

State Police Retirement System

GASB No. 67 Accounting Valuation Report

As of June 30, 2023





December 6, 2023

Board of Trustees
Kentucky Retirement Systems
Perimeter Park West
1260 Louisville Road
Frankfort, KY 40601

Re: GASB 67 Reporting – Actuarial Information – State Police Retirement System

Dear Members of the Board:

This report provided herein contains certain information for the **State Police Retirement System (SPRS)** in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67, “Financial Reporting for Pension Plans” for the fiscal year ending June 30, 2023. A separate report will be provided at a later date with additional accounting information determined in accordance with GASB Statement No. 68, “Accounting and Financial Reporting for Pensions”.

The liability calculations presented in this report were performed for the purpose of satisfying the requirements of GASB No. 67 and are not applicable for other purposes, such as determining the plan’s funding requirements. The plan’s liability for other purposes may produce significantly different results. This report may be provided to parties other than the Board of Trustees of the Kentucky Retirement Systems only in its entirety and only with the permission of the Board.

The total pension liability, net pension liability, and sensitivity information shown in this report are based on an actuarial valuation date of June 30, 2022. The total pension liability was rolled-forward from the valuation date to the plan’s fiscal year ending June 30, 2023 using generally accepted actuarial principles. GASB 67 requires the disclosure of a 10-year history of certain information in the Required Supplementary Information within the annual financial report. Information disclosed for years prior to June 30, 2017 were prepared by the prior actuary.

Actuarial Assumptions

The Board of Trustees adopted new actuarial assumptions on June 5, 2023. These assumptions are documented in the report titled “2022 Actuarial Experience Study for the Period Ending June 30, 2022”. The Total Pension Liability as of June 30, 2023 is determined using these updated assumptions.

Plan Provisions

House Bill 506 passed during the 2023 legislative session and reinstated the Partial Lump-Sum Optional Form of payment for members who retire on and after January 1, 2024, with the lump-sum payment options expanded to include to 48 or 60 times the member’s monthly retirement allowance.

Since this optional form of payment results in a reduced, actuarial equivalent, monthly retirement allowance for members who elect a partial lump-sum option, this provision does not have a fiscal impact to the total pension liability.

House Bill 506 also adjusted the minimum required separation period before a retiree may become reemployed and continue to receive their retirement allowance to one month for all circumstances for each plan. This is a minimal change for members in SPRS, as the minimum separation period is currently one month for members who become reemployed on a full-time basis in a hazardous position. The requirement was previously three months only for members who become reemployed on a part-time basis or in any non-hazardous position. We believe this provision of House Bill 506 will have an insignificant impact on the retirement pattern of hazardous members and therefore have reflected no fiscal impact to the total pension liability.

There have been no other plan provision changes that would materially impact the total pension liability since June 30, 2022. It is our opinion that these procedures for determining the information contained in these reports are reasonable, appropriate, and comply with applicable requirements under GASB No. 67.

Single Discount Rate

A single discount rate of 5.25% was used to measure the total pension liability for the fiscal year ending June 30, 2023. This single discount rate was based on the expected rate of return on pension plan investments. Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, the pension plan's fiduciary net position and future contributions were projected to be sufficient to finance all the future benefit payments of the current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of the projected benefit payments to determine the total pension liability.

The projection of cash flows used to determine the single discount rate must include an assumption regarding actual employer contributions made each future year. Future contributions are projected assuming that the entire actuarially determined employer contribution is received each future year, calculated in accordance with the current funding policy.

401(h) Subaccount

Based on guidance issued by GASB in connection with GASB Statement No. 74, the 1% of pay member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered an OPEB asset. As a result, the reported fiduciary net positions as of June 30, 2017 and later are net of the 401(h) asset balance.

