February 2024 IC Meeting

Schedule Thursday, February 22, 2024 10:00 AM — 1:00 PM CST

Venue 4700 Mueller Blvd., Austin TX 78723

Organizer Sarah McCleary

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1. Call roll of Committee members

Presented by Ed Van Eenoo

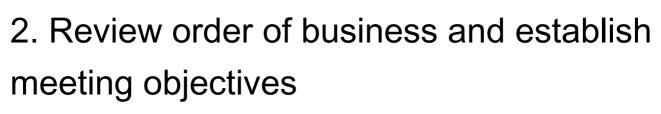


AGENDA ITEM 1: Call roll of Committee members

AGENDA ITEM OBJECTIVE

The objective of the agenda item is to determine for the record which Trustees are present at the start of the meeting.

Each Trustee should respond to the roll call, and it will be noted which Trustees are present in person and which Trustees have joined via video conference.



Presented by Ed Van Eenoo



AGENDA ITEM 2:

Review order of business and establish meeting objectives

AGENDA ITEM OBJECTIVE

This agenda item provides Trustees the opportunity to review the order of business and to express a desire to take an agenda item out of order, and to discuss the key objectives of the meeting. The time frames on the agenda are for informational purposes only.

RELEVANCE TO STRATEGIC PLAN

This agenda item meets **COAERS Strategic Plan Goal 4: Identify and implement leading practices in board governance, pension administration, and investment management.** It is an industry best practice to establish meeting objectives and review them at the outset of each meeting.

MEETING OBJECTIVES

- 1. The Committee will discuss and consider the 2024 Work Plan
- The Committee will discuss and consider any possible changes to its charter and composition
- 3. The Committee will receive a report on fourth quarter 2023 performance including strategy and implementation and consider recommendations regarding the Global Equity asset class
- The Committee will discuss and consider a draft strategic plan for the private markets program
- 5. The Committee will discuss and consider the Investment Practices and Performance Evaluation (IPPE) report
- The Committee will give direction to Staff on an outside review of policy and processes
- 7. The Committee will discuss and consider bids from the general investment consultant Request for Proposal

3. Receive public comments

Presented by Ed Van Eenoo



AGENDA ITEM 3: Receive public comments

AGENDA ITEM OBJECTIVE

This standing agenda item allows System members and members of the public the opportunity to provide comments to the Board.

RELEVANCE TO STRATEGIC PLAN/CORE COMPETENCIES

This agenda item meets the core competency established in the **COAERS Strategic Plan** "*Transparency: Complying with open meeting and public information laws to ensure the decision-making process is clear to members and the public."*

The Chair will recognize any person who wishes to comment for up to three minutes per person.

4. Consider approval of the November 17, 2023 and January 19, 2024 Investment Committee minutes

Presented by Ed Van Eenoo



AGENDA ITEM 4:

Consider approval of the November 17, 2023 and January 19, 2024 Investment Committee minutes

AGENDA ITEM OBJECTIVE

This standing agenda item seeks approval of the minutes from the prior quarterly Investment Committee meetings. The charter for the Investment Committee requires the Committee to keep minutes of its meetings.

RELEVANCE TO STRATEGIC PLAN

This agenda item meets the core competency established in the **COAERS Strategic Plan** "*Transparency: Complying with open meeting and public information laws to ensure the decision-making process is clear to members and the public."*

RECOMMENDATION FOR COMMITTEE ACTION

Staff recommends approval of the minutes of the November 17, 2023 and January 19, 2024 Investment Committee meetings.

ATTACHMENTS

- 1. Draft minutes of November 17, 2023 Investment Committee meeting
- 2. Draft minutes of January 19, 2024 Investment Committee meeting



Public Meeting held in person and videoconference on November 17, 2023 10:00 AM CT

Pursuant to Texas Govt. Code 551.127 6850 Austin Center Blvd., Suite 320, Austin, TX 78731

Committee Member Present/(Absent)

Yuejiao Liu, Committee Chair Michael Granof (Amy Hunter) Dick Lavine Diana Thomas

Guests:

Ian Bray, RVK

Spencer Hunter, RVK Reed Harmon, RVK* Paige Saenz, General Counsel* Joe Ebisa, WithIntelligence*

Other Board Trustees Present/(Absent)

Michael Benson (Kelly Crook) Chris Noak (Leslie Pool) Anthony Ross (Brad Sinclair)

Others Present

Staff:
Christopher Hanson
David Kushner
David Stafford
Ty Sorrel
Kelly Doggett
Sarah McCleary
Mehrin Rahman
Jenni Bonds

Yun Quintanilla

Russell Nash

Amy Kelley*

† present via videoconference

1 Call roll of Committee members

Committee Chair Liu called the meeting to order at 10:03 a.m. The following Committee members were present in person: Liu, Granof, Lavine and Thomas.

2 Review order of business and establish meeting objectives

Committee Chair Liu reviewed the order of business and meeting objectives with the Committee. No changes were made to the order of business.

3 Receive public comments

Committee Chair Liu asked if any members of the public wished to speak, either now or during an agenda item. There were no comments.

^{*} present telephonically

4 Consider approval of the August 25, 2023 Investment Committee minutes

Committee Chair Liu asked the Committee to review the Investment Committee minutes. Ms. Diana Thomas moved approval of the August 25, 2023 Investment Committee minutes. Mr. Dick Lavine seconded, and the motion passed 4-0.

5 Review investment performance including strategy, compliance, and delegation of authority

The Committee reviewed investment performance and market data from RVK through September 30, 2023. Fund investments decreased 3.77% net of fees during the third quarter.

Mr. David Stafford discussed the investment strategy and the compliance dashboards. He shared data showing absolute Fund returns were lower than the assumed rate of return over the trailing 10-years. Additionally, he discussed relative returns noting that realized returns were above the passive index and near to the policy index on a longer-term basis despite near term underperformance. He also noted the high variation in peer rankings, which were largely resulting from the Fund's lower allocation to private markets strategies, and reminded the Committee that peer rankings would be discussed again during Agenda Item # 6. Mr. Stafford also shared a Staff memo outlining both decisions that worked well in the third quarter, and decisions that did not work well.

Mr. Ian Bray of RVK reported that investors grappled with mixed signals in the third quarter, of both the health of the economy and the direction of corporate profits. He noted that labor market data exceeded expectations but energy costs and mortgage rates raised concerns. Results across equities were positive year-to-date, in contrast to the difficult market of 2022. He noted that though inflation has come down the Fed may raise rates again as unemployment remains low. Despite this, the yield curve has flattened suggesting that the market is no longer pricing in the rate increases. Mr. Bray also noted that the drivers of returns in U.S. equities were led by a narrow market rally of a few concentrated names.

Mr. Stafford also reviewed the delegation of authority report and the investment cash activity report. Additionally, he noted that Fund positioning was in the Strategic Bands across a variety of asset and sub-asset classes, as approved by the Board.

Mr. Noak left the meeting at 10:44 a.m. and returned at 10:46 a.m.

6 Discuss and consider proposed revisions to Investment Policy Statement and Investment Implementation Policy

Mr. Stafford presented draft copies of revisions to both the Investment Policy Statement (IPS) and Investment Implementation Policy (IIP). He explained that these were mostly minor changes based on the discussions during the year and

incorporated Trustee direction from the October 2023 workshop, and that more changes would be made as the private markets program is developed. Trustees discussed the changes regarding comparisons to the peer group and directed Staff to incorporate their concerns into a new draft of the IPS and IIP at a later date.

7 Discuss and consider Investment Risk Framework Process

Mr. Stafford presented the IRF memo and reported that The Fund is currently positioned with a heavy overweight to Cash & Equivalents (in the maximum strategic bands), and heavy underweights to Multi-Asset and Fixed Income (in the minimum strategic bands). Global Equities and Real Assets are currently positioned at neutral. He noted that market dynamics had not changed enough to warrant a recommendation to the Board regarding this approved positioning in the Strategic Bands.

Mr. Noak left the meeting at 11:14 a.m. and returned at 11:16 a.m. Mr. Benson left the meeting at 11:14 a.m. and returned at 11:16 a.m.

8 Discuss and consider investment implementation and Premier List for the following:

A. Real Assets - Ty Sorrel and RVK

B. Fixed Income - David Kushner and RVK

8A. Real Assets

Mr. Sorrel presented the annual review of the current construction and composition of the Real Assets allocations, including the associated Premier List.

Trustees took a break from 11:34 a.m. to 11:54 a.m.

8B. Fixed Income

Mr. David Kushner presented a recommendation to invest 1-3% of Fund assets in a Private Credit – Direct Lending strategy. He noted this will be COAERS' first investment in this asset class. This investment will initially be classified as Fixed Income – Investment Grade Credit under the current Strategic Asset Allocation structure.

Ms. Thomas moved to refer to the Board for approval proposed changes to the Fixed Income Premier List pending final approval by counsel on fund-related documents and the development of a funding implementation plan by Staff and RVK. Mr. Granof seconded, and the motion passed 4-0.

9 Discuss and consider investment consulting services including:

- A. Request for Proposal for General Investment Consultant
- B. Request for Information for Private Markets Consulting Services

Mr. David Kushner presented the components of both a Request for Proposal (RFP) for a General Investment Consultant, and Request for Information (RFI) for Private Markets Consulting Services. He said the goal was to finish the due diligence including site visits prior to the May 2024 Investment Committee meeting. Trustees requested that some of the questions be grouped according to function.

Ms. Thomas moved to refer to the Board for approval the proposed Request for Proposal for General Consulting Services and the Request for Information for Private Markets Consulting Services. Mr. Granof seconded, and the motion passed 4-0.

10 Discuss and consider proposed 2024 investment budget

Mr. Hanson presented data from the latest CEM Benchmarking Report showing that the Fund remains low-cost relative to peers. Mr. Hanson presented the proposed 2024 Investments budget. The budget includes salaries for comparison, but those salaries are reflected in the administrative budget.

Mr. Ross left the meeting at 12:36 p.m.

Mr. Lavine moved to refer the 2024 investment budget to the Board for approval. Ms. Thomas seconded, and the motion passed 4-0.

11 Review 2023 Committee Work Plan and discuss development of 2024 Committee Work Plan

Mr. Hanson reviewed the 2023 Committee accomplishments against the 2023 Committee Work Plan. He also outlined the 2024 Committee Work Plan, which includes additional meetings and site visits for the Consultant RFP for two Committee members.

12 Review key meeting takeaways and call for future agenda items

Committee Chair Liu summarized the actions taken and information discussed at the meeting and provided an opportunity to add future agenda items.

As there were no further items to address, the meeting adjourned at 1:02 p.m.



Public Meeting held in person and videoconference on January 19, 2024 10:00 AM CT

Pursuant to Texas Govt. Code 551.127 6850 Austin Center Blvd., Suite 320, Austin, TX 78731

Committee Member* Present/(Absent)

Yuejiao Liu, Committee Chair Michael Granof Dick Lavine Diana Thomas

Guests:

Ian Bray, RVK Spencer Hunter, RVK* Paige Saenz, General Counsel Joe Ebisa, WithIntelligence* James Baratta*

Other Board Trustees Present/(Absent)

Michael Benson Kelly Crook Chris Noak (Leslie Pool) Anthony Ross Brad Sinclair Ed Van Eenoo

Others Present

Staff:
Christopher Hanson
David Kushner
David Stafford
Ty Sorrel
Kelly Doggett
Sarah McCleary
Michelle Mahaini
Mehrin Rahman*
Russell Nash
Amy Kelley*

- * present telephonically
- † present via videoconference

1 Call roll of Committee members

Committee Chair Liu called the meeting to order at 10:03 a.m. The following Committee members were present in person: Liu, Granof, and Thomas.

2 Review order of business and establish meeting objectives

Committee Chair Liu reviewed the order of business and meeting objectives with the Committee. No changes were made to the order of business.

Mr. Benson arrived at 10:05 a.m.

^{*}The Committee members are the 2023 members, as the new Committees had not been named as of the date of the meeting. Ms. Hunter, who was previously on the committee, has been replaced on the Board by Mr. Van Eenoo, resulting in only four members on the committee as of January 19, 2024.

3 Receive public comments

Committee Chair Liu asked if any members of the public wished to speak, either now or during an agenda item. There were no comments.

4 Discuss investment program objectives

Mr. Lavine arrived at 10:14 a.m.

Mr. Christopher Hanson reviewed the objectives of the investment program as stated in the Investment Policy Statement (IPS). He noted that Trustees had previously discussed the use of peer data, and whether it should be a stated goal or moved to another section of the IPS. Either way, Staff would continue to report peer rankings. Trustees discussed the pitfalls of peer data including reporting period, size, and consistency of net-of-fees data. Mr. Hanson sought feedback on how much time the Committee wanted to spend reviewing performance and how in-depth performance reviews should be, and other changes the Investment Committee would like to see in terms of reporting or committee time.

5 Discuss measuring success including benchmarking

Mr. David Stafford led the discussion on benchmarking with a focus on setting the Policy Benchmark. Mr. Stafford discussed the current approach to doing so, which uses public markets indices as benchmarks, organized by major asset classes. Mr. Stafford then noted areas of this benchmark that are mismatched to underlying subasset classes and areas where "normal" implementation is significantly different than the benchmark. After Mr. Stafford presented Staff's conclusions related to these items, the Committee provided feedback about the approach to benchmarking which included clearly defining Board decisions and keeping decision making at a higher level.

Trustees took a break from 12:19 p.m. to 12:32 p.m.

6 Discuss private markets program including private credit update and development of strategic plan

Mr. David Kushner sought Committee direction on measuring success in private markets, including the initial investment to Blue Owl Diversified Lending Fund. Mr. Kushner mentioned two sources being evaluated by Staff.

Mr. Ross left the meeting at 12:54 p.m.

Mr. Lavine stepped out of the meeting from 12:58 p.m. to 12:59 p.m.

Mr. Ian Bray reiterated the need for developing a strategic plan for Private Markets investments.

7 Review key meeting takeaways and call for future agenda items

Committee Chair provided an opportunity to add future agenda items. Trustees expressed a desire to consider independence of IPPE consulting, looking at the charter for this committee, and considering an alternative schedule to this committee's meetings to coincide with the full Board meetings.

As there were no further items to address, the meeting adjourned at 1:13 p.m.

5. Discuss 2024 Investment Committee Work Plan

Presented by Ed Van Eenoo



AGENDA ITEM 5: Discuss 2024 Investment Committee Work Plan

AGENDA ITEM OBJECTIVE

This agenda item is for discussion of the draft 2024 Committee work plan.

RELEVANCE TO STRATEGIC PLAN

This agenda item meets COAERS Strategic Plan Goal 4: Identify and implement leading practices in board governance, pension administration, and investment management. It is an industry best practice to establish and review Committee work plans.

RECOMMENDATION FOR COMMITTEE ACTION

At the Committee's discretion.

ATTACHMENT

1. Draft 2024 Committee Work Plan



Investment Committee Proposed 2024 Work Plan

1. January meeting

- ✓ Investment program objectives
- Measuring success including benchmarking philosophy
- Private markets program discussion

2. February meeting

- Strategic Asset Allocation preliminary review
- Global Equities strategic review, Premier List, and implementation
- Private markets program discussion
- Consultant RFP progress report
- PRB Investment Practices and Performance: Evaluation Report
- Quarterly review of investment performance, positioning, strategy, implementation, delegated authority, manager fees, and cash movements

3. April meeting

- Consultant RFP initial evaluation
- Strategic Asset Allocation review and benchmarking discussion
- 4. Consultant RFP Site Visits (week of either April 22 or April 29)

5. May meeting

- Consultant RFP recommendation
- Fixed Income, Real Assets, Cash & Equivalents strategic review, Premier Lists and implementation
- Private markets program discussion
- Quarterly review of investment performance, positioning, strategy, implementation, delegated authority, manager fees, and cash movements

August meeting

- Review of Investment Policy Statement and Investment Implementation policy including strategic asset allocation, guidelines, and goals
- Private markets program discussion
- Quarterly review of investment performance, positioning, strategy, implementation, delegated authority, manager fees, cash movements, and Premier List

7. October Workshop

Private markets program discussion

8. November meeting

- Private markets program discussion
- Annual review of investment budget
- Quarterly review of investment performance, positioning, strategy, implementation, delegated authority, manager fees, cash movements, and Premier List
- Develop 2025 Committee Work Plan

6. Discuss and consider Investment Committee Charter

Presented by Ed Van Eenoo



AGENDA ITEM 6: Discuss and consider Investment Committee Charter

AGENDA ITEM OBJECTIVE

The objective of this agenda item is for the Committee to discuss possible changes to the Investment Committee's charter and composition.

RELEVANCE TO STRATEGIC PLAN

This agenda item meets COAERS Strategic Plan Goal 4: Identify and implement leading practices in board governance, pension administration, and investment management. It is an industry best practice to periodically review governing documents.

RECOMMENDATION FOR COMMITTEE ACTION

At committee's recommendation

BACKGROUND

At the January 31, 2024 Board Meeting, Trustees discussed the option of having the Investment Committee be a Committee of the Whole, perhaps meeting directly before Board meetings. The Board deferred to the Investment Committee whether the change should be implemented.

<u>ATTACHMENT</u>

1. Investment Committee Charter

City of Austin Employees' Retirement System Charter for the Investment Committee

Introduction

- 1) **Purpose** The purpose of the Investment Committee is to assist the Board of Trustees in fulfilling its fiduciary oversight responsibility for the investment assets of the System ("the Fund").
- 2) Authority The Investment Committee will consider all matters relating to the Fund; and will make specific recommendations to the Board to achieve the investment goals and objectives of the System. All recommendations shall be subject to approval by the Board of Trustees.
- 3) Composition The Investment Committee will consist of at least five members of the Board of Trustees and the composition shall be consistent with COAERS Bylaws. Training may be obtained as needed to enhance members' knowledge of investments to fulfill the prudent person standard.
- 4) Meetings The Investment Committee will meet at least quarterly, with authority to convene additional meetings as circumstances require. All committee members are expected to attend each meeting. The committee may invite investment managers, professional advisors, and others to attend meetings and provide pertinent information as necessary. Meeting agendas will be prepared and provided in advance to members, along with appropriate briefing materials.

Duties and Responsibilities

1) Make Recommendations:

- Establish the investment strategy and governance framework including the approach to asset allocation considering the risk and return objectives of the Fund and the System's liability stream.
- Formulate and maintain investment policies, processes, and guidelines of the System regarding investment strategy, asset allocation, investment implementation, benchmarking, and other investment issues.
- Recommend to the Board service providers for professional services for investment consulting, investment management, and custodial banking.

2) Oversee Activities:

• Monitor the management of the portfolio for meeting performance objectives over time and for compliance with the investment policies and guidelines.

3) Review Performance:

- Assess regularly the effectiveness of investment strategy, governance, asset allocation, risk budgeting and other long-term criteria as well as the allocation of investment resources.
- Monitor the performance of Staff, investment managers, investment consultant, custodians, and other key relationships relative to contractual obligations and other criteria as appropriate.

Monitoring and Reporting

- The Investment Committee will establish in policy the reporting and monitoring practices necessary to provide the Board with the information it requires to effectively oversee the Fund.
- 2) The Investment Committee will report to the Board on its activities. The Investment Committee will keep minutes of its meetings and make these materials available to

Trustees.

Charter Review and History

- 1) This Charter will be reviewed at least every three years for continued relevancy and appropriateness.
- 2) The Board adopted this Charter on December 15, 2022.

7. Discuss and consider total portfolio and asset class performance through fourth quarter 2023, including strategy, implementation, and staff reports
Presented by RVK, David Stafford and Ty Sorrel



AGENDA ITEM 7:

Discuss and consider total portfolio and asset class performance through fourth quarter 2023, including strategy, implementation, and staff reports

AGENDA ITEM OBJECTIVE

This agenda item is for the Committee to review the Fund's performance through December 31, 2023, review the strategy for Global Equities, Premier List, and Staff reports.

RELEVANCE TO STRATEGIC PLAN

This item allows the Committee to review Fund performance and assess the extent to which the System is meeting COAERS Strategic Plan Goal 1: Achieve and maintain a funding level that ensures the long-term sustainability of the retirement system since long-term investment performance consistent with the investment program's goals is central to long-term system sustainability. Additionally, the agenda item allows the Committee to review the Fund goals and compliance requirements to ensure the System is fulfilling COAERS Strategic Plan Goal 2: Responsibly Manage the Risks of the System.

RECOMMENDATIONS

RVK and Staff recommend that the Committee refer to the Board the Global Equity portfolio recommendations outlined in RVK's presentation.

Staff recommends that the Committee refer to the Board for approval proposed changes to the Global Equity Premier List and direct Staff and RVK to develop a funding implementation plan for the March Board meeting.

BACKGROUND

This agenda item will focus on the total portfolio with specific focus given to Global Equities and related strategy and implementation considerations. The Consultant will lead a review of total Fund performance through year-end 2023. The Consultant will then provide an asset class structure review for Global Equities, including recommendations for consideration. Subsequently, Staff will review the Premier List including recommendations for consideration.

Staff has additionally provided standard quarterly reports in a consolidated fashion. Based on Trustee feedback to streamline meetings, many standard quarterly reports have also been included in the supplemental materials.

ATTACHMENTS

- 1. RVK Summary of Fund Performance 2023-Q4
- 2. RVK Summary of Manager Performance 2023-Q4
- 3. Staff Memo: Q4-2023 Performance



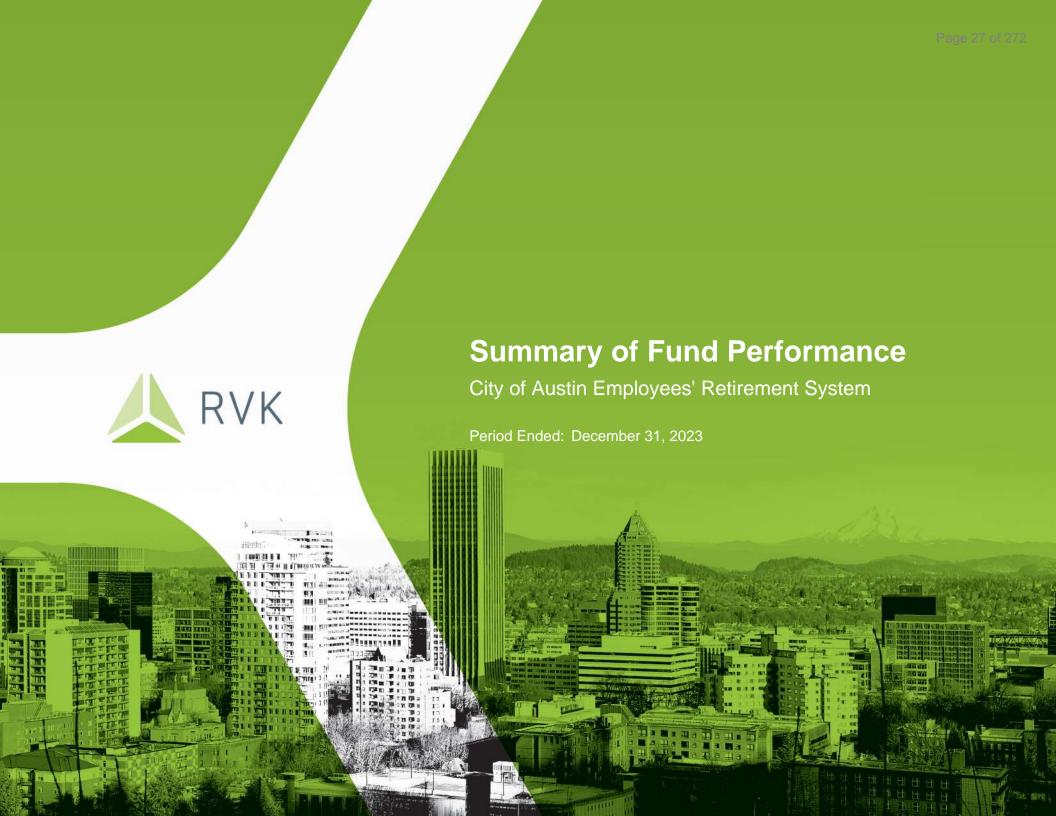
- 4. RVK Memo: Global Equity Review Executive Summary
- 5. RVK Presentation: Global Equity Review
- 6. Staff Memo: RVK Global Equity Review Presentation
- 7. Staff Memo: Global Equity Premier List Recommendations CONFIDENTIAL
- 8. RVK Memo: Global Equity Premier List Recommendations CONFIDENTIAL
- 9. Staff Reports Executive Summary
- 10. Global Equity Market and Portfolio Review 2023-Q4
- 11. Investment Strategy Dashboard 2023-Q4
- 12. Investment Compliance Dashboard 2023-Q4
- 13. Status of Delegated Authority 2023-Q4
- 14. Implementation Update 2023-Q4 CONFIDENTIAL

SUPPLEMENTAL MATERIALS

- 1. Additional Staff Reports
- 2. Additional RVK Performance Reports
- 3. Callan Period Table
- 4. Investment Risk Framework Reports CONFIDENTIAL
- 5. Investment Manager Diligence Materials CONFIDENTIAL



Performance



City of Austin Employees' Retirement System Executive Summary

Capital Markets Review	
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- In Q4, most risk assets rebounded from subdued conditions in the previous quarter to finish the year with significant positive returns--a stark turnaround compared to performance in 2022.
- The labor market remained healthy as the unemployment rate finished the year at 3.7%.
- The December Consumer Price Index (CPI) report showed a higher than expected uptick in monthly inflation and annual inflation of 3.4%. The Federal Open Markets Committee (FOMC) anticipates further progress in bringing inflation down to target levels by the end of 2024.

Market Performance										
	QTD	1 Year	3 Years	5 Years	10 Years					
S&P 500 (Mkt Cap Wtd)	11.7	26.3	10.0	15.7	12.0					
Russell 2000	14.0	16.9	2.2	10.0	7.2					
MSCI EAFE (Net)	10.4	18.2	4.0	8.2	4.3					
MSCI Emg Mkts (Net)	7.9	9.8	-5.1	3.7	2.7					
Bbrg US Agg Bond	6.8	5.5	-3.3	1.1	1.8					
Bbrg Cmdty (TR)	-4.6	-7.9	10.8	7.2	-1.1					
NCREIF ODCE (Net)	-5.0	-12.7	4.0	3.3	6.3					

	Total Fund Performance											
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Total Fund	8.6	12.3	12.3	2.3	7.4	6.7	5.7	-15.6	13.0	10.8	20.7	-5.9
Policy Benchmark	10.8	16.0	16.0	3.1	8.1	6.9	5.9	-17.3	14.4	10.9	21.6	-6.8
Excess Return	-2.2	-3.7	-3.7	-0.8	-0.7	-0.2	-0.2	1.7	-1.4	-0.1	-0.9	0.9

Total Fund Risk Metrics										
	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Sharpe Ratio	0.6	0.1	0.5	0.5	0.5	-1.2	1.9	0.6	2.3	-0.9
Standard Deviation	11.5	11.9	11.3	12.7	10.2	14.3	6.7	17.4	7.3	8.3
Tracking Error	1.4	1.8	1.8	1.7	1.8	2.1	1.2	2.0	1.0	1.8

Asset Class Performance										
QTD CYTD 1 3 Since Year Years Incep										
Total Fund	8.6	12.3	12.3	2.3	9.3	06/01/1982				
Policy Benchmark	10.8	16.0	16.0	3.1	N/A					
Excess Return	-2.2	-3.7	-3.7	-0.8	N/A					
US Equity	11.6	20.1	20.1	7.0	10.6	06/01/1988				
US Equity Benchmark	11.8	26.5	26.5	8.6	10.8					
Excess Return	-0.2	-6.4	-6.4	-1.6	-0.2					
Developed Markets Equity	11.5	17.0	17.0	1.6	5.0	01/01/2008				
Developed Market Equity Benchmark	10.5	17.9	17.9	4.4	2.8					
Excess Return	1.0	-0.9	-0.9	-2.8	2.2					
Emerging Markets Equity	7.7	12.2	12.2	-7.1	1.0	03/01/2008				
Emerging Market Equity Benchmark	7.9	9.8	9.8	-5.1	1.6					
Excess Return	-0.2	2.4	2.4	-2.0	-0.6					
Real Estate Equity	4.4	-1.4	-1.4	4.7	6.5	09/01/2004				
Real Estate Equity Benchmark	16.2	13.7	13.7	7.2	8.0					
Excess Return	-11.8	-15.1	-15.1	-2.5	-1.5					
Infrastructure Equity	6.1	7.9	7.9	8.5	2.9	01/01/2020				
Infrastructure Equity Benchmark	10.7	5.8	5.8	5.2	2.1					
Excess Return	-4.6	2.1	2.1	3.3	0.8					
Global Fixed Income	6.3	5.1	5.1	-4.4	5.0	02/01/1991				
Global Fixed Income Benchmark	8.1	5.7	5.7	-5.5	4.7					
Excess Return	-1.8	-0.6	-0.6	1.1	0.3					
Asset Allocation	9.2	15.9	15.9	2.5	7.7	05/01/2020				
Multi-Asset Benchmark	9.9	15.4	15.4	2.0	8.1					
Excess Return	-0.7	0.5	0.5	0.5	-0.4					
Commodities & Other	11.3	9.4	9.4	2.3	N/A	07/01/2017				
Commodities & Other Benchmark	-4.6	-7.9	-7.9	10.8	4.7					
Excess Return	15.9	17.3	17.3	-8.5	N/A					

Performance Commentary

- The Total Fund returned 8.6% net of fees during the quarter, underperforming the Policy Benchmark which returned 10.8%.
- US Equity was the best performing asset class on an absolute basis, net of fees, returning 11.6%.
 Developed Markets Equity had strong relative returns, outpacing its benchmark in Q4 by 1.0%.

Asset Allocation vs. Target Allocation								
	Market Value (\$000)	Allocation (%)	Target (%)					
US Equity	1,116,278	34.6	34.0					
DM Equity	516,343	16.0	16.0					
EM Equity	213,979	6.6	6.0					
Real Estate Equity	281,925	8.7	10.0					
Infrastructure Equity	162,833	5.1	5.0					
Global Fixed Income	529,979	16.4	21.0					
Asset Allocation	91,479	2.8	5.0					
Commodities & Other	41,495	1.3	2.0					
Cash & Equivalents	268,303	8.3	1.0					
Total Fund	3,222,616	100.0	100.0					

Schedule of Investable Assets									
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return				
CYTD	2,941,251,159	-74,832,390	356,197,050	3,222,615,819	12.30				

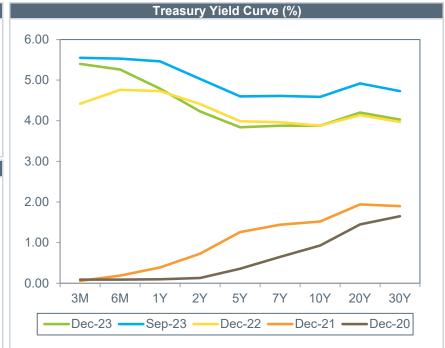


Fourth Quarter Economic Environment

In Q4, most risk assets rebounded from subdued conditions in the previous quarter to	
finish the year with significant positive returns—a stark turnaround compared to	
performance in 2022. For instance, the MSCI All Country World Index, a broad	
measure of the global stock market, returned 22.2% in 2023 compared to returns of	
-18.4% in 2022. Fixed income markets also ended the year firmly in positive territory.	
Despite the positive market performance, some recent indicators of economic activity	
have provided investors reason for caution. For example, commodity prices and	
energy stocks broadly declined amidst slowing inflation. The manufacturing	
Purchasing Managers' Index (PMI) remained in contractionary territory throughout the	
year. However, other economic indicators were more positive, with the services PMI	
remaining in expansionary territory and corporate earnings proving more resilient than	
expected. The labor market remained healthy as the unemployment rate finished the	
year at 3.7%. The Dec. Consumer Price Index (CPI) report showed a higher than	
expected uptick in monthly inflation and annual inflation of 3.4%. The annual level	
represents a significant drop compared to the CPI measure of 6.5% in Dec. 2022. The	
Federal Open Market Committee (FOMC) anticipates further progress in bringing	
inflation down to target levels, with the current forecast for their preferred inflation	
measure, the PCE Price Index, projecting a decline to 2.4% by the end of 2024.	
Formario Indicators Page 22 Can 22 Page 20 20 Vv	i

Key Economic Indicators						
120 7	70 7	160]				
100	60	140 -				
	50 -	120 -				
80 -	40 -	100 -				
60 -	30 -	80 -				
	20 -	60 -				
40 -	10	40 -				
20	0	20				
Since 1940						
	120 100 - 80 - 60 - 40 - 20 US Govt Debt (% of GDP)	120 70 60 50 40 40 20 VIX Index (% of GDP)				

Economic Indicators	Dec-23	Sep-23	Dec-22	Dec-20	20 Yr
Federal Funds Rate (%)	5.33 —	5.33	4.33	0.09	1.49
Breakeven Infl 5 Yr (%)	2.14	2.25	2.38	1.97	1.94
Breakeven Infl 10 Yr (%)	2.17	2.34	2.30	1.99	2.10
CPI YoY (Headline) (%)	3.4	3.7	6.5	1.4	2.6
Unemployment Rate (%)	3.7	3.8	3.5	6.7	5.9
Real GDP YoY (%)	3.1	2.9	0.9	-1.5	2.0
PMI - Manufacturing USD Total Wtd Idx	47.2 ▼ 118 77 ▼	49.0	48.4	60.5	53.4
WTI Crude Oil per Barrel (\$)	118.77 ▼ 71.7 ▼	122.77 90.8	121.40 80.3	111.33 48.5	103.87 70.2
Gold Spot per Oz (\$)	2,068	1,872	1,824	1,898	1,238
,	,				
Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	11.69	26.29	26.29	15.69	12.03
Russell 2000	14.03	16.93	16.93	9.97	7.16
MSCI EAFE (Net)	10.42	18.24	18.24	8.16	4.28
MSCI EAFE SC (Net)	11.14	13.16	13.16	6.58	4.80
MSCI Emg Mkts (Net)	7.86	9.83	9.83	3.68	2.66
Bloomberg US Agg Bond	6.82	5.53	5.53	1.10	1.81
ICE BofAML 3 Mo US T-Bill	1.37	5.02	5.02	1.88	1.25
NCREIF ODCE (Gross)	-4.83	-12.02	-12.02	4.25	7.29
FTSE NAREIT Eq REIT (TR)	16.22	13.73	13.73	7.39	7.65
HFRI FOF Comp	3.41	6.35	6.35	5.14	3.25
Bloomberg Cmdty (TR)	-4.63	-7.91	-7.91	7.23	-1.11





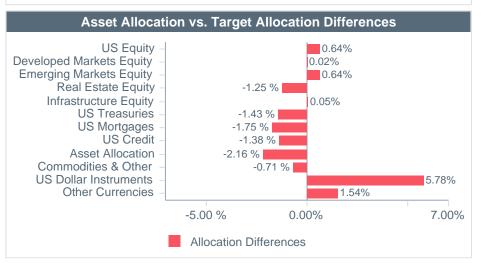
City of Austin Employees' Retirement System

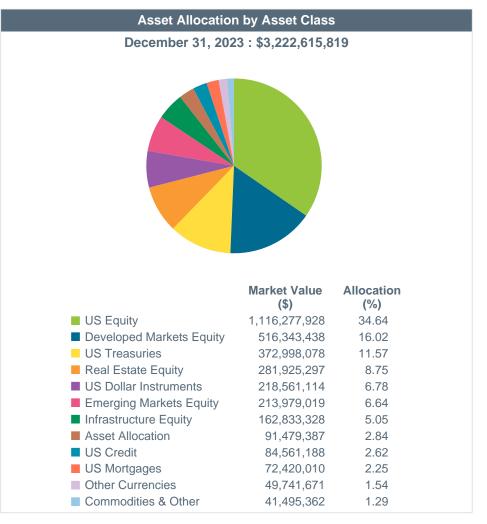
Composite: Total Fund

Asset Alloc. by Asset Class, Asset Alloc. vs. Target, and Schedule of Investable Assets

Schedule of Investable Assets					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
CYTD	2,941,251,159	-74,832,390	356,197,050	3,222,615,819	12.30
1 Year	2,941,251,159	-74,832,390	356,197,050	3,222,615,819	12.30
3 Years	3,183,142,083	-177,870,129	217,343,865	3,222,615,819	2.31

Asset Allocation vs. Target Allocation						
	Market Value (\$)	Allocation (%)	Neutral (%)	Min. (%)	Max. (%)	
Total Fund	3,222,615,819	100.00	100.00	-	-	
US Equity	1,116,277,928	34.64	34.00	29.00	39.00	
Developed Markets Equity	516,343,438	16.02	16.00	13.50	18.50	
Emerging Markets Equity	213,979,019	6.64	6.00	4.00	10.50	
Real Estate Equity	281,925,297	8.75	10.00	7.00	13.00	
Infrastructure Equity	162,833,328	5.05	5.00	1.00	7.00	
US Treasuries	372,998,078	11.57	13.00	11.00	21.00	
US Mortgages	72,420,010	2.25	4.00	3.00	6.00	
US Credit	84,561,188	2.62	4.00	2.50	7.00	
Asset Allocation	91,479,387	2.84	5.00	3.50	7.50	
Commodities & Other	41,495,362	1.29	2.00	1.00	5.00	
US Dollar Instruments	218,561,114	6.78	1.00	0.00	5.00	
Other Currencies	49,741,671	1.54	0.00	0.00	1.00	





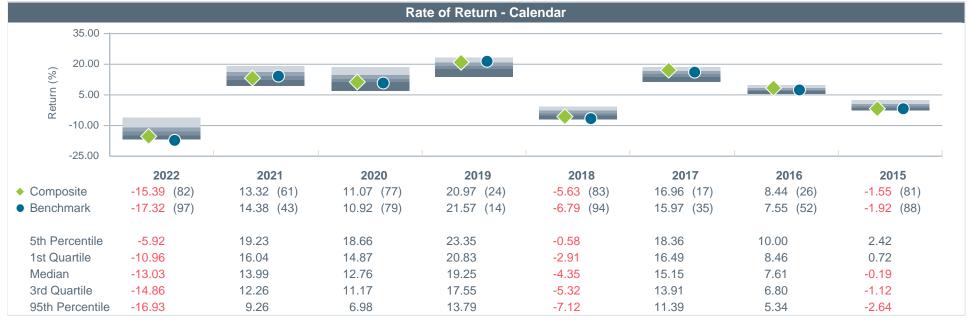
Performance shown is net of fees. Allocations shown may not sum up to 100% exactly due to rounding. Performance is annualized for periods greater than one year. Total Fund market value does not include \$359,404.03 in assets remaining at Northern Trust - representing accruals, cash, tax reclaims, and some assets that were restricted from being delivered due to a liquidation or pending corporate action.



Composite: Total Fund

Benchmark: Policy Benchmark
Peer Group: All Public DB Plans



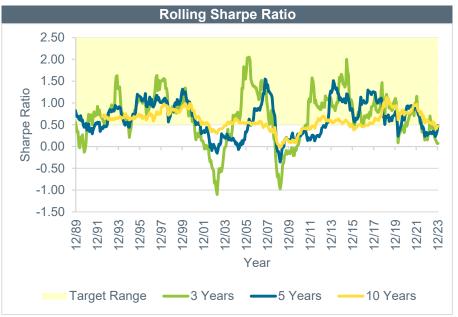


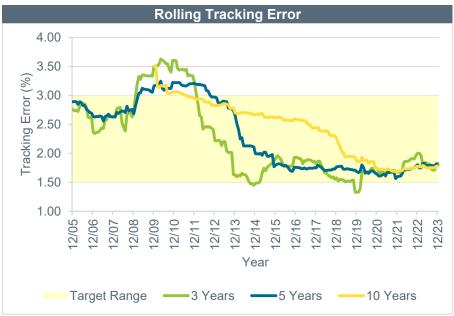
Performance shown is gross of fees and is annualized for periods greater than one year. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Composite: Total Fund Rolling Risk Statistics (Net of Fees)









Performance shown is net of fees. Tracking Error and Info Ratio shown are relative to the Passive Benchmark.



