ACTUARIAL REVIEW OF THE 2019 ACTUARIAL VALUATION OF THE LOUISIANA SCHOOL EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL SERVICES

PRESENTED TO THE PUBLIC RETIREMENT SYSTEMS' ACTUARIAL COMMITTEE
DECEMBER 18, 2019

LOUISIANA LEGISLATIVE AUDITOR
DARYL G. PURPERA, CPA, CFE

December 2, 2019

Mr. Charles P. Bujol, Executive Director
Louisiana School Employees' Retirement System
Post Office Box 44516
Baton Rouge, Louisiana 70804-4516

Re: Actuarial Review of the 2019 Actuarial Valuation

Dear Mr. Bujol:

To fulfill the requirements of R.S. 11:127(C) to the Public Retirement Systems' Actuarial Committee (PRSAC) for 2019, the Louisiana Legislative Auditor (LLA) has conducted an Actuarial Review for the Louisiana School Employees' Retirement System (LSERS).

The remainder of this letter contains the results of our Actuarial Review of your June 30, 2019, actuarial valuation (prepared by G.S. Curran & Company and dated September 30, 2019). More specifically, we have evaluated for appropriateness the actuarial assumptions and methods employed by the System and its actuary.

I would like to thank you, your staff, and the board's actuary for your cooperation and assistance with this review.

Sincerely,

Daryl G. Purpera, CPA, CFE
Legislative Auditor

DGP:LPG:JJR:ch

cc: G.S. Curran & Company

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Scope of Review

The 2019 actuarial valuation report for the Louisiana School Employees' Retirement System (LSERS) for funding purposes was prepared by G.S. Curran & Company, and dated September 30, 2019.

This Actuarial Review of that report was prepared jointly by Lowell Good, Actuary for the Louisiana Legislative Auditor (LLA), and James J. Rizzo, Senior Consultant and Actuary employed by Gabriel, Roeder, Smith and Company (GRS). This Actuarial Review includes evaluations of the appropriateness of key actuarial assumptions and methods. However, a full actuarial valuation replicating the actuary's results was not performed; nor was a full actuarial valuation performed using recommended assumptions and methods.

This Actuarial Review is limited to (1) recommendations for a more appropriate treatment of LSERS' gain-sharing COLA benefits, (2) recommendations for a more appropriate investment return assumption, and (3) the actuary's use of acceptable mortality tables.

Our Findings

1. Gain-sharing Cost-of-Living Adjustments (COLAs).

COLA benefits derived from investment earnings above certain thresholds are commonly called "gain-sharing" COLAs. The term "gain-sharing" derives from plan provisions that "share" higher-than-usual investment gains with members rather than using them, as is typically done, to help pay (indirectly) for the employer's required contribution. However, there is a cost to that "sharing."

An Experience Account is maintained (on an internal accounting basis) by the System to hold funds which ultimately are used to provide COLA benefits. The Experience Account is replenished with investment gains that exceed certain thresholds, subject to a series of complex formulas and rules set forth in the statutes.

LSERS does not currently include the value of future COLA-grants in its measurement of costs and liabilities. LSERS does, however, recognize one fill-up of the Experience Account as an automatic benefit that would someday need to pay for a COLA. Beyond that one fill-up, no future COLA benefits are recognized.

The System's retirees are likely to receive future cost-of-living (COLA) benefit increases with some regularity. This likelihood comes from the workings of the relevant state statutes coupled with the tendency and history of board members and legislators voting to grant COLAs whenever permitted to do so in accordance with the statutory template. Consider the following internal and external forces at play, which tend to press board members, the Legislature, and the Governor to recommend and approve COLAs when allowed:

a. While we have no personal knowledge of – or experience with – the LSERS board, generally speaking, retirement board members often have a sense of duty to serve the plan members. The LSERS retirement board of trustees is composed of individuals who have a natural constituency to plan members. As a result, there may be a natural tendency to recommend COLAs when permitted.

b. Social Security gives a COLA almost every year. In any given future year, if LSERS retirees have not had a COLA in a couple years, and since they are not generally covered by Social Security, there may be a natural tendency to want to recommend a COLA if permitted.

c. Furthermore, if other Louisiana retirement systems (such as LASERS, TRSL, and LSPRS, or statewide systems) grant COLAs in a given year, LSERS' board members, legislators, and the Governor may feel pressure to recommend a COLA if permitted.

d. Finally, if the funded ratio of the System continues to improve as it is expected to do, board members might feel like sharing that success with the plan members by recommending a COLA.

