Public Notice

In compliance with the requirements of the State Government Article Section 2-1224(i), of the Annotated Code of Maryland the Office of Legislative Audits has redacted cybersecurity findings and related auditee responses from this public report.
Joint Audit and Evaluation Committee

Senator Clarence K. Lam, M.D. (Senate Chair)  Delegate Carol L. Krimm (House Chair)
Senator Malcolm L. Augustine       Delegate Steven J. Arentz
Senator Adelaide C. Eckardt        Delegate Mark S. Chang
Senator George C. Edwards           Delegate Nicholas P. Charles II
Senator Katie Fry Hester            Delegate Andrea Fletcher Harrison
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Senator Benjamin F. Kramer           Delegate David Moon
Senator Cory V. McCray                Delegate Julie Palakovich Carr
Senator Justin D. Ready               Delegate Elizabeth G. Proctor
Senator Craig J. Zucker               Delegate Geraldine Valentino-Smith

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May 20, 2022

Senator Clarence K. Lam, M.D., Senate Chair, Joint Audit and Evaluation Committee
Delegate Carol L. Krimm, House Chair, Joint Audit and Evaluation Committee
Members of Joint Audit and Evaluation Committee
Annapolis, Maryland

Ladies and Gentlemen:

We have conducted a fiscal compliance audit of the State Retirement Agency for the period beginning May 8, 2017 and ending April 30, 2021. The Agency provides administrative support services and investment functions for the State Retirement and Pension System of Maryland, a cost-sharing multiple employer public employee retirement system.

Our audit disclosed that the Agency discontinued reviewing and approving investment reconciliations received from its custodial bank in 2019. Consequently, the Agency was unable to explain certain significant discrepancies and material monthly differences, as well as certain missing reconciliations.

Furthermore, we found certain risks existed within the Agency’s computer system. However, in accordance with the State Government Article, Section 2-1224(i) of the Annotated Code of Maryland, we have redacted those findings from this audit report. Specifically, State law requires the Office of Legislative Audits to redact cybersecurity findings in a manner consistent with auditing best practices before the report is made available to the public. The term “cybersecurity” is defined in the State Finance and Procurement Article, Section 3A-301(b), and using our professional judgment we have determined that the redacted findings fall under the referenced definition. The specifics of the cybersecurity findings were previously communicated to the Agency and those parties responsible for acting on our recommendations.
Our audit included a review to determine the status of the five findings contained in our preceding audit report. We call your attention to our determination that the Agency satisfactorily addressed all of the five prior report findings.

The Agency’s response to this audit is included as an appendix to this report. We reviewed the response to our findings and related recommendations, and have concluded that the corrective actions identified are sufficient to address all audit issues. However, consistent with the requirements of State law, we have redacted the elements of the Agency’s response related to the cybersecurity audit finding.

We wish to acknowledge the cooperation extended to us during the audit by the Agency. We also wish to acknowledge the Agency’s willingness to address the audit issues and implement appropriate corrective actions.

Respectfully submitted,

Gregory A. Hook, CPA
Legislative Auditor
Background Information

Agency Responsibilities

The State Retirement Agency provides administrative support services and investment functions for the State Retirement and Pension System (System) of Maryland, a cost-sharing multiple-employer public employee retirement system consisting of a State pool and a Municipal pool. The State pool includes State agencies, boards of education, community colleges, and libraries; and the Municipal pool includes participating local governmental units that elected to join the System.

The System was established by the State Personnel and Pensions Article of the Annotated Code of Maryland and comprises the following individual systems:

- Teachers’ Retirement and Pension Systems,
- Employees’ Retirement and Pension Systems,
- State Police Retirement System,
- Judges’ Retirement System, and
- Law Enforcement Officers’ Pension System.

Responsibility for the administration and operation of the System is vested in a 15-member Board of Trustees. According to the State’s records, the Agency’s operating expenditures totaled approximately $43.2 million during fiscal year 2021.