	Allocatio	n				Rate of	Return (%)			
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
Total Fund	3,222,615,819	100.00	8.62	12.30	12.30	2.31	7.44	5.71	9.34	06/01/1982
Policy Benchmark			10.82	16.02	16.02	3.14	8.15	5.87	N/A	
Excess Return			-2.20	-3.72	-3.72	-0.83	-0.71	-0.16	N/A	
Passive Benchmark			9.88	15.43	15.43	1.25	7.01	5.05	N/A	
Excess Return			-1.26	-3.13	-3.13	1.06	0.43	0.66	N/A	
Global Equity	1,846,600,385	57.30	11.13	18.27	18.27	3.47	10.23	7.26	8.90	06/01/1988
Global Equity Benchmark			11.14	21.58	21.58	5.46	11.49	7.77	N/A	
Excess Return			-0.01	-3.31	-3.31	-1.99	-1.26	-0.51	N/A	
US Equity	1,116,277,928	34.64	11.64	20.12	20.12	7.04	12.83	9.69	10.60	06/01/1988
US Equity Benchmark			11.81	26.49	26.49	8.64	15.19	11.49	10.76	
Excess Return			-0.17	-6.37	-6.37	-1.60	-2.36	-1.80	-0.16	
Developed Markets Equity	516,343,438	16.02	11.47	16.96	16.96	1.60	8.75	5.34	5.04	01/01/2008
Developed Market Equity Benchmark			10.51	17.94	17.94	4.42	8.45	4.32	2.78	
Excess Return			0.96	-0.98	-0.98	-2.82	0.30	1.02	2.26	
Emerging Markets Equity	213,979,019	6.64	7.70	12.18	12.18	-7.09	2.60	2.11	1.04	03/01/2008
Emerging Market Equity Benchmark			7.86	9.83	9.83	-5.08	3.68	2.66	1.61	
Excess Return			-0.16	2.35	2.35	-2.01	-1.08	-0.55	-0.57	
Real Assets	444,758,625	13.80	5.01	1.74	1.74	5.91	4.46	6.18	5.97	09/01/2004
Real Assets Benchmark			14.36	11.10	11.10	6.69	7.22	6.83	7.63	
Excess Return			-9.35	-9.36	-9.36	-0.78	-2.76	-0.65	-1.66	
Real Estate Equity	281,925,297	8.75	4.39	-1.39	-1.39	4.67	4.21	7.29	6.53	09/01/2004
Real Estate Equity Benchmark			16.22	13.73	13.73	7.21	7.39	7.44	8.01	
Excess Return			-11.83	-15.12	-15.12	-2.54	-3.18	-0.15	-1.48	
Infrastructure Equity	162,833,328	5.05	6.10	7.91	7.91	8.49	2.32	N/A	2.90	01/01/2020
Infrastructure Equity Benchmark			10.71	5.78	5.78	5.16	6.46	4.82	2.12	
Excess Return			-4.61	2.13	2.13	3.33	-4.14	N/A	0.78	

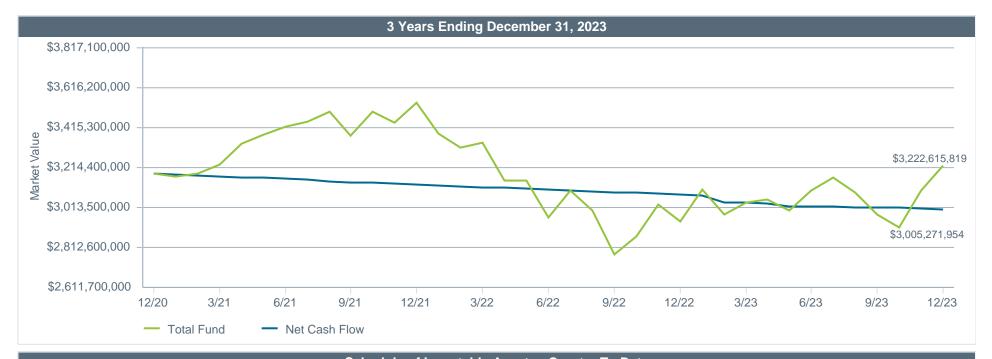


	Allocatio	n				Rate of	Return (%)			
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
Global Fixed Income	529,979,275	16.45	6.29	5.05	5.05	-4.40	0.53	1.55	4.96	02/01/1991
Global Fixed Income Benchmark			8.10	5.72	5.72	-5.51	-0.32	1.11	4.75	
Excess Return			-1.81	-0.67	-0.67	1.11	0.85	0.44	0.21	
US Treasuries	372,998,078	11.57	5.60	4.02	4.02	-5.22	N/A	N/A	0.36	05/01/2019
US Treasuries Benchmark			5.66	4.05	4.05	-3.82	0.53	1.27	0.18	
Excess Return			-0.06	-0.03	-0.03	-1.40	N/A	N/A	0.18	
US Mortgages	72,420,010	2.25	7.19	5.67	5.67	-2.75	N/A	N/A	-0.71	08/01/2019
US Mortgages Benchmark			7.48	5.05	5.05	-2.86	0.25	1.38	-0.73	
Excess Return			-0.29	0.62	0.62	0.11	N/A	N/A	0.02	
US Credit	84,561,188	2.62	8.65	9.26	9.26	-3.11	N/A	N/A	1.00	08/01/2019
US Credit Benchmark			8.15	8.18	8.18	-3.21	2.45	2.83	0.60	
Excess Return			0.50	1.08	1.08	0.10	N/A	N/A	0.40	
Multi-Asset	132,974,749	4.13	9.83	13.72	13.72	3.68	8.52	N/A	5.25	02/01/2014
Multi-Asset Benchmark			9.88	15.43	15.43	2.01	6.92	5.00	5.26	
Excess Return			-0.05	-1.71	-1.71	1.67	1.60	N/A	-0.01	
Asset Allocation	91,479,387	2.84	9.18	15.93	15.93	2.49	N/A	N/A	7.71	05/01/2020
Multi-Asset Benchmark			9.88	15.43	15.43	2.01	6.92	5.00	8.12	
Excess Return			-0.70	0.50	0.50	0.48	N/A	N/A	-0.41	
Commodities & Other	41,495,362	1.29	11.29	9.38	9.38	2.28	N/A	N/A	6.19	04/01/2021
Commodities & Other Benchmark			-4.63	-7.91	-7.91	10.76	7.23	-1.11	9.11	
Excess Return			15.92	17.29	17.29	-8.48	N/A	N/A	-2.92	
Cash & Equivalents	268,302,785	8.33	1.36	5.07	5.07	2.22	1.86	N/A	1.76	07/01/2017
Cash & Equivalents Benchmark			1.38	5.14	5.14	2.21	1.87	1.23	1.80	
Excess Return			-0.02	-0.07	-0.07	0.01	-0.01	N/A	-0.04	
US Dollar Instruments	218,561,114	6.78	1.34	5.01	5.01	2.21	1.85	1.20	1.44	09/01/2015
Bloomberg US T-Bills 1-3 Mo Index			1.38	5.14	5.14	2.21	1.87	1.23	1.47	
Excess Return			-0.04	-0.13	-0.13	0.00	-0.02	-0.03	-0.03	
Other Currencies	49,741,671	1.54	1.42	5.19	5.19	N/A	N/A	N/A	3.27	12/01/2021
Bloomberg US T-Bills 1-3 Mo Index			1.38	5.14	5.14	2.21	1.87	1.23	3.18	
Excess Return			0.04	0.05	0.05	N/A	N/A	N/A	0.09	

Performance shown is net of fees and is annualized for periods greater than one year. Indices show N/A for since inception returns when the fund contains more history than the corresponding benchmark.



Composite: Total Fund Total Fund Asset Growth Summary



		Schedule of Inv	estable Assets - Quar	ter To Date		
Periods Ending	Beginning Market Value (\$)	Contributions (\$)	Withdrawals (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)
QTD	2,976,657,953	100,111,208	-110,221,939	-10,110,731	256,068,597	3,222,615,819
		Schedule of Ir	າvestable Assets - Yea	ır To Date		
Parioda Endina	Beginning	Contributions (\$)	Withdrawala (\$)	Net	Coin/Loss (\$)	Ending

Periods Ending	Beginning Market Value (\$)	Contributions (\$)	Withdrawals (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)
CYTD	2,941,251,159	615,106,536	-689,938,926	-74,832,390	356,197,050	3,222,615,819

		Schedule o	of Investable Assets -	1 Year		
Periods Ending	Beginning Market Value (\$)	Contributions (\$)	Withdrawals (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)
1 Year	2,941,251,159	615,106,536	-689,938,926	-74,832,390	356,197,050	3,222,615,819

		Schedule o	f Investable Assets - 3	Years		
Periods Ending	Beginning Market Value (\$)	Contributions (\$)	Withdrawals (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)
3 Years	3,183,142,083	2,195,358,466	-2,373,228,595	-177,870,129	217,343,865	3,222,615,819

Cash flows shown are net of fees. Net cash flow shown in the line chart represents the beginning market value, adjusted for cash flows. Contributions and withdrawals detail shown includes intra-portfolio cash flows.



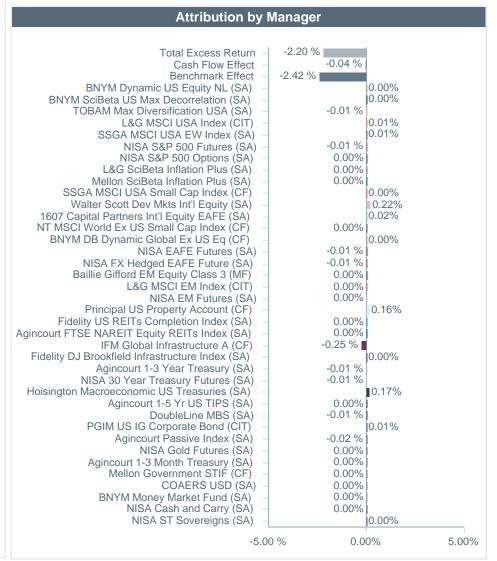


As of December 31, 2023

Composite: Total Fund
Benchmark: Policy Benchmark

Agincourt 1-3 Year Treasury (SA) SSGA MSCI USA EW Index (SA) Walter Scott Dev Mkts Int'l Equity (SA) L&G MSCI USA Index (CIT) Principal US Property Account (CF) 1607 Capital Partners Int'l Equity EAFE (SA)	259,073,596 216,242,463 207,899,036 206,821,410 176,598,608 164,470,378 158,175,553 145,360,135 129,536,186 106,545,999	8.04 6.71 6.45 6.42 5.48 5.10 4.91 4.51 4.02
SSGA MSCI USA EW Index (SA) Walter Scott Dev Mkts Int'l Equity (SA) L&G MSCI USA Index (CIT) Principal US Property Account (CF) 1607 Capital Partners Int'l Equity EAFE (SA)	207,899,036 206,821,410 176,598,608 164,470,378 158,175,553 145,360,135 129,536,186	6.45 6.42 5.48 5.10 4.91 4.51
Walter Scott Dev Mkts Int'l Equity (SA) L&G MSCI USA Index (CIT) Principal US Property Account (CF) 1607 Capital Partners Int'l Equity EAFE (SA)	206,821,410 176,598,608 164,470,378 158,175,553 145,360,135 129,536,186	6.42 5.48 5.10 4.91 4.51
L&G MSCI USA Index (CIT) Principal US Property Account (CF) 1607 Capital Partners Int'l Equity EAFE (SA)	176,598,608 164,470,378 158,175,553 145,360,135 129,536,186	5.48 5.10 4.91 4.51
Principal US Property Account (CF) 1607 Capital Partners Int'l Equity EAFE (SA)	164,470,378 158,175,553 145,360,135 129,536,186	5.10 4.91 4.51
1607 Capital Partners Int'l Equity EAFE (SA)	158,175,553 145,360,135 129,536,186	4.91 4.51
	145,360,135 129,536,186	4.51
	129,536,186	
BNYM SciBeta US Max Decorrelation (SA)		4.02
Baillie Gifford EM Equity Class 3 (MF)	106,545,999	
Fidelity US REITs Completion Index (SA)	.,,	3.31
Agincourt 1-3 Month Treasury (SA)	105,968,609	3.29
Mellon SciBeta Inflation Plus (SA)	104,501,115	3.24
TOBAM Max Diversification USA (SA)	99,289,261	3.08
IFM Global Infrastructure A (CF)	95,689,868	2.97
Agincourt Passive Index (SA)	91,479,387	2.84
PGIM US IG Corporate Bond (CIT)	84,561,188	2.62
L&G MSCI EM Index (CIT)	76,279,507	2.37
NISA S&P 500 Futures (SA)	74,623,457	2.32
DoubleLine MBS (SA)	72,420,010	2.25
NISA Cash and Carry (SA)	67,769,065	2.10
Fidelity DJ Brookfield Infrastructure Index (SA)	67,143,460	2.08
Agincourt 1-5 Yr US TIPS (SA)	65,139,129	2.02
NISA 30 Year Treasury Futures (SA)	60,783,503	1.89
NISA ST Sovereigns (SA)	49,741,671	1.54
SSGA MSCI USA Small Cap Index (CF)	48,867,640	1.52
NT MSCI World Ex US Small Cap Index (CF)	45,812,879	1.42
Mellon Government STIF (CF)	41,677,991	1.29
NISA Gold Futures (SA)	41,495,362	1.29
NISA FX Hedged EAFE Future (SA)	40,044,078	1.24
NISA EAFE Futures (SA)	36,115,941	1.12
Hoisington Macroeconomic US Treasuries (SA)	30,832,983	0.96
BNYM DB Dynamic Global Ex US Eq (CF)	29,373,577	0.91
Agincourt FTSE NAREIT Equity REITs Index (SA)	10,908,919	0.34
NISA EM Futures (SA)	8,163,326	0.25
BNYM Money Market Fund (SA)	2,125,913	0.07
COAERS USD (SA)	1,019,537	0.03
NISA S&P 500 Options (SA)	65,081	0.00

	Rate of Return	
	QTD	
Composite	8.62	
Benchmark	10.82	
Excess Return	-2.20	



Performance shown is net of fees. Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. See glossary for calculation definitions.



	Allocatio	n				Rate of	Return (%)		
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
US Equity										
BNYM Dynamic US Equity NL (SA)	259,073,596	8.04	11.74	24.08	24.08	8.19	15.76	N/A	12.67	05/01/2018
S&P 500 Index (Cap Wtd)			11.69	26.29	26.29	10.00	15.69	12.03	12.90	
Excess Return			0.05	-2.21	-2.21	-1.81	0.07	N/A	-0.23	
IM U.S. Large Cap Core Equity (SA+CF) Median			11.48	23.76	23.76	9.06	14.36	11.12	11.43	
Rank			41	49	49	69	26	N/A	30	
BNYM SciBeta US Max Decorrelation (SA)	145,360,135	4.51	11.16	15.68	15.68	7.53	N/A	N/A	12.16	10/01/2020
SciBeta Max Decorrelation Index			11.10	15.72	15.72	7.66	13.50	10.65	12.30	
Excess Return			0.06	-0.04	-0.04	-0.13	N/A	N/A	-0.14	
IM U.S. Large Cap Core Equity (SA+CF) Median			11.48	23.76	23.76	9.06	14.36	11.12	12.37	
Rank			56	78	78	77	N/A	N/A	53	
TOBAM Max Diversification USA (SA)	99,289,261	3.08	9.37	7.05	7.05	-0.24	N/A	N/A	3.76	10/01/2020
TOBAM Max Diversification Index			9.66	7.31	7.31	-0.03	9.16	8.87	3.98	
Excess Return			-0.29	-0.26	-0.26	-0.21	N/A	N/A	-0.22	
IM U.S. Large Cap Core Equity (SA+CF) Median			11.48	23.76	23.76	9.06	14.36	11.12	12.37	
Rank			80	98	98	99	N/A	N/A	99	
L&G MSCI USA Index (CIT)	176,598,608	5.48	11.97	26.95	26.95	9.23	N/A	N/A	12.70	10/01/2020
MSCI USA Index (Net)			11.81	26.49	26.49	8.64	15.16	11.36	12.09	
Excess Return			0.16	0.46	0.46	0.59	N/A	N/A	0.61	
IM U.S. Large Cap Core Equity (SA+CF) Median			11.48	23.76	23.76	9.06	14.36	11.12	12.37	
Rank			34	24	24	48	N/A	N/A	44	
SSGA MSCI USA EW Index (SA)	207,899,036	6.45	12.70	17.60	17.60	7.04	N/A	N/A	12.71	11/01/2020
MSCI USA Equal Weighted Index (Net)			12.53	16.99	16.99	6.53	12.38	9.21	12.17	
Excess Return			0.17	0.61	0.61	0.51	N/A	N/A	0.54	
IM U.S. Large Cap Core Equity (SA+CF) Median			11.48	23.76	23.76	9.06	14.36	11.12	13.35	
Rank			16	75	75	85	N/A	N/A	65	
SSGA MSCI USA Small Cap Index (CF)	48,867,640	1.52	13.86	18.39	18.39	5.43	N/A	N/A	13.04	11/01/2020
MSCI US Sm Cap Index (USD) (Net)			13.72	17.86	17.86	4.99	11.66	8.31	12.55	
Excess Return			0.14	0.53	0.53	0.44	N/A	N/A	0.49	
IM U.S. Small Cap Equity (SA+CF) Median			12.47	16.70	16.70	6.03	11.55	8.16	13.71	
Rank			26	37	37	54	N/A	N/A	53	





	Allocatio	n				Rate of	Return (%)		
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
NISA S&P 500 Futures (SA)	74,623,457	2.32	11.11	24.72	24.72	9.47	N/A	N/A	11.75	02/01/2020
S&P 500 Index (Cap Wtd)			11.69	26.29	26.29	10.00	15.69	12.03	12.33	
Excess Return			-0.58	-1.57	-1.57	-0.53	N/A	N/A	-0.58	
IM U.S. Large Cap Core Equity (SA+CF) Median			11.48	23.76	23.76	9.06	14.36	11.12	11.36	
Rank			57	43	43	44	N/A	N/A	40	
Mellon SciBeta Inflation Plus (SA)	104,501,115	3.24	11.28	N/A	N/A	N/A	N/A	N/A	8.94	07/01/2023
SciBeta Inflation Plus Index			11.33	21.35	21.35	N/A	N/A	N/A	8.99	
Excess Return			-0.05	N/A	N/A	N/A	N/A	N/A	-0.05	
IM U.S. Large Cap Core Equity (SA+CF) Median			11.48	23.76	23.76	9.06	14.36	11.12	8.00	
Rank			56	N/A	N/A	N/A	N/A	N/A	27	
Developed Markets Equity										
Walter Scott Dev Mkts Int'l Equity (SA)	206,821,410	6.42	14.15	19.72	19.72	1.37	10.10	7.07	8.31	10/01/1992
MSCI EAFE Index (USD) (Net)			10.42	18.24	18.24	4.02	8.16	4.28	5.82	
Excess Return			3.73	1.48	1.48	-2.65	1.94	2.79	2.49	
IM All EAFE (SA+CF) Median			9.98	17.79	17.79	3.31	8.27	4.55	7.46	
Rank			5	22	22	79	19	3	26	
1607 Capital Partners Int'l Equity EAFE (SA)	158,175,553	4.91	10.54	14.94	14.94	1.05	8.25	5.04	7.18	08/01/2010
90% MSCI EAFE/10% MSCI EM Index			10.17	17.40	17.40	3.12	7.76	4.16	5.70	
Excess Return			0.37	-2.46	-2.46	-2.07	0.49	0.88	1.48	
IM International Core Equity (SA+CF) Median			10.33	16.74	16.74	2.26	7.92	4.53	6.53	
Rank			44	67	67	64	40	30	30	
BNYM DB Dynamic Global Ex US Eq (CF)	29,373,577	0.91	10.24	14.38	14.38	0.03	N/A	N/A	4.99	09/01/2019
MSCI ACW Ex US Index (USD) (Net)			9.75	15.62	15.62	1.55	7.08	3.83	6.14	
Excess Return			0.49	-1.24	-1.24	-1.52	N/A	N/A	-1.15	
IM ACWI Ex US Core (SA+CF) Median			9.73	17.20	17.20	1.04	7.65	3.98	6.45	
Rank			37	76	76	74	N/A	N/A	85	
NISA EAFE Futures (SA)	36,115,941	1.12	9.98	17.33	17.33	3.83	N/A	N/A	5.31	02/01/2020
MSCI EAFE Index (USD) (Net)			10.42	18.24	18.24	4.02	8.16	4.28	5.63	
Excess Return			-0.44	-0.91	-0.91	-0.19	N/A	N/A	-0.32	
IM All EAFE (SA+CF) Median			9.98	17.79	17.79	3.31	8.27	4.55	5.50	
Rank			51	58	58	40	N/A	N/A	54	
							,, .	,, .		



	Allocatio	n				Rate of	Return (%)			
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
NT MSCI World Ex US Small Cap Index (CF)	45,812,879	1.42	10.57	12.56	12.56	0.07	7.41	N/A	3.15	08/01/2018
MSCI Wrld Ex US Sm Cap Index (USD) (Net)			10.60	12.62	12.62	-0.20	7.05	4.63	2.81	
Excess Return			-0.03	-0.06	-0.06	0.27	0.36	N/A	0.34	
IM International Small Cap Equity (SA+CF) Median			10.52	14.19	14.19	0.11	7.15	4.79	3.06	
Rank			49	67	67	51	48	N/A	48	
NISA FX Hedged EAFE Future (SA)	40,044,078	1.24	5.34	17.94	17.94	N/A	N/A	N/A	5.43	01/01/2022
MSCI EAFE Index (USD) (Net) (Hedged)			5.99	19.95	19.95	10.97	11.79	8.14	6.97	
Excess Return			-0.65	-2.01	-2.01	N/A	N/A	N/A	-1.54	
IM All EAFE (SA+CF) Median			9.98	17.79	17.79	3.31	8.27	4.55	-0.56	
Rank			100	48	48	N/A	N/A	N/A	7	
Emerging Markets Equity										
Baillie Gifford EM Equity Class 3 (MF)	129,536,186	4.02	7.77	14.40	14.40	-8.50	4.93	N/A	6.09	10/01/2016
MSCI Emerging Markets Index (USD) (Net)			7.86	9.83	9.83	-5.08	3.68	2.66	4.19	
Excess Return			-0.09	4.57	4.57	-3.42	1.25	N/A	1.90	
IM Emerging Markets Equity (MF) Median			7.73	10.91	10.91	-5.62	4.02	2.41	3.89	
Rank			49	27	27	73	32	N/A	17	
L&G MSCI EM Index (CIT)	76,279,507	2.37	7.69	8.96	8.96	-5.42	N/A	N/A	0.39	10/01/2020
MSCI Emerging Markets Index (USD) (Net)			7.86	9.83	9.83	-5.08	3.68	2.66	0.73	
Excess Return			-0.17	-0.87	-0.87	-0.34	N/A	N/A	-0.34	
IM Emerging Markets Equity (SA+CF) Median			8.11	11.82	11.82	-4.08	4.85	3.06	1.50	
Rank			60	71	71	57	N/A	N/A	61	
NISA EM Futures (SA)	8,163,326	0.25	6.74	8.85	8.85	-5.58	N/A	N/A	1.25	02/01/2020
MSCI Emerging Markets Index (USD) (Net)			7.86	9.83	9.83	-5.08	3.68	2.66	1.53	
Excess Return			-1.12	-0.98	-0.98	-0.50	N/A	N/A	-0.28	
IM Emerging Markets Equity (SA+CF) Median			8.11	11.82	11.82	-4.08	4.85	3.06	2.27	
Rank			75	72	72	60	N/A	N/A	64	



	Allocatio	n				Rate of	Return (%)		
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
Real Estate Equity										
Principal US Property Account (CF)	164,470,378	5.10	-2.28	-10.73	-10.73	4.54	4.09	7.23	6.50	09/01/2004
NCREIF ODCE Index (AWA) (Net)			-5.00	-12.73	-12.73	4.01	3.34	6.33	6.19	
Excess Return			2.72	2.00	2.00	0.53	0.75	0.90	0.31	
Fidelity US REITs Completion Index (SA)	106,545,999	3.31	15.35	14.29	14.29	6.61	N/A	N/A	4.17	01/01/2020
Fidelity REITs Completion Index			15.40	14.40	14.40	6.69	N/A	N/A	4.24	
Excess Return			-0.05	-0.11	-0.11	-0.08	N/A	N/A	-0.07	
Agincourt FTSE NAREIT Equity REITs Index (SA)	10,908,919	0.34	16.16	13.35	13.35	N/A	N/A	N/A	2.02	05/01/2021
FTSE NAREIT Eq REITs Index (TR)			16.22	13.73	13.73	7.21	7.39	7.65	1.75	
Excess Return			-0.06	-0.38	-0.38	N/A	N/A	N/A	0.27	
Infrastructure Equity										
IFM Global Infrastructure A (CF)	95,689,868	2.97	2.67	8.38	8.38	11.26	N/A	N/A	10.86	04/01/2020
S&P Gbl Infrastructure Index (Net)			10.71	5.78	5.78	5.16	6.46	4.82	12.17	
Excess Return			-8.04	2.60	2.60	6.10	N/A	N/A	-1.31	
Fidelity DJ Brookfield Infrastructure Index (SA)	67,143,460	2.08	11.41	7.25	7.25	7.35	N/A	N/A	3.09	01/01/2020
DJ Brookfield Gbl Infra Comp Index			11.19	6.23	6.23	6.69	6.82	4.70	2.39	
Excess Return			0.22	1.02	1.02	0.66	N/A	N/A	0.70	
US Treasuries										
Agincourt 1-3 Year Treasury (SA)	216,242,463	6.71	2.46	4.20	4.20	-0.15	N/A	N/A	1.08	05/01/2019
Bloomberg US Trsy 1-3 Yr Index			2.56	4.29	4.29	-0.10	1.28	1.04	1.11	
Excess Return			-0.10	-0.09	-0.09	-0.05	N/A	N/A	-0.03	
IM U.S. Short Term Treasury/Govt Bonds (MF) Median			2.55	4.13	4.13	-0.66	0.88	0.79	0.70	
Rank			62	44	44	31	N/A	N/A	19	
Agincourt 1-5 Yr US TIPS (SA)	65,139,129	2.02	2.68	4.46	4.46	1.99	N/A	N/A	2.94	01/01/2020
Bloomberg US TIPS 1-5 Yr Index			2.88	4.45	4.45	1.92	3.29	1.94	2.85	
Excess Return			-0.20	0.01	0.01	0.07	N/A	N/A	0.09	
IM U.S. TIPS (MF) Median			4.21	3.70	3.70	-1.12	2.93	1.91	1.80	
Rank			86	25	25	16	N/A	N/A	13	



	Allocation			Rate of Return (%)						
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
NISA 30 Year Treasury Futures (SA)	60,783,503	1.89	12.14	1.45	1.45	-12.29	N/A	N/A	-11.37	05/01/2020
Bloomberg US Trsy Bellwethers 30 Yr Index			12.85	1.93	1.93	-13.44	-2.16	1.86	-13.00	
Excess Return			-0.71	-0.48	-0.48	1.15	N/A	N/A	1.63	
IM U.S. Long Term Treasury/Govt Bond (MF) Median			6.03	3.58	3.58	-3.94	0.14	1.16	-3.30	
Rank			22	97	97	94	N/A	N/A	95	
Hoisington Macroeconomic US Treasuries (SA)	30,832,983	0.96	15.96	4.72	4.72	-12.63	N/A	N/A	-1.81	05/01/2019
Bloomberg US Trsy Index			5.66	4.05	4.05	-3.82	0.53	1.27	0.18	
Excess Return			10.30	0.67	0.67	-8.81	N/A	N/A	-1.99	
IM U.S. Long Term Treasury/Govt Bond (MF) Median			6.03	3.58	3.58	-3.94	0.14	1.16	-0.27	
Rank			6	10	10	96	N/A	N/A	78	
US Mortgages										
DoubleLine MBS (SA)	72,420,010	2.25	7.19	5.67	5.67	-2.75	N/A	N/A	-0.71	08/01/2019
Bloomberg US MBS Index (Unhgd)			7.48	5.05	5.05	-2.86	0.25	1.38	-0.73	
Excess Return			-0.29	0.62	0.62	0.11	N/A	N/A	0.02	
IM U.S. Mortgage Backed Bonds (SA+CF) Median			6.77	5.47	5.47	-2.54	0.59	1.80	-0.37	
Rank			39	41	41	66	N/A	N/A	82	
US Credit										
PGIM US IG Corporate Bond (CIT)	84,561,188	2.62	8.65	9.26	9.26	-3.11	N/A	N/A	1.21	08/01/2019
Bloomberg US Crdt Index			8.15	8.18	8.18	-3.21	2.45	2.83	0.60	
Excess Return			0.50	1.08	1.08	0.10	N/A	N/A	0.61	
IM U.S. Corporate Bonds (SA+CF) Median			8.27	8.69	8.69	-3.31	2.96	3.30	0.79	
Rank			32	35	35	41	N/A	N/A	28	
Asset Allocation										
Agincourt Passive Index (SA)	91,479,387	2.84	9.18	15.93	15.93	2.50	N/A	N/A	2.50	01/01/2021
Passive Benchmark			9.88	15.43	15.43	1.25	7.01	5.05	1.25	
Excess Return			-0.70	0.50	0.50	1.25	N/A	N/A	1.25	
Commodities & Other										
NISA Gold Futures (SA)	41,495,362	1.29	11.29	9.38	9.38	2.28	N/A	N/A	4.57	05/01/2020
Bloomberg Gold Sub Index (TR)			11.38	12.82	12.82	2.35	8.88	4.70	4.35	
Excess Return			-0.09	-3.44	-3.44	-0.07	N/A	N/A	0.22	



	Allocation			Rate of Return (%)						
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
US Dollar Instruments										
Agincourt 1-3 Month Treasury (SA)	105,968,609	3.29	1.35	5.04	5.04	2.13	N/A	N/A	1.78	05/01/2019
Bloomberg US T-Bills 1-3 Mo Index			1.38	5.14	5.14	2.21	1.87	1.23	1.84	
Excess Return			-0.03	-0.10	-0.10	-0.08	N/A	N/A	-0.06	
Mellon Government STIF (CF)	41,677,991	1.29	1.32	5.00	5.00	N/A	N/A	N/A	2.19	02/01/2021
Bloomberg US T-Bills 1-3 Mo Index			1.38	5.14	5.14	2.21	1.87	1.23	2.27	
Excess Return			-0.06	-0.14	-0.14	N/A	N/A	N/A	-0.08	
COAERS USD (SA)	1,019,537	0.03	0.37	1.44	1.44	0.65	N/A	N/A	0.53	05/01/2020
Bloomberg US T-Bills 1-3 Mo Index			1.38	5.14	5.14	2.21	1.87	1.23	1.83	
Excess Return			-1.01	-3.70	-3.70	-1.56	N/A	N/A	-1.30	
BNYM Money Market Fund (SA)	2,125,913	0.07	1.28	4.82	4.82	N/A	N/A	N/A	3.10	01/01/2022
Bloomberg US T-Bills 1-3 Mo Index			1.38	5.14	5.14	2.21	1.87	1.23	3.31	
Excess Return			-0.10	-0.32	-0.32	N/A	N/A	N/A	-0.21	
NISA Cash and Carry (SA)	67,769,065	2.10	1.34	5.18	5.18	N/A	N/A	N/A	5.72	09/01/2022
Bloomberg US T-Bills 1-3 Mo Index			1.38	5.14	5.14	2.21	1.87	1.23	4.68	
Excess Return			-0.04	0.04	0.04	N/A	N/A	N/A	1.04	
Other Currencies										
NISA ST Sovereigns (SA)	49,741,671	1.54	1.42	5.19	5.19	N/A	N/A	N/A	3.41	01/01/2022
Bloomberg US T-Bills 1-3 Mo Index			1.38	5.14	5.14	2.21	1.87	1.23	3.31	
Excess Return			0.04	0.05	0.05	N/A	N/A	N/A	0.10	





Investment Performance Staff Memo

In reviewing RVK performance reporting, Staff note the below items that have or have not worked well for the quarter:

Q4 2023

Decisions that worked well:

- Every asset and sub-asset class increased during the quarter as the Fund returned 8.62% net of fees. Global equities increased +11.13%, Real Assets by +5.01%, Global Fixed Income by +6.29%, Multi-Asset by +9.83% and Cash & Equivalents by +1.36%. While encouraging in absolute returns, Staff notes the continued trend of all asset classes moving in the same direction at the same time is troubling for Fund diversification.
- Manager selection added to total Fund relative performance by 22 bps, primarily driven by outperformance through active management in Developed Markets, Real Estate, and Fixed Income.

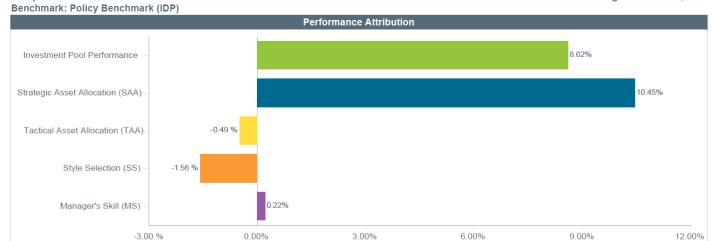
Decisions that didn't work well:

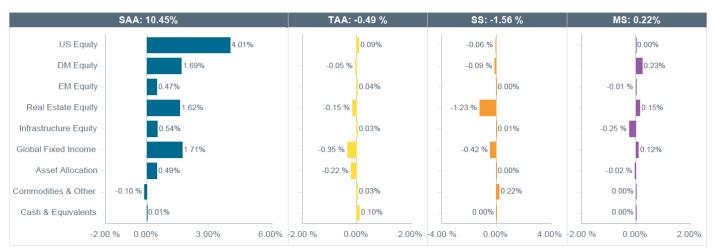
- The decision to overweight Cash & Equivalents (8.3% allocation versus 1.0% neutral) over Fixed Income (16.4% allocation versus 21% neutral) and Multi-Asset was detractive to the total Fund. Cash & Equivalents delivered modest positive returns during the quarter, but Fixed Income and Multi-Asset both had very strong returns. This decision detracted -0.47% to total Fund underperformance during the quarter.
- Style selection (the mix of underlying mandate types) in Real Assets reduced performance for the total Fund, primarily through the use of private markets. The ODCE private real estate index returned -5.01% during the quarter, while the public market REIT index rallied +16.22%. In Infrastructure, COAERS' private fund, IFM GIF, returned +2.67% while the public markets benchmark rallied by +10.71%.

Appendix: RVK Attribution Exhibit

Composite: Total Fund

Quarter To Date Ending December 31, 2023





Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.





Global Equity Strategy



Memorandum

То	City of Austin Employees' Retirement System (COAERS)
From	RVK, Inc.
Subject	Executive Summary and Recommendations – Global Equity Review
Date	February 22, 2024

Executive Summary

- A comprehensive review of the COAERS Global Equity portfolio and underlying components was completed by RVK, with additional analysis from Staff.
- The portfolio is well diversified and provides broad market exposure to US, developed non-US, and emerging markets equities through a combination of passive, quasi-passive, and active strategies.
- Performance has been mixed, with the US Equity portfolio lagging its policy benchmark due to structural biases within the portfolio. These biases are a result of the use of more diversified strategies than the traditional passive implementation.
 - Recent market dynamics have highlighted the differences between COAERS' portfolio and the policy benchmark due to the US equity market's concentration in and outperformance by a handful of large cap stocks.
- The non-US portion of the portfolio has performed reasonably well and while there may be opportunities for simplification and streamlining, RVK is comfortable with the current strategies and overall structure.

Recommendations

- Reduce exposure to "diversifying" strategies within the US Equity portfolio, reducing the structural mismatch with the benchmark.
- Continue the use of the MSCI ACW IMI as the Global Equity portfolio's policy benchmark.
- Clearly delineate which portfolio decisions belong to the Investment Committee and Board vs. those that can be delegated to Staff with Consultant support and oversight.



Background

- COAERS currently has a 53% target to Global Equity, which consists of US, non-US developed, and emerging markets.
 - Historically, COAERS has had a higher allocation (60%) to Global Equity, but has gradually reduced that allocation recently and introduced more diversifying asset classes such as Private Credit.
 - As such, the role of the Global Equity portfolio while still focused on growth and capital
 appreciation should be reviewed in the context of the overall asset allocation structure for the
 total portfolio.

SAA Targets	2015	2018	2019	2021	2022	Approved SAA
Global Equity	60	55	55	56	56	53
Real Assets	10.5	15	15	15	15	15
Fixed Income	24.5	20	20	21	21	21
Private Credit						10
Multi-Asset	5	10	9	7	7	
Cash	0	0	1	1	1	1



Performance

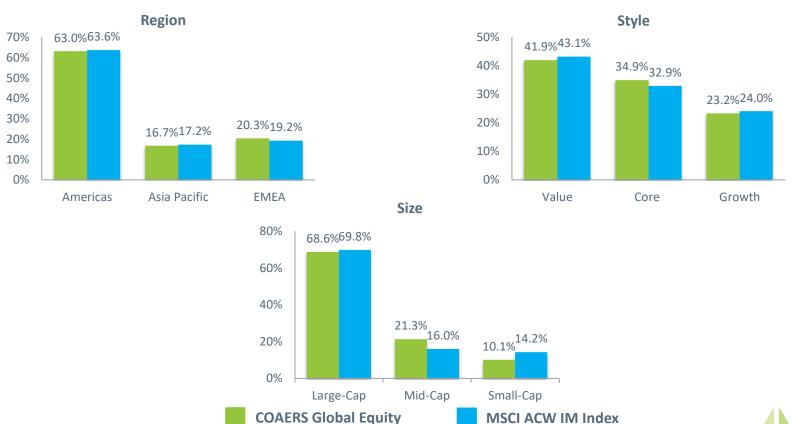
- COAERS Global Equity portfolio has experienced mixed results over the last 10 years, with the developed non-US component of the portfolio outperforming its benchmark, but US and emerging markets lagging.
 - Much of the underperformance for the Global Equity portfolio over the longer time periods (5-10 years) can be attributed to the underperformance of the US Equity portfolio.
 - Global Equity benchmark: MSCI ACW IMI
 - US Equity benchmark: MSCI USA
 - Non-US Developed Equity benchmark: MSCI World ex. US
 - Emerging Markets Equity benchmark: MSCI Emerging Markets

As of December 31, 2023	1 Year	3 Years	5 Years	10 Years
Global Equity	18.27	3.47	10.23	7.26
Out/Underperformance	-3.31	-1.99	-1.26	-0.51
US Equity	20.12	7.04	12.83	9.69
Out/Underperformance	-6.37	-1.60	-2.46	-1.80
Non-US Developed Equity	16.96	1.60	8.75	5.34
Out/Underperformance	-0.98	-2.82	0.30	1.02
Emerging Markets Equity	12.18	-7.09	2.60	2.11
Out/Underperformance	2.35	-2.01	-1.08	-0.55



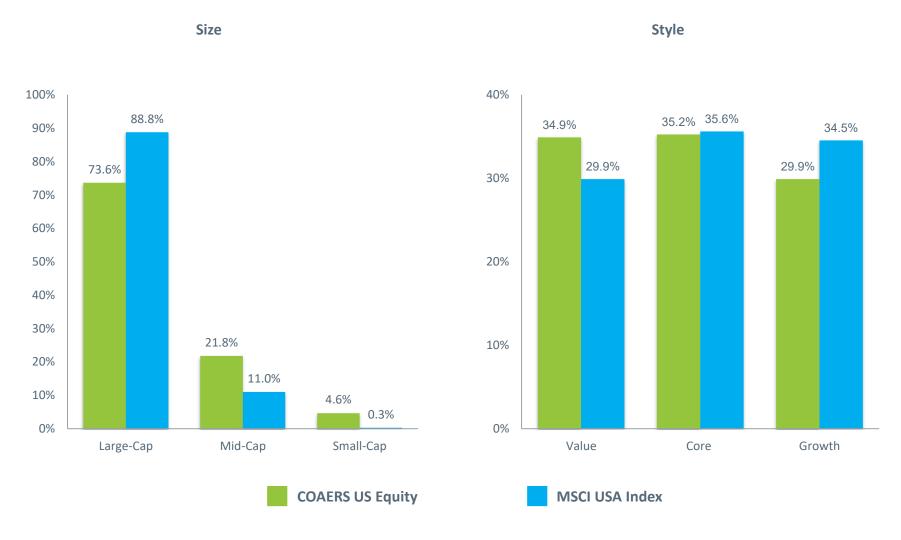
Portfolio Positioning Relative to Benchmark

- COAERS Global Equity portfolio is closely aligned from a regional and style perspective, but is notably underweight to large cap securities relative to the benchmark.
 - The underweight is a combination of active choices by external investment managers in the non-US
 portfolio and structural deviations away from the traditional cap weighted strategies in the US
 portfolio.





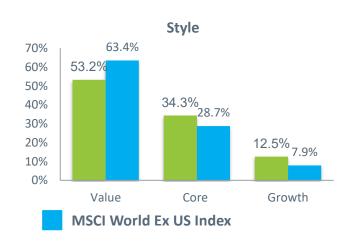
US Portfolio





Developed Markets





Emerging Markets







US Equity Portfolio Observations

- The current portfolio has a structural underweight to large cap, growth, and more specifically the information technology sector.
 - These securities have driven much of the recent US equity market performance, particularly in 2023 when the "Magnificent 7" produced returns of ~85% vs. the rest of market at ~10%.

Security	COAERS	MSCI USA Index	Difference
Apple	3.84	7.15	-3.31
Microsoft	3.49	6.31	-2.82
Amazon	1.79	3.35	-1.56
NVIDIA	1.66	2.91	-1.25
Tesla	1.35	1.69	-0.34
Meta	1.34	1.87	-0.53
Alphabet (A)	1.22	1.97	-0.75
United Health	0.93	1.16	-0.23
JP Morgan	0.88	1.17	-0.29
Alphabet (B)	0.86	1.75	-0.89
Top 10 Total	17.36	29.33	-11.97

 The past decision to move away from the traditional cap-weighted benchmark and implement a portion of the portfolio in diversifying – albeit passive – strategies has led to a material underweight to the largest securities in the US equity market.

US Equity Portfolio Observations cont.

- As the rest of the total COAERS portfolio has become more diversified in its strategic asset allocation, the active and quasi-passive strategies in the US Equity portfolio deserve additional review and scrutiny.
- The goal of certain quasi-passive strategies is to diversify away from the typical cap-weighted approach found in traditional passive benchmarks. Should COAERS wish to retain some level of this style of diversification, there are likely more simplified approaches with fewer strategies that would result in similar exposures.

Strategy Name	Strategy Type	COAERS MV (12/31/23)
BNYM Dynamic US Equity NL (SA)	Active	\$259M
SSGA MSCI USA EW Index (SA)	Passive	\$208M
L&G MSCI USA Index (CIT)	Passive	\$177M
BNYM SciBeta US Max Decorrelation (SA)	Quasi-Passive	\$145M
Mellon SciBeta Inflation Plus (SA)	Quasi-Passive	\$105M
TOBAM Max Diversification USA (SA)	Quasi-Passive	\$99M
NISA S&P 500 Futures (SA)	Quasi-Passive	\$74M
SSGA MSCI USA Small Cap Index (CF)	Passive	\$49M
NISA S&P 500 Options (SA)	Quasi-Passive	



Non-US Equity Portfolio Observations

- The non-US equity portion consists of the Developed and Emerging Markets portfolios, each weighted appropriately relative to the Global Equity benchmark.
- Performance has been generally good for the Developed Markets portfolio, which utilizes a combination of traditional passive and actively managed strategies. COAERS has benefitted from longstanding active management mandates, while controlling fees with low-cost index strategies.
- The Emerging Markets portfolio has gone through periods of both out- and underperformance, which is almost entirely driven by a single active manager. While RVK has no concerns about this manager, it may be worthwhile to consider complementing the exposure with a more value-oriented manager in the future.

Strategy Name	Strategy Type	COAERS MV (12/31/23)
Walter Scott Dev Mkts Int'l Equity (SA)	Active	\$206M
1607 Capital Partners Int'l Equity EAFE (SA)	Active	\$158M
Baillie Gifford EM Equity Class 3 (MF)	Active	\$130M
L&G MSCI EM Index (CIT)	Passive	\$76M
NT MSCI World Ex US Small Cap Index (CF)	Passive	\$46M
NISA FX Hedged EAFE Futures (SA)	Quasi-Passive	\$40M
NISA EAFE Futures (SA)	Quasi-Passive	\$36M
BNYM DB Dynamic Global Ex US Eq (CF)	Active	\$29M
NISA EM Futures (SA)	Quasi-Passive	\$8M



Global Equity Portfolio - Potential Path(s) Forward

- The current high-level structure remains reasonable as it relates to the split between US and non-US allocations. However, the current mismatch between the portfolio's implementation specifically in the US Equity portfolio relative to the policy benchmark has created the need for further review.
- There are multiple paths forward for the Investment Committee and Board to consider, including:
 - 1. Moving the US Equity portfolio to a truly passive approach, simply matching the policy benchmark.
 - 2. Reducing the mismatch within the US Equity portfolio by reallocating within existing strategies.
 - 3. Retaining the current strategies and allocations, which would signal that the structural differences between the portfolio and benchmark are strategic in nature.
 - This option would likely require additional analysis on the appropriate benchmark.