Additional Disclosures

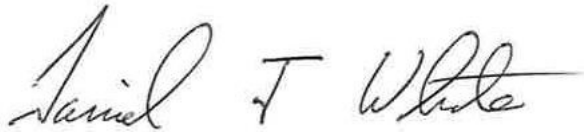
This report is based upon information, furnished to us by the Kentucky Public Pensions Authority (KPPA), which includes benefit provisions, membership information, and financial data. We did not audit this data and information, but we did apply a number of tests and concluded that it was reasonable and consistent. GRS is not responsible for the accuracy or completeness of the information provided by KPPA. Please see the "Actuarial Valuation Report as of June 30, 2022" and the "2022 Actuarial Experience Study for the Period Ending June 30, 2022" for additional discussion of the nature of the actuarial calculations and more



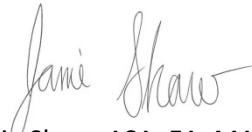
information related to participant data, economic and demographic assumptions, and benefit provisions. These reports should be considered together as a complete report for the fiscal year ending June 30, 2023. To the best of our knowledge, this report is complete and accurate and is in accordance with generally recognized actuarial practices and methods. Mr. White and Ms. Shaw are Enrolled Actuaries. All three of the undersigned are members of the American Academy of Actuaries and meet all of the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. In addition, all three are independent of KPPA and are experienced in performing valuations for large public retirement systems. This communication shall not be construed to provide tax advice, legal advice or investment advice.

Sincerely,

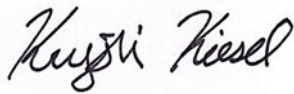
Gabriel Roeder Smith & Co.



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SECTION 1

EXHIBIT 1

Schedule of the Employers' Net Pension Liability – SPRS Plan (\$ in thousands)

| Fiscal Year Ending June 30, (1) | Total Pension Liability (2) | Plan Fiduciary Net Position (3) | Employers' Net Pension Liability (Asset) (4) = (2) - (3) | Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (5) = (3) / (2) | Covered Employee Payroll ¹ (6) | Net Pension Liability as a Percentage of Covered Employee Payroll (7) = (4) / (6) |
|--|--------------------------------------|---------------------------------------|---|---|--|--|
| 2023 | \$ 1,039,813 | \$ 591,514 | \$ 448,299 | 56.89% | \$ 65,693 | 682.42% |
| 2022 | 1,057,752 | 551,699 | 506,053 | 52.16% | 48,061 | 1,052.94% |
| 2021 | 1,055,824 | 356,346 | 699,478 | 33.75% | 47,873 | 1,461.11% |
| 2020 | 1,049,237 | 293,949 | 755,288 | 28.02% | 49,019 | 1,540.81% |
| 2019 | 1,035,000 | 286,165 | 748,835 | 27.65% | 49,515 | 1,512.34% |
| 2018 | 969,622 | 267,572 | 702,050 | 27.60% | 50,346 | 1,394.45% |
| 2017 | 943,271 | 255,737 | 687,534 | 27.11% | 54,065 | 1,271.68% |
| 2016 | 795,421 | 218,012 | 577,409 | 27.41% | 46,685 | 1,236.82% |
| 2015 | 734,156 | 247,228 | 486,928 | 33.68% | 45,765 | 1,063.97% |
| 2014 | 681,118 | 260,974 | 420,144 | 38.32% | 44,616 | 941.69% |

Note:

¹ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.



EXHIBIT 2

Schedule of the Employers' Net Pension Liability – SPRS Plan (\$ in thousands)

