ACTUARIAL REVIEW OF THE SHERIFFS' PENSION AND RELIEF FUND'S 2019 ACTUARIAL VALUATION

ACTUARIAL SERVICES

PRESENTED TO THE PUBLIC RETIREMENT SYSTEMS' ACTUARIAL COMMITTEE

FEBRUARY 12, 2020

LOUISIANA LEGISLATIVE AUDITOR
DARYL G. PURPERA, CPA, CFE

January 14, 2020

Mr. Osey "Skip" McGee, Jr.
Executive Director
Sheriffs' Pension and Relief Fund
1225 Nicholson Drive
Baton Rouge, Louisiana 70802

Re: Actuarial Review of the 2019 Actuarial Valuation

Dear Mr. McGee:

To fulfill the requirements of R.S. 11:127(C) to the Public Retirement Systems' Actuarial Committee, the Louisiana Legislative Auditor has arranged for an Actuarial Review for the Sheriffs' Pension and Relief Fund (Fund).

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 December 5, 2019). More specifically, we have evaluated for appropriateness the actuarial assumptions and methods employed by the Fund 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:JJR:ch

cc: G.S. Curran & Company

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Scope of Review

The 2019 actuarial valuation report for the Sheriffs' Pension and Relief Fund (SPRF or System) for funding purposes was prepared by G.S. Curran & Company, and dated December 5, 2019.

This Actuarial Review of that report was prepared jointly by James J. Rizzo, Senior Consultant and Actuary employed by Gabriel, Roeder, Smith & Company (GRS), and by Piotr Krekora, Consultant and Actuary also employed by GRS. GRS serves as staff for the LLA Actuarial Services section. This Actuarial Review includes evaluations for 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 discussion of (1) appropriate treatment of SPRF's gain-sharing COLA benefits, (2) appropriate investment return assumption, (3) appropriate salary increase assumptions given recent reductions in the assumed rate of inflation, and (4) the actuary's use of acceptable mortality tables.

Summary of Findings

1. **<u>Gain-sharing Cost-of-Living Adjustments (COLAs)</u>**.

   The cost of future COLAs is currently not included in the actuary's funding valuations. Future COLAs are currently recognized in the calculations of costs and liabilities only after they are granted.

   For SPRF, the LLA agrees with this treatment, for now. The favorable investment performance and other conditions in the past several years put the SPRF board in a position of being permitted to grant gain-sharing COLAs in a few of those years. However, the SPRF board of trustees has chosen to use the Funding Deposit Account (FDA) to grant the most recent COLA (granted as of January 1, 2018). Furthermore, the FDA currently has a significant balance (which it is expected to maintain) from which the board may grant COLAs in the future. Therefore, for now, it is the opinion of the LLA that it is acceptable actuarial treatment not to recognize future COLAs in the measurement of costs and liabilities.

   "<u>Gain-sharing COLAs</u>" are allowed when the actual investment earnings exceed the valuation rate, effectively sharing the better-than-assumed gains with the eligible members. The authority for the SPRF board to pay gain-sharing COLAs is also subject to various timing and other conditions and restrictions. Practically speaking, there are two types of gain-sharing COLAs outlined in statutes for SPRF.

   - R.S. 11:2178(K) describes a plan-specific COLA, and
   - R.S. 11:246 describes "*additional*" cost-of-living adjustments.

   The likelihood of future gain-sharing COLAs being permitted is actuarially predictable when standing alone. The statutory provisions that give rise to allowing SPRF gain-sharing COLAs operate under something akin to auto-pilot. The rules are set forth in statutes. However, when a gain-sharing COLA is permitted to be paid, the SPRF board has discretionary authority to grant, or not to grant, a gain-sharing COLA to increase eligible members' benefits.

In addition, "Funding Deposit COLAs" are allowed for SPRF when there is a balance in the FDA. For example, a Funding Deposit COLA was granted as of January 1, 2018. Again, the authority for the SPRF board to pay FDA COLAs is subject to various timing and other conditions and restrictions.