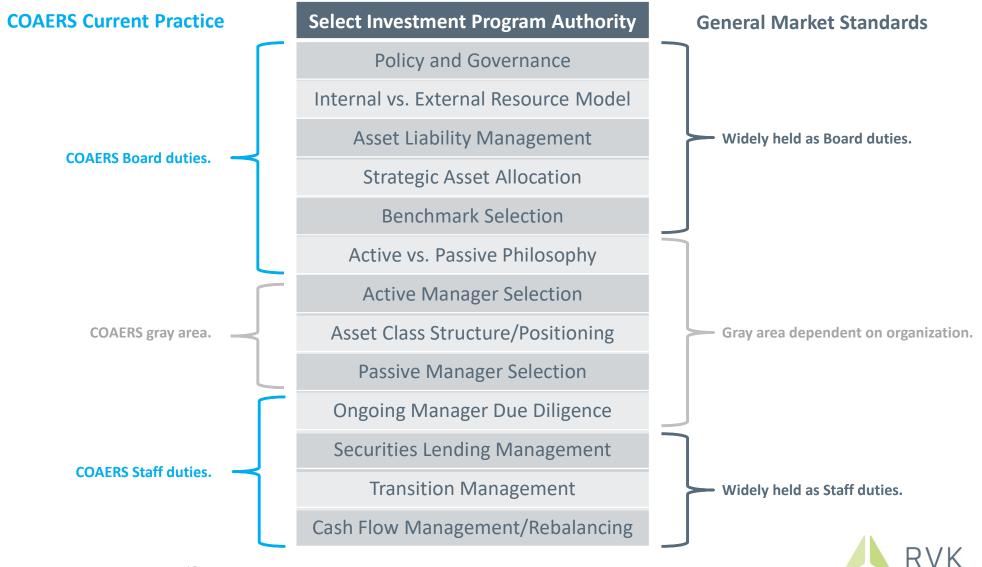


Global Equity Portfolio Recommendations

- While all three potential changes to the US Equity portfolio previously outlined are viable and reasonable, RVK recommends option #2 in the near-term. COAERS' total portfolio is more diversified from an asset allocation perspective, which reduces the need for additional diversification within the US Equity portfolio.
- From a benchmarking perspective, RVK recommends a simple approach by utilizing the MSCI ACW IMI for the Global Equity portfolio. While a blended benchmark inclusive of diversifying strategies' benchmarks may have some value, RVK believes the complexity added with this approach outweighs the potential benefits.
 - As we prefer a simplified benchmark for the Global Equity portfolio, RVK also recommends removing from policy the underlying regional targets.
- RVK recommends the Investment Committee and Board more clearly delineate between strategic decisions and active
 decisions implemented by Staff (with Consultant oversight). While this is not specific only to the Global Equity review,
 it is highly relevant as the responsibility over future portfolio structure and implementation decisions should be clearly
 understood and documented.



Delineation of Duties – High Level Summary



Appendix



Region, Market Cap, and Style Trends

Market Cap and Style Returns Have Shifted Throughout Time

High growth and mega cap stocks have outperformed recently, but these trends have tended to shift and vary over full market cycles.



Global Equity Strategies

Available Strategies

	Pros	Cons
Cap-Weighted Passive	 Low cost exposure to US equity market beta 	Often negative alpha due to fees
	 Negligible tracking error to benchmark 	
Non-Cap Weighted (e.g. Factor Indexes)	 Beta exposure using different rules (e.g. – equal-weighted, factor weights, etc.) 	 Higher tracking error to cap- weighted benchmark Higher fees than cap-weighted but
	 Low tracking error to respective benchmark compared to traditional active management 	lower than active management
	 Potential for downside protection as risk is diversified across multiple market trends 	
, ,	 Potential for risk-adjusted excess returns Downside protection from higher quality biases from most active managers 	 Higher fees relative to cap-weighted and non-cap weighted passive High levels of tracking error Subjects to longer periods of underperformance dependent on market conditions



Global Equity Strategies

Active vs. Passive

- Every year, RVK conducts an active vs. passive management study to analyze trends and identify sub-asset classes where active managers are most likely to outperform.
- The below table identifies the results of our annual active vs. passive management analysis, for the US and non-US mandates. The analysis examines average active manager performance relative to a relevant style and market cap benchmark, net of fees.

Long-Term 3-Year Rolling Average (Net of Fees)

January 2001 – December 2022

US Equi	ty Excess Returns,	, %	
	25 th Percentile	Median	75 th Percentile
US All Cap Core Equity	2.01	0.02	-2.01
US All Cap Growth Equity	2.75	-0.11	-2.82
US All Cap Value Equity	3.23	0.56	-1.86
US Large Cap Core Equity	1.26	-0.31	-1.89
US Large Cap Growth Equity	1.36	-0.54	-2.42
US Large Cap Value Equity	2.18	0.35	-1.28
US Large Cap Enhanced Equity	0.89	0.09	-0.78
US Mid Cap Core Equity	1.49	-0.46	-2.35
US Mid Cap Growth Equity	1.92	-0.29	-2.34
US Mid Cap Value Equity	1.51	-0.35	-2.15
US Small-Mid Cap Core Equity	2.52	0.24	-1.90
US Small-Mid Cap Growth Equity	2.72	-0.07	-2.72
US Small-Mid Cap Value Equity	2.40	0.20	-1.77
US Small Cap Core Equity	2.87	0.65	-1.49
US Small Cap Growth Equity	3.82	0.94	-1.85
US Small Cap Value Equity	3.16	0.89	-1.27

International & Global Equity Excess Returns, %							
	25 th Percentile	Median	75 th Percentile				
Developed Non-US Large Cap	2.35	0.43	-1.23				
Developed Non-US All Cap	2.49	0.39	-1.37				
Developed Non-US Small Cap	3.37	1.22	-1.00				
All-Country Non-US Large Cap	2.61	0.57	-1.24				
All-Country Non-US All Cap	3.25	1.11	-1.10				
All-Country Non-US Small Cap*	4.52	1.82	-0.67				
Emerging Markets Large Cap	2.78	0.70	-1.47				
Emerging Markets All Cap	3.12	0.75	-1.36				
Emerging Markets Small Cap*	4.50	2.03	-0.37				
Global Large Cap	3.17	0.59	-1.50				
Global All Cap	3.50	0.79	-1.63				
Global Small Cap*	2.97	0.57	-1.78				
Global REITs*	1.79	0.18	-1.33				

*The following asset classes have different start dates due to low manager population sizes:

- o All-Country Non-US Small Cap data begins on February 2005 with a population of 20.
- o Emerging Markets Small Cap data begins on December 2009 with a population of 21.
- o Global Small Cap data begins on December 2005 with a population of 20.
- o Global REITs data begins on July 2004 with a population of 25.

Excess return is calculated versus universe-specific benchmark. January 2001 represents the start of the first 3-year period. Performance shown represents rolling 3-year performance at each quartile, and does not correspond to the long-term experience of any specific manager. Peer group constituents and managers' rankings change over time.



Global Equity Strategies

Implementation Approaches

- It is important to develop reasonable tracking error and excess return expectations, and to implement a structure to meet those expectations. Many clients use elements of different implementation approaches to arrive at their final portfolio structure.
- Fees, capacity constraints, and client-specific implementation considerations such as liquidity and the administrative aspects of multi-manager structures are additional considerations.





Trailing Performance

Composite: Total Fund Asset Allocation & Performance - Net of Fees As of December 31, 2023

				Rate of F	Return (%)			
	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
Global Equity	11.13	18.27	18.27	3.47	10.23	7.26	8.90	06/01/1988
Global Equity Benchmark	11.14	21.58	21.58	5.46	11.49	7.77	N/A	
Excess Return	-0.01	-3.31	-3.31	-1.99	-1.26	-0.51	N/A	
US Equity	11.64	20.12	20.12	7.04	12.83	9.69	10.60	06/01/1988
US Equity Benchmark	11.81	26.49	26.49	8.64	15.19	11.49	10.76	
Excess Return	-0.17	-6.37	-6.37	-1.60	-2.36	-1.80	-0.16	
Developed Markets Equity	11.47	16.96	16.96	1.60	8.75	5.34	5.04	01/01/2008
Developed Market Equity Benchmark	10.51	17.94	17.94	4.42	8.45	4.32	2.78	
Excess Return	0.96	-0.98	-0.98	-2.82	0.30	1.02	2.26	
Emerging Markets Equity	7.70	12.18	12.18	-7.09	2.60	2.11	1.04	03/01/2008
Emerging Market Equity Benchmark	7.86	9.83	9.83	-5.08	3.68	2.66	1.61	
Excess Return	-0.16	2.35	2.35	-2.01	-1.08	-0.55	-0.57	
	2022	2021	2020	2019	2018	2017	2016	2015
Global Equity	-19.42	16.24	16.04	26.61	-9.79	24.90	8.79	-2.85
Global Equity Benchmark	-18.40	18.22	16.25	26.35	-10.08	23.95	8.36	-2.19
Excess Return	-1.02	-1.98	-0.21	0.26	0.29	0.95	0.43	-0.66
US Equity	-18.38	25.10	15.15	29.49	-5.64	18.99	10.97	-0.16
US Equity Benchmark	-19.85	26.45	20.73	31.02	-5.24	21.13	12.74	0.48
Excess Return	1.47	-1.35	-5.58	-1.53	-0.40	-2.14	-1.77	-0.64
Developed Markets Equity	-19.65	11.60	15.65	25.38	-13.87	29.50	4.93	-1.78
Developed Market Equity Benchmark	-14.29	12.62	7.59	22.49	-14.09	24.21	2.75	-3.04
Excess Return	-5.36	-1.02	8.06	2.89	0.22	5.29	2.18	1.26
Emerging Markets Equity	-23.64	-6.39	20.13	18.00	-14.46	37.63	9.74	-14.70
				40.40	44.53		44.40	44.00
Emerging Market Equity Benchmark	-20.09 -3.55	-2.54 -3.85	18.31 1.82	18.42	-14.57 0.11	37.28 0.35	11.19 -1.45	-14.92



COAERS US Equity Historical Style





COAERS International Equity Historical Style









Staff Memo: Global Equities Strategic Asset Allocation

The purpose of this memo is twofold:

- 1. Review and opine on RVK's Global Equity Structure Review presentation, and
- 2. Provide Staff's recommendation for the appropriate structure for Global Equity

Staff review of RVK's Global Equity Structure Review presentation:

Staff has reviewed this presentation and believe it provides an accurate assessment, at a high level, of the performance and characteristics of the Fund's Global Equity portfolio. RVK observations related to the use of diversifiers in the US (and potential simplifications in this exposure) and active management in Developed and Emerging Markets are key structuring decision points within these sub-asset classes.

Staff agrees with RVK that more clearly delineating strategic Board decisions and active decisions implemented by Staff with Consultant oversight is a useful discussion point. To that end, Staff would additionally note the below items related to the Strategic Asset Allocation asset and sub-asset class structure in Global Equities, not explicitly covered in this presentation, that we believe are prudent to consider in this conversation as well:

- Regional Weights: the major asset class benchmark has "floating" regional weights and as certain
 regions do well or poorly, their relative weight in the benchmark changes. Meanwhile, in the Strategic
 Asset Allocation these regional weights are "fixed" at a certain neutral weight. As a result, minor
 differences between regional weights have developed between the major and sub-asset class
 structures.
- Small Cap exposures: the major asset class benchmark is the Investable Market Index (IMI) version of
 the index which includes small cap company exposure. The sub-asset class benchmarks, however, do
 not use the IMI version of the index and therefore do not have small cap company exposures. This
 lack of small cap company exposure, at the benchmark level, represents a weight of 11% of the ACWI
 IMI and 6,150 companies.

Staff recommendations for the appropriate structure for Global Equity:

In structuring the Strategic Asset Allocation and choosing the benchmark for Global Equities, Staff recommends the Committee consider setting a single line-item benchmark for Global Equities and eliminating the current sub-asset class structure. By using the broadest, market-cap weighting benchmark to approximate this allocation in the Fund, the Board could maintain decision making at the highest level.

Benchmark Recommendation: After consideration of a variety of approaches and benchmarks, Staff concurs with RVK's recommendation to use the **MSCI ACWI Investable Market Index (ACWI IMI)** as the benchmark for Global Equities.

Structure Recommendation: Additionally, Staff agrees with RVK's recommendation to simplify and potentially reduce US Equity diversifiers with specific recommendations to be brought to the full Board in March in conjunction with the Premier List review.



Staff Memo: Global Equities Strategic Asset Allocation

Supplemental Commentary:

Summary: In structuring the Strategic Asset Allocation and choosing the benchmark for Global Equities, this approach would set a single line-item allocation and benchmark for Global Equities. By using the broadest, market-cap weighting benchmark to approximate this allocation in the Fund, the Board could maintain decision making at the highest level. Should the Board choose this approach, Staff would recommend the **MSCI ACWI Investable Market Index (ACWI IMI)** as the benchmark.

Change from Current Approach: At the Policy Benchmark level, this approach uses the same benchmark as currently employed. This structure improves upon the current approach by eliminating the sub-asset class targets from the Strategic Asset Allocation. As discussed previously, adopting both major asset and sub-asset class benchmarks has led to mismatches between the two which makes it more difficult to attribute the success of investment decisions.

Rationale: This approach simplifies Board decision making by selecting a single benchmark which approximates the broad investable Global Equity universe. By default, COAERS neutral allocations to different regions are determined by the market capitalization weighting scheme used in the benchmark.

Board Decision: In this approach the Board would make a single decision on Global Equities exposure. However, the appropriate delegated authority to implement this exposure still needs to be decided for other considerations such as regional weights, style selection, and manager selection.

Owner	Board	Seek Board feedback on appropriate delegated authority				
Decision	Global Equity Exposure	US, DM, EM Regional Weights	Style Selection (e.g., equal weight)	Manager Selection		

Benchmark Index Description: The MSCI ACWI Investable Market Index (ACWI IMI) is a widely quoted global equity index. The MSCI ACWI Investable Market Index (IMI) captures large, mid and small cap representation across 23 Developed Markets (DM) and 24 Emerging Markets (EM) countries. With 9,070 constituents, the index is comprehensive, covering approximately 99% of the global equity investment opportunity set. Approximately USD 4.3 trillion in assets are benchmarked to the ACWI IMI as of June 30, 2023. The resulting benchmark leads to a 59% allocation to the United States, 30% to Developed Markets ex. USA, and 11% allocation to Emerging Markets.

Sources: MSCI ACWI IMI Factsheet as of 1/31/2024, MSCI Geographic Breakdown Factsheet as of 10/30/2023



Global Equity Premier List



Staff Reports



Quarterly Reports Executive Summary

Please find very high-level summaries of each attachment in this agenda item:

- Global Equity Market & Portfolio Review: Global Equities underperformed the ACWI IMI benchmark by 3.3% in 2023. Discusses regional, size, passive, diversifying, and active exposures.
- 2. **Investment Strategy Dashboard**: Over the trailing 10-years, Fund returns are below the assumed rate of return, Policy Index, and top quartile peers. Over this same period, risk has been within guidelines.
- 3. **Investment Compliance Dashboard**: The investment program is within all compliance related guidelines.
- 4. **Status of Delegated Authority**: Staff did not exercise any delegated authority, including approved policy exceptions, in Q4 2023.
- 5. **Investment Implementation Update**: Staff completed the Board approved risk rebalance in December.



Investment Committee February 22, 2024

Global Equity Market & Portfolio Review

Market Review

The equity market posted a solid year of gains for 2023 as measured by COAERS' Global Equity benchmark, the MSCI ACWI IMI Index. Ending the year up over 21%, the global benchmark was only up 5.8% through the end of October, but then the index rallied over 15% in the final two months of the year.

Turning towards regional markets, as measured by COAERS' equity sub-asset class benchmarks, the US outperformed DM and EM equity markets. The US's impressive 26.5% return was mostly driven by large tech companies, which helped lift the global benchmark given the US's weighting is over 50% of the global index.

COAERS' overall equity portfolio lagged the global benchmark, by 3.3%. Within COAERS' sub asset classes, the passive diversifying strategies in US Equity pulled down relative performance in 2023 as these strategies underweighted the large cap performers within the index.

	Global Equity	US Equity	DM Equity	EM Equity
Benchmark (BM)	MSCI ACWI IMI	MSCI USA	MSCI World ex-US	MSCI EM
BM 1Y Return*	21.6%	26.5%	17.9%	9.8%
Portfolio 1Y Return*	18.3%	20.1%	17.0%	12.2%
Portfolio Excess Return	-3.3%	-6.4%	-1.0%	2.4%
Portfolio Volatility	15.8%	15.3%	16.1%	19.7%
BM Volatility	15.3%	14.4%	16.5%	17.3%
Portfolio Beta	1.03	1.05	0.95	1.13

^{*}from RVK Quarterly Investment Performance Analysis, December 31, 2023

It is worth noting that Global Equity's benchmark includes small caps, while the three sub-asset class benchmarks do not. COAERS' equity asset and sub-asset class benchmarks are as follows:

- Global Equity's benchmark is the MSCI ACWI IMI Index, which is a market capitalization weighted benchmark of public equities. The index includes most global markets, large, mid, and small cap equities;
- US Equity's benchmark is the MSCI USA Index, which is a market capitalization weighted benchmark of US large and mid-cap public equities;
- DM Equity's benchmark is the MSCI World ex-US Index, which is a market capitalization weighted benchmark of developed market large and mid-cap public equities; and
- EM Equity's benchmark is the MSCI EM Index, which is a market capitalization weighted benchmark of emerging market large and mid-cap public equities.

Portfolio Exposures

Regional

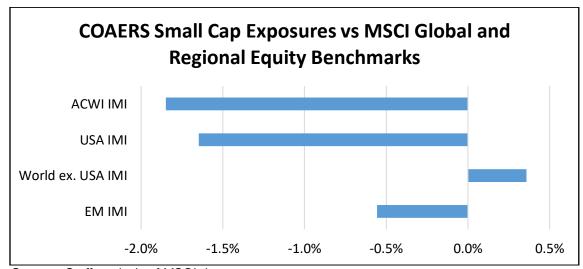
Exposure	Dedicated regional exposures through the respective sub-asset classes
Purpose(s)	Enhance diversification and to better align with Global Equity benchmark exposures
Performance	Minimal impact and in-line with expectations

The three equity sub-asset classes are managed according to the neutral weights in the IPS. Because the sub-asset class benchmarks do not aggregate to the Global Equity benchmark, it is worth discussing the implications of this from an implementation viewpoint. When we compare the Global ACWI IMI to COAERS' implementation of the three sub-asset class benchmarks, there are small regional differences within each sub-asset class. However, these differences amount to approximately 20 basis points and do not materially impact performance.

Small Caps

	Dedicated small cap mandates within US and DM sub-asset
Exposure	classes. Underweight relative to global benchmark
	Enhance diversification and to better align with Global Equity
Purpose(s)	benchmark exposures
	Small cap performance relative to large caps was mixed across
Performance	global markets

When we look at the portfolio's large and small cap exposures, the equity sub-asset class benchmarks do not include exposure to small cap stocks. However, COAERS maintains dedicated small cap mandates in the US Equity and DM Equity sub-asset classes in order to increase diversification and to better align portfolio exposures with the global benchmark, which includes about 11% small caps. Within the EM sub-asset class, COAERS' active management mandate allocates to small caps as well. COAERS' overall small cap exposure is modestly less than the Global Equity benchmark, which can be seen in the graph below.



Source: Staff analysis of MSCI data

Passive Mandates

Exposure	Systematic investment mandates utilized through all three sub- asset classes
Purpose(s)	Provide index exposures. Cost-effective implementation
	Mixed. Equity index mandates met expectations, but equity
Performance	futures lagged benchmark

Consistent with adopted investment beliefs, the Fund utilizes passive equity mandates to gain access to markets in a cost-effective manner and employs separately managed accounts, funds, and futures to accomplish this. Passive exposures within COAERS' equity portfolio track cap-weighted indices, and, in the US, also replicate diversifying indices such as the MSCI USA Equal Weighted (EW) Index. Below is a table that provides the percentage of passive mandates across sub-asset classes.

Sub-Asset Class	% of Passive Mandates	% of Active Mandates
US Equity	77%*	23%
DM Equity	24%	76%
EM Equity	39%	61%

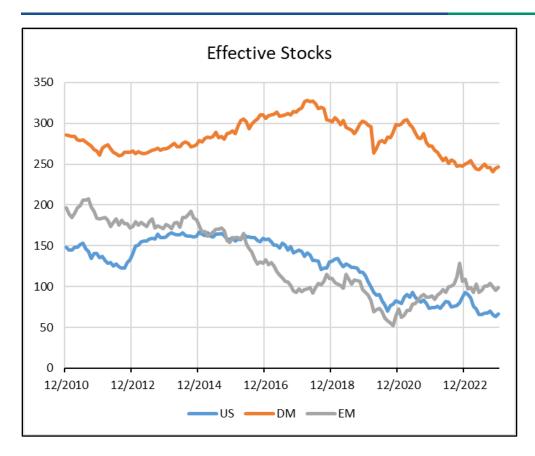
^{*}Includes 50% diversifying strategies and 27% cap-weighted passive mandates

Excluding COAERS diversifying US passive exposures, which will be discussed next, COAERS cap-weighted passive strategies performed as expected with the exception of the futures overlay mandates which experienced cash drag. This underperformance is addressed further in the recommendations. The passive equity index funds used across the portfolio continue to provide low-tracking error exposure at reasonable management fees.

US Diversifying Mandates

Exposure	Systematic investment mandates focused on factors other than size
Purpose(s)	To diversify away from cap-weighted index concentration
Performance	Below expectations as concentrations levels remain historic

COAERS also employs diversifying passive mandates within the US Equity sub-asset class. These diversifying equity strategies are meant to reduce the risk of single stock concentration present in the cap-weighted benchmarks. This concentration can be measured by the index's effective number of stocks, which is the number of stocks needed to mimic the index. As this number decreases, fewer stocks are needed to replicate the index. In the past several years, stock concentration within the US equity index, the MSCI USA, has increased to levels not seen since the "tech wreck" of 2000-2001. During that period, the effective number of stocks in the MSCI USA Index hit a low of 57 in March 2000. As of the end of 2023, the effective number of stocks was 67 and is just off the recent low of 64 stocks set in November 2023.



US diversifying mandates weight securities more evenly than the market cap benchmark which gives larger allocations to bigger companies. The implementation of the diversifying US mandates is intended to broaden factor exposures and to adapt to changing market conditions. COAERS has approximately 50% of US Equity exposure implemented through diversifying strategies, as stock concentration within the benchmark is historically high. COAERS' US Equity diversifying strategies have increased the number of effective stocks in US Equities to 175 versus the benchmark's 67.

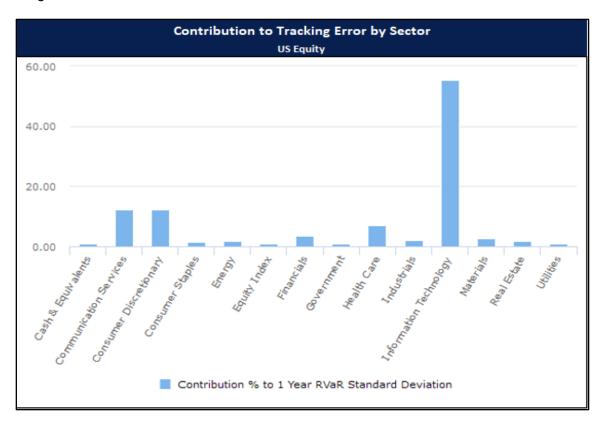
These strategies are expected to outperform the market-cap index as the market becomes less concentrated. Due to the continuing concentration of the market, the diversifying strategies underperformed the US equity benchmark, the MSCI USA Index, in 2023.

	AUM	1Y Return	3Y Return
Sci Beta Inflation Plus Index	104,501,115	23.5*	9.4%*
Sci Beta Max Decorrelation Index	145,360,135	15.7%	7.5%
TOBAM Max Diversification Index	99,289,261	7.1%	-0.2%**
MSCI USA Equal Weighted Index	207,899,036	17.6%	7.0%
MSCI USA Index		26.5%	8.6%

^{*}Due to manager transition during the period, index data is presented

^{**}This will be discussed further in the recommendations section

Performance for these mandates in 2023 was very poor relative to the US Equity benchmark. Historically, these mandates generate approximately 4% of annual tracking error to the market cap-weighted benchmark, suggesting that 2023 represented a 2-standard deviation move down. The largest contribution to tracking error within these mandates tends to be an underweight to the Information Technology sector. This is also the largest sector by market weight in the cap-weighted index, the MSCI USA Index.



Active Mandates

Exposure	Vary by mandate
Purpose(s)	Seeks to outperform index on a risk-adjusted basis
Performance	Mixed across sub-asset classes

COAERS utilizes active mandates within each of the three sub-asset classes. More active mandates, as a percentage of each asset class, are employed within the DM and EM sub-asset classes than in the US. Below is a list of the active mandates across the COAERS' portfolio and their percentile rank in peer comparisons.

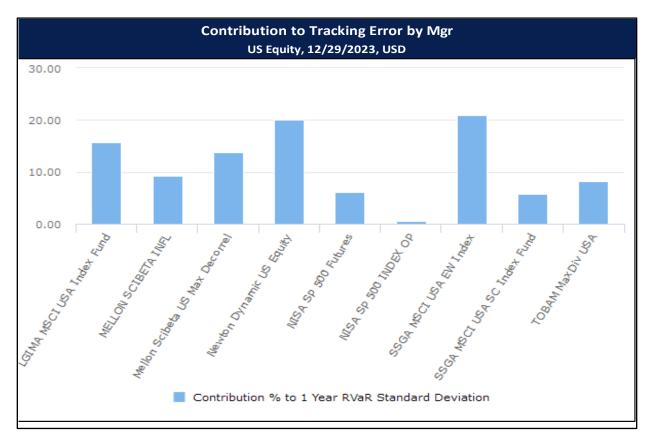
Peer Rankings						
Mandate	AUM	1-Year	3-Year	5-year	10-Year	
Newton DUSE (US)	259,073,596	41	63	29	15	
1607 International Equities (DM)	158,175,553	73	74	46	29	
Walter Scott International Equities						
(DM)	206,821,410	27	73	20	5	

Peer Rankings						
Mandate AUM 1-Year 3-Year 5-year 10-Year						
Newton DEXUS (DM)	29,373,577	76	82	81	n/a	
Baillie Gifford EM Equities (EM)	129,536,186	36	87	54	22	

Data source: eVestment

US: Within the US, Newton's DUSE is the only active mandate. Unlike typical active managers, DUSE does not utilize stock picking but employs proprietary allocation models to shift the weights of stocks, bonds, and cash with modest leverage to produce a more efficient portfolio. Newton's models use historical data to inform their forecasts. Throughout 2023, DUSE's conservative view of the equity market, expressed by underweighting equities, caused the mandate to underperform.

As noted below, DUSE was one of the top contributors to tracking error within the US sub-asset class.

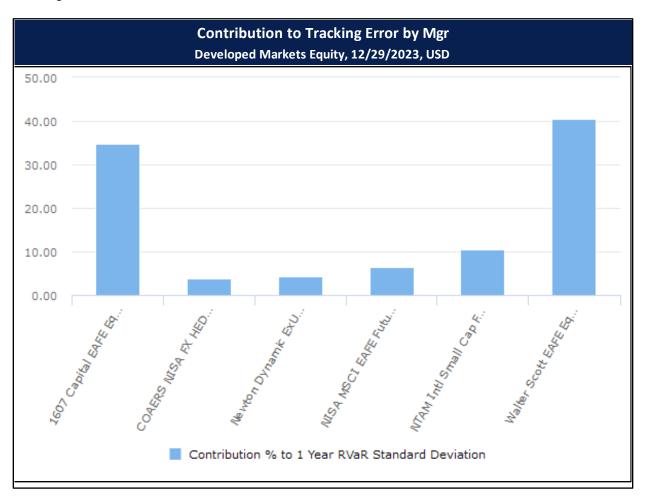


2022 can be classified as an "upside down world" due to cash outperforming both stocks and bonds. 2023 was a year in which stocks were the best performer, but bonds lagged cash for the second year in a row. DUSE's historical performance has demonstrated mixed results relative to its benchmark during previous markets with similar conditions. Given DUSE's strong long-term track record, along with the difficulty of outperformance in the US, as noted below, Staff remains confident in this allocation.

DM: In the DM Equity sub-asset class, COAERS employs several active managers to complement the passive market-cap exposures. All three of the active mandates employ different approaches to active management:

- Walter Scott selects stocks based on their long-term view of individual companies. Portfolio turnover remains low which is not surprising given their high conviction. Approximately 43% of the stocks in the portfolio have been held for at least 10 years. Walter Scott outperformed its benchmark in 2023, in part due to its exposure to the information technology sector as well as some stock specific performance.
- 1607 purchases closed-end funds that are trading at a discount to the underlying holdings of the funds. 1607 underperformed in 2023, due to discounts in closed-end funds remaining historically elevated in 2023.
- Newton DEXUS allocates between stocks, bonds, and cash similarly to DUSE, but employs ACWI ex-US as the equity exposure. The allocation decisions are based on proprietary forward-looking models of the three asset classes. The mandate underperformed in 2023, due to the timing of its equity allocation changes.

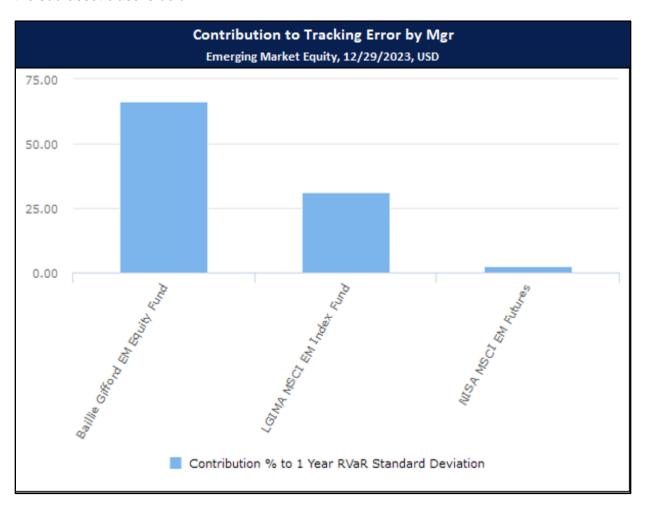
Staff maintains its confidence in the active DM managers noted above. The top contributors to tracking error within the sub-asset class were Walter Scott and 1607.



EM: Within EM, COAERS utilizes only one active mandate in the sub-asset class. Baillie Gifford Emerging Markets Equities selects stocks across emerging markets based on Baillie

Gifford's internal fundamental research. In addition to their bottom-up research, the portfolio managers include macroeconomic factors in their portfolio construction. Baillie Gifford outperformed relative to its benchmark in 2023 due to strong stock selection and regional exposures. Staff remains confident in Baillie Gifford's abilities and in their role within the portfolio.

Baillie Gifford's tracking error was in line with expectations. A breakdown by contributors within the sub-asset class is below.



Glossary

- Collective investment trust (CIT): COAERS owns shares in a pooled fund that is sponsored by a bank or trust company and is open only to institutional investors. As such, it is not considered a security under US law and is governed instead by federal and/or state banking laws.
- Exchange Traded Fund (ETF): COAERS owns shares in a pooled fund that is sponsored by a bank or trust company. ETFs are traded on an exchange, and as such they offer intraday liquidity since they can be bought and sold intraday through a brokerage firm.
- **Futures:** COAERS owns futures on stock indices and bonds. Ownership of a future represents a contractual obligation to take delivery of the underlying stock index, bond, gold warrant, etc., at an agreed upon price and at a future date.
- **Limited partnership (LP):** COAERS is a limited partner in a legal entity that invests according to a pre-determined strategy and is managed by a general partner.
- **Mutual fund (MF):** COAERS owns shares in a pooled fund of both institutional and retail investors that is managed by a registered investment advisor according to US securities laws.
- **Separately managed account (SMA):** the underlying shares are owned directly by COAERS, and the manager has authorization to trade that account.
- Warrant: COAERS owns warrants on gold bars. The warrants are registered with the Commodity Exchange Inc. (COMEX) and are claims on individual gold bars stored in vaults throughout the United States.

Appendix

Global Equity: US Equities (Strategic Benchmark: MSCI USA Net Index)

- **Newton Capital Dynamic US Equity (DUSE):** this strategy seeks to outperform the broad US equity market while taking comparable amounts of risk by dynamically allocating between stocks, bonds, and cash. The strategy invests primarily in cash instruments and may also use modest amounts of borrowing using futures and options to control risk. The strategy is managed by Newton Investment Management in a separately managed account. The manager's performance benchmark is the S&P 500, a market cap weighted US large cap index.
- **Mellon Capital Scientific Beta Maximum Decorrelation:** this strategy seeks to outperform the broad US equity market while minimizing the volatility of the portfolio. Utilizing US large cap stocks, the portfolio weights are optimized by focusing on the pair-wise correlation contributions to the portfolio. The strategy is managed by Mellon Investments Corporation in a separately managed account. The manager's performance benchmark is the S&P 500, a market cap weighted US large cap index.
- **Mellon Scientific Beta Inflation Plus:** this strategy seeks to construct an equity portfolio that reacts positively to inflation surprises while maintaining the broad market exposure. The portfolio utilizes the constituents of the S&P 500 large cap stock index and weights the stocks based on their inflation sensitivities. The manager's performance benchmark is the Scientific Beta US Inflation Plus Index, a US large cap equity index weighted according to inflation sensitivities. The mandate is managed by Mellon Investments Corporation, based in Boston, MA. It is managed in a separately managed account.
- NISA S&P 500 Index Futures: this strategy seeks to track the total return of the S&P 500 large cap stock index through the purchase of S&P 500 futures. The account is fully collateralized with Treasury bills and as a result no leverage is incurred. The mandate is managed through a separately managed account and benchmarked to the S&P 500. The investment manager is NISA Investment Advisors, which is based in St. Louis, Missouri.
- NISA S&P 500 Index Options: this strategy seeks to add leveraged equity exposure by buying S&P 500 Index options that are 10% in-the-money with an expiration of approximately three months. The purchase of the options is fully funded, and the leverage is provided though the option contract. The mandate is managed through a separately managed account and benchmarked to the S&P 500. The investment manager is NISA Investment Advisors, which is based in St. Louis, Missouri.

- LGIMA MSCI USA Index Fund: this fund seeks to track the total return of the MSCI USA index. The performance benchmark is the MSCI USA, a market cap weighted US large cap and mid cap equity index. The investment is managed by Legal & General Investment Management Americas (LGIMA), which is based in Chicago, Illinois and has a UK parent. It is held as shares of a collective investment trust (CIT) in a share class where securities lending is not permitted.
- TOBAM Maximum Diversification USA: this strategy seeks to outperform the MSCI USA Index on a risk-adjusted basis by constructing a more diversified portfolio. Maximum Diversification USA utilizes TOBAM's patented Diversification Ratio to quantify portfolio diversification and then to maximize the ratio. By maximizing the diversification of a portfolio, risk-adjusted returns are improved as the portfolio is better compensated for each unit of risk. TOBAM is based in Paris, France, but is also registered with the SEC in the US. TOBAM manages the strategy in a separately managed account.
- State Street MSCI USA Equal Weight Index: this strategy seeks to track the total return of the MSCI USA Large Cap Equal Weighted Index. The manager's performance benchmark is the MSCI USA Equal Weighted Index, an equally weighted US large cap equity index. The investment is managed by State Street Global Advisors (SSGA), which is based in Boston, MA. The strategy is executed in a separately managed account.
- State Street MSCI USA Small Cap Index Fund: this fund seeks to track the total return of the MSCI USA Small Cap index. The performance benchmark is the MSCI USA Small Cap Index, a market cap weighted US small cap equity index. The investment is managed by State Street Global Advisors (SSGA), which is based in Boston, MA. It is held as shares of a collective investment trust (CIT) in a share class where securities lending is not permitted.

Global Equity: Developed Market Equities (Strategic Benchmark: MSCI World ex-USA Net USD Index)

- 1607 Capital Partners International Equities: this strategy invests in shares of closed end mutual funds that trade at a discount to their net asset value. The manager's performance benchmark is a 90%/10% blend of the MSCI EAFE Net Index and the MSCI EM Net Index, respectively. The account is managed by 1607 Capital Partners of Richmond, Virginia and structured as a separately managed account (SMA) in which securities lending is not permitted.
- Newton Capital Dynamic ex-US Equity (DEXUS) Fund: this fund seeks to outperform the broad global ex-US equity market while taking comparable amounts of risk by dynamically allocating between stocks, bonds, and cash. The fund invests primarily in cash instruments and may also use modest amounts of borrowing using futures and options to control risk. The

strategy is managed by Newton Investment Management and is held as shares of a collective investment trust (CIT) in which securities lending is not permitted. The manager's performance benchmark is the MSCI All Country World Index ex-USA, a market cap weighted index of global large cap stocks domiciled outside the US.

- NISA EAFE Equity Futures: this strategy seeks to track the total return of the MSCI EAFE equity index through the purchase of EAFE equity futures. The account is fully collateralized with Treasury bills and as a result no leverage is incurred. The mandate is managed through a separately managed account and benchmarked to the MSCI EAFE Equity Index. The MSCI EAFE Equity Index includes large and mid-cap stocks from 21 developed nations around the world, excluding the United States and Canada. The investment manager is NISA Investment Advisors, which is based in St. Louis, Missouri.
- NISA Hedged EAFE Equity Futures: this strategy seeks to track the total return of the MSCI EAFE equity hedged to USD index through the purchase of EAFE equity futures and the sale of foreign currency futures. The account is fully collateralized with Treasury bills and as a result no leverage is incurred. The mandate is managed through a separately managed account and benchmarked to the MSCI EAFE Hedged to USD Equity Index. The MSCI EAFE Equity Hedged to USD Index includes large and mid-cap stocks from 21 developed nations around the world, excluding the United States and Canada. The investment manager is NISA Investment Advisors, which is based in St. Louis, Missouri.
- NTAM Developed International Small Cap (DISC) Fund: this fund seeks to track the returns of the MSCI World ex-US Small Cap Index, a market cap weighted index representing small cap equities in all 23 Developed Markets (DM) countries except the US. The investment is made via shares in a mutual fund managed by Northern Trust Asset Management, which is based in Chicago, Illinois. The manager's performance benchmark is the MSCI World ex US Small Cap Index.
- Walter Scott EAFE Equities: this strategy holds 40-50 high quality large cap international (90-100% in developed markets and up to 10% in emerging markets) stocks with good long-term fundamentals and reasonable valuation. The investment is structured as a separately managed account (SMA) managed by Walter Scott & Co., a firm based in Edinburgh, Scotland. The manager's performance benchmark is the MSCI EAFE Net Index.

Global Equity: Emerging Market Equities (Strategic Benchmark: MSCI EM Net USD Index)

• Baillie Gifford Emerging Market Equities Fund: this fund holds 60-70 high quality emerging market stocks with strong long-term growth prospects and attractive valuation. The investment is held as shares in a mutual fund managed by Baillie Gifford & Co., a firm based in

Edinburgh, Scotland. The manager's performance benchmark is the MSCI Emerging Markets Net index.

- NISA EM Equity Futures: this strategy seeks to track the total return of the MSCI EM stock index through the purchase of EM equity futures. The account is fully collateralized with Treasury bills and as a result no leverage is incurred. The mandate is managed through a separately managed account and benchmarked to the MSCI EM Equity Index. The MSCI EM Equity Index includes large and mid-cap stocks from 26 emerging market countries. The investment manager is NISA Investment Advisors, which is based in St. Louis, Missouri.
- LGIMA MSCI EM Index Fund: this fund seeks to track the total return of the MSCI Emerging Markets (EM) Index. The manager's performance benchmark is the MSCI EM, a market cap weighted index comprised of 26 emerging economies' large cap and mid cap companies. The investment is managed by Legal & General Investment Management Americas (LGIMA), which is based in Chicago, Illinois and has a UK parent. It is held as shares of a collective investment trust (CIT) in a share class where securities lending is not permitted.

COAERS Investment Strategy Dashboard

as of 2023-Q4

COAERS

INVESTMENT GOALS

- 1. Achieve long-term, annualized nominal rate of return net of fees that:
 - Meets or exceeds the assumed actuarial rate of return for the System

	3Y	5Y	10Y
COAERS Fund - Net Return	2.32%	7.45%	5.71%
COAERS Actuarially Assumed Rate of Return	6.75%	6.75%	6.75%
Difference	-4.43%	0.70%	-1.04%
Status	BELOW	ABOVE	BELOW

- 2. Achieve a long-term, risk-adjusted relative rate of return net of fees that:
 - Meets or exceeds the Passive Index (i.e. the Reference Portfolio)
 Passive Index: 60% MSCI ACWI Net USD Unhedged/40% Bloomberg Global Agg USD Unhedged

	3Y	5Y	10Y
COAERS Fund - Net Return	2.32%	7.45%	5.71%
COAERS Passive Index - Gross Return	1.25%	7.01%	5.05%
Difference	1.07%	0.44%	0.66%
Status	ABOVE	ABOVE	ABOVE

Incorporating fee levels for the Passive Index that are consistent with best COAERS Premier List fees (12 bps)

COAERS Passive Index - Net Return	1.13%	6.89%	4.93%
Difference	1.19%	0.56%	0.78%
Status	ABOVE	ABOVE	ABOVE

Meets or exceeds the Policy Index (i.e. the Strategic Benchmark)
 Policy Index: Target weighted composite of the benchmarks for the major asset classes in the SAA

	3Y	5Y	10Y
COAERS Fund - Net Return	2.32%	7.45%	5.71%
COAERS Policy Index - Gross Return	3.14%	8.15%	5.87%
Difference	-0.82%	-0.70%	-0.16%
Status	BELOW	BELOW	BELOW

Incorporating fee levels for the Policy Index that are consistent with best COAERS Premier List fees (12 bps)

COAERS Policy Index - Net Return	3.02%	8.03%	5.75%
Difference	-0.70%	-0.58%	-0.04%
Status	BELOW	BELOW	BELOW

 $Investment\ returns\ are\ presented\ in\ an\ annualized\ net\ basis\ unless\ otherwise\ noted$

Ranks in the top quartile of peer comparisons consistently
 Versus <u>all plans</u> and incorporating fee levels equal to the CEM Benchmarking median of 90 bps

	3Y	5Y	10Y
COAERS Fund - Net Return	2.32%	7.45%	5.71%
Top Quartile Net Return - All Peers *	4.10%	8.48%	6.32%
Difference	-1.77%	-1.03%	-0.60%
Status	BELOW	BELOW	BELOW

Versus **small plans** and incorporating fee levels equal to the CEM Benchmarking median of 72 bps

	3Y	5Y	10Y
COAERS Fund - Net Return	2.32%	7.45%	5.71%
Top Quartile Net Return - Small Peers *	4.85%	8.34%	6.38%
Difference	-2.52%	-0.89%	-0.66%
Status	BELOW	BELOW	BELOW

^{*} Peer Return Data is provided by RVK and is preliminary as of 2/11/2023.

INVESTMENT GOALS (continued)

- 3. Achieve these strategic objectives via fiduciary best practices that:
 - Ensure proper diversification of asset classes and factor exposures
 - Staff and Consultant continue to assess the diversification of Fund's Strategic Asset Allocation including Functionally Focused portfolio construction concepts.
 - Staff is evaluating current portfolio hedging strategies to ensure the Fund maintains appropriate diversification against adverse regimes.
 - Maintain appropriate long-term risk and return expectations
 - CMAs reviewed each year with IC/Board to assess outlook and market conditions.
 - Key Investment Manager views and asset allocation strategies are incorporated into IRF discussions to inform outlook.
 - Adapt the asset allocation to changing market conditions
 - Staff regularly evaluates current market conditions via the Investment Risk Framework to guide recommendations to the IC/Board regarding changes to SAA parameters based upon current market conditions and their impact to return and risk expectations.
 - Delegated authority to implement strategy within SAA parameters approved by Board.
 - Investment Risk Framework approved by Board, regular reporting provided to IC.