Select System Financial Information

According to its records, as of June 30, 2021, the System had approximately 169,000 retirees and beneficiaries, and approximately 194,000 active participants. Figure 1 provides select System financial information.
Financial Statement Audits

The Agency engages an independent accounting firm to perform an annual audit of the System’s financial statements. In the related auditor reports, the firm stated that the System’s financial statements presented fairly, in all material respects, the respective financial position of the System as of June 30, 2017, 2018, 2019, 2020, and 2021, and the changes in plan net position for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Status of Findings from Preceding Audit Report

Our audit included a review to determine the status of the five findings in our preceding audit report dated June 8, 2018. We determined that the Agency satisfactorily addressed the five prior report findings.
Findings and Recommendations

Investment Fund Managers

Background
The Agency uses public and private fund managers to provide investment services for its assets, which totaled approximately $57.3 billion, as of March 31, 2021. Public fund managers invest in publicly traded assets, such as those found on a stock exchange, while private fund managers invest in privately held entities, such as limited partnerships, and private equity and private real estate fund investments. According to its records as of March 31, 2021, the Agency had contracts with over 400 individual fund managers.1 Approximately $40.9 billion was invested by the Agency’s public fund managers, and $16.4 billion was invested by private fund managers.

Fund managers are generally paid a fixed management fee, but can also earn incentive fees based on performance. Management fees for public fund managers are paid through an invoicing process, and are generally calculated by applying a specified contract rate to an ending investment value. Management fees for private fund managers are normally based on a specified contract rate applied to the investment amount committed by the Agency to the manager. Private fund managers deduct their fees directly from an Agency established investment account, and report amounts deducted in accordance with contract requirements. During fiscal year 2021, management fees paid to fund managers totaled $532.5 million. In addition, during calendar year 2020, the managers and partners for certain private alternative investments earned approximately $203.6 million in interest incentives that are normally only paid if performance thresholds are achieved.

The Agency also contracts with a third-party custodial bank to perform various functions relating to investment activity, including monthly reconciliations of independently compiled investment records to investment values reported by the Agency’s public fund managers. Monthly reconciliations are not performed for private investments since the actual value of these investments is normally not readily available through, for example, a public exchange, but may instead require other unique valuation methods, such as the use of appraisals. The custodial bank is also responsible for making management fee payments to certain fund

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1 The Agency has a limited number of its own employees who also perform functions similar to the public fund managers. These Agency employees are not included in the Investment Fund Managers’ audit findings.
managers based on authorization from the Agency. The Agency paid the
custodial bank $10.1 million during our audit period.

Finding 1
The Agency discontinued reviewing and approving investment
reconciliations received from its custodial bank resulting in the failure to
identify missing reconciliations and investigate monthly discrepancies and
differences ranging between $315.5 million and $1.1 billion.

Analysis
The Agency discontinued reviewing and approving investment reconciliations
received from its custodial bank in March 2019. Consequently, the Agency was
unable to explain certain significant discrepancies in reconciliations it received, as
well as certain material differences identified, which in the aggregate ranged
between $315.5 million and $1.1 billion for selected months. In addition, we
noted certain missing reconciliations. Adequate review and approval of these
reconciliations is critical to help ensure the validity and accuracy of investment
records maintained by public fund managers.

- Investment reconciliations submitted by the custodial bank were not always
  complete. Specifically, our review of reconciliations for seven months (a total
  of 487 different investment reconciliations) submitted by the custodial bank
  between September 2020 and March 2021 disclosed that the bank did not
  include the ending investment balance from the bank’s records and/or the fund
  manager’s records on 168 reconciliations. In addition, 44 reconciliations had
  material differences in which fund manager records exceeded the bank’s
  records in certain months by an aggregate total ranging between $315.5
  million and $1.1 billion, for which there was no documented explanation,
  investigation, or resolution by the bank or the Agency (see Figure 2).
Our review of records for 12 public fund managers disclosed that reconciliations for the period April 2017 to February 2021 were not being submitted by the bank for 2 of the fund managers. These 2 fund managers controlled investments totaling approximately $68 million and $126 million. The custodial bank began submitting the missing reconciliations in February 2021, although the Agency was not aware of the missing reconciliations until we brought this issue to its attention in June 2021.

