Commission Meeting Agenda

Thursday, December 1, 2022 at 9:30 a.m.

RSIC Presentation Center and Streaming Online at www.rsic.sc.gov

I. Call to Order and Consent Agenda
   A. Adoption of Proposed Agenda
   B. Approval of September 2022 Minutes

II. Chair's Report
   A. Chair and Vice-Chair Elections
   B. Commissioner Committee Selection

III. Committee Reports

IV. CEO's Report

V. Fiduciary Performance Audit Report – Funston Advisory Services

VI. CIO's Report
   A. Quarterly Investment Performance Update
   B. Fiscal Year 2022 Investment Management Fee Presentation
   C. Passive Equity Mandates Presentation

VII. Verus - Enterprise Risk Tolerance Survey

VIII. Delegated Investment Report

IX. Executive Session -To discuss investment matters, including specific co-investments and private debt investments, pursuant to S.C. Code Ann. Sections 9-16-80 and 9-16-320; to discuss personnel matters pursuant to S.C. Code Ann. Section 30-4-70(a)(1); and to receive advice from legal counsel pursuant to S.C. Code Ann. Section 30-4-70(a)(2).

X. Potential Action Resulting from Executive Session

XI. Adjournment

NOTICE OF PUBLIC MEETING

This notice is given to meet the requirements of the S.C. Freedom of Information Act and the Americans with Disabilities Act. Furthermore, this facility is accessible to individuals with disabilities, and special accommodations will be provided if requested in advance.

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South Carolina Retirement System Investment Commission
Meeting Minutes

September 8, 2022 9:30 a.m.
Capitol Center
1201 Main Street, 15th Floor
Columbia, South Carolina 29201
Meeting Location: 1201 Main Street, 15th Floor, Ste. 1510 & Streaming Online at www.rsic.sc.gov

Commissioners Present:
Mr. William Hancock, Chair
Ms. Peggy Boykin, PEBA Executive Director
Mr. William J. Condon, Jr.
Mr. Kenneth F. Deon
Mr. Edward Giobbe
Ms. Melissa Schumpert
Dr. Holley H. Ulbrich
Mr. Reynolds Williams (absent)

I. Call to Order and Consent Agenda

Chair William H. Hancock called the meeting of the South Carolina Retirement System Investment Commission ("Commission") to order at 9:32 a.m. Mr. Hancock recognized Mr. Michael Hitchcock, Chief Executive Officer ("CEO"). Mr. Hitchcock introduced two new Commissioners, Dr. Holley H. Ulbrich and Mr. Kenneth F. Dion and gave a brief overview of their background. A link to that information is below.

https://www.youtube.com/watch?v=zZKEHq-R1y4&t=0s

After the introductions, Mr. William J. Condon, Jr. moved to approve the proposed agenda as presented, Mr. Edward Giobbe seconded the motion, which was approved unanimously.

Ms. Melissa Schumpert made a motion to approve the minutes from the June 2, 2022, Commission meeting as presented. Mr. Giobbe seconded the motion, which was approved unanimously.

II. Verus Investment Consultants Introduction

Chair Hancock recognized Mr. Hitchcock to introduce the new general investment consultant selected by the Commission. Mr. Hitchcock introduced Mr. Mark Brubaker and Mr. Mike Patowski from Verus Advisory, Inc. Mr. Brubaker and Mr. Patowski gave a brief overview of their company and their background. The video presentation of their introduction is linked below:

https://www.youtube.com/watch?v=zZKEHq-R1y4&t=320s

III. Chair's Report

Chair Hancock requested that Mr. Hitchcock address the status of chair and vice-chair elections and Commissioner committee selection. Mr. Hitchcock reminded the Commissioners that at the previous meeting they had agreed to carry over the election of a chair and vice-chair until the September meeting. He stated that because Commissioners Ulbrich and Deon had just joined the Commission, he understood that the consensus was to carry over the elections again until the December 2022 meeting to give the new Commissioners time to get acclimated. Mr. Hitchcock also noted that he would send out an email to the Commissioners to gauge interest for Committee assignments. He reported that Chair Hancock had appointed Ms. Schumpert to the Human Resources and Compensation Committee ("HRCC") on an interim basis. No Commissioners had any further comment, and the Chair concluded his report. A link to the discussion is below:

https://www.youtube.com/watch?v=zZKEHq-R1y4&t=662s

IV. Committee Reports

The Chair recognized Mr. Hitchcock to give an update on the activities of the Audit and Enterprise Risk Management Committee ("AERM"). Mr. Hitchcock noted that the AERM Committee Report had been made available to the Commissioners for review prior to the meeting. He asked that any questions be directed to a member of the Committee. Hearing no questions, he concluded the report. Mr. Hitchcock reported that the HRCC met Friday, September 2, 2022. As part of its oversight role, the HRCC received information regarding the Variable Compensation Program as well as staffing and compensation changes that had occurred since the last HRCC meeting. Hearing no questions, he concluded the report. A link to the discussion is below:

https://www.youtube.com/watch?v=zZKEHq-R1y4&t=768s

V. CEO's Report

Mr. Hancock recognized Mr. Hitchcock for the CEO's report. Mr. Hitchcock introduced new staff members, Sally Fulkert, Director of Human Resources, and Richard Foster, Investment Associate. He then presented the annual budget recommendation. Mr. Hitchcock reported that Staff would be requesting the same budget authorization, $15.3 million, as the previous fiscal year. After a discussion of the budget process and request, linked below, Dr. Ulbrich made a motion to authorize the CEO to submit a proposed FY 2024 detail budget substantially similar to the drat budget presented for inclusion in the Governor's annual budget. Ms. Schumpert seconded the motion, which was approved unanimously. A link to the CEO's report is below:

https://www.youtube.com/watch?v=zZKEHq-R1y4&t=892s

A link to the presentation materials detailing the budget request may be accessed here, commencing on page 7:

https://www.rsic.sc.gov/_documents/2022.09.08-commission-meeting-rnd.pdf

VI. CIO's Report

Chair Hancock introduced Mr. Geoffrey Berg, Chief Investment Officer ("CIO"), for the investment performance review for the prior fiscal year. Mr. Berg reported that the Portfolio outperformed the benchmark by 4.3 percent for the fiscal year despite a challenging market landscape in the latter half of the fiscal year. The Portfolio also outperformed the benchmark over the last three and five years.

Mr. Berg then discussed the performance framework and summarized the impacts of the different investment decisions that Staff made. He shared that the value from diversification (the difference between the Policy Portfolio and the Reference Portfolio) was very significant during the fiscal year and over the trailing three-year period as well. He also pointed out that the portfolio structure decisions—those which cause the Portfolio to look different from the Policy Portfolio—added value as well over all time periods. He also shared that RSIC's external investment managers outperformed very significantly over the past fiscal year.

Mr. Berg then turned to an asset class performance review. He noted that five of the six asset classes added value during the fiscal year. The only asset class that underperformed for the year was the real assets portfolio, but he pointed out that real assets has had strong returns relative to its benchmark over longer periods of time. Five out of six asset classes added value over the three-year period with only private equity lagging during that time. Mr. Berg reminded the Commissioners that the portable alpha hedge funds return shown is the excess return over the cash rate and noted that Staff targets 3 to 5 percent over the cash rate and reported that the portable alpha hedge funds have significantly outperformed over the past few years.

Next, Mr. Berg gave an overview of performance attribution and explained how each attribution effect contributes to the total outcome. After reviewing each effect, he then turned to a discussion of manager performance over the fiscal year. Mr. Berg reported that manager selection was positive for every asset class.

Mr. Berg then highlighted some of the Portfolio repositioning activities and noted that the Portfolio remained above its limit to both private equity as well as all private markets as of June 30, 2022. He stated that the biggest contributor to the overweight in private equity was that private equity had outperformed plan growth by 25 percent per year over the past two years. Mr. Berg advised that he was reviewing capital deployment models with Staff to determine if any changes are warranted.

Mr. Berg then turned to a brief discussion of forecasted risk statistics. He noted that, as expected, the volatility estimates rose versus the prior quarter's report. However, Staff estimates for relative risk had changed little. After a brief discussion with the Commissioners, he concluded his report. A link to the CIO's report is below:

https://www.youtube.com/watch?v=zZKEHq-R1y4&t=2091s

VII. Delegated Investment Report

The Chair recognized Mr. Berg for the delegated investment report. The following delegated investments were closed by Staff since the June 2, 2022, Commission meeting:

Asset Class	Investment	Investment Amount	Closing Date
Real Estate	Blackstone Real Estate Partners X	$100 M	June 30, 2022
Infrastructure	Brookfield Infrastructure Fund V	$100 M	July 11, 2022
Private Equity	Cinven 8	€50 M	July 13, 2022
Real Estate	EQT Exeter Industrial Value Fund VI	$100 M	August 8, 2022
Private Credit	Eagle Point Defensive Income Fund II	$50 M	August 30, 2022

After the Delegated Investment Report, the Commission recognized Dr. Rebecca Gunlauggson and Dr. Ronald Wilder for their service to the Commission. A link to the presentation is below:
https://www.youtube.com/watch?v=zZKEHq-R1y4&t=4537s

VIII. Executive Session

Mr. Condon made a motion to recede into Executive Session to discuss investment matters pursuant to S.C. Code Ann. Sections 9-16-80 and 9-16-320, including particular matters related to the public equity and portable alpha portfolios; to discuss personnel matters pursuant to S.C. Code Ann. Section 30-4-70(a)(1); and to receive advice from legal counsel pursuant to S.C. Code Ann. Section 30-4-70(a)(2). Ms. Schumpert seconded the motion, which was approved unanimously.

IX. Potential Actions Resulting from Executive Session

Upon return to open session, Mr. Hitchcock noted that the Commission did not take any action while in Executive Session.

X. Adjourn

There being no further business, the Commission adjourned at 3:16 P.M. by unanimous vote.

[Staff Note: In compliance with S.C. Code Section 30-4-80, public notice of and the agenda for this meeting was delivered to the press and to parties who requested notice and were posted at the entrance, in the lobbies and near the 15th Floor Presentation Center at 1201 Main Street, Columbia, S.C. by 10:20 A.M. on Tuesday, September 6, 2022]

Proposed RSIC Committee Membership 2022-2024

Audit and Enterprise Risk Management Committee:

1. Peggy Boykin
2. Bill Condon
3. Ken Deon

Human Resources and Compensation Committee:

1. Missy Schumpert
2. Bill Hancock
3. Holley Ulbrich

Fiduciary Performance Audit of the South Carolina Retirement System Investment Commission

Conducted on Behalf of the South Carolina Office of the State Auditor

December 1, 2022 Commission Meeting

Funston Advisory Services LLC

Overview

- Funston Advisory Services LLC (FAS) was selected by the South Carolina Office of the State Auditor (OSA) to conduct the 2022 South Carolina Retirement System Investment Commission (RSIC) fiduciary performance audit.
- FAS also completed the 2014 and 2018 fiduciary performance audits of RSIC for the South Carolina State Inspector General and the Office of the State Auditor, respectively.
- This fiduciary performance audit began in May 2022.
- The 2022 FAS team was substantially the same as the 2018 team:
  - Rick Funston – Project leader; governance and risk management
  - Randy Miller – Project manager; governance and organization
  - Keith Johnson – Fiduciary duties, governance and legal
  - Jon Lukomnik – Investment policy
  - Mike Gold (new) – Investment operations and IT
  - Steve Case (new) – Investment governance and policy

Purposes of this Audit

1. Evaluate the extent to which SCRSIC has implemented the recommendations from the 2018 Fiduciary Performance Audit and the extent to which certain recommendations remain relevant given the following significant changes: simplifying the asset allocation, launching a co-investment program, and implementing the investment delegation policy.
2. Review SCRSIC's changes to policies, procedures, and practices related to the simplification of the portfolio's asset allocation and the other changes noted above, to critically evaluate whether these policies, practices, and procedures effectively address the amelioration or enhancement of risk resulting from the changes.
3. Evaluate whether the board's evolving role from a management to an oversight committee positions it to fulfill its fiduciary duties.`
4. Within the course of the evaluation described above, make note of any enhancements to SCRSIC policies, procedures, and practices that will help bring it into line with prevailing and/or best practices.

1. Implementation Progress on 2018 Recommendations

Of 66 recommendations in the 2018 fiduciary performance audit report:

- The majority (38) have been implemented.
- Due to changes in investment and organizational strategy during the prior four years, nine of the recommendations that were not implemented are no longer applicable.
- We have assessed nine as partially implemented.
- Ten recommendations that we believe are still valid were not acted upon.

	Fully Implemented	Partially Implemented	Not Implemented	No Longer Applicable	Total
RSIC Staff	36	7	2	9	54
Commission	2	1	5	0	8
General Assembly	0	0	3	0	3
Appointing Authorities	0	1	0	0	1
Total	38	9	10	9	66

2. Effect of Investment Strategy Changes

Findings

- The revised asset allocation program is consistent with prevailing practices among other state pensions.
  - The new asset allocation provides greater investment flexibility to the capable RSIC investment staff and greater potential to add value from their decisions as compared to the more constraining prior asset allocation policy with 18 asset class targets.
  - The co-investment program with the private equity allocation has been well conceived and implemented.
- Internal decision making and controls were updated.
- The Internal Investment Committee (IIC) charter clearly lays out the governance process surrounding the implementation of the target investment program.
- The investment program is at a prevailing practice level in line with other large state pensions that have delegated day-to-day investment implementation to staff.
- RSIC has a sophisticated and successful investment operation; the hybrid in-house/outsourcing model represents an optimized balance of complementing limited internal resources with experienced external professional advisors.

2. Effect of Investment Strategy Changes

Findings

- There is appropriate transparency and accountability for the implementation of the asset allocation program approved by the Commission.
- Planned risk management measurement and reporting improvements should provide an additional layer of transparency and insight for both staff and the Commission on the overall portfolio.
- The Commission should adopt a simplified, yet more advanced, staff monitoring process.
- Improving education and engagement at the Commission level will also enhance the Commission's verification and monitoring role given the decision to delegate implementation to staff.
- A major risk to continuing the successful implementation of the investment program is the potential for staff turnover; the risk is mitigated by the effective use of third-party advisors.

3. The Role of the Commission

Findings

- The Commission has made many improvements since the prior review four years ago.
  - The Commission and its committees appears to function effectively in most areas.
  - Commissioners report that they have an opportunity to be heard and voice any concerns.
- The major policy and delegation decisions of the Commission have been appropriate and successful.
  - In 2017 the CIO was granted the authority to approve investments which fall within the parameters of the Investment Delegation Policy, subject to the oversight of the CEO
  - The simplification of the strategic investment allocation was implemented in 2019.
  - The more recent decision to establish an improved compensation structure for investment staff is another example of the Commission's effective setting of policy, although it is too soon to assess results.
- The strategic asset allocation has been greatly simplified and internal resources have been focused on those areas of the portfolio where they can add the most value.
- Fund performance, relative to peers and benchmarks, has significantly improved.

3. The Role of the Commission

Findings

- The Commission has a high level of confidence in the CEO and the leadership team.
  - The CEO has developed a highly competent staff.
  - The CEO's briefings before meetings has helped improve the preparation and readiness of Commissioners to participate in discussions with good questions.
- There is a strong ethical tone at the top.
- There are effective governance policies in place.
- Risk management has been significantly strengthened.
- Commissioners believe investment reporting provided by staff has improved and is currently very effective.
- While investment risk reporting has also improved, Commissioners acknowledge it is more complex and challenging to understand.

3. The Role of the Commission

Recommendations

- To improve direction setting and oversight in the future, the Commission should:
  - Develop its own strategic agenda and priorities.
  - Be more actively engaged in development of the RSIC strategic plan.
  - Retain its own consultants and advisors to provide an independent opinion and counsel regarding direction, assessment of available policy options, and implications of the strategies.
  - Develop an effective relationship with its general investment consultant, including an annual evaluation process.
- The Commission Chair needs to take the lead in the relationship with the investment consultant to address issues on behalf of the Commission and:
  - Develop a more collaborative and direct relationship with the investment consultant.
  - Ensure there is effective ongoing communication between the Commission and the investment consultant.
  - Work with the consultant to improve Commission understanding of investment risk and decisions made by staff.
- Commissioners could be more constructively engaged and professionally skeptical during Commission meetings when topics are debated.

3. The Role of the Commission

Recommendations

- The Commission should play a more active and formalized role in executive succession planning.
- The CEO evaluation process could benefit from more commissioner engagement.
- The annual Commission self-assessment process could be much more effective and result in more specific improvement plans; an external facilitator should be engaged.
- Commissioner continuing education should be improved (this is in process).

4. Other Recommendations

- While there has been significant progress, there will always be opportunities for improvement.
- This report includes forty-four detailed new recommendations for improvement:
  - Eight are for the Commission (previously discussed);
  - Thirty-two are primarily the responsibility of staff;
  - Three for the General Assembly; and
  - One for the commissioner appointing authorities.

4. Other Recommendations

Other key recommendations included in the report include:

The Commission and Staff

- Develop a list of decisions that the Commission has reserved for itself and develop due diligence standards for each one.
- Work with appointing authorities to ensure that appointments are promptly made upon expiration of Commissioner terms.

Staff

- Continue to develop talent management and succession planning capabilities to ensure that there is resiliency in the case of turnover in key positions.
- Continue to develop the Enterprise Risk Management program, including integration with quantitative performance and exception-based reporting.

The General Assembly

- Delegate to the Commission statutory authority for budget, staffing, and compensation approval to better align authorities with responsibilities.
- Allow procurement process exceptions for direct investment-related purchases.
- Revise the commissioner qualification requirements, if necessary, to achieve greater professional and demographic diversity.

Conclusions

- Overall, RSIC leadership, organization and staff are highly effective .
- Investment returns have significantly improved.
- RSIC demonstrates numerous leading practices compared to its peers.
- There is a strong culture of responsibility, accountability and collaboration, and appropriate tone at the top, with an emphasis on value-added performance throughout.
- Relationships with key stakeholders and critical counterparties appear very productive and much improved since 2014 and are a model of constructive engagement.
- The 2017 Commission decision to delegate many investment decisions to staff, followed by the new streamlined and simplified strategic asset allocation, has been very positive.
- However, the Commission appears to be struggling with how to effectively engage in its new strategy and oversight role; recommendations in this report should assist the Commission in improving its oversight.
- Significant progress has been made in every respect, and the RSIC Commission and staff should be recognized for the truly significant progress that RSIC has made.

Questions?

Fiduciary Performance Audit of the South Carolina Retirement System Investment Commission

Prepared for the South Carolina Office of the State Auditor

Final Report

Funston Advisory Services LLC

Submitted: November 3, 2022

Contents

Executive Summary

Overview

The South Carolina Office of the State Auditor (OSA) selected Funston Advisory Services LLC (FAS) to conduct the 2022 South Carolina Retirement System Investment Commission (RSIC) fiduciary performance audit through a competitive bid process. FAS also completed the 2018 fiduciary performance audit of the RSIC, as well as the 2014 fiduciary performance audit which was conducted at the direction of the South Carolina State Inspector General.

We began this fiduciary performance audit in May 2022, submitted a draft report for RSIC review and feedback in September, and submitted the final report in November 2022. The FAS team for 2022 included Michael Gold and Steven Case as new members on the RSIC FAS team and Rick Funston, Keith Johnson and Randy Miller as returning members who were part of the 2014 and 2018 audits.

The RSIC has implemented major changes to its investment allocation and investment process since the 2018 Fiduciary Performance Audit. These changes included simplifying the asset allocation, launching a co-investment program, revamping investment risk reporting, and implementing the investment delegation policy approved in 2017. The goals of these changes are to enhance returns, reduce costs, better understand and manage investment risks, and focus the RSIC's investment activities on asset classes that provide the opportunity for consistent outperformance in a manner recognizing RSIC's available investment opportunities. These changes were implemented to increase accountability both at the staff and Commission levels and more clearly define the roles of each in the investment process.

These significant changes have resulted in the RSIC updating policies, revising front and middle-office practices, revising the organization's technology strategy, and adjusting its resource plan to effectively meet the demands of evolving and improving investment practices and mitigate operational risk. In this report we comment on the significant progress RSIC has made in these areas – much of which was not contemplated in 2018.

The purposes of this audit are to:

- Evaluate the extent to which the RSIC has implemented the recommendations from the 2018 Fiduciary Performance Audit and the extent to which certain recommendations remain relevant given the significant changes noted above.
- Review the RSIC's changes to policies, procedures, and practices related to the simplification of the portfolio's asset allocation and the other changes noted above, and critically evaluate whether these policies, practices, and procedures effectively address the amelioration or enhancement of investment, operational, and compliance risk resulting from the changes.
- Evaluate whether the board's evolving role from a management to an oversight committee positions it to fulfill its fiduciary duties.
- Within the course of the evaluation described above, make note of any enhancements to the RSIC policies, procedures, and practices that will help bring it into line with prevailing and/or best practices.

Overall Assessment of RSIC Governance

The Retirement System Investment Commission has continued to make major improvements in its governance over the past four years. This is evidenced particularly in the effectiveness of the RSIC organization and staff. Leadership is very capable and effective, and investment returns have significantly improved. RSIC employs numerous leading practices as compared to its peers. There is a strong culture of empowerment and collaboration, great tone at the top, middle, and bottom, with an emphasis on value-added performance throughout.

Relationships with key stakeholders and critical counterparties appear very productive and much improved since 2014 and are a model of constructive engagement.

The impact of the 2017 Commission decision to delegate many investment decisions to staff, followed by the new streamlined and simplified strategic asset allocation, has been very positive. However, it has changed the role of the Commission from a more active, "hands-on" board that makes frequent tactical investment decisions to one that focuses primarily on the strategy of the fund and organizational development and then oversees the results. The Commission appears to be struggling with how to effectively engage in its new role.

In summary, significant progress has been made in every respect, and the RSIC Commission and staff should be recognized for the truly significant progress that RSIC has made.

Overall Assessment of Progress Implementing 2018 Recommendations

There were 66 discrete recommendations in the 2018 fiduciary performance audit report. Based on our assessment, the majority of them (38) have been implemented. Due to changes in investment and organizational strategy during the prior four years, we have determined that nine of the recommendations that were not implemented are no longer applicable. We have assessed nine as partially implemented. Ten recommendations that we believe are still valid were not acted upon. Below is a summary of our assessment of implementation progress:

	Fully Implemented	Partially Implemented	Not Implemented	No Longer Applicable	Total
RSIC Staff	36	7	2	9	54
Commission	2	1	5	0	8
General Assembly	0	0	3	0	3
Appointing Authorities	0	1	0	0	1
Total	38	9	10	9	66

As shown, RSIC staff, who had responsibility for 54 of the recommendations, have at least partially implemented all but two of the 45 that are still applicable after the strategy and policy changes. RSIC staff have made significant progress on the 2018 recommendations, and this is reflected in the very well-run organization we observed during our review.

There were eight recommendations that were primarily the responsibility of the Commission board itself. Of those eight recommendations, only two were fully implemented and one partially. Five remain valid recommendations that were not acted upon. As noted in the detailed report, we believe failure to act upon these recommendations is contributing to the Commission's questions about whether it is fulfilling its role effectively. The unimplemented recommendations generally relate to: 1) the Commission annual self-assessment process; 2) Commission onboarding and continuing education; and 3) the Commission relationship with its general investment consultant. It should be noted that initiatives are underway to address onboarding and continuing education and the relationship with the general investment consultant.

The pension reform passed by the General Assembly in 2017 was effective in improving the overall statutory framework governing the RSIC. Many of the improvements since 2017 were facilitated by the updated statues and authorities granted to the Commission, and the General Assembly is to be congratulated. There are three recommendations that were made in 2014, and again in 2018, that were not acted upon that we continue to encourage the General Assembly to consider: 1) delegating budget and staffing authority to the Commission; 2) providing an exemption from state procurement requirements for direct investment support services; and 3) fully delegating the setting of the assumed rate of return for the fund to PEBA and RSIC.

Effect of Investment Strategy Changes

RSIC's asset allocation policy went through a significant redesign in 2019 that was implemented starting in 2020. Prior to the 2019 asset allocation redesign, the investment approach included 18 asset class targets and benchmarks. The large number of asset allocation classes constrained staff's flexibility to be opportunistic in their implementation of the portfolio.

The revised asset allocation policy established much broader and easier to intuitively understand asset allocation targets. Broad, conventional market benchmarks reflective of the intended investment risk exposures were established, and a sophisticated performance attribution reporting system was developed by staff to indicate where risks versus benchmark exist and overall additions and deletions from return were achieved versus benchmark.

We found the revised asset allocation program is in keeping with prevailing practices among other state pensions. The revised program provides greater investment flexibility to the highly capable RSIC investment staff and greater potential to add value from their decisions as compared to the more constraining prior asset allocation policy with a large number of asset class targets. The co-Investment program with the private equity allocation has been well conceived and implemented.

Internal decision making and controls were updated, and the Internal Investment Committee (IIC) charter clearly lays out the governance process surrounding the implementation of the target investment program. RSIC staff has embraced the challenges posed by the delegation process and is implementing the investment program at a prevailing practice level in line with other large state pensions that have delegated day-to-day investment implementation to staff.

RSIC has established a sophisticated and successful investment operation. The hybrid in-house/outsourcing model that RSIC has developed over the past five years represents an optimized balance of complementing limited internal resources with experienced external professional advisors.

The combination of monthly performance updates, quarterly reviews and annual deep dives for each asset class provides appropriate transparency and accountabilities for the implementation of the asset allocation program approved by the Commission. As detailed in this report, the meaningful advancement of the risk management measurement and reporting system at RSIC should provide an additional layer of transparency and insight for both staff and the Commission on the overall portfolio.

We recommend the Commission develop a more simplified, yet advanced, staff monitoring process. Improving education and engagement at the Commission level will also enhance the Commission's verification and monitoring role given the decision to delegate implementation to staff.

The major risk to continuing the successful implementation of the investment program is the potential for staff turnover. There are effective staff recruitment, development, and retention programs in place, but as a small organization this still represents a significant risk. However, this risk is mitigated by the effective use of third-party advisors who act as an extension of staff during unexpected periods of turnover or situations when opportunistic investments are available.

Role of the Commission

Based upon the current high level of functioning of the RSIC organization, the policy and delegation decisions of the Commission have been very appropriate and successful. This includes the major decision in 2017 to grant the CIO the ability to approve investments which fall within the parameters of the Investment Delegation Policy, subject to the oversight of the CEO; and the simplification of the strategic investment allocation implemented in 2019.

The more recent decision to establish an improved compensation structure for investment staff in order to strengthen attracting, developing and retaining staff is another example of the Commission effectively setting direction, although it is too soon to assess the results of the new program.

Despite the success in these two key areas, the Commission has not developed its own strategic agenda and set its own priorities. The Commission has not been extensively engaged in development of the RSIC strategic plan, which is developed by staff and then reviewed with the Commission. While there is a strategic calendar, the Commission has not spent much time discussing its priorities and how it wants to spend its time. Most peer boards have an annual retreat where, in a more casual setting, they follow an agenda that includes, for example, strategic planning, succession planning, and the board self-assessment.

Although the Commission has a high level of confidence in the CEO and the leadership team, it still needs to retain its own independent consultants/advisors to provide an independent opinion and counsel regarding direction, assessment of available policy options, and implications of the strategy. The Commission's repeated failure to develop an effective relationship with its general investment consultant, and to receive adequate independent advice and counsel, has been a major deficiency that has contributed to concerns by commissioners that its oversight has not been as effective as desired.

It is critically important that the Commission Chair take the lead in this relationship and work with the investment consultant to address issues on behalf of the Commission, and that there is effective ongoing communication between the Commission and the investment consultant. This relationship should not be staff driven, as the investment consultant is a key independent advisor to the Commission and a critical check and balance in the oversight process.

Although most commissioners commented that the Commission books for each meeting are typically large, they also said that they thought the information was useful and appropriate. In addition, the CEO usually meets with each commissioner before the meeting to brief them and help them prepare. Commissioners said this improved the preparation and readiness of members to participate in discussions with good questions.

Commissioners believe investment reporting provided by staff has improved and is currently very effective. While investment risk reporting has also improved, they acknowledge that it is more complex and challenging to understand. Having a more collaborative and direct relationship with the investment consultant could potentially assist in better understanding and opining on investment risk decisions made by staff.

In summary, by most measures the Commission has done a very good job over the past four years since the prior review. They have retained a very effective CEO, who in turn has continued to develop a highly competent staff. The strategic asset allocation has been greatly simplified and internal resources have been focused on those areas of the portfolio where they can add the most value. Risk management has been significantly strengthened. Fund performance, relative to peers and benchmarks, has significantly improved.

In addition, the business of the commission and its committees appears to function effectively in most areas. Among the areas that have performed exceptionally well are:

- There is a strong ethical tone at the top.
- There is an effective set of governance policies in place.
- Hiring of the CEO has been very successful.
- Committees generally function effectively.
- Commissioners report that they have an opportunity to be heard and voice any concerns.

However, based upon feedback from commissioners and staff, and our experience working with other public retirement systems, there are several areas that could be improved:

- Commissioners could be more constructively engaged and professionally questioning during Commission meetings when topics are debated.
- The Commission needs to have a much more active and collaborative relationship with its general investment consultant.

- The annual Commission self-assessment process could be much more effective and result in more specific improvement plans.
- Continuing education could be improved (this is in process).
- The CEO evaluation process could benefit from more commissioner engagement.
- Succession planning should be a Commission focus and more formalized.

2022 Recommendations for Further Improvement

While there has been significant progress, there will always be opportunities for improvement. This report includes 45 detailed new recommendations for improvement identified by the FAS team during the course of this review to help the RSIC in the development and adoption of leading practices. Of the forty-four, thirty-two are primarily the responsibility of staff, eight are for the Commission, three for the General Assembly, and one for the commissioner appointing authorities. A summary of recommendations is found at the end of the report. We have counted only the unique recommendations, as some similar recommendations are made in multiple sections.

Among the major recommendations for the General Assembly, the Commissioner appointing authorities, the Commissioners, and RSIC staff are:

- The Commission needs to effectively develop its relationship with its general investment consultant and rely upon the consultant for independent advice and education.
- The Commission should significantly enhance its self-assessment process to identify improvements and to provide input into its new continuing education program.
- The Commission and staff should develop the list of decisions that the Commission has reserved for itself and develop due diligence standards for each one.
- Staff need to continue to develop talent management and succession planning capabilities to ensure that there is resiliency in the case of turnover in key positions.
- Staff should continue to develop its Enterprise Risk Management program, including integration with quantitative performance and exception-based reporting.
- The General Assembly should: delegate responsibility to the Commission for budget, staffing, and compensation approval; allow procurement process exceptions for direct investment-related purchases, and revise the commissioner qualification requirements, if necessary, to achieve greater professional and demographic diversity.

Assessment and Findings

In conducting this fiduciary performance audit, the FAS team reviewed the recommendations from the 2018 fiduciary performance audit and the background and context for each recommendation. Through document reviews, interviews (both internal and external), and follow-up conversations, we developed our assessment of progress toward implementing each recommendation. Some were fully implemented, others partially implemented or still in progress, and a few have not been implemented. We also identified opportunities for further improvement based upon leading practices at peer funds and the experience of our team members.

The remainder of this section of the report is structured to reflect the recommendations made in the 2018 fiduciary performance audit. For each recommendation, we describe the background, our assessment of implementation progress, and opportunities for further improvement.

I. Implementation of 2018 Recommendations

Evaluate the extent to which SCRSIC has implemented the recommendations from the 2018 Fiduciary Performance Audit and the extent to which certain recommendations remain relevant given simplification of the asset allocation, launching a co-investment program, and implementing the investment delegation policy.

A. Overarching Theme Recommendations

The 2018 RSIC fiduciary performance audit included recommendations in four overarching themes that were initially identified in the 2014 fiduciary performance audit. This section of the 2022 report reviews the background of each of those overarching recommendations, implementation progress, and opportunities for further improvement.

Overarching 1: Improve assurance and independent reassurance to build trust and confidence.

1. Background of 2018 recommendations:

RSIC had improved its assurance and independent reassurance in several areas by 2018. First, the Commission retained the PEBA auditor, CliftonLarsonAllen, to conduct annual Agreed Upon Procedures (AUP). These typically focused on due diligence procedures and investment valuations, but also addressed other areas, as appropriate. These reports were submitted to the Audit and Enterprise Risk Management Committee. However, although they are available through WatchDox, a number of Commissioners had not seen the AUP reports and did not have a good understanding of the effectiveness of and compliance with due diligence policies and processes.

Second, the roles and responsibilities in the Internal Investment Committee charter had been strengthened, detailed, and clarified. The charter had been most recently updated and approved in May 2018.

Third, CEM Benchmarking had been retained by RSIC to participate in CEM's annual peer investment performance and cost benchmarking. The CEM reports were made available to the Commissioners and also publicly available on the RSIC website. Several Commissioners said that they found the reports valuable.

Although the Commission had approved an enterprise risk management (ERM) program in 2014, and the Audit and Enterprise Risk Management Committee (AERMC) charter included responsibility for oversight of the ERM program, RSIC had realized very little progress in this area, in part due to staff turnover in the Director of ERM position. Consequently, ERM, Internal Audit, and Compliance were combined into a single position (Director of Enterprise Risk Management and Compliance), with internal audit activities being outsourced and also under the direction of that position. However, the most recent person in that position left during the course of the 2018 review. In 2018, there was no functioning ERM program.

Recommendations in 2018 included two primary areas for further improvement for independent reassurance.

- A more specific and detailed approach for adapting ERM to the RSIC organization to achieve the most value.
- Expanded scope of Agreed Upon Procedures reports and communication and discussion of the results with all Commissioners.

2. Assessment of implementation progress: Partially implemented

ERM adaptation: As recommended, RSIC has developed a risk assessment framework based on its business model. RSIC has identified three phases to the implementation of a comprehensive ERM framework. Each of these is described in greater detail in Appendix 1.

Phase 1 – Annual Qualitative Assessment

There is an initial ERM process, consistent with prevailing practice. The CEO is the Chief Risk Officer. The executive leadership team (ELT) is the staff ERM committee. Risk Owners are defined in the Dashboard/Heatmap. There is a risk register (list of risks) that is mapped to RSIC's key business functions. The annual risk assessment is conducted by Deloitte, the co-source internal auditor, and the ERM Director In addition, a quarterly, staff-wide Business Investment Review meeting is held to showcase new initiatives and highlight other important items. ERM & Compliance provides updates in meetings.

For external business partners, PEBA/RSIC has implemented a monthly scorecard with BNYM which also is part of the standing agenda for the quarterly BNYM call.

Phase 2 – Quantitative Assessment and Reporting (by end of 2022)

RSIC recognizes that while Phase 1 is necessary, there is a need to develop additional key quantitative metrics. The second phase of quantification is to be completed by year-end. To move from prevailing practice to leading practice, RSIC plans to develop an enterprise performance dashboard and integrate and then align the overall approach with its strategy and business plan.

Phase 3 – Alignment with Strategy and Business Plan (2023)

The third phase will evolve as Tier 1 and 2 metrics are implemented. This phase will align with strategic initiatives/business plan.

Agreed Upon Procedures: RSIC has fully implemented the recommendation regarding Agreed Upon Procedures (AUPs), which are conducted by the external audit firm that performs the audit of the PEBA Annual Comprehensive Financial Report (ACFR). The scope of the AUPs has expanded from investment valuation and due diligence process in 2018 to now also include training and ethics policy certification, investment compliance, personal trading, and statement of material interest certification.

Results of the AUPs are annually shared with the Audit and Enterprise Risk Committee (AERMC) of the Commission, and the AERMC Chair reports on the results to the full Commission. The AERMC discusses and approves the plan for the scope of the AUPs each year. The AUPs are included in Commissioner onboarding as one of the sources of additional external audit and oversight.

Although the external auditor of PEBA has changed this year, the new firm, Crowe, has agreed to conduct the AUPs for RSIC. For this first year with Crowe, the scope of the AUPs is expected to be the same as the prior year.

3. 2022 Recommendations for further improvement:

A1: Develop vital signs for vital functions and create quantitative enterprise-wide dashboards that track actual performance compared to expected. Escalate exceptions with policy implications to the Commission. See B14.

Overarching 2: Build capabilities across the organization (including HR, IT, Accounting, etc.).

1. Background of 2018 recommendations:

RSIC had made significant progress in building its human resources capabilities across the organization including hiring a new Director of Human Resources to replace the unplanned transition of the former leader of the department. However, there was no succession plan in place.

RSIC had made significant upgrades to its support capabilities through the hiring of an investment administrator, acquiring a risk analytics system, and a document storage and management system.

RSIC had also formed an IT Steering Committee to provide oversight and governance for IT-operational related needs of the organization and, in 2018, was considering significant changes and upgrades to its risk and workflow capabilities.

RSIC had also formed a cross-functional Business Internal Investment Committee that met quarterly and was intended to ensure effective communication of business initiatives to and from the Investment Office.

RSIC had decided to develop a more comprehensive organizational strategic planning for resourcing, personnel, infrastructure, risk management, systems, and policies but did not yet have a strategic plan in place.

Recommendations in 2018 included:

- Develop a succession plan for key RSIC leadership positions.
- Develop a five-year capability development plan in conjunction with the next strategic plan for RSIC.

2. Assessment of implementation progress: Implemented

RSIC's design and execution of a multi-faceted plan to promote employee retention, facilitate recruitment, and reduce key-person risk have been effective. Objectives for each are clearly described as supporting pillars under the goal of talent management in the RSIC 2022-23 business plan and further described in the job responsibilities of the Director of Human Resources. Notable actions that collectively facilitate employee engagement and support the underpinnings of robust succession planning include but are not limited to:

- Contracting with Deloitte to perform key risk management and internal audit functions;
- Pivoting from an IT strategy based on the internal development of business applications to one that emphasizes the use of off-the-shelf, cloud-based solutions;
- Establishing a performance-based variable compensation system for investment staff;
- Continuing to benchmark compensation levels with peer agencies and setting an (unstated) objective to not lose talent to other public pension plans;
- Promoting the acquisition of CAIA and CFA certifications among staff; and

- Collaborating with local institutions of higher education to offer entry into the organization through internship programs.

The focus of the senior leadership on tactics that support recruitment, retention, and succession has served the organization well as evidenced by the recent departures of RSIC managers from private markets and human resources. In both cases, RSIC was able to sustain continuity of execution and performance despite their lean staffing model, until successors were determined – internally for the former role and externally for the latter. The CEO and his direct reports realize that RSIC, and all public pension plans for that matter, will need to remain very diligent in this area, as compensation levels in the public sector will remain well below that which investment professionals can attain in the private sector.

3. 2022 Recommendations for further improvement:

A2: Expand third-party servicing and/or establish remote / virtual workplace opportunities in select investment and investment support functions.

A3: Maintain utilization of interns in investment support roles and strengthen cross-training efforts to mitigate key person risk in the event of an emergency.

A4: Formalize an annual talent review process to identify high potential successor candidates and retention risks across all supervisory and managerial positions and create individualized development plans for potential successors to acquire the essential skills to fulfill the responsibilities of those positions if called upon to do so. See D2.

Overarching 3: Reset Commissioners' focus on strategy and oversight.

1. Background of 2018 recommendation:

There had been significant progress by the Commissioners in removing themselves from the day-to-day investment execution processes and focusing more on oversight and the longer-term strategic challenges of RSIC. The Commission had spent a significant portion of its efforts focused on rethinking the strategic asset allocation, culminating in a new long-term asset allocation being approved in February 2018.

As recommended in the 2014 fiduciary performance audit, the two Commission committees, the Compensation Committee and the Audit Committee, were renamed the Human Resources and Compensation Committee and Audit and Enterprise Risk Management Committee, respectively, and the charters of each were expanded to reflect broader oversight authorities. Although the Commission had completed annual self-assessments to identify areas of improvement, most Commissioners stated that the results of the annual self-assessment program had been marginally helpful, at best. The Commission also had not yet developed a formal continuing education program linked to key policy decisions.

The Commission delegated most investment manager selection decisions to the CIO, subject to the oversight of the CEO, which was effective as of October 2017. As a relatively new delegation, the 2018 review was not able to assess how the delegation impacted the long-term strategic focus of the Commission.