JDGET						
ABSOLUTE RISK (aka VOLATILITY)						
		POLICY			REALIZED	
	MIN	TARGET	MAX	3Y	5Y	10Y
COAERS Fund - Volatility	10%	-	12%	11.9%	12.7%	10.39
Status				WITHIN	ABOVE	WITH
	MIN	TARGET	MAX	3Y	5Y	10\
COAERS Fund - Sharpe Ratio	-	0.50	-	0.09	0.50	0.5
Status				BELOW	ABOVE	ABO'
RELATIVE RISK (aka TRACKING ERROR)						
		POLICY			REALIZED	
	MIN	NEUTRAL	MAX	3Y	5Y	10
COAERS Fund - Tracking Error	-	150	300	183	180	176
Status				WITHIN	WITHIN	WITH
	MIN	TARGET	MAX	3Y	5Y	10
COAERS Fund - Information Ratio	-	0.50	-	0.66	0.35	0.5
Status				ABOVE	BELOW	ABO

ASSET ALLOCATION

COAERS Fund Positioning

YTD Return (Net): 12.30% as of 2023-Q4 AUM: \$3.223 Bn

		Current	SAA Neutral	Relative	Bands	Strateg	ic Tactica	al Neutral	Current	
Gle	obal Equity	57.3%	56.0%	1.3%	TACTICAL	46%	51%	56%	61%	66%
	US Equity	34.6%	34.0%	0.6%	TACTICAL	22%	29%	34%	39%	47%
	DM Equity	16.0%	16.0%	0.0%	TACTICAL	11%	13.5%	16%	19%	20%
	EM Equity	6.6%	6.0%	0.6%	TACTICAL	2%	4% 6%	6	11%	13%
Re	al Assets	13.8%	15.0%	-1.2%	TACTICAL	10% 11%		15%	1	19% 20%
	Real Estate Equity	8.8%	10.0%	-1.3%	TACTICAL	5%	7%	10%	13%	15%
	Infrastructure Equity	5.1%	5.0%	0.0%	TACTICAL	0% 1%		5%	7%	10%
* F	Fixed Income	16.5%	21.0%	-4.6%	STRATEGIC U/W	16% 18%	21%		27%	33%
	UST	11.6%	13.0%	-1.4%	TACTICAL	9% 11%	13%		21%	25%
*	MBS	2.3%	4.0%	-1.8%	STRATEGIC U/W	2% 3%	% 4%		6%	8%
	Credit	2.6%	4.0%	-1.4%	TACTICAL	1% 2.	.5% 4%		7%	10%
*	Multi Asset	4.1%	7.0%	-2.9%	STRATEGIC U/W	2.5% 4	1.5% 7%	,	13%	15%
*	Asset Allocation	2.8%	5.0%	-2.2%	STRATEGIC U/W	2.5% 3.5	5% 5%		8%	10%
	Commodities & Other	1.3%	2.0%	-0.7%	TACTICAL	0% 1%	2%	5%		10%
* (Cash & Equivalents	8.3%	1.0%	7.3%	STRATEGIC O/W	-10%	-5%	1%	5%	10%
*	US Dollar Instruments	6.8%	1.0%	5.8%	STRATEGIC O/W	-10%	-5%	1%	5%	10%
*	Foreign Currency	1.5%	0.0%	1.5%	STRATEGIC O/W	0%		1%		2%

^{*} Strategic Positioining Approved at December 19, 2023 Board Meeting

COAERS Compliance Dashboard

as of 2023-Q4



INVESTMENT STRATEGY

1. Pursue a superior investment strategy by conducting:

• Formal Asset/Liability Study every 5 years or upon major changes to contributions, benefits, or capital markets.

<u>Completion Date</u> <u>As of Date</u> <u>Service Provider</u>
Asset/Liability Study: **August 2023 December 2022 RVK**

• Formal Asset Allocation Study every 3 years.

 Completion Date
 As of Date
 Service Provider

 Strategic Asset Allocation Study:
 August 2023
 December 2022
 RVK

• Review of Strategic Asset Allocation parameters at least every 1 year.

 Completion Date
 As of Date

 Strategic Asset Allocation Review:
 August 2023
 December 2022

• Review of IPS and IIP at least annually or upon major changes in capital markets or industry practices.

Investment Policy Statement: March 30, 2023 March 30, 2023
Investment Implementation Policy: March 30, 2023 March 30, 2023

ASSET DIVERSIFICATION

2. Maintain proper diversification of assets by:

• Reviewing investment concentration levels in any single public corporation.

Largest Concentration

Individual Holding Concentration Limits: Company Name Status

3% of the Fund in the securities of any one company: EQUINIX INC 0.4% OK

5% of the Fund of any class of voting security of any one company: EQUINIX INC 0.4% OK

• Reviewing investment concentration levels in any single investment manager or investment vehicle.

Largest Concentration

<u>Investment Manager Concentration Limits:</u> Manager/Vehicle Level Status ≤15% of Fund assets with any active manager: 9.0% Newton IM ОК ≤30% of Fund assets with any passive manager: Agincourt 15.2% OK ≤20% of firm assets for any manager: 6.3% Agincourt OK ≤20% of fund/vehicle assets unless a seed investment: ОК LGIMA MSCI USA 13.9% Board approved Seed Investments: PGIM IG Credit 35.7% Seed

FUND LIQUIDITY

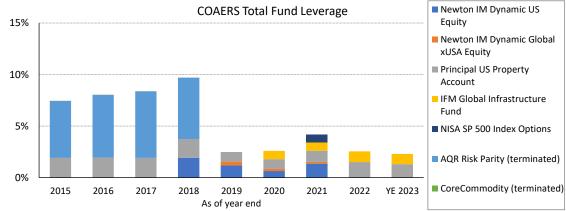
3. Ensure sufficient liquidity to meet benefit payment and other obligations by:

• Review allocation to highly liquid investments quarterly.

Liquidity:	\$ millions	% of Fund	Accounts Included
0 - 5 Days	2,530	79%	All except those listed below
5-30 Days	433	13%	1607, PGIM, DoubleLine, Fidelity, Agincourt
30+ Days	260	8%	Principal, IFM

FUND LEVERAGE

4. Monitor level of risk associated with leverage at the Fund level and within portfolios.



COAERS Compliance Dashboard

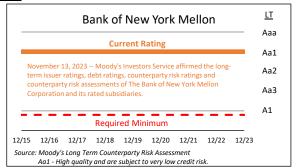
as of 2023-Q4



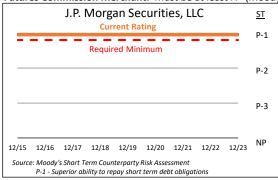
COUNTERPARTY MANAGEMENT

5. Monitor risk of loss from counterparty default and/or insolvency

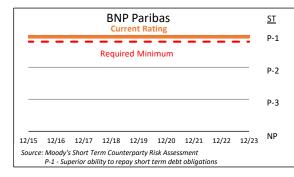


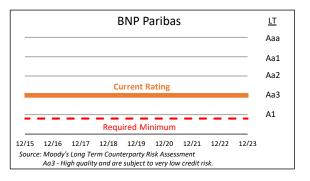


Futures Commission Merchant: Must be at least A+ (Moody's Short Term Rating P-1 and Long Term Rating A1)









Status of Authority Delegated To COAERS Staff

		Status during
Source	Nature of Delegated Authority	2023-Q4
PS Section I	Executive Director may approve variances to further compliance	Unused
PS Section I	Executive Director may update policies for administrative items	Unused
PS Section II	Executive Director may act to protect System assets	Unused
PS Section V	Fund positioning may be rebalanced due to market drift	Unused
PS Section V	Fund positioning may be rebalanced for risk management	Unused
PS Section V	Fund positioning may be rebalanced due to phased transition	Unused
PS Section VI	Staff may move between lending and non-lending shares to manage risk	Unused
IP Section I	Executive Director may update policies for administrative items	Unused
IP Section IV	Staff may transition between approved Premier List managers	Unused
IP Section V	Emergency termination of managers by Executive Director	Unused
IP Section VIII	Staff may select Money Market Funds for cash investments.	Unused

Status of Approved Policy Exceptions

		Status during
Source	Nature of Policy Exception	2023-Q4
12/19/2023 &	The Board approved a policy exception to allow Staff to:	Unused
09/21/2023	1) not rebalance the asset and underlying sub-asset classes for Fixed Income and Multi-Asset for market drift and	
Board Meetings	2) rebalance the Fund for Risk Management within the Strategic Rebalancing Ranges for Cash & Equivalents	
	Authorization of these policy exceptions initially expired on December 19, 2023 and was extended through January 31, 2024.	
	31, 2024.	

8. Discuss and consider private markets
program including draft strategic plan
Presented by David Kushner



COMMITTEE MEETING Agenda Item Information Sheet

AGENDA ITEM 8:

Discuss and consider private markets program including draft strategic plan

AGENDA ITEM OBJECTIVE

This item is for the Committee to review the Strategic Plan for Private Credit and provide direction to Staff.

RELEVANCE TO STRATEGIC PLAN

This agenda item is central to COAERS Strategic Plan Goal 4: Identify and implement leading practices in Board governance, pension administration, and investment management. It is considered a best practice to have strategic plans related to Private Markets programs.

RECOMMENDATION FOR COMMITTEE ACTION

At the Committee's discretion.

BACKGROUND

At its September 2023 meeting, the Board approved a new Strategic Asset Allocation including dedicated private markets exposure. Staff will present a draft Private Credit Program Strategic Plan to guide the Fund's activities in this area.

ATTACHMENTS

- 1. Staff Memo "Private Credit Strategic Plan"
- 2. Private Credit Program Benchmark Evaluation
- 3. Draft Private Credit Program Strategic Plan
- 4. RVK Memo "Strategic Plan Review"
- 5. RVK Memo "Annual Investment Plan"



February 22, 2024

At the September 21, 2023 Meeting, the Board adopted a new Strategic Asset Allocation which included a recommendation to incorporate Private Credit for the first time. At the December 19, 2023 meeting, the Board approved the first investment in a Direct Lending strategy, which Staff executed on December 26, 2023 with a \$90 million commitment.

As best practice for enacting a Private Markets Program, Staff created a draft strategic plan that outlines how the program will be measured, how individual funds within the program will be evaluated, and the exposures desired of the program.

Similar to other policies guiding investment activities, Staff recommends the plan be reviewed at least annually in conjunction with an Annual Investment Plan and Pacing Analysis. In combination these documents guide Staff and Consultant's activities through the year in determining which strategies, and within strategies which managers, should be pursued to execute the program's objectives.

The Private Markets Strategic Plan articulates a long-term vision for the program. Staff and Consultant recognize that during the ramp-up phase of the program, which may take as long as five to seven years, that certain objectives or constraints may appear out of line with those stated in policy. With each Annual Investment Plan and regular review of activities, these imbalances will be recognized and, as appropriate or available, recommendations for adjustment will be made.

Specifically, the Strategic Plan contains the following recommendations:

- 1. Returns objective for the program is to exceed the Morningstar LSTA U.S. Leveraged Loan Index by 200 basis points over rolling ten-year periods
- 2. Maintains a well-diversified exposure to Private Credit of 10% within a range of 7% to 13% of total Fund assets
- 3. Provides targets and ranges to specific strategies to pursue to achieve program objectives.
- 4. Identifies manager selection criteria and the due diligence process
- 5. Articulates monitoring of program objectives and performance
- 6. Incorporates a sample due diligence questionnaire
- 7. Includes operating parameters for a potential secondary program

Attached to this memorandum is Staff's summary analysis of the recommended program benchmark.

Staff requests the Investment Committee review the attached Private Credit Program Strategic Plan. Staff will incorporate Committee feedback and request formal approval from the Board of Trustees at the scheduled March Board meeting.



Private Credit Program Benchmark Evaluation

Private Credit Program Benchmark: Morningstar LSTA Leveraged Loan Index +200 bps

Rationale: The rationale to use this index as the benchmark for the Private Credit program is supported by a number of factors:

- Using a public leveraged loans index is the most commonly used approach by peer pensions plans based on a sampling of nationwide pension CIO's and review of Investment Policy Statements.
- The constituents are derived from syndicated term leveraged loans that are held in institutional investor loan portfolios tracked by PitchBook and LCD.
- The underlying loans are floating rate and are reasonable proxies for senior secured private debt.
- The System has access to the index and its underlying performance and characteristics through existing Pitchbook agreements.
- The 200 bps premium over the index accounts for the broader range of higher returning Private Credit strategies and will likely equate to high single digit target returns.

Methodology: Loans from within the Pitchbook and LCD database must meet the following criteria to be included: senior secured, minimum 1-year initial term, USD denominated, initial spread of SOFR +125 bps, and an initial issue size of \$50 million. The index is market value-weighted with bid prices from LSTA/Refinitiv Mark-to-Market Pricing Service and is priced daily.

Index Characteristics: The resulting index has a heavy exposure to the US at 85% of the par value. The remaining exposure is heavily concentrated in developed European countries. Credit quality is heavily focused on B-rated credits with 62% of exposure by market value. Limited investment grade exposure (7%) through BBB-rate credits is gained as well. The index currently has an effective yield of 9.36%, trailing 12-month defaults of 1.5%, market value of \$1.3T, and 1499 facilities.

Source: December 2023 LSTA Leveraged Loan Index Factsheet

Risk Return Profile: Using the last 20 years of quarterly data as of 9/30/2023, the Morningstar LSTA Index has displayed the below risk and return characteristics:

	Return	Risk	Returns/Risk	Max Drawdown
LSTA LLI	4.8%	9.3%	0.52	-30.1%

Source: Staff analysis of Morningstar LSTA data as of 9/30/2023, return and risk are annualized

Comparison to Burgiss Private Credit Index: Staff also considered the Burgiss Private Credit Index as a potential benchmark for the program. This index notably had much higher returns over the prior 20-years (9.7% annualized) and much lower volatility (7.1% annualized) than the LSTA LLI. More than half of constituent funds in this index are mezzanine and distressed debt funds, which skews risk (and therefore returns) higher. This index composition is likely inconsistent with the goals of the Private Credit program to generate stable returns and diversification for the total Fund. Additionally, the variation in reporting methods/times for constituent funds can lead to issues in calculating time-weighted rates of return for comparative purposes.

City of Austin Employees' Retirement System (COAERS)

Private Credit Program Strategic Plan

February 2024

Executive Summary

In September 2023, COAERS adopted a Strategic Asset Allocation including an initial allocation to Private Credit based on the results of an Asset/Liability Study and corresponding Asset Allocation Study. These same studies indicate exposure to Private Equity should be included in future Strategic Asset Allocations and is likely to be additive to the portfolio.

This document is specific to Private Credit, and will be incorporated as an Appendix to the Investment Policy Statement. This document will be reviewed at least annually and amended from time to time as Strategic Asset Allocation decisions by the Board dictate, as investment staff refines processes and procedures, or as market dynamics dictate.

Summary of Recommendations for COAERS Long Term Strategic Plan

- To achieve COAERS 10%¹ long-term target exposure within a range of 7% to 13% Staff and Consultant recommend reviewing and adopting the annual commitment pace, as part of COAERS Private Credit Annual Investment Plan for 2024.
- Continue to develop COAERS exposure to Private Credit.
- COAERS Staff and Consultant will continue to review and evaluate research, surveys and suggestions of best practices for the investment management and execution of the program.

The following Strategic Plan is presented to the Board for its consideration.

¹ COAERS' target allocation of 10% to Private Credit was established by the Board in September, 2023.

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I. Private Credit Program Objectives

A. Investment Objectives

COAERS objectives of the Private Credit Program are to:

- 1. Provide returns that exceed an appropriate publicly available benchmark
- 2. Diversify the Fund's sources of risk and return; and
- 3. Reduce Fund volatility

These objectives are reviewed annually. Specifically, the objectives are as follows:

Primary Objective: Provide a total return to the Fund (net of fees and carried interest) that exceeds the annual return of the Morningstar LSTA U.S. Leveraged Loan Index by 200 basis points over rolling ten-year periods and maintain a well-diversified exposure to Private Credit of 10%² within a range of 7% to 13%. Through the diligence process, Staff and Consultant expect to identify managers that will perform above median. Unless an investment is expected to meet or exceed this minimum return goal, it should not be considered.

Secondary Objective: To diversify the Fund by investment type and by manager to reduce manager and asset specific risk. Investments will not be undertaken to meet the secondary objective if they do not also expect to meet the primary objective.

Tertiary Objective: To reduce total portfolio volatility by investing in asset types that have a low statistical correlation with other asset classes. Investments will not be undertaken to meet the tertiary objective if they do not also expect to meet the primary and secondary objectives.

COAERS short-term investment objectives are outlined in the Annual Investment Plan (a separate document) which is prepared by COAERS Staff and Consultant and approved by the Board annually. The Annual Investment Plan outlines how the portfolio will be managed over the following calendar year in order to best comply with COAERS Private Credit long-term investment objectives.

² COAERS' target allocation of 10% to Private Credit was established by the Board in September, 2023.

II. Asset Allocation

A. Current Allocation

COAERS allocation to Private Credit shall remain within the limits authorized by the Board and incorporated in the Fund's Strategic Asset Allocation. The target allocation is 10% with a range of +/- 3% of the total fund (based on the net asset value of the invested portfolio). COAERS recognizes that it is necessary to make capital commitments in excess of the target allocation in order to achieve and maintain its 10% target.

An important implementation goal for the Fund is to spread out the timing of new commitments so as to avoid an undue concentration of commitments in any one calendar year. Vintage year is defined as the year in which a private market fund makes its first capital call. It is considered prudent to spread commitments over several vintage years to eliminate the risk that any single year generates poor returns across the asset class, also known as "vintage year risk". Over the long term, it is expected that the amount of new commitments added to the portfolio each calendar year will increase slightly to garner the benefits of time diversification and match the expected growth of COAERS total plan assets. As a new allocation for the fund, it will likely take several years to achieve the target allocation.

The factors that will impact COAERS exposure to the asset class and fluctuations within the range are:

- Changes in the overall assets of the pension fund
- Unrealized appreciation and depreciation of underlying holdings in the Private Credit Portfolio
- Timing of distributions and contributions in the Private Credit Portfolio
- Annual commitments within the Private Credit Portfolio

III. Portfolio Diversification

A. Diversification

A portfolio of diversified investments reduces the variability of returns that, in turn, reduces risk. Diversification in the alternative investment asset class is achieved by investing in a number of different partnerships or separately managed accounts (SMAs) with varying investment styles, each operating in a variety of industries and geographies. Further, by spreading out the commitments to Private Credit partnerships over a period of time, an investor is able to reduce the exposure to vintage year risk in the asset class.

The Portfolio's diversification will be driven by the following five events:

- 1) commitment pace,
- 2) types of investment strategies utilized,
- 3) pace of capital invested by the fund managers,
- 4) valuation changes in underlying investments, and
- 5) timing of exits from underlying investments.

The interaction of these five factors will cause the diversification at any reporting date to differ from the Target Portfolio diversification.

COAERS Private Credit Portfolio may include five Primary Sector allocations within its portfolio: Direct Lending, Distressed Debt, Real Assets Debt, Mezzanine/Bridge Financing, and Credit Special Situations. Unlike public markets, where benchmarks

include exposure to non-U.S. regions, international exposure is not viewed as a Sector but rather a geographic allocation that is regarded as a separate consideration within each of these Sectors. These Sectors are defined as follows:

Private Credit Sectors

Direct lending - Provides a source of capital for companies, often in the form of senior financing alternatives, including revolving credit facilities, term loans, delayed draw term loans, second lien loans, and unitranche facilities. These loans often support platform acquisitions, portfolio company add-ons, recapitalization, and refinancings. The objective is to provide the fund's investors with high current income, emphasizing capital preservation and attractive risk-adjusted returns.

Distressed debt - Investment into the debt of a business that is suffering and needs help. The distress could be from operational hardship, industry hardship, or a mix of both. The debt may be in default or nearing a default state when the distressed debt investor steps in. A typical company may have filed for bankruptcy protection or be in the process of a reorganization. The targeted debt instruments are usually senior, junior and equity securities within the capital structure. Some managers seek to gain control of the bankruptcy or reorganization process, so they have more influence on the ultimate outcome. Funds may also seek to arbitrage the value of the debt security with newly issued equity or to liquidate the value of the company through a negotiated workout. Distressed Debt trading strategies tend to be more cyclical than control strategies and therefore are not as attractive under all market conditions.

Asset Backed Debt – Includes loans on real assets, primarily real estate and infrastructure projects. This category may include investments backed by equipment or other assets.

Real estate debt - Private real estate debt funds have multiple strategies, primarily using real estate as collateral. By issuing senior debt, real estate debt funds have priority over other forms of financing such as mezzanine loans, preferred equity, or equity. The interest payments can lead to a known income stream for the investors, usually monthly.

Infrastructure debt- Provides debt investments related to infrastructure projects (like real estate funds, with an infrastructure focus). Infrastructure debt is an asset class that should provide stable returns and cash flows over long-term horizons due to the fundamental essentiality of these real assets, with low relative levels of default. Senior infrastructure debt is a lower risk profile than junior debt or equity in similar projects.

Equipment/Aircraft Leases –These asset-based finance structures are secured by the cash flows generated by loans or leases against physical assets. The assets include equipment, aircraft, rail, shipping, data centers, solar panels, and other various hard assets owned by corporations and essential to their business and cash flow generation. Some strategies include owning the underlying asset and then leasing it to a business, other strategies entail buying the leases from other entities.

Credit Card and Consumer loan receivables – Generally, this refers to pools of loans or receivables that are backed by an individual's credit, willingness to pay, and, in certain cases, a hard asset. Individuals will look for financing in order to

fund large purchases, including automobiles, college, and home improvements. Consumer loans are generally pooled and can be directly originated or can be purchased in the form of asset-backed securities; these pools are highly diversified with various borrowers and large number of loans within each pool.

Mezzanine/Bridge Financing – These funds typically provide subordinated debt financing for private equity transactions. These debt facilities usually include equity-based warrants. This includes private debt funds that provide short-term loans, also called bridge loans, made in anticipation of intermediate-term or long-term financing. Mezzanine funds are characterized by lower risk, higher capitalization, and cash flow-oriented assets. Investments are characterized by debt instruments with current pay cash coupons and warrants which allow the portfolio to share in the equity appreciation of the company. The securities are typically unsecured junior obligations.

Credit Special Situations - Special Situations include funds that have broad mandates such as a fund that invests in subordinated debt, distressed debt, or funds that purchase diversified secondary interests. These funds may include:

Credit Trading – Typically involves acquiring a credit instrument (e.g., an issuer's bonds) trading at a price that the investor believes presents a compelling value, perhaps because the overall market may be misjudging the ability of the issuer to meet its debt obligations.

Direct Origination or Capital Solutions – Focused on making direct loans to companies that cannot access traditional credit due to financial or operational challenges. Investors can originate a loan with strict covenants and at an interest rate well above typical bank loans to help a company refinance existing debt. Another term often used for this strategy is "Loan-to-Own," as the lenders structure the credit to allow them to gain control of the borrower if it misses any of the covenants.

Distressed-for-Control – Invest in corporate credit to gain control of a company through a debt-for-equity restructuring. To achieve control, the strategy requires acquiring significant positions in the credit to play an active role in any restructuring.

Secondary fund of funds are defined as funds that acquire multiple pre-existing limited partnership interests. Investments are usually made at a discount to the net asset value of the interest (referred to as the Par Value). By investing through the secondary market these funds may establish positions in funds at a lower cost than the primary fund investors and with a shorter duration.

Secondary investments, where COAERS would directly acquire a limited partnership interest in an existing fund, would be categorized into the appropriate Sector based on the strategy of the partnership.

COAERS defines Private Credit investments as partnership investments in Direct Lending, Asset Backed Debt, Real Estate and Infrastructure Debt, Specialty Finance, Distressed Debt, Special Situations, and other Private Credit Sub-Sectors that can take the following forms:

- Partnership investments through primary fund commitments
- Partnership investments through secondary fund investments

- Partnership investments through primary fund of funds vehicles
- Partnership investments through secondary fund of funds vehicles

Sector allocations will be addressed in Section III.B and COAERS Annual Investment Plan will address the execution of proper investment strategies within each Sector and the appropriate form of investments, taking into account macro economic and market factors.

B. Sector Allocation

COAERS primary objective is to generate attractive risk-adjusted returns and reduce volatility. Private Credit is intended to be a well-diversified program that is currently in a ramp-up period to achieve the 10% target allocation to the asset class. The objective is to prudently grow overall exposure to the asset class while opportunistically positioning the portfolio to continue generating attractive returns and reduce volatility.

During the ramp up phase, allocations to individual strategies within the Private Credit market may appear to be somewhat concentrated. The Fund should strive toward the following allocation targets and ranges (all specific to Private Credit):

	Target	Low	High
Direct Lending	35%	30%	40%
Distressed Debt	20%	15%	25%
Asset Backed Debt	20%	15%	25%
Mezzanine/Bridge Financing	15%	10%	20%
Credit Special Situations	10%	5%	15%

C. Geographic Region Diversification

The number of international opportunities for private credit investors has increased substantially over the last few years as private credit markets outside the U.S. have matured. However, due to more developed markets and regulatory regimes, Staff recommends emphasizing the more proven markets of Western Europe (including U.K.) and select Asian markets and putting less emphasis on the opportunities available in emerging markets such as Latin America and Eastern Europe. Large companies continue to rationalize resources and focus on their core competencies to compete. Smaller businesses continue to consolidate across borders to achieve the critical mass necessary to compete. Family-owned businesses started after World War II continue to address succession issues as the next generation seeks broader career opportunities and the original owners seek liquidity. All of these factors are creating opportunities for buyout firms, both large and small, to utilize their expertise in industry sectors, company operations and deal structuring to produce attractive risk-adjusted returns for their investors. This in turn lends itself to opportunities in the private credit sector.

Asia is made up of several growing economies that continue to develop the infrastructure and expertise needed to foster attractive risk-adjusted private market returns. The long-term prospects merit attention from both Staff and Consultant and are likely to become an increasing part of COAERS long term diversification.

Both Staff and Consultant will continue to review opportunities within these markets with the objective of adding select opportunities to Private Credit over time.

D. Industry Sector Diversification

COAERS will seek to diversify across all major sectors in the economy. However, it should be noted that this diversification will be a function of the types of managers and strategies pursued by the program. Unlike Private Equity where managers may specialize in specific sectors, Private Credit managers tend to (in aggregate) diversify across many sectors of the economy.

Staff suggests that specialization in certain industries can enhance a manager's ability to add value to its portfolio investments and reduce risk through the application of seasoned expertise. This can result in attractive risk-adjusted returns for limited partners. In these instances, specialized managers (i.e. managers focused on healthcare, financial services, energy, etc.) that meet COAERS rigorous investment criteria should be considered for the portfolio.

E. Manager Diversification

COAERS is currently invested in a single partnership in Direct Lending. Staff and Consultant will continue to seek additional opportunities to diversify the portfolio across the metrics discussed in this document.

As a nascent program, COAERS believes that managers should be added selectively to the portfolio only if they achieve the goals set forth in this Plan or provide a strategic dimension. Selectively adding top quality firms to which COAERS does not currently have exposure will position the program to generate enhanced returns and lower volatility.

IV. Program Management

The selection and management of assets in Private Credit shall be guided to generate a high level of risk-adjusted return, provide a moderate amount of current income, and to maintain prudent diversification of assets and specific investments in accordance with COAERS Objectives.

Roles and Responsibilities

The roles and responsibilities of Board, Staff and Consultant are defined in the Investment Policy Statement adopted by the Board of Trustees.

A. Manager Identification

COAERS Staff and Consultant will utilize a rigorous sourcing, screening and due diligence process to identify and select the highest quality managers that have the greatest likelihood of achieving the objectives of COAERS Private Credit program.

This process is very resource intensive requiring a proactive outreach effort to find and source compelling offerings and increase the market presence of the institution. As capital continues to flow into the private credit markets a program that is only reactive in deal sourcing may miss out on a significant portion of the market's offerings. COAERS Staff and Consultant will on average source and screen over one hundred offerings per year in order to find the highest quality opportunities that fit COAERS Private Credit program requirements.

Secondary Program

COAERS Staff and Consultant will seek to improve long-term returns and add additional exposure through the acquisition of attractively priced secondary investments. In addition, the existing portfolio will be actively monitored and managed to take advantage of attractive market pricing in order to maximize the potential returns for each portfolio partnership. Dispositions may take place after significant evaluation of market pricing in comparison to potential future returns. The impact on manager relationships will also be considered.

Information regarding COAERS secondary program is attached as **Appendix B.**

B. Investment Selection Criteria

COAERS Staff and Consultant will utilize a rigorous due diligence process to screen and select fund managers based upon certain qualifications that are particularly important. These characteristics apply to all prospective investments. These characteristics include:

- 1) **Experience**. There must be demonstrated long-term experience of the core investment team particularly as it relates to their defined investment focus. COAERS recognizes that with first and second time funds, this experience may have come from several different sources.
- 2) Record. The track record of the manager must be clearly superior through more than one economic cycle. This record must be consistent and include a review of all individual investment records. This record will be compared with those of other managers, as well as a number of benchmarks. Again, with a first or second time fund, different partners may have investment track records from different sources. It is particularly important with first time funds to ascertain that individual partner track records are accurate and that these partners are not taking credit for deals where they were not the principal lead at their prior firms.
- 3) <u>Organization</u>. The organization must be able to provide complete documentation of all aspects of sourcing, investing, monitoring, and investor reporting. There must be oversight and backup capabilities.
- 4) <u>Continuity</u>. The general partners in the firm should have invested together, with little turnover, for a significant period of time. Personal chemistry and career objectives of the partners of the general partner should be aligned to provide confidence in the stability and effectiveness of the investment team throughout the life of the partnership. A first time fund will not be able to meet the first criteria but they must demonstrate a cohesiveness and alignment of interests across the investment team.
- 5) <u>Common objectives</u>. The investment objectives of the manager and COAERS must be parallel; that is as measured by duration, focus of the fund, and return objectives.
- 6) <u>Reputation</u>. The investment professionals must be people of good character and integrity, and have an acknowledged stature in the investment and business communities.

C. Investment Due Diligence Process

COAERS due diligence process will be conducted by COAERS Staff and Consultant to determine that each investment opportunity meets the investment selection criteria. No

investment will be recommended to the Board without the completion of full due diligence. COAERS investment due diligence process is summarized below.

All prospective investments are analyzed in five stages:

Stage 1: Preliminary Screening

Objective: To review current market opportunities and future market opportunities to determine, through preliminary conversations and from the private placement memorandum, whether the proposed investment has the potential to meet COAERS required investment objectives. During the preliminary screening stage the following investment issues are addressed:

- (1) What is the quality and background of the general partner?
- (2) Is the investment objective desirable and will the stated strategy accomplish the objective?
- (3) Can the required returns be achieved given the proposed structure of the investment?

All prospective investment opportunities are reviewed by Staff and Consultant. Investments that clearly do not meet COAERS objectives are rejected.

If it is determined during Stage 1 that a proposed investment has a reasonable probability of addressing these key investment criteria, then the investment advances in the due diligence process to Stage 2.

Stage 2: Preliminary Due Diligence

Objective: To determine through face-to-face meetings whether the general partner's strategy is valid and timely and will meet the required investment objectives of COAERS. During this preliminary due diligence the following investment issues are addressed:

- (1) Is the general partner's presentation of the offering consistent with the offering memorandum?
- (2) Does the general partner respond productively and honestly to probing questions about its investment history, commitment to the success of the partnership, chemistry of the investment team, and ability to repeat successes of the past in current environments?
- (3) Does the general partner make a strong and convincing case that its strategy will meet or exceed COAERS return objectives?

This phase includes completing COAERS Private Credit Investment Questionnaire included as Appendix A of this document. If it is determined during Stage 2 that a proposed investment has a reasonable probability of addressing these key investment criteria, then the investment advances in the due diligence process to Stage 3.

Stage 3: Final/Comprehensive Due Diligence

Objective: To determine through comprehensive due diligence whether the potential investment meets the key investment criteria.

- (1) Through interviews with the management team and staff, as well as reference checks with other sponsors, previous and prospective investors and management of portfolio companies, Staff and Consultant make an independent appraisal of the management team's depth and breadth of experience, character, motivations and working dynamic. In addition, COAERS Staff and Consultant assess whether the management team has the experience, deal flow and resources necessary to successfully implement the investment strategy.
- (2) Perform a careful review of the manager's due diligence process, record keeping, investor reports and audits. Review the manager's financial condition. Review the partnership organization and management, ownership of the general partner, incentive compensation and employee retention issues.
- (3) Determine whether the investment objective can be achieved given the fund's industry and sector focus and type of investment activity. Will current and expected market conditions allow portfolio companies to be nurtured to a sufficient size such that they can achieve and accomplish return objectives?
- (4) Evaluate whether the proposed terms of the investment are such that there are fair economic incentives to all partners, general and limited, and whether sufficient controls are in place to guide management's activities such that successful investment performance on the part of the management team will accrue equitably to all partners.
- (5) A litigation questionnaire (included as part of COAERS Private Credit Investment Questionnaire) is reviewed to determine whether the general partner or any of its partners are or have been involved in any material litigation which would bring into question their integrity, operating methods, financial viability or would disrupt the investment process.
- (6) During this stage, the sponsors will make a presentation to both COAERS Staff and Consultant, if either has not already met or is otherwise unfamiliar with the sponsor.

If it is determined during Stage 3 that a proposed investment has a high probability of addressing these key investment criteria and with the concurrence of COAERS, then the investment advances in the due diligence process to Stage 4.

Stage 4: Commitment and Documentation

Objective: Given COAERS investment and diversification objectives, determine the appropriate size of the investment and begin the negotiation and documentation of acceptable terms.

- (1) Determine the appropriate commitment level relative to the size of the fund and any investment stage, industry focus, and portfolio construction considerations.
- (2) Begin negotiation of critical document terms, including key man and clawback provisions, management fees, organizational expenses of the partnership, distribution and carried interest policies of the general partners. Terms will be reviewed individually and in the aggregate.
- (3) Partnership terms will also be compared to standards of best practices.

(4) In order to facilitate an orderly review of the terms of the agreement a summary of terms will be created.

If it is determined during Stage 4 that a proposed investment's terms, as negotiated, materially address the aforementioned key investment criteria, COAERS Staff and Consultant will make the appropriate investment recommendation to the Board. Each recommendation includes a thorough written and oral presentation. Upon the Board's approval, the investment advances in the due diligence process to Stage 5.

Stage 5: Finalizing Documentation and Closing

Objective: To finalize the terms and conditions of the partnership agreement and close on the commitment.

- (1) Review investment documents to ensure that all negotiated terms and conditions are incorporated therein.
- (2) Review documentation with outside counsel for their concurrence on compliance with material terms and structural protection of COAERS.
- (3) All investments must be underwritten and assets managed by a qualified investment manager acting in a fiduciary capacity to COAERS. Once retained, an investment manager must acknowledge in writing the manager's fiduciary responsibility to the Trust and agree that these objectives and policies will be observed. It is expected that, at all times, the manager(s) will conduct themselves as fiduciaries in conformance with the laws, rules and regulations promulgated by the State of Texas, and the Board of Trustees unless a lesser standard of fiduciary duty is necessary because of generally prevailing industry standards for an investment of that type and nature. Any such generally prevailing industry standard shall be established upon the written advice of the investment consultant and agreed to by legal counsel.
- (4) All closing documents, the summary of terms, as well as the review letter from outside counsel will be provided to the Chief Investment Officer to confirm completion of the review processes. COAERS Staff will prepare and present closing documents to the appropriate person or persons for execution.
- (5) Upon closing the investment, organize the completed due diligence file.

After closing the investment, active monitoring of the fund's compliance with the partnership agreement and the progress of portfolio investments begins.

D. Review of Industry Best Practices

COAERS Staff and Consultant shall continue to review and evaluate research, surveys and suggestions of best practices for the investment management and execution of the program. To this end, COAERS will take into consideration the suggestions of best practices put forth by the Institutional Limited Partners Association (ILPA) which are intended to serve as a basis for continued discussion among and between the general partner and limited partner communities with the goal of improving the private markets industry for the long-term benefit of all of its participants.

As part of COAERS ongoing efforts to adopt and/or establish best practices, COAERS has established a Code of Ethics. The purpose of this policy is to promote and require transparency in the use of placement agents in connection with COAERS investment

City of Austin Employees' Retirement System

decisions. This Policy formalizes COAERS existing practice of making investment decisions solely on the merits of the investment and in a manner consistent with the fiduciary duties of the COAERS Board.

Additionally, the Investment Implementation Policy clearly identifies procedures to be followed by any organization utilizing a third-party marketing firm or placement agent. These policies are incorporated into this document by reference.

E. COAERS Due Diligence Questionnaire (DDQ)

As part of COAERS due diligence process, each manager shall be asked to provide or complete a thorough due diligence questionnaire. To the extent a manager does not have a prepared DDQ, COAERS and Consultant will provide a due diligence questionnaire to be completed. See **Appendix A** for a sample questionnaire.

V. Monitoring of Objectives and Performance

- A. General. The deployment of assets within Private Credit will be monitored for consistency of the manager's investment philosophy, returns relative to objectives and investment risk as measured by asset concentration, exposure to extreme economic conditions, market volatility, and target allocations. COAERS Staff and Consultant will monitor partnerships on an on-going basis. The portfolios of each vehicle will be analyzed in depth at least annually to ascertain consistency with the stated investment philosophy, objectives, asset allocation criteria, and the guidelines and restrictions set forth in this Statement. Interim internal rates of return for each investment as well as the total Program will be calculated on an ongoing basis and evaluated on a five-year horizon.
- B. <u>Program Evaluation</u>. Due to the long-term nature of these asset classes, the progress of the total Program should be evaluated over a minimum of five-year rolling periods, although the progress of the individual investment managers will be monitored at least annually.
- C. Reports Provided by Managers. Each investment manager will provide COAERS Staff and Consultant with quarterly reports in sufficient detail in order to assess performance of its investment in each entity. Specifically, each manager will provide performance information concerning investment, financial statements for the partnership, and a capital account statement for COAERS. Each manager shall report on a timely basis, all material developments in the portfolio, including but not limited to personnel changes, contractual problems or amendments, distribution issues and other items required for monitoring the Program.

D. <u>Performance Reporting</u>.

Performance in private markets is typically calculated using an internal rate of return (IRR) methodology, versus the time weighted rate of return (TWR) used for public markets reporting. Because investors are able to quickly move funds in and out of public markets, TWR is generally used to measure performance for public markets, as it does not consider the timing of cash flows in the calculation of returns. In contrast, IRR is the annualized implied discount rate calculated from a series of cash flows. As the manager, not the investor, controls the timing of cash flows, the industry standard is to use the IRR as a means of measuring and comparing performance to funds with similar strategies of a similar vintage.

COAERS will establish a means for reporting performance in Private Credit using both methodologies. For purposes of reporting on the program, the IRR methodology will be used. This typically is reported with a one-quarter lag due to the timing of receiving updated information. The Fund level quarterly performance reports provided by COAERS General Investment Consultant will use a time weighted return calculation to provide consistency in reporting for all fund assets.

On a semi-annual basis, a performance report for the Private Credit Program will be provided to the COAERS Board. Performance measurement will be based upon Internal Rates of Return (IRR). The IRR is based on cash-on-cash returns with consideration for residual value of holdings, calculated net of management fees, expenses, and the general partners' share of carried interest, as contained in the manager's financial statements. The IRR calculation is cumulative,

- calculated quarterly, and shall serve as the definitive measurement of a vehicle's performance. The performance of each investment vehicle will be compared against the performance of comparable investments.
- E. <u>Cash Flow Projections</u>. On an annual basis, the Program and its cash flows will be reviewed for the purposes of evaluating target allocations and the upcoming year's commitment level.
- F. <u>Monitoring and Evaluation Responsibility</u>. Due to the time-intensive nature of private markets investing, Staff and Consultant will work closely to ensure there are sufficient resources to oversee the planning, implementation, and monitoring of the Program.
- G. <u>Performance</u>. Performance measurement reports will be the responsibility of the consultant in conjunction with the Staff.
- H. Review of Investment Objectives and Guidelines. This Statement of Objectives and Guidelines will be reviewed at least annually, in order to determine whether there is continued applicability. Any changes in policy approved by the Board will be incorporated into revisions to this Statement.

Appendixes VI.

Appendix A

COAERS - PRIVATE CREDIT INVESTMENT QUESTIONNAIRE

I.	<u>Or</u>	ganization
	4	Diagon provide the following information for the energy's main office as

<u>Or</u>	ganization_
1.	Please provide the following information for the sponsor's main office as well as all branch offices, if any:
	Address: Phone: Fax: E-mail: Website:
2.	Fill in the following general fund information:
	Legal name of fund:
	Name of general partner and/or investment sponsor:
	Legal structure of fund:
	Date and jurisdiction of fund formation:
3.	General Partner/Fund Sponsor General Information:
	Full legal name of the general partner:
	Legal structure of the general partner:
	Date and jurisdiction of the general partner's formation:
4.	Name of all placement agents with their compensation structure. Is there any affiliation between the general partner and a placement agent? If so, describe.

II. General Partner Structure and Background

- 5. What is the current structure of the firm? Please include employees at all levels.
- 6. What is the ownership structure of the general partner entity? (Include percentage ownership.)
- 7. How are the fees and carried interests allocated among the principals and others? Please be specific. How is this split determined? What provisions are in place to promote the retention of principals, and change allocations over time?
- 8. What, if any, are the carried interests and ownership interests in the General Partner or Management Company held by individuals or business entities not employed by the firm?
- 9. What is the firm's compensation structure? What are the vesting provisions? Are there vesting provisions for future general partner additions?
- 10. What is the general partner's capital commitment to the fund? What is the amount committed by each participant in the general partner? What is the source for each contributor's funds?
- 11. Please provide a detailed three year budget for the general partner.
- 12. Please describe the firm's professional turnover for the last five years, citing reasons for each departure and contacts for departed partners.
- 13. Are any new hires expected in the near term? Please explain at what level these new hires are expected, and their anticipated compensation (salary, bonus, participation in carried interest).
- 14. What is the decision-making process internally among the principals for (i) internal matters, (ii) new partners, and (iii) partnership operations and management decisions?
- 15. Does the firm have a succession plan in place? If so, please describe.

- 16. Who are the principals of the general partner? How long has each of the principals been a participant of the general partner?
- 17. Please complete the following table which addresses the principals' relationship with each other prior to becoming principals of the general partner.

Principals	Number of Years Worked Together Prior to Forming General Partner	Nature of Relationship

- 18. Identify all prior funds each principal has been involved with in any capacity. What is the status of those funds, and how much of the principals' time is committed to each fund?
- 19. Do any of the principals have any conflicts of interest with the current fund?
- 20. Is the firm or any of its principals involved in, or a partner in, any other businesses outside of the firm's activities? Please describe.
- 21. Has the firm or any of its principals (including former principals) ever been involved in <u>any</u> litigation? Please describe. Are any cases still open or pending? Please have each principal complete the <u>Litigation</u> <u>Questionnaire</u> attached as Schedule A.
- 22. Do any of the principals have <u>any</u> health or personal issues that should be of concern? Please explain.