| Change in the Net Pension Liability | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|--------------------|--------------------|--------------------|-------------------|
| Total pension liability | | | | | | | | | | |
| Service Cost | \$ 13,229 | \$ 12,158 | \$ 12,530 | \$ 13,192 | \$ 11,726 | \$ 11,890 | \$ 8,297 | \$ 8,402 | \$ 7,695 | \$ 7,142 |
| Interest | 53,853 | 53,740 | 53,417 | 52,697 | 49,301 | 47,978 | 51,769 | 52,951 | 50,661 | 50,391 |
| Benefit Changes | 0 | 3,130 | 35 | 0 | 0 | 184 | 0 | 0 | 0 | 0 |
| Difference between actual and expected experience | 10,204 | (2,700) | 4,127 | 10,859 | 20,952 | 25,126 | 8,143 | 0 | 9,331 | 0 |
| Assumption Changes | (31,255) | 0 | 0 | 0 | 44,510 | 0 | 136,602 | 56,191 | 40,201 | 0 |
| Benefit Payments | (63,970) | (64,400) | (63,522) | (62,511) | (61,111) | (58,827) | (56,960) | (56,279) | (54,850) | (53,239) |
| Net Change in Total Pension Liability | \$ (17,939) | \$ 1,928 | \$ 6,587 | \$ 14,237 | \$ 65,378 | \$ 26,351 | \$ 147,850 | \$ 61,265 | \$ 53,038 | \$ 4,294 |
| Total Pension Liability - Beginning | \$ 1,057,752 | \$ 1,055,824 | \$ 1,049,237 | \$ 1,035,000 | \$ 969,622 | \$ 943,271 | \$ 795,421 | \$ 734,156 | \$ 681,118 | \$ 676,824 |
| Total Pension Liability - Ending (a) | \$ 1,039,813 | \$ 1,057,752 | \$ 1,055,824 | \$ 1,049,237 | \$ 1,035,000 | \$ 969,622 | \$ 943,271 | \$ 795,421 | \$ 734,156 | \$ 681,118 |
| Plan Fiduciary Net Position¹ | | | | | | | | | | |
| Contributions - Employer | \$ 58,120 | \$ 277,341 | \$ 59,650 | \$ 59,453 | \$ 60,048 | \$ 46,877 | \$ 63,239 | \$ 25,822 | \$ 31,990 | \$ 20,279 |
| Contributions - Member ² | 5,250 | 4,773 | 4,752 | 4,767 | 5,062 | 5,522 | 5,348 | 5,263 | 5,244 | 5,075 |
| Refunds of contributions to members | (166) | (280) | (273) | (88) | (162) | (22) | (26) | (11) | (85) | (213) |
| Retirement benefits | (63,804) | (64,120) | (63,249) | (62,423) | (60,949) | (58,805) | (56,934) | (56,268) | (54,765) | (53,026) |
| Net Investment Income ² | 40,708 | (22,088) | 61,729 | 6,341 | 14,816 | 18,437 | 26,795 | (3,843) | 3,426 | 40,374 |
| Administrative Expense | (293) | (273) | (212) | (266) | (225) | (194) | (181) | (178) | (201) | (215) |
| Other | 0 | 0 | 0 | 0 | 3 ⁵ | 21 ⁵ | (517) ⁴ | 0 | 645 | 0 |
| Net Change in Plan Fiduciary Net Position | \$ 39,815 | \$ 195,353 | \$ 62,397 | \$ 7,784 | \$ 18,593 | \$ 11,836 | \$ 37,724 | \$ (29,215) | \$ (13,746) | \$ 12,274 |
| Plan Fiduciary Net Position - Beginning | \$ 551,699 | \$ 356,346 | \$ 293,949 | \$ 286,165 | \$ 267,572 | \$ 255,737 | \$ 218,012 | \$ 247,228 | \$ 260,974 | \$ 248,700 |
| Prior Year Adjustment | 0 | 0 | 0 | 0 | 0 | (1) | 0 | 0 | 0 | 0 |
| Plan Fiduciary Net Position - Ending (b) | \$ 591,514 | \$ 551,699 | \$ 356,346 | \$ 293,949 | \$ 286,165 | \$ 267,572 | \$ 255,737 | \$ 218,012 | \$ 247,228 | \$ 260,974 |
| Net Pension Liability - Ending (a) - (b) | \$ 448,299 | \$ 506,053 | \$ 699,478 | \$ 755,288 | \$ 748,835 | \$ 702,050 | \$ 687,534 | \$ 577,409 | \$ 486,928 | \$ 420,144 |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 56.89% | 52.16% | 33.75% | 28.02% | 27.65% | 27.60% | 27.11% | 27.41% | 33.68% | 38.32% |
| Covered Employee Payroll³ | \$ 65,693 | \$ 48,061 | \$ 47,873 | \$ 49,019 | \$ 49,515 | \$ 50,346 | \$ 54,065 | \$ 46,685 | \$ 45,765 | \$ 44,616 |
| Net Pension Liability as a Percentage of Covered Employee Payroll | 682.42% | 1052.94% | 1461.11% | 1540.81% | 1512.34% | 1394.45% | 1271.68% | 1236.82% | 1063.97% | 941.69% |