The 2018 recommendations for the Commission were:

- The annual Commission self-assessment process should be improved to better focus on the strategic objectives of the Board and RSIC and to stimulate a more productive discussion of how the Commission can continue to become more strategic; to the extent permissible, the Commission may want to spend time in closed session without staff or consultants to discuss its own performance.

- The Commission should develop its long-term strategic policy agenda to ensure it identifies all known key decisions to be made over a three- to five-year time horizon and is prepared to make informed decisions in a timely manner. The list of key initiatives developed as part of the self-assessment is a good start, but it should be longer term, not just one year.

- The investment beliefs have not been updated since 2014, are relatively high-level, and could be revisited and revised to provide a more tangible direction to the asset allocation process.

- During its annual review of the asset allocation, as required by statute, the Commission could focus more on the underlying assumptions (e.g. correlations, returns and risk) and develop more insights about the portfolio and its allocations, rather than changing the allocations. Leading practice is to have a full review of the strategic asset allocation every three to five years, with minimal year-to-year changes in between. The continuing education program should be designed to prepare Commissioners for the next asset allocation cycle over a period of years.

- The RSIC staff should work with the Commission to identify ways to streamline the materials provided through improved executive summaries and hyperlinks to supporting materials. This topic was included in the FY 2019 key initiatives list developed by the Commission.

2. Assessment of implementation progress: Partially implemented

Commission self-assessment: The Commission continues to conduct its self-assessment process. However, Commissioners report that it is somewhat perfunctory and there typically have not been any improvement action steps identified. Commissioners are pleased with the performance of staff but expressed uncertainty about their oversight role and want to improve their governance. A more effective self-assessment process, likely facilitated by a third party, could be a useful tool to more clearly define the Commission's role and opportunities for governance improvements. **Not implemented**

Strategic policy agenda: See G12.1. **Implemented**

Investment beliefs: While various statements concerning investment beliefs are made in the Statement of Investment Policy (SIOP), and many investment structure changes reflecting investment beliefs have been made, a full Statement of Investment Beliefs has not been developed by the Commission. Leading Practice suggests this exercise should be conducted. See G10.1 **Partially implemented**

Asset allocation review: We consider the overall simplification of the asset allocation targets and allocation system one of the best improvements made by RSIC over the past 4 years. The simplified target system leaves room for judgement by the investment staff for implementation, within the delegated authorities yet provides a roadmap of intent for broad strategic direction approval by the Commission. In addition, the asset class reviews ("deep dives") provide effective continuing education that prepares commissioners for the next asset allocation cycle. **Implemented**

Reporting of investment performance: A streamlined method of reporting investment performance and attribution of results has been developed. This streamlined performance reporting system is seen as a significant improvement. Consultant performance reports supplement this streamlined performance reporting by RSIC staff. With the recent consultant change, there should be continued progress on the independent verification of results from the general consultant. **Implemented**

3. 2022 Recommendations for further improvement:

See B5

Overarching 4: Align fiduciary duties and responsibilities.

1. Background of 2018 recommendation:

The General Assembly had addressed nearly all of the 2014 fiduciary performance audit recommendations through legislation which culminated in the Pension Reform Act of 2017, and the results were already very noticeable in 2018.

The fragmentation of fiduciary responsibilities was significantly reduced, including removal of the SFAA as a retirement system fiduciary. The process for setting the assumed rate of return was reformed. Now the General Assembly receives a recommendation every four years from PEBA, in consultation with RSIC and the system actuary, for the assumed annual rate of return.

The reform legislation codified establishment of the CEO position which had been implemented by RSIC in 2014. RSIC was authorized to directly engage and manage outside legal counsel for investment and asset management matters, in consultation with the Attorney General. The statutory Commissioner qualification criteria were modified to recognize relevant experience in lieu of specific credentials, and the size of the Commission was expanded with the addition of a seventh voting member to represent active members of the pension systems.

Based upon our assessment of RSIC, these legislative changes significantly contributed to the improvements RSIC had implemented by 2018. However, the two recommendations which had not been addressed by the General Assembly were again recommended by FAS in 2018:

- Delegate authority to the Commission for operational budgetary control and the setting of staff compensation and performance incentives.
- Provide an exemption to the State procurement policy for the investment management system.

2. Assessment of implementation progress: Not implemented

Budgetary authority: Delegation to RSIC of budget and personnel authority remains unaddressed.

Procurement exemptions: RSIC has not received any additional exemptions from standard procurement policies and practices for investment management systems.

The rationale for delegation of purchasing, budget, and personnel authority remains the same. This delegation would align RSIC's powers with its responsibilities. Unlike other state agencies that fall under the State's budgeting process, RSIC is subject to objective fiduciary standards that impose independent accountability. The current limits create a disconnect between RSIC's fiduciary obligations and its authority to meet purchasing, budget, and personnel needs, reduce its flexibility in responding to rapidly changing circumstances and increase the risk of suboptimal decisions being externally imposed on the RSIC and the pension systems.

3. 2022 Recommendations for further improvement:

See B1, G4 and P1.

B. Governance

G5.1: RSIC should continue to engage over time with the General Assembly to seek delegated budget and personnel resourcing authority to RSIC that is commensurate with what is needed to meet RSIC's fiduciary obligations. This ongoing advocacy should emphasize accountability for delegated authority through continued maintenance of oversight monitoring and periodic independent expert fiduciary reviews to evaluate how that the authority is being exercised.

1. Background of 2018 recommendations:

In 2018, RSIC had total authority to invest trust assets, but it did not have the authority to build the infrastructure or hire the employees necessary to invest those assets. Funds for staff compensation, information systems, research services, consultants, legal services, and overhead were appropriated from the trust by the General Assembly.

In the 2017 Pension Reform Act, the CEO was given authority to hire employees and set their compensation pursuant to an organizational plan approved by the Commission: S.C. Code Ann. § 9-16-315(H) provides:

The chief executive officer shall employ the other professional, administrative, and clerical personnel he determines necessary to support the administration and operation of the commission and fix their compensation pursuant to an organizational plan approved by the commission.

However, RSIC is still subject to the state budget process pursuant to S.C. Code Ann. § 11-11-30, which provides:

On or before the first day of November, annually, each of the several state … agencies… receiving or asking for financial aid from the State shall report to the Governor … an estimate in itemized form showing the amount needed for the year beginning with the first day of July or thereafter.

Although RSIC requested delegated budget authority as recommended in the 2014 fiduciary performance audit report, the General Assembly declined to create an exemption for RSIC, as it commonly uses the budget process to oversee agencies. The budget process still requires that RSIC submit a budget request and full-time employee (FTE) request to the Governor. The Governor incorporates RSIC's responses into the annual budget proposal which is submitted to the General Assembly. Since the CEO's authority to hire employees and fix their compensation is limited by approvals received in the budget process, the risks identified in the 2014 and 2018 fiduciary performance audit reports regarding RSIC's dependence on the General Assembly for budget approval remain.

Like other agencies, RSIC has limited flexibility to move funds between budget categories and cannot carry forward unspent funds from one fiscal year to the next. Those limitations can be challenging for an organization like RSIC that has been going through a period of rapid change and transformation .

Recruitment and retention of talented investment staff remain a concern. RSIC has a strict external fiduciary duty standard which it must meet in fulfilling responsibilities to its beneficiaries. The ability to meet that standard is highly dependent on being able to attract and retain qualified personnel in a very competitive industry. If RSIC had full delegated authority to implement its own hiring and compensation decisions, then RSIC would have more flexibility to recruit top talent and take advantage of hiring opportunities.

In practice, RSIC has not had difficulty receiving requested amounts in the budget and RSIC currently appears to be adequately funded.

However, we note that RSIC's dependency on the General Assembly to approve its budget could become an imprudent constraint in the future. There is potential for conflict between short-term political pressure to reduce expenses and RSIC's ongoing fiduciary obligation to have sufficient professional and other resources to prudently manage and monitor the investment of its trust fund assets.

2. Assessment of implementation progress in 2022: Not implemented

The General Assembly chose not to change RSIC authority for budgeting, staffing and compensation.

3. 2022 Recommendations for further improvement:

B1: The Legislature should delegate authority for operating budget, staffing and all compensation approval to the Commission to allow the Commission to set the investment strategy and ensure adequate resources are available for implementation and oversight of the strategy.

G7: It would be useful to write a "lessons learned" memorandum analyzing what circumstances, abilities, resources, governance structures, and economics need to be present for a successful strategic partnership so as to memorialize the learnings for future generations of RSIC staff.

1. Background of 2018 recommendations:

In 2014, the RSIC investment program featured eight strategic partnerships, down from the original 14 which, by one estimate, could have held more than half of the assets of the fund if fully funded.

By 2018, the number of partnerships had been reduced to seven, three of which were more active, and the investment staff articulated the specific value added for each of those relationships. RSIC was also making considered judgments about whether a new investment with a strategic partner should be made within the partnership or outside the partnership structure. Each partnership was assigned to a specific investment officer for monitoring and that investment officer acted as the investment "sponsor" for new investments within the partnerships. Those proposed new investments within a partnership went through the normal Internal Investment Committee (IIC) process.

The IIC also reviewed the strategic partnership program generally twice a year.

In addition to the legally constituted strategic partnerships, the RSIC created de facto partnerships through multiple mandates to at least one multi-product provider, resulting in both a deep knowledge of that provider and a "relationship" fee discount, without the de jure governance issues created by the previous generation of partnerships.

2. Assessment of implementation progress in 2022: Implemented

The "Strategic Partnership Lessons Learned" memo was created as suggested in 2018.

While we observed the core concept of strategic partnerships as being effective throughout the culture of RSIC's work with external vendors, the existence of formal strategic partnerships involved in the investment of portfolio assets under the historic definition used by RSIC has rapidly dwindled over the past 4 years. Strategic Partner 1 (SP1) and Strategic Partner 2 (SP2) are, to our knowledge, the remaining active Strategic Partnerships.

We understand the nature of the relationship with each has undergone significant transformation since 2018. We noted in our discussions with SP1 and SP2 that as Covid has made the execution of face-to-face meetings difficult, staff has regular discussions and meetings as appropriate with all strategic partners. Furthermore, we understand that RSIC's relationship with Strategic Relationship 3 (SR3) has expanded significantly over the past 4 years and believe that the relationship with SR3 is entering into the "strategic partnership" category. This flexible and adaptable use of outsourced resources by RSIC as evidenced in these relationships is a leading practice among state pension funds.

One of the key benefits from the strategic partnerships was the ease of investment decision making. This concept continues with the SP2 portable alpha relationship where certain investments can be made by the strategic partner without approval from RSIC staff and Commission as long as the investment is within the investment guidelines of the mandate established.

With this authority, SP2 invests in the external hedge funds and niche hedge funds they manage. In these cases, SP2 is responsible for investment, operational and legal due diligence. SP2 has a managed account side of its business. It is used when hedge funds not selected or managed by SP2 are included in the South Carolina portfolio. In these cases, typically SR3 is involved with investment, legal and operational due diligence along with RSIC staff. The effective use of third parties and RSIC's internal skills is highlighted as an example of the highly effective advancement of the strategic partner model RSIC has made in recent years since 2018.

Use of SP1 funds and use of co-investments – either alongside an SP1 fund or in an SP1 fund structure – has become the norm for investments in private debt. As is noted throughout this report, the manner in which RSIC staff work with external vendors is universally applauded by the investment community. SP1 in particular is an example where the Co-investment process and internal RSIC approval process have meaningfully changed the nature of the relationship.

In summary, the move to a governance model delegating investment authority to staff from the Commission negated the key advantages of the original Strategic Partnership model for RSIC. Furthermore, the existence of highly competent and experienced staff as well as the decision-making policies and procedures that are formalized in the IIC charter and executed with professional skill suggest RSIC has grown beyond the need for extensive use of strategic partnership model.

3. 2022 Recommendations for further improvement:

No recommendations at this time.

G9: Close attention should be given to the timely appointment of successor Commissioners when terms expire.

1. Background of 2018 recommendations:

Legislation was enacted in 2017 to change S.C. Code Ann. § 9-16-315 (2017) and reduce commissioner terms from 5 to 4 years and limit commissioners to two consecutive terms.

Some concerns were raised that achieving the intent of term limits may be vulnerable to delays in appointments effectively extending the term of the incumbent beyond term expiration as a holdover. The language allowing this in Title 9 is apparently consistent with legislative language commonly used in South Carolina.

2. Assessment of implementation progress in 2022: Partially implemented

Although there have been new Commissioner appointments since 2018, two expired term Commissioners have remained in their seats as holdovers for an extended period of time. This may not only hinder achieving the goals of term limits but also could undermine the purpose for staggered terms. It could result in loss of experience on the Commission and create succession planning problems when multiple commissioners end up being replaced around the same time because of holdovers.

From interviews for this 2022 Report, it came to our attention that delays in making appointments may also be the result of difficulty in identifying commissioner candidates that meet the statutory qualification requirements in South Carolina. RSIC commissioner qualification standards are among the strictest compared to peers in required credentials and length of experience. Those appointment qualifications are:

A person may not be appointed to the Commission unless the person possesses at least one of the following qualifications: (i) The Chartered Financial Analyst credential of the CFA Institute; (ii) At least twelve years of experience as a Certified Financial Planner™ credentialed by the Certified Financial Planner Board of Standards; (iii) The Chartered Alternative Investment Analyst certification of the Chartered Alternative Investment Analyst Association; (iv) At least twenty years professional actuarial experience, including at least ten as an Enrolled Actuary licensed by a Joint Board of the Department of Treasury and the Department of Labor, to perform a variety of actuarial tasks required by pension plans in the United States by the Employee Retirement Income Security Act of 1974; (v) At least twenty years professional teaching experience in economics or finance, ten of which must have occurred at a doctorate-granting university, master's granting college or university, or a baccalaureate college as classified by the Carnegie Foundation; (vi) An earned Ph.D. in economics or finance from a doctorate-granting institution as classified by the Carnegie Foundation; (vii)The Certified Internal Auditor credential of The Institute of Internal Auditors; (viii) At least twelve years of professional experience in the financial management of pensions or insurance plans; or (ix) At least twelve years of professional experience as a certified public accountant with financial management, pension, or insurance audit expertise (S.C. Code §9-16-315(D)).

The difficulty in locating qualified candidates for appointment to the Commission may be illustrated by the fact that four of the current commissioners are certified public accountants, a qualification where the pool of candidates is likely largest. Unfortunately, this reduces benefits that are likely to accrue from having Commission members with other professional backgrounds and viewpoints relevant to the duties of an investment board.

As a result, the advantages of imposing commission term limits and using diverse statutory qualifications for appointments may have only been partially achieved. We recommend that the Commission consider the following options to address this situation:

i) Adopt a policy that contemplates the Commission will engage with appointing authorities and take a proactive approach to offer assistance in sourcing qualified South Carolina candidates for the Commission when a holdover situation arises. If appropriate, a search firm might be engaged to assist in identifying candidates that meet the Commissions diverse experience needs; or

ii) Seek legislation to allow greater flexibility in commissioner qualifications by removing some of the credentialing qualifications while keeping the related experience requirements; or

iii) Seek legislation to expand the pool of candidates by allowing appointment of commissioners who meet the qualifications but reside out of state

We see the first option as having the greatest potential for positive results and recognize that the third option may be seen as inconsistent with established public policy in South Carolina.

3. 2022 Recommendations for further improvement:

B2: In order to retain the benefits of term limits and staggered terms, the Commission should either:

a. Engage with appointing authorities to offer assistance in sourcing qualified candidates to promptly to fill holdover Commissioner positions, or

b. If the engagement option is not successful or is not deemed appropriate, seek legislation to expand the eligible pool of candidates by either allowing greater flexibility in Commissioner qualifications or seek legislation that authorizes appointment of qualified candidates from out of state.

See also III1.

G10.1: The investment beliefs should be revisited periodically (every 3-5 years, coterminous with the asset allocation study periodicity recommended in I2) or as required by new knowledge.

1. Background of 2018 recommendations:

Based upon a recommendation in the 2014 fiduciary performance audit, the Commission developed a statement of investment beliefs as part of a series of recommendations designed to refocus the Commission on high-value strategic decisions.

A set of high-level investment beliefs were incorporated into the then-current SIOP affirmed on September 28, 2017. The 2018 recommendation was intended to ensure that the investment beliefs were periodically revisited and updated.

2. Assessment of implementation progress in 2022: Partially Implemented

As we noted in 2018, the RSIC Investment Beliefs statement is incorporated in its Statement of Investment Policy (SIOP) and is relatively high-level. We noted at that time and still believe an Investment Beliefs Statement could be revisited and revised by the Commission to provide a more tangible direction to staff regarding the asset allocation process and implementation policies and procedures.

We consider the annual update of the Statement of Investment Policy prevailing practice among RSIC's peers. Starting in 2020, the SIOP and Annual Investment Plan were combined which is also prevailing practice. Included in this regular update is an updated Asset Allocation review. While the high-level Investment Belief statement by the Commission is adequate, we recommend a statement that contemplates the challenges and beliefs unique to RSIC.

For example, the fact that most of the public market investments are now passive is, by action, a statement regarding RSIC's belief regarding the RSIC's ability to manage an active management program to add value given the resources it has available to it. Also, the significant growth of the alternative investment portfolio and the co-investment portfolio, by action, is another statement of belief in this asset category's ability to add value and RSIC's ability to implement this program.

RSIC's ability to attract, develop and retain key investment professionals is another area that could be incorporated in the Statement of Investment Beliefs. Staffing management will be critically important to RSIC's success now and in the future. The Commission should explicitly comment on the ability to execute this function given the unique constraints RSIC is working under. Peer public retirement organizations are developing more complete philosophical Statements of Investment Beliefs (SIB) particular to their system to provide guidance to senior staff when managing the organization and the investment portfolio.

3. 2022 Recommendations for further improvement:

B3: To achieve leading practice in the area of Investment Beliefs, RSIC should conduct a more complete philosophical review and discussion of investment beliefs that provides guidance to staff when managing the organization and guiding the investment of pension assets.

G10.2: The Commission approved a plan to improve the SIOP and AIP adoption process at its June 2018 meeting, which should improve the efficiency and logic of the process. Integrating an annual calendar of asset class presentations into that process should increase the robustness of the Commission's oversight and ability to provide strategic guidance.

1. Background of 2018 recommendations:

By 2018, the Commission had approved an Annual Investment Plan (AIP) which contained a high-level plan by asset class. In addition, the Commission received presentations throughout the year from various asset class investment officers, including asset class deep dives in executive session. Since the 2017 delegation decision, the asset classes did an annual "deep dive" presentation to the IIC on a rolling basis.

2. Assessment of implementation progress in 2022: Partially Implemented

We reviewed the "Deep Dive" reports for Private Debt, Real Assets, Bonds, Private Equity, the investment pipeline and General Consultant presented in Executive Session. These staff reports, as well as the Annual Investment Plan, provide the Commission appropriate opportunity to oversee the progress of each area and provide strategic guidance to staff.

One area of the deep dive reports we would like to see expanded for the Commission's review is a discussion of internal resources required and key resource dependencies involved with implementing each asset class plan. This could include mention of portfolio initiatives that would require greater resource allocations or increased budget for external resources. Comparisons to peer organizations in the implementation of the portfolio will allow Commissioners the opportunity to opine on the appropriateness of the asset class plan and implementation approach for RSIC. For instance, the deep dive for real estate and infrastructure could show what peer organizations have done in these areas and the staffing/resources they have employed compared to the RSIC resource dedication.

The successful implementation of the delegation of investment authority to staff implies an evolution of the type of reporting required by the Commission. The Annual Investment Plan (a public document) and the asset class deep dives provided in Executive Session provide the Commission ample information to understand the direction.

3. 2022 Recommendations for further improvement:

B4: Expand the deep dive analyses provided the Commission to include a discussion of resources applied and potential resources required to implement potential portfolio enhancements. This would sensitize the Commission to possible resources required to implement further strategic changes/initiatives in each asset class.

G12.1: RSIC should develop a long-term (e.g., 3-5 years) strategic policy agenda which includes decisions which are reserved for the Commission to make. The policy agenda should provide a framework for bringing key issues to the Commission and for planning Commissioner education in advance of addressing those issues.

1. Background of 2018 recommendations:

In 2018, there was a regular cadence for recurring Commission agenda items; however, there was not a long-term strategic agenda for the Commission which drives preparation for addressing major decisions and was linked to Commissioner education.

2. Assessment of implementation progress in 2022: Implemented

The Commission has typically had five regular meetings annually since delegating manager selection to staff and are scheduled for five during 2022. This appears to be an effective number of meetings, as the Commissioners said they felt they had sufficient time to discuss key topics thoughtfully and to have their questions answered.

The Consolidated AIP and SIOP document references a strategic calendar that sets a meeting schedule of five meetings per year with at least one meeting every fiscal quarter. The strategic calendar also includes standing agenda items for each meeting, with 8-10 items for each meeting in the 2022 calendar. The annual calendar is adjusted annually to include appropriate activities related to the multi-year strategic asset allocation cycle and other longer-term processes.

3. 2022 Recommendations for further improvement:

No recommendations at this time

G12.3: The Commission self-assessment processes could be improved by improving Commissioner engagement and ensuring more systematic follow-up on opportunities for improvement. The Commission should also consider the use of an experienced external facilitator.

1. Background of 2018 recommendations:

The Commission had utilized a self-assessment process which was prevailing practice since 2014. The Commission conducted self-assessments of the entire commission and the committees, but individual member, peer-to-peer, and upward (staff) evaluations were not used. The Commission chair coordinated the self-assessments using a questionnaire and open discussion. There was no individualized feedback or personalized improvement goals.

Although the Commission's self-development policies were prevailing practice, there were opportunities for improvement. Commissioner training was mandatory and the type of training was consistent with the peer group. While there was a training plan for new commissioners, there was no overall plan or budget for the Commission or individual members.

After 2018, self-assessment surveys were completed by Commissioners and then analyzed by the CEO. Differences of opinion were identified. Some Commissioners expressed concerns about follow-through on results of self-assessments and the utility of the self-assessment process. The most recent process had produced a list of key initiatives for the Commission for FY 2019.

It was recommended that the Commission revisit both the process and the self-assessment questionnaire to better engage the Commissioners. For example, consider having the process facilitated by an independent third party who interviews each Commissioner, and is able to synthesize the results, and help facilitate development of the long-term Commission strategic agenda and ongoing education needs.

2. Assessment of implementation progress in 2022: Not implemented

Although the Commission has continued to conduct annual self-assessments, none of the recommended improvements have been implemented, and the feedback from Commissioners remains very similar to 2018: everyone provides feedback, but the questions are not focused on improvements and action plans are not developed. In general, Commissioners felt that the Commission has functioned well, but that the self-assessment process could be improved. Although the process attempts to identify continuing education needs, it does not appear to have been effective.

3. 2022 Recommendations for further improvement:

B5: The Commission's self-assessment processes could be improved by:

- **Using an experienced external facilitator;**
- **Including upward feedback from staff;**
- **Revising the process to elicit suggestions for improvement;**
- **Clearly identifying continuing education needs for each individual Commissioner; and**
- **Developing action items and ensuring more systematic follow-up.**

G12.4: RSIC could improve ongoing education of Commissioners in several areas:

1. ***For onboarding of new Commissioners after selection or appointment:***

    1. ***Training should begin as soon as practical and be individualized to the specific needs of new Commissioners by identifying skills gaps and developing a continuing education plan for each Commissioner to address those gaps;***

    2. ***Rather than a one-time training event, on-boarding should be staged to provide an extended time period to complete the process. The additional time may avoid overwhelming Commissioners with too much information at once and also allow them more time to absorb the large amount of new information associated with Commissioner responsibilities;***

    3. ***Better use can be made of executive summaries with hyper-links to more detailed materials for on-boarding.***

2. ***Commissioners' continuing education plans should:***

    1. ***Incorporate the results of the Commissioner's self-assessment;***

    2. ***Be better linked to anticipated policy decisions required (see Strategic Policy Agenda) and the specific related needs identified as part of the annual self-assessment.***

3. ***The education policy could be revised to identify a subset of education requirements relevant to the Commission. For example, instead of only requiring "at least 16 hours of continuing education annually," RSIC could specify that education cover fiduciary duty, communications/stakeholder relations, asset allocation, and other topics where skills development is determined to be appropriate (including those in the strategic policy agenda).***

1. Background of 2018 recommendations:

After the 2014 fiduciary performance audit, RSIC adopted a Governance Policy Manual, which required as follows:

"(a) In order to help fulfill their fiduciary duties, Commissioners should continually develop and maintain their knowledge of pension investment and administration matters by attending educational presentations and events.

(b) Commissioners should report all continuing education related to the Commission to the Chair or CEO.

(c) Commissioners are encouraged to participate in at least 16 hours of continuing education annually, including in-house seminars, pertinent national conferences, select investment and pension plan administration courses, and continuing educational courses offered through local colleges and universities."

New Commissioners participated in training sessions and received a large on-boarding binder, which provided important information about their role on the Commission including an overview of governance policies, selected statutes, and the investment process. The training and materials RSIC had developed for new Commissioners was consistent with peer funds but difficult to digest due to the volume.

Commissioners received ongoing education from several sources. RSIC's asset managers often provided some education sessions. Also, Commissioners participated in fiduciary training offered for peer funds (e.g., NCPERS). However, it did not appear that the Commission had developed a continuing education plan based on the needs of the commissioners. Additional education was particularly important at that moment, as the Commission shifted from a tactical board that had been heavily involved in investment decisions to a strategic board that establishes policy and oversees staff. To address this need, it was suggested that RSIC consider forming a new committee or assigning responsibility to an existing committee for developing Commissioner education plans.

2. Assessment of implementation progress in 2022: Partially implemented

As several new Commissioners were appointed over the past two years, RSIC staff have worked to improve new Commissioner onboarding. In addition to a traditional "welcome packet," this included providing "A Primer For Investment Trustees: Understanding Investment Committee Responsibilities" from the CFA Institute, with an accompanying presentation. Commissioners have reported that this has been a valuable resource.

Ongoing continuing education, which traditionally has included conferences and other off-site training, has been a challenge for all retirement systems since the start of the COVID-19 pandemic. That having been said, there has not been an organized Commissioner continuing education program, and participation in external training programs has been ad hoc and at the initiative of individual Commissioners.

Prior to the asset allocation change in 2019 there was training from the investment consultant, the PEBA actuary, and external investment managers, to assist the Commission in preparing for the discussions.

Over the past year, the CEO has assigned responsibility for developing the Commissioner continuing education program to the Managing Director for Investment Administration. One of the objectives is to develop individualized Commissioner training plans that meet the specific needs of each Commissioner. However, this is in the early stages of implementation.

3. 2022 Recommendations for further improvement:

B6: Implement the planned individualized Commissioner training plans, starting with the onboarding process and informed by feedback from the annual Commission self-assessment process.

B7: Develop a "core curriculum" training program for all Commissioners that anticipates upcoming topics based upon the strategic policy agenda and ensures that all Commissioners are prepared for discussions.

G13.2: Expedite implementation of an ERM program.

1. Background of 2018 recommendations:

The enterprise risk management (ERM), Internal Audit (IA) and Compliance functions provided an important source of internal independent reassurance to the senior executive, the AERMC, the Commission and their key stakeholders. Internal independent reassurance was provided by those who were independent of management in that they report directly to the Commission (not through the CEO) about the reliability of management's reports and assurances.

There were also external sources of reassurance such as the external auditor and fiduciary performance audits (such as this report) commissioned by the Office of the State Auditor. The State Auditor also reviewed RSIC directly, typically focused on the finance and administration areas. These reports were discussed by AERMC and shared with all Commissioners via WatchDox.

Compliance conversations were frequent among the executive leadership team. Until the Director's departure, there were regular compliance conversations between legal and compliance. These were ongoing. Internal legal counsel was considered to be a great resource.

There was a strong tone at the top. The CEO made it clear that non-compliance was unacceptable and frequently checked in with Compliance. Compliance topics got time as needed at Business IIC or Investment IIC to cover topics. The CIO also recognized the importance of compliance. A compliance update was provided to the AERMC although this focused on processes rather than outcomes. More detailed discussions also happened as needed (e.g., when reviewing the results of the annual manager compliance questionnaire).

In 2018, risk discussions were an almost constant occurrence at the agency among key staff and, as needed, with Commissioners. However, there was no systematic way to understand and manage risks across the enterprise. RSIC was planning to implement an ERM program in 2014, but by 2018 ERM was one of the few functions within the control of RSIC where not much progress had been made.

2. Assessment of implementation progress in 2022: Partially implemented

Enterprise Performance Risk Management

RSIC has developed a three-phase approach to enterprise risk management. (See Appendix 1 for a description of the three phases)

1. Annual Qualitative Assessment
2. Quantitative Assessment and Reporting
3. Alignment with strategy and business plan.

The Audit and Enterprise Risk Management Committee (AERMC) receives a quarterly heat map report based on the annual risk assessment as well as occurrence related.

Internal Audit (IA) annual risk assessment and annual risk plan is informed by these assessments. RSIC IA is co-sourced with Deloitte. The PEBA external auditor is also performing agreed-upon procedures to test control effectiveness in key areas as shown in the heat map.

2018 ERM Recommendations	Summary Implementation Status Yes / No / Partial	2022 Lagging / Prevailing / Leading
Step 1: Define RSIC's Investment Function Business Model	Yes	Prevailing
Step 2: Verify / Assign Executive Owners	Yes	Prevailing
Step 3: Assess Performance and Risk	Partial	Prevailing
Step 4: Define / Refine KPIs / KRIs	Partial – In process	Prevailing
Step 5: Manage Performance and Risk	Yes	Prevailing
Step 6: Monitor and Report Performance and Risk	Partial	Prevailing
Refine Risk Appetite and Tolerances	Partial	Prevailing
Roles and Responsibilities		
Incident Management	Yes	Prevailing
Role of the AERMC	Yes	Prevailing
Role of the ERM Function	Yes	Prevailing
Tracking Progress Performance and Risk	Partial	Prevailing
Independent Reassurance: The Role of Internal Audit (IA)	Yes	Leading
Compliance	Yes	Prevailing

RSIC has made significant progress in implementing the 2018 recommendations. Tone at the top remains strong. RSIC appears to have developed a high-performing culture characterized by a strong sense of commitment, with high visibility of the importance of effective performance and risk management, and rapid response. Risk is the subject of frequent discussion and is top of mind.

The COO's direct reports have constant communication with the investment team, both through formal and informal meetings. The COO believes this is the best way to understand and measure operational performance.

RSIC has developed and deployed an enterprise risk management process that is consistent with prevailing practices. The risk assessment process stimulates constructive dialogue with operational management and the identification of risk management improvements.

In the quarterly AERMC meetings, the heat map is provided and Internal Audit reviews third-party verification regarding control improvements.

However, RSIC recognizes that while subjective assessments are necessary, additional quantitative measures should be implemented regarding monitoring enterprise performance risks.

The CEO has identified the need to streamline and integrate reporting, to better understand what is essential for the Commission, and to create an enterprise dashboard. The target implementation is December 2022. The plan is to leverage existing metrics and reporting.

The CIO has likewise identified the need for a better investment dashboard with escalation criteria and a process for when to involve the board, e.g., rebalancing. Tolerances need to be effectively established and affirmed by the Commission.

There is an Incident Management Plan and Team as part of RSIC's Business Continuity Plan. The Incident Management Team is comprised of a cross-functional group of executives representing all major business functions. There are identified alternates for each lead role on the team.

Despite the progress made thus far, there are always opportunities for improvement. Currently:

- RSIC lacks a common high-level definition of risk, e.g., strategic and operational although one is implied.
- Strategic risks are combined with operational risks which makes progress reporting difficult as they represent different time frames and metrics. Treating them separately may help reporting.
- Heatmaps are better suited for identifying processes in need of remediation and for audit planning purposes. Heatmaps are also better suited for management purposes and for audit planning than reporting performance and risk to the Commission.
- Subjective assessments are inevitably biased, the possible causes are limited by team knowledge and the relationships between causes may not be understood.
- Risk appetite is not defined.
- Risk tolerance is not defined.
- Dynamic root cause analysis is not consistently part of risk assessment/performance reporting.
- There is potential for risk to be separated from the performance management process. i.e., KPIs and should therefore be addressed as enterprise performance risk management.
- There is a need to clarify / reinforce roles and responsibilities: Commission, executive, independent audit and advisors.

See Appendix 2 to help to better understand the relationship between RSIC's three phases and accelerate progress by organizing roles using a timeline.

3. 2022 Recommendations for further improvement:

To accelerate RSIC's progress, we recommend the following using RSIC's three-phase approach:

Phase 1 - Annual Qualitative Assessment

B8: Continue the annual assessment process to proactively identify how processes / performance might fail and what could be done to prevent, or quickly detect and correct it. Currently seen as Phase 1. This assessment should help to inform the development of control improvements, internal audits and agreed-upon procedures (AUP).

Phase 2 - Quantitative Assessment and Reporting

B9: Adopt a common definition of risk, for example, consider risk as the potential for an unacceptable difference between actual and expected performance regardless of cause (this is consistent with definitions of investment risk).

B10: Adopt a definition of risk appetite, e.g., the willingness to accept risks of goal/strategy, e.g., asset allocation and define risk appetite for all major goals, e.g., asset allocation.

B11: Adopt a definition of risk tolerance, e.g., the acceptable difference between actual and expected performance using KPIs and define tolerances for differences between actual and expected performance for board approval.

B12: Determine criteria for escalation to the board, e.g., cause for concern vs. unacceptable and related policy implications.

B13: Define key performance indicators (KPIs) for vital functions for board approval.

B14: Adopt exception-based reporting for vital signs for vital functions based on tolerances.

B15: Perform root cause analysis after every unacceptable or unexpected change in performance based on tolerances and identify policy implications.

B16: Develop links to underlying information for the summary enterprise performance dashboard.

B17: Align independent verification with each key performance indicator.

Phase 3 - Alignment with Strategy and Business Plan

B18: Address strategic risk, (cross-functional risk) as part of the strategic plan, and address organizational capabilities required to be more resilient and agile.

G16.1 The IIC could be improved through:

a. ***The IIC is technically advisory to the CIO. In reality, it would be highly unusual for the CIO to proceed with an investment decision opposed by the IIC. Given that, the charter should be revised to note that any such CIO override of a formal vote by the IIC should be reported to the CEO and Commission, so that they can be aware of the situation. While the CEO attends IIC meetings and would very likely be aware of such a situation, formalizing the process so as to provide documentation in such a rare instance would be a helpful governance procedure, particularly since the CEO can veto such a decision.***

b. ***An important function of the IIC is to review and modify policies and procedures. At present, there is no obligation that the broker-dealers used by the short-term fixed income desk affirm annually that they comply with the RSIC's ethics and gifts policy. (The RSIC staff makes such an affirmation, and the requirement for such an affirmation is included routinely in investment management agreements with external asset managers.). The IIC should work with Compliance and Legal to create an annual affirmation for any broker-dealer executing trades for the RSIC directly.***

c. ***Our understanding is that there is a broker-dealer selection policy which requires a broker-dealer to have $25 million in net capital, as well as certain regulatory checks. Brokers are recommended by the head of the short-term desk and approved by the CIO. The IIC reviews trade volumes by broker-dealer semi-annually and there is an informal annual review process. There is no formal process to detect potential issues at broker-dealers, though the head of short-term fixed income monitors news services. The IIC should formalize the annual review process and add an environmental scan (news feeds, FINRA and SEC checks, etc.).***

1. Background of 2018 recommendations:

At the time of the 2014 fiduciary performance audit, the IIC was relatively new, attendance was limited, there was minimal cross-asset class pollination and even less interaction between non-investment functions such as legal and operations.

By 2018, there had been a major evolution in the IIC. It was now central to the RSIC's investment program. Voting members were appointed by the CEO, with the input of the CIO. New investments required approval by the IIC, and it was the forum at which all the diligence (investment and operational) was discussed. It had been successful in surfacing issues, cross-pollinating analyses across asset classes and raising both investment and specific manager diligence questions.

There was a forward calendar and scheduled performance and risk reviews. The voting members of the IIC met as a peer review committee to guide and track potential new investments. The first peer review examined the potential investment for "fit;" in other words, if the investment were to satisfy due diligence requirements, would it achieve the desired impact on the overall portfolio. The second peer review (and a subsequent follow up) examined the qualifications of the particular manager/general partnership by reviewing the investment and operational due diligence and consultant report (if any).

Effectively that meant that the IIC members examined new investments three times (twice constituted as peer reviews and, finally, as the formal IIC). The IIC charter had been amended in May 2018.

2. Assessment of implementation progress in 2022: Implemented

a. We note that the IIC charter dated April 4, 2022 requires that a scenario of the CIO override of IIC decisions is to follow a formal documentation and review process with the CEO and the IIC. In general, the IIC mandate and the management of its implementation of this governance process is a leading practice among peer organizations.

Should RSIC grow significantly, the ability to act with the apparent flexibility and transparency evident in the ICC Committee structure today could be impaired. This could be a disadvantage to the possible significant expansion of the RSIC investment staff and suggest staff expansion be done sparingly going forward.

The creation of the Co-Investment Subcommittee (CIS) was an effective addition to the IIC mandate during the past 4 years. During our interviews with external parties, the RSIC staff received universal praise for their ability to organize themselves and execute the required steps to capitalize on co-investment opportunities. RSIC has set itself up as a leading practice organization in the world of co-investments.

To date, we understand co-investments have been made primarily in the private equity area. This concept should be expanded when opportunities are available in Real Estate / Infrastructure and possibly in Private Credit (with difficulty) and utilize the Co-Investment Subcommittee concept and flexible staffing to review co-investment opportunities as they arise. This would help to ensure that co-investment opportunities are consistent with the overall Annual Investment Plan.

The IIC and CIS are operating at a leading practice level for organizations of the size of RSIC. As co-investment activities are opportunistically expanded into the real estate and infrastructure areas as well as private credit, the staffing focus should be on developing one or two selective generalists with skills and flexibility to expand the due diligence effort to take advantage of co-investment opportunities beyond the private equity area. Continued use of external resources to assist in the due diligence process for the timely evaluation of these opportunities when they arise should be encouraged.

b. As a component of the 2020 restructuring, RSIC no longer maintains a short-term trading desk. The recommendation relating to broker-dealers with whom RSIC transacts directly is no longer applicable.

c. As a component of the 2020 restructuring, RSIC no longer maintains a short-term trading desk. The recommendation relating to broker-dealers with whom RSIC transacts directly is no longer applicable.

3. 2022 Recommendations for further improvement:

No recommendations at this time

G16.3: The IIC (including the peer review process) may also present an opportunity to improve communications with the RSIC's private asset class consultant. We do not suggest inviting the consultant to the meetings on a routine basis for two reasons: 1) There is a balance between using the IIC to broaden and improve communications and the free flow of informed discussion around sensitive investment issues which become unwieldy with a large number of participants, and 2) there is the threat of group think if the independent consultant regularly participates in IIC meetings.

However, a verbal or electronic report following the initial peer review meeting, including which partnerships are being considered for investment, could be circulated timely to the consultant, thereby furthering the consultant's understanding of the investment staff's thinking and priorities. That would serve to both alert the consultant as to potential upcoming due diligence needs, as well as provide the consultant with an early opportunity to volunteer relevant information to the RSIC staff.

1. Background of 2018 recommendations:

See the background to G16.1, above.

2. Assessment of implementation progress in 2022: Partially implemented

RSIC operates as a highly functioning team across the various investment, legal and business functions when considering private investment opportunities. The IIC Investment review meetings are open to staff and appear to be occurring bi-weekly. Business review meetings operate quarterly and provide ample opportunity for cross organization communications. Other meetings, e.g., quarterly performance reviews, quarterly risk management meetings, asset class deep dive reviews and the annual policy review, appear thoughtfully designed and constructed to assure ample opportunity for discussion and constructive debate but also far enough apart to assure focusing on the meeting process doesn't become a burden to getting real work done. RSIC staff has done an excellent job leveraging SR3's consulting services into its decision process. In general, RSIC appears to be operating internally and leveraging external agents as a well-considered organization at a leading practice level.