III. General Partner Qualifications

- 23. Please provide four (4) references for each principal. Include, at a minimum, references from investors, co-investors, management representatives and consultants.
- 24. Please provide the internal rate of return (IRR) of all prior funds which the firm has managed. Be sure to show gross and net returns for each individual fund and in the aggregate for all funds. Also, provide returns for realized and unrealized investments for each fund and in the aggregate.
- 25. Please provide cash flows for each previous fund, with each cash event labeled by date and investment.
- 26. For each principal of the general partner, please provide the following information for every investment considered a part of that individual's investment record.

Name of Investment	\$'s Invested and Date of Investment	Individual(s) Responsible for Sourcing Deal	Individual(s) Responsible for Monitoring	Individual(s) Responsible for Exit	Total Value Realized from Investment and Date of Realization	IRR

- 27. Please identify each principal's area of expertise. Identify the number of years each principal has worked in his/her area of expertise.
- 28. Please complete the attached table regarding board memberships.

Name of Principal	Current Board Memberships	Prior Board Memberships

- 29. How many board seats will each principal be expected to hold for this fund? How does this compare to prior funds?
- 30. Using the table below, identify the amount of time (in percentages) that each principal will dedicate to each role for this fund.

Name of Principal	а	b	С	d	е	f	g	h	Total

- a. generating deal flow; b. reviewing opportunities; c. conducting due diligence; d. negotiating and structuring; e. administrative/other internal activities; f. outside activities; g. monitoring portfolio investments in prior funds; h. monitoring portfolio investments in current fund.
 - 31. How does the investment committee for the fund operate? How are decisions made? Is consensus required from each partner, or is a simple majority sufficient?
 - 32. How often do the principals meet as a group? Are meetings typically held in person or telephonically? What forum do the principals use for information and idea sharing?
 - 33. What is the investment capacity for the firm with its current structure and staff?
 - 34. What is the average number of opportunities reviewed by the firm annually?
 - 35. Has the general partner warehoused or otherwise specified or targeted any deals for this fund? If so, please provide information on all such deals.
 - 36. What are the proposed funds' investment strategy(s) and objectives? What is the anticipated investment range in terms of size for the fund's investments? Are these the same as the objectives, strategies, and average size implemented in prior funds? If not, explain the differences.

- 37. What is the targeted rate of return for the fund? Please provide both gross and net return targets. Why does the general partner feel such returns are achievable?
- 38. Who are the firm's competitors? Which are currently viewed by the general partner as the leading firm(s), and why?
- 39. How do you differentiate your fund from competitive funds?
- 40. To what extent are outside consultants used for due diligence and monitoring of portfolio investments? Please list consultants used over the last three years and the nature of their engagement with the firm.
- 41. What outside resources and strategic relationships does the general partner rely on?
- 42. Will the partnership participate in hostile investments?
- 43. What restrictions are proposed for starting new partnerships?
- 44. What are the firm's documentation procedures? Please attach a sample of each of the following documents: due diligence checklist, deal log, a typical investment term sheet that you would use, and a summary investment memorandum.
- 45. What is the firm's valuation policy and methodology?
- 46. Is the firm GIPS compliant?
- 47. Is the partnership permitted to re-invest proceeds? What rules govern those re-investments?
- 48. What is the fund's approach to UBTI related investments?

IV. Limited Partners

49. Please complete the following table for all limited partners, for the current fund and all prior funds.

Limited Partner	ERISA (Y/N)	Contact Name/Phone	Name of funds committed to	Commitment amounts	Commitment to this fund or explanation for opting out of this or future funds

- 50. Have you entered into any side letter agreements or other arrangements with any limited partners? Do you anticipate doing so prior to or at the final closing? Are there any 'most favored nations' provisions? Are there 'special' limited partners or limited partners who also have investments in, or special rights from, the general partner or manager?
- 51. Does the fund currently have or expect to receive commitments from any "strategic" limited partners? What are the expectations of these LP(s)' investment(s) in this fund?
- 52. What co-investment rights are afforded the limited partners of the fund? What about GP co-investment rights?

V. Legal and Accounting

- 53. Who is the partnership's legal counsel? Who is the general partner's legal counsel? How does counsel address conflicts between the partnership and the general partner?
- 54. Which firm will audit the partnership at year-end? Provide copies of the last four quarterly reports and the last three years' audited year-end financials for your prior fund. Also include any investor communications distributed during that period.
- 55. Please provide contact names with addresses and phone numbers for all legal counsel and the accounting firms the sponsor has engaged over the past 5 years. Please provide a brief description of the nature of the engagement.

VI. Principal and Key Personnel Profile

Please complete this page for each principal and all key personnel who will be involved directly or indirectly in the partnership.

- 1. Name:
- 2. Home address:
- 3. Home phone:
- 4. Date of birth:
- 5. Do you have any health issues that may impair your ability to perform your responsibilities as they relate to the partnership?
- 6. What professional licenses, if any, do you hold?
- 7. Please attach a detailed biography for each of the principals. Include complete month and year employment information for the last 10 years.

END OF QUESTIONNAIRE

SCHEDULE A COAERS LITIGATION QUESTIONNAIRE (To be completed by each individual General Partner)

RES	SPONDENT NAME:
INV	ESTMENT PROPOSAL NAME:
Note	e: Please provide details of any "Yes" answers on a separate sheet.
	Are you now, or have you ever been, a party to any criminal action or civil action involving a claim of more than \$250,000?
	Yes No
	Has any organization of which you have been a member of senior management, or in which you have had a meaningful ownership interest (greater than 5%), ever been a named defendant in any criminal action or civil action involving a claim of greater than \$500,000?
	Yes No
	Have you or any organization in which you have had a meaningful ownership interest (greater than 5%), or of which you are, or were, a member of senior management ever filed voluntarily, or had filed against you involuntarily, a bankruptcy petition?
	Yes No
	Has any licensor, franchisor, or master distributor ever initiated proceedings to terminate a business relationship with you or any organization of which you have ever been a member of senior management?
	Yes No
	Has any business partner, joint venture, or subcontractor ever sought injunctive relief or arbitration to terminate any business or contractual relationship?
	Yes No
	Are you aware of any prospective litigation to be filed in which you, your firm or any principal in your firm will be a party?
	Yes No
_	
Date	e: Signature

Appendix B

COAERS – PRIVATE CREDIT SECONDARY PROGRAM

Summary

The opportunity to selectively acquire a partnership interest in the secondary market may be attractive. While COAERS is just embarking on a private markets program, a secondary program provides a means to more actively manage the Private Credit program to meet its long-term objectives.

COAERS expects a Secondary Program to become an integral part of the Strategic and Annual Investment Plans which are reviewed annually by COAERS Staff and Consultant and approved by the Board.

The Secondary Market - Background

Commitments to private credit funds have grown dramatically during the past decade with close to \$2 trillion of capital committed since 2013³ and more than 60% of that total having been raised between 2018 and 2023. The size and number of commitments to private credit funds have created a large base of investors that may not be willing or able to hold these illiquid positions to maturity. Early liquidity needs and changes in strategy on the part of some of these investors have led to an increasing volume of secondary activity that is expected to approximate \$50 billion by 20264.

As the private credit industry matures and grows, institutional investors are increasingly aware of the opportunity to more actively manage their existing portfolios of private markets investments. Some institutions are looking to rebalance their private exposure, generate liquidity, adjust the risk profile of a portfolio, eliminate mature, smaller partnership interests, or reduce the number of holdings being administered. The awareness among investors that the secondary market provides a viable solution to these needs is rapidly expanding. An increasing number of institutions are pursuing opportunities to acquire and sell secondary interests in private credit funds.

COAERS Secondary Purchase Program

The purchase of existing limited partnership interests in the secondary market has become an effective tool in the management of institutional alternative investment programs. The main objective of COAERS Secondary Purchase Program is to strategically and tactically increase investment exposure to certain existing fund managers or to gain access to funds with strategies and managers additive to the COAERS portfolio, with the goal of improving the long-term economic returns of the program. Secondary investments would typically consist of acquiring an interest in a private credit limited partnership from an existing investor that is looking to gain liquidity prior to the full term of the partnership. Attractive secondary purchases provide numerous benefits, such as:

- Investing in an existing portfolio, not a blind pool.
- > More mature funds have shorter average holding periods due to nearer term realizations.
- Ability to strategically and tactically manage a portfolio's diversification.
- Possibility of purchasing assets at a discount to current carrying value and a further discount to fair market value.

³ Source: PitchBook

⁴ ibid

The increasing supply and broadening access to secondaries has enabled many institutional investors to successfully move beyond the traditional buy and hold mind set and begin to actively manage their portfolios through the acquisition of secondary partnership interests.

Purchase Program – Recommended Investment Guidelines

- ➤ All investments must meet COAERS Private Credit Objectives.
- Investments would be considered only in funds managed by existing managers or those managers who meet all the criteria for a primary fund investment.
- > All investments must be within COAERS investment sectors.
- The program would consider both mature secondaries, funds with more than 50% of capital funded, as well as hybrid secondaries, funds with less than 50% of capital funded.
- ➤ Investments would opportunistically focus on single Limited Partnership interests, rather than broad portfolios of multiple interests.
- Staff would have authority to acquire secondary interests in existing partnerships at or below the capital account value, or, where appropriate, at modest premiums to capital account value. Board approval would be required for investments at a significant premium to the capital account.
- ➤ All secondary transactions require the consent of COAERS consultant. The Fund's Consultant would have to provide a written opinion that the transaction is appropriately priced given the circumstances, meets all objectives of the program, and agrees with the purchase prior to execution.
- Any single fund investment would be no more than \$20 million in purchase value which includes the purchase price plus any remaining unfunded commitment.
- ➤ Limit maximum exposure (existing investment plus secondary purchase) to not greater than 20% in limited partnership interest of a single fund and, no single partnership investment can constitute more than 20% of COAERS total Private Credit adjusted reported value partnership holdings at the time of purchase once the program is considered fully invested. Limit maximum exposure (adjusted reported value plus any remaining unfunded commitment) to any sponsor such that the aggregate investment with any sponsor across multiple funds is not greater than 30% of COAERS total Private Credit adjusted reported value partnership holdings at the time of purchase.

Percentage of Annual Allocation

COAERS Staff and Consultant recommend that secondary investments represent up to 20% of COAERS annual investment allocation for Private Credit. Additionally, any proceeds from the sale of partnership interests through the secondary sale program would be available for reinvestment in secondary interests.

Purchase Program - Investment Process

COAERS Staff in conjunction with its Consultant would implement the Secondary Purchase Program through the following process:

Sourcing: Secondary investment opportunities would be sourced directly from General Partners and Limited Partners of private credit funds where COAERS has existing exposure, or on which COAERS Staff and Consultant have performed due diligence and believe are additive to the program. Opportunities may also be sourced through secondary managers and intermediaries.

Screening: Investments would be considered in existing partnerships that provide strategic and/or tactical benefits to the overall Private Credit program. This includes partnerships that have the potential to enhance returns and/or help manage sector exposure for COAERS Private Credit program.

Evaluating: Secondary opportunities that fall within the Secondary Program's guidelines would be evaluated to determine if a full valuation analysis should be conducted. Those that meet the criteria of enhancing potential returns and/or helping manage sector exposure will be analyzed and valued by the Consultant and COAERS Staff. A deal by deal valuation analysis will be conducted to estimate the Fair Market Value of the partnership and provide negotiation strategies including a bidding range.

Offer and Negotiation: If a secondary opportunity meets all of COAERS Private Credit objectives and the guidelines of the Secondary Program, COAERS Staff supported by Consultant will have discretion to make an offer, negotiate a final price and execute transfer documents on behalf of COAERS. Since the purchase of specific partnership interests are unique to COAERS, to the extent negotiations of terms and contracts require legal counsel, outside legal counsel would need to be retained and paid for by COAERS.

Reporting: Staff's semi-annual update report to the Board will include a summary of completed secondary transactions. The information provided will include: Fund Name, Vintage Year, Fund Type, Commitment Amount, Date of Transfer, and NAV.

Monitoring: Secondary investments would be monitored along with all Private Credit investments. Investments would be placed in the appropriate Sector of the portfolio based on the investment strategy of the fund. Staff and Consultant shall seek to report performance of all secondary investments as a separate grouping to track the specific performance of the Secondary Program.

COAERS Secondary Sale Program

Though the potential disposition of existing limited partnership interests in the secondary market can be a complicated process, it can be an effective tool in strategically and tactically managing COAERS Private Credit program. Selling certain interests in COAERS Private Credit portfolio can serve to:

- ➤ Eliminate lower-impact holdings including mature and non-strategic assets.
- > Reduce the number of holdings in the portfolio.
- Provide added liquidity to recycle capital into new private credit investments.
- Adjust the risk profile of the portfolio by adjusting the asset mix.

As COAERS is just embarking on development of a Private Credit Program, Staff does not anticipate any sales of interests in the near to intermediate term. As the program

City of Austin Employees' Retirement System

expands, Staff will consider adding language regarding sales of existing interests for consideration.



Memorandum

То	City of Austin Employees' Retirement System (COAERS)
From	RVK, Inc.
Subject	Private Credit Strategic Plan Review
Date	February 22, 2024

Review of Staff's Private Credit Strategic Plan

Staff's private credit strategic plan is thorough and is largely focused on policy considerations for such a program. As noted, this plan would be incorporated into System governance as an appendix to the Investment Policy Statement. Typically, strategic plans are less policy focused and more geared towards the specifics of portfolio construction. However, given the private markets program is in its infancy, the proposed strategic policy is a reasonable approach which offers guidance on items such as near-term portfolio structuring and oversight. In the future, RVK would recommend a more narrow and focused approach that more closely aligns with a 5-year investment plan, which would supplement any adopted Board policy.

RVK has reviewed each section of the strategic plan and offer the following potential changes for the Investment Committee and Board's consideration:

Policy vs. Forward Strategic Plan:

As noted, the proposed strategic plan is currently written with a more policy focused element than a typical forward-looking strategic plan. There are sections of the proposed plan that are relevant now in year one, but may not be as important to be included in the future. This plan can certainly be amended as the program matures, but RVK typically sees a more clear delineation between policy and plan.

• Private Credit Program Objectives:

As currently drafted, one of the key program objectives is to select managers which fall above median. This is a reasonable goal and one that would result in an attractive overall private credit program; however, we would note some caution in using peer group results as a barometer for success. At times, there may be strategies which fall below median but still meet expectations from a portfolio construction standpoint. For example, an unlevered and conservative direct lending portfolio may be a better investment than something with more risk, even if after 5-7 years it falls below median.

• Total Program Benchmark:

RVK agrees that an index of public leveraged loans plus a 200bp premium is a
reasonable benchmark for the program. Each individual private credit strategy may have
a different benchmark given expected risk and return characteristics, all of which will be
clearly defined in Staff and RVK recommendations moving forward.



Sectors and Sector Allocation:

 The proposed allowable sectors incorporate the vast majority of private credit strategies available in the market. The targets and ranges to each sector are reasonable for a program targeting a consistent return pattern, likely in the high single digits.

Rebalancing:

 As the private credit program will likely not reach its 10% target until sometime in 2027 or 2028, RVK recommends clear language in the Investment Policy Statement relating to the ramp-up period and where the "underweight" to private credit is held in the broader asset allocation construct.

• Program Management:

The roles and responsibilities, as well as the due diligence process, are well
documented. Moving into the future, RVK would recommend moving this language into
the IIP as it is more focused on implementation than strategic planning.

Other Items Already Addressed:

 Prior to the finalization of meeting materials, RVK and Staff worked closely together on additional aspects of the strategic plan. There were a handful of changes agreed to after multiple discussions, all of which are now included in the proposed plan.



To Memorandum

То	City of Austin Employees' Retirement System (COAERS)
From	RVK, Inc.
Subject	Private Credit - Annual Investment Plan
Date	February 22, 2024

Annual Investment Plan

Objective: To set a reasonable commitment allocation to private credit funds that aligns with the strategic plan ranges to various strategy types.

Process: RVK utilizes proprietary software to model the existing portfolio and expected forward commitments. A number of assumptions are made throughout this analysis and include the following:

- Private credit investment cash flow/valuation patterns based on historical data from Pregin Alternatives.
- A custom annualized growth rate for the overall total portfolio, net of spending rate.

Output: The pacing study provides a recommended annual commitment volume to meet the total fund's private credit target.

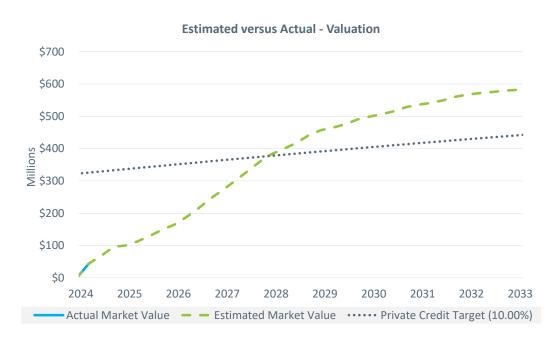
- Vintage commitments shown may be made to one or more investment managers depending on the size of the commitment.
- Likely to approach private credit target slowly estimated sometime in 2027 or 2028 to minimize vintage year risk.

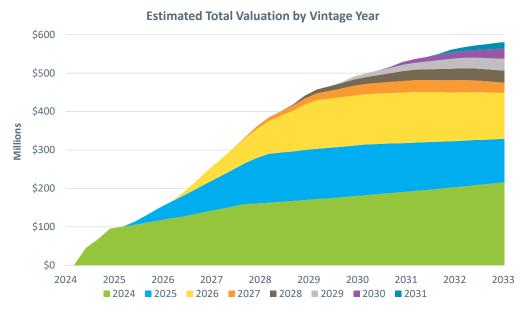
Recommended Commitments

Year	Commitment Amount
2024	\$90 million (done) \$50 million (remaining)
2025	\$140 million
2026	\$140 million
2027	\$40 million
2028	\$40 million

By committing approximately \$140 million over the next three years, with an additional \$40M in the following years, COAERS will gradually move toward the stated target of 10%. As market conditions and the total portfolio value change over time, this analysis will be updated to reflect new pacing amounts on an annual basis. These commitment amounts represent a measured approach to reaching the target and can be adjusted depending on preference of the Investment Committee and Board, plus the quality of opportunities presented in any given year.









Potential 2024 Investments

Selecting high quality private markets investments in any given year is a combination of knowledge of the managers themselves, but also the strategies being raised at the time. As private markets strategies are typically offered in drawdown style vehicles, the fundraising process is limited to a certain window of time; as such, COAERS and RVK will continue to meet with and conduct due diligence on high quality managers offering a variety of private credit strategies and bring forward recommendations that are a good fit for the portfolio. The table below represents a high level summary of potential investment ideas for 2024/early 2025:

Manager/GP	Year	Timing	Strategy Type
Opportunistic Credit Manager	2024	Q2	Specialty Finance / Asset Backed
Direct Lending Manager	2024	Q2	Direct Lending
Opportunistic / Niche Manager	2024	Q2	Opportunistic / Niche
Direct Lending Manager	2024	Q4	Direct Lending
Opportunistic / Niche Manager	2025	Q1	Opportunistic / Niche

Next Steps

RVK and Staff will continue to provide updates to the Investment Committee and Board relating to efforts to identify top tier private credit managers and strategies. As opportunities present themselves, both parties will bring forward independent due diligence and recommendations for the Investment Committee and Board's consideration.

The purpose of the annual investment plan presented here is to provide a high level plan for the remainder of the year. RVK and Staff seek support from the Investment Committee and Board to pursue building out the private credit program as outlined, including the annual commitment amounts.

9. Discuss and consider Investment Practices and Performance Evaluation report

Presented by RVK



COMMITTEE MEETING Agenda Item Information Sheet

AGENDA ITEM 9:

Discuss and consider Investment Practices and Performance Evaluation report

AGENDA ITEM OBJECTIVE

This item is for the Committee to receive the investment practices and performance evaluation report submitted by RVK as required Texas Government Code 802.109.

RELEVANCE TO STRATEGIC PLAN

This agenda item is central to COAERS Strategic Plan Goal 4: Identify and implement leading practices in Board governance, pension administration, and investment management.

RECOMMENDATION FOR COMMITTEE ACTION

Staff recommends that the Committee refer to the Board the acceptance of the RVK report "Investment Practices and Performance Evaluation" as required under Section 802.109 Texas Government Code.

BACKGROUND

This item fulfills the Board's legal requirement under Texas Government Code §802.109, which "requires Texas public retirement systems with assets of at least \$30 million to select an independent firm with substantial experience to evaluate the appropriateness, adequacy, and effectiveness of the system's investment practices and performance and to make recommendations for improving its investment policies, procedures, and practices." COAERS is required to conduct this review at least every three years and the current review is due to the Pension Review Board by June 1, 2024.

In June 2023, the Board selected RVK to complete the report for the current review cycle and make recommendations for improving the System's investment policies, procedures, and practices. RVK will present its recommendations to the Investment Committee.

<u>ATTACHMENTS</u>

- COAERS Investment Practices and Performance Evaluation Executive Summary
- COAERS Investment Practices and Performance Evaluation Report

RVK

Memorandum

То	City of Austin Employees' Retirement System
From	RVK Investment Program Review Team
Subject	Executive Summary of COAERS Investment Practices and Performance Evaluation
	February 22, 2024

Background

RVK was engaged to conduct an independent evaluation of the current investment practices and performance, with a focus on the appropriateness, adequacy, and effectiveness of the City of Austin Employees' Retirement System (COAERS or "the System") and to make recommendations for improving COAERS' investment policies, procedures, and practices.

Observations and Recommendations for Consideration

This Executive Summary highlights the key observations detailed in the COAERS Investment Practices and Performance Evaluation (IPPE). **Sections I – VI** outline our findings; **Section VII** includes a list of recommendations, the background and rationale for which are also contained in the body of the report; and **Section VIII** includes the adoption dates of the recommendations from the 2020 IPPE.

Section I – Analysis of any investment policy or strategic investment plan adopted by the retirement fund and the retirement fund's compliance with that policy or plan.

COAERS's investment program is governed by two separate but related policies:

- 1. The Investment Policy Statement (IPS) serves as the comprehensive "road map" for the investment program, detailing items that, in our judgment, are best practice inclusions in an IPS, such as: (1) Investment Beliefs, (2) responsibilities, (3) objectives and guidelines, (3) risk management, (4) asset allocation, and (5) monitoring used for the management of System assets and fiduciary oversight of the investment program.
 - RVK believes the IPS is consistent with industry best practices.
- 2. The Investment Implementation Policy (IIP) is meant to complement the IPS by providing specifics relating to the selection, contracting, monitoring, and retention of investment managers. It references the reporting strategies used by the System to assist the Board in its duty to monitor and regularly evaluate the design and effectiveness of the processes that define the execution of the investment program, and critically, their congruence with the Board's IPS. The IIP includes sections about reporting the progress toward stated strategic objectives, measuring investment risk, total fund, asset class, and sub-asset class performance compared to stated benchmarks, and retention of investment managers. We observe that the use of a supplemental implementation-



oriented policy statement, such as the one employed at COAERS, is more often seen at larger institutional investment funds and one that RVK believes is a good practice.

RVK believes the COAERS IIP represents a clear and workable extension of the IPS and is consistent with industry best practices.

In RVK's review of the Board and Investment Committee meeting packet and minutes, the Board has reviewed, edited when necessary, and approved changes on at least an annual basis over the last three years. The IIP has also been reviewed on an annual basis.

It is our opinion that both documents reflect best-in-class industry standards related to both policy language and governance related to implementing said policies.

Section II - Detailed review of the retirement fund's investment asset allocation.

Collective efforts of COAERS' Board, Investment Committee, and Staff have led to an effective and well-articulated methodology for selecting a Strategic Asset Allocation policy that is responsive to changes in the System's liabilities and shifts in long-term capital market assumptions. To the extent that Staff exercise their delegated authority to tactically tilt the portfolio, the rationale is transparently communicated and in service of prudent risk management. Discussions around enhancing the portfolio structure and asset class exposures are ongoing and will likely include the addition of private market assets in future iterations of the System's portfolio. Overall, the System has developed a comprehensive approach to managing the portfolio in the ultimate service of the Plan's beneficiaries.

Section III – Review of the appropriateness of investment fees and commissions paid by the retirement fund.

One of COAERS' Investment Beliefs is to gain market exposure and structure the investment portfolio with important considerations given to fees and costs. The System has been very diligent and successful in negotiating fees with investment managers across asset classes in both public and private markets. Investment manager fees, trade commissions, and estimated total plan fee of 0.24% are not only reasonable and appropriate but are considerably lower compared to median universe fee and public peers of similar size, respectively.

It is important to note that the lower fee is a function of asset allocation, structure of the investment program, high utilization of passive management, and efficient fee negotiations. With the recent decision to allocate more into the private markets (private equity and private credit) which carry higher fees than the public market, total plan fees will go up relative to current fees. However, over the years, COAERS has taken a thoughtful approach to structure and implement the investment program and is expected to continue to be an industry leader in managing and



controlling plan costs.

Section IV – Review of the retirement fund's governance processes related to investment activities, including investment decision-making processes, delegation of investment authority, and board investment expertise and education.

Based on our review of COAERS' policies, the investment decision-making process for the System broadly reflects a comprehensive implementation of best practices.

The COAERS IPS, while not specifying required processes in detail, provides a strong foundation for investment decision-making. The IPS clearly addresses key investment principles that are industry standards for best practices in institutional investment decision-making. The outcome of individual investment decisions is always uncertain, but we believe COAERS' policy foundation goes a long way to mitigate that risk.

The COAERS IIP is a sound and appropriately detailed guide indicating how the Board wishes the implementation of the investment program to be accomplished. Not all boards of trustees in the US have adopted the simultaneous development and use of an IPS as well as a more granular, process-oriented IIP. Our firm views a supplementary process-oriented policy document such as the one COAERS employs quite favorably, keeping the IPS solely focused on the Board's goals, beliefs, policy, and guidelines. The IIP requires common best practices methods and implementation steps without being so prescriptive that it excessively constrains the flexibility necessary for effective decisions.

Our review of the governance structure under which COAERS operates indicates clarity regarding the delegation of authority to make and provide advice on investment decisions.

Section V – Review of the retirement fund's investment manager selection and monitoring process.

COAERS has a robust system for investment manager selection, evaluation and monitoring. The Premier List approach is unique to public pension funds and in our judgment can be an effective approach to structuring the process of investment manager review and selection. But, as with all approaches, it has its pros and cons.

The pros include (1) having a pre-vetted list of investment managers on deck and ready to fund if a change is necessary, and (2) continuously monitoring investment managers on the Premier List even when they are not funded expands the range of ongoing vision of Investment Staff and the Investment Consultant for opportunities beyond those funded and utilized in the Fund.

The cons include (1) the Premier List will not work well if vetted but not-currently-funded investment managers are not monitored as rigorously as the funded investment managers, or if



the review does not periodically expand beyond the current list for possible new inclusions, and (2) the Premier List is actually an active construct and it could become an asset class structure issue; the most important observation we can offer is that the Premier List by itself is not a replacement for deliberate and thoughtful structure of asset class mandates.

From our review of Investment Committee and Board reporting packets, we have observed that the System's performance reporting and ongoing monitoring of investment managers are comprehensive and considered best practice in reporting and monitoring.

Section VI – Review of COAERS' internal proxy voting policies and procedures.

Based on fiduciary standards addressed in the IPS and federal guidance, we believe COAERS' proxy voting policies and procedures as stated in Section XII (Proxy Voting) of the IIP are appropriate for delegating proxy voting to each Manager and documented in the individual contracts.

Section XII of the IIP allows flexibility for the Board to revoke its delegation and provides a process for monitoring and reporting by Investment Staff through the Executive Director.

Section VII – Recommendations to align with best-in-class investment management program.

RVK serves over 200 full-retainer and project clients and we can safely say that the COAERS Board and Staff are running a pretty tight ship but there is always room to consider some improvements if they fit with the Board's goals, objectives, and investment beliefs. We submit the following:

Section I

- The power to designate the institutions and individuals who hold the
 responsibilities, as described in Section II, is a critical aspect of clarifying
 the ownership of both governance authority and the fulfillment of fiduciary
 responsibility. COAERS should consider noting the process by which
 these responsibilities are assigned and periodically reviewed.
- 2. Asset/Liability Studies are the only standard analysis that fully links all three aspects of the System's investment policy, contribution policy, and benefit policy, providing a means to examine how well different investment strategies (differing asset allocations) address the objectives served by the Fund. We believe Asset/Liability merits either its own Section in the IPS or to be added to Section V preceding any discussion of Strategic Asset Allocation.



- 3. Consider removing the specificity of sub-asset class structure from the Policy Benchmark in Section VII of the IPS and make it part of a routine asset class structure discussion. For example, the Policy Benchmark specifies the benchmark index for fixed income as the Bloomberg Global Aggregate Bond TR, yet each of the sub-asset classes under fixed income are US (US Treasuries, US Mortgages, and US Credit). This appears quite granular and could inhibit broader thinking about the structure of the fixed income asset class as conditions warrant.
- 4. We understand that one of the Board's Investment Beliefs is that "implementation should occur passively and in public markets unless a high likelihood of success on a risk-adjusted, net-of-fees basis can be expected from other approaches." We also understand that the "[Policy] benchmark is intended to reflect a passive implementation of the neutral weights established by the Board during the SAA process." However, we suggest the Board consider reviewing their Policy Benchmarks, targeting alignment with actual mandates. For example, close to 60% of the real estate composite is a private core real estate fund which is a mismatch with the Policy Benchmark for Real Estate which is the FTSE NAREIT Equity REITS TR, a publicly traded index. This will become more evident as the System moves into additional private asset classes.
- 5. Consider adding a subsection in Section II for Investment Counsel since the position is referenced within the IIP.
- 6. With the understanding that the Board may delegate authority for strategic and operational aspects of the Fund to Staff, consider adding clarity to the degree of delegation by the Board to its Investment Committee and Staff in Section II Responsibilities of the IPS. Although clarity for the degree of delegation may be stated later in the IPS or the IIP, we believe it is important to lay it out upfront when addressing the responsibilities of fiduciaries to the System.
- 7. Consider including the Investment Committee, its role, responsibilities, and any authority held independent of the Board as a whole as its own subsection of Section II. We understand the Investment Committee is a subset of the Board; however, best practice would give the Investment



Committee a strong advisory role to vet and recommend to the Board, so actions requiring Board approval can be addressed as a consent item or a motion based on an Investment Committee written summary of the process taken.

- 8. Regarding the discussion currently in Section V of the IPS of A/L Studies and its importance (as noted above) and the query below regarding clarity, we do find the treatment of A/L in the IPS merits review. The IPS currently states that an A/L Study determines as one of its objectives the "maximum and minimum ranges (Rebalancing Ranges)" around the SAA targets. Having a rebalancing policy and process is a best practice in our view. And COAERS has adopted both. But while rebalancing policy and process should be informed by the risk target set for the total fund in an A/L Study, its design also reflects a host of other considerations related more to asset class liquidity, transaction costs, and more. We suggest that the implied link between A/L Studies and rebalancing in the IPS be reconsidered. Indeed, if it were eliminated, we do not think it would in any way reduce the robustness of the IPS.
- 9. As addressed in Recommendations 6 and 7, add clarity to the degree of delegation by the Board to its Investment Committee, and to Investment Staff in the Section II Responsibilities of the IPS. Although clarity for the degree of delegation may be stated later in the IPS or in the IIP, we believe in the importance of laying it out upfront when addressing the responsibilities of fiduciaries to the System. If the work of the Investment Committee is not distinctive from and additive to the Board's final decisions and ongoing monitoring, its contribution is debatable.
- 10. While we believe the inclusion of these evaluation metrics (benchmark indices, peer universes, and tracking error budgets) in the Premier List guidelines is fully sufficient given the annual review process and the use of these benchmarks in the Investment Consultant's quarterly performance reports, COAERS might consider adding investment manager benchmarks to the IPS or reference in the IPS their inclusion in the Premier List, particularly for any investment manager actually implementing a funded "active" mandate (note: investment managers may be selected for inclusion in the Premier List but not necessarily be



awarded funds to manage at any given point in time).

11. We strongly suggest the Board remove performance relative to peers as a specific objective/benchmark for the System. First, peer comparison offers little, indeed almost no, information about whether the fund is achieving its core mission—funding benefits for COAERS plan participants. Second, COAERS is unique with its own contribution policy, benefit structure, assumed rate of return, cash flow, size, objectives, etc. In our view, these differentiators render the very notion of "peers" questionable, and while a group of public funds can be assembled with somewhat more "peer-like" attributes, it will likely be a small universe that is far from statistically robust. The Board's Investment Consultant can and should continue to provide the COAERS Board with peer comparisons of this data, as it is prudent to at least remain generally aware of the performance other funds deliver.

Section II

12. Consider removing 10 – 12% risk targets for the portfolio/adding metrics that more directly align with the Asset/Liability Study and the goals of the portfolio.

Setting a range of acceptable risk via monitoring long-term standard deviation helps measure whether realized risk is favorable versus peers, but is not, in isolation, a good proxy for the alignment of risk relative to the stated goals of the portfolio.

Target risk is set based on the liabilities of the System, which can vary meaningfully from other plans with different liability profiles. Therefore, selecting a realized risk metric—or better yet, a set of metrics considered in combination—that bounds the desired outcome of the Asset/Liability Study may be a better proxy for success.

The introduction of private investments may add additional difficulties in measuring the true risk of the portfolio through standard deviation alone due to smoothing effects and should be taken into consideration.

13. Consider setting capacity/risk contribution constraints in place of 4% dollar-weight constraints for sub-asset class thresholds:

There is currently an exception to the 4% rule in place for commodities.



The exception suggests there may be better variables to consider than the dollar weight of a sub-asset class.

Commodities exhibit a higher level of volatility and have capacity constraints that warrant consideration—even below a 4% allocation. As such, reframing the inclusion criteria around a measurement such as exante risk contribution may be a more direct way to evaluate sub-asset class inclusion while avoiding the need to create exceptions.

14. Consider consolidating explanations for how sub-asset class tactical and strategic sub-asset class ranges are set:

The independent Investment Consultant currently works with Investment Staff to determine target weights allocated to each sub-asset class. The ranges are stated to be based on the volatility of the asset class relative to the proportion of the fund allocated to each. This explanation aligns with the IPS policy set forth in Section V (Asset Allocation) within the "Rebalancing" subsection—particularly the last sentence of the first paragraph.

The IPS separately states that the rebalancing ranges are defined as reflecting 2nd – 3rd quartile allocations of peers for tactical ranges and 1st – 4th quartile of peer allocations for strategic ranges. This policy is set forth in the IPS guidelines under Section V (Asset Allocation) within the "Asset Class Diversification" subsection and is detailed within the two bullet points on pages 13 – 14.

We are not convinced that the behavior of peers is a good guide to setting strategic and tactical ranges that appropriately reflect the specific circumstances in place at COAERS and explored in the regular Asset/Liability Studies. COAERS should reconsider the role of peer data in setting these ranges and instead focus more on asset volatility data combined with stress tests based on varying inter-asset class correlations.

15. Consider revisiting tracking error targets:

Some asset classes have fallen short of tracking error targets over the last ten years, particularly within developed international and emerging markets.



If these targets are still desired, more active management or active structuring decisions by Investment Staff may be appropriate. If lower tracking error is preferred, a revision of tracking error targets may be warranted.

16. Consider reaffirming Investment Staff's authority to execute rebalancing decisions—without Board approval—should circumstances require such action.

While the IPS delegates authority to Investment Staff for rebalancing within the tactical ranges, our review indicates to date that Investment Staff have consistently sought permission from the Board anyway. We observe that, so long as obtaining this approval does not impede the achievement of the objectives sought by providing the Investment Staff with delegated authority, doing so is fine. If the record to date suggests that there are no circumstances in which that delegated authority would be exercised by Investment Staff and reported to the Board promptly after the fact, the latitude it provides and the results obtained may be limited.

17. Consider adding a separate section for the selection and evaluation of private equity and private credit mandates, if implemented. Reporting and benchmarking of private investments should also be added.

Section III

- 18. Continue to utilize passive management in asset classes with higher efficiency.
- 19. Consider adding a section on management and control of investment management and service provider cost in the IPS or IIP.
- 20. Consider adding a periodic frequency for conducting plan fee reviews similar to the minimum frequency noted in the IPS for Asset/Liability Studies and Asset Allocation Studies.

Section IV

21. Regarding Delegation of Authority, we suggest the Board carefully review Recommendations 6, 7, and 9, which are addressed in Section I of this Evaluation.



22. Consider adopting and documenting a schedule for reviewing service providers, including a potential RFP after five to seven years.

Section V

- 23. Consider adding language for the investment manager selection process for private market asset classes.
- 24. Consider updating investment manager reporting requirements for metrics and data that are relevant to private asset class managers.

Section VIII – Analysis of COAERS' implementation of the recommendations presented in the 2020 review performed by RVK.

2020 IPPE Recommendations

Recommendations presented in the 2020 IPPE report were addressed during the November 2020 Investment Committee meeting. The Board then approved the changes outlined below during their December 2020 meeting. The following table outlines the impacted sections, recommendations from the 2020 IPPE report, and ultimate resolutions adopted by the Board.

Section	Recommendation	Resolution		
Investment Asset Allocation	Consider policy language defining a reporting process for less liquid and illiquid investments.	Ongoing work due to further allocation to private markets is pending.		
Investment Manager Selection and Monitoring	Consider the addition of a formal investment manager review policy with a more specific timeframe.	Adopted a rolling review of investment managers on Premier List by asset class. Investment Consultant provides investment manager write-ups.		
Investment Manager Selection and Monitoring	Consider verbiage edits to the Watch List.	Adopted suggested verbiage edits within the IIP.		



Investment Manager Selection and Monitoring	Consider clarifying language regarding reporting for investment managers with "live" mandates vs. those currently on the Premier List.	Resolved: Investment manager requirements for "live" mandates are now separate from those without active mandates.		
Investment Manager Selection and Monitoring	Consider the addition of performance metrics for non-public securities and/or vehicles.	Ongoing: Will need to consider different performance metrics for private investments versus public investments.		



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February 22, 2024

City of Austin Employees' Retirement System

Investment Practices and Performance Evaluation by

RVK Investment Program Review Team

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RVK Investment Program Review (IPR) Team

Co-Lead Consultant | Jim Voytko, President, Senior Consultant, Principal
Co-Lead Consultant | Marcia Beard, Senior Consultant, Principal
Project Consultant | Samia Khan, Consultant
Project Associate Consultant | Blake Curtis, Associate Consultant
Administrative Support | Alexandra Goroch, Senior Administrative Assistant
Administrative Support | Jessica Goodall, Senior Executive Assistant
Specialist Consultant | Jonathan Kowolik, Senior Consultant, Head of IOSG, Principal

Introduction & Background Information

Introduction

RVK was engaged to conduct an independent evaluation of the current investment practices and performance, with a focus on the appropriateness, adequacy, and effectiveness of the City of Austin Employees' Retirement System (COAERS or "the System") and to make recommendations for improving COAERS' investment policies, procedures, and practices. Per Texas Government Code 802.109, each evaluation must include:

- 1) An analysis of any investment policy or strategic investment plan adopted by the retirement fund and the retirement fund's compliance with that policy or plan;
- 2) A detailed review of the retirement fund's investment asset allocation, including:
 - a) The process for determining target allocations;
 - b) The expected risk and expected rate of return, categorized by asset class;
 - c) The appropriateness of selection and valuation methodologies of alternative and illiquid assets; and
 - d) Future cash flow and liquidity needs;
- 3) A review of the appropriateness of investment fees and commissions paid by the retirement fund;
- 4) A review of the retirement fund's governance processes related to investment activities, including investment decision-making processes, delegation of investment authority, and board investment expertise and education; and
- 5) A review of the retirement fund's investment manager selection and monitoring process.

As part of the scope for this project, the COAERS Board required the following three additions to our report beyond those required by Texas Government Code 802.109:

- 1) Review of COAERS' internal proxy voting policies and procedures;
- 2) Recommendations to align with best-in-class investment management programs; and
- 3) An analysis of COAERS' implementation of the recommendations presented in the 2020 review performed by RVK.

RVK is uniquely qualified to perform this evaluation, as we are one of the largest fully independent consulting firms in the world, with over 200 institutional clients and over \$3 trillion of assets under advisement. We are strictly focused on providing our clients with non-discretionary consulting services and do not offer discretionary management of assets, nor do we offer any investment products. Since our founding in 1985, RVK has been an industry leader in adhering to a strict no conflicts of interest policy, with 100% of our revenue generated from client fees; we do not accept fees of any kind from any investment manager or other service provider that our clients may ask us to evaluate.



RVK has completed over 20 related projects thus far. We offer an effective option for executing PRB analyses based on the following key attributes:

- We have extensive experience in this area. Serving over 200 full-retainer and project clients, we are keenly aware of the multi-dimensional challenges many boards and committees face in managing investment programs. Unlike other "audit firms," which are not actually engaged in the institutional investment industry, we bring substantial and ongoing real-world experience to these reviews.
- We bring the broad resources of a large, national, full-service investment consulting firm to the task, covering governance and investment decision-making, staff and resource organization, portfolio analytics, asset allocation, asset/liability, investment manager selection and monitoring, risk management, and investment operations.
- We are an independent, employee-owned firm with no conflicting lines of business. COAERS can rest assured that our analysis and findings will be credible and objective.
- For each IPR assignment, we draw upon RVK's consulting, research, and specialized professionals to
 create a customized team specifically matched to the scope of work for that particular assignment. We believe
 our team, which includes specialized resources and experience across the firm, places RVK in a uniquely
 qualified position to complete this project.

Background Information

COAERS provides benefits for full-time employees of the City and was established in 1941 by City ordinance. It serves over 10,000 active members, plus an additional 9,000+ retired and inactive members, and is managed by an elevenmember Board, as well as professional full-time Investment Staff. As of December 31, 2022, the market value of System investment assets was approximately \$3.5 billion. The System's stated mission is to "provide our members their promised benefits" and is strengthened by a set of values and overall vision:

	We	Va	lue
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Accessibility
Accountability
Cooperation
Ethical Behavior
Fairness
Innovation
Integrity
Open Communication
Respect

Responsiveness

Our Vision

Our vision is to be a best-in-class public pension plan through excellence in financial stewardship, plan administration, and investment management.



The majority of this evaluation will focus on investment practices and program management, with RVK providing an independent review of policies, procedures, and specific considerations as described in Texas Government Code 802.109. Outlined below is a review of the resources and approach employed by the RVK team in executing this evaluation. Supplementary details on the background and experience of the RVK project team can be found in the **Appendix**.