The Agency’s Investment Division Operations Manual requires timely supervisory review of reconciliations and that all material differences identified in reconciliations, such as the aforementioned discrepancies, be explained or corrected. In addition, the Manual requires that all missing reconciliations be researched. Properly completed reconciliations are critical for ensuring the accuracy of fund manager records and management fees that are based, in part, on those records. We were advised by Agency management that review and approval of the reconciliations were discontinued due to employee turnover at the Agency and the custodial bank.

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2 Judgmentally selected from fund managers that had certain missing or incomplete reconciliations.

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### Figure 2

**Investment Reconciliations Reviewed**

<table>
<thead>
<tr>
<th>Month</th>
<th>Number of Reconciliations</th>
<th>Reconciliations Missing Bank and/or Fund Manager Balance</th>
<th>Reconciliations with Unexplained Difference of $500,000 or More</th>
<th>Cumulative Unexplained Differences (in Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2020</td>
<td>67</td>
<td>23</td>
<td>9</td>
<td>$879.9</td>
</tr>
<tr>
<td>October 2020</td>
<td>67</td>
<td>23</td>
<td>10</td>
<td>$856.8</td>
</tr>
<tr>
<td>November 2020</td>
<td>67</td>
<td>23</td>
<td>17</td>
<td>$1,053.8</td>
</tr>
<tr>
<td>December 2020</td>
<td>67</td>
<td>24</td>
<td>4</td>
<td>$315.5</td>
</tr>
<tr>
<td>January 2021</td>
<td>67</td>
<td>23</td>
<td>4</td>
<td>$764.3</td>
</tr>
<tr>
<td>February 2021</td>
<td>76</td>
<td>22</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>March 2021</td>
<td>76</td>
<td>30</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>487</strong></td>
<td><strong>168</strong></td>
<td><strong>44</strong></td>
<td><strong>$0</strong></td>
</tr>
</tbody>
</table>

**Note:** A specific investment could be included in the count for more than one month.  
Source: The Agency’s Records
Recommendation 1
We recommend that the Agency comply with its Investment Division Operations Manual, and
a. ensure that its custodial bank properly completes and submits all required fund manager reconciliations, including an explanation and resolution of all material differences identified; and
b. obtain and review the aforementioned missing and incomplete reconciliations and resolve any differences.

Information Systems Security and Control

We determined that Finding 2 related to “cybersecurity”, as defined by the State Finance and Procurement Article, Section 3A-301(b) of the Annotated Code of Maryland, and therefore is subject to redaction from the publicly available audit report in accordance with State Government Article 2-1224(i). Consequently, the specifics of the following finding, including the analysis, related recommendation(s), along with the Agency’s responses, have been redacted from this report copy.

Finding 2
Redacted cybersecurity-related finding

Audit Scope, Objectives, and Methodology

We have conducted a fiscal compliance audit the State Retirement Agency for the period beginning May 8, 2017 and ending April 30, 2021. The audit was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

As prescribed by the State Government Article, Section 2-1221 of the Annotated Code of Maryland, the objectives of this audit were to examine the Agency’s financial transactions, records, and internal control, and to evaluate its compliance with applicable State laws, rules, and regulations.

In planning and conducting our audit, we focused on the major financial-related areas of operations based on assessments of significance and risk. The areas
addressed by the audit included benefits paid to retirees and beneficiaries, contributions required from participating employers, investments, critical information systems, and payroll. We also determined the status of the findings contained in our preceding audit report.

Our assessment of internal controls was based on agency procedures and controls in place at the time of our fieldwork. Our tests of transactions and other auditing procedures were generally focused on the transactions occurring during our audit period of May 8, 2017 to April 30, 2021, but may include transactions before or after this period as we considered necessary to achieve our audit objectives.