While RSIC's staff is operating at a leading practice level and utilizes the asset class consultants and manager partners effectively, there appears to be a lack of input and oversight by the RSIC Commission members and its general consultant. The fact that the Commission's consulting relationship has changed from Consultant 1 (C1) to Consultant 2 (C2) to Consultant 3 (C3) to now Consultant 4 (C4) over the past decade is an indication that the Commissioners' relationship with its the external consultant has not worked effectively.

A retainer consulting relationship typically has a degree of longevity attached as an interactive, trusting relationship generally develops. From this perspective, the RSIC Commission and staff relationship development with the Commission's external investment consultant is operating at a lagging practice level and requires focus to repair the relationship model in place today.

The general consultant has a unique position for being able to bring comparative peer information to the attention of the Commission and staff. We suggest that an education session be reserved during each board meeting for the Consultant to be able to present alternative paths or solutions they are observing in the marketplace for issues being faced by the RSIC staff and Commission.

There is a need for an overhaul of the manner in which the RSIC Commission interacts with its investment consultant.

a. First, primary contacts for the consultant should be established at the staff level. This point of contact would ideally not be focused on investment issues – but would facilitate information transfer to allow the consultant to process the governance situation and develop focused recommendations for process improvement and resource allocations. The staff's historic role with the Strategic Partnership program appears to be a good model to work from when establishing a facilitation role for the general consultant with staff.
b. Second, a primary contact role should be developed with a member of the Commission. This contact should be focused on information interpretation and transfer and allow the consultant to get its finger on the pulse of the overall Commission. Education agendas should evolve to ensure Commissioner skills are appropriate for their oversight role and independent verification of staff actions.

Both staff and Commission should schedule at least monthly check-ins with the Consultant. While it is difficult to quantitatively measure the quality of interaction and relationship development that happens between a consultant and key points of contact, a formal 360-degree review by the Commissioner contact and Staff contact each year to explore strengths and areas of improvement is suggested. The goal will be to have the consultant observe and independently opine on the investment staff and their implementation of the investment program and for the consultant to bring best-in-class ideas for both governance and resource allocation to the attention of staff and the Commission for consideration.

3. 2022 Recommendations for further improvement:

B19: The Commission needs to "take ownership" of the general consultant relationship going forward and become much more involved in the successful implementation of this relationship. Focused points of contact at both the Staff and Commission level and regularly scheduled points of interface should be established and nurtured.

G18.2: Identify metrics, such as activity on RSIC's website and surveys of stakeholders, to help measure the progress of the communications plan.

1. Background of 2018 recommendations:

The FY 2019 communications plan identified goals, audiences, methods, and proactive initiatives to expand stakeholder understanding of RSIC's role and objectives.

2. Assessment of implementation progress in 2022: Partially implemented

Although there was a stakeholder communications policy and plan developed for FY2019, there were not any metrics identified and progress against the plan was not monitored. The COVID-19 pandemic likely had an impact, but at the same time may have increased the importance of well-planned communications. It is clear that the CEO and staff communicate well with the General Assembly and maintain a very positive relationship with both chambers.

Although no major issues with stakeholder communications were observed, there should be a more formalized plan, with specific goals and accountabilities, to ensure communications efforts are more proactive. For example, a periodic update provided to members, through the State Employees Association, could increase awareness of the role of the RSIC.

3. 2022 Recommendations for further improvement:

B20: The 2019 communications plan should be updated and include specific activities and accountabilities, and progress should be actively monitored. The Commission should be advised of the plan and progress.

C. Policy review and development

P2.1: RSIC should update the policy to address the custodial relationship and continue to evaluate exposures when its counterparty relationships change.

1. Background of 2018 recommendations:

RSIC had approved an overlay counterparty risk policy in March 2015. The policy was "limited to OTC derivative transactions executed by an OM [overlay manager] on behalf of RSIC. Non-overlay counterparty risks are covered by separate governing documents."

The policy established internal monitoring standards, material violation of which resulted in escalation to the attention of the IIC. In such cases, RSIC could then decide to override the recommendations of the overlay manager, as approved by the CIO.

RSIC addressed the area it deemed to have the most exposure, i.e., overlay counterparty risk, and also assessed the risk in other areas of RSIC investment activities, such as custody.

RSIC believed all non-overlay counterparty risks were covered by separate governing documents. Going forward, it was recommended that RSIC should continue to evaluate counterparty risk potential if it enters into foreign exchange, bond swap, other collateralized assets, and electronic securities exchange transactions, for example, where counterparties may pose significant counterparty risks to RSIC.

2. Assessment of implementation progress in 2022: Implemented

RSIC and PEBA's joint management of counterparty risk as it relates to their custodial relationship with and oversight of BNY Mellon is considered leading practice among its peers. While many public pension plans with split organizational "custody" of the relationship with their asset safekeeper often wrestle with fundamentals of accountability, oversight, and prioritization of needs, RSIC and PEBA are to be commended for jointly establishing a very effective operating model that emphasizes transparency and performance.

Overall contractual responsibilities, formally managed through the Treasurer of State, now reside with RSIC. BNY Mellon works with PEBA directly, a relationship which is supported by a written policy understanding between RSIC and PEBA. From the perspective of custodial oversight, PEBA and RSIC have established a robust set of capabilities, as evidenced by the following:

a. BNY Mellon deploys the same servicing team for both RSIC and PEBA;
b. PEBA investment accounting participates with RSIC in joint quarterly meetings with BNY Mellon;
c. Combined service level metrics with clear KPIs were implemented in 2020;
d. A monthly scorecard is produced and distributed by BNY Mellon; and
e. BNY Mellon supports a reconciliation between their accounting book of record (ABOR - IAS) for PEBA and their performance book of record (PBOR-Caissa) for RSIC.

Finally, an annual review of componentized custody and ancillary fees is performed at the IIC.

Broker A acts as an agent for RSIC when negotiating ISDA (International Swaps and Derivatives Association) agreements for the OTC swaps they enter into on behalf of South Carolina using their Master ISDA agreement they utilize across clients. Collateral for these agreements is held at a separate custodial account at BNY Mellon. Broker A's ODD counterparty review is we believe a significant backup to the counterparty due diligence and legal work performed in house by RSIC staff.

As custodians such as BNY Mellon continue to expand their service offerings beyond the traditional spaces of asset safekeeping and plan accounting and drive down costs through bundled servicing, PEBA and RSIC should ensure that they examine other potentially beneficial offers (to both the middle- and back-office) through a joint lens deploying a return on investment (ROI) or cost-benefit analysis (CBA) approach. As banks continue to drive down the costs of services for commodity functionality, asset managers and asset owners may find opportunities to commensurately reduce their expense footprint in delivering additional, value-added middle- and back-office investment services.

3. 2022 Recommendations for further improvement:

C1: The finance departments of RSIC and PEBA should consider jointly performing a total cost of ownership analysis (TCO) of the suite of investment middle- and back-office services every few years and compare the results to a broader set of services that their custodian may offer in a bundled bid.

P2.3: RSIC should update the template IMA to incorporate specific requirements of the statutes and SIOP. In addition, RSIC should update its policies to:

- ***i. Require that prospective new managers submit their proxy voting policies to RSIC for initial review so that RSIC can confirm that the proxy voting policies are consistent with the interests of the retirement systems and their participants and with proxy advisor oversight requirements at the beginning of the relationship;***
- ***ii. Require existing managers to provide copies of the manager's policies and procedures for monitoring its proxy voting on behalf of RSIC and evaluating the capabilities of its proxy advisors so that RSIC can verify that each manager is able to meet its obligation to vote proxies in the interests of the retirement systems and their participants;***
- ***iii. Require managers to submit their evaluations of proxy advisors, including how proxy advisors manage conflicts of interest;***
- ***iv. Require managers to notify RSIC if the manager has changed proxy advisors and to provide a copy of any new proxy voting policy covering RSIC's proxy issues so that RSIC can confirm the policy is in the interests of the retirement systems and their participants; and***
- ***v. Formalize RSIC's process for monitoring its proxy voting, including documentation of RSIC's annual review of proxy votes submitted in response to the annual compliance questionnaire. This review should focus on identifying key votes that are material to the plan.***

1. Background of 2018 recommendations:

The 2018 Report recommended that RSIC update its Investment Management Agreement to ensure that contractual proxy voting standards are consistent with the statutes and the SIOP; review external manager proxy voting practices; and formalize related manager reporting and RSIC review practices.

2. Assessment of implementation progress in 2022: Implemented

RSIC now has policies or practices in place that allow it to address the issues which were raised in the 2018 opportunities for improvement.

The RSIC standard IMA was revised to be consistent with the SIOP and to incorporate additional reporting requirements. It now provides:

"Manager is authorized and directed to vote all proxies, or to direct the Physical Custodian (as defined below) to vote proxies, in keeping with the Manager's duties under federal and state law to act in the best interests of the Client, and generally to exercise any of the powers of an owner with respect to the assets under Manager's control, subject at all times to the absolute right of Client to direct said voting of proxies upon written notification to Manager. Manager agrees to promptly (i) provide notice to Client if the

Manager changes its proxy voting advisor or (ii) provide Client a copy of its proxy voting policy in the event of any material changes or amendments to the policy. Manager shall provide a written annual summary to Client summarizing proxy votes cast during the previous year. The report shall also (i) detail any changes that have occurred in the Manager's proxy voting practices, and (ii) note any instances where proxies were not voted in accordance with the best interests of the Plan."

This improved policy consistency and enhanced reporting transparency augment RSIC's ability to monitor compliance with its delegated proxy voting standards. Collectively, these SIOP, IMA, annual manager compliance questionnaire responses and audit practices allow RSIC to exercise a reasonably prudent level of proxy voting oversight of delegated proxy voting responsibilities.

3. 2022 Recommendations for further improvement:

No recommendations at this time

P2.4: RSIC should update the Securities Litigation Policy to clarify the approval roles of the Commission, the Legal Division, executive leadership, and the Attorney General (if any).

1. Background of 2018 recommendations:

In 2018, the Securities Litigation Policy in Part VI of the SIOP described the process RSIC would follow for identifying and considering a securities claim. That included the process for identifying potential claims, hiring claim evaluation counsel, serving as lead plaintiff, and selecting outside counsel. However, the Securities Litigation Policy was not yet updated to clarify the roles of the Commission, the Legal Division, executive leadership, and the Attorney General (if any). RSIC had recently released an RFP for securities litigation counsel in 2018, and the Legal Division was planning to update the Securities Litigation Policy to incorporate important considerations learned in that process as well as this recommendation.

2. Assessment of implementation progress in 2022: Implemented

The 2018 Report recommendation was addressed through revision of the SIOP to explicitly set forth delegated authority to the Chief Legal Officer, Executive Leadership Team, and CEO in regard to review and approval of securities claim litigation. Under new authority for RSIC to select and manage its outside legal counsel, RSIC also did a competitive selection and retained four qualified law firms to provide monitoring, evaluation and litigation services relating to recovery of losses in securities claims. These changes clarified application of RSIC's securities litigation policy and addressed the 2018 recommendation.

3. 2022 Recommendations for further improvement:

No recommendations at this time

P2.5: RSIC should amend the Ethics Policy to provide the same level of specificity regarding standards of conduct applicable to employees as is provided in Policy I(I)(3) of the Governance Policy Manual applicable to Commissioners.

1. Background of 2018 recommendations:

RSIC revised the Ethics Policy applicable to employees in July 2016. The revised Ethics Policy described the sources of ethics laws and addressed common ethics issues that arise for employees, such as application of the travel policy provisions. However, while the revised 2016 staff Ethics Policy referenced the standards of conduct described in S.C. Code Ann. § 9-16-360, it did not provide the same level of specificity on them as is provided for Commissioners in the Governance Policy Manual.

For example, the Ethics Policy did not indicate that an employee may not represent anyone before RSIC while that person is employed with RSIC and for a year afterwards. In addition, the Ethics Policy did not mention that there is a three year "cooling off period" during which RSIC is prevented from doing business with a former employee. These Standards of Conduct were described in Policy I(I)(3) of the Governance Policy Manual, and the 2018 Report recommended that a similar description of the statutory standards of conduct be incorporated into the Ethics Policy so that they provide the same level of guidance to employees as for Commissioners.

2. Assessment of implementation progress in 2022: Implemented

The current employee Ethics Policy contains detailed explanations of the RSIC standards of conduct, with examples. While the post-employment "cooling off period" is not addressed in the policy, it is covered in the Post-Employment Notice that every departing employee receives and signs. In addition, extensive ethics training is provided to all RSIC employees on an annual basis. These provisions and practices fully address the concerns raised in connection with the 2018 recommendation.

3. 2022 Recommendations for further improvement:

No recommendations at this time

P5: RSIC should engage with the General Assembly to revise the statutes to exempt RSIC from state procurement requirements for direct investment support services, including IT systems, similar to brokerage and investment management and advisory services.

1. Background of 2018 recommendations:

Although RSIC was exempt from the standard State procurement process for brokerage, investment management and advisory services, it was not exempt for investment support systems. RSIC cited multiple examples of systems procurements that have taken a year or more to complete.

State procurement processes limited RSIC's ability to do the same kind of expert due diligence on complex investment system purchases as they do to hire investment managers. This limitation could impede RSIC's ability to timely respond to service needs from market developments and to consistently meet its fiduciary duty of care. Benchmarking indicated that half of RSIC's investment board peers have an exemption from state procurement requirements for direct investment support services such as IT systems, which is a leading practice.

The General Assembly chose to retain the requirement for RSIC to follow state procurement processes for direct investment support services.

2. Assessment of implementation progress in 2022: Not implemented

The General Assembly chose to retain the requirement for RSIC to follow state procurement processes for direct investment support services.

3. 2022 Recommendations for further improvement:

C2: RSIC should engage with the General Assembly to revise the statutes to exempt RSIC from state procurement requirements for direct investment support services, including IT systems, similar to brokerage and investment management and advisory services.

D. Organization structure

O1.2: The investment organization could be improved through:

- ***a. There have been a number of personnel changes made since the last full succession plan review. As a result, the succession plan is out of date and should be revised.***
- b. ***The CIO should determine if additional resource(s) are needed in private markets.***

1. Background of 2018 recommendations:

While the RSIC has faced challenges in hiring and maintaining staff, the RSIC investment program appeared adequately staffed at the time of the 2018 review. One possible exception to that analysis was private markets, which was categorized as a "pain point" by one senior RSIC official, and which was expected to become more so with the planned increase in co-investments.

2. Assessment of implementation progress in 2022: Implemented

The succession plan has been recently updated and is generally updated annually. In addition, the annual business plan includes specific steps to support succession planning, retention, and recruitment.

Proper investment staffing levels are tied to the execution of appropriate investment strategies and balance the retention of in-house talent while utilizing available external talent where and when appropriate. RSIC has done an admirable job of staffing, utilizing third-party resources appropriately, and flexibly adjusting staffing levels as time has changed, in particular with the decision to delegate investment authority to the staff in recent years.

From the current staffing position, the decision to expand the alternative investment program, in particular in the co-investment area, and the use of primarily passive investment management in the public markets, are key to defining current and future staffing needs. From the perspective of opining on the objectives of the 2018 report, staffing plans were successfully implemented.

Consideration of a more flexible staffing support model is in order for the support areas of the RSIC investment staff. As RSIC contemplates and implements revisions into more focused investments into private equity, real estate and infrastructure, and potentially other asset categories, consideration of enhanced staffing levels will likely be required on an opportunistic basis. Possible staffing enhancements through the successful use of interns and external consulting resources should be considered.

As is discussed throughout this report – key person risk exists at the mid-level and senior levels of the RSIC organization. Use of existing staff and external resources either through consultants or through asset managers has been effective. However, staffing expansion needs to be done for purposes of redundancy and talent development, especially at the junior and intern level. As RSIC grows in sophistication of its investment program, recognition of the fact that RSIC is participating in the national/global competition for investment talent needs to be kept in mind. Relying on strategic external resources such as SR3 and/or other external resources can enhance delegated internal decision making. Adjusting investment goals for what is implementable given the culture and resources of RSIC needs to be kept top of mind.

3. 2022 Recommendations for further improvement:

D1: Develop a flexible staffing model which allocates resources to areas of investment emphasis – making use of interns and other beginning level talent from South Carolina's university system enhanced by the use of external consultants when required.

O3.3: The Commission will need to closely monitor the effects of recent changes in the incentive payment plan on the recruitment and retention of investment staff.

1. Background of 2018 recommendations:

The RSIC compensation policy provided that it be reviewed by the Commission at least every three years; it had been last amended in April 2018. It established objectives, modified targets and replaced performance incentive compensation only for investment staff with base salary increases that can be earned by all staff. Although the overall compensation target was reduced, current salaries still needed to rise to reach the new target. The hiring and retention of quality staff remained challenging.

The performance awards pool available to investment staff was smaller than under the previous incentive program. However, the new program addressed issues the Legislature had with the previous program and provided RSIC more authority in making awards. The CEO was to annually report to the Commission on the effects of the compensation policy and to provide regular updates to the HRCC.

2. Assessment of implementation progress in 2022: Implemented

The same comment applies from 2018. Commissioners and RSIC need to continue closely monitoring the incentive payment plan's impact on retention and recruitment of investment staff. Continued retention of external compensation and HR specialists are encouraged. These resources will provide external input and validation on this topic. RSIC cannot pay private sector compensation levels for top talent.

Maintaining an appropriate work / life balance for employees including allocation of proper support resources including technology and a positive work culture is key for retaining talent for RSIC. Yet compensation levels need to be "in the ballpark" to retain talent. Approaching 90% of national compensation levels for comparable public pension fund jobs is a reasonable goal for RSIC.

The enhanced focus on the ongoing retention and recruiting for beginning, mid-level and senior talent at RSIC is appropriate. RSIC should continue to utilize South Carolina colleges and universities as a source of candidates for the internship program and beginning level roles that provides jobs and training for local talent. This path, combined with continued attention on making RSIC an employer of choice for professionals focused on an investment related career in South Carolina, should be effective for RSIC.

RSIC's early recognition of talent from the intern level upwards is essential in developing staff along the flexible / generalist investment skills model we suggest. Internal talent can be leveraged when required by specialist skills from consulting organizations and other third parties. This path won't be perfect or easy to implement but, given the many natural constraints at RSIC, it is the most likely to achieve success in attracting and retaining talent for the organization. The Commissioners should take an active role in monitoring this issue at the Commission level, receiving external compensation input from third party sources and regular reports from staff on recruiting, retention, and talent development.

3. 2022 Recommendation for further improvement:

D2: A full talent development and monitoring program should be implemented by RSIC staff and monitored by the Commission that makes use of locally grown talent whenever possible and supplemented by consulting support when necessary.

O3.5: Staff development could be improved through:

   a. Update succession plans for senior management positions.

   b. Annually review succession planning across the organization with the HRCC.

1. **Background of 2018 recommendations:**

Succession plans for the CEO, Chief Investment Officer, Chief Operating Officer and Chief Legal Officer needed to be refreshed. RSIC provided financial incentives for training and professional certifications, and access to on-line courses to help staff prepare for more responsibility. The Commissioners did not have a specified role in succession beyond the hiring of the CEO.

2. Assessment of implementation progress in 2022: Implemented

Since the 2018 report, RSIC has taken deliberate steps to broadly improve its succession planning capabilities at the senior level. A number of noteworthy developments that collectively place RSIC among leading practices in succession planning include:

- Accountability for leading organizational efforts in succession planning is clearly defined in the list of essential responsibilities in the position description of the Director of Human Resources;
- An objective contained within the Talent Management Goal in the SCRSIC 2022/23 Business Plan to “Ensure succession planning across the agency remains pertinent and updated;”
- The direct linkage of training and development strategies to support succession plan goals; including the use of CFA and CAIA certifications to incentivize investment support staff to consider careers in the front-office;
- The adoption of an annual review of the state of succession plans at RSIC between the Director of Human Resources and the HRCC;
- The adoption of a concerted and broad-based effort to document processes to facilitate onboarding and training in order to mitigate key person risk; and
- The inclusion of succession planning on the organization’s risk dashboard.

Clearly RSIC senior management recognizes the challenges faced by public pension plans to recruit and retain talent in the current employment market. Indeed, in the past two years, the organization has experienced turnover in key roles including in the lead manager role of Private Market Investments and HR itself. Nevertheless, the organization is recognized by its vendors for maintaining a lean posture accompanied by a culture of empowerment, a strong intern program for investment management, and the effective utilization of third-party services.

Continuous attention and development and strengthening of RSIC’s bench is essential to reducing key person risk and improving succession planning readiness at all levels of the organization. While Funston recognizes that RSIC largely operates at a prevailing or leading practice across nearly all functional areas, a few of those areas are thinly staffed with high performing, specialized resources. Where applicable, RSIC has effectively utilized third party service providers to augment capacity, especially as needed to meet volume demands.

Despite the remarkable progress that RSIC has made in developing and retaining a team of experts that are well qualified to execute the demanding task of investing the South Carolina Retirement System pension assets, FAS advises that the organization retain a keen focus on key person risk, especially in some key areas within investment services that are thinly staffed. As the organization moves forward with plans to introduce variable compensation opportunities for the investment team, members of the middle-office team may likely aspire to elevate their careers and compensation opportunities and explore front-office roles. Along with existing incentives in place (e.g., CFA certifications), a renewed focus on cross-training may provide RSIC with some needed flexibility to prevent key-person risk in the event of an emergency.

3. 2022 Recommendations for further improvement:

D3: Maintain utilization of interns in investment support roles and strengthen cross-training efforts to mitigate key person risk in the event of an emergency.

O3.6: The Human Resources function should provide leadership for development of a multi-year (3-5-year time horizon) infrastructure business plan which considers the needs and priorities of the organization.

1. **Background of 2018 recommendations:**

RSIC had a three-year strategic plan that broadly outlined its investment beliefs, vision, and objectives, but did not yet have a broad-based plan for developing the organization's capabilities to meet longer-term objectives. Management indicated that its attention over the last several years had been to focus on more immediate matters. However, one of the Commission's key initiatives for FY 2019 was to "Focus on more comprehensive organizational strategic planning for resourcing, personnel, infrastructure, risk management, systems, and policy."

2. **Assessment of implementation progress in 2022: Implemented**

Although in the form of a one-year plan that is annually refreshed and updated, this recommendation has been fully implemented. RSIC has made significant progress over the past four years in thoughtfully building out an infrastructure that effectively supports its current investment strategies.

3. **2022 Recommendations for further improvement:**

No recommendations at this time

E. Investment Administration

I1: In order to minimize the likelihood that the Commission may accept unreasonable investment risk in order to achieve the assumed rate of return, the General Assembly should consider fully delegating the responsibility for setting the assumed rate of return to PEBA and RSIC, consistent with peer practices.

1. **Background of 2018 recommendations:**

The 2017 Pension Reform legislation changed the process by which the assumed rate of return is determined, though the General Assembly retained control to set the assumed rate of return. First, the Pension Reform Act requires that the assumed rate of return be reconsidered every four years. The assumed rate of 7.25% was set to expire on July 1, 2021.

Second, the Pension Reform Act shifted the responsibility for proposing the assumed rate of return from the General Assembly to PEBA. The assumed rate of return that PEBA proposes must be developed based on the recommendations of PEBA's actuary "and in consultation with the Commission." S.C. Code Ann. § 9-16-335(B). Accordingly, RSIC has input into the determination of the assumed rate of return. PEBA's proposed assumed rate of return becomes effective unless the General Assembly rejects or revises PEBA's proposed assumed rate of return during the six months before the July 1 effective date. Finally, the Pension Reform Act made RSIC a third-party beneficiary of the contract with PEBA's actuary, so RSIC may independently enforce the terms of the agreement. S.C. Code Ann. § 9-1-240.

Even though PEBA, in consultation with RSIC, has more direct influence on setting the assumed rate of return, the ultimate authority remained with the General Assembly. It is not a prevailing practice amongst peers for the state legislature to set the assumed rate of return for a public pension plan. Typically, the retirement system board of trustees determines the assumed rate of return.

In this case, the General Assembly retained ultimate authority to set the assumed rate of return, creating risk that the RSIC may be pressured to take on more investment risk in order to achieve an unrealistic assumed rate of return designed to artificially reduce required current contributions.

2. **Assessment of implementation progress in 2022: Not implemented**

The General Assembly did not act on the 2018 recommendation to fully delegate responsibility for setting the assumed rate of return to PEBA and RSIC. However, the existing process has worked well so far, as the General Assembly has accepted the rate of return recommended by PEBA and RSIC in 2021. This resulted in a reduction in the expected rate of return from 7.25% to 7.00%.

The new statute has been a significant improvement from prior practice and, although not prevailing practice, appears to work well for South Carolina.

3. **2022 Recommendations for further improvement:**

No recommendations at this time

I2: A full asset liability and asset allocation study should be conducted every three to five years, to include a review of the plan's investment beliefs. While an annual review is needed to check adherence and is a useful safeguard in the event of a major market change (such as the global financial crisis of 2008) or a material change to a specific fund's assets or liabilities (such as one caused by legislative changes or collective bargaining benefit changes), it is generally regarded as better to adhere to the longer-term strategic plan rather than materially change the asset allocation annually. Therefore, the Commission ought to consider what should be the appropriate periodicity of asset allocation study, the level of review to be performed annually, and the periodicity of review of its investment beliefs.

1. **Background of 2018 recommendations:**

The Commission was reviewing asset allocation annually, with the aid of its investment consultant. The Commission's deliberations include looking at potential risk/return profiles of various potential asset allocation mixes, liquidity needs, cash flows and other considerations typical of a full-blown asset allocation study.

2. **Assessment of implementation progress in 2022: Implemented**

RSIC implemented a new asset allocation policy in 2020 after a period of reconsidering the structure of the portfolio and redefining the asset classes. The simplification of the target asset allocation contained in this revised approach was well received and in FAS' view logical and consistent with the RSIC goals. Based upon interviews with the Commissioners, the expectation is that the strategic asset allocation is a long-term goal that should not be changed annually, but rather to be reconsidered every 4-5 years for potential modifications – with annual reviews/updates in the Annual investment review.

3. **2022 Recommendations for further improvement:**

No recommendations at this time

I3.1: RSIC should finalize a decision as to how to create the necessary risk analytical system.

1. **Background of 2018 recommendations:**

The BarraOne risk management system was installed in 2014. However, BarraOne is based on position-level data and is used primarily in constructing portfolios. For a fund which is largely externally managed, BarraOne may be a mismatch, though many externally-managed funds do use it. RSIC was considering migrating to other systems that could provide asset class and total plan analytics, rather than on an analytical system which would provide position-based analysis. It was also considering whether it could leverage the new custodial relationship to provide risk management analysis. In such a case, it would likely have needed to build a number of "home-grown" applications atop the custodial data and available analyses.

2. **Assessment of implementation progress in 2022: Implemented**

At the time of the 2018 report, RSIC was implementing a risk system based on BARRA risk analytics. The audience for this risk reporting system was primarily staff for use in managing the portfolio. Since the 2018 report, the decision was made to disband the BarraOne risk approach based on the lack of holistic portfolio view. A holistic portfolio monitoring system integrating three risk models was created: PowerBI (proprietary), Risk View (BNY Mellon) and Caissa Risk and Reporting. This approach was developed based on peer reviews of other US public pensions with the following identified as best in class peers: CalPERS, SWIB, UTIMCO, Texas Teachers. Deloitte was also retained to advise on control design and implementation efforts of the Caissa system and to assess the maturity of RSIC's investment risk management capabilities.

Overall, RSIC staff has accomplished our 2018 recommendation and is operating an integrated portfolio risk system at prevailing industry practice level. The path that RSIC has followed with respect to simplifying and quantifying risk measurement and management and performance reporting to the Commission is also operating at prevailing industry practice levels. The three risk systems identified above that are currently in use rely on the provision of underlying security holdings and when these holdings are not available, the creation of proxy positions. Input is either provided by the BNY Mellon custodial system, the asset managers (for instance most of the public market investments are held in collective trusts and holdings are provided) or SP2 who has collective data from the portable alpha portfolio.

A holistic view of the portfolio's risk exposures versus target is being used by the asset teams to help manage risk and plan for future risk positioning. While real time data is not available from all the alternative investments, RSIC has created a system which is at or near leading practice in their ability to understand and measure portfolio risks in the illiquid investment portfolio. Based on the risk information developed, performance attribution is possible on a detailed level to determine the sources of under and out performance based on the risk positioning of the portfolio.

The Quantitative Services Group (QSG) is also providing input into the portfolio selection process. A factor model has been developed to determine quantitatively if a prospective investment fits the desired risk profile based on the existing and desired risk positioning of each asset class. The Head of QSG is a permanent member of the IIC and this quantitative input is an important criterion considered for each prospective portfolio allocation.

3. **2022 Recommendations for further improvement:**

No recommendations at this time

I3.2: Investment risk management could be improved through:

- ***a. Once a risk system is selected, quantitative solutions and reporting should create a user group to inform the types and periodicity of standard reports, which will likely vary by asset class. We also suggest that the plan include a plan for user training.***
- ***b. Risk management and investment reporting should determine if there are ways to cooperate to extend risk measurement/analysis and performance attribution to other asset classes. For instance, can the data from reporting allow the quantitative solutions group to provide useful analyses to public market asset class heads for ongoing monitoring of public securities portfolios? The specific example is indicative only, designed to suggest how pairing the analyses provided by quantitative solutions, fueled by a new risk management system, and aided by reporting, could be leveraged across various asset classes.***

1. **Background of 2018 recommendations:**

In 2018 there was a risk steering committee, whose purview included the investment staff's input into the selection of a risk system and consideration of the desired functionality. In general, coordination had improved greatly. The Quantitative Solutions Group (QSG, which includes risk management) provided a quarterly risk presentation at the IIC. RSIC had an ambitious project to determine performance attribution in the private asset classes. A separate group, Investment Reporting and Performance, generated investment reports and some public market risk analyses.

2. **Assessment of implementation progress in 2022: Partially Implemented**

The fact that the holistic risk systems described in I3.2 exist and have been successfully implemented since the prior Governance review represents good progress in the area of risk management and monitoring but there is more to do.

The risk system developed to date appears to measure and monitor risk at the portfolio level with staff as the primary audience. Bringing the Commission itself along the learning curve with the knowledge of the risk system has lagged. Risk education and reporting at a level appropriate for the Commission to fulfill its oversight role should be a priority. An attribution risk dashboard has been created for the Commissioners by the performance reporting group. A similar construct can be applied with respect to the portfolio risk area to achieve a leading practice level in this area.

The QSG's has the ability to offer quantitative insights in the execution of the private equity strategy and permanent participation on the IIC. This top-down assessment of the "fit" of each investment being considered in the overall investment plan is an example of an enhancement in the due diligence process since 2018.

3. **2022 Recommendations for further improvement:**

E1: RSIC should continue its risk reporting effort by focusing on risk education and reporting at a level appropriate for the Commission to fulfill its oversight role. This could be integrated with the ERM dashboard reporting.

I3.5: RSIC should continue with its plans to activate a secondary LP interest program, or to decide explicitly not to proceed. It should also take advantage of Albourne's expertise and knowledge base (the private market consultant) in this area as part of its exploration.

1. Background of 2018 recommendations:

As of the time FAS held its on-site interviews (June 2018), secondary markets was a priority for the private markets investment staff. The investment officers pledged to perform a deep information dive into the secondary market, identify the key firms, and decide whether or not to proceed, and, if so, how and to what extent.

2. **Assessment of implementation progress in 2022: Implemented**

RSIC staff reviewed their existing portfolio that had developed through the strategic partnership era and categorized the existing portfolio into Tier 1, Tier 2 and Tier 3 holdings based on staff's view of the LP's future outlook. After a competitive bidding process that included three firms, one was hired to execute a $400 million secondary sale 3 years ago on behalf of RSIC.

This significant transaction had the effect of "cleaning up" the portfolio for the future. At the time there was a general understanding that every few years a review of the portfolio for possible future transactions and portfolio repositioning was in order. To date, a combination of pricing considerations and comfort with the existing portfolio has led to no secondary sales action taking place, although there is an ongoing dialogue with multiple advisors who are available to assist should RSIC determine a secondary offering from their existing portfolio is required.

Regarding establishing a program aimed at the purchase of secondaries, RSIC has also been active since the last FAS report was issued. Investment Manager 3 (IM3) and IM2 were retained as fund investors focused on secondary purchases.

The goal of this secondary purchase program has been to purchase vintage years when RSIC had previously not invested capital to round out the venture program and to also capture ongoing private equity type returns from increasing the ownership of preferred partnership holdings if available at a discount. RSIC has also considered opportunistic secondary offerings but not completed any transactions to date.

3. **2022 Recommendations for further improvement:**

No recommendations at this time

I4.3 The broker/dealer policy could be improved through:

a. Require broker/dealers to perform background checks of employees directly responsible for RSIC relationships. Prior to approval of any broker/dealer eligible to do business certify that the broker is familiar with RSIC restrictions on RSIC accepting gifts and hospitality and that the broker provides training to its employees on those restrictions. Also certify that the firm will monitor compliance and promptly notify RSIC if it becomes aware of violations.

b. Formalize the annual broker review procedures into RSIC policy (see G16.1 and P2.2).

c. Continue to implement the recommendations from the 2017 independent review of the fixed income trading process and supporting operations.

1. Background of 2018 recommendations:

Internal trading was limited to liquidity and short duration fixed income accounts. In 2015, RSIC adopted a policy that required an approved list of brokers for internally managed accounts, with sign-off by the CIO. The policy included standards for brokers to be placed on the approved list and for selecting an approved broker to execute a particular transaction.

The IIC was responsible for reviewing the methodology and received a semi-annual report listing approved broker dealers and trading volume. In 2017, RSIC had an outside firm conduct an independent review of the trading process and supporting operations. It observed that the RSIC team was small so there was "key person" risk that could be lessened by systems improvements and stronger documentation of procedures. There was an annual broker review process that was undocumented.

2. Assessment of implementation progress in 2022: No longer applicable

As a component of the 2020 restructuring, RSIC no longer maintains a short-term trading desk. The recommendation relating to broker-dealers with whom RSIC transacts directly is no longer applicable.

3. **2022 Recommendations for further improvement:**

No recommendations at this time

I6.1: RSIC could realize further improvements in its due diligence processes through:

a. In one recent situation, the decision to involve the quantitative solutions group occurred relatively late in the process. While the group's review did not cause the RSIC to miss a close, it involved extraordinary cooperation by the general partner, which held open the closing date for RSIC. FAS suggests that the quantitative solutions group attend the pipeline meeting, along with ODD and legal, and that one output of that meeting be a schedule of any other resources within RSIC which will be needed for the due diligence (other asset class specialists, quantitative strategies, legal, consultant, ODD, etc.).

b. The peer review process is designed to catch issues early, and, particularly, to stop the resources from being wasted on new investments as soon as a "no go" point is reached. The first peer review looks at the incremental benefit of the investment irrespective of the manager, while the second peer review (2A) examines the manager due diligence. Another peer review meeting (2B) examines any follow ups from the managerial due diligence, and then, finally, the IIC votes. (In certain cases, usually related to size or matters of first impression, the investment is brought to the Commission.) The CIO ought to consider what circumstances would warrant a combined 2B peer review/final IIC meeting.

c. RSIC uses outside counsel to review private placement memoranda, limited partnership agreements and related subscription documents. RSIC relies heavily on one attorney for most private equity reviews. That has an advantage in that the attorney is familiar with RSIC's requirements and business priorities, but it has created a bottleneck on occasion. Legal should consider marginally expanding the roster of outside counsel firms so as to relieve any time pressure stemming from outside counsel constraints. Our understanding is that Legal has commenced this process since the time of the FAS site visit. See L5.1

1. Background of 2018 recommendations:

The due diligence process had been greatly streamlined, while becoming even more robust. RSIC adopted a number of changes to improve its efficiency:

a. Diligence was now clearly the responsibility of staff (as opposed to the Commission or the consultant).

b. RSIC hired a private markets consultant (SR3) to serve private equity, private debt, real estate and infrastructure asset classes. SR3's resources complemented RSIC's own investment and operational due diligence efforts.

c. RSIC established additional internal meetings to coordinate and prioritize workflow. These meetings included biweekly leadership team meetings and a bimonthly meeting to discuss the investment pipeline.

d. RSIC had hired a paralegal who prepared the initial draft of the investment pipeline, which generally improved the efficiency of legal review.

By and large, the process was within industry norms for the time. RSIC had committed to a policy of making larger, earlier commitments to fewer private market funds, both to be able to know those partnerships more thoroughly and to take advantage of the economic benefits which come with being an early, sizeable investor. That said, there were occasions when the process was slower than desired, putting the ability to meet a closing deadline at risk. (This was a common issue among public plans in the United States at the time).

2. Assessment of implementation progress in 2022: Implemented

The most significant step towards the streamlining of the investment decision making process came in the delegation of decision making from the Commission to staff. We heard universal praise from the staff, Commission and investment community on the manner this has been implemented during the past four years.

A pipeline of future investments is discussed in the IIC to assure proper communication of upcoming opportunities under consideration across the organization. The IIC also includes the Head of QSG for quantitative balance to the fundamental due diligence process with external consultants and staff.

The close partnership with SR3 with alternative investment and operational due diligence and the shortened due diligence process (when SR3 has previously rated a potential investment) is another example of how the approval process has been streamlined. A similar streamlining process of due diligence is occurring on hedge fund investments with SP2. Our concerns in the timely execution of the decision making and due diligence process at RSIC have been largely addressed.

The same streamlining appears to have happened with ODD and legal reviews. Setting up ongoing outsourced relationships with third parties and appropriate review and oversight by internal process has elevated the investment, operational and legal due diligence review processes and procedures to leading industry practice.

3. **2022 Recommendations for further improvement:**

No recommendations at this time

I7.1: FAS continues to recommend that all managers and general partners be visited on-site annually. However, if an asset class head chooses to not do so because he/she believes the particular manager is adequately monitored without an annual site visit, he/she should document the rationale for not performing an annual on-site monitoring visit. That documentation should have a statement from the investment officer in charge stating what he/she believes should be the periodicity of on-site visits for that manager. That written document should be reported timely to the CIO, who should either affirm or countermand the decision. FAS notes that the investment staff disagrees with this recommendation, stating that: a) it has a robust monitoring program; b) the value of on-site monitoring is variable; and c) where the asset class head believes an on-site monitoring is needed, it is done. FAS agrees with all those assertions. Nevertheless, FAS continues to believe that periodic on-site monitoring is desirable, and the decision to not do such an on-site visit, while justifiable, should be treated as an exception, which means it should be justified in writing and escalated for affirmation or override. Also, FAS notes that this recommendation implies leeway for an asset class head to suggest a less frequent than annual on-site visit. Variants of such decisions about periodicities abound (for example risk-based periodicity based on such issues as liquidity, custody, public/private).

1. Background of 2018 recommendations:

In 2018, RSIC typically visited most managers and general partners annually, including through service on Limited Partnership Advisory Committees (LPACs) for private market investments. Moreover, RSIC continued to have a robust monitoring program, typically featuring monthly reporting from managers for public markets and quarterly reporting from managers for private markets. Written reporting was extensive and appropriate. Managers often visited the RSIC investment offices in Columbia. Although on-site visits allow skilled investment officers to note warning signs and cultural changes at managers before they become manifest in the portfolio, the decision to not visit each manager or general partner annually can be a way to triage resources, particularly in an otherwise robust monitoring program.

2. Assessment of implementation progress in 2022: Implemented

The system outlined in the SIOP and the governance process detailed in the ICC Charter, leveraging SR3, SP2, and Strategic Relationship work with Investment Manager 1 (IM1) in particular, is sensible. The documentation process and voting process is well designed and appears both thorough and efficient. RSIC is operating at a leading practice level for the review and documentation of investment opportunities, especially co-investment opportunities.

On-site due diligence has been severely hampered in recent years due to the Covid epidemic. Staff interaction and monitoring with the investment manager organizations is frequent and regularly scheduled. Interviews with the various asset managers employed suggest both investment and operational due diligence is being performed by in-house staff and confirmed through work performed by SP2 in the alternative area, IM1 and SP2 in a well-designed in-sourced/ outsourced backup approach. On-site due diligence is beginning again, and further participation in LP partnership meetings on site is also beginning to take place again. The mix of reliance on third parties and staff due diligence meetings is working well for RSIC at this time.