In addition to drawing upon RVK and its employees' institutional knowledge of investment programs, the RVK team used several methods to conduct research and gain insight into the COAERS organization, its decision-making process, and overall efficacy. The first method employed was a detailed review of numerous documents COAERS provided and produced. These documents covered a comprehensive array of topics including, but not limited to:

- Investment Policy Statements
- Investment Implementation Policies
- Investment Committee Charter
- COAERS Effectiveness Assessment Global Governance Advisors
- Investment Staff and Investment Consultant Presentations to the Investment Committee and Board
- Meeting Minutes
- Investment Management Agreements
- Investment Cost Effectiveness Analysis (CEM Benchmarking)
- COAERS PRB Training Requirements Core and Continuing MET Requirements
- 2020 COAERS Evaluation of Investment Practices and Performance
- Governance Manual
- Asset/Liability Studies
- Asset Allocation Studies
- Actuarial Valuation Reports
- Audit Reports
- Strategic Plans
- Trade Cost Analysis Report (Zeno AN Solutions)



A note of appreciation to the COAERS Investment Staff and Board, as well as the System's Lead Consultants, Spencer Hunter and Ian Bray of RVK, and actuary, Lewis Ward, from Gabriel, Roeder, Smith & Company, whose cooperation with our requests for interviews, data, and organizational information were critical in the execution of this project.

RVK serves as the General Consultant for the System. Although the Lead Consultants assigned to COAERS were interviewed, they were not involved in the research, analysis, or drafting of this Investment Practices and Performance Evaluation. Both the IPR Team and the General Consulting Team were mindful of avoiding all conflicts. The General Consulting Team was not copied on emails pertaining to the Evaluation and were not included on the IPR Team email.



Section I – Analysis of any investment policy or strategic investment plan adopted by the retirement fund and the retirement fund's compliance with that policy or plan.

Documents Reviewed

- √ Investment Policy Statements
- ✓ Investment Implementation Policy
- ✓ COAERS Governance Manual
- ✓ Investment Committee Charter
- ✓ COAERS Effectiveness Assessment (Global Governance Advisors)
- ✓ Strategic Plan Fiscal Years 2021-2023
- ✓ Strategic Plan Fiscal Years 2022-2026
- ✓ Board and Investment Committee Packets.

Does the system have a written investment policy statement (IPS)?

Yes, COAERS' investment program is governed by two separate but related policies summarized as follows:

- 1. The Investment Policy Statement (IPS) serves as the comprehensive "road map" for the investment program, detailing items that, in our judgment, are best practice inclusions in an IPS, such as: (1) Investment Beliefs, (2) responsibilities, (3) objectives and guidelines, (3) risk management, (4) asset allocation, and (5) monitoring used for the management of System assets and fiduciary oversight of the investment program.
- 2. The Investment Implementation Policy (IIP) is meant to complement the IPS by providing specifics relating to the selection, contracting, monitoring, and retention of investment managers. It references the reporting strategies used by the System to assist the Board in its duty to monitor and regularly evaluate the design and effectiveness of the processes that define the execution of the investment program, and critically, their congruence with the Board's IPS. The IIP includes sections about reporting the progress toward stated strategic objectives, measuring investment risk, total fund, asset class, and sub-asset class performance compared to stated benchmarks, and retention of investment managers. We observe that the use of a supplemental implementation-oriented policy statement, such as the one employed at COAERS, is more often seen at larger institutional investment funds and one that RVK believes is a good practice.

Both policies are reviewed at least annually by the Board, which we believe is a best practice. The following page lists the most recent adoption dates for each policy.



IPS Review Dates	IPS Adoption Dates	IIP Review Dates	IIP Adoption Dates
5/10/2019		5/10/2019	
6/25/2019	6/25/2019	6/25/2019	6/25/2019
11/15/2019		11/15/2019	
12/10/2019	12/10/2019	12/10/2019	12/10/2019
3/27/2020		3/27/2020	
3/31/2020	3/31/2020	3/31/2020	3/31/2020
		8/21/2020	
		9/1/2020	9/1/2020
11/13/2020		11/13/2020	
12/16/2020	12/17/2020	12/18/2020	12/19/2020
2/26/2021		2/26/2021	
3/30/2021	3/30/2021	3/30/2021	3/30/2021
2/18/2022		2/18/2022	
3/31/2022	3/31/2022	3/31/2022	3/31/2022
2/23/2023		2/23/2023	
3/30/2023	3/30/2023	3/30/2023	3/30/2023



Summary of the IPS

The IPS serves as the governing document with respect to the System's investment program. The IPS is organized into seven sections, each detailing a set of oversight components approved and applicable to the Board.

- I. Statement of Policy Section I sets the stage by stating that the IPS is the Board's document that establishes the objectives and policies of the System's investment program. Section I reminds all related parties that the sole purpose of the investment program is to accumulate the financial reserves necessary to provide benefits to the System's members and their beneficiaries. Beyond outlining purpose and scope, this section defines investment goals; states the Board's Investment Beliefs; and clarifies interpretation, review, and revision requirements.
- II. Investment Responsibilities Section II details the investment responsibilities of the System's fiduciaries including the Board, Investment Committee (as a subset of the Board), Professional Staff, Executive Director, Investment Staff, Chief Investment Officer, Non-CIO Investment Staff, Finance Staff, Investment Consultant(s), Investment Managers, and Custodian(s). While the responsibilities for each differ, a consistent theme reminds all parties that each must act in a capacity that places the exclusive benefit of the assets of the System for each member, beneficiary, and retiree at the forefront of every investment decision-making process. Additionally, this section ensures proper reporting, allowing the Board to monitor that each fiduciary group is conducting its core duties effectively.

Recommendation 1. The power to designate the institutions and individuals who hold the responsibilities, as described in Section II, is a critical aspect of clarifying the ownership of both governance authority and the fulfillment of fiduciary responsibility. COAERS should consider noting the process by which these responsibilities are assigned and periodically reviewed.

- III. **Fiduciary Conduct** Section III provides important clarity as to the individuals and entities that bear fiduciary responsibility. This section provides language that defines proper conduct for all parties considered to be fiduciaries. Finally, this section requires that all Board and Professional Staff adhere to COAERS' Ethics Policy, detailing strict adherence to no gifts, personal benefits, and/or favors. Narrowly defined permissible exceptions are noted. We consider both the existence of a formal Ethics Policy and the comment on its application in the IPS a best practice.
- IV. Investment Risk Management Section IV recognizes that bearing prudent levels of compensated risk is critical to meeting long-term return objections. This section identifies types of investment risks that the Fund encounters in its pursuit of meeting its long-term return objectives and how to properly navigate, manage, and monitor these risks. The inclusion of guidance on risk management in the IPS is a best practice, though institutional funds vary in their approaches to this area.
- V. Asset Allocation Section V puts at the forefront, and rightly so in our judgment, that establishing the



Strategic Asset Allocation (SAA) is the Board's responsibility. The Board relies on advice from Investment Staff and the Board's Investment Consultant for process and parameters including expectations from both an expected return and risk viewpoint. Similarly, our review noted that beyond these two fundamental aspects, the Board also utilizes both its Investment Staff and Investment Consultant to determine the most effective and sound investment methods, tools, and applicable time horizons to be used in order to assist with the process of proper asset class diversification. Formal reviews of the SAA are conducted at least annually. This Section also addresses the frequency (at least every five years) and the objective of Asset/Liability studies.

Recommendation 2. Asset/Liability Studies are the only standard analysis that fully links all three aspects of the System's investment policy, contribution policy, and benefit policy, providing a means to examine how well different investment strategies (differing asset allocations) address the objectives served by the Fund. We believe Asset/Liability merits either its own section in the IPS or to be added to Section V preceding any discussion of Strategic Asset Allocation.

Section V goes into great detail on asset class diversification and the establishment of appropriate rebalancing ranges, including procedures within the IPS outlining responsibility for adherence. The System has two sets of rebalancing ranges: tactical and strategic. Each has separate governing procedures implemented by Investment Staff or the Board depending on the degree of market drift, risk management, and cash management needs. COAERS' rebalancing strategy is not common and although we harbor general concerns about processes involving short-term tactical investment decisions, our concerns are mitigated by COAERS' adoption of differing ranges and detailed governing procedures. Please see Recommendation 14 in Section II of this Evaluation for further thoughts on COAERS' rebalancing strategy.

- VI. **Operational Guidelines** Section VI provides operational guidelines for diversification; the evaluation, selection, and monitoring of counterparties; the use of leverage; authorized use of derivatives; cash management; securities lending; and securities litigation. All of these, in our experience, are highly appropriate inclusions in an IPS and provide critical guidance for risk mitigation.
- VII. **Reporting, Evaluation, and Review** Section VII references the reporting strategies used by the System to assist the Board in its duty to monitor and regularly evaluate the effectiveness and adherence of the investment processes outlined within the Policy. This includes sections on reporting the progress toward stated strategic objectives, measuring investment risk, total fund, asset class and sub-asset class performance compared to stated benchmarks, and comparison to peers.

Recommendation 3. Consider removing the specificity of sub-asset class structure from the Policy Benchmark in Section VII of the IPS and make it part of a routine asset class structure discussion. For example, the Policy Benchmark specifies the benchmark index for fixed income as the Bloomberg Global Aggregate Bond TR, yet each of the sub-asset classes under fixed income are US (US



Treasuries, US Mortgages, and US Credit). This appears quite granular and could inhibit broader thinking about the structure of the fixed income asset class as conditions warrant.

Recommendation 4. We understand that one of the Board's Investment Beliefs is that "implementation should occur passively and in public markets unless a high likelihood of success on a risk-adjusted, net-of-fees basis can be expected from other approaches." We also understand that the "[Policy] benchmark is intended to reflect a passive implementation of the neutral weights established by the Board during the SAA process." However, we suggest the Board consider reviewing their Policy Benchmarks, targeting alignment with actual mandates. For example, close to 60% of the real estate composite is a private core real estate fund which is a mismatch with the Policy Benchmark for Real Estate which is the FTSE NAREIT Equity REITS TR, a publicly traded index. This will become more evident as the System moves into additional private asset classes.

Summary of the IIP

The IIP is a supporting document to the IPS, further detailing specific oversight and process requirements related to selecting, contracting, monitoring, and retaining Investment Managers. The document contains twelve sections plus appendix items that pertain to the oversight processes:

- Purpose, Scope, and Revision
- Strategy and Philosophy
- Fiduciary Conduct
- Manager Responsibilities
- Manager Selection
- Manager Contracting
- Portfolio Guidelines
- Permissible Investments
- · Reporting, Evaluation, and Monitoring
- Retention
- Transition Management
- Proxy Voting
- Summary of any Manager Specific Guidelines
- Onsite Due Diligence
- Manager Reporting Requirements
- Third Party Marketing
- Political Contributions
- Improper Influence, and Placement Agents and Finders



The language contained within the IIP allows for the Board to establish overarching governance with respect to Investment manager interaction, while simultaneously ensuring that the Investment Staff has authority to act on the Board's behalf in a manner that is mutually agreed upon. Additionally, it allows the Investment Staff to have one set of guidelines to communicate to prospective and current Managers.

Are the roles and responsibilities of those involved in governance, investing, consulting, monitoring, and custody clearly outlined?

Yes, the IPS defines the responsibilities of the Board, Investment Committee (as a subset of the Board), Professional Staff, Investment Consultant(s), Investment Managers, and Custodian(s). We suggest that COAERS extend this delineation of roles and responsibilities as follows:

<u>Recommendation 5</u>. Consider adding a subsection in Section II for Investment Counsel since the position is referenced within the IIP.

Recommendation 6. With the understanding that the Board may delegate authority for strategic and operational aspects of the Fund to Staff, consider adding clarity to the degree of delegation by the Board to its Investment Committee and Staff in Section II – Responsibilities of the IPS. Although clarity for the degree of delegation may be stated later in the IPS or in the IIP, we believe it is important to lay it out upfront when addressing the responsibilities of fiduciaries to the System.

Recommendation 7. Consider including the Investment Committee, its role, responsibilities, and any authority held independent of the Board as a whole as its own subsection of Section II. We understand the Investment Committee is a subset of the Board; however, best practice would give the Investment Committee a strong advisory role to vet and recommend to the Board, so actions requiring Board approval can be addressed as a consent item or a motion based on an Investment Committee written summary of the process taken.

Is the policy carefully designed to meet the real needs and objectives of the retirement plan? Is it integrated with any existing funding or benefit policies? (i.e. does the policy take into account the current funded status of the plan, the specific liquidity needs associated with the difference between expected short-term

The answer to this question is "yes." The IPS requires an Asset/Liability Study (A/L Study) to be completed at least every five years. We believe this is without question a critical requirement, particularly for any pension plan with a material unfunded actuarial liability (UAL) or a history of variable contributions below the Actuarially Determined Contribution (ADEC). Further, we strongly believe that A/L Studies are a critical prerequisite for fully informed Asset Allocation studies. In fact, the IPS indicates that an A/L Study should be completed more frequently if there is a material event that affects liability structure, contribution policy, and/or capital markets. Case in point: over a several-month period spanning 2022 and 2023, multiple A/L Studies were conducted as a result of a significant change in capital market assumptions (CMAs) due to market conditions and changes to COAERS' contribution policy enacted by legislation in 2023. The new contribution policy is a material improvement over the prior policy and was initiated by the Board and Staff based on the projected funded status of an earlier A/L Study. The most recent A/L Study using



inflows and outflows, the underlying nature of the liabilities being supported [e.g. pay-based vs. flat \$ benefit, automatic COLAs, DROP, etc.])

projected stochastic modeling showed a significant improvement in funded status although still underfunded. These examples are clear evidence that to date, A/L Studies have been used in a timely manner, dictated by important changes in the System's operating and strategic environment.

Recommendation 8. Regarding the discussion currently in Section V of the IPS of A/L Studies and its importance (as noted above) and the query below regarding clarity, we do find the treatment of A/L in the IPS merits review. The IPS currently states that an A/L Study determines as one of its objectives the "maximum and minimum ranges (Rebalancing Ranges)" around the SAA targets. Having a rebalancing policy and process is a best practice in our view. And COAERS has adopted both. But while rebalancing policy and process should be informed by the risk target set for the total fund in an A/L Study, its design also reflects a host of other considerations related more to asset class liquidity, transaction costs, and more. We suggest that the implied link between A/L Studies and rebalancing in the IPS be reconsidered. Indeed, if it were eliminated, we do not think it would in any way reduce the robustness of the IPS.

Is the policy written so clearly and explicitly that anyone could manage a portfolio and conform to the desired intentions?

The answer is "yes," conditioned only by the comment that, both by design and necessity, the COAERS IPS allows a broad range of approaches. That said, the IPS, as written, is an effective "road map" for the Board and other fiduciaries. The conformance to the pursuit of desired intentions and objectives is further strengthened by the use of the IIP. Together, these documents provide effective guidance laying out a course of action to be followed with a focus on long-term outcomes while providing flexibility, if necessary, to meet the benefit payment obligations of the System.

The IPS includes the key elements of a good and effective policy, including goals and objectives, roles and responsibilities, asset/liability and asset allocation processes including targets and ranges, a rebalancing policy, risk management, investment guidelines, benchmarks, and performance measurement.

Does the policy follow industry best practices? If not, what are the differences?

The IPS, in combination with its supporting IIP, is consistent with industry best practices. We have noted this throughout our discussion, as the question relates to specific aspects of the IPS. Taken as a whole, the policies are well thought out, written in clear and straightforward language, and align with guidance provided by the CFA Institute.

As mentioned above, we suggest the Board consider the following:

Recommendation 9. As addressed in Recommendations 6 and 7, add clarity to the degree of delegation by the Board to its Investment Committee, and to Staff in the Section II – Responsibilities of the IPS. Although clarity for the degree of delegation may be stated later in the IPS or in the IIP, we believe in the importance of laying it out upfront when addressing the responsibilities of fiduciaries to the System. If the work of the Investment Committee is not distinctive from and additive to the Board's final decisions and ongoing monitoring, its contribution is debatable.



Does the IPS contain measurable Current COAERS Investment Managers are assigned benchmark indices, peer universes, and tracking error budgets. These guidelines are not described in the IPS or the IIP but rather in the appropriate "Premier List" document that is outcomes for managers? Does the reviewed by the Board at least annually. Per the IIP, the Investment Committee is granted authority to oversee IPS outline over what time periods performance is to be considered? Managers and make recommendations to the Board regarding the System's Premier List. Recommendation 10. While we believe the inclusion of these evaluation metrics (benchmark indices, peer universes, and tracking error budgets) in the Premier List guidelines is fully sufficient given the annual review process and the use of these benchmarks in the Investment Consultant's quarterly performance reports, COAERS might consider adding investment manager benchmarks to the IPS or reference in the IPS their inclusion in the Premier List, particularly for any investment manager actually implementing a funded "active" mandate (note: investment managers may be selected for inclusion in the Premier List but not necessarily be awarded funds to manage at any given point in time). The IPS states that all performance measurement should be based on total returns, net of fees, adjusted for risk, as measured over a sufficient time period to reflect the benefits of any active decisions (typically a minimum of three years and preferably over five or more years and/or a full market cycle). The baseline time period for achieving Fund, asset class, and sub-asset class performance objectives is three years, although shorter and longer periods are also considered. A review of Board and Investment Committee materials and meeting agendas clearly confirms the System is following Is there evidence that the system is following its IPS? Is there the IPS and the IIP. We see no evidence of any known compliance violations with either policy. evidence that the system is not following its IPS? What practices are being followed No exceptions were noted. that are not in, or are counter to, written investment policies and procedures? The sole purpose of the Fund is to accumulate the financial reserves necessary to provide benefits to eligible members Are stated investment objectives being met? of the System and their beneficiaries. To achieve this outcome as consistently as investment markets allow and do so sustainably over multiple market cycles, the Fund is to be structured and managed to maximize, in order of importance, net of all fees and expenses, the probability of achieving:



- A long-term, annualized nominal rate of return that meets or exceeds the actuarially Assumed Rate of Return (ARoR) for the System (currently 6.75% and subject to change based on the Actuary and Board's determination of prudent levels of contribution).
- 2. A long-term, risk-adjusted relative rate of return that meets or exceeds the Passive Benchmark (i.e., the Reference Portfolio which currently is 60% MSCI All Country World Net Total Return USD Unhedged/40% Bloomberg Global Aggregate Total Return USD Unhedged).
- 3. A long-term, risk-adjusted relative rate of return that meets or exceeds the Policy Benchmark (i.e., the Strategic Benchmark).
- 4. A long-term, risk-adjusted relative rate of return that ranks in the top quartile of comparable peers consistently.

We believe these are best practice investment objectives and, equally important, we believe this is the correct order of importance, with peer comparisons being, by far, the least important to the Fund's core mission of funding benefits.

The System pursues the strategic objectives by the following best practices:

- Ensuring proper diversification of asset classes and factor exposures;
- Maintaining appropriate long-term risk and return expectations; and
- Adapting positioning to changing market conditions.

Acknowledging the volatility of the markets over the last few years, the long-term performance results, risk profile, investment management costs, and liquidity profile of the System is in accordance with the above objectives (see performance from last three years below).

Composite: Total Fund Asset Allocation & Performance - Net of Fees As of December 31, 2020

	Allocatio	Allocation			Rate of Return (%)						
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date	
Total Fund	3,183,142,083	100.00	10.52	10.78	10.78	7.94	9.65	7.72	9.91	06/01/1982	
Policy Index			12.29	10.92	10.92	7.92	9.41	7.60	N/A		
Excess Return			-1.77	-0.14	-0.14	0.02	0.24	0.12	N/A		
Passive Index			10.13	14.05	14.05	8.32	9.48	6.79	N/A		
Excess Return			0.39	-3.27	-3.27	-0.38	0.17	0.93	N/A		



Composite: Total Fund Asset Allocation & Performance - Net of Fees

As of December 31, 2021

	Allocatio	Allocation			Rate of Return (%)						
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date	
Total Fund	3,538,734,335	100.00	5.20	12.99	12.99	14.73	10.63	9.19	9.99	06/01/1982	
Policy Benchmark			5.36	14.38	14.38	15.54	10.76	9.17	N/A		
Excess Return			-0.16	-1.39	-1.39	-0.81	-0.13	0.02	N/A		
Passive Benchmark			3.73	8.78	8.78	13.72	10.11	7.91	N/A		
Excess Return			1.47	4.21	4.21	1.01	0.52	1.28	N/A		

Composite: Total Fund Asset Allocation & Performance - Net of Fees

As of December 31, 2022

	Allocatio	Allocation			Rate of Return (%)						
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date	
Total Fund	2,941,251,159	100.00	6.13	-15.59	-15.59	1.86	3.71	6.02	9.27	06/01/1982	
Policy Benchmark			8.12	-17.32	-17.32	1.60	3.52	5.82	N/A		
Excess Return			-1.99	1.73	1.73	0.26	0.19	0.20	N/A		
Passive Benchmark			7.74	-17.33	-17.33	0.84	2.71	4.74	N/A		
Excess Return			-1.61	1.74	1.74	1.02	1.00	1.28	N/A		

Recommendation 11. We strongly suggest the Board remove performance relative to peers as a specific objective/benchmark for the System. First, peer comparison offers little, indeed almost no, information about whether the fund is achieving its core mission—funding benefits for COAERS plan participants. Second, COAERS is unique with its own contribution policy, benefit structure, ARoR, cash flow, size, objectives, etc. In our view, these differentiators render the very notion of "peers" questionable, and while a group of public funds can be assembled with somewhat more "peer-like" attributes, it will likely be a small universe that is far from statistically robust. The Board's Investment Consultant can and should continue to provide the COAERS Board with peer comparisons of this data, as it is prudent to at least remain generally aware of the performance other funds deliver.

Will the retirement fund be able to sustain a commitment to the policies under stress test scenarios, including those based on the capital markets that have actually been experienced over the past ten, twenty, or thirty years?

Regarding this question and the one that immediately follows, there can be no guarantee that the existing policies, those policies as implemented, nor the investment managers selected to implement the resulting mandates would survive any hypothetical investment market scenarios. However, there is clear evidence that the COAERS Board has required its Investment Staff and Investment Consultant to explore stress tests as an integral part of major investment decision-making. For example:

The IPS requires an Asset/Liability Study to be conducted at least every five years. A review of the most recent studies confirms that the Board's Investment Consultant routinely provides sensitivity analyses and stress tests as part of these studies. Permissible exceptions are detailed.



The study conducted in 2023 summarized the outcomes of the following deterministic scenarios.

- V-Shaped Recovery The V scenario assumes a return of +20% in 2023 followed by the ARoR thereafter (6.75%).
- W-Shaped Market Event The W scenario assumes a return of +20% in 2023, -15% in 2024, +15% in 2025, and the ARoR thereafter (6.75%).
- Future V-Shaped Market Event This scenario assumes a return of -10% in 2032, +10% in 2033, and the ARoR (6.75%) in all other projection years.
- Future W-Shaped Market Event This scenario assumes a return of -15% in 2032, +15% in 2033, -15% in 2034, +15% in 2035, and the ARoR (6.75%) in all other projection years.
- 6.00% Assets earn 6.00% each year after 2022.
- Loss then Low 10% loss in 2023 followed by a lower return environment (6.00%).
- Persistent Inflation Assets earn 6.75% each year (after 2022) but wage inflation is 5.00% per year during the 20-year projection period.

The IPS requires an Asset Allocation Study at least once every year. Our inspection of those Asset Allocation Studies shows that forecasts of expected returns and asset risk are examined over multiple timeframes using best practice Monte Carlo analysis.

Will the investment managers be able to maintain fidelity to the policy under the same scenarios?

The IPS and especially the IIP are very clear with respect to fiduciary conduct, Investment manager responsibilities, guidelines, permissible investments, reporting, and evaluation. The IIP is also very transparent with COAERS' process for selection, contracting, retention, and monitoring. Process and expectations are clearly defined.

Will the policy achieve the stated investment objectives under the same scenarios? How often is the policy reviewed and/or updated? When was the most recent substantial change to the policy and why was this change made?

By design and best practice, COAERS' Investment Staff and Investment Consultant probe investment scenarios that clearly challenge the achievement of current stated objectives. That is the most important purpose of stress testing.

As for the frequency with which key policies are reviewed, the IPS and the IIP are formally reviewed by the Board at least annually to determine whether it remains appropriate considering the Board's investment philosophy and objectives, changes in the capital markets, and/or Fund structure. A review of Investment Committee and Board materials confirms the policy review requirement is being met.



IPS Review Dates	IPS Adoption Dates	IIP Review Dates	IIP Adoption Dates
5/10/2019		5/10/2019	
6/25/2019	6/25/2019	6/25/2019	6/25/2019
11/15/2019		11/15/2019	
12/10/2019	12/10/2019	12/10/2019	12/10/2019
3/27/2020		3/27/2020	
3/31/2020	3/31/2020	3/31/2020	3/31/2020
		8/21/2020	
		9/1/2020	9/1/2020
11/13/2020		11/13/2020	
12/16/2020	12/17/2020	12/18/2020	12/19/2020
2/26/2021		2/26/2021	
3/30/2021	3/30/2021	3/30/2021	3/30/2021
2/18/2022		2/18/2022	
3/31/2022	3/31/2022	3/31/2022	3/31/2022
2/23/2023		2/23/2023	
3/30/2023	3/30/2023	3/30/2023	3/30/2023



Summary

Evaluation of the IPS and IIP

RVK believes the IPS is consistent with industry best practices.

RVK believes the IIP represents a clear and workable extension of the IPS and is consistent with industry best practices.

Compliance with the IPS

In RVK's review of the Board and Investment Committee meeting packet and minutes, the Board has reviewed, edited when necessary, and approved changes on at least an annual basis over the last three years.

The IIP has also been reviewed on an annual basis.

Recommendations

- The power to designate the institutions and individuals who hold the responsibilities, as described in Section II, is a
 critical aspect of clarifying the ownership of both governance authority and the fulfillment of fiduciary responsibility.
 COAERS should consider noting the process by which these responsibilities are assigned and periodically reviewed.
- 2. Asset/Liability Studies are the only standard analysis that fully links all three aspects of the System's investment policy, contribution policy, and benefit policy, providing a means to examine how well different investment strategies (differing asset allocations) address the objectives served by the Fund. We believe Asset/Liability merits either its own Section in the IPS or to be added to Section V preceding any discussion of Strategic Asset Allocation.
- 3. Consider removing the specificity of sub-asset class structure from the Policy Benchmark in Section VII of the IPS and make it part of a routine asset class structure discussion. For example, the Policy Benchmark specifies the benchmark index for fixed income as the Bloomberg Global Aggregate Bond TR, yet each of the sub-asset classes under fixed income are US (US Treasuries, US Mortgages, and US Credit). This appears quite granular and could inhibit broader thinking about the structure of the fixed income asset class as conditions warrant.
- 4. We understand that one of the Board's Investment Beliefs is that "implementation should occur passively and in public markets unless a high likelihood of success on a risk-adjusted, net-of-fees basis can be expected from other approaches." We also understand that the "[Policy] benchmark is intended to reflect a passive implementation of the neutral weights established by the Board during the SAA process." However, we suggest the Board consider reviewing their Policy Benchmarks, targeting alignment with actual mandates. For example, close to 60% of the real estate composite is a private core real estate fund which is a mismatch with the Policy Benchmark for Real Estate which is the FTSE NAREIT Equity REITS TR, a publicly traded index. This will become more evident as the System moves into additional private asset classes.
- 5. Consider adding a subsection in Section II for Investment Counsel since the position is referenced within the IIP.
- 6. With the understanding that the Board may delegate authority for strategic and operational aspects of the Fund to Staff, consider adding clarity to the degree of delegation by the Board to its Investment Committee and Staff in



- Section II Responsibilities of the IPS. Although clarity for the degree of delegation may be stated later in the IPS or the IIP, we believe it is important to lay it out upfront when addressing the responsibilities of fiduciaries to the System.
- 7. Consider including the Investment Committee, its role, responsibilities, and any authority held independent of the Board as a whole as its own subsection of Section II. We understand the Investment Committee is a subset of the Board; however, best practice would give the Investment Committee a strong advisory role to vet and recommend to the Board, so actions requiring Board approval can be addressed as a consent item or a motion based on an Investment Committee written summary of the process taken.
- 8. Regarding the discussion currently in Section V of the IPS of A/L Studies and its importance (as noted above) and the query below regarding clarity, we do find the treatment of A/L in the IPS merits review. The IPS currently states that an A/L Study determines as one of its objectives the "maximum and minimum ranges (Rebalancing Ranges)" around the SAA targets. Having a rebalancing policy and process is a best practice in our view. And COAERS has adopted both. But while rebalancing policy and process should be informed by the risk target set for the total fund in an A/L Study, its design also reflects a host of other considerations related more to asset class liquidity, transaction costs, and more. We suggest that the implied link between A/L Studies and rebalancing in the IPS be reconsidered. Indeed, if it were eliminated, we do not think it would in any way reduce the robustness of the IPS.
- 9. As addressed in Recommendations 6 and 7, add clarity to the degree of delegation by the Board to its Investment Committee, and to Investment Staff in the Section II – Responsibilities of the IPS. Although clarity for the degree of delegation may be stated later in the IPS or in the IIP, we believe in the importance of laying it out upfront when addressing the responsibilities of fiduciaries to the System. If the work of the Investment Committee is not distinctive from and additive to the Board's final decisions and ongoing monitoring, its contribution is debatable.
- 10. While we believe the inclusion of these evaluation metrics (benchmark indices, peer universes, and tracking error budgets) in the Premier List guidelines is fully sufficient given the annual review process and the use of these benchmarks in the Investment Consultant's quarterly performance reports, COAERS might consider adding investment manager benchmarks to the IPS or reference in the IPS their inclusion in the Premier List, particularly for any investment manager actually implementing a funded "active" mandate (note: investment managers may be selected for inclusion in the Premier List but not necessarily be awarded funds to manage at any given point in time).
- 11. We strongly suggest the Board remove performance relative to peers as a specific objective/benchmark for the System. First, peer comparison offers little, indeed almost no, information about whether the fund is achieving its core mission—funding benefits for COAERS plan participants. Second, COAERS is unique with its own contribution policy, benefit structure, assumed rate of return, cash flow, size, objectives, etc. In our view, these differentiators render the very notion of "peers" questionable, and while a group of public funds can be assembled with somewhat more "peer-like" attributes, it will likely be a small universe that is far from statistically robust. The Board's Investment Consultant can and should continue to provide the COAERS Board with peer comparisons of this data, as it is prudent to at least remain generally aware of the performance other funds deliver.



Section II – Detailed review of the retirement fund's investment asset allocation.

Documents Reviewed

- √ Investment Policy Statement
- ✓ Investment Staff and Investment Consultant Presentations to the Investment Committee and Board
- ✓ Asset Allocation Study
- √ Asset/Liability Study
- ✓ Actuarial Valuation Reports
- ✓ Investment Management Agreements

Asset Allocation: Process

Does the system have a formal and/or written policy for determining and evaluating its asset allocation? Is the system following this policy?	The COAERS Board and Investment Committee adopted an IPS, which provides a framework for targeting appropriate risk, asset allocation, operational guidelines, and reporting—all of which serve the purpose of aligning the Fund's actions with meeting the long-term benefits committed to by the System. The IPS details specific quantifiable objectives that are regularly monitored. More details on the System's adherence to these policies are provided in the Appendix .
Who is responsible for making the decisions regarding strategic asset allocation?	The Board is responsible for providing fiduciary oversight and charters the Investment Committee to make recommendations and establish investment policies and guidelines. It is ultimately the responsibility of the Board to establish the strategic asset allocation process and parameters. Investment Staff have been delegated authority to make tactical tilts in asset allocation but must receive approval for larger, strategic shifts.
How is the system's overall risk tolerance expressed and measured? What methodology is used to determine and evaluate the strategic asset allocation?	Risk for the System is ultimately the inability to cover future benefit payments. In service of this objective, an Asset/Liability Study is conducted to determine optimal levels of risk to target given unique considerations for the Fund. Examples of such considerations include, but are not limited to, the following: Risk of sudden drawdown Volatility of employer contributions Volatility of asset returns Expected volatility of funded status Illiquidity risk



	The central purpose of an A/L Study is to examine the probable future consequences, over extended periods of time, of applying alternative asset allocation strategies to the System's investment assets in order to fund the liabilities created by the benefit provisions of the System. A/L Studies are unique in their ability to combine in a single analysis the three critical factors that drive the financial health of the System: Benefit policy Contribution policy Investment strategy
How often is the strategic asset allocation reviewed?	The strategic asset allocation is reviewed at least annually. In periods where warranted, asset allocation may be reviewed more often, such as following large shifts in CMAs. An Asset/Liability Study is revisited at least every five years. Major changes to CMAs, contribution policy, liabilities, etc., may result in more frequent reviews.
Do the system's investment consultants and actuaries communicate regarding their respective future expectations?	The System's independent Investment Consultant communicates with the actuary as changes in CMAs occur or an Asset/Liability Study is required. While the Investment Consultant's CMAs are one input, COAERS' actuary utilizes a mosaic of assumptions from around 12 to 14 providers when setting the ARoR. This is consistent with common industry practice.
How does the current assumed rate of return used for discounting plan liabilities factor into the discussion and decision-making associated with setting the asset allocation? Is the actuarial expected return on assets a function of the asset allocation or has the asset allocation been chosen to meet the desired actuarial expected return on assets?	The actuarial AROR plays a critical role in setting the contribution rate of the System and incorporates a variety of factors and risks that affect the System's long-term ability to fund benefits. Among those factors is the Board's asset allocation and expected long-term returns and associated variability based (as noted above) on the CMA's of the System's independent Investment Consultant (as well as others the actuary chooses to utilize). The Board, in its consideration of asset allocation, is aware of the actuary's recommendation of a prudent level of contributions (based in part on the asset allocation). However, like the actuary's decision, the Board's decision must take into account other factors, most notably prudent levels of risk in the management of the Fund's assets, pragmatic considerations associated with investing, maintaining sufficient near-term liquidity, and more. Thus, the decision on the AROR (and thus prudent levels of contributions over time) and the decision on asset allocation (reflecting the Board's view of prudent levels of risk to the System's assets in the pursuit of investment returns over time) are two different, albeit related, decisions in the management of the System as a whole. The actuarial AROR is set independently of an asset allocation and reflects a pursuit of prudent long-term contributions. Asset allocation is driven by the targeted risk level rather than an obligatory fitting to the AROR. In the end, these must bear a reasonable relationship to one another, and our review of the Asset Allocation studies conducted for and discussed by the COAERS Investment Committee and Board are consistent with that objective.



Is the asset allocation approach used by the system based on a specific methodology? Is this methodology prudent, recognized as best practice, and consistently applied?

The System utilizes its Investment Consultant to produce CMAs with appropriately-long-term asset assumptions that match the long-term nature of the liabilities, as required by the IPS. Expected returns utilize a "build-up" approach. A summary of inputs include, but are not limited to, the following:

- Inflation expectations and return on cash
- · Going-in yields and spreads for fixed income
- Dividend yields, earnings expectations, currency impacts, and expected changes in P/E for equities
- Cap rates for real estate

Once return, risk, and correlations are set, a mean-variance optimization is used to produce an efficient frontier of asset allocations. Deterministic and stochastic analyses (such as Monte Carlo simulations) capture a multi-dimensional risk profile that seeks to model long-term impacts on the funded status of the Fund.

We deem the approach used to be prudent, aligned with best practices, and consistently applied across recent studies.

Does the system implement a tactical asset allocation? If so, what methodology is used to determine the tactical asset allocation? Who is responsible for making decisions regarding the tactical asset allocation?

The System has delegated authority to Investment Staff to exercise limited discretion over rebalancing. There are two bands in place around the neutral allocations for each sub-asset class: a "strategic" band and a narrower "tactical" band lying within the broader strategic band.

Investment Staff has full discretion to over- or under-weight a sub-asset class only to the extent the final weight resides within the narrower tactical band without requiring additional approvals from the Board. If actual weights are desired to extend beyond the tactical range into the strategic range, formal Board approval is required.

While the IPS delegates authority to Investment Staff for rebalancing within the tactical ranges, our review indicates to date that Investment Staff has consistently sought permission from the Board anyway. We observe that, so long as obtaining this approval does not impede achievement of the objectives sought by providing the Investment Staff with delegated authority, doing so is fine. If the record to date suggests that there are no circumstances in which that delegated authority would be exercised by Investment Staff and reported to the Board promptly after the fact, the latitude it provides and the results obtained may be limited. Consider reaffirming this authority to Investment Staff and taking steps to ensure Investment Staff are prepared to exercise this authority—without Board approval—should circumstances require such action.

How does the asset allocation compare to peer systems?

Actual asset allocation currently in place at COAERS is not abnormal relative to other public plans, with major asset classes falling in a normal range compared to other US public pension plans with assets between \$1 – 5 billion. One area of note is the relatively large allocation to cash as of June 2023 compared to peers. This was a strategic decision approved by the Board to take advantage of higher short-term interest rates during a period of yield curve inversion. The fund has been unique in not implementing any material exposure to private markets but has pointed to new legislation improving the contribution policy as possibly enabling the funding of such strategies in the future.







What are the strategic and tactical allocations?

The System's strategic and tactical allocations are provided below, including neutral targets:

Asset Class/Sub-Asset Class Policy Weights & Rebalancing Ranges

		, ,				
	Asset Class	Min ^S	Min ^T	Neutral	Max [⊤]	Max ^s
Ś	Global Equity	46.0%	51.0%	56.0%	61.0%	66.0%
Assets	US Equity	22.0%	29.0%	34.0%	39.0%	47.0%
	DM Equity	11.0%	13.5%	16.0%	18.5%	20.0%
ient	EM Equity	2.0%	4.0%	6.0%	10.5%	13.0%
h-O	Real Assets	10.0%	11.0%	15.0%	19.0%	20.0%
Growth-Oriented	Real Estate Equity	5.0%	7.0%	10.0%	13.0%	15.0%
Q	Infrastructure Equity	0.0%	1.0%	5.0%	7.0%	10.0%
	Fixed Income	16.0%	18.0%	21.0%	27.0%	33.0%
sts	US Treasuries	9.0%	11.0%	13.0%	21.0%	25.0%
Assets	US Mortgages	2.0%	3.0%	4.0%	6.0%	8.0%
	US Credit	1.0%	2.5%	4.0%	7.0%	10.0%
Diversifying	Multi-Asset	2.5%	4.5%	7.0%	12.5%	15.0%
Dive	Asset Allocation	2.5%	3.5%	5.0%	7.5%	10.0%
«ک ج	Commodities & Other	0.0%	1.0%	2.0%	5.0%	10.0%
Liquidity	Cash & Equivalents	-10.0%	-5.0%	1.0%	5.0%	10.0%
Liq	US Dollar instruments	-10.0%	-5.0%	1.0%	5.0%	10.0%
	Other currencies	0.0%	0.0%	0.0%	1.0%	2.0%

T: Tactical Rebalancing Range S: Strategic Rebalancing Range



Asset Allocation: Risk & Return

What is the expected risk and expected rate of return of each asset class?

Based on the Investment Consultant's 2023 CMAs, the expected risk and return are provided below. Note that private credit and private equity are provided, although not officially adopted as of the completion of this report.

Asset Class	Arithmetic Return Assumption	Geometric/ Compound Return Assumption	Standard Deviation Assumption	20.00 18.00 \$\mathbb{E}\$ 16.00 \$\mathbb{E}\$ 14.00
Global Equity	7.85	6.62	16.40	₹ 10.00 G
US Agg Fixed Income	4.00	3.88	5.00	8.00 F D A
COAERS Fixed Income	4.00	3.81	6.29	5 6.00
COAERS Real Assets	7.08	6.11	14.53	# 400 B C
COAERS Multi-Asset	6.87	6.17	12.32	0.00 3.00 6.00 9.00 12.00 15.00 18.00 21.00 24.00 27.00 30.00 33.00
Private Credit	8.00	7.23	13.00	Risk (Annualized Standard Deviation, %)
Private Equity	10.00	7.86	22.00	A Global Equity B Agg FI C COAERS FI D COAERS RA
Cash Equivalents	2.50	2.48	2.00	E COAERS MA F Private Credit G Priv Equity H Cash

Assumptions noted as COAERS are custom assumptions based on COARERS' implementation of the asset class.

COAERS Fixed Income = 75% US Agg Fixed Income, 25% US Long Duration Government Fixed Income.

COAERS Real Assets = 33% each Core Real Estate, US REITs, and listed Infrastructure.

COAERS Multi-Asset = 56% Global Equity, 21% US Agg Fixed Income, 10% US REITs, 5% Listed Infrastructure, 7% GTAA, and 1% Cash.

How is this risk measured and how are the expected rates of return determined? What is the time horizon? In the asset allocation process, risk is primarily measured as the standard deviation of asset returns for the purposes of optimization and creating an efficient frontier. CMAs are forecasted over 10+ years to match the long-term liabilities of the plan. Other risks are analyzed including drawdown potential, liquidity constraints, thematic exposures, and equity beta.

What mix of assets is necessary to achieve the plan's investment return and risk objectives?

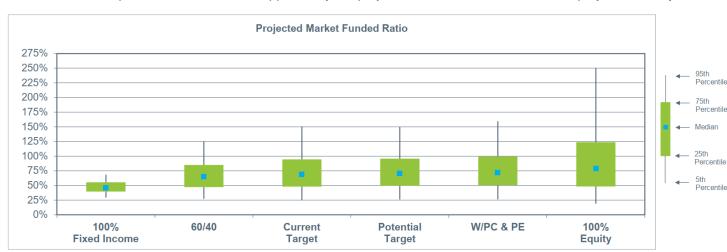
Recent legislation has resulted in changes to the contribution policy and has significant impacts on the funded status of the Plan. Therefore, a forward-looking analysis that captures these new attributes is required. The latest Asset/Liability Study did recommend seeking more diversifying assets to bolster returns without increasing portfolio volatility. The additional contributions would enable the portfolio to pursue new asset classes like private credit and private equity, which the study found would improve the market-funded ratio over time.



Below is a summary of the recommended strategic asset allocation following the August 2023 Asset/Liability Study:

	100% FI	60/40	Current Target	Potential Target	W/PC & PE	100% Eq
Global Equity	0	60	56	53	47	100
US Agg Fixed Income	100	40	0	0	0	0
COAERS Fixed Income	0	0	21	21	19	0
COAERS Real Assets	0	0	15	15	15	0
COAERS Multi-Asset	0	0	7	0	0	0
Private Credit	0	0	0	10	10	0
Private Equity	0	0	0	0	8	0
Cash Equivalents	0	0	1	1	1	0
Total	100	100	100	100	100	100
Capital Appreciation	0	60	60	63	65	100
Capital Preservation	100	40	24	22	20	0
Alpha	0	0	0	0	0	0
Inflation	0	0	16	15	15	0
Expected Arithmetic Return	4.0	6.3	6.8	6.9	7.1	7.8
Expected Risk (Standard Deviation)	5.0	10.3	12.0	11.7	12.2	16.4
Expected Compound Return	3.9	5.8	6.1	6.3	6.4	6.6
Expected Sharpe Ratio	0.30	0.37	0.36	0.38	0.38	0.32
RVK Expected Eq Beta (LCUS Eq = 1)	0.07	0.61	0.71	0.69	0.71	0.97
RVK Liquidity Metric (T-Bills = 100)	85	88	85	77	70	90





The introduction of private markets is also supported by the projected market-funded ratio, which projects out 20 years:

What consideration is given to active vs. passive management?