To accomplish our audit objectives, our audit procedures included inquiries of appropriate personnel, inspections of documents and records, tests of transactions, and to the extent practicable, observations of the Agency’s operations. Generally, transactions were selected for testing based on auditor judgment, which primarily considers risk, the timing or dollar amount of the transaction, or the significance of the transaction to the area of operation reviewed. As a matter of course, we do not normally use sampling in our tests, so unless otherwise specifically indicated, neither statistical nor non-statistical audit sampling was used to select the transactions tested. Therefore, unless sampling is specifically indicated in the finding, the results from any tests conducted or disclosed by us cannot be used to project those results to the entire population from which the test items were selected.

We also performed various data extracts of pertinent information from the State’s Financial Management Information System (such as revenue and expenditure data) and the State’s Central Payroll Bureau (payroll data). The extracts are performed as part of ongoing internal processes established by the Office of Legislative Audits and were subject to various tests to determine data reliability. We determined that the data extracted from these sources were sufficiently reliable for the purposes the data were used during this audit. We also extracted data from the Agency’s automated Maryland Pension Administration System for the purpose of testing pension contributions and benefits, and from the Statewide Personnel System for the purpose of testing related payroll and leave transactions. We performed various tests of the relevant data and determined that the data were sufficiently reliable for the purposes the data were used during the audit. Finally, we performed other auditing procedures that we considered necessary to achieve our audit objectives. The reliability of data used in this report for background or informational purposes was not assessed.

The Agency’s management is responsible for establishing and maintaining effective internal control. Internal control is a process designed to provide
reasonable assurance that objectives pertaining to the reliability of financial records; effectiveness and efficiency of operations, including safeguarding of assets; and compliance with applicable laws, rules, and regulations are achieved. As provided in Government Auditing Standards, there are five components of internal control: control environment, risk assessment, control activities, information and communication, and monitoring. Each of the five components, when significant to the audit objectives, and as applicable to the Agency, were considered by us during the course of this audit.

Because of inherent limitations in internal control, errors or fraud may nevertheless occur and not be detected. Also, projections of any evaluation of internal control to future periods are subject to the risk that conditions may change or compliance with policies and procedures may deteriorate.

Our reports are designed to assist the Maryland General Assembly in exercising its legislative oversight function and to provide constructive recommendations for improving State operations. As a result, our reports generally do not address activities we reviewed that are functioning properly.

This report includes findings relating to conditions that we consider to be significant deficiencies in the design or operation of internal control that could adversely affect the Agency’s ability to maintain reliable financial records, operate effectively and efficiently, and/or comply with applicable laws, rules, and regulations. Our report also includes findings regarding significant instances of noncompliance with applicable laws, rules, or regulations. Other less significant findings were communicated to the Agency that did not warrant inclusion in this report.

State Government Article Section 2-1224(i) requires that we redact in a manner consistent with auditing best practices any cybersecurity findings before a report is made available to the public. This results in the issuance of two different versions of an audit report that contains cybersecurity findings – a redacted version for the public and an unredacted version for government officials responsible for acting on our audit recommendations.

The State Finance and Procurement Article, Section 3A-301(b), states that cybersecurity is defined as “means processes or capabilities wherein systems, communications, and information are protected and defended against damage, unauthorized use or modification, and exploitation”. Based on that definition, and in our professional judgement, we concluded that certain findings in this report fall under that definition. Consequently, for the publicly available audit report all specifics as to the nature of cybersecurity findings and required corrective actions
have been redacted. We have determined that such aforementioned practices, and
government auditing standards, support the redaction of this information from the
public audit report. The specifics of these cybersecurity findings have been
communicated to the Agency and those parties responsible for acting on our
recommendations in an unredacted audit report.