3. **2022 Recommendations for further improvement:**

No recommendations at this time

I9.2: RSIC should consider expanding the co-investment program to include real estate and private credit.

1. Background of 2018 recommendations:

RSIC was using several strategies to reduce fees, from aggressively asking and renegotiating with existing managers, to making fewer (and larger) allocations so as to reap economies of scale, to obtaining first close fee discounts in partnership investments, to obtaining relationship discounts from asset managers with whom it has multiple relationships.

Fees had decreased from 2012 to 2016. In total, CEM had found that RSIC paid somewhat less (in basis points) than its peers for similar externally managed portfolios. However, CEM identified strategies for which RSIC pays more where there might be opportunities to pursue further fee reductions. Since 2012, RSIC had more than doubled the share of assets managed with low-cost passive strategies. However, it still relied more heavily than its peers on active external management.

RSIC had hired a co-investment manager to enable it to take greater advantage of co-investment opportunities, with a target of eventually moving one-third of its private equity program into co-investments, which would further decrease private asset class fees (by an estimated $30 million) in the future. Similarly, RSIC was reallocating from hedge strategies to alternative beta managers, primarily to achieve fee savings while maintaining desired risk exposures.

2. Assessment of implementation progress in 2022: Implemented

While co-investment activity is effective in the private equity space, the expansion of co-investments into the private credit areas has not occurred. The vestiges of the SP1 fund of one in the private credit space could allow some activity in this space but this portfolio is in wind down mode. Staff does not believe there is an adequate level of possible deal flow in this market to make a targeted strategic allocation to private credit co-investments.

Timely due diligence required to take advantage of deals available in the private credit marketplace would also be a challenge. As a result, the market for co-investments in private credit is opportunistic for RSIC. As discussed below, resources for co-investments in private credit should be organized with an opportunistic approach in mind.

We also discussed the ability to create fee savings from traditional LP investments with co-investments in real estate and infrastructure areas. Similar to private credit, deal flow and timeliness of required due diligence are considered barriers. In addition, the LP co-investment fee structures for real estate and infrastructure are not as advantageous as private equity and private credit, and thus not as attractive for pursuing co-investments.

Given this reality, a similar comment to the private credit area applies to co-investment opportunities with real estate and infrastructure for RSIC. An opportunistic approach seems in order with resources structured and applied as required.

3. **2022 Recommendations for further improvement:**

No recommendations at this time

I9.3: As RSIC considers expanding the co-investment program to other private asset classes such as real estate or private credit, it should consider what type of outside expertise and support it needs to access, and whether that expertise and support is resident in the current consultant and co-investment manager or whether it needs additional resources for those asset classes.

1. Background of 2018 recommendations:

RSIC had a goal of having at least one-third of its private equity portfolio in co-investments over time. RSIC had taken logical steps to achieve that, including the development of a co-investment philosophy for private equity opportunities and hiring a co-investment manager. Between the co-investment manager, the private asset class consultant, and RSIC staff, RSIC had a better ability to take advantage of more co-investment opportunities, at least within private equity. However, it was not yet making co-investments in real estate or private credit.

2. Assessment of implementation progress in 2022: Partially Implemented

The decision-making structure put in place for private equity co-investment opportunities is operating at a leading practice level. During our interviews with the investment community comments were universally positive regarding the thoroughness, speed, and commitment to success in this area.

The partnerships that have developed between in-house staff, external consultants and law firms, administrators in the area such as IM1, as well as the annual investment plan that identifies areas of emphasis for co-investments all appear geared to assure the thorough due diligence required for private equity co-investments is done with a focus on timeliness and accuracy as required.

While it could be possible to rethink staffing and external resources for co-investment opportunities in areas for expansion into private credit and real estate/infrastructure, as discussed above, interviews with staff and external firms suggest there are not the same number and quality of opportunities available. For private credit, an opportunistic staffing model that takes advantage of existing GP relationships such as SP1 and experienced staffing and consulting resources from firms like SR3 appears warranted at this time.

For possible real estate co-investments, a resource staffing model that takes advantage of existing GP relationships such as IM3 and Investment Manager 4 (IM4) and experienced staff and consulting resources should opportunities develop is appropriate.

3. 2022 Recommendations for further improvement:

E2: RSIC should continue to utilize and, when appropriate, expand its opportunistic, generalist staffing model and reliance on existing close GP relationships for co-investment opportunities in the real estate, infrastructure and private debt areas based on the opportunities available in these market segments.

I12.2: RSIC should examine the costs and benefits of keeping or removing the remaining long-only account within its strategic partnership. If appropriate, a plan for removing it should be undertaken.

1. **Background of 2018 recommendations:**

The rationalization of the strategic partnership program had largely eliminated the long-only, public securities holdings, although it continued in one instance. RSIC paid only a normal, non-partnership fee in that case. Otherwise, when RSIC desired to hire a partner to run a long-only portfolio, it does so explicitly and outside the existing partnership.

2. **Assessment of implementation progress in 2022: Implemented**

The one remaining long only portfolio previously overseen by Lighthouse was shut down following the 2018 review.

The decision to delegate decision making to staff resulted in a complete rethinking of the long only portfolio approach. Most long only investments were eliminated at both the strategic partner level as well as the direct separate account area. Investment Manager 2 (IM2), and to a lesser extent Investment Manager 5 (IM5), are being utilized as beta providers for most long only asset class allocations. Significantly more staff attention was allocated to the expansion of the private equity partnership and co-investment area.

Collective trusts, with one exception, are being utilized to implement these long only investments in both a cost effective and operationally efficient basis. Going forward, selective use of long only active portfolios could be appropriate when significant opportunities might present themselves, but, in general, the RSIC strategy is for continued emphasis on alternative investments as the source of alpha.

3. **2022 Recommendations for further improvement:**

No recommendations at this time

I12.4: The Commission should task its consultant to coordinate with the Chair to schedule appropriate professional education, aligned to the forward calendar, so that the education is related to upcoming strategic decisions to be made by the Commission.

1. Background of 2018 recommendations:

The Commission appeared to recognize both the need for professional education and the ability of its general partners and investment managers to provide it. The Commission had recently hosted a presentation by the three new Global Tactical Asset Allocation (GTAA) managers. However, there was not a formal education program.

2. Assessment of implementation progress in 2022: Not Implemented

There has not been a robust Commissioner education program and, as mentioned in the discussion about the general investment consultant relationship, communications with the consultant have been poor.

RSIC Commissioners have significant continuing education needs. A key element involves being informed on the various investment concepts being implemented by RSIC staff.

One of the key roles identified in the recent general investment consultant selection process was commissioner education and evaluation of peer practices. As mentioned elsewhere in this report, the Managing Director, Investment Administration is developing a new commissioner education program. We understand that the new role for Verus will include an emphasis on commissioner education.

3. 2022 Recommendations for further improvement:

E3: The Commission should work with the staff, general consultant and external service and product providers to develop an expanded Commissioner education and oversight program.

I14.1: In addition to the appropriate actions taken to date, we suggest exploring the possibility of retaining more than one transition manager.

1. Background of 2018 recommendation:

A single vendor performed all public market transitions at the time of the 2014 fiduciary performance audit. There were no independent transition cost analyses done, though that vendor gave its analysis following each transition.

Although that vendor continued to be the only designated transition manager, RSIC staff had appropriately taken advantage of other of its asset managers to reduce transition costs in some creative ways, including manager to manager transitions, internal crossing, ETF creations, etc. The net result of these actions had been a more robust and materially less costly transition program.

2. Assessment of implementation progress in 2022: No longer applicable

The move to primarily passive investment vehicles for public market investments combined with the thoughtful planning of market rebalancing moves, involving appropriate third parties in the discussion when appropriate, to maximize crossing opportunities has largely eliminated the need for a transition management program.

RSIC has a strong relationship with its derivatives manager for the portable alpha program and this manager provides transition management and trading insight if assistance is required. The need for transition management is largely tied to the use of multiple long-only active managers and given the state of the RSIC investment portfolio at this time, significant effort is not warranted in this area unless the strategy toward the long-only active managers changes.

3. 2022 Recommendations for further improvement:

No recommendations at this time

I16: We recommend that the Commission adopt and implement a formal process for evaluating the Commission's investment consultant.

1. Background of 2018 recommendation:

The Commission had adopted a general policy for RSIC staff to evaluate service providers in its Governance Policy Manual, though it did not identify a process for the Commission to evaluate its own general consultant. The Commission had an informal process for evaluating the general investment consultant. The Commission considered whether the consultant was complying with its obligations under its contract and RSIC's policies and procedures. Some Commissioners noted that there was a need for a formal, annual evaluation process, as the Commission had terminated the contracts of two investment consultants since the 2014 fiduciary performance audit. An annual evaluation process could have been a useful tool for the Commission to communicate any concerns. In addition, the evaluation process would demonstrate that the Commission has a reasonable process for evaluating its consultants and monitoring its general consultant, consistent with its duty of care.

2. Assessment of implementation progress in 2022: Not implemented

In 2022, the Commission once again changed its general consultant through an RFP-based selection process, marking the third change since 2014. Commissioner satisfaction with the general consultant relationship has been very low through all prior consultants.

Comments from Commissioners indicated that the relationship between the Commission and the most recent general consultant was weak and characterized by limited contact. Indeed, midway through the most recent four-year contract, the consultant team was changed at RSIC's request and the RSIC CEO took over the relationship on behalf of the Commission; subsequently, the consultant team had relatively limited contact with the Commission outside of presenting (remotely due to COVID) at Commission meetings and never met the Commissioners face-to-face.

With the selection of a new general investment consultant, C4, the Commission has an opportunity to reset its relationship with the new consultant. There have been positive signs; for example, two Commissioners, including the Chair, participated on the selection committee, and Verus has begun a process of interviewing each Commissioner to understand their expectations and develop a relationship.

However, the Commission needs to take a very different approach to this relationship and not delegate coordination to the CEO, as happened previously. The general investment consultant should be the Commission's consultant and a check and balance on staff decisions, a role that did not effectively develop with the prior consultant. The role of the RSIC general investment consultant should include:

1. Advising the Commission in identifying their Investment Beliefs and a clearly articulated Statement of Investment Policy (SIOP) that identifies the board's risk appetite, asset allocation decisions, benchmarks, and related policies to be implemented.
2. Providing counsel to both the board and investment staff and opining on investment staff decisions to provide reassurance to the Commission that staff decisions are reasonable.

3. Providing independent performance reporting based upon information from the custodian and external managers.

4. Providing timely continuing education support to the Commission in support of setting and monitoring investment policy.

If the Commission Chair does not take the lead in the relationship with the general investment consultant, there is a high risk that RSIC will see the same level of dissatisfaction that has occurred over many years. While the consultant must liaise, be in communication with staff and have access to information on investments being considered by staff, they should report to the Commission and be directed by the Commission Chair, not by staff. At the same time, they should interact with staff and advise staff on the areas they are responsible for, such as asset allocation, investment policies, and other issues as they arise.

A key element of the Commission having a direct relationship with the consultant is to meet privately with them, to the extent allowed by Open Meetings laws, at least annually. During these meetings, the Commission should clearly articulate their expectations, provide feedback on past consultant performance, and have candid discussions about staff decisions, capabilities, and effectiveness.

This type of Commission-consultant relationship should result in an effective check and balance and provide the Commission with a true "second opinion." This has been lacking and, in our opinion, a key driver in the lack of satisfaction with general investment consulting services through the relationships with prior firms.

3. 2022 Recommendations for further improvement:

E4: The Commission Chair should take the lead in managing the relationship with the General Investment Consultant and ensure that there is regular communication between Commission meetings, at least monthly.

E5: The Commission should develop a process to meet privately with the General Investment Consultant, to the extent allowed by Open Meetings laws, at least annually to discuss expectations, consultant performance, and RSIC investment staff performance.

E6: Protocols for communication of investment transactions to the General Investment Consultant should be developed to ensure the consultant receives appropriate information on investment actions implemented by the staff so the Consultant can fulfill its independent role of advising the Commission on the investment activities made by the staff.

E7: The Commission should establish a regular process to receive briefings by the General Investment Consultant regarding topics such as peer investing practices, performance reporting, risk, leading governance practices, market dynamics, and asset classes.

I18.1: The Commission should determine the future of securities lending based on an assessment of the potential investment benefits and risks of different approaches to participating in the lending market.

1. Background of 2018 recommendations:

RSIC became fully responsible for securities lending management and oversight as of July 1, 2017. The program remained significantly smaller than it was prior to the 2008 market collapse ($2.1 billion on loan in FY 2009 compared to $164.7 million in FY 2017). After several years of revenue decline, RSIC broadened its reinvestment guidelines and revenues rose to an estimated $1.8 million in FY 2018. While well below revenues when lending was at its peak, it was sufficient to pay BNYM's $1.2 million custody fee and $0.6 million of RSIC's $47.0 million loss from 2008. BNYM indicated that RSIC's cash reinvestment guidelines were still more conservative than many of its other clients. Because RSIC did not plan on any significant changes to the program in the near future, there were no immediate plans to do a review with the Commission, given the program's small size and relatively low materiality of earnings.

2. Assessment of implementation progress in 2022: Implemented

Following the restructuring of the long only portfolios due to the decision to delegate, we understand there is one passive portfolio held in a separate account eligible for securities lending. There exist other separately managed accounts with assets eligible for lending . BNY Mellon holds all collateral in a separate account for this portfolio, monitored by RSIC risk systems, and BNY Mellon indemnifies RSIC in case of any losses. We consider this set up a leading practice set up for securities lending with custodians. The terms of securities lending via the collective trusts management by the index managers is industry standard. This, combined with very well negotiated fees for collective funds, suggests there is little opportunity for improvement in the securities lending area going forward given the RSIC current structure.

3. 2022 Recommendations for further improvement:

No recommendations at this time

I18.2: Seek separate bids for securities lending and custody services the next time these services are rebid.

1. Background of 2018 recommendation:

In 2018, the AIP stated that the program operates with very conservative investment guidelines and that RSIC is evaluating the risks and benefits of increasing lending and expanding reinvestment guidelines. The securities lending policy was approved in 2015 and had been last updated in January 2018 with some expansion of reinvestment guidelines. The policy stated that the objective was to provide incremental return with incremental risk. It addressed eligible assets, collateral management, risk management, responsibilities and reporting. To limit risk, the program had two types of indemnification.

2. Assessment of implementation progress in 2022: Implemented

As mentioned in I18.1, following the restructuring of the long only portfolio due to the decision to delegate, RSIC retains a number of separate accounts that are eligible for securities lending. BNY Mellon holds all collateral in a separate account for this portfolio, monitored by RSIC risk systems, and indemnifies RSIC in case of any losses.

For securities lending from collective trust-based accounts, RSIC is fundamentally unable to influence compliance matters such as counterparty eligibility requirements and collateral investment pool characteristics. Should these compliance matters, or the potential risk for adverse selection among the investors in a commingled product, increase over time, the organization may wish to consider alternative lending options for these investment strategies (i.e., separate account based) or terminate the lending arrangements for them.

While the recommendation above deals with the separation of contractual arrangements for custodial and lending services, in practice the two services are very much intertwined, requiring asset owners to be attentive to both financial and legal aspects of the relationship. In a number of recent cases in public pension plans, issues such as (hidden) bank movement fees and the lack of indemnification clarity between custodians and third-party agent lenders have negatively impacted overall lending results and costs.

The separation of securities lending bids from custodial bids, as recommended in 2018, is a prevailing practice in the industry; however, as custodial banks have overwhelmingly embraced a bundled service pricing model, RSIC might expect to receive more advantageous pricing from their existing custodian as compared to other banks that would bid on lending services from a third-party agent perspective.

3. 2022 Recommendations for further improvement:

E8: When considering and comparing future lending arrangements with the custodian or with a third-party agent, RSIC should ensure that the custodian makes the organization fully aware of new direct and indirect expenses and provides full clarity about which

counterparty will indemnify them for fails that may occur throughout the lifecycle of a loan.

F. Legal compliance

L2.1: RSIC may consider developing an internal document or annotated side letter template describing which side letter terms are priorities and the legal basis for prioritizing those terms.

1. Background of 2018 recommendation:

RSIC had recently developed a template side letter. The template side letter effectively set forth RSIC's state law limitations, such as the South Carolina Freedom of Information Act and prohibitions on placement agent fees and lobbyist contact with RSIC. Overall, the template side letter was consistent with peer funds and was found likely to improve contract consistency.

However, RSIC had not expressly prioritized side letter terms. RSIC could develop an internal document or simply annotate the existing side letter request to identify priority terms and the reason why the side letter term is a priority. For example, the template side letter request stated that RSIC will not waive trial by jury, which is a common request among public pension funds. It could have been helpful to identify the source of that requirement (*e.g.,* public policy of the State of South Carolina or Attorney General's Opinion), as external managers are increasingly pressing public pension funds for this information. As another example, the template side letter requested fee reporting consistent with the Institutional Limited Partnership Association (ILPA) template. It could be helpful to note that this fee reporting is essential so that RSIC can comply with its own fee reporting requirements. Prioritization would guide outside counsel, reduce time and legal fees associated with negotiating side letters, and improve compliance.

2. Assessment of implementation progress in 2022: Implemented

RSIC has developed template side letters for the various types of alternative investment transactions it does. The templates effectively communicate RSIC's state law limitations and policy requirements, such as compliance with the South Carolina Freedom of Information Act and prohibitions on placement agent fees and lobbyist contacts with RSIC personnel. Overall, the template side letters are consistent with similar templates used by peer funds and will likely improve compliance and contract consistency.

RSIC legal staff also undertook an effort to prioritize side letter terms, as was recommended in the 2018 report. However, it was determined that the prioritization was not as useful as had been expected. Transaction legal counsel was already familiar with RSIC priorities and mandated provisions. In addition, because RSIC side letter terms are consistent with documentation provisions used by peers, the RSIC template and its legal basis under state law appears well understood by legal counsel on both sides of transactions. RSIC's actions have appropriately addressed the concerns which underlie the 2018 recommendations.

3. 2022 Recommendations for further improvement:

No recommendations at this time

L3.1: RSIC should consider supplementing the Legal Sufficiency Certificate to include a statement addressing whether outside counsel has verified that final transaction documentation complies with all material requirements, including state law and investment policy requirements, or otherwise asking outside counsel to provide a closing letter to the same effect.

1. Background of 2018 recommendation:

RSIC eliminated the requirement that Commissioners have 30 days to review the final contract. The Commission voted to reduce the requirement to three days in May 2014. After the adoption of the 2017 Pension Reform Act, which permitted delegation of investment authority to RSIC staff, the Commission incorporated the three-day review period into the Investment Authority Delegation Policy. The Investment Authority Delegation Policy requires that RSIC provide all applicable documentation and reports to the Commission three days before the closing of the investment. The Commission must still review the investment transaction, but the review may occur post-closing.

Following the adoption of the 2017 Pension Reform Act, the Commissioners are not involved in due diligence and have a more limited role overseeing RSIC staff make delegated investment decisions. This is a significant change in the Commission's role, and the Commission may require additional assurance that investment transactions are being executed in accordance with the policies and procedures adopted by the Commission. In the 2014 fiduciary performance audit FAS recommended that a member of the investment staff sign the Legal Sufficiency Certificate, which RSIC implemented.

The 2018 Report suggested that RSIC could also consider updating the Legal Sufficiency Certificate to include a statement addressing whether outside counsel has verified that final transaction documentation complies with all material requirements, including state law and investment policy requirements identified in the template side letter. Alternatively, it said that outside counsel could sign a closing letter to the Chief Legal Officer providing this verification. In our experience, this was a common practice among peer funds and would provide independent assurance for the Commission that appropriate legal diligence has been completed.

2. Assessment of implementation progress in 2022: Implemented

In December 2021, the Commission modified RSIC policy to replace the Legal Sufficiency Certificate with a Closing Certificate from the CEO. The Closing Certificate is provided to the Commissioners within three days of closing and certifies the following:

"Pursuant to S.C. Code Ann. Section 9-16-330(B) and the Investment Authority Delegation Policy (the "Policy") adopted by the Commission on October 23, 2017, and amended on December 2, 2021, Geoffrey Berg, Chief Investment Officer, approved the following investment on [insert date] subject to conformance with the requirements of the Policy: an investment of up to [insert amount] into [insert investment name] ("Investment").

RSIC Staff closed the Investment on [insert date RSIC executed docs].

On [insert date], all relevant due diligence and legal closing documents were posted to WatchDox as required by the Policy;

All preconditions to closing having been satisfied; and

The Investment conforms to the amount and extent of the delegation provided by the Policy."

Under current RSIC policy, the Closing Certificate, along with the posting of due diligence and legal closing documents, offers confirmation that the investment meets delegated policy requirements. This current practice adequately addresses the substance of the 2018 recommendation.

3. 2022 Recommendations for further improvement:

No recommendations at this time

L5.1: RSIC should complete an RFP selection process for outside counsel since it has been more than ten years since the last RFP market test. Our understanding is that RSIC Legal Division has commenced this process since the time of the FAS site visit.

1. Background of 2018 recommendation:

The Pension Reform Act authorized RSIC to hire outside counsel without having to obtain deal-by-deal approval from the Attorney General. S.C. Code Ann. § 9-16-315(I) says that RSIC "in consultation with the Attorney General may engage, on a fee basis, attorneys necessary to exercise its exclusive authority to invest and manage the retirement system's assets." RSIC now had more flexibility to hire outside counsel on investment matters, subject to its obligation to report the fees and rates of outside counsel to the Attorney General.

Although RSIC had the flexibility to hire outside investment counsel, the 2018 Report noted that it had not refreshed the pool of law firms upon which it relies for investment counsel services. RSIC relied on two law firms for its investment counsel services, and only one attorney for most private equity and real estate transactions. While the Legal Division staff were satisfied with the efficiency and quality of legal services provided, RSIC's reliance on one attorney was cited as a source of bottlenecking.

The 2018 Report also noted that the Commission had a duty to only incur costs that are "appropriate and reasonable." S.C. Code Ann. § 9-16-40(5). It is important for RSIC to test the market and ensure that it is paying reasonable rates. Periodically soliciting bids from outside law firms would allow RSIC to confirm that its rates are reasonable. The Report noted that RSIC had initiated the RFP process during the 2018 review.

2. Assessment of implementation progress in 2022: Implemented

RSIC completed the RFP selection process for outside counsel in 2018 and engaged a new pool of outside counsel firms.

3. 2022 Recommendations for further improvement:

No recommendations at this time

L5.3: RSIC should continue to consider engaging qualified, independent fiduciary counsel and consult with the Attorney General, when determined appropriate, regarding the extent to which the authority to engage fiduciary counsel is delegated.

1. Background of 2018 recommendation:

In 2018, RSIC was no longer required to obtain the approval of the Attorney General before engaging counsel on investment matters. However, there was uncertainty as to whether this extended to fiduciary counsel, unless related to specific investments. In addition, RSIC had decided not to hire fiduciary counsel, since there appeared to be no immediate need for fiduciary counsel in 2018.

The Commission was transitioning from a tactical board heavily involved in investment decisions to a strategic board that establishes policy and oversees staff. The 2018 Report noted that as the Commission made this change, it was more likely to encounter questions about its role and responsibilities. Fiduciary counsel would be able to address those questions and allow the Legal Division to focus on investments. It is generally preferable to have fiduciary counsel already in place before issues develop. Then, if a fiduciary duty question arises, RSIC would be able to quickly address the issue without having to first go through the RFP process. Furthermore, because all of RSIC's duties relate to the exercise of investment management responsibilities, the Attorney General might reasonably interpret RSIC authority to engage investment legal counsel to include fiduciary counsel.

2. Assessment of implementation progress in 2022: Implemented

When refreshing the pool of outside counsel in 2018, RSIC structured the RFP process to include provision of fiduciary advice by selected firms. One of the firms has since provided the Commission with fiduciary duty training. Additional regular training sessions are planned.

3. 2022 Recommendations for further improvement:

No recommendations at this time

G. Information technology

IT1.1: **Enhancements with significant potential for the organization include:**

a. **RSIC uses PowerBI in numerous areas, including risk and performance and is testing its usage on management fees analysis and reporting. For Business Intelligence and Data Mining applications a strong Excel programmer is needed with training in the BI application. A third-party support firm may also be needed until the person is adequately trained. We encourage RSIC to devote appropriate resources to use these applications to their fullest extent.**

b. **Now that the MS Dynamics platform has been purchased, RSIC will need additional resources to implement it. RSIC in the process of developing an RFP to hire a consultant for the build out of MS Dynamics. The IT business plan should describe short- and long-term goals for PowerBI and MS Dynamics, e.g., for CRM, ERP, BI, etc.**

1. **Background of 2018 recommendations:**

The 2014 fiduciary performance audit recommended significant improvements in five system areas. These comprise the core of the needed IT infrastructure based on increased investment in private markets and strategic partnerships and the expectation that these will increase over time, the need for better investment risk analytics, and better operational risk management systems, including the investment accounting application.

Hurdles in the path to technology improvements that were noted at the time included the disconnect between RSIC and the vendors (BNYM & QED) due to the relationship being between the vendors and the STO rather than RSIC, and also the state's policy constraints on procurement and management of information technology.

At the time, RSIC had just signed (March 2014) a contract with an investment administrator (Conifer, now SS&C Technologies). A risk analytics system (BarraOne) was implemented. A document storage and management system (Tamale) had also been implemented. Management reported that these systems were functioning as expected and worked with the vendors to continuously review, modify and enhance them.

The applications provided by Conifer/SS&C Technologies met the large majority of the needs identified in our prior report. This had greatly helped RSIC to better manage and monitor the portfolio of private market investments.

The contractual relationships with BNYM and QED were now directly between RSIC and the vendors. This was a significant improvement and benefit for the system because both were critical systems for RSIC and PEBA and integral to financial and performance reporting. The change in these relationships resulted in very positive developments that included the ability of RSIC to communicate directly to the vendors to get custody service improvements and upgrade the investment accounting system.

2. **Assessment of implementation progress in 2022: No longer applicable**

   a. RSIC's plans for PowerBI in 2018 evolved shortly after the publication of the fiduciary audit. While the Quantitative Solutions Group has expanded its use of the development platform for investment risk functionality, the Investment Performance and Reporting team decided to contract with Caissa, a cloud-based solution, to support its needs. This decision was aligned with the organization's overall strategy to seek SaaS solutions in lieu of building functionality internally. While there are three analysts within the QSG team, the organization should seek support, in the form of a third-party or intern, to build out the technical support documentation for the PowerBI code that has been written and continues to be tailored and honed.

   b. RSIC reversed the MS Dynamics decision in line with the strategic shift to deploy third party, cloud based, SaaS solutions to meet its business needs. The strategic shift enabled the organization to implement new IT solutions, including Caissa and DealCloud, more efficiently. The decision has been sound, as efforts to build these capabilities in-house would have undoubtedly taken a much longer period and required significant investments in application development skillsets and infrastructure.

On a broader level, RSIC is to be commended for their strategic decision to utilize third party, cloud-based solutions to support investment and investment operations. Their decision to pivot away from internal development resulted in their ability to achieve prevailing practice in the deployment of technology to support key functions. The organization's establishment of an IT steering committee and development of a larger strategic plan is also commendable.

While the IT organization periodically performs SOC-1, SOC-2, and SAE-18 reviews of critical counterparties, there is not currently a periodic review (or audit) of critical IT-solution providers to ensure that RSIC remains current in its assessment of key vendor risk. Periodic examinations of vendors and their products can be modeled from an "ODD type review" and consider organization and leadership, financial strength, growth / contraction, and strategic plans for software products licensed by RSIC

3. **2022 Recommendations for further improvement:**

   G1: RSIC should adopt a policy of periodic review (or audit) of critical IT-solution providers to ensure that RSIC remains current in its assessment of key vendor risk.

IT2: RSIC may benefit from an application development team to leverage the full potential of the Data Warehouse (e.g., business intelligence, data mining, real-time dashboards, real-time reports), but without an IT plan and the respective business cases it is not likely that it will be able to justify them to the CEO or to the state legislature. However, these positions could add significant value to support the investment team.

1. **Background of 2018 recommendation:**

RSIC had significantly broadened the types and functionalities of its systems, which then included additional BNYM applications, the BarraOne risk system, the Conifer systems, and an expanded role performing some things that PEBA was doing. The IT department had added one full-time employee to the support team. The complement in IT included a Director, an IT infrastructure support employee, a full-time IT Help Desk employee and two interns. However, IT had not created a strategic plan to address the RSIC's IT needs for the future or to make the related business case(s).

A Systems Roadmap had been created to compare pros and cons, primarily between Conifer and BNYM, but it was not an overall IT Plan. While one staff had been added to accommodate the needs created by the domain split, there appeared to be no basis, e.g., a strategic IT plan or business case, for determining future staff needs. Without the IT business plan and accompanying business case(s) for resource expansion, the IT department was not leading the organization in the technology area.

2. **Assessment of implementation progress in 2022: No longer applicable**

RSIC's strategic decision to migrate IT focus from in-house development to outsourced, cloud-based, SaaS solutions effectively removed the urgency to establish a strong internal application development team. As such, the existing IT team's focus has been limited to an IT operational role (i.e., desktop support, connectivity, information security) staffed by two individuals.

However, it is worth noting that the expansion and proliferation of distributed platforms that are targeted to support individual business functions can introduce the potential for collateral challenges such as cross platform reconciliation and referential data integrity drift. Both the investment support and investment teams have worked diligently to ensure that the risks of data integrity and reconciliation issues are minimized; however, as RSIC's investments and portfolio grows, the need to formalize and control data integrity in a systemic way across platforms will also increase.

Leading practices for public pension plans in the area of data management commonly include the designation of a "single source of the truth" (or golden copy) from which all other internal and cloud-based applications acquire their source data or reconcile against. For larger asset managers, this strategy commonly involves the acquisition and deployment of a data hub; however, the benefits of establishing a single source of the truth in smaller plans such as RSIC can be attained at a much lower cost by designating a source of truth from among its suite of in-house or cloud-based applications and by assigning a data owner (or steward) for maintaining tight controls over referential data entities and attributes that are shared across business systems.

For portfolio referential data (e.g., fund, asset class, composite) RSIC has a natural data source in BNY Mellon and Caissa. The bank's records already feed numerous systems across both RSIC and PEBA and BNY retains tight controls on authorized usage and editing.

On the client side, the DealCloud CRM should serve as a single source of the truth for referential information, and the organization is moving forward with assigning a data steward that establishes standards for naming conventions (i.e., firms and contacts). Hopefully, that leading practice can facilitate the proliferation and sharing of that data across both internal and cloud-based applications, reducing the need for reconciliation and minimizing workload to maintain multiple copies

3. **2022 Recommendations for further improvement:**

G2: RSIC should continue to pursue and formalize a data steward function that establishes standards for naming conventions (i.e., firms and contacts) and maintains sole responsibility for creating and updating referential data on the CRM platform.

IT3.1: RSIC should develop more formal IT plans, including:

a. RSIC should complete an overall IT strategic plan with clearly defined objectives, a full assessment of the current state of its systems and a timetable for completing needed improvements. The written IT strategic plan should address the key areas of:

- ***Technology Management and Information Security***
- ***IT Vendor Contracts & Oversight***
- ***Data Governance & Management***
- ***Business Continuity and Disaster Recovery***

b. The COO and IT Director should meet to lay out a list of responsibilities and timeline for completion of the IT plan.

c. This should consider the impact of the timing and completion of the overall business plan (see O3.6) but if the completion of that plan will be delayed further, then the matter should be escalated to the CEO for resolution. Nonetheless, the IT Director should strive to complete an overall IT plan and assessment with the components recommended and under available verbal and written direction, i.e., the RSIC Strategic Plan, plans for risk systems evolution, etc.

1. Background of 2018 recommendations:

An overall organizational business plan had not been completed, nor was there an IT plan. However, for many years, RSIC management had completed a three-year *strategic* plan that could have informed an overall IT plan, albeit in less detail than might be hoped for had the recommended business plan been completed. Independent of whether RSIC planned significant changes in its internal/ external investment management strategy, the organization could have benefited from a written IT plan.

2. Assessment of implementation progress in 2022: Partially implemented

a. RSIC published a two-page IT strategy document for 2021-2024. The document effectively laid out three primary objectives:

   i. Mobility and flexibility

   ii. Data protection for confidentiality, integrity, and availability; and

   iii. Design systems with cross department functionality in mind.

   The two-page, abbreviated strategy document is satisfactory in its current form as an IT governing principles document. However, it lacks clearly defined objectives, a depiction of RSIC's application and data flow architecture, and a plan for expanding and enhancing the suite of business systems (accompanied by a future state architecture). Further, the IT strategy should contain an assessment of current state and planned investments to support the key areas of IT's infrastructure, including technology management and information security, IT vendor contracts and oversight, data governance and management, and business continuity and disaster recovery.

b. The more detailed plan, as recommended, should cascade from the overall 2022-2023 business plan and ERM assessment of IT risks. The COO and IT Director should develop the strategic plan, highlight roles and responsibilities, timelines for enhancements, and present it to the IT Steering Committee for approval. Updates should be provided as part of the regularly scheduled, semi-annual meetings of the IT Steering Committee and be incorporated in RSIC's annual budget.

c. The development of the IT plan can commence and cascade from the RSIC business plan and ERM register. This has not yet been accomplished.

Although the focus of IT staff has migrated to more of an IT operational posture after the 2018 fiduciary audit, the organization is recommended to complete the task to create a living IT strategic plan. As RSIC continues to invest in distributed, cloud-based, SaaS solutions to modernize processes for key functions across the organization, developing a strategic IT plan accompanied by a holistic view of platforms, interfaces and vendors, and informed by the business plan and ERM priorities will ensure that the organization remains effective and efficient in managing, integrating and growing its footprint of business systems.

3. 2022 Recommendations for further improvement:

G3: RSIC should develop a living IT strategic plan that addresses the current strategy of utilizing distributed, cloud-based, SaaS solutions to modernize processes for key functions across the organization.

IT4.1: RSIC should engage with the General Assembly to seek authorization to procure investment systems under a modified procurement process that includes appropriate accountability.

1. **Background of 2018 recommendation:**

Procurement of needed systems had been a perennial problem for RSIC. RSIC had to work around imposed dollar limitations, approved vendor lists, and other constraints. The same issues raised in the 2014 fiduciary performance audit continue in 2018. For example, a recent and lengthy procurement of the MS Dynamics CRM/ERP platform was initially denied because it had gone off state contract. RSIC was able to 'piggy-back' on another state agency contract in order to purchase it after much negotiation.

In 2018, RSIC had made little progress in getting relief from the General Assembly despite best efforts.

2. **Assessment of implementation progress in 2022: Not implemented**

The General Assembly chose to retain the requirement for RSIC to follow state procurement processes for direct investment support services. RSIC has indicated that, to date, this limitation has not been a major barrier to receiving the IT services they have been seeking, particularly since the IT strategy has changed to focusing on IT services rather than products operated in-house.

3. **2022 Recommendations for further improvement:**

G4: RSIC should engage with the General Assembly to revise the statutes to exempt RSIC from state procurement requirements for investment technology products and services.

H. Additional Observations and Recommendations

General Compliance Function

1. Current background

The RSIC SIOP states "The Enterprise Risk Management and Compliance ("ERM and Compliance") function reports to the CEO and serves as the primary staff to aid the CEO in fulfilling the role of chief risk officer. The ERM and Compliance function coordinates with the Executive Team and other staff on the assessment of, and provides oversight related to the identification and evaluation of, major strategic, operational, regulatory, informational, and external risks inherent in the business of RSIC. ERM and Compliance is also responsible for overseeing the process for monitoring compliance with RSIC policies and applicable laws."

2. Assessment of current status.

Compliance conversations are frequent among executive leadership team members. There have been regular compliance conversations between legal and compliance. These are ongoing. Internal legal counsel is considered to be a valuable resource for the compliance function.

There appears to be a strong compliance tone at the top of RSIC. The CEO has made it clear that non-compliance is unacceptable and frequently checks in with Compliance. Compliance topics also get time as needed at the IIC to cover topics. The IIC Charter provides for the IIC to "*periodically receive, review, and discuss certain compliance matters. These updates may include items such as SMA compliance certifications, counterparty exposure reviews, the annual manager questionnaire, and compliance with strategic asset allocation ranges." Quarterly* compliance reports are provided to the AERMC. More detailed AERMC discussions also happen as needed (e.g. when reviewing the results of annual manager compliance questionnaires).

RSIC has developed a comprehensive compliance program that includes the following:

Compliance Requirements	Status
Securities Lending monitoring	Quarterly - reported to CIO and AERMC
Separately Managed Accounts certifications	Quarterly - reported to Investment staff for review and to AERMC
Personal Trading monitoring	Quarterly - reported to AERMC
Annual Manager Questionnaire certifications	Annually - reported annually to AERMC
SEI filing coordination (Statement of Economic Interest)	Annually – DERMC makes sure the Commissioners and covered staff file SEI disclosures with the State Ethics Commission
SMA guideline review (BNYM reporting)	Reviewed weekly, based on data reports from BNYM
Annual employee compliance training/New employee	Annually in December and within the first few days of a new employee's start date
Annual employee COE/compliance acknowledgment	Confirmation of December training is reported to AERMC
Gift monitoring	Occurrence related (notice sent to employees and managers in November to remind them of policy)
Pre-approval/final approval of employee travel regarding compliance with policy	Occurrence related
Completeness Check for new investments	Occurrence-related; CEO certification provided in WatchDox
Maintain Restricted List	Occurrence related
Annual Commissioner COE acknowledgment	Annually in March
Policy oversight and policy maintenance	Annual review and occurrence related
Ethics	Annual Code of Ethics training and upon new employment; training acknowledgments signed; travel approvals; gift monitoring; SEI filings; annual Commissioner ethics compliance acknowledgment
Manager proxy voting policy reviews and manager voting practice reviews	Addressed in Annual Manager Compliance Questionnaires; reviewed by Investment staff with signed acknowledgment of reviews completed

While the compliance function at RSIC appears to be designed and to operate at or above prevailing practice standards, there are a few leading practices that could improve effectiveness and efficiency of compliance reporting. Development of an aggregated ERM and compliance exceptions agency-wide reporting dashboard could facilitate integration of compliance within ERM processes, while also improving clarity and insight of AERMC reports. An example aggregated dashboard is included in Appendix 3.

3. **2022 Recommendations for further improvement:**

H1: The Director of ERM should consider the development of an aggregated agency-wide compliance and ERM dashboard that includes compliance and ERM risk tolerance range exception reporting linked to drill down resources.

II. Effect of Investment Strategy Changes

Review SCRSIC's changes to policies, procedures, and practices related to the simplification of the portfolio's asset allocation; launching a co-investment program; and implementing the investment delegation policy; to critically evaluate whether these policies, practices, and procedures effectively address the amelioration or enhancement of risk resulting from the changes.

Background

SCRSIC's asset allocation policy went through a significant redesign in 2019 as outlined in the table below (taken from the 2020 revised SIOP).

Table 4

Legacy Asset Allocation	
Nominal IG Bonds	6
Treasuries	5
TIPS	2
Mixed Credit	4
EM Debt	4
Private Debt	7
US Equity	18
Developed Int'l Equity	11
EM Equity	6
Equity Options	7
Private Equity	9
Real Estate (Public)	1
Real Estate (Private)	8
Infrastructure (Public)	1
Infrastructure (Private)	2
PA Hedge Funds	10
GTAA	7
Other Opportunistic	1

Current Asset Allocation	
Bonds	26
Private Debt	7
Global Equity	46
Private Equity	9
Real Assets	12

Prior to the 2019 asset allocation redesign, the investment approach implemented by the investment staff was constrained by the 18 asset class targets established in the asset allocation process. Benchmarks were established for each asset class category. The large number of asset allocation classes effectively limited the staff's flexibility to be opportunistic in their implementation of the portfolio. Investment products/managers considered needed to fit within the "bucket" categories identified in the asset allocation plan.