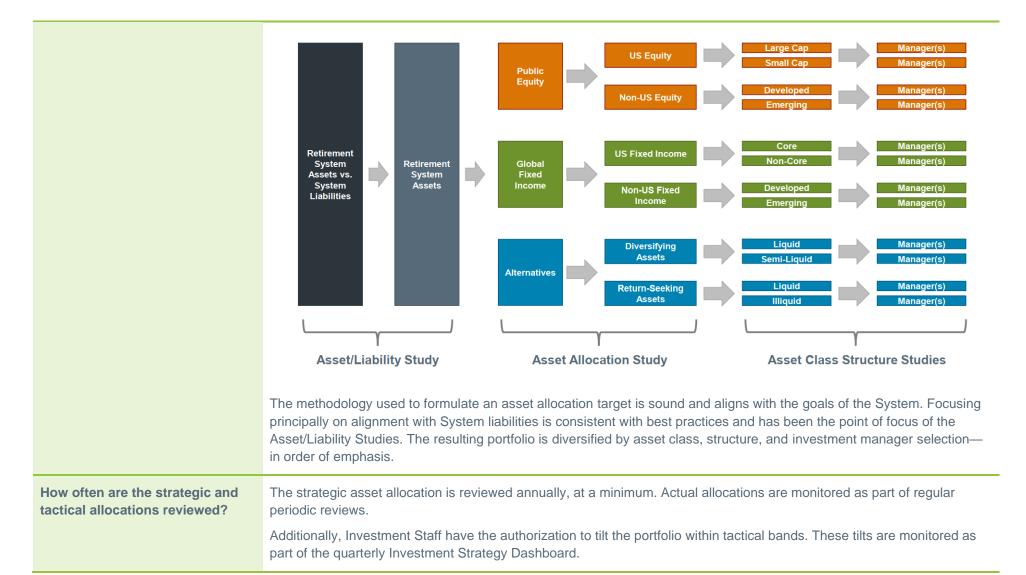
Per the IPS, investment implementation should occur passively and in public markets unless a high likelihood of success on a risk-adjusted, net-of-fees basis can be expected from other approaches. An information ratio of 0.5 is provided as the hurdle expected to be met by an active mandate.

COAERS' utilization of active management is low and has allowed the System to maintain competitively low management fees versus peers. Comparing the deployment of active management by asset class versus peers, the Plan utilizes less active management as a percentage of composite assets in US small-cap equities and in fixed income versus most peers.

These observations are not a concern and are delivering a competitive investment fee structure. COAERS should continue to promote fee-efficient implementations, so long as they do not come at the expense of higher net-of-fee returns. Where no active management is utilized, Investment Staff should be able to communicate their Investment Beliefs that rationalize this decision to Board.

Is the approach used by the system to formulate asset allocation strategies sound, consistent with best practices, and does it result in a welldiversified portfolio? The process for determining a sound asset allocation begins with understanding the ability of the fund to bear risk, which starts with reviewing the liabilities and cash flows of the System. Once an appropriate risk level is determined, an Asset Allocation Study is conducted to produce the most efficient return per unit of risk. Finally, an Asset Class Structure Study produces targets across style and implementation, investment manager selection, and other considerations.







Asset Allocation: Appropriateness of Valuation Methodologies

How are alternative and illiquid assets selected, measured and evaluated? What valuation methodologies are used to measure alternative and illiquid assets? What alternative valuation methodologies exist and what makes the chosen method most appropriate?

COAERS currently utilizes the same process for the selection and evaluation of alternative and illiquid asset class managers as it does for the selection and evaluation of public market asset class managers. We provide more details on the investment manager selection and evaluation process in Section V of this report.

As of December 31, 2022, COAERS has allocations to two alternative investment managers: a private real estate strategy that has daily liquidity with provisions for redemption gates, and a private infrastructure strategy that has quarterly liquidity on best efforts basis. Each of the investment managers has their own valuation methodology, which is appropriate and consistent with industry practice.

While COAERS' Custodian pricing serves as the primary basis for valuing liquid/less liquid assets, fund statements provided by alternative/illiquid investment managers are used to obtain the fund market values. The appropriateness of investment manager valuation policies is reviewed during the initial due diligence, and, if hired or added to the Premier List, on an ongoing basis, but at least annually. The IIP document has clear guidelines on valuation policies of liquid/less liquid assets along with illiquid assets. COAERS provides its policies to the fund managers and any differences with individual investment manager valuation policies are disclosed by the investment manager to COAERS Investment Staff and Investment Consultant. Investment staff are required to confirm valuation policy compliance with appropriate valuation procedures on an annual basis. The valuation methodology for the two current alternative investment managers is consistent with industry best practice.

Are the system's alternative investments appropriate given its size and level of investment expertise? Does the IPS outline the specific types of alternative and illiquid investments allowed, as well as the maximum allocation allowable?

The IPS outlines all asset classes, including alternative and illiquid asset classes, utilized by the System and allocations to each. As of December 31, 2022, COAERS has allocations to real estate and infrastructure. Investments in these two asset classes comprise a mix of private core open-end funds (60%) and liquid passive funds (40%).

The policy includes target (neutral) allocation, as well as permissible allocation ranges (minimum and maximum strategic and tactical) for all asset classes. As of December 31, 2022, the asset classes are within their allowable ranges.

Given COAERS' liquidity needs, the asset allocation with minimal exposure to private and illiquid assets is appropriate. However, based on the Asset/Liability Study conducted by the System in 2023, the new contribution policy is expected to improve the total fund liquidity. This would allow the system to take slightly more risk through a portfolio, which could include moderate exposures to private credit and private equity. COAERS is in the process of evaluating these asset classes for possible additions to the investment structure.

Consider adding a separate section for the selection and evaluation of private equity and private credit mandates, if implemented. Reporting and benchmarking of private investments should also be added.

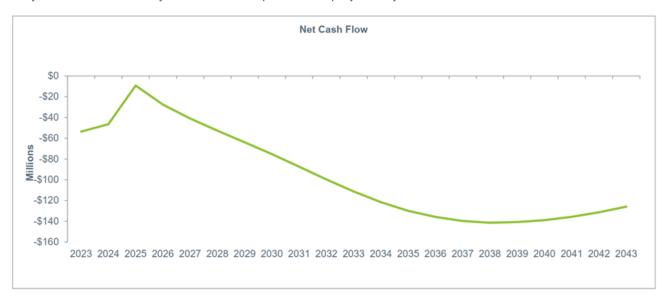


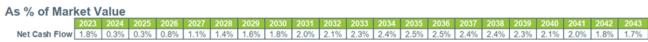
Asset Allocation: Future Cash Flow and Liquidity Needs

What are the plan's anticipated future cash flow and liquidity needs? Is this based on an open or closed group projection?

Below are the latest cash flow projections as of the August 2023 Asset/Liability Study. The study was based on an open group analysis.

The results assume the contribution policy remains unchanged, and that the System's assets return precisely the actuarially assumed rate each year without exception for all projection years.





When was the last time an assetliability study was performed? An Asset/Liability Study was produced in 2023, with a memo outlining the major findings provided to the System on August 25, 2023.

How are system-specific issues incorporated in the asset allocation process? What is the current funded status of the plan and what impact does it have? What changes should

System-specific issues have a material and direct impact on the asset allocation process and are modeled as part of the Asset/Liability Study. The plan's funded status was projected to have fallen to 56% as of December 31, 2022, due to a difficult market environment through year-end.

While the System is currently underfunded, the Asset/Liability Study revealed that merely increasing overall risk would



be considered when the plan is severely underfunded, approaching full funding, or in a surplus?	likely not yield a materially better outcome due to the widened distribution of potential outcomes. Increases in contribution rates (resulting from recently approved legislation) and recently proposed adoption of private markets are expected to help reach a more diversifying universe of assets and improve the funded status without material changes in overall volatility risk.			
What types of stress testing are incorporated in the process?	Stochastic modeling is used to capture a distribution of potential outcomes and model the effects of path dependency that arise from future uncertainty. This includes forward-looking projections like a Monte Carlo simulation in addition to historic scenario analysis to capture archetypal market regimes and risks.			

Summary

Collective efforts of COAERS' Board, Investment Committee, and Staff have led to an effective and well-articulated methodology for selecting a Strategic Asset Allocation policy that is responsive to changes in the System's liabilities and shifts in long-term capital market assumptions. To the extent that Staff exercise their delegated authority to tactically tilt the portfolio, the rationale is transparently communicated and in service of prudent risk management. Discussions around enhancing the portfolio structure and asset class exposures are ongoing and will likely include the addition of private market assets in future iterations of the System's portfolio. Overall, the System has developed a comprehensive approach to managing the portfolio in the ultimate service of the Plan's beneficiaries.

Recommendations

12. Consider removing 10 – 12% risk targets for the portfolio/adding metrics that more directly align with the Asset/Liability Study and the goals of the portfolio.

Setting a range of acceptable risk via monitoring long-term standard deviation helps measure whether realized risk is favorable versus peers, but is not, in isolation, a good proxy for the alignment of risk relative to the stated goals of the portfolio.

Target risk is set based on the liabilities of the System, which can vary meaningfully from other plans with different liability profiles. Therefore, selecting a realized risk metric—or better yet, a set of metrics considered in combination—that bounds the desired outcome of the Asset/Liability Study may be a better proxy for success.

The introduction of private investments may add additional difficulties in measuring the true risk of the portfolio through standard deviation alone due to smoothing effects and should be taken into consideration.

13. Consider setting capacity/risk contribution constraints in place of 4% dollar-weight constraints for sub-asset class thresholds:

There is currently an exception to the 4% rule in place for commodities. The exception suggests there may be better variables to consider than the dollar weight of a sub-asset class.



Commodities exhibit a higher level of volatility and have capacity constraints that warrant consideration—even below a 4% allocation. As such, reframing the inclusion criteria around a measurement such as ex-ante risk contribution may be a more direct way to evaluate sub-asset class inclusion while avoiding the need to create exceptions.

14. Consider consolidating explanations for how tactical and strategic sub-asset class ranges are set:

The independent Investment Consultant currently works with Investment Staff to determine target weights allocated to each sub-asset class. The ranges are stated to be based on the volatility of the asset class relative to the proportion of the fund allocated to each. This explanation aligns with the IPS policy set forth in Section V (Asset Allocation) within the "Rebalancing" subsection—particularly the last sentence of the first paragraph.

The IPS separately states that the rebalancing ranges are defined as reflecting $2^{nd} - 3^{rd}$ quartile allocations of peers for tactical ranges and $1^{st} - 4^{th}$ quartile of peer allocations for strategic ranges. This policy is set forth in the IPS guidelines under Section V (Asset Allocation) within the "Asset Class Diversification" subsection and is detailed within the two bullet points on pages 13 - 14.

We are not convinced that the behavior of peers is a good guide to setting strategic and tactical ranges that appropriately reflect the specific circumstances in place at COAERS and explored in the regular Asset/Liability Studies. COAERS should reconsider the role of peer data in setting these ranges and instead focus more on asset volatility data combined with stress tests based on varying inter-asset class correlations.

15. Consider revisiting tracking error targets:

Some asset classes have fallen short of tracking error targets over the last ten years, particularly within developed international and emerging markets.

If these targets are still desired, more active management or active structuring decisions by Investment Staff may be appropriate. If lower tracking error is preferred, a revision of tracking error targets may be warranted.

16. Consider reaffirming Investment Staff's authority to execute rebalancing decisions—without Board approval—should circumstances require such action.

While the IPS delegates authority to Investment Staff for rebalancing within the tactical ranges, our review indicates to date that Investment Staff have consistently sought permission from the Board anyway. We observe that, so long as obtaining this approval does not impede the achievement of the objectives sought by providing the Investment Staff with delegated authority, doing so is fine. If the record to date suggests that there are no circumstances in which that delegated authority would be exercised by Investment Staff and reported to the Board promptly after the fact, the latitude it provides and the results obtained may be limited.

17. Consider adding a separate section for the selection and evaluation of private equity and private credit mandates, if implemented. Reporting and benchmarking of private investments should also be added.



Section III – Review of the appropriateness of investment fees and commissions paid by the retirement fund.

Documents Reviewed

- ✓ Investment Management Agreements
- ✓ Confirmation Emails of Current Fee Agreements
- ✓ Trade Cost Analysis Report (Zeno AN Solutions)
- ✓ Investment Cost Effectiveness Analysis (CEM Benchmarking)
- √ Investment Staff and Investment Consultant Presentations to the Investment Committee and Board
- ✓ Investment Policy Statement
- ✓ Investment Implementation Policy

Do the system's policies describe the management and monitoring of direct and indirect compensation paid to investment managers and other service providers? What direct and indirect investment fees and commissions are paid by the system? Does the system have appropriate policies and procedures in place to account for and control investment expenses and other asset management fees?

Inherent in COAERS' Investment Beliefs as stated in the IPS, is the System's consideration of cost in making decisions regarding investment strategy and implementation. The policy states a preference for the use of passive management and public markets as the default unless the expected likelihood of risk-adjusted, net-of-fees outperformance is high from other approaches. Per the IIP document, implementation decisions of investment strategies, including choice of vehicles for both public and private markets, will take into consideration the effect of costs on net returns to the fund and the policy preference for lower cost structures when available and effective in the pursuit of net-of-fee returns. There is evidence in the current structure of the fund that low-cost passive mandates are highly utilized by the System.

The document also states that Investment Staff are required to report investment costs, including investment management fees and commissions, no less than annually, to the Board via the Investment Committee. Investment Staff are also required to regularly review to ensure investment manager compliance with specific directives regarding commission cost management. In addition, the Board periodically engages a third party to evaluate its total fee structure, and the results are presented to and discussed with the Board.

Who is responsible for monitoring and reporting fees to the board? Is this responsibility clearly defined in the system's investment policies?

The duty to review fees is inherent in the Board's oversight role per the IPS and its monitoring provisions. The Investment Committee and the Board review fees for each of the investment managers and strategies in the reports provided by the independent Investment Consultant and the Investment Staff. Total fund performance in these reports is shown on both a gross-of-fees basis and net-of-fees basis and includes 'Cash Activity – Investment Operations' and 'COAERS Investment Manager Fees' reports, which detail direct and indirect fees paid to the investment managers quarterly.



Are all forms of manager compensation included in reported fees?

While the majority of COAERS' investment managers' fee structure is based on a fixed management fee schedule varying only with the size of the mandate, the Board and Investment Staff have negotiated performance-based fees with a small number of investment managers. These fees are generally predicated on net outperformance over a specified highwater mark, hurdle rate, and/or loss carryforward, as appropriate, over a specified time horizon. All forms of investment manager compensation, including administrative expenses and performance-based fees, are reported in the quarterly fees paid to the investment managers.

How do these fees compare to peer group and industry averages for similar services? How are the fee benchmarks determined? RVK's analysis included review and confirmation of fee schedules of all investment managers, review of investment manager agreements, comparison to similar mandates, as well as a comprehensive peer group fee analysis. These peer groups are routinely used by RVK to benchmark fees and are comprised of both active and passive managers specific to the mandate's vehicle type. Each investment manager was ranked against an appropriate eVestment peer group based on mandate type and overall asset size. The eVestment fee database is considered the broadest and most frequently updated in the industry. Lower fees are represented by lower percentile rank (i.e., the 1st percentile is the lowest fee and conversely the 99th percentile is the highest fee in the relevant investment manager peer group).

As shown in the table below, 94% of the System's public fund managers have effective annual fees that fall well below the industry median for each respective mandate. As stated above, COAERS favors passive implementation, as appropriate, which leads to low fees in general, but we observed that even fees paid to passive managers are below the industry average. The System's utilization of mainly separately managed accounts (SA), followed by collective funds (CFs and CITs) and small usage of mutual funds also contribute to its low fees. Peer group classification for this table can be found in the **Appendix**.

Investment Managers and Management Fees as of December 31, 2022

Fund	Universe Median Fee (%)	Fee Rank	Size of Universe
BNYM Dynamic US Eq. NL (SA)	0.44%	26	337
BNYM SciBeta US Max Decorr. (SA)	0.30%	17	88
TOBAM Max Div. USA (SA)	0.30%	31	88
L&G MSCI USA Index (CIT)	0.04%	28	54
SSGA MSCI USA EW Index (SA)	0.29%	7	88
SSGA MSCI USA SC Index (CF)	0.05%	39	26
NISA S&P 500 Futures (SA)	0.07%	41	71



L&G SciBeta Inflation Plus (SA)	0.34%	2	88
Walter Scott DM Int'l Equity (SA)	0.52%	17	172
1607 Capital Partners Int'l Eq. EAFE (SA)	0.55%	5	172
BNYM DB Dynamic Glb Ex US Eq (CF)	0.70%	1	52
NISA EAFE Futures (SA)	0.12%	1	22
NT MSCI World Ex US Small Cap Index (CF)	0.10%	1	18
NISA FX Hedged EAFE Future (SA)	0.12%	1	22
Baillie Gifford EM Equity Class 3 (MF)	0.95%	28	231
L&G MSCI EM Index (CIT)	0.15%	11	15
NISA EM Futures (SA)	0.20%	1	16
Principal US Property Account (CF)			
Fidelity US REITs Completion Index (SA)	0.60%	1	59
Agincourt FTSE NAREIT Eq. REITs Index (SA)	0.70%	1	59
IFM Global Infrastructure A (CF)			
Fidelity DJ Brookfield Infra. Index (SA)	0.71%	1	50
NISA Gold Futures (SA)	0.78%	1	30
Agincourt 1-3 Year Treasury (SA)	0.06%	15	75
Agincourt 1-5 Year US TIPS (SA)	0.08%	2	75
NISA 30 Year Treasury Futures (SA)	0.10%	7	3
Hoisington Macro US Treasuries (SA)	0.25%	92	15
DoubleLine MBS (SA)	0.25%	20	56
PGIM US IG Corp. Bond (CIT)	0.24%	57	13



Agincourt Passive Index (SA)	0.57%	2	157
Agincourt 1-3 Month Treasury (SA)	0.15%	1	73
Mellon Government STIF (CF)	0.15%	1	73
COAERS USD (SA)	N/A	N/A	N/A
BNYM Money Market Fund (SA)	0.12%	1	40
NISA Cash and Carry (SA)	0.76%	4	30
NISA ST Sovereigns (SA)	0.15%	1	73

The table below summarizes the overall distribution of relative fees of the public market managers.

Fee Percentile Distribution

Fee Percentile Range	Number of Investment Managers in Range
1st to 24th	26
25th to 49th	6
50th to 74th	1
75th to 100th	1

Fees as of December 31, 2022

COAERS' allocation to private market alternatives, as of December 31, 2022, is 9% of the total Fund and is invested across two investment managers. The fees of both private mandates fall closer to the lower range of the peer universe fee range for management and incentive fees as shown in the tables below.

Private Real Estate

Fund	Peer Universe Management & Incentive Fees	Population
Principal US Property Account (CF)	Fee impact has varied between 0.76% - 0.97% over the past 10-year period	25

Peer universe population and fees, as of 12/31/2022, include NCREIF-ODCE fund managers that share fee data with RVK.



Private Infrastructure

Fund	Peer Universe Management & Incentive Fees	Population
IFM Global Infrastructure A (CF)	Management Fee varies but ranges between 0.70% - 1.00%. Incentive fee structure varies.	23

Peer universe population and fees, as of 12/31/22, include open-end core infrastructure funds that share fee data with RVK.

Overall, the System's estimated total investment management cost¹ based on RVK's analysis is about 0.24% as of December 31, 2022. We observe COAERS' investment management fee to be much lower compared to public plans peers. This fee is almost half compared to the average investment fee of 0.49% of 195 public retirement funds that participated in National Conference on Public Employee Retirement Systems (NCPERS) 2023 Public Retirement Systems Study. The survey includes responses from 195 state and local government pension funds with more than 19.6 million active and retired members and assets exceeding \$3 trillion.

¹ The calculation is based on fund market values as of December 31, 2022, and investment management fee and does not include incentive fees.



Review of Commissions – Trade Cost Analysis

While not nearly so critical, RVK notes that the use of transaction cost analysis (TCA) covering trade activity by their investment managers within public market portfolios is a means for providing additional context to performance results, and thus can play a role in ongoing fiduciary monitoring activities. The ongoing consideration and review of such reporting over multiple periods can form the basis for additional insights into comparative trading effectiveness and trade execution cost containment by the investment managers utilized in the Fund's public markets mandates. Discussion of findings with the TCA provider, and investment managers, can add contextual value to this monitoring exercise.

RVK has reviewed recent reporting² provided by Zeno AN Solutions, the current provider of TCA for COAERS, to inform this summary of the findings³. Unless otherwise noted, we have reviewed (or assembled, based on guarterly information) the total reported information for the prior four guarters as of December 2022.

COAERS Fixed Income Trading

- Total of 407 trades / \$1,491.0 million in market value
- 99.4% of the total volume was possible for the TCA provider to evaluate and consisted of 363 trades / \$1,481.6 million in market value
- Primarily (79.6%) US Treasury Trading
- Total Costs (as measured by Implementation Shortfall) of -4 bps, comprised of the following:
 - Multi-Day Delay Costs (Savings) of +1 bps
 - Impact Costs of -3 bps
 - Overnight Gap Costs of -2 bps
 - Explicit Costs of 0 bps
- Limited Quarter-over-Quarter variability was noted, although increased Overnight Gap costs for the quarter ended 12/31/2022 (in line with increase in cost benchmark) were observed.
- Total Cost Ranking (for the period 10/1/2021 9/30/2022) for measured costs of -2 bps ranked slightly below the median at the 57th percentile.

³ For this reporting summary, RVK has sought to uniformly present costs as negative figures/units and cost savings as positive figures/units.



² Fourth Quarter 2022 TCA: Fixed Income Monitor; Trading Summary Report – United States Market; Trading Summary Report – Global; and FX Monitor.

COAERS US Equity Trading

- Total of 9,891,524 shares / \$536.65 million in market value
- Total Commission Costs of -\$60,004.65 (equivalent to -1.12 bps or -0.61 cps)
- Quarter-over-Quarter Commission Costs were observed to operate in a reasonable range of -0.5 cps to -0.79 cps
 | -1.0 to -1.3 bps (ranking in the 14th 19th percentiles).
- Quarter-over-Quarter Slippage Costs vs. VWAP had some variability with the Q2 2022 portfolio experiencing the
 best at a (savings) of +7.7 bps gain vs. VWAP, ranking in the 20th percentile, and the Q3 2022 portfolio
 experiencing the worst at a cost of -12.9 bps loss versus VWAP, ranking in the 77th percentile.
- Quarter-over-Quarter Total Costs had some variability with the Q2 2022 portfolio experiencing the best at a
 (savings) of +6.7 bps (3.94 cps) and ranking in the 18th percentile, and the Q3 2022 portfolio experiencing the
 worst at a cost of -14.0 bps (-6.39 cps) and ranking in the 73rd percentile.
- Overall commission cost levels were measured in the top quartile.
- Of the 8 investment managers measured in Q4 2022
 - Managers/accounts increasing Total Execution Cost levels (i.e. below median) during Q4 2022 were:
 SSGA MSCI USA EW IND; AGINCOURT PASSIV IND; and FIDELITY BROOKFIELD GLOBAL.
 - Managers/accounts decreasing Total Execution Cost levels (i.e. above median) during Q4 2022 were:
 LGIMA INFLATION PLUS; 1607CAP; MELLON SCI BETA US DC; and FIDELITY US REITS.

COAERS Non-US Equity Trading

- Total of 20,518,769 shares / \$90.3 million in market value
- Total Commission Costs estimated at -\$88,560.18 (due to rounded bps figures presented) equal to -9.8 bps.
- Quarter-over-Quarter Commission Costs were observed to operate in a reasonable (but above median) range of -5.7 bps to -12.6 bps (ranking in the 60th – 86th percentile, respectively). This may be due to active fundamental strategies.
- Quarter-over-Quarter Slippage Costs vs. VWAP had some variability with the Q1 2022 portfolio experiencing the
 best at a (savings) of +11.5 bps vs. VWAP, ranking in the 21st percentile, and the Q3 2022 portfolio experiencing
 the worst at a cost of -8.1 bps vs. VWAP, ranking in the 64th percentile.
- Quarter-over-Quarter Total Costs had some variability with the Q1 2022 portfolio experiencing the best at a cost of -1.1 bps, ranking in the 32nd percentile, while Q2 2022 had the worst experience with a cost of -17.7 bps, ranking in the 72nd percentile.



- In all quarters during 2022, commission levels in aggregate were below the median.
- For Q4 2022 in particular, commission cost levels overall appear to rank fairly poorly with 1607 CAP ranking at the 92nd percentile.
- Markets that appear to be driving the rank in particular include high volumes executed in the United Kingdom, Australia, and the Netherlands at higher basis point execution levels of -14.9 bps, -18.2 bps, and -8.0 bps, respectively.
- In the case of the United Kingdom and the Netherlands, and to a lesser degree in Australia, strong VWAP relative execution is evident (potentiality justifying higher commission levels) but this may not be universally present.

COAERS FX Execution

- Total of \$144.7 million in FX traded in 556 trades 14% Spots; 86% Forwards
- Total costs vs. the Average Daily Mid-Point were a (savings) of +7 bps and +10 bps relative to the Zeno Benchmark. Total costs were -4 bps relative to the 4 PM London Close and a savings of +53 bps relative to a hypothetical buy-high/sell-low sub-optimal scenario.
- Execution efficiency in the Forward market was notable and drove overall results with performance in 2022 of savings of +9 bps vs. Average Daily Mid-Point and savings of +13 bps relative to the Zeno Benchmark. Total costs were -4 bps relative to the 4 PM London Close and a savings of +56 bps relative to a hypothetical buyhigh/sell-low sub-optimal scenario.
- The was offset by reduced execution efficiency in the Spot market with execution efficiency in 2022 of costs of -7 bps vs. Average Daily Mid-Point and costs of -4 bps relative to the Zeno Benchmark. Total costs were -3 bps relative to the 4 PM London Close and a savings of +31 bps relative to a hypothetical buy-high/sell-low sub-optimal scenario.
- 20% of trades were done with the custodian and were generally more costly.
- Average cost of -6 bps vs. 4 PM London Close.
- 80% of trades were done with a non-custodian counterparty and were slightly less costly.
- Average cost of -3 bps vs. 4 PM London Close.
- All trades were done in "non-restricted" markets.
- Continued discussion with investment managers regarding the usage of custodial vs. non-custodial venues is reasonable. For Q4 2022 the following observations can be made.



- o 1607 CAP
- 100% of executions were with a custodian with an average cost of -7 bps vs. Average Daily Mid-Point

TCA reporting and review of results are prudent fiduciary exercises. In our experience, not every public fund extends its monitoring of fees and cost of execution by having TCA studies conducted as COAERS has done. The review of TCA reporting with TCA providers and the discussion of results and findings can be an effective manner of assessing transaction cost trends. RVK cautions that it is important to consider these observations within the context of longer-term trends and the qualitative observations and findings from discussions with investment managers, which may offer additional justification and/or clarification. In the final analysis, it is the fee charged to COAERS that is most important.

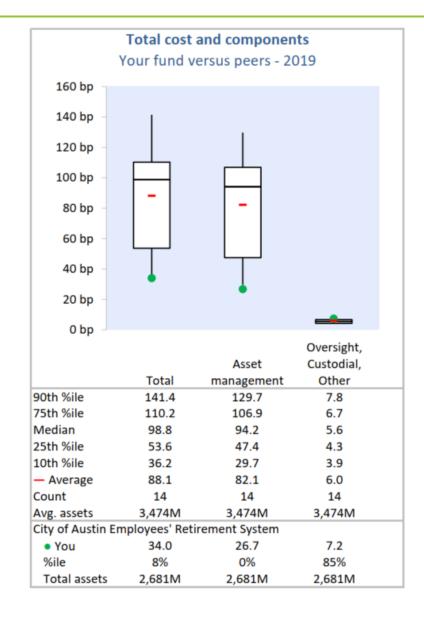
What other fees are incurred by the system that are not directly related to the management of the portfolio? How often are the fees reviewed for reasonableness?

Based on the documents we have reviewed, there are no other fees directly related to the management of the portfolio. In addition to reviewing the quarterly investment manager fees, COAERS also periodically conducts investment cost benchmarking analysis for comparison and appropriateness relative to public peers of similar size. This includes benchmarking of total fund fees, asset management costs by asset class, and oversight and service provider fees inclusive of trustee, custodian, consulting, reporting, and audit fees. The last fee benchmarking report was conducted by CEM Benchmarking for the period ending December 31, 2019.

Based on that study, COAERS' total investment cost, excluding transaction costs, of 0.34% was about one-third of the peer median cost of 0.99% bps. The asset management portion of the total cost at 0.27%, is between one-quarter and one-third of the peer median fee of 0.94%. The low overall cost of the System was mainly due to the lower cost of implementation style and lower fees for similar services compared to peers. The exhibit on the next page is from the study and shows that COAERS ranked in the 8th percentile among peers of similar size and is in the lowest percentile for asset management fees among all public plans⁴ in the survey as of December 31, 2019.

⁴ Peer group comprised of 14 global funds, with assets ranging from \$1.7 billion to \$7.9 billion, with median size of \$2.7 billion.







The report further provided the change in asset management and oversight/service provider fees since 2015, as shown in the below exhibit. While asset management costs have decreased by \$0.6m, the oversight cost increased by \$0.8m and service provider costs increased by \$0.2m during this period.

		2019		Cost in bps		Cost/
Asset class styles where you had assets in both		avg. assets			More/	-Savings
2019 and 2015 ¹	Style	\$mils	2019	2015	-less	\$000s
External asset management		Α			В	AxB
Stock - U.S. Large Cap	passive	592	7.9	5.0	2.9	174
Stock - U.S. Large Cap	active	190	28.8	43.9	-15.1	-286
Stock - U.S. Small Cap	passive	128	1.0	1.0	0.0	0
Fixed Income - U.S.	passive	94	1.7	4.0	-2.3	-22
Fixed Income - U.S.	active	224	15.9	16.7	-0.8	-19
Cash	active	15	29.9	1.5	28.4	43
Real Estate ex-REITs	active	246	78.6	82.3	-3.7	-91
Top layer perf. fees (on NAV)	active	266	0.0	17.0	-17.0	-452
Risk Parity	active	75	43.4	39.6	3.7	28
Total for external management						-625
Oversight		2,681	4.8	1.9	2.9	775.2
Trustee & Custodial		2,681	0.9	1.0	-0.1	-18
Consulting		2,681	0.4	0.5	-0.1	-23
Audit		2,681	0.5	0.4	0.2	41
Other		2,681	0.6	0.0	0.6	155
Total for fund oversight						931
Total						306

1. Cost differences are attributed to paying more/less for similar services only if the asset-class style existed in both years.

As the total fund grows and with the addition of private asset classes, we would expect asset management costs and oversight/service provider costs to increase. This is normal and, if fund and manager selection is good over time, the net-of-fees benefit will be realized.

Is an attorney reviewing any investment fee arrangements for alternative investments?

All investment manager contracts, side letters, and other agreements, whether public market or private alternatives, are evaluated, reviewed, and finalized by the Executive Director, as delegated by the Board, in consultation with the General and/or Investment Counsel.



Overall Fees

One of COAERS' Investment Beliefs is to gain market exposure and structure the investment portfolio with important considerations given to fees and costs. The System has been very diligent and successful in negotiating fees with investment managers across asset classes in both public and private markets. Investment manager fees, trade commissions, and estimated total plan fee of 0.24% are not only reasonable and appropriate but are considerably lower compared to median universe fee and public peers of similar size, respectively.

It is important to note that the lower fee is a function of asset allocation, structure of the investment program, high utilization of passive management, and efficient fee negotiations. With the recent decision to allocate more into the private markets (private equity and private credit) which carry higher fees than the public market, total plan fees will go up relative to current fees. However, over the years, COAERS has taken a thoughtful approach to structure and implement the investment program and is expected to continue to be an industry leader in managing and controlling plan costs.

Recommendations

- 18. Continue to utilize passive management in asset classes with higher efficiency.
- 19. Consider adding a section on management and control of investment management and service provider cost in the IPS or IIP.
- 20. Consider adding a periodic frequency for conducting plan fee reviews similar to the minimum frequency noted in the IPS for Asset/Liability Studies and Asset Allocation Studies.



Section IV – Review of the retirement fund's governance processes related to investment activities, including investment decision-making processes, delegation of investment authority, and board investment expertise and education.

Documents Reviewed

- ✓ Investment Policy Statement
- ✓ Investment Implementation Policy
- ✓ COAERS Governance Manual
- ✓ Investment Committee Charter
- ✓ COAERS Effectiveness Assessment (Global Governance Advisors)
- ✓ Investment Staff and Investment Consultant Presentations to the Investment Committee and Board
- ✓ PRB Training Requirements Core and Continuing MET Requirements

General Comments

Based on our review, the investment decision-making process for the System broadly reflects a comprehensive implementation of best practices.

The COAERS IPS, while not specifying required processes in detail, provides a strong foundation for investment decision-making. The IPS clearly addresses key investment principles that are industry standards for best practices in institutional investment decision-making, including but not limited to:

- The sole purpose is to provide benefits to members and their beneficiaries
- The importance of regular asset/liability and asset allocation analyses
- The commitment to incorporate risk considerations
- The central role of diversification
- The requirements and guidelines for thoughtful portfolio rebalancing
- The encouragement to seek advice from experts
- The importance of avoiding conflicts of interest

The outcome of individual investment decisions is always uncertain, but we believe COAERS' policy foundation goes a long way to mitigate that risk.

The COAERS IIP is a sound and appropriately detailed guide indicating how the Board wishes the implementation of the investment program to be accomplished. Not all boards of trustees in the US have adopted the simultaneous



development and use of an IPS as well as a more granular, process-oriented IIP. Our firm views a supplementary process-oriented policy document such as the one COAERS employs quite favorably, keeping the IPS solely focused on the Board's goals, beliefs, policy, and guidelines.

The IIP covers a broad array of investment activities common to defined benefit pension plans like the COAERS plan. It sets forth processes and methods to be employed in investment manager and product due diligence, investment manager selection and monitoring, performance evaluation, permissible investments, execution of major asset flows associated with fund management, etc. The IIP requires common best practices methods and implementation steps without being so prescriptive that it excessively constrains the flexibility necessary for effective decisions.

Delegation of Investment Authority

Our review of the governance structure under which COAERS operates indicates clarity regarding the delegation of authority to make and provide advice on investment decisions. More specifically, our review finds:

- Authority held by the Board: Clarity that while the Board may delegate duties, it cannot delegate away overall
 responsibility for the operation of the plan, including the management of the funds held in trust solely for the
 benefit of the plan participants and their beneficiaries.
- Authority held by the Committee(s) of the Board: Clarity regarding the review and recommendation process for investment decision-making by the Investment Committee for the Board. However, we suggest the Board carefully review Recommendations 6, 7, and 9, which are addressed in Section I of this Evaluation.
- Authority held by Executive Staff: Clarity on the authority granted to the Executive Director regarding investment decisions. Furthermore, we find that that the COAERS governance documents set forth in substantial detail not only the direct authority delegated to the Executive Director but also the requirements to keep the Board informed on a timely basis when it is exercised. Similarly, we conclude that there is also clarity regarding the role and obligations of the Chief Investment Officer with respect to investment decisions when the IPS and IIP are knit together, providing policy direction, approved implementation procedures, and delegation of authority to Executive and Investment Staff.
- Authority held by Investment Staff: The governance structure addresses this point by noting that both the
 Executive Director and the Chief Investment Officer may delegate authority to non-CIO Investment Staff while
 making it clear that they remain responsible for its execution.
- Authority held by outside consultants: There is substantial clarity regarding the role of the Investment
 Consultant with respect to its obligations to the COAERS Board; the requirement to collaborate with Investment
 Staff yet retain the independence necessary to be an effective direct advisor to the Investment Committee and
 Board; and the importance COAERS places on all involved parties avoiding conflicts of interest.



Transparency

Does the system have a written governance policy statement outlining the governance structure? Is it a stand-alone document or part of the IPS?	In addition to the IPS Section I (Responsibilities) and specific delegation noted in the IIP, the Board has adopted a Governance Manual that emphasizes that the Board utilizes the single fiduciary board model with an integrated investment and pension administration organization where the Board has authority, per its governing statute, for investments and pension administration and delegates its authorities through the Executive Director.	
Are all investment-related policy statements easily accessible by the plan members and the public?	The IPS and IIP are available on the COAERS website.	
How often are board meetings? What are the primary topics of discussion? How much time, detail, and discussion are devoted to investment issues?	The Board meets as needed, but at least five times a year, including a workshop. Time is allocated as needed. Meeting packets are provided in advance of scheduled meetings so that the Board has adequate time to review material in advance of meeting with the Executive Director or Chief Investment Officer as offered.	
Are meeting agendas and minutes available to the public? How detailed are the minutes?	Board agendas are available on the COAERS website. Agendas are thorough, including reviewing order and business and the establishment of meeting objectives, public comment, consent items including prior Board minutes, Committee reports, education and action items, Executive Director report, required and informational reporting, education opportunities, and, finally, a review of meeting takeaways and call for future agenda items. Over the last three years, Board meeting minutes were available on the website with the exception of two meetings. Beginning in 2021, Investment Committee minutes have been posted to the website in addition to agendas. We believe offering the public Investment Committee transparency is a best practice.	

Investment Knowledge/Expertise

What are the backgrounds of the	OAERS is governed by an eleven-member Board comprised of:		
board members?	Three elected active City of Austin employees		
	Two elected retired employees		
	Two City Council-appointed citizens		
	One Board-appointed citizen		
	One City Manager designee		



- One Director of Finance of the City or designee
- One City Council member

Place	Туре	Member	Date Appointed / Term Elected	Current Term	Title
1	City Council Member	Leslie Pool	2/15 – Appointed		
2	City Manager Designee	Diana Thomas	1/21 – Appointed		
3	City Council Appointed Citizen	Kelly Crook	8/21 – Appointed	1/21 – 12/24	
4	City Council Appointed Citizen	Dick Lavine	11/21 – Appointed	1/22 – 12/25	
5	Board Appointed Citizen	Michael Granof	12/21 – Appointed	1/22 – 12/25	
6	Active Elected Member	Brad Sinclair	12/20 - Elected	1/21 – 12/23	Vice Chair
7	Active Elected Member	Amy Hunter	12/19 - Elected	1/20 – 12/23	
8	Active Elected Member	Chris Noak	12/21 – Elected	1/22 – 12/25	
9	Active Elected Member	Yuejiao Liu	12/21 - Elected	1/22 – 12/25	Chair
10	Retired Elected Member	Michael Benson	12/20 - Elected	1/21 – 12/24	
11	Retired Elected Member	Anthony B. Ross, Sr	12/18 - Elected	1/23 – 12/26	

What training is provided and/or required of new board members? How frequently are board members provided investment-related education?

New Board members and administrators are required to receive a minimum of seven hours of training in core topic areas including governance, ethics investments, actuarial, benefits administration, and risk management. After the core training cycle ends, the Board members and administrators are required to complete a minimum of four hours of training every two years. This continuing education training can include core topics or non-core topics such as compliance, legal and regulatory, pension, accounting, custodial issues, plan administration, and Texas' Open Meetings and Public Information Acts.

Board members receive investment-related education at the annual workshop and a majority of their regular meetings. In addition, the Executive Director provides a list of potential education opportunities at each Board meeting.

What are the minimum ethics,

Requirements are noted above. The Executive Director provides a report at least annually on the progress each



governance, and investment education requirements? Have all board members satisfied these minimum requirements?	Trustee has made in meeting their training requirements. No exceptions were noted.
Does the system apply adequate policies and/or procedures to help ensure that all board members understand their fiduciary responsibilities?	Sections II and III of the IPS clearly describe fiduciary responsibility and conduct.
What is the investment management model (i.e. internal vs. external investment managers)? Does the board receive impartial investment advice and guidance?	Investment management is external. One of the Board's Investment Beliefs in Section I of the IPS states that "Implementation should occur passively and in public markets unless a high likelihood of success on a risk-adjusted, net-of-fees basis can be expected from other approaches." RVK is strictly a non-discretionary investment consulting firm. RVK is an independent, employee-owned firm with no conflicting lines of business.
How frequently is an RFP issued for investment consultant services?	There is no Investment Consultant RFP frequency requirement in the IPS or the IIP. We believe it is prudent to review service providers periodically. In addition, a documented procedure for periodic service provider RFPs (five to seven years) provides the Board with the opportunity to review the marketplace in order to confirm an existing provider or make a change.

Accountability

How is the leadership of the board and committee(s), if any, selected?	The Board Chair is selected by the Board and is responsible for the committee assignment process.	
Who is responsible for making decisions regarding investments, including manager selection and asset allocation? How is authority allocated between the full board, a	 Has the fiduciary duty of overseeing the management of the Fund and the associated investment process. In fulfilling this responsibility, the Board will establish, maintain, and require compliance with this policy and its stated objectives. 	
allocated between the full board, a portion of the board (e.g. an	Will select, retain, monitor, and evaluate the Investment Consultant, Inve	



investment committee), and internal staff members and/or outside consultants? Does the IPS clearly outline this information? Is the board consistent in its use of this structure/delegation of authority?

other parties to serve the goal that actual results meet the objectives.

 At its discretion, may delegate authority for strategic and operational aspects of the Fund to Investment Staff, though it may not delegate overall responsibility for the program.

The Investment Committee is chartered to assist the Board in fulfilling its fiduciary oversight responsibility for the management of the System's investments.

Duties of the Investment Committee may include, but are not limited to:

- Formulating and recommending to the Board the overall investment policies of the System;
- Establishing and recommending to the Board investment guidelines in furtherance of those policies, all of which shall be subject to approval by the Board;
- Monitoring investment performance relative to the strategic objectives and compliance with relevant investment risk guidelines set forth in policy; and
- Monitoring the management of the Fund for compliance with relevant investment policies and guidelines.

Managers are recommended by Investment Staff but approved by the Investment Committee and the Board.

The Board is consistent in its use of this structure and authority.

Is the current governance structure striking a good balance between risk and efficiency? What controls are in place to ensure policies are being followed? Investment decisions are thoroughly vetted and reviewed by the Investment Committee and approved by the Board. Decisions are made prudently.

The following is a consistent outline for Investment Committee meeting objectives:

- 1. The Committee will review reports on investment performance including strategy, compliance, and delegation of authority.
- 2. The Committee will review the Investment Risk Framework.
- 3. The Committee will discuss and consider the Premier List for Global Equities with potential recommendations to the Board.
- 4. The Committee will review reports on an updated Asset/Liability Study following the passage of SB 1444.
- 5. The Committee will discuss and consider the Fund's strategic asset allocation through an updated Asset Allocation Study and related presentations with potential asset allocation recommendations to the Board.
- 6. The Committee will receive a report on the status of the general consultant RFP process.
- 7. In its oversight capacity, the Committee will review the custodial bank relationship.



How is overall portfolio performance monitored by the board?	At least quarterly, the Investment Committee and Board review materials provided by the Board's independent Investment Consultant and Investment Staff. The reports begin with compliance with the SAA and are followed by performance evaluation beginning with the total fund, then asset class composite performance, and finally performance for investment managers. Fees are also included in the materials. Investment Staff provides a thorough IPS compliance review. Investment Staff and the Investment Consultant provide the Investment Committee and Board with multiple monthly performance summaries and comprehensive quarterly performance reports to aid with the ongoing evaluation and monitoring of investment managers and the total fund.
How often are the investment governance processes reviewed for continued appropriateness?	The Board and the Investment Committee review the investment process at least annually when updating the IPS and the IIP.