The response from the Agency to our findings and recommendations is included
as an appendix to this report. Depending on the version of the audit report,
responses to any cybersecurity findings may be redacted in accordance with State
law. As prescribed in the State Government Article, Section 2-1224 of the
Annotated Code of Maryland, we will advise the Agency regarding the results of
our review of its response.
May 11, 2022

Gregory Hook, CPA
Legislative Auditor
Office of Legislative Audits
The Warehouse at Camden Yards
351 West Camden Street, Suite 400
Baltimore, Maryland 21201

Dear Mr. Hook:

Please find enclosed the Maryland State Retirement Agency response to the draft Legislative Audit Report dated April 2022 regarding the fiscal compliance audit for the period beginning May 8, 2017 and ending April 30, 2021.

If you have any questions or concerns, please contact Mr. David Rongione, MSRA Chief Internal Auditor at 410-625-5586 or drongione@sra.state.md.us. You can also contact me directly as well.

Sincerely,

[Signature]

Martin Noven
Executive Director

Enclosure

cc: Members, Board of Trustees
    David Rongione, Chief Internal Auditor, SRA
Investment Fund Managers

Finding 1
The Agency discontinued reviewing and approving investment reconciliations received from its custodial bank resulting in the failure to identify missing reconciliations and investigate monthly discrepancies and differences ranging between $315.5 million and $1.1 billion.

We recommend that the Agency comply with its *Investment Division Operations Manual*, and
a. ensure that its custodial bank properly completes and submits all required fund manager reconciliations, including an explanation and resolution of all material differences identified; and
b. obtain and review the aforementioned missing and incomplete reconciliations and resolve any differences.

<table>
<thead>
<tr>
<th>Agency Response</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analysis</strong></td>
<td>Management will work to implement Audit’s recommendation.</td>
</tr>
<tr>
<td>Please provide additional comments as deemed necessary.</td>
<td>It is important to note that for a portion of the fiscal compliance audit of the State Retirement Agency for the period beginning May 2017, and ending April 2021 (48 months), the accounting and operations group was understaffed.</td>
</tr>
<tr>
<td></td>
<td>The Managing Director of the Accounting and Operations retired on December 31, 2019, and the Director of Investment Accounting left the agency in August 2020.</td>
</tr>
<tr>
<td></td>
<td>The vacant Managing Director position was filled in March 2021. While the open Director position was filled internally in August 2020, the position left open was not filled until December 2021. This turnover, and subsequent short staffing required staff to prioritize workflows and tasks.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommendation 1a</th>
<th>Agree</th>
<th>Estimated Completion Date: April 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please provide details of corrective action or explain disagreement.</td>
<td>State Street failed to send valuations for several funds and staff did not notice or did not follow up on the oversight. We believe staffing turnover at the System and at State Street was the source of the problem and the reason for its persistence. The Director of Accounting noticed the oversight and implemented corrections in March 2021.</td>
<td></td>
</tr>
</tbody>
</table>
Management feels that the discrepancies did not prove to be permanent and did not lead to a misstatement of total fund valuation or performance.

<table>
<thead>
<tr>
<th>Recommendation 1b</th>
<th>Agree</th>
<th>Estimated Completion Date:</th>
<th>April 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please provide details of corrective action or explain disagreement.</td>
<td>The Managing Director reviewed the missed reconciliations, and noted and explained any significant variances in accordance with the Investment Division Operations Manuel guidelines. The reviewed reconciliations were emailed to the OLA staff on April 4, 2022.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
State Retirement Agency

Agency Response Form

Information Systems Security and Control

The Office of Legislative Audits (OLA) has determined that Finding 2 related to “cybersecurity”, as defined by the State Finance and Procurement Article, Section 3A-301(b) of the Annotated Code of Maryland, and therefore is subject to redaction from the publicly available audit report in accordance with State Government Article 2-1224(i). Consequently, the specifics of the finding, including the analysis, related recommendation(s), along with the Agency’s responses, have been redacted from this report copy.

Finding 2
Redacted cybersecurity-related finding

Agency Response has been redacted by OLA.
AUDIT TEAM

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