The revised asset allocation policy establishes much broader, easier to intuitively understand, asset allocation targets with broad, more conventional market benchmarks. Broad market benchmarks reflective of the intended risk exposures were established, and a sophisticated performance attribution reporting system was developed by staff to indicate where risks versus benchmark exist and overall additions and deletions from return are achieved.

The fundamental goal of the investment program is: "Striving to construct an investment portfolio that will meet or exceed the actuarially assumed rate of return over time at a prudent level of market risk in keeping with RSIC's fiduciary duties to the Plan's beneficiaries."

Findings and conclusions

The revised asset allocation program is in keeping with prevailing practices among other state pensions. The revised program provides greater investment flexibility to the capable RSIC investment staff and greater potential to add value from their decisions as compared to the more constraining prior asset allocation policy with a large number of asset class targets. The key to capitalizing on the added flexibility will be in the manner the investment staff takes advantage of this flexibility.

The following chart from the 2022 SIOP explains well the role each of the various asset categories will play in the investment portfolio as well as the return, alpha and liquidity expectations from each segment of the asset portfolio:

	Public Equity	Private Equity	Bonds	Private Debt	Real Assets
Primary role in portfolio (asset allocation)	Growth	Growth	Diversification	Yield	Diversification
Secondary role in portfolio (asset allocation)			Yield		Yield
Return expectation (20Y benchmark return)	High	> Public Equity	Low	> Bonds	Moderate
Alpha expectation where active: magnitude vs. cost	Low	High	Moderate	Moderate	Moderate
Consistency of excess return	Low	Moderate	Moderate	High	High
Expected liquidity	Very high	Very Low	Very high	Low	Low
RSIC Target Portfolio Expected Cost	Low	High	Low	Moderate	Moderate

The IIC charter clearly lays out the governance process surrounding the implementation of the target investment program. The combination of monthly performance updates, quarterly reviews and annual deep dives for each asset class provides appropriate transparency and accountability for the implementation of the asset allocation program approved by the RSIC Commission. As detailed in this report, the meaningful advancement of the risk management measurement and reporting system at RSIC should provide an additional layer of transparency and insight for both staff and the Commission on the overall portfolio.

The co-Investment program with the private equity allocation has been well conceived and implemented. RSIC has developed a strong relationship with IM1 to source co-investment opportunities and perform due diligence on other co-investments sourced from existing LPs or Strategic Partnership arrangements. This relationship has developed two custom LPs with a separate plan administrator and auditor and valuation process. The arms-length relationship between RSIC and IM1, capitalizing on their skills as well as existing private equity relationships, appears to be an effective approach for a co-investment program to function in a timely and complete manner. All reasonable risks of implementation appear to be addressed in this implementation model.

As mentioned above, the IIC and SIOP address other reasonable governance and implementation policies for the revised investment program in light of the Commission's decision to delegate decision making to staff. RSIC staff has embraced the challenges posed by the delegation process and is implementing the investment program at a prevailing practice level in line with other large state pensions that have delegated day-to-day investment implementation to staff.

From a purely investment perspective, we do not believe the revised program materially changed the fundamental investment risk and return potential of the RSIC portfolio. This concept was brought out in the revised SIOP statement approved after the program was approved. The more clearly understandable asset class targets and benchmarks, the simplified asset allocation targets, and added flexibility given staff delegation have reduced implementation risk and improved the ability for opportunistic investments by RSIC staff.

Going forward, we recommend the Commission develop more simplified and yet advanced levels of monitoring staff progress on asset allocation goals. Increased levels of education and engagement at the Commission level, along with better use of the general consultant, will enhance the commission's verification and monitoring role given the decision to delegate implementation to staff.

RSIC has established a sophisticated and successful investment operation that is serving the citizens of South Carolina well. The successful hybrid in-house/outsourcing model that RSIC has developed over the past 5 years represents an optimized balance of complementing limited internal resources with experienced professional advisors. The new asset allocation policy appears well designed to at least capture the same risk /return balance as the previous policy if not improve through better staff implementation of portfolio decisions.

The key ongoing risk of successful implementation of the investment program is staff adjustments following inevitable turnover of staff over time. We encourage the Commission's enhanced monitoring of staffing and retention efforts as well as staff development.

2022 Recommendations for further improvement

No recommendations at this time

III. Role of the Commission

Evaluate whether the board's evolving role from a management to an oversight committee positions it to fulfill its fiduciary duties.

Background

According to South Carolina Code (§9-16-30(A)), the Commission may delegate any of its functions to the CEO as it deems appropriate for efficient administration and when such delegation is consistent with South Carolina law.

In 2017, consistent with the statute, the Commission chose to delegate substantial investment decisions to the Chief Investment Officer (CIO), under the oversight of the Chief Executive Officer (CEO). While operating consistent with overall investment policy and an Annual Investment Plan approved by the Commission, the delegations effectively allow the CIO and investment staff to select and terminate external investment managers without Commission approval. Prior to the delegation, these external investment manager decisions were a major focus of the Commission and related deliberations consumed a significant portion of the Commission's meeting time.

The delegations were prudent, given the complexity of the portfolio, the capabilities of the internal investment staff and their advisors, and the part-time nature of the commissioner role. In addition, few of the commissioners were institutional investing experts.

It has now been five years since the Commission has made these significant delegations to staff. The intention was for the Commission to evolve from a more active investment management role to one of setting strategy and oversight. In speaking with the commissioners, it is apparent that there is still some concern about whether or not the Commission is most effectively fulfilling its oversight responsibilities.

Findings and conclusions

Governance Structure

The overall responsibility of a fiduciary investment board or commission is to direct, oversee and control the investment program for the exclusive benefit of the beneficiaries. Consistent with prevailing peer practices, a board typically organizes itself into committees to expedite the work of the board, to advise the board on available choices, recommend options, to oversee and to verify the system's performance and risk. Committees are typically advised by staff and by independent consultants. About two-thirds of U.S. state investment boards do not have an investment committee because the full board chooses to address investment topics, similar to the Investment Commission.

RSIC has an effective governance structure and, although there are misalignments of responsibility and authority with respect to staffing, compensation, budgets, and procurement, as referenced elsewhere in this report, on balance the Commission has the authorities and resources it needs to fulfill its fiduciary duties and the overall governance framework is effective.

The Commission has two committees, the Human Resources & Compensation Committee (HRCC) and the Audit & Enterprise Risk Management Committee (AERMC). The HRCC has generally met twice annually and the AERMC four times annually. This is a typical frequency for each of these committees to meet as compared to peers, and they appear to function well. There is a standard process for each committee to report to the full Commission, and committee materials are available to all the commissioners through the Watchdox portal.

Regarding Commission composition, the stringent commissioner qualifications may have resulted in unintended consequences. Although we understand one intent of the commissioner qualification requirements was to ensure that there is a high level of institutional investing expertise on the Commission, the specific requirements have not had that effect, and at the moment, there is minimal institutional investing experience. Four of the current commissioners, or half, are Certified Public Accountants. All of the commissioners are capable and dedicated trustees, but the qualification requirement has resulted in limited diversity of professional backgrounds and also demographics. Greater diversity of backgrounds would enhance diversity of thought.

Direct Report to the Commission

It is the responsibility of the Commission to set the direction for the system and to hire the CEO to execute the direction within the policies as set by the board, to demand accountability, and to obtain appropriate independent verification on the reliability of reports it receives and issues. It is the CEO's responsibility to carry out the board's direction and to timely bring to the attention of the Commission where course correction or additional resources may be needed.

Prevailing practice among peers is for the board to hire the CEO, often with the assistance of a search firm, and for the board, primarily through the chair, to be in regular contact with the CEO once hired. RSIC has accomplished the objective of hiring an effective CEO and maintaining an effective relationship and communications with him. There is a concern that the Commission needs to have a documented succession plan for the CEO, as at some point it will be needed and will present a challenge to the Commission. This has not been accomplished, as mentioned elsewhere in this report.

On the face of it, the reporting relationships to the Commission appear to be well articulated and working well. The CEO is the clear operating report to the Commission, and delegations are clearly defined.

However, we heard from most of the commissioners that the Commission has become passive and takes its lead from the CEO. It is clear that all the commissioners hold the CEO, as well as the CIO and COO, in high regard and have confidence in the organization. The Commission does not appear to have identified its appropriate role since it has delegated investment authority to staff and needs to become more proactive, constructively challenge staff and consultants and be professionally skeptical.

Setting Direction

It is the Commission's responsibility to make informed choices about direction and policy. The Commission also needs to ensure the system is adequately resourced. With a combination of internal resources and external advisors and service providers, RSIC has developed a high-performing investment organization.

Based upon the current high level of functioning of the RSIC organization, the policy and delegation decisions of the Commission have been very appropriate and successful. This includes the major decision in 2017 to grant the CIO the ability to approve investments which fall within the parameters of the Investment Delegation Policy, subject to the oversight of the CEO, and the simplification of the strategic investment allocation in 2019. It is highly likely that the recent improvement in investment returns relative to peers was greatly facilitated by these two Commission decisions.

The more recent decision to establish an improved compensation structure for investment staff in order to strengthen attracting, developing and retaining staff is another example of the Commission effectively setting direction, although it is too soon to assess the results of the new program.

Despite the success in these two key areas, the Commission has not developed its own strategic agenda and set its own priorities. The Commission has not been extensively engaged in development of the RSIC strategic plan, which is developed by staff and then reviewed with the Commission. While there is a strategic calendar, as discussed earlier in this report, the Commission has not spent much time discussing its priorities and how it wants to spend its time. Most peer boards have an annual retreat where, in a more casual setting, they follow an agenda that includes, for example:

- Strategic planning and the key long-term issues facing the organization
- Setting the board's agenda for the upcoming year
- Succession planning for the CEO
- Board performance and how to make improvements
- Future capability development needed in the organization

Although the Commission has a high level of confidence in the CEO, CIO, COO and the other staff, it still needs to retain its own independent consultants/advisors to provide an independent opinion regarding direction, available policy options and implications. The Commission then decides the overall course of action needed. In the absence of the Commission having its own advisors, although there may be robust discussion of key topics, a key check and balance is missing without another expert opinion.

The Commission's failure to develop an effective relationship with its general investment consultant, and to receive adequate independent advice and counsel, has been a major deficiency that has contributed to concerns by commissioners that its oversight has not been as effective as desired.

Approving Key Decisions

Since the delegation of significant investment decision-making to staff in 2017, the Commission has had significantly fewer decisions to approve. In general, Commission approvals appear to be timely and appropriate. However, there is not a list of all decisions that require Commission approval, and there are not due diligence standards for each decision. This is a leading practice that could potentially clarify for the Commission their role in decision-making and also their understanding of the diligence efforts that staff and/or third parties have undertaken for each decision.

Overseeing Execution of Direction Within Policy

Although most commissioners commented that the Commission books for each meeting are typically large, they also said that they thought the information was useful and appropriate. In addition, the CEO usually meets with each commissioner before the meeting to brief them and help them prepare.

Commissioners said this improved the preparation and readiness of members to participate in discussions with good questions.

Commissioners believe investment reporting has improved and is currently very effective. While investment risk reporting has also improved, they acknowledge that it is more complex and challenging to understand. Having a more collaborative and direct relationship with the investment consultant could potentially assist in better understanding investment risk.

Some commissioners suggested that improved executive summaries and more exception-based reporting would be an enhancement.

While commissioners on each of the committees stated that they had a good understanding of matters handled by their committee, commissioners who did not sit on those committees did not seem to be well informed. There may be an opportunity to improve the committee report-out process to the full Commission to achieve a deeper understanding of the committees' work.

Verifying then Trusting

The Commission has developed an effective internal audit program utilizing outside resources, and the use of the PEBA's external auditor to conduct agreed-upon procedures has also been effective.

RSIC now conforms to the CFA Institute's Global Investment Performance Standards (GIPS) and receives verification of compliance annually from ACA Group. This performance reporting reassurance can be considered a leading practice that is increasingly being adopted by other leading institutional investors.

RSIC's collaboration with CEM Benchmarking has been effective in better understanding and managing its investment management costs and is considered a prevailing practice.

A critical area for improvement for the Commission is to effectively utilize its relationship with the general investment consultant. As noted earlier in this report, this has been an area where the Commission has been unsuccessful for many years, regardless of which consulting firm was serving RSIC.

It is critically important that the Commission Chair take the lead in this relationship and work with the investment consultant to address issues on behalf of the Commission, and that there are effective ongoing communications between the Commission and the investment consultant. This relationship should not be staff driven, as the investment consultant is a key independent advisor to the Commission and a critical check and balance in the process.

While there should be a collaborative relationship between the investment consultant and staff, the Commission should lead and direct the relationship. An important element of the relationship is at least one annual meeting with the investment consultant without staff present when the Commission can provide candid feedback and also discuss the consultant's perspective on the performance of staff and any potential disagreements.

This has never happened and has contributed to the failure to develop a strong Commission-investment consultant working relationship. The Commission should also direct staff to provide investment materials to the general investment consultant on a timely basis to ensure they have the ability to advise the Commission.

Overall Commission Performance

By most measures the Commission has done a very good job over the past four years since the prior review. They have retained a very effective CEO, who in turn has continued to develop a very competent staff. The strategic asset allocation has been greatly simplified and internal resources have been focused on those areas of the portfolio where they can add the most value. Risk management has been significantly strengthened. Fund performance, relative to peers and benchmarks, has significantly improved.

In addition, the business of the commission and its committees appears to function effectively in most areas. Among the areas that have performed exceptionally well are:

- There is a strong ethical tone at the top.
- There is an effective set of governance policies in place.
- Hiring of the CEO has been very successful.
- Committees generally function effectively.
- Commissioners report that they have an opportunity to be heard and voice any concerns.

However, based upon feedback from commissioners and staff, and our experience working with other public retirement systems, there are several areas that could be improved:

- Commissioners could have more constructive challenges and skepticism during Commission meetings when topics are debated.
- The Commission needs to have a much more active and collaborative relationship with its general investment consultant.
- The annual Commission self-assessment process could be much more effective and result in more specific improvement plans.
- Continuing education could be improved (this is in process).
- The CEO evaluation process could benefit from more commissioner engagement.
- Succession planning should be a Commission focus and more formalized.

2022 Recommendations for further improvement

III1. Revise the statute for commissioner qualifications to allow for more diversity of professional backgrounds and also demographics. See also B2.

III2: The Commission should hold an annual retreat where, in a more casual setting, they follow an agenda that includes, for example, strategic planning, setting the agenda for the upcoming year, succession planning for the CEO, Commission performance and how to make improvements, and future capability development needed in the organization.

III3: The Commission should strengthen its relationship with its general investment consultant to receive adequate independent advice and counsel.

III4: With staff support, the Commission should develop a scope relationship detailing decisions that require Commission approval and diligence standards for each decision.

III5: Staff should develop improved executive summaries and more exception reporting for reports to the Commission.

III6: The Commission should meet at least once annually with the general investment consultant, without staff present, and provide candid feedback and also discuss the consultant's perspective on the performance of staff, any potential disagreements, etc.

III7: The Commission should direct staff to provide summary investment materials to the general investment consultant on a timely basis to ensure they have the ability to independently advise the Commission on the direction of the investment program and the potential strengths and weaknesses of the direction being taken by staff.

III8: The CEO evaluation process should have more commissioner engagement; the Commission should consider the use of an outside facilitator.

Summary Assessment of 2018 Implementation Progress

Responsibility	Fully Implemented	Partially Implemented	Not Implemented	No Longer Applicable	Total
Staff	36	7	2	9	54
Commission	2	1	5	0	8
General Assembly	0	0	3	0	3
Appointing Authorities	0	1	0	0	1
Total	38	9	10	9	66

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
A. Overarching			
OA1: Improve assurance and independent reassurance to build trust and confidence.			
· Adapting ERM to the RSIC organization			**See G13.2**
· Agreed Upon Procedures	**Necessary**	**Staff**	**Implemented**
OA2: Build capabilities across the organization (including HR, IT, Accounting, etc.).			
· Succession plan for leadership positions			**See O1.2**
· Five-year capability development plan	**Critical**	**Staff**	**Implemented**
OA3: Reset Commissioners' focus on strategy and oversight.			
· Commission self-assessment			**See G12.3**
· Strategic policy agenda			**See G12.1**

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
· Investment beliefs			**See G10.1**
· Asset allocation review			**See I2**
· Reporting of investment performance	**Necessary**	**Staff**	**Implemented**
OA4: Align fiduciary duties and responsibilities.			
· Budgetary authority			**See G5.1**
· Procurement exemptions			**See P5**
B. Governance			
G5.1: RSIC should continue to engage over time with the General Assembly to seek delegated budget and personnel resourcing authority to RSIC that is commensurate with what is needed to meet RSIC's fiduciary obligations. This ongoing advocacy should emphasize accountability for delegated authority through continued maintenance of oversight monitoring and periodic independent expert fiduciary reviews to evaluate how that authority is being exercised.	**Critical**	**General Assembly**	**Not Implemented**
G7: It would be useful to write a "lessons learned" memorandum analyzing what circumstances, abilities, resources, governance structures, and economics need to be present for a successful strategic partnership so as to memorialize the learnings for future generations of RSIC staff.	**Necessary**	**Staff**	**Implemented**
G9: Close attention should be given to the timely appointment of successor Commissioners when terms expire.	**Critical**	**Appointing Authorities**	**Partially Implemented**
G10.1: The investment beliefs should be revisited periodically (every 3-5 years, coterminous with the asset allocation study periodicity recommended in I2) or as required by new knowledge.	**Important**	**Commission**	**Partially Implemented**
G10.2: The Commission approved a plan to improve the SIOP and AIP adoption process at its June 2018 meeting, which should improve the efficiency and logic of the process.	**Important**	**Staff**	**Partially Implemented**

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
Integrating an annual calendar of asset class presentations into that process should increase the robustness of the Commission's oversight and ability to provide strategic guidance.			
G12.1: RSIC should develop a long-term (e.g., 3-5 years) strategic policy agenda which includes decisions which are reserved for the Commission to make. The policy agenda should provide a framework for bringing key issues to the Commission and for planning Commissioner education in advance of addressing those issues.	**Important**	**Staff**	**Implemented**
G12.3: The Commission self-assessment processes could be improved by improving Commissioner engagement and ensuring more systematic follow-up on opportunities for improvement. The Commission should also consider the use of an experienced external facilitator.	**Important**	**Commission**	**Not Implemented**
G12.4: RSIC could improve ongoing education of Commissioners in several areas:			
a. For on-boarding of new Commissioners:			
1. Training should begin as soon as practical and be individualized to the specific needs of new Commissioners by identifying skills gaps and developing a continuing education plan for that Commissioner to address those gaps;	**Important**	**Staff**	**Implemented**
2. Rather than a one-time training event, on-boarding should have a one- to two-year time horizon to extend and be staged to provide an extended time period to complete the process. The additional time may avoid overwhelming Commissioners with too much information at once and also allow them more time to absorb the large amount of new information associated with Commissioner responsibilities;	**Important**	**Staff**	**Not Implemented**
3. Better use can be made of executive summaries with hyper-links to more detailed materials for on-boarding.	**Necessary**	**Staff**	**Implemented**
b. Commissioners' continuing education plans should:			
1. Incorporate the results of the Commissioner self-assessment;	**Necessary**	**Commission**	**Not Implemented**

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
2. Be better linked to anticipated policy decisions required (see Strategic Policy Agenda) and the specific related needs identified as part of the annual self-assessment.	**Important**	**Staff**	**Implemented**
c. The education policy could be revised to identify a subset of education requirements relevant to the Commission. For example, instead of only requiring "at least 16 hours of continuing education annually," RSIC could require a certain number of hours of specify that education cover related to fiduciary duty, communications/stakeholder relations, asset allocation, and other topics where skills development is determined to be appropriate (including those in the strategic policy agenda).	**Important**	**Commission**	**Not Implemented**
G13.2: Expedite implementation of an ERM program. See Appendix 2 for more detailed explanation of contributing factors, tools, implementation considerations and recommendations.	**Critical**	**Staff**	**Partially Implemented**
G16.1: The IIC could be improved through:			
a. The IIC is technically advisory to the CIO. In reality, it would be highly unusual for the CIO to proceed with an investment decision opposed by the IIC. Given that, the charter should be revised to note that any such CIO override of a formal vote by the IIC should be reported to the CEO and Commission, so that they can be aware of the situation. While the CEO attends IIC meetings, and would very likely be aware of such a situation, formalizing the process so as to provide documentation in such a rare instance would be a helpful governance procedure, particularly since the CEO can veto such a decision.	**Necessary**	**Staff**	**Implemented**

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
b. An important function of the IIC is to review and modify policies and procedures. At present, there is no obligation that the broker-dealers used by the short-term fixed income desk affirm annually that they are in compliance with the RSIC's ethics and gifts policy. (The RSIC staff makes such an affirmation, and the requirement for such an affirmation is included routinely in investment management agreements with external asset managers.). The IIC should work with Compliance and Legal to create an annual affirmation for any broker-dealer executing trades for the RSIC directly.	**Necessary**	**Staff**	**No Longer Applicable**
c. Our understanding is that there is a broker-dealer selection policy which requires a broker-dealer to have $25 million in net capital, as well as certain regulatory checks. Brokers are recommended by the head of the short-term desk and approved by the CIO. The IIC reviews trade volumes by broker-dealer semi-annually and there is an informal annual review process. There is no formal process to detect potential issues at broker-dealers, though the head of short-term fixed income monitors news services. The IIC should formalize the annual review process and add an environmental scan (news feeds, FINRA and SEC checks, etc.).	**Necessary**	**Staff**	**No Longer Applicable**
G16.3: The IIC (including the peer review process) may also present an opportunity to improve communications to the RSIC's private asset class consultant. We do not suggest inviting the consultant to the meetings on a routine basis for two reasons: 1) There is a balance between using the IIC to broaden and improve communications and the free flow of informed discussion around sensitive investment issues which become unwieldy with a large number of participants, and 2) there is the threat of group think if the independent consultant regularly participates in IIC meetings. However, a verbal or electronic report following the initial peer review meeting, including which partnerships are being considered for investment, could be circulated timely to the consultant, thereby furthering the consultant's understanding of the investment staff's thinking and priorities. That would serve to both alert the consultant to potential upcoming due diligence needs,	**Necessary**	**Staff**	**Partially Implemented**

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
as well as provide the consultant with an early opportunity to volunteer relative information to the RSIC staff.			
G18.2: Identify metrics, such as activity on RSIC's website and surveys of stakeholders, to help measure the progress of the communications plan.	**Necessary**	**Staff**	**Partially Implemented**
C. Policy review and development			
P2.1: RSIC should update the policy to address custodial relationship and continue to evaluate exposures when its counterparty relationships change	**Important**	**Staff**	**Implemented**
P2.3: RSIC should update the template IMA to incorporate specific requirements of the statutes and SIOP. In addition, RSIC should update its policies to:			
a. Require that prospective new managers submit their proxy voting policies to RSIC for initial review so that RSIC can confirm that the proxy voting policies are consistent with the interests of the retirement systems and their participants and with proxy advisor oversight requirements at the beginning of the relationship;	**Important**	**Staff**	**Implemented**
b. Require existing managers to provide copies of the manager's policies and procedures for monitoring its proxy voting on behalf of RSIC and evaluating the capabilities or its proxy advisors so that RSIC can verify that each manager is able to meet its obligation to vote proxies in the interests of the retirement systems and their participants;	**Necessary**	**Staff**	**Implemented**
c. Require managers to submit their evaluations of proxy advisors, including how proxy advisors manage conflicts of interest;	**Necessary**	**Staff**	**Implemented**
d. Require managers to notify RSIC if the manager has changed proxy advisors and to provide a copy of any new proxy voting policy covering RSIC's proxy issues so that RSIC can confirm the policy is in the interests of the retirement systems and their participants; and	**Necessary**	**Staff**	**Implemented**

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
e. Formalize RSIC's process for monitoring its proxy voting, including documentation of RSIC's annual review of proxy votes submitted in response to the annual compliance questionnaire. This review should focus on identifying key votes that are material to the plan and evaluating inconsistencies in votes between managers.	**Necessary**	**Staff**	**Implemented**
P2.4: RSIC should update the Securities Litigation Policy to clarify the approval roles of the Commission, the Legal Division, executive leadership, and the Attorney General (if any).	**Necessary**	**Commission**	**Implemented**
P2.5: RSIC should amend the Ethics Policy to incorporate the specific standards of conduct applicable to employees, similar to in Policy I(I)(3) of the Governance Policy Manual applicable to Commissioners.	**Necessary**	**Staff**	**Implemented**
P5: RSIC should engage with the General Assembly to revise the statutes to exempt RSIC from state procurement requirements for direct investment support services, including IT systems, similar to brokerage and investment management and advisory services.	**Important**	**General Assembly**	**Not Implemented**
D. Organization Structure			
O1.2: The investment organization could be improved through:			
a. There have been a number of personnel changes made since the last full succession plan review. As a result, the succession plan is out of date and should be revised.	**Important**	**Staff**	**Implemented**
b. The CIO should determine if additional resource(s) are needed in private markets.	**Critical**	**Staff**	**Implemented**
O3.3: The Commission will need to closely monitor the effects of recent changes in the incentive payment plan on the recruitment of investment staff.	**Important**	**Staff**	**Implemented**
O3.5: Staff development could be improved through:			
a. Update succession plans for senior management positions.			**See O1.2.a**
b. Annually review succession planning across the organization with the HRCC.	**Important**	**Staff**	**Implemented**

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
O3.6: The Human Resources function should provide leadership for development of a multi-year (3-5-year time horizon) infrastructure business plan which considers the needs and priorities of the organization.	**Important**	**Staff**	**Implemented**
E. Investment administration			
I1: In order to minimize the likelihood that the Commission may accept unreasonable investment risk in order to achieve the assumed rate of return, the General Assembly should consider fully delegating the responsibility for setting the assumed rate of return to PEBA and RSIC, consistent with peer practices.	**Important**	**General Assembly**	**Not Implemented**
I2: A full asset liability and asset allocation study should be conducted every three to five years, to include a review of plan's investment beliefs. While an annual review is needed to check adherence and is a useful safeguard in the event of a major market change (such as the global financial crisis of 2008) or a material change to a specific fund's assets or liabilities (such as one caused by legislative changes or collective bargaining benefit changes), it is generally regarded as better to adhere to the longer-term strategic plan rather than materially change the asset allocation annually. Therefore, the Commission ought to consider what should be the appropriate periodicity of asset allocation study, the level of review to be performed annually, and the periodicity of review of its investment beliefs.	**Critical**	**Commission**	**Implemented**
I3.1: RSIC should finalize a decision as to how to create the necessary risk analytical system.	**Important**	**Staff**	**Implemented**
I3.2: Investment risk management could be improved through:			
a. Once a risk system is selected, quantitative solutions and reporting should create a user group to inform the types and periodicity of standard reports, which will likely vary by asset class. We also suggest that the plan include a plan for user training.	**Critical**	**Staff**	**Implemented**

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
b. Risk management and investment reporting should determine if there are ways to cooperate to extend risk measurement/analysis and performance attribution to other asset classes. For instance, can the data from reporting allow the quantitative solutions group to provide useful analyses to public market asset class heads for ongoing monitoring of public securities portfolios? The specific example is indicative only, designed to suggest how pairing the analyses provided by quantitative solutions, fueled by a new risk management system, and aided by reporting, could be leveraged across various asset classes.	**Important**	**Staff**	**Partially Implemented**
I3.5: RSIC should continue with its plans to activate a secondary LP interest program, or to decide explicitly not to proceed. It should also take advantage of Albourne's expertise and knowledge base in this area as part of its exploration.	**Important**	**Staff**	**Implemented**
I4.3: The broker/dealer policy could be improved through:			
a. Require broker/dealers to perform background checks of employees directly responsible for RSIC relationships. Prior to approval of any broker/dealer eligible to do business certify that the broker is familiar with RSIC restrictions on RSIC accepting gifts and hospitality and that the broker provides training to its employees on those restrictions. Also certify that the firm will monitor compliance and promptly notify RSIC if it becomes aware of violations.	**Necessary**	**Staff**	**No Longer Applicable**
b. Formalize the annual broker review procedures into RSIC policy (see G16.1 and P2.2).	**Necessary**	**Staff**	**No Longer Applicable**
c. Continue to implement the recommendations from the 2017 independent review of the fixed income trading process and supporting operations.	**Important**	**Staff**	**No Longer Applicable**
I6.1: RSIC could realize further improvements in its due diligence processes through:			
a. In one recent situation, the decision to involve the quantitative solutions group occurred relatively late in the process. While the group's review was accomplished and did not cause the RSIC to miss a close, it involved extraordinary cooperation by the general partner, which held open the closing date for RSIC. FAS suggests that the	**Necessary**	**Staff**	**Implemented**

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
quantitative solutions group attend the pipeline meeting, along with ODD and legal, and that one output of that meeting be a schedule of any other resources within RSIC which will be needed for the due diligence (other asset class specialists, quantitative strategies, legal, consultant, ODD, etc.).			
b. The peer review process is designed to catch issues early, and, particularly, to stop the resources from being wasted on new investments as soon as a "no go" point is reached. The first peer review looks at the incremental benefit of the investment irrespective of the manager, while the second peer review (2A) examines the manager due diligence. Another peer review meeting (2B) examines any follow ups from the managerial due diligence, and then, finally, the IIC votes. (In certain cases, usually related to size or matters of first impression, the investment is brought to the Commission.) The CIO ought to consider under what circumstances would warrant a combined 2B peer review/IIC meeting.	**Necessary**	**Staff**	**Implemented**
c. RSIC uses outside counsel to review private placement memoranda, limited partnership agreements and related subscription documents. RSIC relies heavily on one attorney for most private equity reviews. That has an advantage in that the attorney is familiar with RSIC's requirements and business priorities, but it has created a bottleneck on occasion. Legal should consider marginally expanding the roster of outside counsel firms so as to relieve any time pressure stemming from outside counsel constraints. Our understanding is that Legal has commenced this process since the time of the FAS site visit. See L5.1			**See L5.1**
I7.1: FAS continues to suggest that all managers and general partners be visited on-site annually. However, if an asset class head chooses to not do so because he/she believes the particular manager is adequately monitored without an annual site visit, he/she should document the rationale for not performing an annual on-site monitoring visit. That documentation should have a statement from the investment officer in charge stating what he/she believes should be the periodicity of on-site visits for that manager.	**Necessary**	**Staff**	**Implemented**

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
That written document should be reported timely to the CIO, who should either affirm or countermand the decision. FAS notes that the investment staff disagrees with this recommendation, stating that: a) it has a robust monitoring program; b) the value of on-site monitoring is variable; and c) where the asset class head believes an on-site monitoring is needed, it is done. FAS agrees with all those assertions. Nevertheless, FAS continues to believe that periodic on-site monitoring is desirable, and the decision to not do such an on-site visit, while justifiable, should be treated as an exception, which means it should be justified in writing and escalated for affirmation or override. Also, FAS notes that this recommendation implies leeway for an asset class head to suggest a less frequent than annual on-site visit. Variants of such decisions about periodicities abound (for example risk=based periodicity based on such issues as liquidity, custody, public/private, etc.).			
I9.2: RSIC should consider expanding the co-investment program to include real estate and private credit.	**Important**	**Staff**	**Implemented**
I9.3: As RSIC considers expanding the co-investment program to other private asset classes such as real estate or private credit, it should consider what type of outside expertise and support it needs to access, and whether that expertise and support is resident in the current consultant and co-investment manager or whether it needs additional resources for those asset classes.	**Important**	**Staff**	**Partially Implemented**
I12.2: RSIC should examine the costs and benefits of keeping or removing the remaining long-only account from within its strategic partnership. If appropriate, a plan for removing it should be undertaken.	**Necessary**	**Staff**	**Implemented**
I12.4: The Commission should task its consultant to coordinate with the Chair to schedule appropriate professional education, aligned to the forward calendar, so that the education is related to upcoming strategic decisions to be made by the Commission.	**Important**	**Commission**	**Not Implemented**

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
I14.1: In addition to the appropriate actions taken to date, we suggest exploring the possibility of retaining more than one transition manager.	**Important**	**Staff**	**No Longer Applicable**
I16: We recommend that the Commission adopt and implement a formal process for evaluating the Commission's investment consultant.	**Necessary**	**Commission**	**Not Implemented**
I18.1: Share the results of the IIC securities lending review with the Commission when there are significant changes in the economic terms, performance, or risk.	**Necessary**	**Staff**	**Implemented**
I18.2: Seek separate bids for securities lending and custody services the next time these services are rebid.	**Necessary**	**Staff**	**Implemented**
F. Legal compliance			
L2.1: RSIC may consider developing an internal document or annotated side letter template describing which side letter terms are priorities and the legal basis for prioritizing those terms.	**Important**	**Staff**	**Implemented**
L3.1: RSIC should consider supplementing the Legal Sufficiency Certificate to include a statement addressing whether outside counsel has verified that final transaction documentation complies with all material requirements, including state law and investment policy requirements, or otherwise asking outside counsel to provide a closing letter to the same effect.	**Important**	**Staff**	**Implemented**
L5.1: RSIC should complete an RFP selection process for outside counsel, since it has been more than ten years since the last RFP market test. Our understanding is that Legal has commenced this process since the time of the FAS site visit.	**Important**	**Staff**	**Implemented**
L5.3: RSIC should continue to consider engaging qualified, independent fiduciary counsel and consult with the Attorney General, when determined appropriate, regarding the extent to which the authority to engage fiduciary counsel is delegated.			**Implemented**
G. Information technology			
IT1.1: Enhancements with significant potential for the organization include:			

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
a. RSIC uses PowerBI in numerous areas, including risk and performance and is testing its usage on management fees analysis and reporting. For Business Intelligence and Data Mining applications a strong Excel programmer is needed with training in the BI application. A third-party support firm may also be needed until the person is adequately trained. We encourage RSIC to devote appropriate resources to use these applications to their fullest extent.	**Important**	**Staff**	**No Longer Applicable**
b. Now that the MS Dynamics platform has been purchased, RSIC will need additional resources to implement it. RSIC in the process of developing an RFP to hire a consultant for the build out of MS Dynamics. The IT business plan should describe short- and long-term goals for (PowerBI and) MS Dynamics, e.g., for CRM, ERP, BI, Accounting, etc.	**Critical**	**Staff**	**No Longer Applicable**
IT2: RSIC may benefit from an application development team to leverage the full potential of the Data Warehouse (e.g., business intelligence, data mining, real-time dashboards, real-time reports), but without an IT plan and the respective business cases it is not likely that it will be able to justify them to the CEO or to the legislature. However, these positions could add significant value to support the investment team.	**Necessary**	**Staff**	**No Longer Applicable**
IT3.1: RSIC should develop more formal IT plans, including:			
a. RSIC should complete an overall IT strategic plan with clearly defined objectives, a full assessment of the current state of its systems and a timetable for completing needed improvements. The written IT Strategic Plan should address the key areas of:	**Necessary**	**Staff**	**Implemented**
• Technology Management and Information Security			
• IT Vendor Contracts & Oversight			
• Data Governance & Management			
• Business Continuity and Disaster Recovery			

FAS 2018 Recommendation	Criticality (Critical/ Necessary/ Important)	Respons-ibility	2022 Status (Not Implemented/ Partially Implemented/ Implemented/ No Longer Applicable)
b. The COO and IT Director should meet to lay out a list of responsibilities and timeline for completion of the IT plan.	**Necessary**	**Staff**	**Partially Implemented**
c. This team should consider the impact of the timing and completion of the overall business plan (see O3.6) but if the completion of that plan will be delayed further, then the matter should be escalated to the CEO for resolution. Nonetheless, the IT Director should strive to complete an overall IT plan and assessment with the components recommended and under available verbal and written direction, i.e., the RSIC Strategic Plan, plans for risk systems evolution, etc.	**Necessary**	**Staff**	**Not Implemented**
IT4.1: RSIC should engage with the General Assembly to seek authorization to procure investment systems under a modified procurement process that includes appropriate accountability (See also P5).			**See P5**

Summary of New Recommendations

	FAS 2022 Recommendation	Criticality (Critical/ Necessary/ Important)	Responsibility
A. Overarching			
A1	Develop vital signs for vital functions and create quantitative enterprise-wide dashboards that track actual performance compared to expected. Escalate exceptions with policy implications to the Commission. See B14.		See B14
A2	Expand third-party servicing and/or establish remote / virtual workplace opportunities in select investment and investment support functions.	Important	Staff
A3	Maintain utilization of interns in investment support roles and strengthen cross-training efforts to mitigate key person risk in the event of an emergency.	Important	Staff
A4	Formalize an annual talent review process to identify high potential successor candidates and retention risks across all supervisory and managerial positions and create individualized development plans for potential successors to acquire the essential skills to fulfill the responsibilities of those positions if called upon to do so. See D2.		See D2
B. Governance			
B1	The Legislature should delegate authority for operating budget, staffing and all compensation approval to the Commission to allow the Commission to set the investment strategy and ensure adequate resources are available for implementation and oversight of the strategy.	Important	General Assembly
B2	In order to retain the benefits of term limits and staggered terms, the Commission should either: a. Engage with appointing authorities to offer assistance in sourcing qualified candidates to promptly to fill holdover Commissioner positions, or b. If the engagement option is not successful or is not deemed appropriate, seek legislation to expand the eligible pool of candidates by either allowing greater flexibility in Commissioner qualifications or seek legislation that authorizes appointment of qualified candidates from out of state.	Necessary	Appointing Authorities

	FAS 2022 Recommendation	Criticality (Critical/ Necessary/ Important)	Responsibility
B3	To achieve leading practice in the area of Investment Beliefs, RSIC should conduct a more complete philosophical review and discussion of investment beliefs that provides guidance to staff when managing the organization and guiding the investment of pension assets.	Necessary	Commission
B4	Expand the deep dive analyses provided the Commission to include a discussion of resources applied and potential resources required to implement potential portfolio enhancements. This would sensitize the Commission to possible resources required to implement further strategic changes/initiatives in each asset class.	Necessary	Staff
B5	The Commission's self-assessment processes could be improved by: • Using an experienced external facilitator; • Including upward feedback from staff; • Revising the process to elicit suggestions for improvement; • Clearly identifying continuing education needs for each individual Commissioner; and • Developing action items and ensuring more systematic follow-up.	Necessary	Commission
B6	Implement the planned individualized Commissioner training plans, starting with the onboarding process and informed by feedback from the annual Commission self-assessment process.	Necessary	Staff
B7	Develop a "core curriculum" training program for all Commissioners that anticipates upcoming topics based upon the strategic policy agenda and ensures that all Commissioners are prepared for discussions.	Necessary	Staff
B8	Continue the annual assessment process to proactively identify how processes / performance might fail and what could be done to prevent, or quickly detect and correct it. Currently seen as Phase 1. This assessment should help to inform the development of control improvements, internal audits and agreed-upon procedures (AUP).	Necessary	Staff
B9	Adopt a common definition of risk, for example, consider risk as the potential for an unacceptable difference between actual and expected performance regardless of cause (this is consistent with definitions of investment risk).	Necessary	Staff
B10	Adopt a definition of risk appetite, e.g., the willingness to accept risks of goal/strategy, e.g., asset allocation and define risk appetite for all major goals, e.g., asset allocation.	Necessary	Staff

	FAS 2022 Recommendation	Criticality (Critical/ Necessary/ Important)	Responsibility
B11	Adopt a definition of risk tolerance, e.g., the acceptable difference between actual and expected performance using KPIs and define tolerances for differences between actual and expected performance for board approval.	Necessary	Staff
B12	Determine criteria for escalation to the board, e.g., cause for concern vs. unacceptable and related policy implications.	Necessary	Staff
B13	Define key performance indicators (KPIs) for vital functions for board approval.	Necessary	Staff
B14	Adopt exception-based reporting for vital signs for vital functions based on tolerances.	Necessary	Staff
B15	Perform root cause analysis after every unacceptable or unexpected change in performance based on tolerances and identify policy implications.	Necessary	Staff
B16	Develop links to underlying information for the summary enterprise performance dashboard.	Necessary	Staff
B17	Align independent verification with each key performance indicator.	Necessary	Staff
B18	Address strategic risk, (cross-functional risk) as part of the strategic plan, and address organizational capabilities required to be more resilient and agile.	Necessary	Staff
B19	The Commission needs to "take ownership" of the general consultant relationship going forward and become much more involved in the successful implementation of this relationship. Focused points of contact at both the Staff and Commission level and regularly scheduled points of interface should be established and nurtured.	Critical	Commission
B20	The 2019 communications plan should be updated and include specific activities and accountabilities, and progress should be actively monitored. The Commission should be advised of the plan and progress.	Important	Staff
C. Policy review and development			
C1	The finance departments of RSIC and PEBA should consider jointly performing a total cost of ownership analysis (TCO) of the suite of investment middle- and back-office services every few years and compare the results to a broader set of services that their custodian may offer in a bundled bid.	Important	Staff