Recognizing only one year's transfer to the Experience Account (and that no future COLA benefits would be granted) does not reflect the overwhelming likelihood that COLAs will be granted in the future.

The frequency and magnitude of the future transfers to the Experience Account can be modelled actuarially using well-accepted techniques. Assuming legislators will grant template-driven COLAs whenever allowed by the statutes, it is actuarially appropriate to recognize the frequency and magnitude of future COLAs when performing an annual actuarial valuation of the System's costs and liabilities.

Conclusion – By failing to recognize actuarially-expected future COLA benefits in the actuarial valuations, LSERS is not advance-funding all the plan's benefits appropriately. The Actuary for the LLA recommends that the LSERS board engage its actuary to undertake a quantitative actuarial analysis of the operation of the gain-sharing provisions, in order to be able to advise the board about the long-term costs and liabilities associated with future gain-sharing COLAs.

Last year, the Actuary for the LLA prepared a detailed analysis for the 2018 valuation report (presented in an Actuarial Valuation Report dated December 20, 2018) concerning the costs and liabilities for future COLA benefits. The actuarial analysis concluded that LSERS' future COLA benefits are actuarially equivalent to a fixed annual COLA of 0.50%. This is an actuarially reasonable approximation of the future workings of the actual statutory gain-sharing COLA template.

Refer to the Appendix for additional support and details concerning the actuarial appropriateness of recognizing all future expected COLAs in LSERS actuarial valuations.

2. Overly-Optimistic Return Assumption

For this 2019 Actuarial Review, a detailed analysis of independent experts' current (2019) forecasts for LSERS' current target portfolio was not undertaken. The last detailed analysis was prepared by the Actuary for the LLA last year - for the 2018 valuation report (presented in an Actuarial Valuation Report dated December 20, 2018).

The LSERS 2018 valuation report used a 7.0625% return assumption, while the 2018 Actuarial Valuation Report prepared by the Actuary for the LLA used 6.80% for the 2018 return assumption. However, that 6.80% was at the top end of the LLA's range of reasonableness. The "most appropriate" return assumption was 6.30%, based on a consensus average of independent national investment forecasters.

The LSERS board and its actuary lowered the investment return assumption slightly, from 7.0625% for the 2018 valuation to 7.0% for the 2019 valuation.

Two factors have influenced our opinion of the "most appropriate" 2019 return assumption for LSERS. The influence has been in opposite directions. Recent adjustments to the LSERS pension portfolio's target asset allocation (recognizing it may take a little time to get there) support a slightly higher expectation of return for the future, for having taken on slightly more risk. However, early reports about the 2020 return expectations among major national forecasting experts appears to be moving the mainstream back down again for many of the asset classes employed by LSERS. These competing factors continue to support the LLA's opinion that the 7.0% return assumption by LSERS for its 2019 valuation remains overly optimistic.

An overly-optimistic return assumption, applied repeatedly, creates underfunding in a retirement system and undermines the actuarial promise to career public servants.

Furthermore, a return assumption that is an outlier compared the mainstream of professional forecasters is not a "best estimate" and obscures the fair representation of future costs and liabilities in public disclosures.

The appropriateness of a retirement system's investment return assumption for any given year's pension valuation is assessed as follows:

- In terms of the expected future inflation rates and future capital market assumptions for relevant asset classes;
- As forecasted by several reputable and independent professional forecasters, and applied to the pension fund's own asset allocation targets;
- Net of the pension fund's own expected investment-related expenses – both in-house or external, for passive management fees, for custodial and trade-execution fees, and for external investment consulting; and
- Adjusted for the pension plan's duration calculation (a proxy for adjustments due to projected benefit cash flows).