- R.S. 11:107.1(D)(4)(a) and R.S. 11:243(G)

SPRF has now accumulated a significant balance in its FDA and will likely continue to operate with a large balance in the future. Thus, there is a high likelihood of SPRF paying future COLAs from the FDA.

Refer to the Appendix for the recent history of when SPRF COLAs were allowed to be granted and for the amounts allowed and granted.

Conclusion -- The LLA recommends that the SPRF 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 (when permitted). Without that sort of study, the board of trustees may not have any quantitative measure of the longer-term cost of embarking on that path.

In summary, at this time, we do not find compelling reasons to recommend the recognition of gain-sharing COLAs in the System's annual actuarial valuations. That may not hold true of our opinions in the future for SPRF and is not necessarily true of other systems.

2. Overly Optimistic Return Assumption

For this Actuarial Review, a detailed analysis of independent experts' current forecasts for SPRF's portfolio was not undertaken. The last time such a detailed analysis was undertaken by the actuary for the LLA was for the 2017 valuation report (presented in a Comprehensive Actuarial Review dated February 5, 2018).

The SPRF's 2017 valuation report used a 7.40% return assumption. The Comprehensive Actuarial Review suggested 5.69% for the 2017 return assumption based on a consensus average of independent national investment forecasters.

The SPRF board and actuary lowered its return assumption for the 2018 valuation to 7.25% and lowered it again for the 2019 valuation to 7.10%. This action is commendable and has kept the SPRF return assumption moving in the direction where the majority of national investment forecasts (as adjusted for SPRF own asset allocation) have moved.

However, in the absence of a new Comprehensive Actuarial Review of the return assumption, we cannot assess the current reasonableness of the 7.10% assumption against the forecasters' current sentiments about future returns.

SPRF's asset allocations are relatively conservative, and, therefore, the fund is not expected to earn as much as other portfolios. The appropriate benchmark for whether 7.10% is conservative or optimistic is a consensus average of expert inflation forecasters and, more importantly, expert investment forecasters.

Nevertheless, the trend among professional investment forecasters since 2017 has generally been reductions in their forecasts below the 5.69% determined for 2017. So, if the asset allocation is unchanged from our 2017 analysis, the 7.10% would likely be considered overly optimistic compared to the direction we have seen from our survey of 14 major national investment forecasters since 2017.

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

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 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 SPRF's own asset allocation and expected cash flow, the LLA recommends that the SPRF retirement board and actuary consider lowering the return assumption to be somewhere within a range from 5.25% to 6.00%, with the top end of that range being an aggressive (not conservative) assumption. A current 2019 return assumption of 7.10% might appear conservative compared to other pension funds, but compared to expert professional forecasters' 2019 expectations it is likely to be overly optimistic.

3. Salary Scale Inconsistency

The assumed rate of inflation is an important and common building block in a pension valuation's assumption concerning expected rate of return, as well as salary increases for individual members.

In the two most recent funding valuation reports (2018 and 2019), the board's assumption for inflation dropped by 0.175% and 0.10% from the prior year, respectively. However, the salary increase assumption was not lowered by similar levels. No parallel change was made in tandem to the salary increase assumptions. This makes the salary increase assumption inconsistent with the embedded inflation assumption.[1]

Valuation June 30:	2017	2018	2019
Return Assumption	7.40%	7.25%	7.10%
Reduction in Return Assumption from Prior Year	NA	**0.15%**	**0.15%**
Inflation Assumption	2.775%	2.6%	2.5%
Reduction in Inflation Assumption from Prior Year	NA	**0.175%**	**0.10%**
Salary Increase Assumption	5.50%	5.50%	5.50%
Reduction in Salary Increase Assumption From Prior Year	NA	**None**	**None**

Retirement boards often set a schedule for performing periodic experience studies, for addressing and usually changing certain assumptions, such as future salary increases and mortality rates. Actuaries usually state that they will apply any newly-adopted rates to each intervening valuation unless any significant event changes that.