	FAS 2022 Recommendation	Criticality (Critical/ Necessary/ Important)	Responsibility
C2	RSIC should engage with the General Assembly to revise the statutes to exempt RSIC from state procurement requirements for direct investment support services, including IT systems, similar to brokerage and investment management and advisory services.	Important	General Assembly
D. Organization structure			
D1	Develop a flexible staffing model which allocates resources to areas of investment emphasis – making use of interns and other beginning level talent from South Carolina's university system enhanced by the use of external consultants when required.	Necessary	Staff
D2	A full talent development and monitoring program should be implemented by RSIC staff and monitored by the Commission that makes use of locally grown talent whenever possible and supplemented by consulting support when necessary.	Necessary	Staff
D3	Maintain utilization of interns in investment support roles and strengthen cross-training efforts to mitigate key person risk in the event of an emergency.	Necessary	Staff
E. Investment administration			
E1	RSIC should continue its risk reporting effort by focusing on risk education and reporting at a level appropriate for the Commission to fulfill its oversight role. This could be integrated with the ERM dashboard reporting.	Necessary	Staff
E2	RSIC should continue to utilize and, when appropriate, expand its opportunistic, generalist staffing model and reliance on existing close GP relationships for co-investment opportunities in the real estate, infrastructure and private debt areas based on the opportunities available in these market segments.	Important	Staff
E3	The Commission should work with the staff, general consultant and external service and product providers to develop an expanded Commissioner education and oversight program.	Necessary	Staff
E4	The Commission Chair should take the lead in managing the relationship with the General Investment Consultant and ensure that there is regular communication between Commission meetings, at least monthly.	Critical	Commission

	FAS 2022 Recommendation	Criticality (Critical/ Necessary/ Important)	Responsibility
E5	The Commission should develop a process to meet privately with the General Investment Consultant, to the extent allowed by Open Meetings laws, at least annually to discuss expectations, consultant performance, and RSIC investment staff performance.	Critical	Commission
E6	Protocols for communication of investment transactions to the General Investment Consultant should be developed to ensure the consultant receives appropriate information on investment actions implemented by the staff so the Consultant can fulfill its independent role of advising the Commission on the investment activities made by the staff.	Critical	Staff
E7	The Commission should establish a regular process to receive briefings by the General Investment Consultant regarding topics such as peer investing practices, performance reporting, risk, leading governance practices, market dynamics, and asset classes.	Critical	Commission
E8	When considering and comparing future lending arrangements with the custodian or with a third-party agent, RSIC should ensure that the custodian makes the organization fully aware of new direct and indirect expenses and provides full clarity about which counterparty will indemnify them for fails that may occur throughout the lifecycle of a loan.	Important	Staff
F. Legal compliance			
	No new recommendations		
G. Information technology			
G1	RSIC should adopt a policy of periodic review (or audit) of critical IT-solution providers to ensure that RSIC remains current in its assessment of key vendor risk.	Important	Staff
G2	RSIC should continue to pursue and formalize a data steward function that establishes standards for naming conventions (i.e., firms and contacts) and maintains sole responsibility for creating and updating referential data on the CRM platform.	Necessary	Staff
G3	RSIC should develop a living IT strategic plan that addresses the current strategy of utilizing distributed, cloud-based, SaaS solutions to modernize processes for key functions across the organization.	Necessary	Staff

	FAS 2022 Recommendation	Criticality (Critical/ Necessary/ Important)	Responsibility
G4	RSIC should engage with the General Assembly to revise the statutes to exempt RSIC from state procurement requirements for investment technology products and services.		See C2
H. Additional Observations and Recommendations			
H1	The Director of ERM should consider the development of an aggregated agency-wide compliance and ERM dashboard that includes compliance and ERM risk tolerance range exception reporting linked to drill down resources.	Necessary	Staff
II. Effect of Investment Strategy Changes			
	No new recommendations		
III. Role of the Commission			
III1	Revise the statute for commissioner qualifications to allow for more diversity of professional backgrounds and also demographics. See also B2.	Necessary	General Assembly
III2	The Commission should hold an annual retreat where, in a more casual setting, they follow an agenda that includes, for example, strategic planning, setting the agenda for the upcoming year, succession planning for the CEO, Commission performance and how to make improvements, and future capability development needed in the organization.	Necessary	Commission
III3	The Commission should strengthen its relationship with its general investment consultant to receive adequate independent advice and counsel.		See E5
III4	With staff support, the Commission should develop a scope relationship detailing decisions that require Commission approval and diligence standards for each decision.	Critical	Staff
III5	Staff should develop improved executive summaries and more exception reporting for reports to the Commission.	Necessary	Staff
III6	The Commission should meet at least once annually with the general investment consultant, without staff present, and provide candid feedback and also discuss the consultant's perspective on the performance of staff, any potential disagreements, etc.		See E6

	FAS 2022 Recommendation	Criticality (Critical/ Necessary/ Important)	Responsibility
III7	The Commission should direct staff to provide summary investment materials to the general investment consultant on a timely basis to ensure they have the ability to independently advise the Commission on the direction of the investment program and the potential strengths and weaknesses of the direction being taken by staff.		See E7
III8	The CEO evaluation process should have more commissioner engagement; the Commission should consider the use of an outside facilitator.	Necessary	Commission

Appendices

Appendix 1 Three Phases of ERM Implementation

Phase 1 – Annual Qualitative Assessment

There is an initial ERM process, consistent with prevailing practice. The CEO is the Chief Risk Officer. The executive leadership team (ELT) is the staff ERM committee. Risk Owners are defined in the Dashboard/Heatmap. There is a risk register (list of risks) that is mapped to RSIC's key business functions. The annual assessment is facilitated by the ERM Director. Risks have been prioritized into Tiers (priorities) that represent the risks "that are top of mind for the key stakeholders / management."

Tier 1 and 2 represent risks that management believes would benefit from a more formal approach. In the COO's department areas, there are currently 4 areas in Tier 1 and 2 (Liquidity, Comp Sys Ops & Info Sec, Cash Management, and Reporting & Perf). ERM has been working on developing metrics with the RSIC staff in those areas. The plan is to have draft metrics in place by year-end.

Tiers are based on three risk scores:

- Deloitte Risk Score – based on the Internal Audit team's Risk Assessment score
- RSIC Risk Score – based on RSIC's internal risk owner risk rating. A risk assessment is completed annually by the risk owners based on their subjective estimates of likelihood and velocity times impact to create a risk level.
- Each risk owner completes a worksheet that requires them to:
  - List possible causes and the effects
  - Describe current efforts to prevent those causes from occurring
  - Identify further actions that could be taken to prevent the cause or reduce its effects
- Post Risk Assessment Discussion Score based on completed RSIC surveys (to include participants to list the 3-5 risks that mattered most to them, irrespective of how the risk is currently being managed. Then each risk is ranked based on the number of times a risk was prioritized.

RSIC is a ~40-person agency, with all employees on the same floor. Executives have an open-door policy when it comes to meeting with RSIC staff. If there is a problem or a process staff think can be improved upon, the COO and the department head say they are promptly informed. Feedback is welcomed and much is reported as being positive. Being a small agency appears to allow most staff to understand and know what is going on. The ELT appears to do a good job communicating to staff but that job is never done. Bad news" seems to travel fast.

The COO gets feedback on all staff from investment staff as part of the year-end review process. That process will be even more formal (via standard surveys) soon (as it's one of the big HR initiatives the Executive Leadership Team has recently rolled out). Operational performance is discussed as needed during the weekly Executive Leadership Team meetings.

Phase 2 – Quantitative Assessment and Reporting (by end of 2022)

RSIC recognizes that Phase 1 is necessary but not sufficient and there is a need to develop key metrics.

The second phase of quantification is to be completed by year-end. To move from prevailing practice to leading practice, RSIC plans to develop an enterprise performance dashboard and integrate and then align the overall approach with its strategy and business plan.

Phase 3 – Alignment with Strategy and Business Plan (2023)

The third phase will align with strategic initiatives/business plan to evolve as Tier 1 and 2 metrics are implemented.

Business Investment Review

A quarterly, staff-wide Business Investment Review meeting is held to showcase new initiatives and highlight anything worthwhile focusing on. These meetings have been going on for several years now and have been seen as quite successful in both re-educating staff on projects. The review also serves as a way to remind staff to provide their feedback whether at the meeting or afterward. This is a great format to inform staff of initiatives and progress and allow for questions. ERM &C provides updates in meetings.

External Business Partners

For external business partners, PEBA/RSIC has implemented a monthly scorecard with BNYM which also covers part of the standing agenda items for the quarterly BNYM call. The goal is to finalize an SLD with Caissa now that it has moved to the production phase. There is a formalized ongoing monitoring process of vendors that RSIC believes is appropriate given the agency's needs and risks. These scores are discussed and then reviewed and approved by the Executive Leadership Team.

Appendix 2 Performance and Risk Management Roles and Timelines

Roles	Timeline		
	Strategic (3-5+ years)	Annual / Tactical	Quarterly
Board / Committee (Investment / Organization) • Conduct • Set • Approve • Oversee • Verify	• Consider issues / assumptions / options / capabilities required • Set direction / allocate assets ($ / people / processes / systems / facilities / governance / stakeholder engagement) • Delegate authority & resources	• Oversee progress compared to plan • Adjust course if needed • Ensure management completes annual vulnerability assessment (current process) • Approve audit plan coverage	• Quantitative performance and risk dashboard reporting for vital functions • Review exception-based reports • Consider policy implications

Executive and Staff
• Advise / research / engage
• Execute / direct
• Control / comply
• Report
• Reasonably assure
	• Prepare issues / options / pros and cons
	• Propose implementation plan with milestones / performance objectives
	• Clarify authority and resources required
		• Qualitatively assess vulnerabilities
		  ◦ What could fail?
		  ◦ How could it fail?
		  ◦ Effects of failure?
		• Mitigate / remediate vulnerabilities – prevent, detect, correct
		• Make tactical adjustments
		• Report actual compared to plan
		• Reasonably assure reliability
			• Report actual compared to expected performance for vital functions
			• Escalate exceptions with policy implications

Audit (Internal/External) • Verify effectiveness of controls • Independent reassurance	• Adequacy of resources / timing / coverage	• Develop annual plans to test effectiveness of controls for vital functions / processes / systems • Advise on control improvements	• Report on audits (internal / external) • Control effectiveness & efficiency? • Reliability of reports received / issued? • Open items?
	RSIC Phase 3	RSIC Phase 1	RSIC Phase 2

Appendix 3 Example of ERM Dashboard

The following are from a CalPERS Board report from 2020:

EPR Third Quarter Report: Key Performance Indicators Summary Dashboard

In addition to the strategic side of the house, we also have the operational side which is represented by our Key Performance Indicators (KPIs). The KPIs are the third component of our Enterprise Performance Reporting structure and serve as a collection of performance indicators that measure and monitor the effectiveness of our efforts at the operational level.

The Key Performance Indicators Summary Dashboard provides a brief synopsis of how all 59 KPIs are performing for the third quarter (January 1, 2020 – March 31, 2020). Additional performance details can be found on the summary sheets for each KPI. Informational KPI's are non-performance driven.

Third Quarter Measure Performance:

- 17 On-Target
- 1 At-Risk
- 2 Off-Target
- 30 Pending refresh
- 8 Informational
- 1 Closed Session item

The Key Performance Indicators Summary Dashboard also provides trend analysis data that captures performance from year two (FY 2018-19).

Status Key ● On-Target △ At-Risk ■ Off-Target * Pending Refresh ** Data Not Available □ Under Development

Enterprise Performance Reporting – Third Quarter Status
Key Performance Indicators

Reliable Steward of Funds	Q1 Status	Q2 Status	Q3 Status	Q4 Status	Trend Analysis (FY2018-19)	Page Number
GASB 68 reports completed timely	Informational	Informational	Informational		N/A	15
Produce CAFR with no material weaknesses	Informational	Informational	Informational		N/A	16
% forecast to actual expenses (annually)	*	●	*		** ● ** Q1 | Q2 | Q3 | Q4	17
Maintain appropriate reserve levels – California Employers' Retiree Benefit Trust Fund	●	●	●		● ● ● ● Q1 | Q2 | Q3 | Q4	19
Maintain appropriate reserve levels – Long Term Care Fund	●	●	●		● ● ● ● Q1 | Q2 | Q3 | Q4	21
Maintain appropriate reserve levels – defined benefit funds	●	●	●		● ● ● ● Q1 | Q2 | Q3 | Q4	23
Stay within risk boundaries for total fund	●	*	*		* * * * Q1 | Q2 | Q3 | Q4	25
Aggregate risk levels of the INVO operating model (TOM)	●	*	*		* * * * Q1 | Q2 | Q3 | Q4	27
Strategic asset allocation ranges (if outside approved ranges)	●	*	*		* * * * Q1 | Q2 | Q3 | Q4	29
Adequate liquidity coverage	●	●	●		● ● ● ● Q1 | Q2 | Q3 | Q4	31

RETIREMENT SYSTEM
INVESTMENT COMMISSION

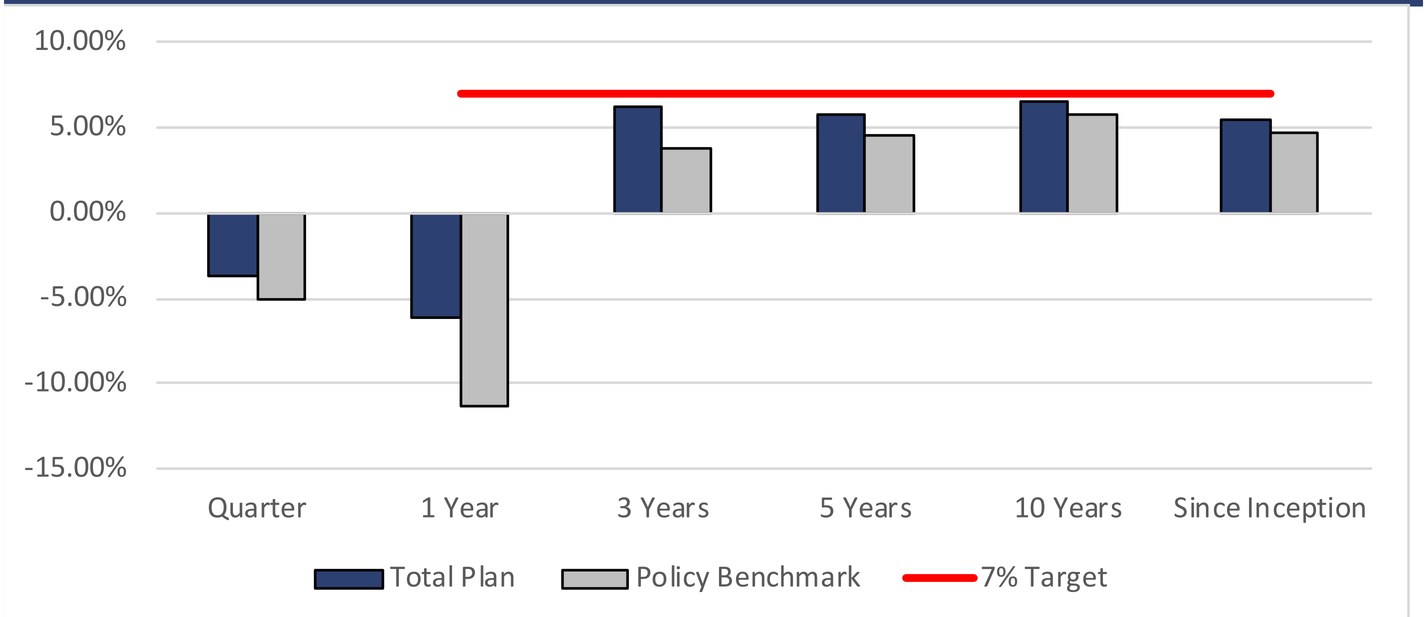
Performance Presentation

Data as of September 30th, 2022

Performance - Plan & Policy Benchmark[2]

As of September 30, 2022

Net of Fee Returns by Time Period[2]



Rolling period performance as of September 30, 2022[1]

Executive Summary	Market Value (millions)	Quarter	1 Year	3 Years (Annualized)	5 Years (Annualized)	10 Years (Annualized)	Since Inception (Annualized)
Total Plan	**$36,825**	**-3.77%**	**-6.16%**	**6.21%**	**5.76%**	**6.56%**	**5.43%**
Policy Benchmark		-5.02%	-11.28%	3.73%	4.54%	5.77%	4.71%
Excess Return		1.25%	5.12%	2.48%	1.22%	0.80%	0.72%
Net Benefit Payments (millions)		($11)	($483)	($1,651)	($3,650)	($8,866)	($15,469)

Portfolio Performance Framework

As of September 30, 2022

Reference Portfolio	
Quarter	-6.02%
1-Year	-19.08%
3-Years	1.86%

Policy Benchmark	
Quarter	-5.02%
1-Year	-11.28%
3-Years	3.73%

Implementation Benchmark	
Quarter	-5.18%
1-Year	-10.62%
3-Years	4.80%

Plan Return	
Quarter	-3.77%
1-Year	-6.16%
3-Years	6.21%

Value from Diversification	
Quarter	1.00%
1-Year	7.80%
3-Years	1.87%

Quality of Portfolio Structure	
Quarter	-0.16%
1-Year	0.66%
3-Years	1.07%

Quality of Manager Selection	
Quarter	1.41%
1-Year	4.46%
3-Years	1.41%

Actual vs Reference	
Quarter	2.25%
1-Year	12.92%
3-Years	4.35%

Actual vs Policy	
Quarter	1.25%
1-Year	5.12%
3-Years	2.48%

Asset Class Performance[1,3,4,5]

As of September 30, 2022

Trailing Performance as of 09/30/2022	Portfolio Weight	Quarter	1 Year	Annualized 3 Years	Annualized 5 Years
Public Equity	**42.3%**	**-6.55%**	**-20.78%**	**3.92%**	**3.95%**
Benchmark		*-6.64%*	*-21.18%*	*3.62%*	*4.08%*
Bonds	**17.2%**	**-4.66%**	**-12.32%**	**-2.63%**	**-0.49%**
Benchmark		*-4.75%*	*-14.60%*	*-4.19%*	*-0.98%*
Private Equity	**15.7%**	**-2.88%**	**14.63%**	**18.64%**	**15.44%**
Benchmark		*-5.44%*	*4.03%*	*18.23%*	*16.22%*
Private Debt	**9.8%**	**-0.18%**	**7.78%**	**7.30%**	**6.32%**
Benchmark		*-4.01%*	*-1.28%*	*3.59%*	*4.41%*
Real Assets	**14.9%**	**0.37%**	**20.61%**	**11.91%**	**10.65%**
Benchmark		*0.31%*	*20.95%*	*11.38%*	*9.27%*
Portable Alpha Hedge Funds	13.9%	1.63%	11.01%	9.33%	6.17%
Total Plan	**100.0%**	**-3.77%**	**-6.16%**	**6.21%**	**5.76%**
RSIC Policy Benchmark		*-5.02%*	*-11.28%*	*3.73%*	*4.54%*

*Portable Alpha Hedge Funds are expressed as gross exposure but, as collateral supporting the Overlay program, net to zero when calculating total Plan market value. 3 and 5 year Portable Alpha hedge fund returns are considered supplemental information provided by Staff to illustrate performance of these hedge funds even though they were classified under a different asset class

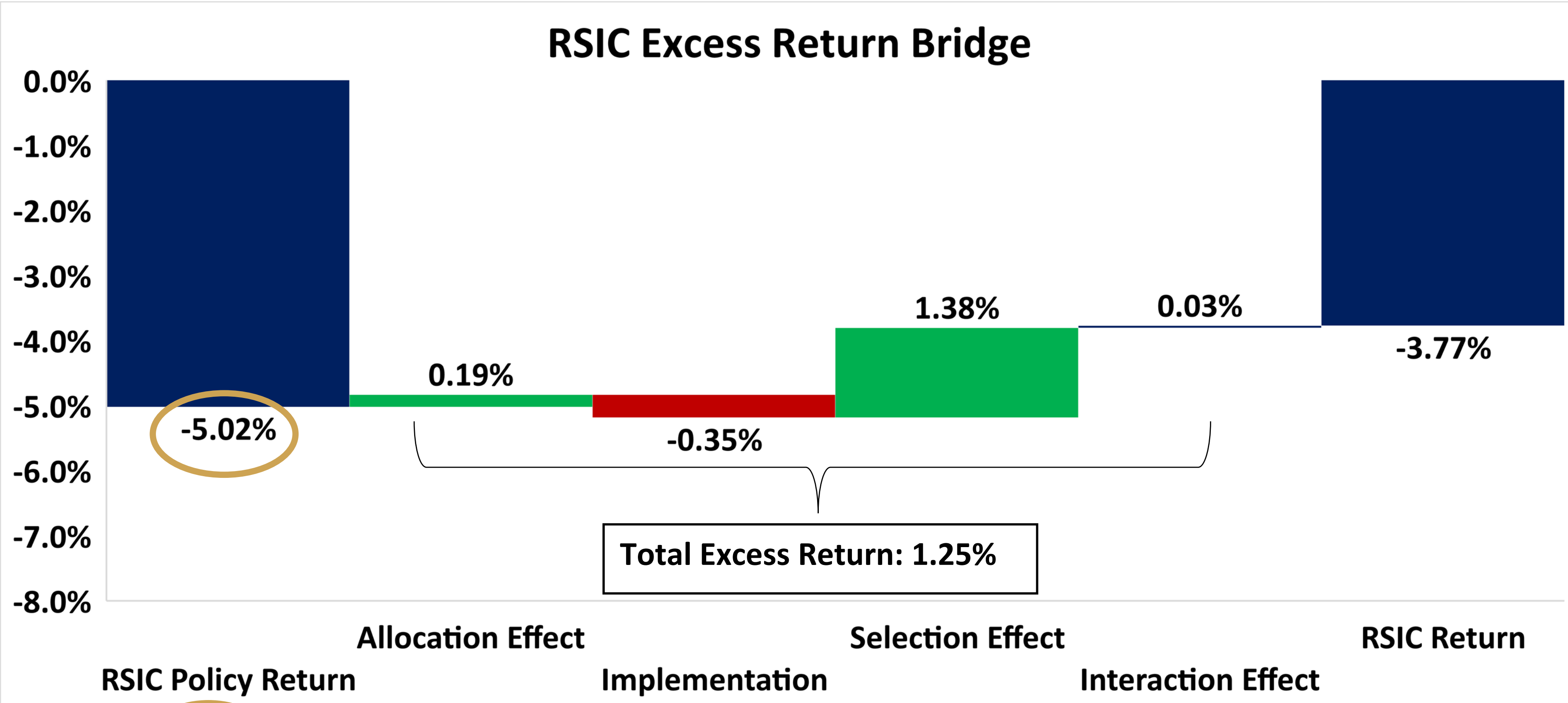
Explanation of Attribution

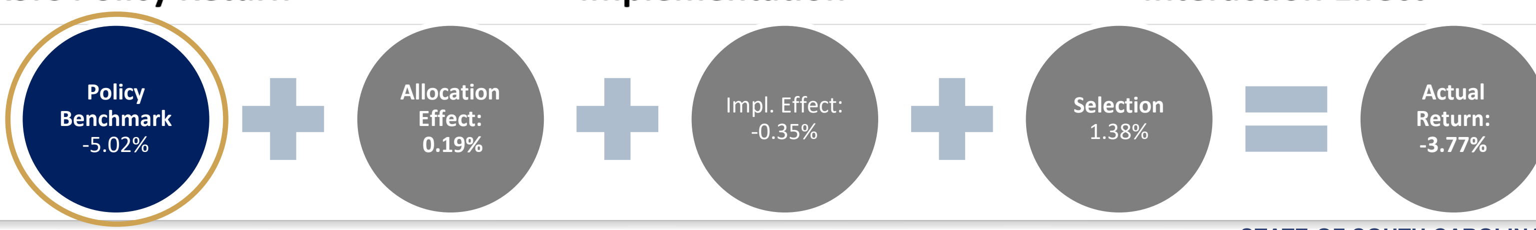
- Policy Benchmark
- Allocation
- Implement-ation
- Selection
- Actual Return

- **Policy Benchmark:** The return of the five-asset class target portfolio.
- **Allocation effect:** isolates the impact of making overweight or underweight decisions to each of the five asset classes.
- **Implementation effect:** measures the impact of decisions to construct each asset class portfolio differently than the benchmark.
- **Selection effect:** evaluates the impact of manager selection decisions.
- The **Actual return** reflects the sum of all of these impacts.

Attribution – FYTD – Return Bridge

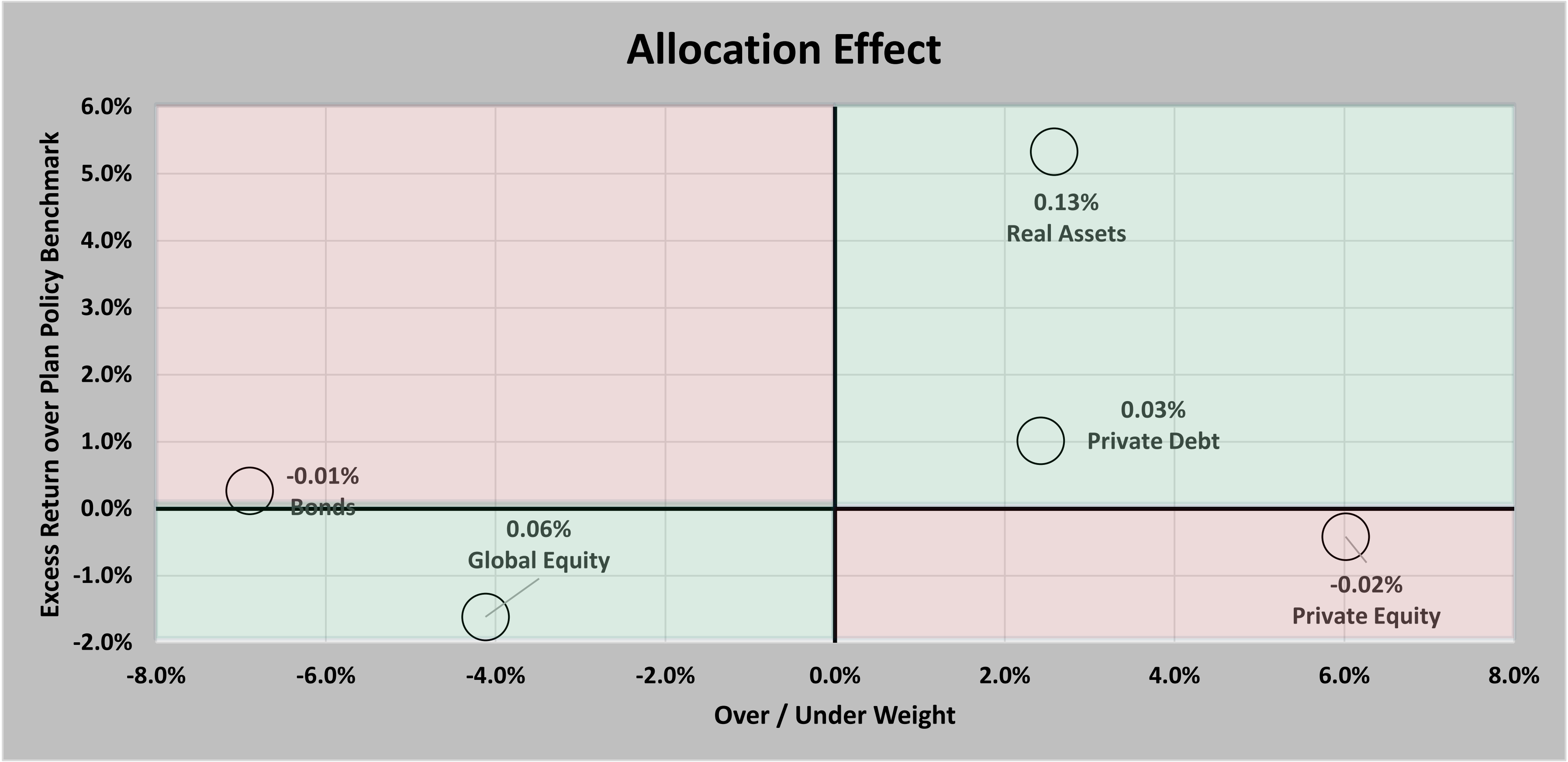
FYTD September 30, 2022





Attribution – FYE – Allocation:

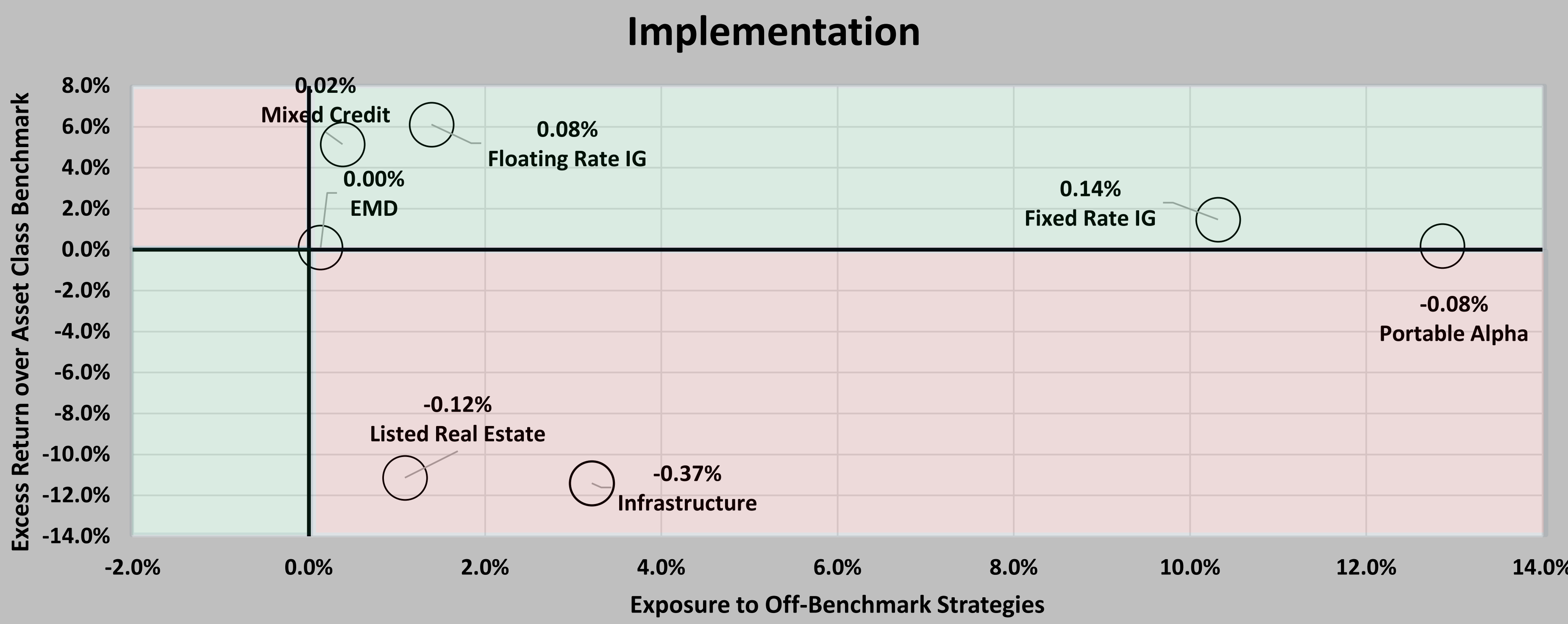
FYE September 30, 2022



Policy Benchmark -5.02% + Allocation Effect: 0.19% + Impl. Effect: -0.35% + Selection 1.38% = Actual Return: -3.77%

Attribution – FYE – Implementation:

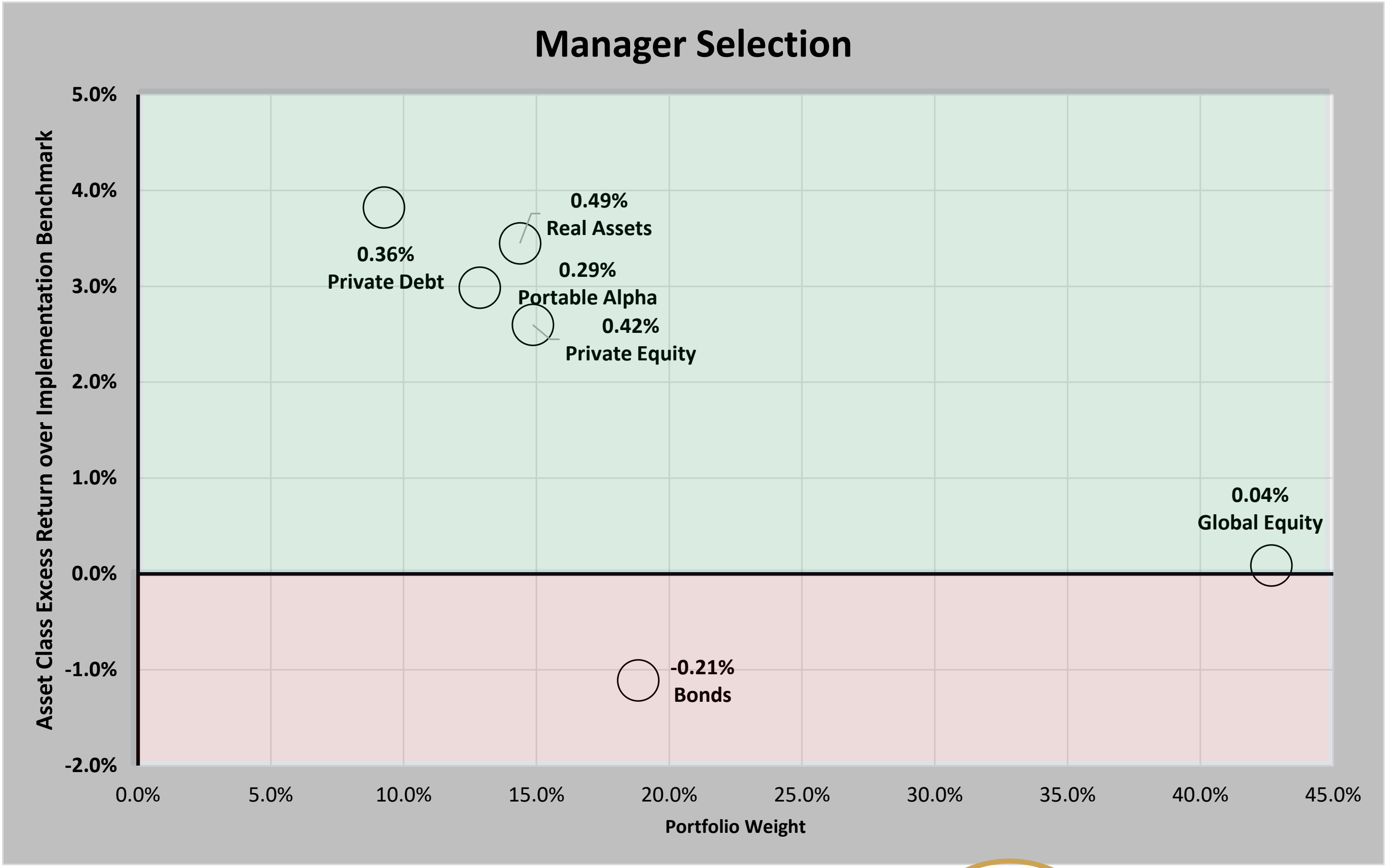
FYE September 30, 2022



Policy Benchmark -5.02% + Allocation Effect: 0.19% + Impl. Effect: -0.35% + Selection 1.38% = Actual Return: -3.77%

Attribution – FYE – Selection:

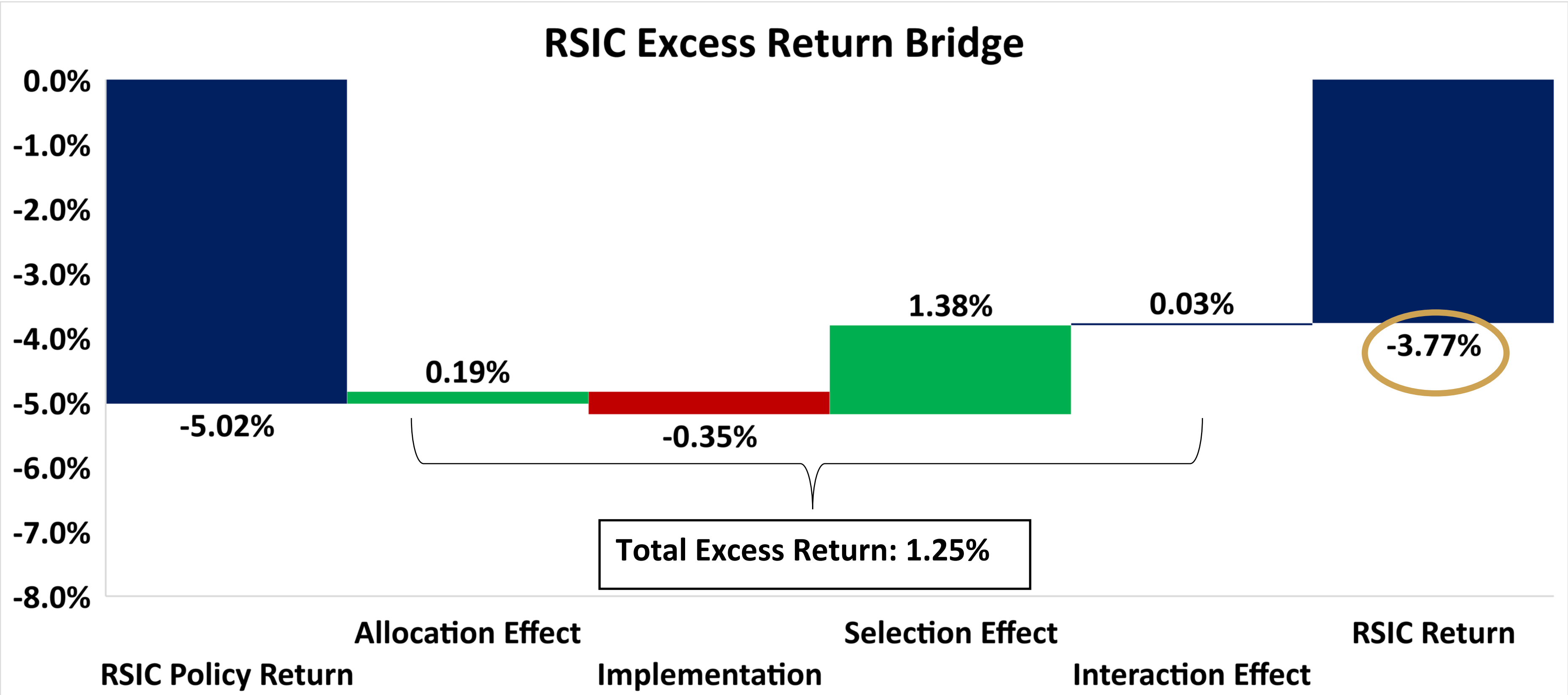
FYE September 30, 2022

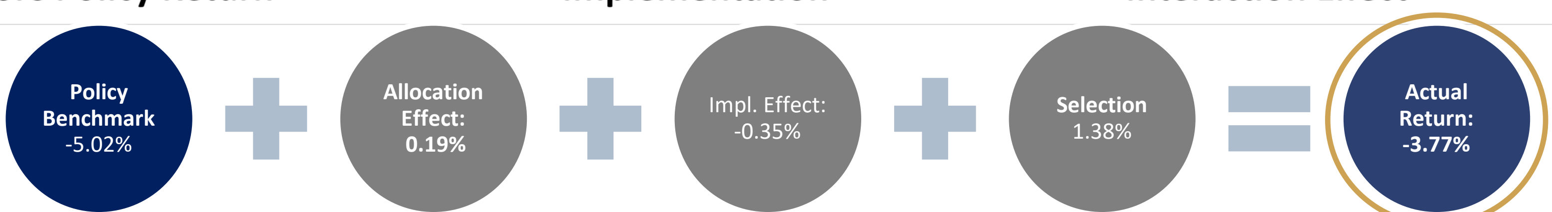


Policy Benchmark -5.02% + Allocation Effect: 0.19% + Impl. Effect: -0.35% + Selection 1.38% = Actual Return: -3.77%