Summary

Based on our review of COAERS' policies, the investment decision-making process for the System broadly reflects a comprehensive implementation of best practices. The governance structure under which COAERS operates indicates clarity regarding the delegation of authority to make and provide advice on investment decisions.

Recommendations

- 21. Regarding Delegation of Authority, we suggest the Board carefully review Recommendations 6, 7, and 9, which are addressed in Section I of this Evaluation.
- 22. Consider adopting and documenting a schedule for reviewing service providers, including a potential RFP after five to seven years.



Section V – Review of the retirement fund's investment manager selection and monitoring process.

Documents Reviewed

- √ Investment Policy Statement
- ✓ Investment Implementation Policies
- ✓ Investment Staff and Investment Consultant Presentations to the Investment Committee and Board

Who is responsible for selecting investment managers?

The Board, with recommendation from the Investment Committee and advice from Investment Staff and Investment Consultant, is ultimately responsible for the selection, retention, monitoring, and evaluation of investment managers. The IPS states the following with respect to investment manager selection:

- "Within this framework, the Board will select, retain, monitor, and evaluate the Investment Consultant, Investment Managers, Custodian (as defined herein), and other parties to serve the goal that actual results meet the objectives."
- "The Investment Committee is chartered to assist the Board of Trustees in fulfilling its fiduciary oversight responsibility for the management of the System's investments."
- "Investment Staff will also advise regarding the development of this policy and its implementation, and provide
 assistance in selection and monitoring of all Managers, Consultants, Custodians and other service providers
 related to the investment function."
- "The CIO works closely with non-CIO Investment Staff and the Investment Consultant(s) to ensure that policies and procedures provide adequate controls to protect the integrity of the investment program, and oversees all investment processes including development, maintenance and modification of the System's Investment Risk Framework, and the selection and oversight of Managers."
- "A General Investment Consultant will assist the Board and Staff in manager selection and monitoring as needed, including informing the Board promptly of material changes to portfolio investments."

How are the managers identified as potential candidates? What are the selection criteria for including potential candidates? What are the selection criteria when deciding between multiple candidates?

Investment Staff and the Investment Consultant collaborate to source and identify potential candidates for the System's various asset classes. Potential investment managers, depending on the strategy and asset class, are sourced from multiple channels including universe screening through the Investment Consultant's proprietary databases; commercial databases; direct investment manager meetings; conferences and networking events; and other research.

COAERS has a unique and disciplined approach to investment manager selection that differs from the traditional,



industry-wide practice of investment consultant-led search process. The System takes a differentiated approach by creating a "Premier List" that includes several viable investment managers that have gone through an extended and rigorous due diligence process and have been approved by the Board for utilization as needed. These investment managers are regularly monitored and reviewed for continued fit within their respective asset classes.

According to the IIP, "The Board believes that developing long-term relationships with a small group of high potential managers allows for a more thoughtful and robust evaluation of potential candidates than starting each search from scratch. As such, the Investment Staff, in coordination with the Investment Consultant, will develop and maintain a 'Premier List' of 3-4 viable managers (including at least one passive index option, which for Multi-Asset shall include allocating back to the Fund) for potential inclusion within each sub-asset class of the Fund. Doing so is intended to allow for (1) ongoing competitive benchmarking of existing managers and (2) rapid, effective replacement of any Manager that may be deemed by the Board to no longer be able to accomplish its mandate(s), including an emergency termination by the Executive Director as described in this Policy."

Potential managers are initially screened by Investment Staff and the Investment Consultant on objectives, investment style, and minimum stated performance metrics for fit within the asset class and overall investment program. Investment managers who pass the initial criteria for inclusion for a given asset class undergo initial due diligence. As the potential list of finalist investment managers is narrowed further, COAERS requires investment managers to complete a strategy-specific investment and Operational Due Diligence Questionnaire. Subsequent to the satisfactory outcome of quantitative and qualitative assessment, and review of organizational factors of investment managers/firms by both Investment Staff and Investment Consultant, onsite due diligence is conducted according to clearly stated 'Onsite Diligence' policies set forth in Appendix II of the IIP. According to the policy, the Chief Investment Officer and the Investment Consultant should be included in all onsite due diligence meetings.

Investment Staff, in collaboration with the Investment Consultant, then propose to the Investment Committee the inclusion of successful candidates to the Premier List for potential recommendation to the Board. The recommendation also includes target (neutral) and maximum allocation to each potential investment manager. Upon approval by the Board, the contracting process, including execution of contracts, side letters, and other agreements, takes place.

The Premier List for each asset class is periodically, but at least annually, presented and reviewed with the Investment Committee and the Board and includes proposals for any additions or removal from the list. Inclusion in the Premier List does not mean that an investment manager is funded at the time of approval or even in the future. The investment manager roster is maintained and monitored so that if a need arises, investment manager changes can be implemented right away.

How does the selection process address ethical considerations and potential conflicts of interest for both

Avoidance of conflicts of interest in conducting fiduciary duties and fulfilling the responsibilities of all involved parties is of utmost importance to COAERS. The IPS states that "the Board requires all Trustees and Staff involved in the investment of Fund assets to make all investment decisions in the best interest of the System and to abide by the System's Ethics Policy. This Policy states that no covered person may solicit, accept, or agree to accept any gifts,



investment managers and board members?

personal benefits, or personal favors offered to them because of their position with the System."

The IIP states that "In all cases, relationships with Managers should seek to mitigate agency problems and conflicts of interest that prevail in the financial services industry. Specifically, the use of performance-based contracts should be considered whenever possible. Conflicts of interest shall be disclosed at least annually or as required in accordance with the System's Ethics Policy. The process for selecting, monitoring, and terminating Managers shall protect against improper and/or unethical behavior including bribery, corruption, and other contact between System representatives and Managers intended to influence the outcome inappropriately. Direct inquiries by Managers to individual Trustees regarding the System's investment program will be referred to Investment Staff."

Who is responsible for developing and/or reviewing investment consultant and/or manager contracts?

All investment manager contracts, side letters, other agreements, and service provider agreements are evaluated, reviewed, and finalized by the Executive Director, as delegated by the Board, in consultation with the General and/or Investment Counsel.

What is the process for monitoring individual and overall fund performance? Who is responsible for measuring the performance? What types of performance evaluation reports are provided to the board? Are they provided in a digestible format accessible to trustees with differing levels of investment knowledge/expertise? How frequently is net-of-fee and gross-of-fee investment manager performance reviewed? Is net-of-fee and gross-of-fee manager performance compared against benchmarks and/or peers?

The IPS and IIP both provide guidance about monitoring and evaluating individual investment managers and the overall fund. The IPS states that "Regular performance evaluation of the Fund by the Board is designed to monitor the effectiveness of the investment process in meeting the long-term objectives of the System. The purpose is to test the continued validity of the associated decisions and to prompt a review of underperformance or excessive risk. All performance measurement should be based on total returns, net of fees, adjusted for risk, as measured over a sufficient time period, to reflect the benefits of any active decisions (typically a minimum of three years and preferably over five or more years and/or a full market cycle)."

Investment Staff and the Investment Consultant provide the Investment Committee and the Board with multiple monthly performance summaries and comprehensive quarterly performance reports to aid with the ongoing evaluation and monitoring of investment managers and the total fund. The reports provided to the Board are detailed but comprehensible for Trustees with differing levels of investment knowledge/expertise.

The Investment Consultant provides the following regular reports:

- 1. Summary of Fund Performance/Executive Summary
 - a. Total fund and asset class performance against benchmarks and peers, as applicable
 - b. Risk metrics
 - c. Asset allocation and allocations vs. policy targets
 - d. Asset growth summary
 - e. Schedule of investable assets



- 2. Quarterly Investment Performance Analysis
 - a. Additional details on the metrics provided in the Summary Report
 - b. Attribution by investment manager
- 3. Capital Markets Review

Investment Staff provide the following regular reports including ad-hoc reports based on the most relevant topics facing the System:

- 1. Investment Strategy Dashboard
 - a. Net and gross-of-fee return relative to actuarial rate of return, reference portfolio, policy index, peers, other investment goals, and risk budget
- 2. Investment Compliance Dashboard
 - a. Investment Strategy
 - b. Asset Diversification
 - c. Liquidity
 - d. Leverage
 - e. Counterparty Management
- 3. Report on Status of Delegated Authority and Policy Deviations
- 4. Investment Operations Cash Activity Detail

Additionally, the IIP outlines the items that need to be included in the quarterly and annual reports presented to the Board, via the Investment Committee, for comprehensive and detailed quantitative analysis, and for qualitative and operational assessment of investment managers to assist in the ongoing monitoring related to investment manager retention and/or termination.

Investment Staff and the Investment Consultant, in collaboration or separately, also regularly review, receive updates, and conduct periodic calls/meetings/due diligence to ensure consistency of strategy, compliance with applicable guidelines, as well as general firm and market updates.

COAERS also requires investment managers to provide quarterly and annual reporting in compliance with guidelines set forth in 'Reporting Requirements for Investment Managers' in Appendix III of the IIP. These are designed to provide comprehensive quantitative and qualitative updates of the investment managers/firms with specific reporting requirements by investment vehicle and asset class.



What benchmarks are used to evaluate performance?

The benchmarks utilized to evaluate investment managers in their respective asset classes as of December 31, 2022, are:

- 1. Global Equity Benchmark MSCI ACW IM Index (USD) (Net)
- 2. US Equity Benchmark MSCI USA (Net)
- 3. Developed Market Equity Benchmark MSCI World Ex US Index (USD) (Net)
- 4. Emerging Market Equity Benchmark Emerging Markets Index (USD) (Net)
- 5. Real Assets Benchmark 34% S&P Global Infrastructure Index (Net) and 66% FTSE NAREIT Eq REITs Index (TR)
- 6. Real Estate Equity Benchmark: FTSE NAREIT Eq REITs Index (TR)
- 7. Infrastructure Equity Benchmark S&P Global Infrastructure Index (Net)
- 8. Global Fixed Income Benchmark Bloomberg Global Aggregate Bond Index
- 9. US Treasuries Benchmark Bloomberg US Treasury Index
- 10. US Mortgages Benchmark Bloomberg US MBS Index (Unhedged)
- 11. US Credit Benchmark Bloomberg US Credit Index
- 12. Multi-Asset Benchmark 60% MSCI ACW Index (USD) (Net) / 40% Bloomberg Global Aggregate Bond Index
- 13. Commodities & Other Benchmark Bloomberg Commodity Index (TR)
- 14. Cash & Equivalents Benchmark Bloomberg US T-Bills 1-3 Mo Index

The benchmarks utilized to evaluate the total fund as of December 31, 2022, are:

- 1. Policy Benchmark 56% MSCI ACW IM Index (USD) (Net), 10% FTSE NAREIT Eq REITs Index (TR), 5% S&P Global Infrastructure Index (Net), 21% Bloomberg Global Agg Bond Index, 7% Multi-Asset Benchmark, and 1% Bloomberg US T-Bills 1-3 Mo Index.
- 2. Passive Benchmark 60% MSCI ACW Index (USD) (Net) / 40% Bloomberg Global Agg Bond Index

What is the process for determining when an investment manager should be replaced?

The 'Retention' section of the IIP states that "Investment Staff shall maintain a Manager Watch List for the purpose of ensuring that concerns regarding any Manager with a live mandate are appropriately recognized, addressed and resolved. At the discretion of the CIO based on written internal procedures and in consultation with the Investment Consultant, a Manager may be included on the Manager Watch List. The contents of this list will be reported to the Investment Committee at each regular meeting. Performance for each of these Managers will be subject to additional



scrutiny until either (1) the Investment Staff removes the Manager from the Watch List, or (2) a recommendation to terminate the mandate(s) assigned to the Manager and/or remove the Manager from the Premier List is made to the Board via the Investment Committee."

Decisions to place an investment manager on watch or terminate them are made on a case-by-case basis. Though performance and other quantitative factors are important determinants, several other factors may also contribute to Investment Staff and the Investment Consultant recommending to place an investment manager on watch or terminate. Per the IIP, these can include, but are not limited to:

- "Significant changes in firm ownership and/or structure,
- Loss of one or more key personnel,
- Significant loss of clients and/or assets under management,
- Shifts in the firm's philosophy or process,
- Lack of adherence to best execution policies,
- Significant and persistent lack of responsiveness to client requests,
- Chronic violations of the IPS or guidelines, or
- Any other materials issue of which Investment Staff and/or Consultant become aware."

How is individual performance evaluation integrated with other investment decisions such as asset allocation and investment risk decisions? Individual investment manager performance directly impacts total fund performance. Investment decisions regarding the structuring of the investment program, asset classes, and allocations based on the System's return objectives, risk budgets, liquidity constraints, and other considerations are all related and integrated.



Overall Comment

COAERS has a robust system for investment manager selection, evaluation and monitoring. The Premier List approach is unique to public pension funds and in our judgment can be an effective approach to structuring the process of investment manager review and selection. But, as with all approaches, it has its pros and cons.

The pros include (1) having a pre-vetted list of investment managers on deck and ready to fund if a change is necessary, and (2) continuously monitoring investment managers on the Premier List even when they are not funded expands the range of ongoing vision of Investment Staff and the Investment Consultant for opportunities beyond those funded and utilized in the Fund.

The cons include (1) the Premier List will not work well if vetted but not-currently-funded investment managers are not monitored as rigorously as the funded investment managers, or if the review does not periodically expand beyond the current list for possible new inclusions, and (2) the Premier List is actually an active construct and it could become an asset class structure issue; the most important observation we can offer is that the Premier List by itself is not a replacement for deliberate and thoughtful structure of asset class mandates.

From our review of Investment Committee and Board reporting packets, we have observed that the System's performance reporting and ongoing monitoring of investment managers are comprehensive and considered best practice in reporting and monitoring.

Recommendations

- 23. Consider adding language for the investment manager selection process for private market asset classes.
- 24. Consider updating investment manager reporting requirements for metrics and data that are relevant to private asset class managers.



Section VI – Review of COAERS' internal proxy voting policies and procedures.

Documents Reviewed

- ✓ Investment Policy Statements
- ✓ Investment Implementation Policy
- ✓ COAERS Governance Manual
- ✓ Investment Committee Charter

Overall Comment

The Board and the System's fiduciaries including their Investment Managers are required to vote proxies solely in the best interest of the System's members and beneficiaries. As fiduciaries, and as stated in Section III of the IPS, the Board must act with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a similar capacity and familiar with those matters would use in the conduct of a similar enterprise with similar aims.

The execution of proxy-voting rights at shareholder meetings is a required duty of System fiduciaries. The US Department of Labor has stated that the fiduciary act of managing fund assets that are shares of corporate stock includes the voting of proxies appurtenant to those shares of stock and that a board may delegate this duty to an investment manager. Acknowledging that the System is not directly subject to the Employee Retirement Income Security Act of 1974 (ERISA), most public pension plans do generally comply with the position set forth by the US Department of Labor in 1988 with regard to the fiduciary responsibilities governing the voting of shares of stock owned by the plan.

Given this background, we believe COAERS' proxy voting policies and procedures as stated in Section XII of the IIP are appropriate for delegating proxy voting to each Investment manager and documented in the individual contracts. Section XII allows flexibility for the Board to revoke its delegation and provides a process for monitoring and reporting by Investment Staff through the Executive Director.



Section VII – Recommendations to align with best-in-class investment management program.

RVK serves over 200 full-retainer and project clients and we can safely say that the COAERS Board and Staff are running a pretty tight ship but there is always room to consider some improvements if they fit with the Board's goals, objectives, and Investment Beliefs. We submit the following:

Section I

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- The power to designate the institutions and individuals who hold the responsibilities, as described in Section II, is a critical aspect of clarifying the ownership of both governance authority and the fulfillment of fiduciary responsibility. COAERS should consider noting the process by which these responsibilities are assigned and periodically reviewed.
- 2. Asset/Liability Studies are the only standard analysis that fully links all three aspects of the System's investment policy, contribution policy, and benefit policy, providing a means to examine how well different investment strategies (differing asset allocations) address the objectives served by the Fund. We believe Asset/Liability merits either its own Section in the IPS or to be added to Section V preceding any discussion of Strategic Asset Allocation.
- 3. Consider removing the specificity of sub-asset class structure from the Policy Benchmark in Section VII of the IPS and make it part of a routine asset class structure discussion. For example, the Policy Benchmark specifies the benchmark index for fixed income as the Bloomberg Global Aggregate Bond TR, yet each of the sub-asset classes under fixed income are US (US Treasuries, US Mortgages, and US Credit). This appears quite granular and could inhibit broader thinking about the structure of the fixed income asset class as conditions warrant.
- 4. We understand that one of the Board's Investment Beliefs is that "implementation should occur passively and in public markets unless a high likelihood of success on a risk-adjusted, net-of-fees basis can be expected from other approaches." We also understand that the "[Policy] benchmark is intended to reflect a passive implementation of the neutral weights established by the Board during the SAA process." However, we suggest the Board consider reviewing their Policy Benchmarks, targeting alignment with actual mandates. For example, close to 60% of the real estate composite is a private core real estate fund which is a mismatch with the Policy Benchmark for Real Estate which is the FTSE NAREIT Equity REITS TR, a publicly traded index. This will become more evident as the System moves into additional private asset classes.
- 5. Consider adding a subsection in Section II for Investment Counsel since the position is referenced within the IIP.
- 6. With the understanding that the Board may delegate authority for strategic and operational aspects of the Fund to Staff, consider adding clarity to the degree of delegation by the Board to its Investment Committee and Staff in Section II Responsibilities of the IPS. Although clarity for the degree of delegation may be stated later in the IPS or the IIP, we believe it is important to lay it out upfront when addressing the responsibilities of



- fiduciaries to the System.
- 7. Consider including the Investment Committee, its role, responsibilities, and any authority held independent of the Board as a whole as its own subsection of Section II. We understand the Investment Committee is a subset of the Board; however, best practice would give the Investment Committee a strong advisory role to vet and recommend to the Board, so actions requiring Board approval can be addressed as a consent item or a motion based on an Investment Committee written summary of the process taken.
- 8. Regarding the discussion currently in Section V of the IPS of A/L Studies and its importance (as noted above) and the query below regarding clarity, we do find the treatment of A/L in the IPS merits review. The IPS currently states that an A/L Study determines as one of its objectives the "maximum and minimum ranges (Rebalancing Ranges)" around the SAA targets. Having a rebalancing policy and process is a best practice in our view. And COAERS has adopted both. But while rebalancing policy and process should be informed by the risk target set for the total fund in an A/L Study, its design also reflects a host of other considerations related more to asset class liquidity, transaction costs, and more. We suggest that the implied link between A/L Studies and rebalancing in the IPS be reconsidered. Indeed, if it were eliminated, we do not think it would in any way reduce the robustness of the IPS.
- 9. As addressed in Recommendations 6 and 7, add clarity to the degree of delegation by the Board to its Investment Committee, and to Investment Staff in the Section II – Responsibilities of the IPS. Although clarity for the degree of delegation may be stated later in the IPS or in the IIP, we believe in the importance of laying it out upfront when addressing the responsibilities of fiduciaries to the System. If the work of the Investment Committee is not distinctive from and additive to the Board's final decisions and ongoing monitoring, its contribution is debatable.
- 10. While we believe the inclusion of these evaluation metrics (benchmark indices, peer universes, and tracking error budgets) in the Premier List guidelines is fully sufficient given the annual review process and the use of these benchmarks in the Investment Consultant's quarterly performance reports, COAERS might consider adding investment manager benchmarks to the IPS or reference in the IPS their inclusion in the Premier List, particularly for any investment manager actually implementing a funded "active" mandate (note: investment managers may be selected for inclusion in the Premier List but not necessarily be awarded funds to manage at any given point in time).
- 11. We strongly suggest the Board remove performance relative to peers as a specific objective/benchmark for the System. First, peer comparison offers little, indeed almost no, information about whether the fund is achieving its core mission—funding benefits for COAERS plan participants. Second, COAERS is unique with its own contribution policy, benefit structure, assumed rate of return, cash flow, size, objectives, etc. In our view, these differentiators render the very notion of "peers" questionable, and while a group of public funds can be assembled with somewhat more "peer-like" attributes, it will likely be a small universe that is far from



statistically robust. The Board's Investment Consultant can and should continue to provide the COAERS Board with peer comparisons of this data, as it is prudent to at least remain generally aware of the performance other funds deliver.

Section II

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12. Consider removing 10 – 12% risk targets for the portfolio/adding metrics that more directly align with the Asset/Liability Study and the goals of the portfolio.

Setting a range of acceptable risk via monitoring long-term standard deviation helps measure whether realized risk is favorable versus peers, but is not, in isolation, a good proxy for the alignment of risk relative to the stated goals of the portfolio.

Target risk is set based on the liabilities of the System, which can vary meaningfully from other plans with different liability profiles. Therefore, selecting a realized risk metric—or better yet, a set of metrics considered in combination—that bounds the desired outcome of the Asset/Liability Study may be a better proxy for success.

The introduction of private investments may add additional difficulties in measuring the true risk of the portfolio through standard deviation alone due to smoothing effects and should be taken into consideration.

13. Consider setting capacity/risk contribution constraints in place of 4% dollar-weight constraints for sub-asset class thresholds:

There is currently an exception to the 4% rule in place for commodities. The exception suggests there may be better variables to consider than the dollar weight of a sub-asset class.

Commodities exhibit a higher level of volatility and have capacity constraints that warrant consideration—even below a 4% allocation. As such, reframing the inclusion criteria around a measurement such as ex-ante risk contribution may be a more direct way to evaluate sub-asset class inclusion while avoiding the need to create exceptions.

14. Consider consolidating explanations for how sub-asset class tactical and strategic sub-asset class ranges are

The independent Investment Consultant currently works with Investment Staff to determine target weights allocated to each sub-asset class. The ranges are stated to be based on the volatility of the asset class relative to the proportion of the fund allocated to each. This explanation aligns with the IPS policy set forth in Section V (Asset Allocation) within the "Rebalancing" subsection—particularly the last sentence of the first paragraph.

The IPS separately states that the rebalancing ranges are defined as reflecting 2nd – 3rd quartile allocations of peers for tactical ranges and 1st – 4th quartile of peer allocations for strategic ranges. This policy is set forth in the IPS guidelines under Section V (Asset Allocation) within the "Asset Class Diversification" subsection and



is detailed within the two bullet points on pages 13 - 14.

We are not convinced that the behavior of peers is a good guide to setting strategic and tactical ranges that appropriately reflect the specific circumstances in place at COAERS and explored in the regular Asset/Liability Studies. COAERS should reconsider the role of peer data in setting these ranges and instead focus more on asset volatility data combined with stress tests based on varying inter-asset class correlations.

15. Consider revisiting tracking error targets:

Some asset classes have fallen short of tracking error targets over the last ten years, particularly within developed international and emerging markets.

If these targets are still desired, more active management or active structuring decisions by Investment Staff may be appropriate. If lower tracking error is preferred, a revision of tracking error targets may be warranted.

16. Consider reaffirming Investment Staff's authority to execute rebalancing decisions—without Board approval—should circumstances require such action.

While the IPS delegates authority to Investment Staff for rebalancing within the tactical ranges, our review indicates to date that Investment Staff have consistently sought permission from the Board anyway. We observe that, so long as obtaining this approval does not impede the achievement of the objectives sought by providing the Investment Staff with delegated authority, doing so is fine. If the record to date suggests that there are no circumstances in which that delegated authority would be exercised by Investment Staff and reported to the Board promptly after the fact, the latitude it provides and the results obtained may be limited.

- 17. Consider adding a separate section for the selection and evaluation of private equity and private credit mandates, if implemented. Reporting and benchmarking of private investments should also be added.
- 18. Continue to utilize passive management in asset classes with higher efficiency.
- 19. Consider adding a section on management and control of investment management and service provider cost in the IPS or IIP.
- 20. Consider adding a periodic frequency for conducting plan fee reviews similar to the minimum frequency noted in the IPS for Asset/Liability Studies and Asset Allocation Studies.
- 21. Regarding Delegation of Authority, we suggest the Board carefully review Recommendations 6, 7, and 9, which are addressed in Section I of this Evaluation.
- 22. Consider adopting and documenting a schedule for reviewing service providers, including a potential RFP after

Section IV

Section III

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five to seven years.

Section V

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- 23. Consider adding language for the investment manager selection process for private market asset classes.
- 24. Consider updating investment manager reporting requirements for metrics and data that are relevant to private asset class managers.



Section VIII – An analysis of COAERS' implementation of the recommendations presented in the 2020 review performed by RVK.

Documents Reviewed

√ 2020 COAERS Evaluation of Investment Practices

2020 IPPE Recommendations

Recommendations presented in the 2020 IPPE report were addressed during the November 2020 Investment Committee meeting. The Board then approved the changes outlined below during their December 2020 meeting. The following table outlines the impacted sections, recommendations from the 2020 IPPE report, and ultimate resolutions adopted by the Board.

Section	Recommendation	Resolution		
Investment Asset Allocation	Consider policy language defining a reporting process for less liquid and illiquid investments.	Ongoing work due to further allocation to private markets is pending.		
Investment Manager Selection and Monitoring	Consider the addition of a formal investment manager review policy with a more specific timeframe.	Adopted a rolling review of investment managers on Premier List by asset class. Investment Consultant provides investment manager write-ups.		
Investment Manager Selection and Monitoring	Consider verbiage edits to the Watch List.	Adopted suggested verbiage edits within the IIP.		
Investment Manager Selection and Monitoring	Consider clarifying language regarding reporting for investment managers with "live" mandates vs. those currently on the Premier List.	Resolved: Investment manager requirements for "live" mandates are now separate from those without active mandates.		
Investment Manager Selection and Monitoring	Consider the addition of performance metrics for non-public securities and/or vehicles.	Ongoing: Will need to consider different performance metrics for private investments versus public investments.		



Appendix

Adherence to Investment Policy

	IPS Measurement	Metric	Monitored? Yes/No	Report	Comments
	Risk Level Targeted at Total Fund	10-12%	Yes	COAERS Investment Strategy Dashboard	May warrant revisiting with the introduction of private markets.
	Market Risk Versus Peers	2nd-3rd quartile	Yes	RVK Quarterly Performance Report	
	Total Fund Tracking Error	150-300 bps	Yes	RVK Quarterly Performance Report	Tracking error from marketable indices could be swapped for indices more closely tracking less-liquid mandates.
	US Equity T.E.	200-500 bps	Yes	ibid	
Risk	Developed Market Equity T.E.	400-700 bps	Yes	ibid	Realized tracking error averaged below target for much of last 10 years. May warrant reaffirming targets or asset class structure.
	Emerging Market Equity T.E.	500-800 bps	Yes	ibid	Realized tracking error averaged below target for much of last 10 years. May warrant reaffirming targets or asset class structure.
	Fixed Income T.E.	150-300 bps	Yes	ibid	
	Real Assets T.E.	350-500 bps	No*	ibid	*Realized tracking error provided for real estate and infrastructure separately. The Investment Consultant can provide for total real assets once there is enough history in the composite.
	Multi-Assets T.E.	300-600 bps	Yes	ibid	
u	CMA assumptions match liability duration	10+ years	Yes	RVK Asset Allocation Study	RVK estimates are produced over a 10- to 20-year horizon.
ocatic	Minimum and Maximum ranges, per asset class	Strategic/Tactical %	Yes	COAERS Investment Strategy Dashboard	
Asset Allocation	Minimum allocation before consideration for inclusion in Asset Allocation	Max. weight target of at least 4%	Yes	ibid	IPS makes exceptions for Cash Equivalents and Commodities. May consider risk contribution/capacity-based language to eliminate the need for such exceptions.



Adherence to Investment Policy (Cont.)

	IPS Measurement	Metric	Monitored? Yes/No	Report	Comments
nes	Max weight of one corporation in portfolio	3%	Yes	COAERS Investment Strategy Dashboard	
	Max weight of one voting class in portfolio	5%	Yes	ibid	
iidelir	Max weight of one investment vehicle in portfolio	20%	Yes	ibid	
Operational Guidelines	Custodian and Futures Commission Merchants credit rating	A+	Yes	ibid	
Operati	Securities lending agent's Tier 1 and Capital Ratio	7% & 10%, respectively	Yes	COAERS Investment Strategy Dashboard (non-public version)	COAERS does not currently engage in securities lending.
	Securities lending cash collateral	102% for domestic 105% for international	Yes	ibid	COAERS does not currently engage in securities lending.
	Performance based on Total Return, Net of Fees, and Adjusted for Risk	NA	Yes	RVK Quarterly Performance Report	
	Performance summary periodicity	Quarterly	Yes	ibid	
	Is the fund meeting long-term targets	Net Return-Actuarily ARoR	Yes	COAERS Investment Strategy Dashboard	
rting	Is risk within budget	10-12%	Yes	ibid	May warrant revisiting with the introduction of private markets
Reporting	Risk measurements	Standard deviation, VaR, Drawdown	Yes*	ibid	*Provided by Investment Consultant via Investment Staff presentations, but not presented to Board directly in recent deliverables, per Investment Consultant.
	Long-term Sharpe Ratio	0.5	Yes	ibid	
	Forward-looking measurements	Scenario Analysis, Stress Testing	Yes	ibid	Deterministic and Stochastic modeling, plus non- normal distribution assumptions.
	Active Strategy Information Ratio	0.5	Yes	RVK Quarterly Performance Report	



Investment Managers and Management Fees as of December 31, 2022

Asset Class	Fund	Peer Group	Universe Median Fee (%)	Fee Rank	Size of Universe
US Equity	BNYM Dynamic US Eq. NL (SA)	Active Large Cap Core (SA)	0.44%	26	337
	BNYM SciBeta US Max Decorr. (SA)	US Smart Beta (SA)	0.30%	17	88
	TOBAM Max Div. USA (SA)	US Smart Beta (SA)	0.30%	31	88
	L&G MSCI USA Index (CIT)	Passive US Large Cap (CF)	0.04%	28	54
	SSGA MSCI USA EW Index (SA)	US Smart Beta (SA)	0.29%	7	88
	SSGA MSCI USA SC Index (CF)	Passive US Small Cap (CF)	0.05%	39	26
	NISA S&P 500 Futures (SA)	Passive US Large Cap (SA)	0.07%	41	71
	L&G SciBeta Inflation Plus (SA)	US Smart Beta (SA)	0.34%	2	88
Developed Market	Walter Scott DM Int'l Equity (SA)	EAFE Large Cap (SA)	0.52%	17	172
Equity	1607 Capital Partners Int'l Eq. EAFE (SA)	EAFE Large Cap (SA)	0.55%	5	172
	BNYM DB Dynamic Glb Ex US Eq (CF)	ACWI ex US Large Cap (CF)	0.70%	1	52
	NISA EAFE Futures (SA)	Passive EAFE (SA)	0.12%	1	22
	NT MSCI World Ex US Small Cap Index (CF)	Passive EAFE (CF)	0.10%	1	18
	NISA FX Hedged EAFE Future (SA)	Passive EAFE (SA)	0.12%	1	22
merging Markets	Baillie Gifford EM Equity Class 3 (MF)	Global EM (MF)	0.95%	28	231
quity	L&G MSCI EM Index (CIT)	Passive EM (CF)	0.15%	11	15
	NISA EM Futures (SA)	Passive EM (SA)	0.20%	1	16
Real Estate	Fidelity US REITs Completion Index (SA)	US REIT (SA)	0.60%	1	59
	Agincourt FTSE NAREIT Eq. REITs Index (SA)	US REIT (SA)	0.70%	1	59
nfrastructure	Fidelity DJ Brookfield Infra. Index (SA)	Infrastructure (SA)	0.71%	1	50
Commodities	NISA Gold Futures (SA)	Natural Resources	0.78%	1	30
JS Treasuries	Agincourt 1-3 Year Treasury (SA)	US Passive Fixed Income (SA)	0.06%	15	75
	Agincourt 1-5 Yr US TIPS (SA)	US Passive Fixed Income (SA)	0.08%	2	75
	NISA 30 Year Treasury Futures (SA)	US Long Duration - Government Fixed Income (SA)	0.10%	7	3
	Hoisington Macro US Treasuries (SA)	eVestment US Government Fixed Income (SA)	0.25%	92	15
JS Mortgages	DoubleLine MBS (SA)	US Securitized Fixed Income – Mortgage (SA)	0.25%	20	56
JS Credit	PGIM US IG Corp. Bond (CIT)	US Corporate Fixed Income (CF)	0.24%	57	13



Asset Class Fund		Peer Group	Universe Median Fee (%)	Fee Rank	Size of Universe
Asset Allocation	Agincourt Passive Index (SA)	All Global Balanced/TAA (SA)	0.57%	2	157
US Dollar/Other	Agincourt 1-3 Month Treasury (SA)	US Enhanced Cash Management (SA)	0.15%	1	73
Currency	Mellon Government STIF (CF)	US Enhanced Cash Management (CF)	0.15%	1	73
Instruments	COAERS USD (SA)		N/A	N/A	N/A
	BNYM Money Market Fund (SA)	Cash Management (SA)	0.12%	1	40
	NISA Cash and Carry (SA)	Natural Resources	0.76%	4	30
	NISA ST Sovereigns (SA)	US Enhanced Cash Management (SA)	0.15%	1	73



RVK Team Biographies



Jim Voytko – President, Director of Research, Senior Consultant, Principal

Located in our Portland office, Jim serves as President, Director of Research, and as a Senior Consultant with RVK. He joined the firm in 2004 and has over 40 years of industry experience. As a Senior Consultant, Jim has worked with both public and corporate pension plans, foundations and endowments, and insurance funds.

A sought-after public speaker, Jim has delivered original presentations on various topics at numerous institutional investment conferences. He is involved in multiple aspects of RVK's specialty consulting practices, most notably Asset/Liability studies and Board governance/investment program structural reviews. Jim's research responsibilities are focused primarily on capital markets issues and

investment decision-making. He has also provided testimony on pension, investment, and financial issues to multiple state legislatures and the US Senate as well as participated in drafting legislation at both the state and federal level.

Prior to joining RVK, Jim served as the CEO/Executive Director of Oregon's statewide pension system for all employees of state and local governments, police and fire, teachers and higher education, statewide retiree health care insurance program, and statewide 457 deferred compensation program. He also served on the five-member Oregon Investment Committee, which directed the investment of all statewide funds totaling approximately \$45 billion.

Jim's experience also includes serving as Director of Research for PaineWebber, CIO and Managing Director of PNC Asset Management Group/PNC Advisors, and the Deputy Director and Chief Operating Officer of PaineWebber's Investment Banking Division. Jim earned his BA degree from Carnegie Mellon University, a Master of Public Administration degree from the University of Washington, and Master of Public Policy degree from Harvard University. Jim is a shareholder of the firm and serves on the firm's Board of Directors.



Marcia Beard - Senior Consultant, Principal

Marcia is a Senior Consultant with RVK and is located in our Portland office. She joined the firm in 1996 and has over 40 years of experience in the investment consulting and asset management industry.

As a Consultant, Marcia has extensive experience working with government entities, and endowments and foundations. Her experience includes developing investment policy statements, formulating asset allocations, developing, and implementing asset class manager structure, conducting manager searches, performance attribution and monitoring, and ongoing investment manager due diligence. In addition, Marcia is co-lead of RVK's Investment Program Review Practice.

Prior to joining RVK, Marcia worked at US Bank, Oregon Bank and US National Bank in Illinois. Marcia graduated cum laude from the University of Illinois, earning a BS degree in Agriculture Economics. She is a shareholder of the firm.





Samia Khan, CFA - Consultant

Samia is a Consultant located in our New York office. She has 15 years of institutional investment experience and serves a diverse client base, including defined benefit and defined contribution plan sponsors, as well as endowments & foundations. Her responsibilities include asset allocation, investment manager research, portfolio structuring, risk analyses, and client education presentations.

Prior to joining RVK, Samia worked as Senior Manager of Investment Management at PricewaterhouseCoopers (PwC), LLP. Her role involved overseeing \$16B of retirement assets of the staff and partners of PwC and managing relationships with all associated external and internal parties including the custodian bank, DC recordkeeper, legal counsel, actuary, investment consultants, and asset managers.

Samia received her BA degree in Economics and Mathematics from Bryn Mawr College. Additionally, she is a CFA Charterholder and a

member of the CFA Society of New York.



Blake Curtis - Associate Consultant

Blake joined RVK in 2023 and is an Associate Consultant based in Los Angeles, California, supported by our Portland Office. He serves a diverse client base, including public and corporate pensions, endowments, foundations, insurance portfolios, and defined contribution plans. As a member of our consulting team, he works on a variety of projects including asset allocation studies, manager structure analyses, investment manager evaluation, client education presentations, and portfolio rebalancing.

Prior to RVK, Blake served as a Senior Associate at Wilshire. His role involved working with defined contribution plans, endowments, and public/private pension plans. Additionally, he worked with the Head of Sustainable Investments to develop portfolio carbon analysis reporting and integrate with major data vendors. He served as Secretary of a Strategic Committee focused on ESG as an investment framework.

Blake graduated from California State University, Northridge with a BS in Finance.

Jessica Goodall - Senior Executive Assistant

Jessica joined RVK in 2018 as a Senior Executive Assistant. She has over a decade of administrative experience, with recent roles including Writer & Special Projects Assistant to the executives of Carondelet Health Network and Executive Assistant to the VP of Human Resources at Harvard University.

Jessica holds a Master of Arts in Professional Writing from New England College as well as a BA in English from Central Washington University.

Alexandra Goroch - Senior Administrative Assistant

Alexandra joined RVK in 2021 as a Senior Administrative Assistant. She has over two decades of administrative and teaching/training experience.

Alexandra holds a Master of Arts in Secondary Education/English Language Arts as well as a Bachelor of Arts in French.





Jonathan Kowolik - Senior Consultant, Head of IOSG, Principal

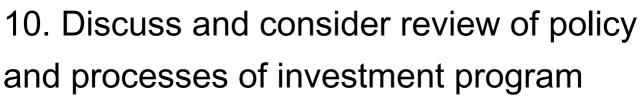
Jonathan is a Senior Consultant with RVK and is located in our New York office. He joined RVK in 2001 and serves as the practice leader for the RVK Investment Operations Solutions Group (IOSG).

The IOSG has primary responsibility for providing project consulting and research including search and evaluation projects for trust/custody providers, recordkeepers, securities lending programs, transition management, and other operational consulting projects. Jonathan and the IOSG also provide support to RVK's Defined Contribution Solutions Group (DCSG) on matters related to DC Plan Operations including Recordkeeping Evaluation, Monitoring and Search activities.

Jonathan serves as a dedicated resource to many of the firm's largest client relationships while also holding a consulting and advisory role within the general RVK consulting organization. He earned his BS degree in Economics with dual concentrations in Management and

Finance from the Wharton School at the University of Pennsylvania. He is a shareholder of the firm.





Presented by Christopher Hanson



COMMITTEE MEETING Agenda Item Information Sheet

AGENDA ITEM 10:

Discuss and consider review of policy and processes of investment program

AGENDA ITEM OBJECTIVE

This item is for the Committee to receive a report from the Executive Director regarding the direction from the Board at its January meeting to find an independent third-party to conduct a review of policy and processes of the investment program.

RELEVANCE TO STRATEGIC PLAN

This agenda item is central to COAERS Strategic Plan Goal 4: Identify and implement leading practices in Board governance, pension administration, and investment management.

RECOMMENDATION FOR COMMITTEE ACTION

At the Committee's discretion.

BACKGROUND

At its January meeting, the Board of Trustees approved a motion directing the Executive Director to work with the Investment Committee, or a working group of the Committee, to contract with an independent third-party investment consultant to conduct a comprehensive review of the System's investment performance practices and policies. The Executive Director will provide the Committee with a report on discussions with possible independent third-party investment consultants and seek direction on the possible scope of work from the Committee.

11. Discuss and consider bids from general investment consultant requests for proposal

Presented by David Kushner



COMMITTEE MEETING Agenda Item Information Sheet

AGENDA ITEM 11:

Discuss and consider request for proposal for general investment consultant

AGENDA ITEM OBJECTIVE

This item is for the Committee to review the responses received to the Request for Proposal (RFP) for General Investment Consulting Services and provide direction to Staff for the next steps of the process.

RELEVANCE TO STRATEGIC PLAN

This agenda item is central to COAERS Strategic Plan Goal 4: Identify and implement leading practices in Board governance, pension administration, and investment management. It is considered a best practice to periodically review major service providers, including consulting relationships.

RECOMMENDATION FOR COMMITTEE ACTION

At the Committee's discretion.

BACKGROUND

At its December meeting, the Board approved the issuance of a Request for Proposal for General Investment Consulting Services. Staff will provide an update on proposals received and request Committee direction on scoring as well as Trustee Working Group.

ATTACHMENTS

- 1. Staff Memo (Confidential)
- 2. Executive Summaries from Proposers (Confidential)
- 3. 2017 Scoring Matrix (Confidential)
- 4. Proposed Draft Scoring Matrix (Confidential)

12. Review key meeting takeaways and call for future agenda items

Presented by Ed Van Eenoo



COMMITTEE MEETING Agenda Item Information Sheet

AGENDA ITEM 12: Call for future agenda items

AGENDA ITEM OBJECTIVE

This standing agenda item provides Trustees the opportunity to review the key takeaways from the meeting.

RELEVANCE TO STRATEGIC PLAN

This agenda item meets COAERS Strategic Plan Goal 4: Identify and implement leading practices in board governance, pension administration, and investment management. It is an industry best practice to review key meeting takeaways to summarize what was accomplished at the meeting as well as ensure Staff has clear direction on further work and future agenda items.

RECOMMENDATION FOR COMMITTEE ACTION

Trustees will review key meeting takeaways and delineate next steps.



Investment Committee Proposed 2024 Work Plan

1. January meeting

- ✓ Investment program objectives
- Measuring success including benchmarking philosophy
- Private markets program discussion

2. February meeting

- Strategic Asset Allocation preliminary review
- ✓ Global Equities strategic review, Premier List, and implementation
- ✓ Private markets program discussion
- ✓ Consultant RFP progress report
- ✓ PRB Investment Practices and Performance: Evaluation Report
- Quarterly review of investment performance, positioning, strategy, implementation, delegated authority, manager fees, and cash movements

3. April meeting

- Consultant RFP initial evaluation
- Strategic Asset Allocation review and benchmarking discussion
- 4. Consultant RFP Site Visits (week of either April 22 or April 29)

5. May meeting

- Consultant RFP recommendation
- Fixed Income, Real Assets, Cash & Equivalents strategic review, Premier Lists and implementation
- Private markets program discussion
- Quarterly review of investment performance, positioning, strategy, implementation, delegated authority, manager fees, and cash movements

6. August meeting

- Review of Investment Policy Statement and Investment Implementation policy including strategic asset allocation, guidelines, and goals
- Private markets program discussion
- Quarterly review of investment performance, positioning, strategy, implementation, delegated authority, manager fees, cash movements, and Premier List

7. October Workshop

• Private markets program discussion

8. November meeting

- Private markets program discussion
- Annual review of investment budget
- Quarterly review of investment performance, positioning, strategy, implementation, delegated authority, manager fees, cash movements, and Premier List
- Develop 2025 Committee Work Plan