Notes:

¹ Does not include 401(h) assets for fiscal years 2017 and later. 401(h) assets totaled \$1,312,000 as of June 30, 2023

² Does not include 401(h) contributions or associated investment income for fiscal years 2017 and later

For fiscal year 2023, 401(h) contributions equaled -\$8,000; and associated investment return equaled \$93,000

³ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later

⁴ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later

⁵ Northern Trust Settlement



EXHIBIT 3

Schedule of Employers' Contributions – SPRS Plan (\$ in thousands)

| Fiscal Year Ending | Actuarially Determined Contribution ¹ | Total Employer Contributions | Contribution Deficiency (Excess) | Covered Employee Payroll ² | Actual Contributions as a Percentage of Covered Payroll |
|--------------------------|--|------------------------------------|--|---|---|
| 2023 | \$ 58,120 | \$ 58,120 | \$ - | \$ 65,693 | 88.47% |
| 2022 | 62,341 | 277,341 | (215,000) | 48,061 | 577.06% |
| 2021 | 59,263 | 59,650 | (387) | 47,873 | 124.60% |
| 2020 | 58,358 | 59,453 | (1,095) | 49,019 | 121.29% |
| 2019 | 58,948 | 60,048 | (1,100) | 49,515 | 121.27% |
| 2018 | 36,033 | 46,877 | (10,844) | 50,346 | 93.11% |
| 2017 | 35,937 | 63,240 | (27,303) | 54,065 | 116.97% |
| 2016 | 25,723 | 25,822 | (99) | 46,685 | 55.31% |
| 2015 | 31,444 | 31,990 | (546) | 45,765 | 69.90% |
| 2014 | 25,808 | 20,279 | 5,529 | 44,616 | 45.45% |

Notes:

¹ Actuarially determined contribution for fiscal year ending 2023 is based on the contribution rate calculated with the June 30, 2021 actuarial valuation, as amended by HB1 passed during the 2022 legislative session.

² Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

Notes to Schedule of Employers' Contributions for FYE 2023

The actuarially determined contribution effective for fiscal year ending 2023 that is documented in the schedule on the previous page was calculated as of June 30, 2021. Based on the June 30, 2021 actuarial valuation report, the actuarial methods and assumptions used to calculate these contribution rates are below:

| Item | SPRS Plan |
|--|--|
| Determined by the Actuarial Valuation as of: | June 30, 2021 |
| Actuarial Cost Method: | Entry Age Normal |
| Asset Valuation Method: | 20% of the difference between the market value of assets and the expected actuarial value of assets is recognized |
| Amortization Method: | Level Percent of Pay |
| Amortization Period: | 30-year closed period at June 30, 2019 <i>Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases</i> |
| Payroll Growth Rate | 0.00% |
| Investment Return: | 5.25% |
| Inflation: | 2.30% |
| Salary Increases: | 3.55% to 16.05%, varies by service |
| Mortality: | System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019 |

EXHIBIT 4

Sensitivity of the Net Pension Liability to Changes in the Discount Rate (\$ in thousands)

| 1.00% Decrease (4.25%) | Current Discount Rate (5.25%) | 1.00% Increase (6.25%) |
|---------------------------------------|--|---------------------------------------|
| \$ 577,298 | \$ 448,299 | \$ 342,465 |