Professional investment forecasters (such as those included in the research for our 2018 valuation) are often more pessimistic about the next 10 years' returns. This is mostly driven by currently high stock price valuations and currently low yields and interest rates. They are not expecting the next 10 years' investment returns to be nearly as high levels as we have seen in many prior periods.

While experts' forecasts are not certain or guaranteed, in our opinion they are the best sources for decision-makers to rely on - a consensus average of the collective expectations of independent subject matter experts applied to the System's own characteristics.

Conclusion – In the absence of conducting a detailed analysis using updated 2019 or 2020 expert forecasts and in the absence of applying them to LSERS' own asset allocation and expected cash flow, the Actuary for the LLA recommends that the LSERS retirement board and actuary consider lowering the return assumption to be somewhere within a range from 6.00% to 6.50%, with the top end of that range being an aggressive (not conservative) assumption.

A current 2019 return assumption of 7.0% might appear conservative compared to other pension funds, but it is not conservative compared to expert professional forecasters' 2019 expectations.

It is recommended that the LSERS board lower its return assumption again for the 2020 valuation and do so in larger steps than in 2019, in order to:

- Bring it into the mainstream of professional forecasters,
- Attain and maintain more actuarial integrity in the benefit promise, and
- Disclose a more appropriate representation of the system's costs and liabilities.

3. Mortality Assumption

The 2019 Actuarial Valuation (page 46) states that the mortality assumption:

- For active member mortality is "130% of the RP2014 Employee Table with Blue Collar Adjustment for males and 115% of the RP2014 Employee Table with Blue Collar Adjustment for females, each with the full generational MP2017 scale" and
- For annuitant and beneficiary mortality is "130% of the RP2014 Healthy Annuitant Table with Blue Collar Adjustment for males and 115% of the RP2014 Healthy Annuitant Table with Blue Collar Adjustment for females, each with the full generational MP2017 scale."

These 2019 mortality rates are the same as used in the 2018 valuation.

To evaluate the reasonableness of the mortality assumption, we reviewed the base mortality (RP2014 with Blue Collar Adjustment) separately from the plan-specific adjustment factors (130% for males and 115% for females) and from the projection scale (MP2017).

Base Mortality Table

A detailed analysis of the LSERS base mortality tables was undertaken by the Actuary for the LLA for the 2018 valuation report (presented in an Actuarial Valuation Report dated December 20, 2018). The conclusion for this year's 2019 valuation report is the same.

Additionally, we note that the Pub-2010 Mortality Tables, the most recently developed broad-based mortality tables, were issued by the Retirement Plans Experience Committee (RPEC) of the Society of Actuaries and published in January 2019. These tables constitute the most recent and reliable standard reference tables available for purposes of national estimates of mortality for public pension plans. However, we find the base tables (before adjustment for plan-specific experience and projection for future mortality) to be fully appropriate for the 2019 Actuarial Valuation.

Conclusion – The Actuary for the LLA considers the LSERS' base tables for mortality rates to be reasonable.

LSERS-derived Adjustment Factors

A detailed analysis of the LSERS-derived adjustment factors (130% for males and 115% for females) was undertaken by the Actuary for the LLA for the 2018 valuation report (presented in an Actuarial Valuation Report dated December 20, 2018). The conclusion for this year's 2019 valuation report is the same.

Conclusion – The Actuary for the LLA considers the LSERS-derived adjustment factors to be reasonable.

Mortality Improvement Scale

A detailed analysis of the mortality improvement scale was undertaken by the Actuary for the LLA for the 2018 valuation report (presented in an Actuarial Valuation Report dated December 20, 2018). The conclusion for this year's 2019 valuation report is the same.

Additionally, we note that projection scale MP2018 was the most recent projection scale available as of the valuation date. However, we find the projection scale MP2017 to be fully appropriate for the 2019 Actuarial Valuation.

Conclusion – The Actuary for the LLA considers the mortality improvement scale to be reasonable.

Actuarial Certification

This Actuarial Review report constitutes a Statement of Actuarial Opinion. It has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents information it is purported to present. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Lowell P. Good and James J. Rizzo are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the Louisiana School Employees' Retirement System.