In this situation, a change in the underlying inflation rate is one such significant event. Another such event is the publication of new mortality tables (see below). Actuarial Standards of Practice (ASOPs) require that each assumption employed be reasonable for each valuation. It may not be required by the ASOPs that such events and assumption

[1] Actuarial Standard of Practice (ASOP) No. 27, section 3.12 states:
Consistency among Economic Assumptions Selected by the Actuary for a Particular Measurement*—With respect to any particular measurement, each economic assumption selected by the actuary should be consistent with every other economic assumption selected by the actuary for the measurement period, unless the assumption, considered individually, is not material, as provided in section 3.5.2. A number of factors may ASOP No. 27—September 2013 14 interact with one another and may be components of other economic assumptions, such as inflation, economic growth, and risk premiums. In some circumstances, consistency may be achieved by using the same inflation, economic growth, and other relevant components in each of the economic assumptions selected by the actuary. Consistency is not necessarily achieved by maintaining a constant difference between one economic assumption and another. For each measurement date, the actuary should reevaluate the individual assumptions and the relationships among them, and make appropriate adjustments.*

changes be recognized in intervening valuations if the previous assumptions are still considered "reasonable." However, doing so would keep the valuation assumptions up to date without much additional difficulty.

Conclusion – We recommend that the board of trustees maintain consistency between the expected inflation rate inherent in the return assumption and in the salary, by reducing the salary scale by the same change in the board's inflation expectations since the year when the salary scale was last adopted. Alternatively, it can be argued that a slightly lower rate of inflation can be embedded within the salary scale than is embedded within the return assumption because of the slightly shorter horizon of salary scale compared to the return assumption. In any event, the reduction in salary scale need not wait until the next experience study.

4. Mortality Assumption

The 2019 Actuarial Valuation (page 40) states that the mortality assumption for annuitant and beneficiary mortality is the "RP 2000 Combined Healthy with Blue Collar Adjustment Sex Distinct Tables Projected to 2028 for males and set forward 1 year and Projected to 2028 for females. (Projections based on Scale AA as published by the Society of Actuaries)."

To evaluate the reasonableness of the mortality assumption, we reviewed the base mortality (RP2000 with Blue Collar Adjustments) separately from the projection scale (Scale AA). We believe the use of the RP2000 with Blue Collar Adjustments as the base mortality table to be reasonable.

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 of the Society of Actuaries (SOA) 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 table (before projection for future mortality) to be fully appropriate for the 2019 Actuarial Valuation.

Conclusion -- A more current approach to estimating mortality rates for valuation purposes would be to use PubS-2010(B) adjusted for partially credible plan-specific experience, then projecting generationally using MP2018 or MP 2019.

Pub-2010 is the most up to date mortality published by the SOA based on public sector retirement plan experience. For the base mortality rates, the LLA recommends rates from SOA tables developed for public safety members with below-median incomes, referred to as PubS-2010(B). This was selected not because SPRF members have below-median incomes, but because the below-median income mortality rates are a reasonable proxy for the geographic variation in Louisiana compared to the rest of the nation.

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.

James J. Rizzo and Piotr Krekora 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 Sheriffs' Pension and Relief Fund.