Attribution – FYE – Return Bridge

FYE September 30, 2022





Attribution – FYE – Attribution Heatmap

Attribution Table (BPS)	Allocation	Implementation	Selection	Total
Bonds	-1	22	-21	**0**
Private Debt	3	0	36	**39**
Global Equity	6	0	4	**9**
Private Equity	-2	0	42	**39**
Real Assets	13	-49	49	**13**
Portable Alpha	n/a	-8	29	**21**
Total	**19**	**-35**	**138**	**125**

- Sources of outperformance:
  - Portable Alpha (manager selection)
  - Overweight to Private Markets
  - Bonds underweight.
- Sources of underperformance:
  - Treasury Exposure vs Agg

Asset Allocation and SIOP Compliance[5]

FYTD September 30, 2022

Exposure Report as of 09/30/2022	Net Exposure	Policy Targets	Over / Under	Allowable Ranges	SIOP Compliance
Public Equity	42.3%	46.0%	-3.7%	30% - 60%	Yes
Bonds	17.2%	26.0%	-8.8%	15% - 35%	Yes
Private Equity	15.7%	9.0%	6.7%	5% - 13%	No
Private Debt	9.8%	7.0%	2.8%	3% - 11%	Yes
Real Assets	14.9%	12.0%	2.9%	6% - 18%	Yes
Portable Alpha Hedge Funds	13.9%	n/a	13.9%	0% - 15%	Yes
Total Plan	100.0%	100.0%	0.0%	n/a	Yes
Total Private Markets	38.9%	28.0%	10.9%	0% - 30%	No

Portfolio Risk Estimates (Forward)

Risk Estimates [1]

Sep 2022 Exposures and Risk

	Reference	Policy [3]	Implementation [3]	Actual [5]
Total Risk [2]	***14.8%***	***14.3%***	***16.7%***	***16.8%***

	Reference vs Policy	Policy vs Implementation	Implementation vs Actual [5]
Relative Risk [4]	***1.6%***	***2.8%***	***0.6%***

Footnotes:

1 *Estimates based on an equal weighted (no-decay) model employing three years of monthly data.*

2 *Total risk shown as volatility, or annualized standard deviation of returns based on current positioning*

3 *Private benchmarks proxied with public alternatives*

4 *Relative risk shown as relative volatility, or annualized standard deviation of the excess returns of one portfolio vs the other*

5 *Actual risk and actual vs implementation relative risk estimated from a set of assumptions and exposures*

Historical (Realized) Volatility vs Forward Volatility

Realized (Historical) vs Forward Risk Measurements [1]

Sep 2022 Risk

	Reference	Policy	Implementation	Actual
Forward Risk	*14.8%*	*14.3%*	*16.7%*	*16.8%*

	Reference	Policy[3]	Implementation[3]	Actual
Historical Risk [2,3]	*14.8%*	*10.8%*	*11.7%*	*11.5%*

Footnotes:

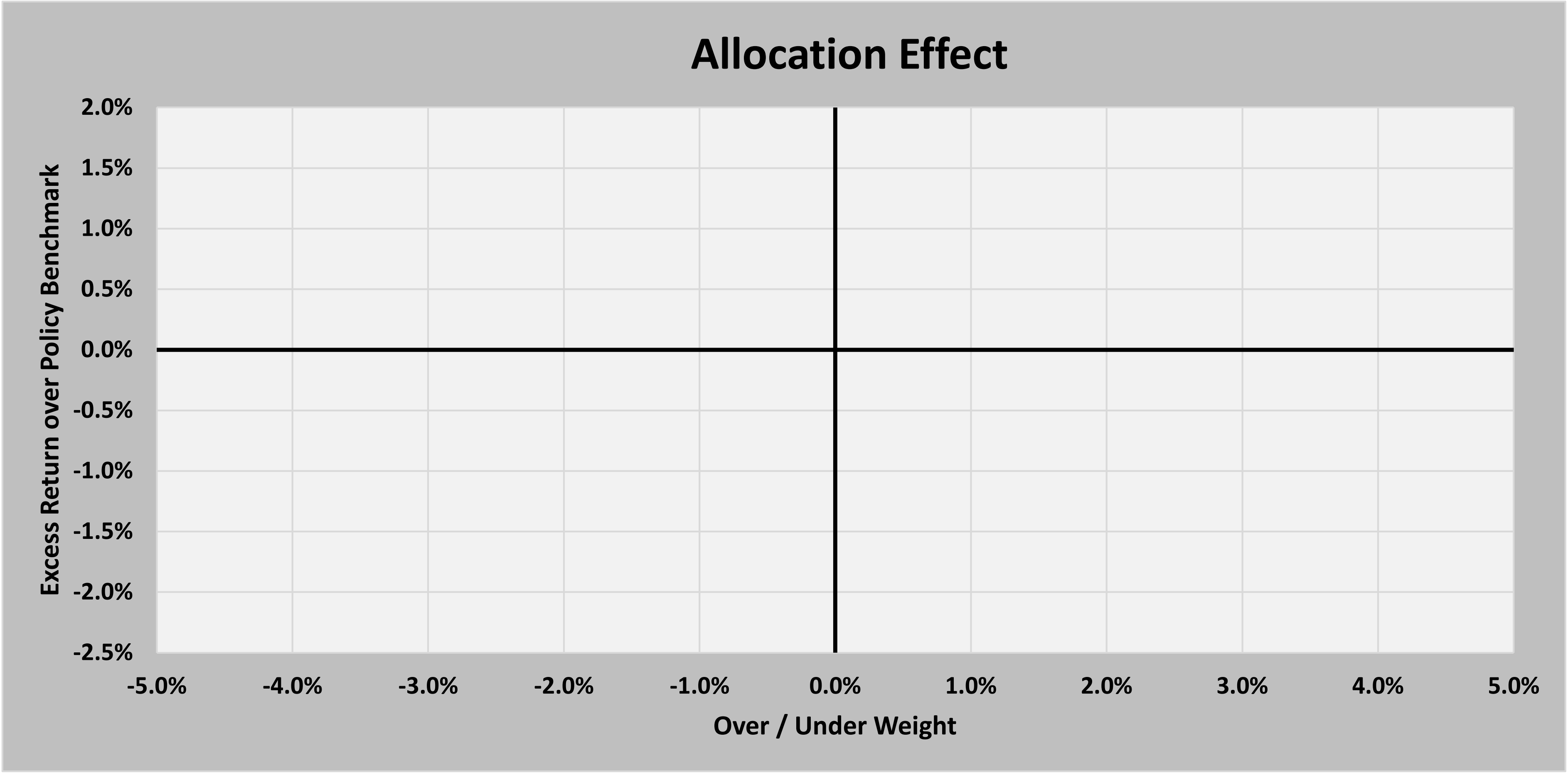
1 *Historical risk reflects actual historical volatility (rather than expected volatility) for RSIC portfolio, using the past 3 years of monthly data*

2 *Historical risk reflects actual historical positioning (rather than current positioning)*

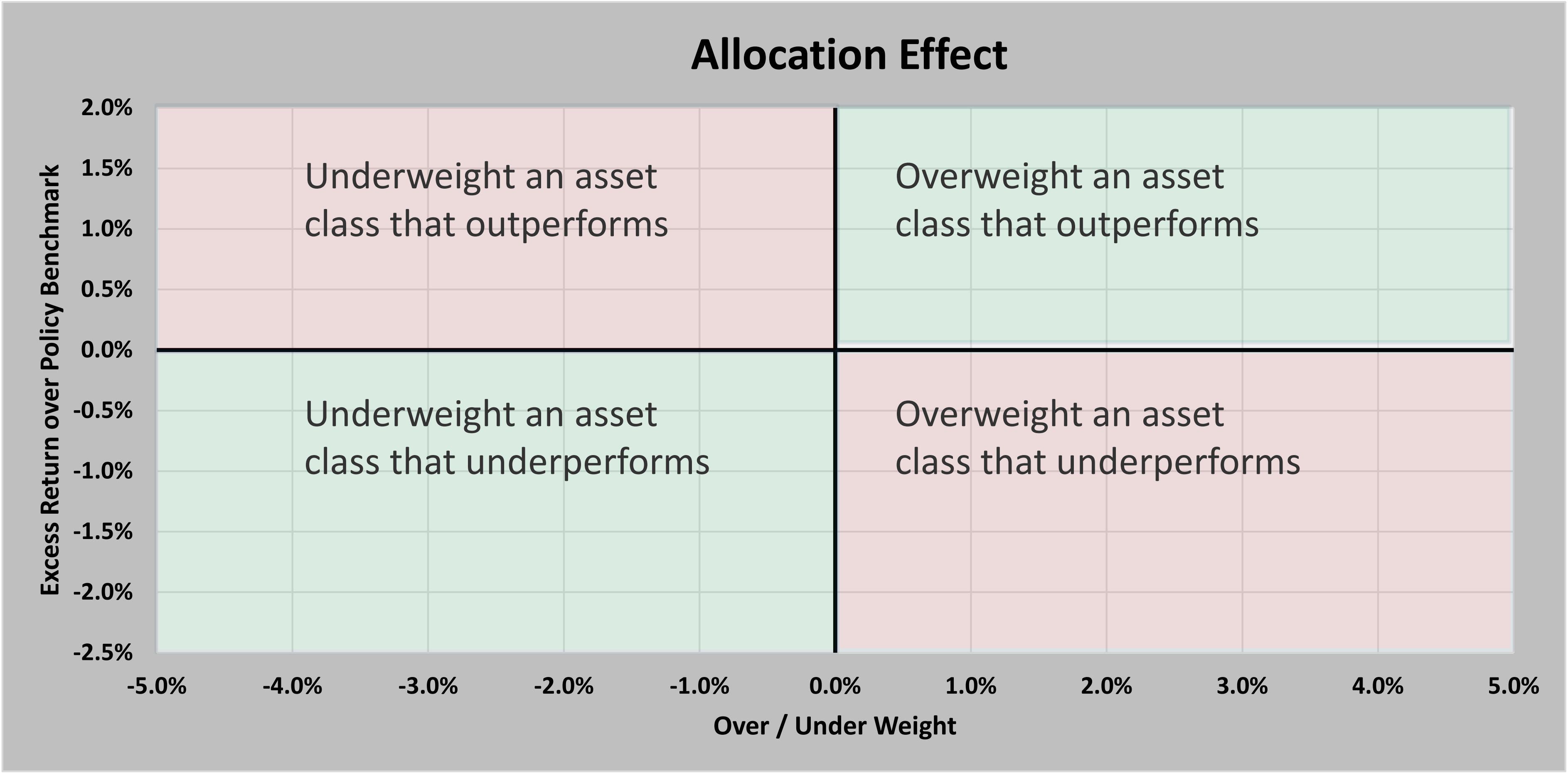
3 *Policy and Implementation portfolio risk calculated using underlying performance benchmarks (rather than public proxy-based risk benchmarks)*

Appendix

Attribution Analysis – How It Works

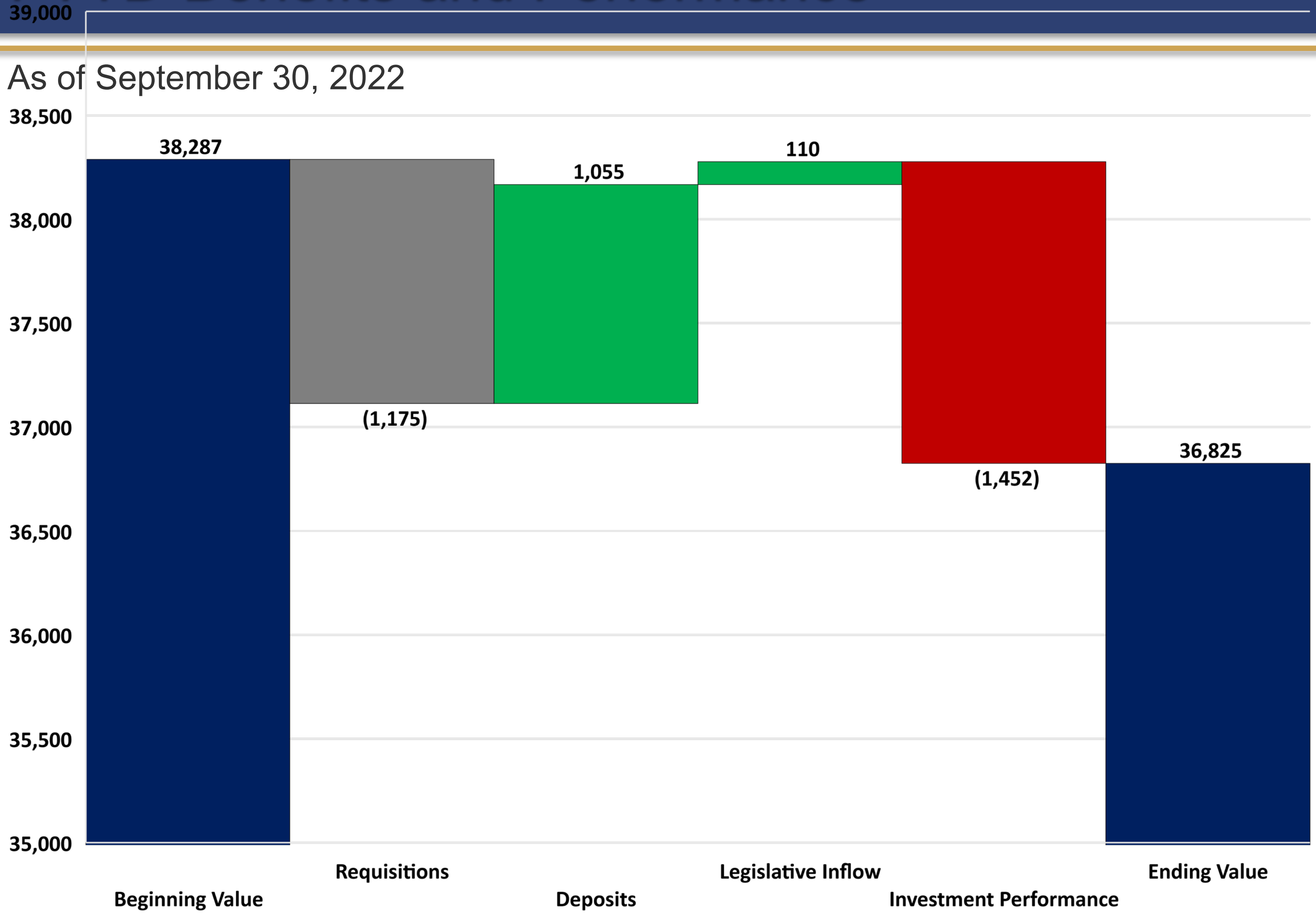


Attribution Analysis – How It Works



FYTD Benefits and Performance

As of September 30, 2022



*Requisitions and deposits include equal and offsetting flows for insurance benefits which cannot be disaggregated from retirement benefit flows. The net of requisitions and deposits represents the surplus or shortfall of retirement deposits in relation to retirement benefit payments.

Asset Allocation and SIOP Compliance[5]

FYE as of June 30, 2022

Exposure Report as of 09/30/2022	Net Exposure	Policy Targets	Over / Under	Allowable Ranges	SIOP Compliance
Public Equity	**42.3%**	**46.0%**	**-3.7%**	**30% - 60%**	**Yes**
Bonds	**17.2%**	**26.0%**	**-8.8%**	**15% - 35%**	**Yes**
Investment Grade - Fixed	12.3%	26.0%	-13.7%	10% - 35%	Yes
Investment Grade - Floating	3.6%	n/a	3.6%	0% - 5%	Yes
EMD	0.1%	n/a	0.1%	0% - 6%	Yes
Mixed Credit	0.4%	n/a	0.4%	0% - 8%	Yes
Cash and Short Duration (Net)	0.8%	n/a	0.8%	0% - 7%	Yes
Private Equity	**15.7%**	**9.0%**	**6.7%**	**5% - 13%**	**No**
Private Debt	**9.8%**	**7.0%**	**2.8%**	**3% - 11%**	**Yes**
Real Assets	**14.9%**	**12.0%**	**2.9%**	**6% - 18%**	**Yes**
Private Real Estate	10.6%	9.0%	1.6%	n/a	Yes
Public Real Estate	0.9%	n/a	0.9%	n/a	Yes
Private Infrastructure	2.8%	3.0%	-0.2%	n/a	Yes
Public Infrastructure	0.6%	n/a	0.6%	n/a	Yes
Portable Alpha Hedge Funds	**13.9%**	**n/a**	**13.9%**	**0% - 15%**	**Yes**
Total Plan	**100.0%**	**100.0%**	**0.0%**	**n/a**	**Yes**
Total Private Markets	**38.9%**	**28.0%**	**10.9%**	**0% - 30%**	**No**

Performance – Plan & Asset Classes[1,3,4,5]

FYTD as of September 30, 2022

Trailing Performance as of 09/30/2022	Portfolio Weight	Quarter	1 Year	Annualized 3 Years	Annualized 5 Years
Public Equity	**42.3%**	**-6.55%**	**-20.78%**	**3.92%**	**3.95%**
Benchmark		*-6.64%*	*-21.18%*	*3.62%*	*4.08%*
Bonds	**17.2%**	**-4.66%**	**-12.32%**	**-2.63%**	**-0.49%**
Benchmark		*-4.75%*	*-14.60%*	*-4.19%*	*-0.98%*
Investment Grade - Fixed	12.3%	-5.73%	-14.39%	-3.24%	-0.41%
Investment Grade - Floating	3.6%	-0.95%	-5.42%	n/a	n/a
EMD	0.1%	-1.92%	-15.50%	-4.03%	-1.99%
Mixed Credit	0.4%	-1.50%	-2.25%	5.07%	4.61%
Cash and Short Duration (Ne	0.8%	0.55%	0.80%	0.70%	1.29%
Private Equity	**15.7%**	**-2.88%**	**14.63%**	**18.64%**	**15.44%**
Benchmark		*-5.44%*	*4.03%*	*18.23%*	*16.22%*
Private Debt	**9.8%**	**-0.18%**	**7.78%**	**7.30%**	**6.32%**
Benchmark		*-4.01%*	*-1.28%*	*3.59%*	*4.41%*
Real Assets	**14.9%**	**0.37%**	**20.61%**	**11.91%**	**10.65%**
Benchmark		*0.31%*	*20.95%*	*11.38%*	*9.27%*
Private Real Estate	10.6%	1.83%	30.86%	14.67%	12.16%
Public Real Estate	0.9%	-10.26%	-15.68%	0.59%	5.18%
Private Infrastructure	2.8%	1.58%	4.31%	6.16%	n/a
Public Infrastructure	0.6%	-10.84%	-8.57%	1.94%	4.22%
Portable Alpha Hedge Funds	13.9%	1.63%	11.01%	9.33%	6.17%
Total Plan	**100.0%**	**-3.77%**	**-6.16%**	**6.21%**	**5.76%**
RSIC Policy Benchmark		*-5.02%*	*-11.28%*	*3.73%*	*4.54%*

*Portable Alpha Hedge Funds are expressed as gross exposure but, as collateral supporting the Overlay program, net to zero when calculating total Plan market value. 3 and 5 year Portable Alpha hedge fund returns are considered supplemental information provided by Staff to illustrate performance of these hedge funds even though they were classified under a different asset class

Footnotes & Disclosures

Footnotes

1. The Policy Benchmark is calculated quarterly using a blend of asset class policy benchmarks and the policy weights for the respective asset classes. Prior to 12/31/2020 the Policy Benchmark was calculated monthly. Asset class benchmarks represent current policy benchmarks blended with past policy benchmarks which may have changed over time. Some asset class policy benchmarks revise over time and these revisions are reflected in subsequent policy benchmark calculations. See Benchmark Disclosure page for current definitions.

2. Benefit payments are the net of Plan contributions and disbursements.

3. "Bonds" asset class includes Cash and Short Duration market value which is the aggregate cash held at the custodian, Russell Investments, and strategic partnerships, short duration within the portfolio, and hedge funds used in collateral pool for Portable Alpha program, net of the notional exposure in the overlay.

4. Asset class returns include Overlay returns as a blend of physical and synthetic returns. Synthetic returns are provided by Russell Investments gross of financing costs. To accommodate for financing costs, LIBOR is added to the synthetic returns and removed from the collateral return. Asset class returns calculated using Caissa, a third-party multi-asset class analytics system.

5. Asset class weights include Overlay exposures which are net notional exposures provided by Russell Investments. RSIC rebalances quarterly and reported exposures reflect any trades made at quarter end that have not settled yet.

Disclosures

- Plan Returns are provided by BNY Mellon. All returns are time-weighted, total return calculations. Net of fee performance is calculated and presented after the deduction of fees and expenses. Periods greater than one year are annualized. Past performance is no guarantee of future results. Asset class returns are based on values obtained from BNY Mellon and adjusted for overlay exposures provided by Russell Investments. Policy benchmark is the blend of asset class policy benchmarks using policy weights. Asset class benchmarks and policy weights are reviewed annually by the Commission's consultant and adopted by the Commission and have changed over time. The policy benchmark return history represents a blend of these past policies. Total Plan trailing periods reflect a performance correction that affected the time period 03/31/2015 through 06/30/2022.

- Overlay allocation detail is provided by Russell Investments.

- This report was compiled by the staff of the South Carolina Retirement System Investment Commission and has not been reviewed, approved or verified by the external investment managers. No information contained herein should be used to calculate returns or compare multiple funds, including private equity funds.

- Effective October 1, 2005, the State Retirement System Preservation and Investment Reform Act ("Act 153") established the Commission and devolved fiduciary responsibility for investment and management of the assets of the South Carolina Retirement Systems upon RSIC.

- Allocation / exposure percentages might not add up to totals due to rounding.

Benchmarks

Benchmarks

- **Core Fixed Income**: Bloomberg US Aggregate Bond Index
- **Global Public Equity Blend**: MSCI All Country World Index IMI
- **Private Equity Blend**: Burgiss All PE Benchmark
- **Private Debt** : S&P/LSTA Leveraged Loan Index + 150 basis points on a 3-month lag
- **Private Real Estate Blend:** NCREIF-Open Ended Diversified Core (ODCE) Index *Net of Fees*

Benchmarks Displayed in this report represent current policy benchmarks as of the SIOP effective 7/1/2020. Asset class benchmarks and policy weights are reviewed annually by the Commission's consultant and adopted by the Commission and have changed over time. The policy benchmark return history represents a blend of these past policies.

RETIREMENT SYSTEM INVESTMENT COMMISSION

FY 2021-2022 Cost Analysis

Summary

- Investment fees and expenses totaled $696M during FYE 2022.
- Alternatives saw higher cost than FYE 2021 due to higher average plan value, greater allocation, and strong performance.
- Traditional asset implementation cost remained very low, due to significant share of passive index investing.
- We expect the returns of traditional and alternative assets to converge over time.

FYE 2022 Cost Breakdown: Traditional vs. Alternative Assets

Alternative assets significantly outperformed traditional assets, which drove plan costs.

Total Plan
Net Return = -0.97%
Accrued Cost = $696.3M

Traditional Assets
Actual Net Return = -13%
Accrued Cost = $14.6M

Alternative Assets
Actual Net Return* = +20%
Accrued Cost = $681.7M

** The net return shown for alternatives treats all returns as separate allocations. The RSIC's portable alpha program involves the combination of a traditional asset exposure (stocks and bonds) with a hedge fund allocation. If we recalculate this figure to reflect both the structure and impact of the portable alpha program, this return (after all fees and expenses) would be 27.7%.*

Alternatives Exceeded Long-Term Expectations* In FYE 2022

Total Plan
Expected Return = 7.2%
Net Return = -0.97%

Traditional Assets
Expected Return = +6.0%
Actual Return = -13.1%

Private Markets
Expected Return = +8.0%
Actual Return = +23.2%

Port. Alpha Hedge Funds
Expected Return = +4.9%
Actual Return = +12.1%

**The long-term expectations are based on the 2020 capital markets forecasts that formed the basis for the current asset allocation.*

Summary

- FY 2022 returns diverged meaningfully from expectations:
  - Low-cost, liquid markets materially underperformed long-term expectations.
  - Alternatives significantly outperformed.

- Better returns and higher costs were both driven by the higher allocation to alternatives.
  - The actual returns were 13.5% better than the 70/30 Reference Portfolio after fees (a difference of more than $5 billion).

RETIREMENT SYSTEM INVESTMENT COMMISSION

Public Equity Passive Index Fund Mandates

Summary

- In recent years, RSIC has shifted considerable assets from actively-managed strategies to passive index exposures in the Global Public Equity asset class.
  - *This change has improved returns by nearly 0.75% for this portfolio (more than $120 million per year at the current size).*

- There were two main reasons for this change:
  - To *consistently* improve returns vs. the benchmark
  - To reduce cost

- This presentation revisits the rationale for:
  - The use of index funds
  - The rationale for selecting the existing platforms

Why Passive/Index Exposures vs. Actively-Managed Funds?

- We have found that actively-managed funds struggle to consistently outperform index funds after fees.
  - RSIC used actively-managed funds prior to 2020.
  - Prior to 2020, our actively-managed funds did not deliver an acceptable long-term return vs. the benchmark.

- Our passive/index strategies, have consistently outperformed their benchmarks at a small fraction of the cost.

- In 2020, the Commission allowed RSIC staff to convert the Global Equity asset class to be entirely passive.

Passive strategies have delivered significantly better outcomes
at a fraction of the cost

What Factors Are Most Important To RSIC?

- Why did RSIC select State Street and BlackRock?
  - Preference for firms with products that enhanced returns through more efficient tax reclaims
  - Low management fees
  - Significant cost benefits accrue from the scale of these platforms
    - Low trading costs
    - Opportunities to “cross” with other investors
  - Broad array of passive products allow RSIC to customize exposure while preserving lowest cost

What Do These Portfolios Cost? How much would it cost to switch?

- We pay approximately 0.032% for our equity program
  - BlackRock: 3.0 bps
  - State Street: 3.6 bps
- It would cost approximately $11 million to move the assets to another manager.
- If the new manager does not have a comparable tax reclaim solution, up to $75 million per year is at risk.

Recent Developments

- In recent months, concerns have arisen about different priorities – specifically those relating to ESG factors – affect how managers vote proxies.

- We have engaged with both State Street and BlackRock on this matter.

- Our goal is to preserve the economic benefits while resolving concerns relating to proxy voting.

South Carolina Retirement System Investment Commission

Investment Performance Review
Period Ending: September 30, 2022

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SEATTLE 206.622.3700
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PITTSBURGH 412.784.6678
LOS ANGELES 310.297.1777
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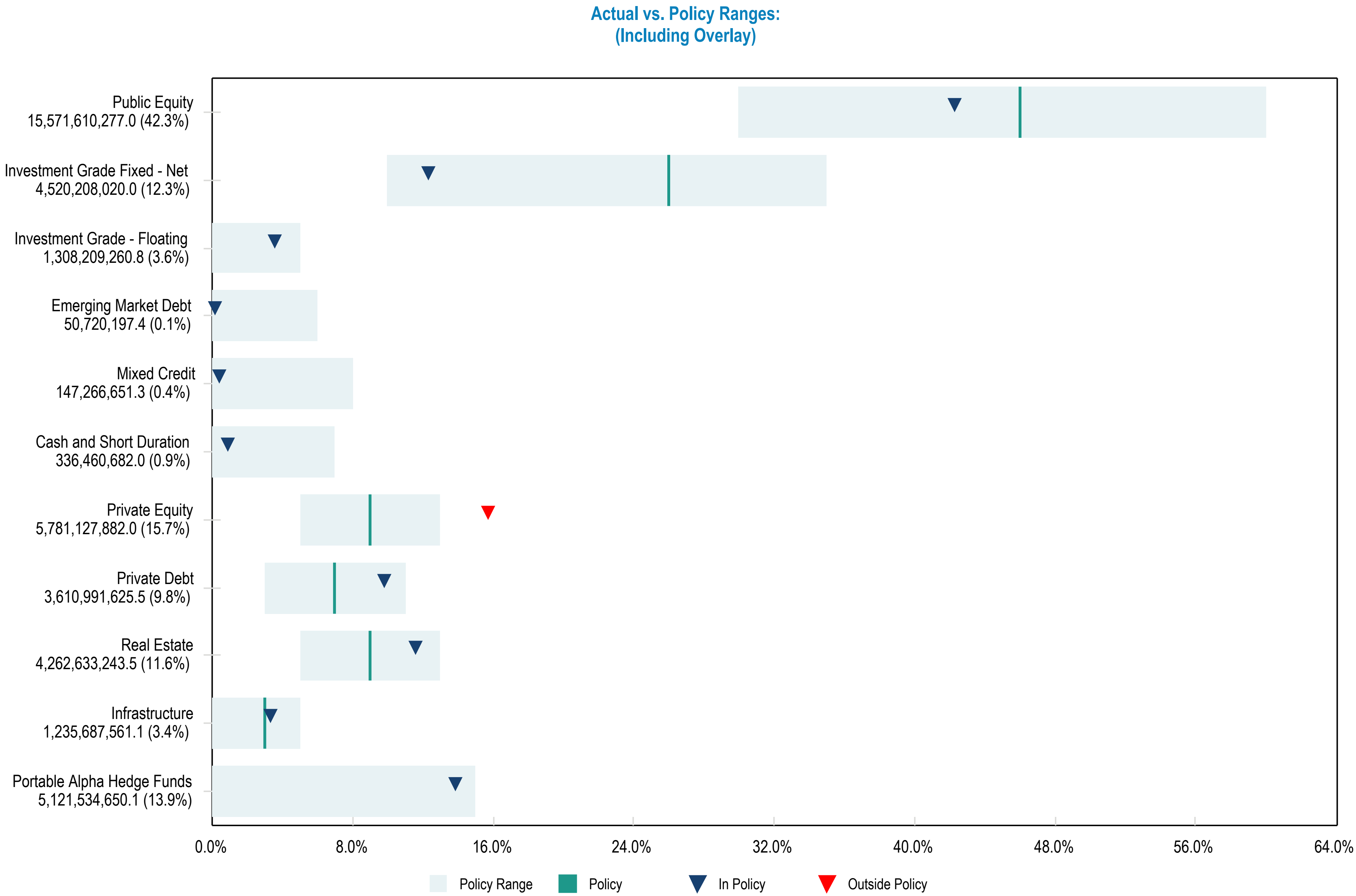
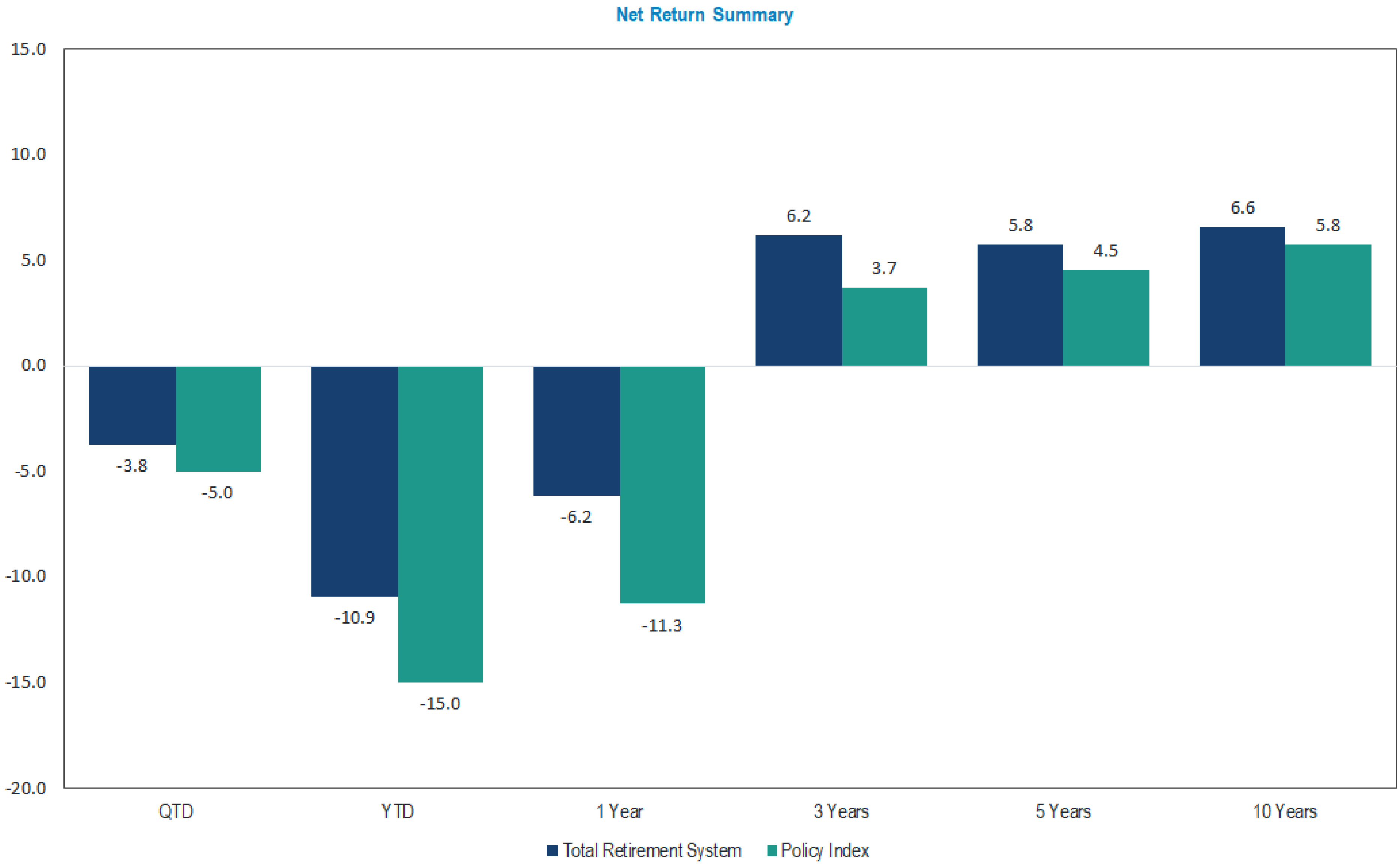
Allocation vs. Targets and Policy
Quarter Ending September 30, 2022

	MV at 9/30/2022	Overlay Exposures	Net Position	% of Total System	% of Total System (Net)	Policy Targets	Allowable Ranges	SIOP Compliance?
Total System	**36,824,915,400**	**-**	**36,824,915,400**	**100%**	**100%**	**100%**		
Public Equity	**13,687,740,754**	**1,883,869,523**	**15,571,610,277**	**37%**	**42%**	**46%**	**30% - 60%**	**Yes**
Public Equity	13,687,740,754	1,883,869,523	15,571,610,277	37%	42%	46%	30% - 60%	Yes
Bonds	**3,125,199,684**	**3,237,665,127**	**6,362,864,811**	**8%**	**17%**	**26%**	**15% - 35%**	**Yes**
Investment Grade - Fixed	561,114,237	3,959,093,783	4,520,208,020	2%	12%	0%	10% - 35%	Yes
Investment Grade - Floating	1,308,209,261	-	1,308,209,261	4%	4%	0%	0% - 5%	Yes
Emerging Market Debt	50,720,197	-	50,720,197	0%	0%	0%	0% - 8%	Yes
Mixed Credit	147,266,651	-	147,266,651	0%	0%	0%	0% - 6%	Yes
Cash and Short Duration	1,057,889,337	(721,428,656)	336,460,682	3%	1%	0%	0% - 7%	Yes
Private Equity	**5,781,127,882**	**-**	**5,781,127,882**	**16%**	**16%**	**9%**	**5% - 13%**	**No**
Private Debt	**3,610,991,626**	**-**	**3,610,991,626**	**10%**	**10%**	**7%**	**3% - 11%**	**Yes**
Real Assets	**5,498,320,805**	**-**	**5,498,320,805**	**15%**	**15%**	**12%**	**6% - 18%**	**Yes**
Real Estate	4,262,633,243	-	4,262,633,243	12%	12%	9%	5% - 13%	Yes
Infrastructure	1,235,687,561	-	1,235,687,561	3%	3%	3%	0% - 5%	Yes
Portable Alpha Hedge Funds	**5,121,534,650**	**(5,121,534,650)**	**-**	**14%**	**0%**	**0%**	**0% - 15%**	**Yes**

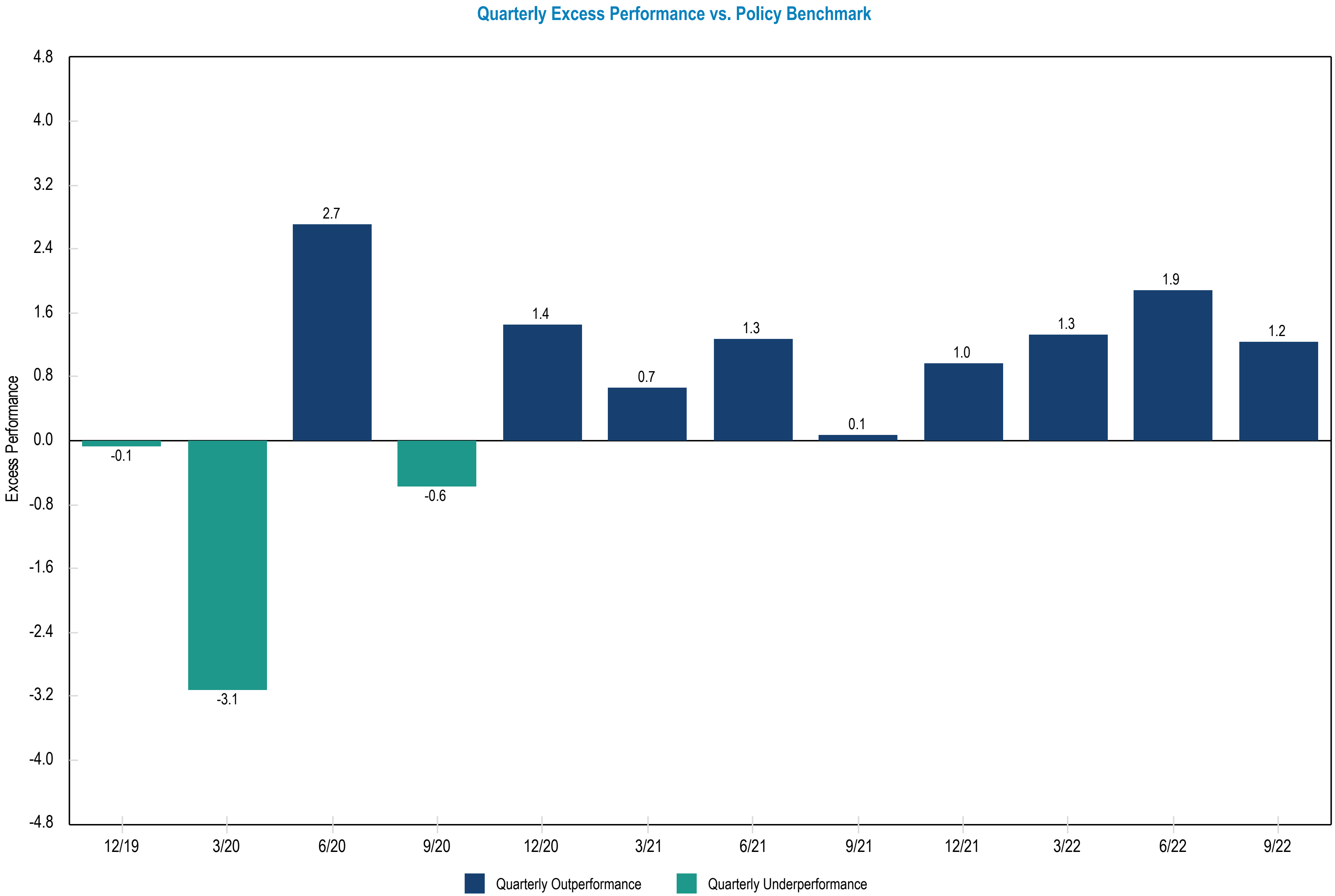
Includes cash in the Russell Overlay separate account