Lowell P. Good, ASA, EA, MAAA
Actuary for the Louisiana Legislative Auditor

November 19, 2019
Date

James J. Rizzo, ASA, EA, MAAA
Senior Consultant and Actuary
Gabriel, Roeder, Smith & Company

November 19, 2019
Date

Appendix

Historical Pattern of Granting COLAs

Actuarial Valuation Date	Legislative Session	Amount Permitted by Statutory Template	Amount Granted by Legislature and Approved by Governor	Date COLA Paid	Comments
6/30/2019	2020	None	NA	NA	Insufficient balance
6/30/2018	2019	None	None	NA	Insufficient balance
6/30/2017	2018	None	None	NA	Insufficient balance
6/30/2016	2017	None	None	NA	Granted in prior year and insufficient funds
6/30/2015	**2016**	**0.1%**	**1.9%[1]**	**7/1/16 (Act No. 93)**	**Legislature granted additional COLA outside the template; Governor signed it**
6/30/2014	2015	None	None	NA	Legislature voted to grant a COLA outside the template; but Governor vetoed it
6/30/2013	**2014**	**1.5%**	**1.5%[2]**	**6/30/14 (Act No. 103)**	**Legislature granted a full COLA as permitted**
6/30/2012	**2013**	**3.15%**	**3.15%[3]**	**7/1/13 (Act No. 297)**	**Legislature granted a COLA for a select group of retirees**

During the last eight (8) years, the statutory template permitted a COLA to be granted three (3) times. In all 3-out-of-3 times that the statutory template permitted a COLA, the legislature and Governor approved them. Conversely, there were no cases when a template-COLA was permitted but the legislature or Governor failed to grant it. This evidence leads us to conclude – based on the historical pattern inherent in the data – that a COLA was granted every year that the statutory template permitted the legislature to grant one, and that a COLA was not granted for years when the statutory template did not otherwise permit the legislature to grant one.

In Act 93, the 2016 Legislature decided that the statutory template did not allow *enough* of an increase even though it permitted 0.1%. As a result, it granted *a higher COLA* outside the established statutory template for COLAs. The main point is that the pattern that emerges from the application of the statutory template has been "to grant a template-COLA whenever the template permits it, and possibly to grant a non-template-COLA even when the template does not permit it."

[1] The application of the statutory mechanism available to the 2016 Legislature would have allowed only a 0.1% COLA due to the limitation of the Consumer Price Index. However, the 2016 Legislature overrode the template (Act 93) and allowed for a 2% COLA but not to exceed the percentage that could be purchased by the balance in the Experience Account at June 30, 2016. The balance could purchase a 1.9% increase.

[2] In Act 399 the 2014 Legislature adopted a template limiting the frequency and level of COLAs to be recommended while the Plan us less than 80% funded or when the actual actuarial rate of return is below 7.25%. Act 103 of 2014 granted a 1.5% COLA in accordance with that newly adopted template.

[3] Act 297 of 2013 authorized a COLA of up to 3.75% but not to exceed the level that could be purchased by the funds in the Experience Account.

We do not find a sufficient pattern of non-template-COLAs being granted (1-out-of-8), but we do find a sufficient pattern for template-driven COLAs (3-out-of-3).

In Act 399, the 2014 Legislature included a limit on the frequency of granting COLAs so that a permanent benefit increase may not be granted more often than every other year, until the System is at least 85% funded. The statutory mechanism and this feature are additional evidence of an intention by the Legislature to approve COLAs with some regularity.