James J. Rizzo

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

January 9, 2020
Date

Piotr Krekora

Piotr Krekora, ASA, EA, MAAA
Consultant and Actuary
Gabriel, Roeder, Smith & Company

January 9, 2020
Date

Appendix

COLA History for the Sheriffs' Pension and Relief Fund										
	Statutory Conditions for Gain-Sharing COLA Under:		Authorizing COLA Statute Pct and Recipients[2]		Authorizing Funding Deposit Account COLAs					
Actuarial Measurement Date	**The Window Rule[3]**	**The Sufficient Actuarial Return Rule[4]**	**R.S. 11:2178(K)(2)(a) COLA [Up to 2.5%, to All Elg]**	**R.S. 11:2178(K)(2)(b) COLA [2% or Nothing, to Elg Over 65]**	**Balance in the FDA**	**FDA Balance Spent?**	**Amount Granted by Board**	**Date Approved by Board**	**Effective Date of COLA**	**Comments**
6/30/2019	**Satisfied** (For YE 2020)	Not Satisfied (6.1% vs. 7.25%)	None Permitted [To All Eligibles]	None Permitted [To Elg Over 65]	$78,520,547	No	NA	NA	NA	None permitted for failure to satisfy the Inv Return Rule
6/30/2018	Not Satisfied (For YE 2019)	**Satisfied** (8.1% vs. 7.4%)	None Permitted [To All Eligibles]	None Permitted [To Elg Over 65]	$52,683,236	No	NA	NA	NA	None permitted for failure of Window Rule
6/30/2017	**Satisfied** (For YE 2018)	**Satisfied** (8.3% vs. 7.5%)	**<3.0% Permitted** [To All Eligibles]	None Permitted [To Elg Over 65]	$56,567,343	Yes, to grant a 3.0% COLA	**3.0% Granted** [To All Eligibles]	12/18/2017	1/1/2018	COLA granted from Funding Deposit Account
6/30/2016	Not Satisfied (For YE 2017)	Not Satisfied (6.6% vs. 7.6%)	None Permitted [To All Eligibles]	None Permitted [To Elg Over 65]	$30,142,795	No	NA	NA	NA	None permitted for failure to satisfy both Rules
6/30/2015	Not Satisfied (For YE 2016)	**Satisfied** (10.4% vs. 7.7%)	None Permitted [To All Eligibles]	None Permitted [To Elg Over 65]	$0	No	NA	NA	NA	None permitted for failure of Window Rule
6/30/2014[5]	**Satisfied** (For YE 2015)	**Satisfied** (11.6% vs. 7.8%)	**3.0% Permitted** [To All Eligibles]	**2%Permitted** [To Elg Over 65]	$0	No	**2.5% Granted** [To All Eligibles]	2/24/2015	1/1/2015	Gain-sharing COLA granted

[2] Prior to 2019, per R.S. 11:2178(K), the Board was authorized to provide a COLA of not less than 2% or more than 3% to all eligible pensioners. Additionally, per R.S. 11:246, the Board was authorized to provide an additional COLA of 2% to eligible pensioners over age 65. No COLA may be provided during any fiscal year until the lapse of at least one-half of the fiscal year.

[3] Per R.S. 11:243, the Board may grant a benefit increase if any of the following apply: (1) the system has a funded ratio of at least 70% and has not granted a benefit increase to retirees, survivors, or beneficiaries in any of the three most recent fiscal years, (2) the system has a funded ratio of at least 80% and has not granted such an increase in any of the two most recent fiscal years, or (3) the system has a funded ratio of at least 90% and has not granted a benefit increase to retirees, survivors, or beneficiaries in the most recent fiscal year. The funded ratio as of any fiscal year is the ratio of the actuarial value of assets to the actuarial accrued liability under the funding method prescribed by the office of the legislative auditor.

[4] Prior to 2019, per R.S. 11:2178(K), the Board was authorized to use interest earnings on investments of the system in excess of normal requirements to provide a supplemental COLA of not less than 2% or more than 3% to all eligible pensioners. Additionally, per R.S. 11:246, the Board was authorized to provide an additional COLA of 2% to eligible pensioners over age 65 if there is sufficient excess interest earnings to fund the entire 2% additional COLA.

[5] The 6/30/14 valuation date marks the first year that Act 170 applies, after the trustees elected to be covered under R.S. 11:243 by 12/31/13.