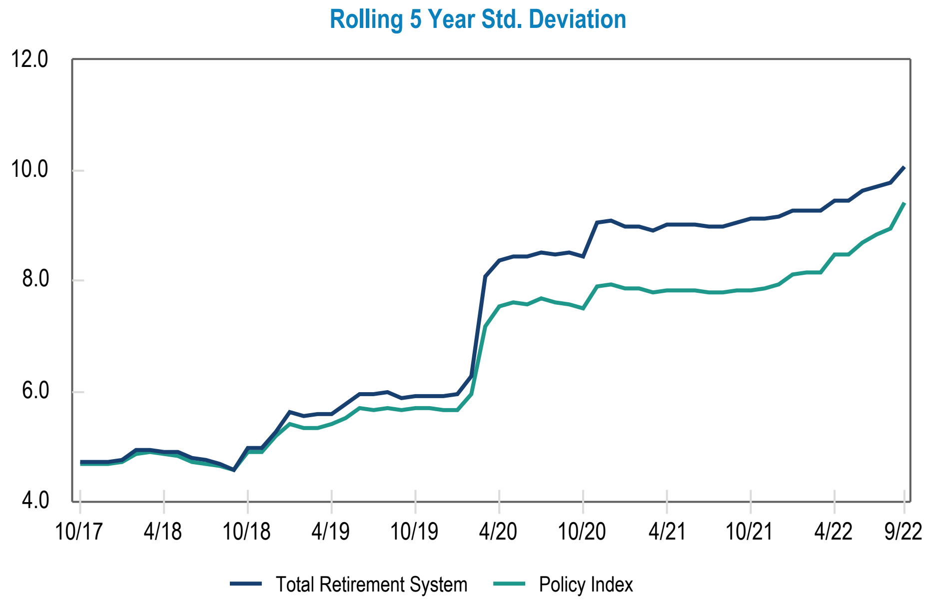
Percentages may not sum to 100% due to rounding

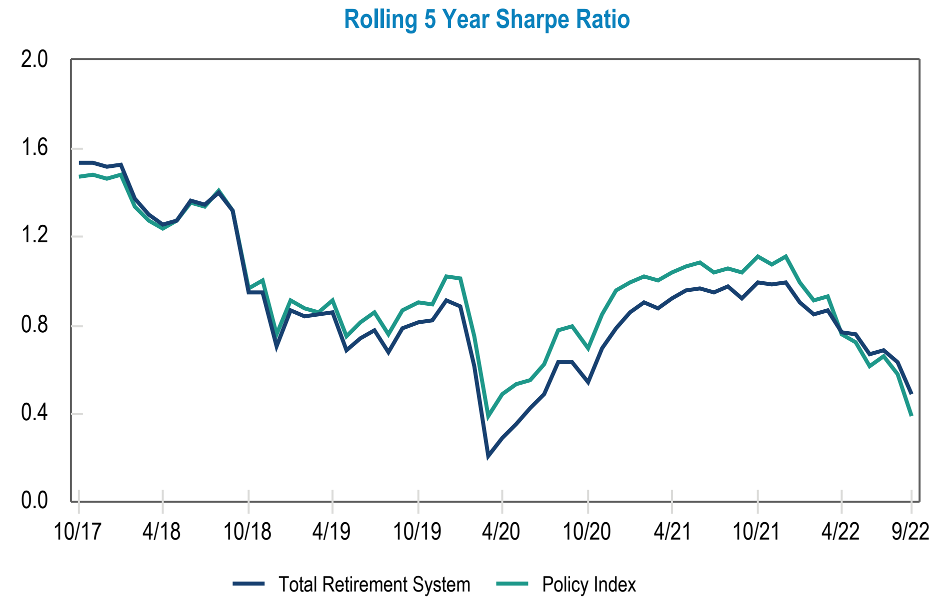

Actual vs. Policy Ranges:
(Including Overlay)
Public Equity
15,571,610,277.0 (42.3%)
Investment Grade Fixed - Net
4,520,208,020.0 (12.3%)
Investment Grade - Floating
1,308,209,260.8 (3.6%)
Emerging Market Debt
50,720,197.4 (0.1%)
Mixed Credit
147,266,651.3 (0.4%)
Cash and Short Duration
336,460,682.0 (0.9%)
Private Equity
5,781,127,882.0 (15.7%)
Private Debt
3,610,991,625.5 (9.8%)
Real Estate
4,262,633,243.5 (11.6%)
Infrastructure
1,235,687,561.1 (3.4%)
Portable Alpha Hedge Funds
5,121,534,650.1 (13.9%)
0.0%
8.0%
16.0%
24.0%
32.0%
40.0%
48.0%
56.0%
64.0%
Policy Range
Policy
In Policy
Outside Policy

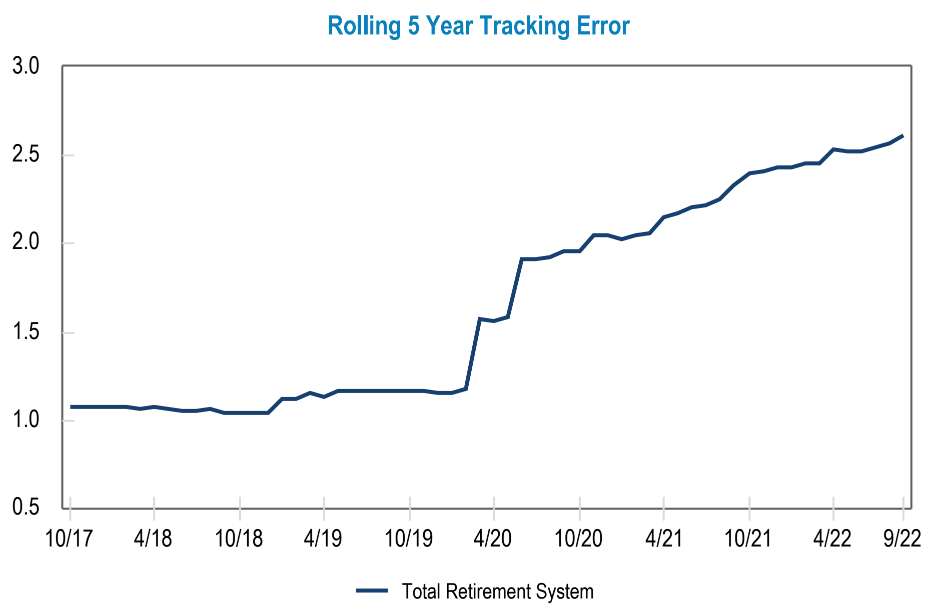


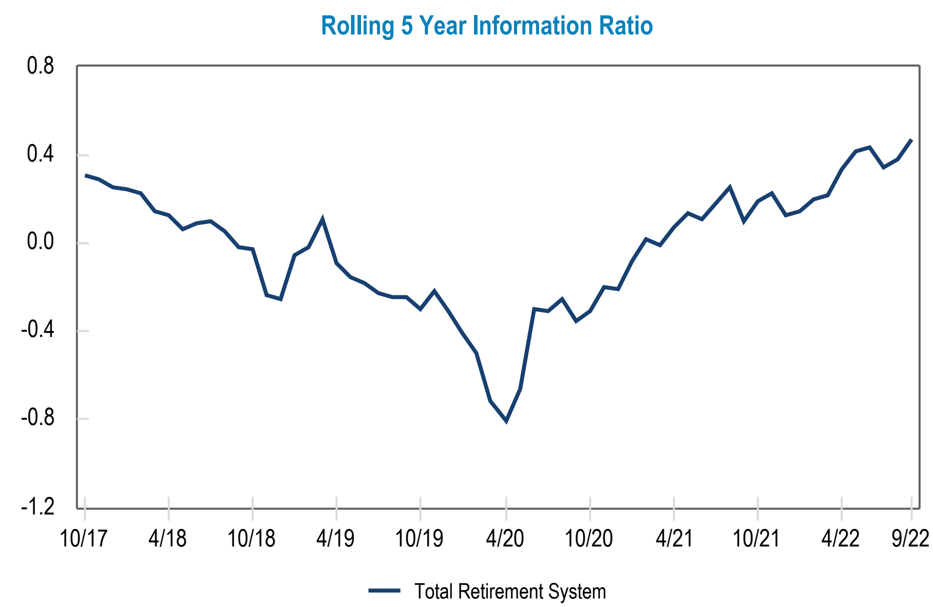
Returns for periods greater than one year are annualized.

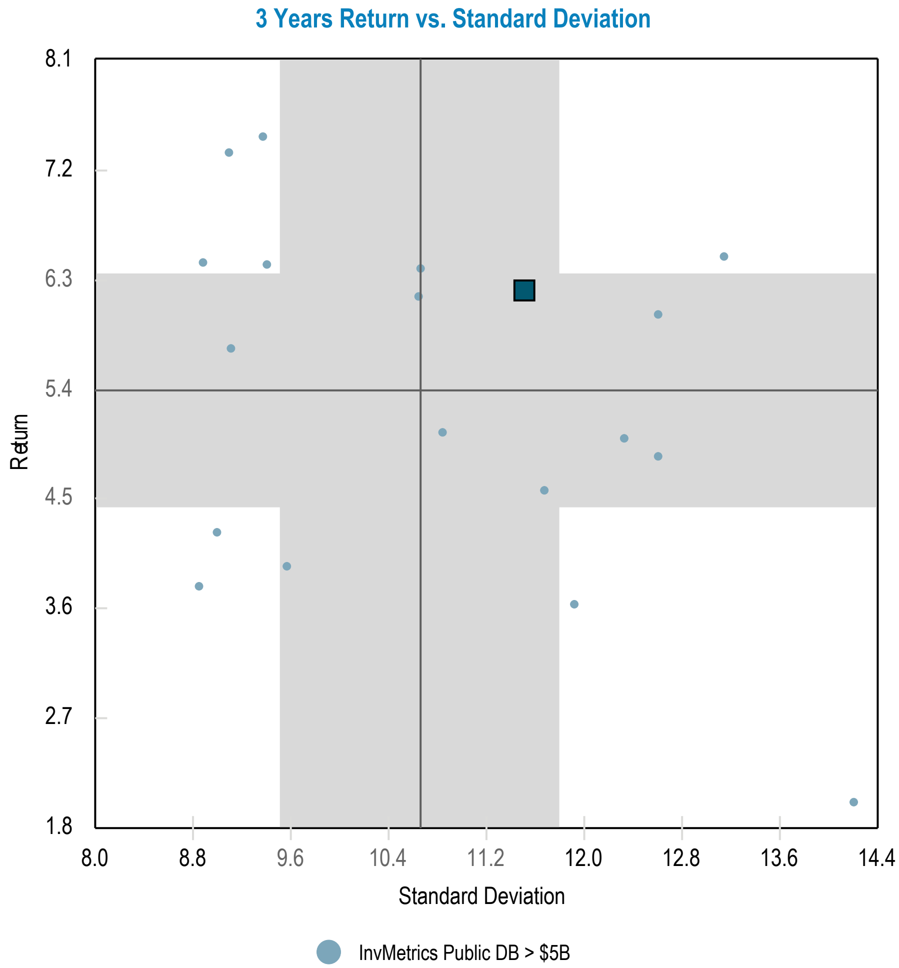

Quarterly Excess Performance vs. Policy Benchmark
Excess Performance
4.8
4.0
3.2
2.4
1.6
0.8
0.0
-0.8
-1.6
-2.4
-3.2
-4.0
-4.8
-0.1
-3.1
2.7
-0.6
1.4
0.7
1.3
0.1
1.0
1.3
1.9
1.2
12/19
3/20
6/20
9/20
12/20
3/21
6/21
9/21
12/21
3/22
6/22
9/22
Quarterly Outperformance
Quarterly Underperformance


Rolling 5 Year Std. Deviation
12.0
10.0
8.0
6.0
4.0
10/17
4/18
10/18
4/19
10/19
4/20
10/20
4/21
10/21
4/22
9/22
Total Retirement System
Policy Index

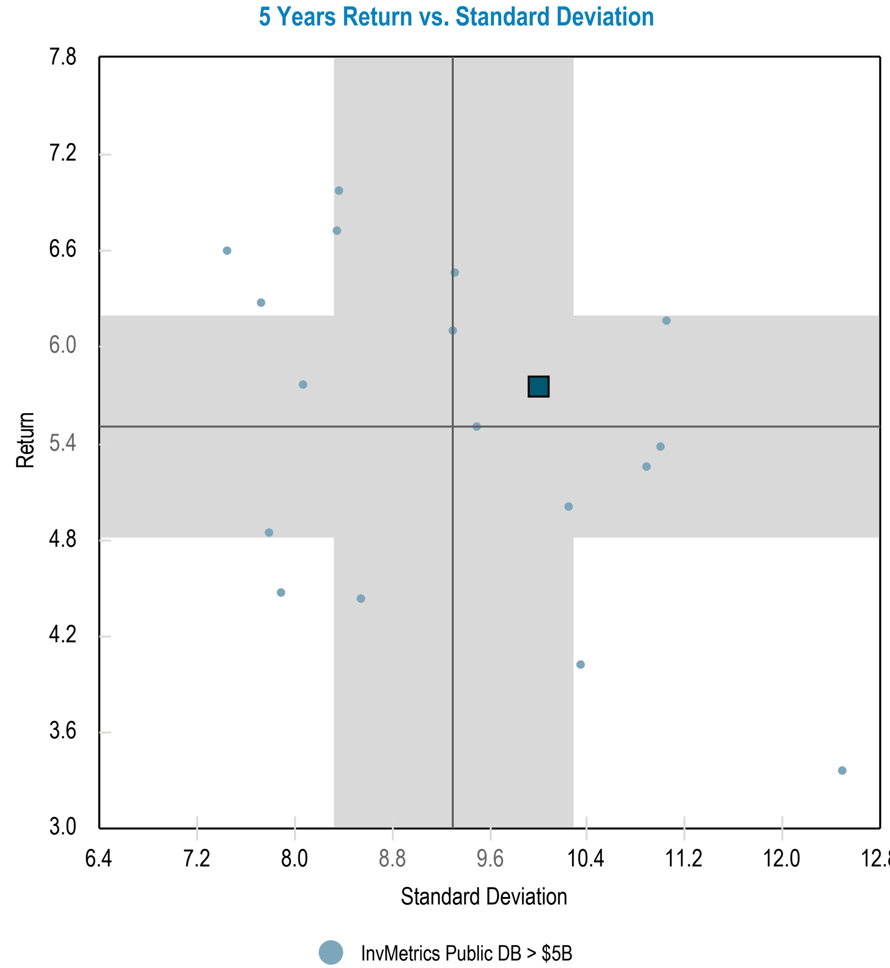

Rolling 5 Year Sharpe Ratio
2.0
1.6
1.2
0.8
0.4
0.0
10/17
4/18
10/18
4/19
10/19
4/20
10/20
4/21
10/21
4/22
9/22
Total Retirement System
Policy Index


Rolling 5 Year Tracking Error
3.0
2.5
2.0
1.5
1.0
0.5
10/17
4/18
10/18
4/19
10/19
4/20
10/20
4/21
10/21
4/22
9/22
Total Retirement System


Rolling 5 Year Information Ratio
0.8
0.4
0.0
-0.4
-0.8
-1.2
10/17
4/18
10/18
4/19
10/19
4/20
10/20
4/21
10/21
4/22
9/22
Total Retirement System

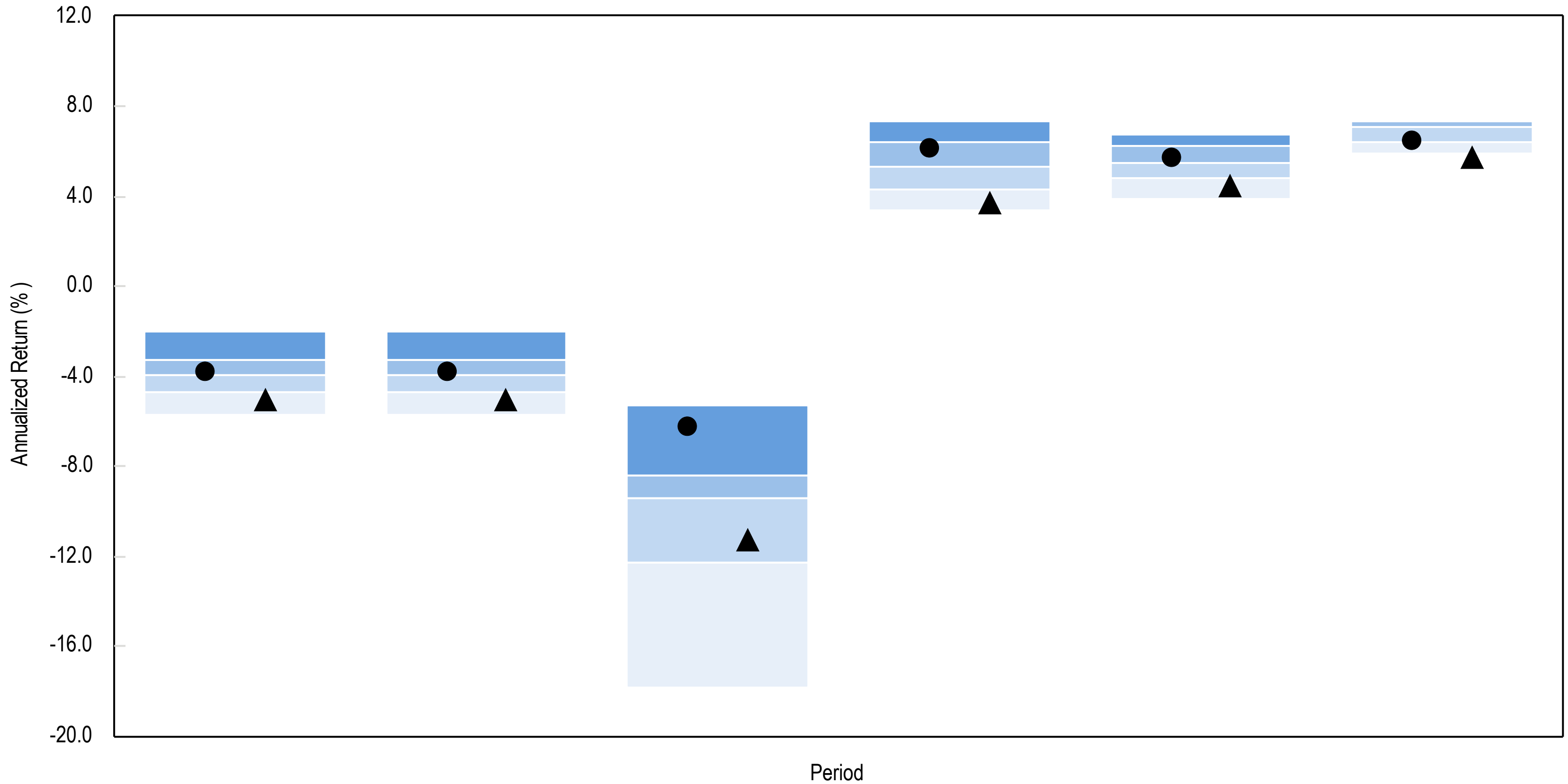


	Return	Standard Deviation
Total Retirement System	6.21	11.51
Median	5.39	10.66
Population	18	18

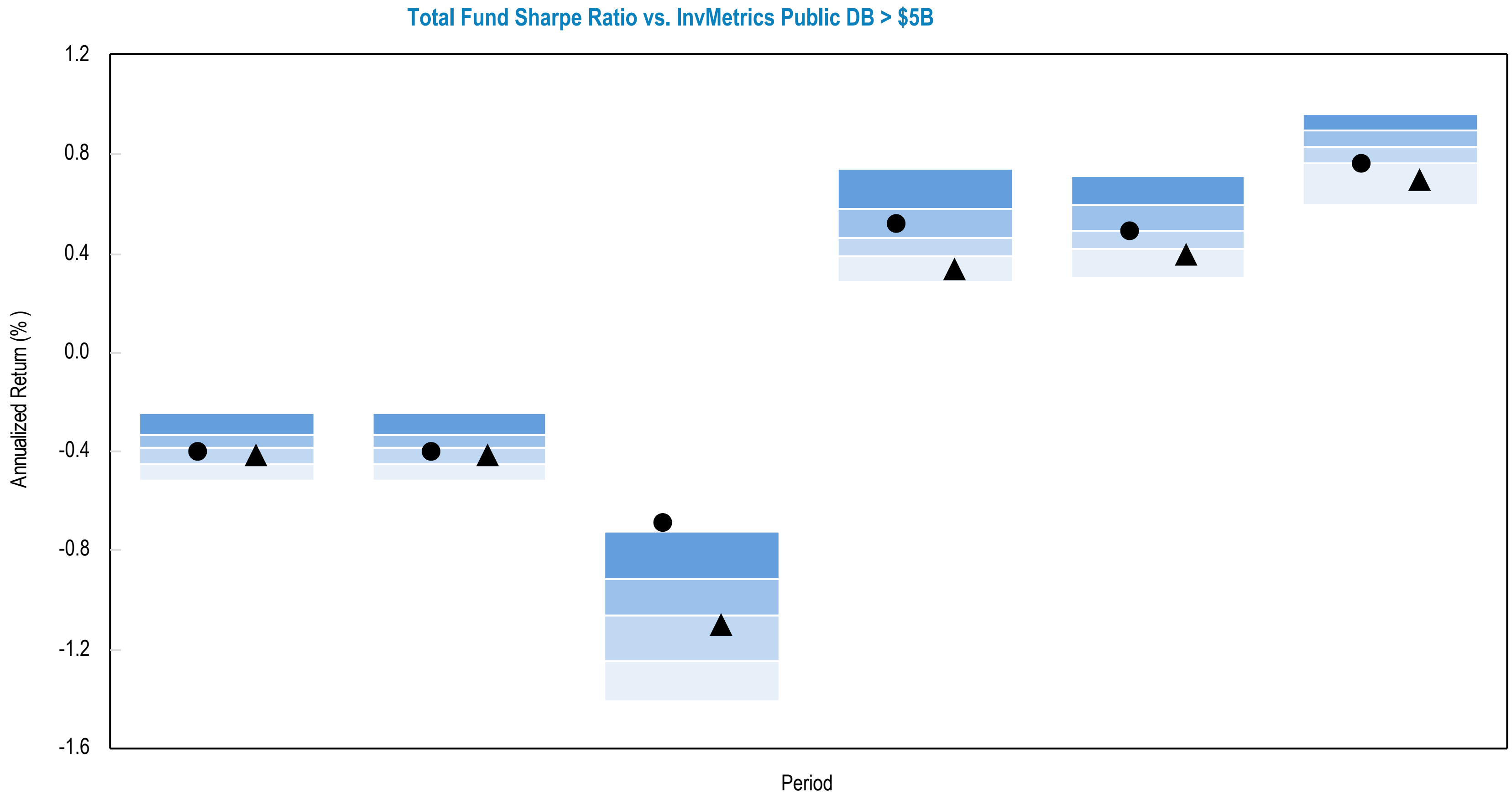


	Return	Standard Deviation
Total Retirement System	5.76	10.01
Median	5.51	9.30
Population	17	17

Total Fund Consecutive Periods vs. InvMetrics Public DB > $5B



	QTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
● Total Retirement System	-3.77 (41)	-3.77 (41)	-6.16 (9)	6.21 (35)	5.76 (44)	6.56 (70)
▲ Policy Index	-5.02 (85)	-5.02 (85)	-11.28 (67)	3.73 (91)	4.54 (81)	5.77 (99)
5th Percentile	-2.01	-2.01	-5.30	7.36	6.78	7.48
1st Quartile	-3.23	-3.23	-8.40	6.42	6.27	7.34
Median	-3.94	-3.94	-9.39	5.39	5.51	7.15
3rd Quartile	-4.65	-4.65	-12.29	4.31	4.84	6.45
95th Percentile	-5.67	-5.67	-17.81	3.40	3.89	5.92
Population	24	24	19	18	17	16



	QTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
● Total Retirement System	-0.40 (53)	-0.40 (53)	-0.69 (4)	0.52 (39)	0.49 (48)	0.76 (77)
▲ Policy Index	-0.41 (62)	-0.41 (62)	-1.10 (59)	0.33 (93)	0.40 (89)	0.70 (84)
5th Percentile	-0.24	-0.24	-0.73	0.75	0.71	0.96
1st Quartile	-0.33	-0.33	-0.91	0.58	0.59	0.90
Median	-0.39	-0.39	-1.06	0.46	0.49	0.83
3rd Quartile	-0.45	-0.45	-1.24	0.39	0.42	0.77
95th Percentile	-0.51	-0.51	-1.41	0.29	0.30	0.60
Population	24	24	19	18	17	16

Total Retirement System
Asset Class Performance Summary

South Carolina Retirement System Investment Commission
Period Ending: September 30, 2022

	Market Value	% of Portfolio	QTD	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Total Retirement System	36,824,915,400	100.0	-3.8	-3.8	-10.9	-6.2	6.2	5.8	6.6	5.4	Oct-05
Policy Index			-5.0	-5.0	-15.0	-11.3	3.7	4.5	5.8	4.7	
Public Equity	13,687,740,754	37.2	-6.5	-6.5	-25.5	-20.9	3.0	3.0	6.3	4.8	Oct-05
Public Equity Blended Benchmark			-6.6	-6.6	-25.7	-21.2	3.6	4.2	7.2	5.7	
Total Bonds	2,755,320,834	7.5	-1.2	-1.2	-6.4	-5.5	0.6	1.2	1.5	3.0	Oct-05
Bonds Blended Benchmark			-4.8	-4.8	-14.6	-14.6	-3.3	-0.3	0.9	2.9	
Investment Grade - Fixed	561,114,237	1.5	-4.3	-4.3	-13.4	-13.2	-1.3	0.9	-	1.8	Jul-15
Investment Grade - Floating	1,308,209,261	3.6	-1.0	-1.0	-7.7	-5.4	-	-	-	3.1	Jul-20
Mixed Credit	147,266,651	0.4	-1.5	-1.5	-3.7	-2.2	5.1	4.6	4.5	5.8	May-08
50% S&P LSTA Leveraged Loan Index/50% Blmbg. High Yield Index			0.4	0.4	-9.1	-8.4	0.9	2.3	3.6	4.9	
Emerging Market Debt	50,720,197	0.1	-1.9	-1.9	-13.3	-15.5	-4.0	-2.0	0.4	3.1	Jul-09
50% JPM EMBI Global Div (USD)/50% JPM GBI EM Global			-4.6	-4.6	-21.3	-22.5	-7.1	-3.2	-0.6	2.5	
Cash - Short Duration	688,010,488	1.9	0.3	0.3	-0.4	-0.5	0.9	1.3	1.0	1.5	Oct-05
90 Day U.S. Treasury Bill			0.5	0.5	0.6	0.6	0.6	1.1	0.7	1.2	
Short Duration	241,442,586	0.7	0.2	0.2	-1.4	-1.3	1.2	1.7	1.6	1.8	Mar-10
Blmbg. 1-3 Year Gov/Credit index			-1.5	-1.5	-4.5	-5.1	-0.4	0.7	0.8	1.0	
Private Equity	5,781,127,882	15.7	-2.9	-2.9	6.0	14.6	18.6	15.4	14.4	9.8	Apr-07
Private Equity Blended Benchmark			-5.4	-5.4	-1.8	4.0	20.3	16.9	15.2	15.5	
Private Debt	3,610,991,626	9.8	-0.2	-0.2	4.0	7.8	7.3	6.3	7.2	6.9	Jun-08
S&P LSTA Leveraged Loan Index + 150 bps 3-mo lag			-4.1	-4.1	-2.9	-1.5	3.5	4.4	5.2	4.9	
Real Assets	5,498,320,805	14.9	0.3	0.3	10.6	20.5	11.9	10.6	12.7	8.3	Jul-08
Real Assets Blended Benchmark			0.3	0.3	12.4	21.0	10.0	9.1	6.3	4.6	
Private Real Estate	3,918,697,498	10.6	1.8	1.8	18.8	30.9	14.7	12.2	13.7	8.7	Jul-08
Private Real Estate Blended Benchmark			0.3	0.3	12.4	21.0	11.7	9.8	10.6	6.6	
Public Real Estate	343,935,746	0.9	-10.3	-10.3	-27.1	-15.7	0.6	5.2	-	4.1	Jul-16
FTSE NAREIT Equity REIT			-9.9	-9.9	-28.1	-16.4	-2.0	2.9	6.3	2.2	
Private Infrastructure	1,016,416,296	2.8	1.2	1.2	2.2	3.6	5.9	-	-	5.9	Jul-18
Dow Jones Brookfield Global Infrastructure			-11.1	-11.1	-14.8	-8.4	-0.4	2.5	5.7	3.2	
Public Infrastructure	219,271,265	0.6	-10.8	-10.8	-15.3	-8.6	1.9	4.2	-	4.7	Jun-16
Dow Jones Brookfield Global Infrastructure			-11.1	-11.1	-14.8	-8.4	-0.4	2.5	5.7	4.6	
Hedge Funds Portable Alpha	5,121,534,650	13.9	2.4	2.4	11.2	12.5	10.3	7.7	7.5	8.3	Jul-07
HFRI Conservative Fund of Funds Less LIBOR			-0.7	-0.7	-2.8	-2.2	3.8	2.3	2.6	0.7	
Russell Overlay	369,878,849	1.0									

Return calculations are rounded to the nearest tenth of percent and may differ slightly from BNYM reported returns.

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Retirement System	**5.8**	**10.0**	**0.5**	**1.0**	**0.5**	**2.6**
Policy Index	*4.5*	*9.4*	*-*	*1.0*	*0.4*	*0.0*
Public Equity	**3.0**	**17.8**	**-0.8**	**1.0**	**0.2**	**1.4**
Public Equity Blended Benchmark	*4.2*	*17.3*	*-*	*1.0*	*0.3*	*0.0*
Total Bonds	**1.2**	**4.3**	**0.3**	**0.3**	**0.0**	**5.0**
Bonds Blended Benchmark	*-0.3*	*4.7*	*-*	*1.0*	*-0.3*	*0.0*
Mixed Credit	**4.6**	**7.4**	**0.4**	**0.8**	**0.5**	**5.0**
50% S&P LSTA Leveraged Loan Index/50% Blmbg. U.S. Corporate High Yield Index	*2.3*	*7.7*	*-*	*1.0*	*0.2*	*0.0*
Emerging Market Debt	**-2.0**	**10.8**	**0.4**	**1.0**	**-0.2**	**3.2**
50% JP Morgan EMBI Global Diversified (USD)/50% JP Morgan EMBI Global Diversified	*-3.2*	*10.4*	*-*	*1.0*	*-0.4*	*0.0*
Cash - Short Duration	**1.3**	**0.8**	**0.1**	**0.2**	**0.1**	**0.8**
90 Day U.S. Treasury Bill	*1.1*	*0.3*	*-*	*1.0*	*-*	*0.0*
Short Duration	1.7	1.6	0.3	-0.9	0.3	1.7
90 Day U.S. Treasury Bill	*1.1*	*0.3*	*-*	*1.0*	*-*	*0.0*
Private Equity	**15.4**	**7.3**	**-0.1**	**0.1**	**1.8**	**17.3**
Private Equity Blended Benchmark	*16.2*	*17.0*	*-*	*1.0*	*0.9*	*0.0*
Private Debt	**6.3**	**4.3**	**0.2**	**-0.1**	**1.1**	**8.6**
S&P LSTA Leveraged Loan Index + 150 bps 3-mo lag	*4.4*	*6.9*	*-*	*1.0*	*0.5*	*0.0*
Real Assets	**10.6**	**5.1**	**0.2**	**0.5**	**1.7**	**5.5**
Real Assets Blended Benchmark	*9.1*	*7.3*	*-*	*1.0*	*1.1*	*0.0*
Private Real Estate	**12.2**	**4.0**	**-**	**-**	**2.6**	**-**
Private Real Estate Blended Benchmark	*-*	*-*	*-*	*-*	*-*	*-*
Public Real Estate	**5.2**	**19.0**	**0.4**	**1.0**	**0.3**	**2.5**
FTSE NAREIT All Equity REITs	*4.1*	*18.9*	*-*	*1.0*	*0.2*	*0.0*
Private Infrastructure	**-**	**-**	**-**	**-**	**-**	**-**
Dow Jones Brookfield Global Infrastructure	*2.5*	*15.9*	*-*	*1.0*	*0.2*	*0.0*
Public Infrastructure	**4.2**	**15.0**	**0.7**	**0.9**	**0.3**	**2.2**
Dow Jones Brookfield Global Infrastructure	*2.5*	*15.9*	*-*	*1.0*	*0.2*	*0.0*
Hedge Funds Portable Alpha	**7.7**	**4.6**	**1.5**	**0.7**	**1.3**	**3.5**
HFRI Conservative Fund of Funds Less LIBOR	*2.3*	*4.5*	*-*	*1.0*	*0.3*	*0.0*

Page excludes managers with less than 5 years of history.

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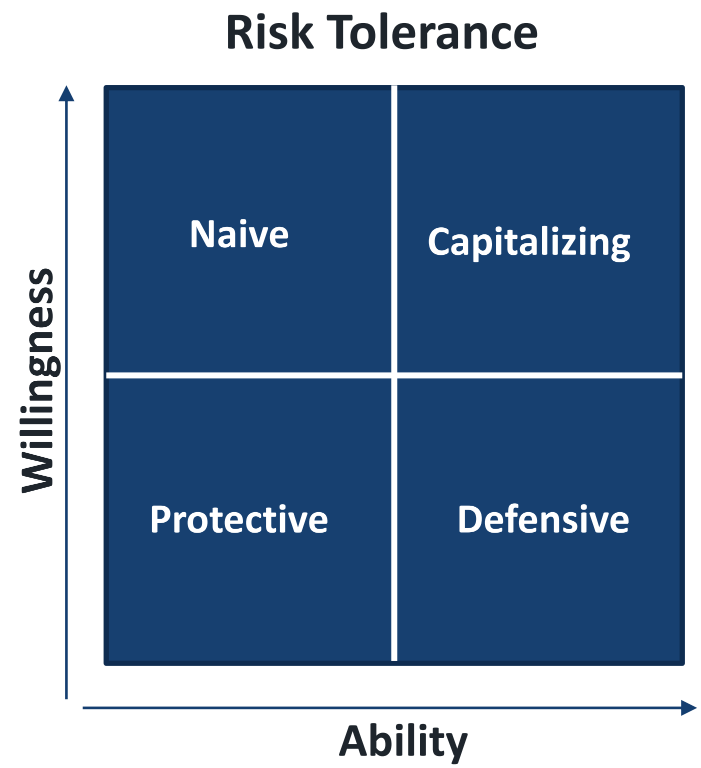
DECEMBER 1, 2022

Enterprise Risk Tolerance Overview

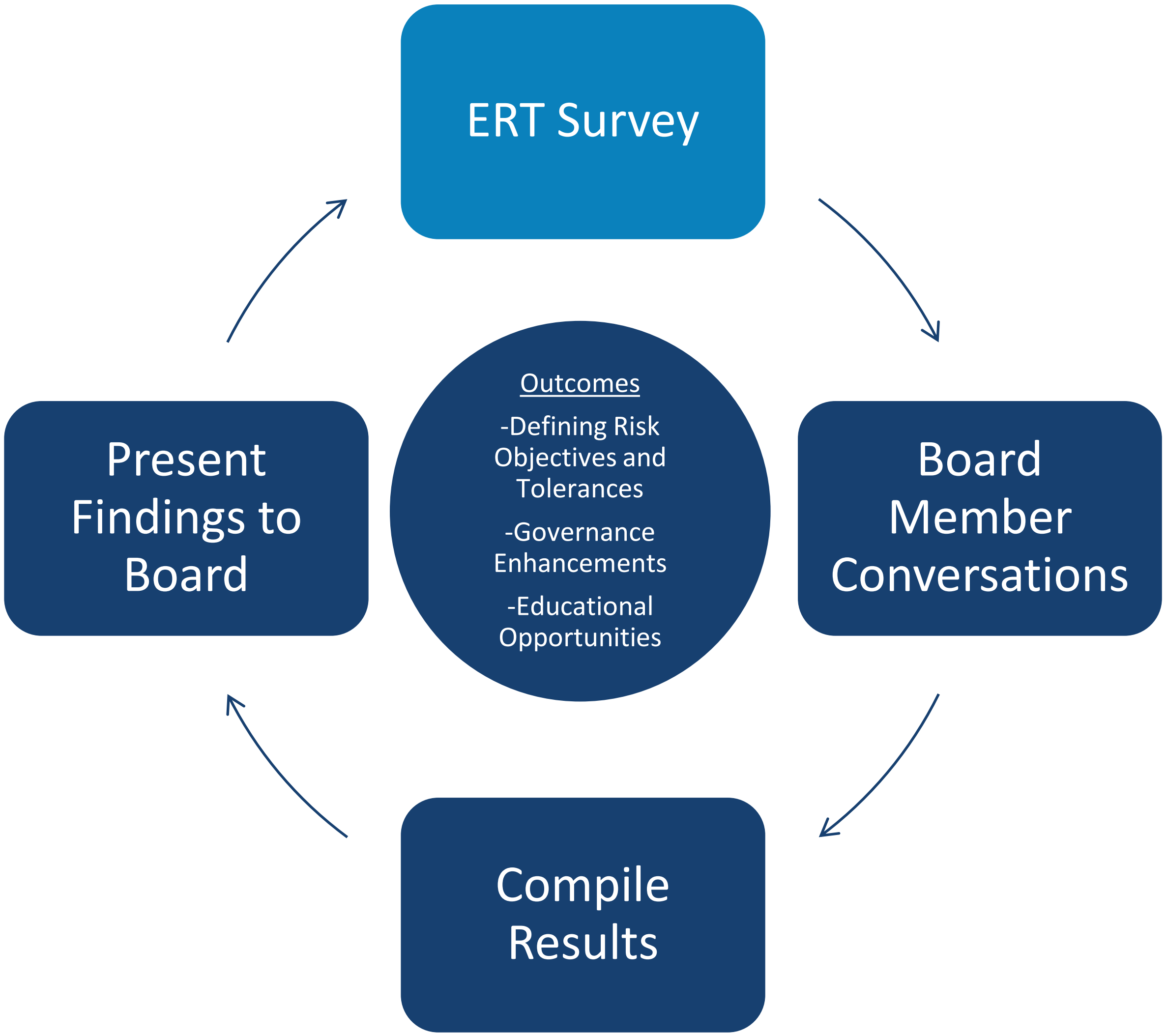
South Carolina RSIC

Enterprise Risk Tolerance Overview

- Assessing Enterprise Risk Tolerance has important practical implications for investment strategy development.
- Identifying the appropriate risk tolerance for a plan involves viewing risk in terms of the Plan's willingness and ability to bear risk.
    - The *ability* to bear risk depends on financial circumstances
    - The *willingness* to bear risk is generally based on investor's attitudes and beliefs about investments.
- This process also helps identify ways to improve governance and areas of educational focus to improve the management and oversight of the Plan.



Enterprise Risk Tolerance Process



ERT Survey

- 10-15 minute online questionnaire
- Each Board member completes individually
- Asks questions in areas of governance, mission and objectives, risk tolerances, and level of asset class comfort/knowledge
- To be followed up with discussion with each board member to discuss their views.

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Delegated Investments (September 8, 2022 to November 30, 2022)

Asset Class	Investment	Investment Amount	Closing Date
Real Estate	Equus Investment Partnership XII	$75 M	September 30, 2022