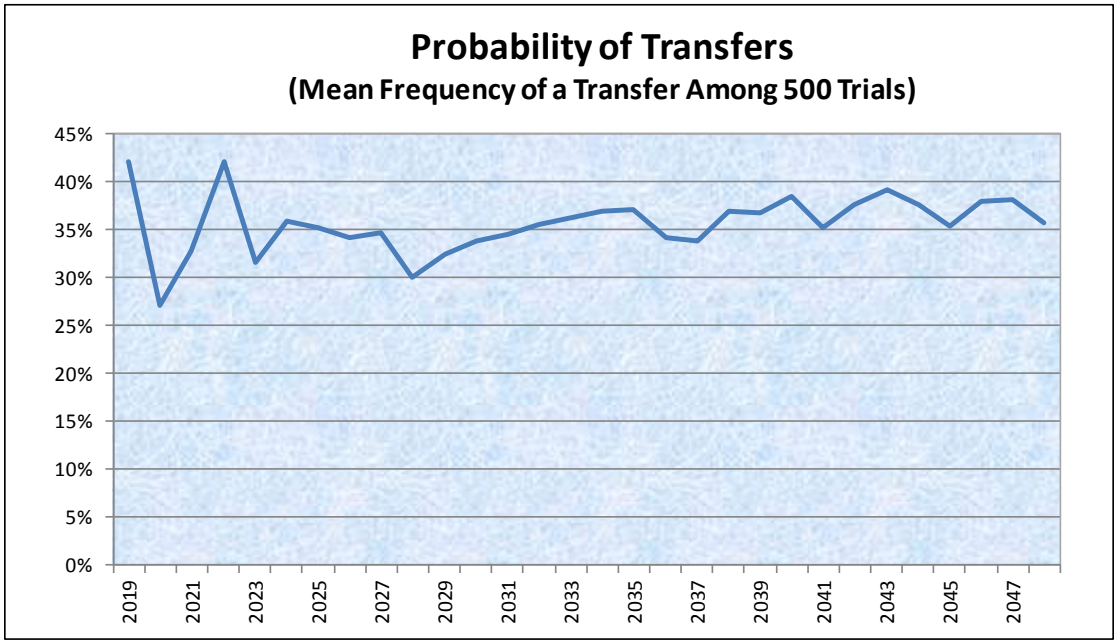
In addition, legislators may be inclined to approve COLAs whenever permitted by the statutory template since they have often been told they have already been funded with the balance in the Experience Account.

It is clear that recognizing only one year's transfer to the Experience Account (and that no future COLA benefits would be granted) does not reflect the overwhelming likelihood that COLAs will be granted in the future. Thus, the Actuary for the LLA recommends that all actuarially-expected future COLA benefits be assumed granted in accordance with the statutory template. This is a change in the actuarial assumptions from the previous PRSAC-adopted valuations.

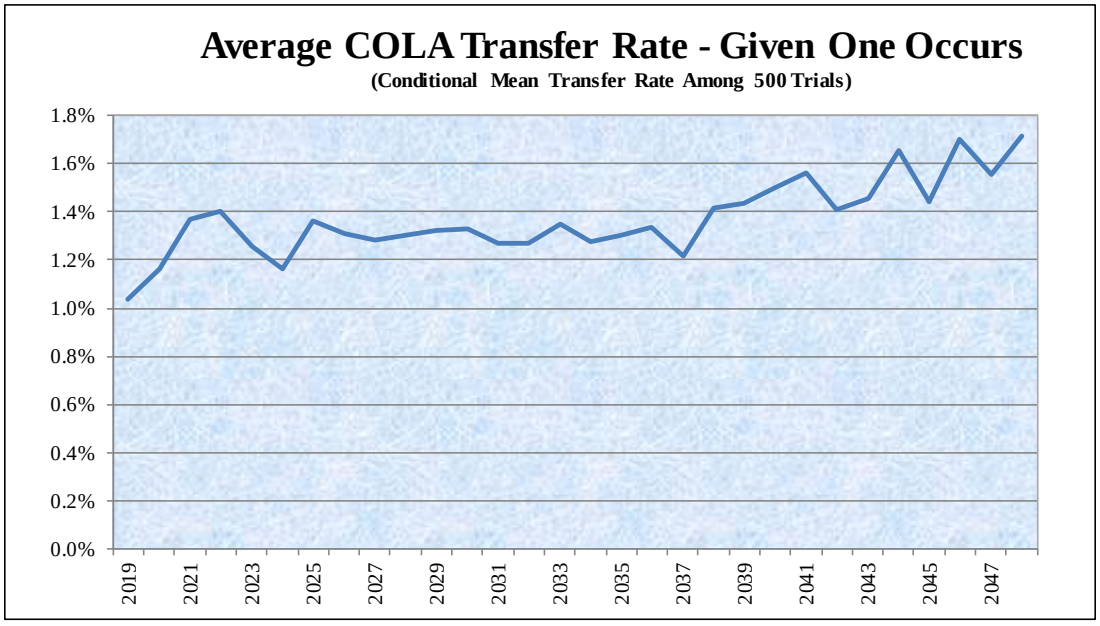
The mathematical and logical rules set forth in the statutory template lend themselves to actuarial modeling. The frequency and magnitude of the future transfers to the Experience Account can be modelled actuarially using well-accepted techniques. Given the presumption that legislators will grant template-driven COLAs whenever permitted by the statutes, it is actuarially appropriate to recognize the frequency and magnitude of future COLAs when performing an annual actuarial valuation of the System's costs and liabilities.

