit increase of 2% of the benefit being received (subject to limitation by the indexed $60,000 limit) to all retirees and beneficiaries who are at least age 65 and who retired on or before June 30, 2001.

ACTUARIAL ASSUMPTIONS

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

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

ACTUARIAL COST METHOD: Individual Entry Age Normal with Allocation of Cost Based on Earnings. Entry and Attained Ages Calculated on an Age Near Birthday Basis.

VALUATION INTEREST RATE: 6.95% (Net of investment expenses)

ACTUARIAL ASSET VALUES: All 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.

ACTIVE MEMBER MORTALITY: 110% of the RP2014 Total Dataset Employee Table for males and 105% of the RP2014 Total Dataset Employee Table for females, each with the full generational MP2017 scale.

ANNUITANT AND BENEFICIARY MORTALITY: 110% of the RP2014 Total Dataset Healthy Annuitant Table for males and 105% of the RP2014 Total Dataset Healthy Annuitant Table for females, each with the full generational MP2017 scale.

DISABLED LIVES MORTALITY: RP2014 Total Dataset Disabled Tables for Males and Females with the full generational MP2017 scale.

PERMANENT BENEFIT INCREASES: The present value of future retirement benefits is based on benefits currently being paid by the system and includes previously granted permanent benefit increases. The present values and accrued liabilities within this report do not include provisions for potential future increases not yet authorized by the Legislature but do include a recognition of the existing balance in the Experience Account together with the present value of future contributions to the Account up to the maximum permissible value of the Account based upon current account limitations.

ANNUAL SALARY INCREASE RATE: 5.25% (2.50% inflation /2.75% merit)

RETIREMENT RATES: The table of these rates through age 75 is included later in the report. These rates apply only to those individuals eligible to retire.

DISABILITY RATES: The table of these rates through age 75 is included later in this report.

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

Service Duration (≤)	Rate	Service Duration (≤)	Rate
1	0.036	14	0.003
2	0.026	15	0.003
3	0.011	16	0.003
4	0.009	17	0.003
5	0.018	18	0.003
6	0.028	19	0.003
7	0.030	20	0.003
8	0.027	21	0.003
9	0.021	22	0.003
10	0.017	23	0.003
11	0.016	24	0.003
12	0.014	Above 24	0.010
13	0.003		

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

VESTING ELECTING PERCENTAGE: Any member who terminates service credit after reaching the vesting threshold may not receive a refund of employee contributions. Thus, we have elected to recognize that 100% of such employees will wait to receive a vested benefit.

Back-DROP UTILIZATION: Back-DROP is an alternative form of retirement benefit elected at the time of retirement. Back-DROP utilization probabilities based on recent experience are as follows:

1-year	2-year	3-year
9.93%	4.96%	12.06%

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

ACCUMULATED LEAVE POLICIES: Retirements are monitored to determine the amount of leave converted to service credit. Leave credit is accrued throughout the duration of the member's career. The average service credit converted is expressed as a 5.5% increase in the accrued benefit.

MARRIAGE STATISTICS: 70% of the members are assumed to be married; husbands are assumed to be three years older than wives.

FAMILY STATISTICS: Assumptions utilized in determining the costs of various survivor benefits as listed below, are derived from the information provided in the 2015 U. S. Census:

Member's Age	% With Children	Number of Children	Average Age	Remarriage Rates
25	70%	1.84	5	0.04566
35	86%	2.13	9	0.02636
45	75%	1.70	12	0.01355
55	22%	1.42	14	N/A
65	4%	1.45	15	N/A

"IN THE LINE OF DUTY" DEATH: 20% of the active deaths are assumed to occur while in the line of duty (service connected).

"IN THE LINE OF DUTY" DISABILITY: 50% of the active disabilities awarded by the Board of Trustees are assumed to have occurred while in the line of duty (service related).

ACTUARIAL TABLES AND RATES

Age	Retirement Rates	Disability Rates
18	0.00000	0.00083
19	0.00000	0.00083
20	0.00000	0.00083
21	0.00000	0.00083
22	0.00000	0.00083
23	0.00000	0.00083
24	0.00000	0.00083
25	0.00000	0.00083
26	0.00000	0.00083
27	0.00000	0.00083
28	0.00000	0.00083
29	0.00000	0.00083
30	0.00000	0.00083
31	0.00000	0.00083
32	0.00000	0.00083
33	0.00000	0.00083
34	0.00000	0.00083
35	0.00000	0.00094
36	0.00000	0.00105
37	0.00000	0.00116
38	0.00000	0.00132
39	0.00000	0.00149
40	0.00000	0.00171
41	0.00000	0.00193
42	0.00000	0.00215
43	0.10000	0.00242
44	0.10000	0.00275
45	0.10000	0.00314
46	0.10000	0.00358
47	0.10000	0.00402
48	0.10000	0.00457
49	0.10000	0.00517
50	0.25000	0.00589
51	0.25000	0.00671
52	0.25000	0.00759
53	0.25000	0.00864
54	0.25000	0.00979
55	0.25000	0.01111
56	0.25000	0.01265
57	0.50000	0.01436
58	0.50000	0.01628
59	0.50000	0.01854
60	0.50000	0.02684
61	0.50000	0.02684
62	0.50000	0.02684
63	0.99000	0.02684
64	0.99000	0.02684
65	0.99000	0.02684
66	0.99000	0.02684
67	0.99000	0.02684
68	0.99000	0.02684
69	0.99000	0.02684
70	0.99000	0.02684
71	0.99000	0.02684
72	0.99000	0.02684
73	0.99000	0.02684
74	0.99000	0.02684
75	1.00000	0.02684

GLOSSARY

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

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

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

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

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

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

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

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

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

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

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

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

Deferred Retirement Option Plan (DROP) Account – The account into which DROP accruals are paid and from which DROP lump sum balances are disbursed.

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.

Initial Benefit Option (IBO) Account – The account into which the initial benefit is deposited. Interest is credited thereto, and monthly payments made from this account.

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.

Priority Allocation – The actual returns available for application to the oldest outstanding positive amortization base. (In accordance with R.S. 11:102.4)

Priority Amount – The maximum amount of system returns in excess of the system's actuarially assumed rate of return that may be applied to the oldest outstanding positive amortization base, regardless of whether actual returns that equal or exceed the maximum are available. (In accordance with R.S. 11:102.4)

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.