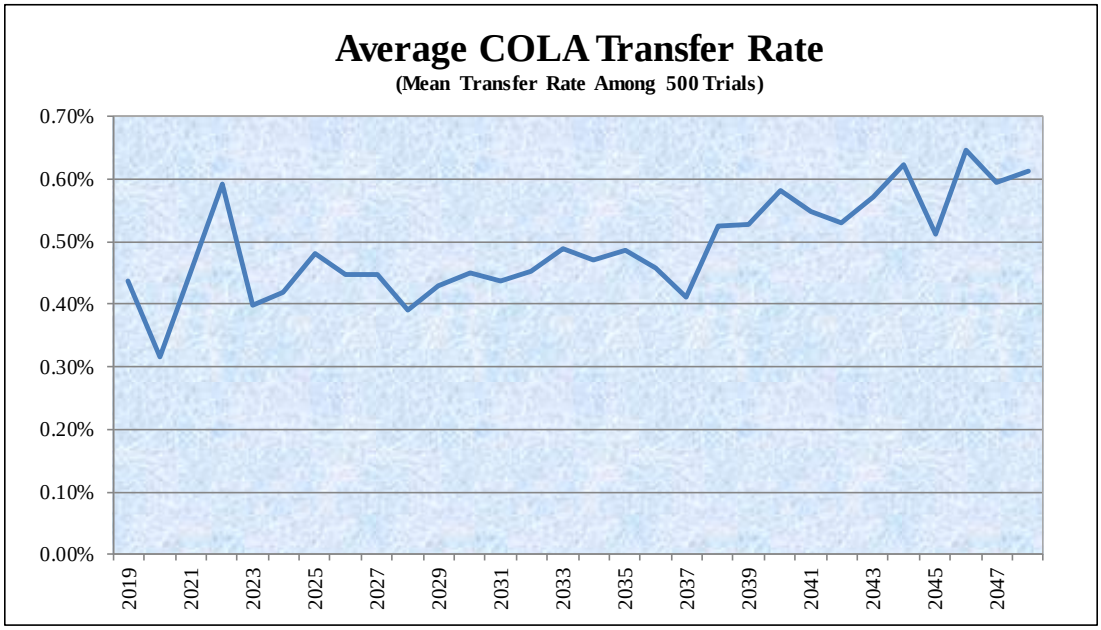
Actuarial Simulations

Consider the following graphs taken from the LSERS 2018 actuarial valuation report prepared by the Actuary for the LLA. These illustrate the results (Experience Account transfers) of the simulations in the stochastic actuarial projection model of LSERS' gain-sharing COLA program. Refer to that actuarial valuation report for details of assumptions and methods.



Based on the graph above, during each of the next 30 years there is a 25% to 45% chance of a transfer to the Experience Account. In other words, transfers to the Experience Account are expected to occur approximately two out of every five years. Once a transfer occurs, it may not be used for anything other than COLAs (unless the Legislature changes the template); although there may be a slight shift in timing. Therefore, measuring the transfer frequency and amounts is the same as measuring the future COLAs.





Based on present values of future expected COLA transfers to the Experience Account, therefore, the final assumption used last year's LLA valuation report was a fixed annual COLA of 0.50%. This was a reasonable approximation of the future workings of the actual statutory gain-sharing COLA template.