

Audit and Risk Committee March meeting

Schedule	Thursday, March 10, 2022 1:00 PM — 2:15 PM CST
Venue	6850 Austin Center Blvd., Suite 320, Austin, TX 78731
Organizer	Sarah McCleary

Agenda

1. Call roll of Committee members

 [Item #1 Summary.docx](#)

2. Review order of business and establish meeting objectives

 [Item #2 Summary.docx](#)

3. Review 2022 Audit and Risk Committee Work Plan

 [Item #3 Summary.docx](#)

 [Draft 2022 Audit and Risk Committee Work Plan.docx](#)

4. Consider approval of the November 16, 2021 Audit and Risk Committee meeting minutes

 [Item #4 Summary.docx](#)

 [2021 11 16 Audit and Risk Committee Minutes.docx](#)

5. Discuss and consider the December 31, 2021 financial statements including the following:

A. Review of the unaudited 2021 year-end financial statements

B. Presentation of required auditor communications in conjunction with the financial statement audit

- 5A Review of the unaudited 2021 year-end financial statements

 [Item #5A Summary.docx](#)

 [Unaudited Financial Statements 12-31-21.pdf](#)

- 5B Presentation of required auditor communications in conjunction with the financial

statement audit

 Item #5B Summary.docx

 COAERS Planning Presentation - Required Communications.pptx

6. Discuss and consider COAERS Enterprise Risk Management program including the following:

- A. Receive report on the following risk categories: funding, market, and personnel
 - B. Receive report on the cybersecurity risk
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6A Receive report on the following risk categories: funding, market, and personnel

 Item #6A Summary.docx

 2022 COAERS Risk Management Report Dashboard.pdf

 Staff Presentation Market, Funding, and Personnel Risks.pptx

6B Receive report on the cybersecurity risk

1. Convene into Executive Session pursuant to Section 551.071, Texas Government Code, Section 1.05, Texas Disciplinary Rules of Professional Conduct, and Section 551.089, Texas Government Code, to consult with legal counsel and deliberate security assessments or deployments relating to information resources technology, network security information described in Section 2059.055, Texas Government Code, and deployment and implementation of security personnel, critical infrastructure, and security devices
2. Reconvene into open session to take action as determined appropriate regarding security assessments or deployments relating to information resources technology, network security information described in Section 2059.055, Texas Government Code, and deployment and implementation of security personnel, critical infrastructure, and security devices

 Item #6B Summary.docx

 CybersecurityProgramQ1_22.pptx

7. Review key meeting takeaways and call for future agenda items

 Item #7 Summary.docx

1. Call roll of Committee members

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.

2. Review order of business and establish meeting objectives

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.

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 review the draft Committee 2022 Work Plan.
2. The Committee will receive a report from Staff on the unaudited 12/31/2021 financial statements.
3. The Committee will receive a presentation from the financial statement auditor regarding the 12/31/2021 financial statement audit.
4. The Committee will review the Enterprise Risk Management Report and dashboard and discuss the following four risk categories: funding, market, cyber, and personnel.

3. Review 2022 Audit and Risk Committee Work Plan

AGENDA ITEM 3:
Review 2022 Audit and Risk Committee Work Plan

AGENDA ITEM OBJECTIVE

This agenda item is for discussion and consideration of the 2022 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 2022 Committee Work Plan

2022 Draft Audit and Risk Committee Work Plan

Scheduled Quarterly Meetings

1. March meeting (3/10/22)
 - Required Communications for 12/31/2021 audit
 - Quarterly review of Enterprise Risk Management program
 - Review of cybersecurity program
 - Quarterly Financial Statements

2. June meeting (6/2/22)
 - 12/31/2021 financial statement audit presentation
 - Quarterly review of Enterprise Risk Management program
 - Review of cybersecurity program
 - Quarterly Financial Statements

3. August meeting (8/25/22)
 - Quarterly review of Enterprise Risk Management program
 - Review of cybersecurity program
 - Annual review of financial audit service provider
 - Quarterly Financial Statements

4. November meeting (11/10/22)
 - Quarterly review of Enterprise Risk Management program
 - Review of cybersecurity program
 - Quarterly Financial Statements
 - 2023 Committee Work Plan

4. Consider approval of the November 16, 2021 Audit and Risk Committee meeting minutes

AGENDA ITEM 4:

Consider approval of the November 16, 2021 Audit and Risk Committee minutes

AGENDA ITEM OBJECTIVE

This standing agenda item seeks approval of the minutes from the prior Audit and Risk Committee meeting.

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 16, 2021 Audit and Risk Committee meeting.

ATTACHMENT

1. Draft minutes of November 16, 2021 Audit and Risk Committee meeting



MINUTES

AUDIT AND RISK COMMITTEE

Public Meeting held in-person and telephonically on November 16, 2021 at 10 a.m. CT
Pursuant to Texas Govt. Code 551.125 – COVID-19 circumstances

Committee Members Present/(Absent)

Yuejiao Liu, Committee
Chair
(Kelly Crook)
Chris Noak†, ex officio
Anthony B. Ross, Sr.
Diana Thomas

Guests:
Paige Saenz*, General
Counsel
Craig Harner*
David Bullock*

Other Board Trustees Present/(Absent)

Michael Benson
(Amy Hunter)
(Frank Merriman)
(Leslie Pool)
(Brad Sinclair)
(Randy Spencer)

Others Present

Staff:
Christopher Hanson
Russell Nash
Donna Boykin*
Sarah McCleary
Amy Kelley*
Mehrin Rahman
Yun Quintanilla*
Teresa Cantu*
Jenni Bonds*
Bertie Corsentino*
Cathy Edwards*

*present telephonically
† present videoconference

1 Call meeting to order

Committee Chair Yuejiao Liu called the meeting to order at 10:02 a.m. The following Committee members were present in person: Liu, Ross, Thomas. Mr. Noak was in virtual attendance.

2 Review order of business and establish meeting objectives

Committee Chair Liu reviewed the order of business and meeting objectives with the Committee.

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

3 Consider approval of the August 31, 2021 Audit and Risk Committee minutes

Committee Chair Liu asked the Committee to review the Audit and Risk Committee minutes. Mr. Anthony Ross moved approval of the August 31, 2021 minutes as presented. Ms. Diana Thomas seconded, and the motion passed 4-0.

Mr. Benson arrived at 10:37 a.m.

4 Discuss and consider Financial Statement Audit Request for Proposal

Mr. Russell Nash outlined the process and the recommendations from those involved.

After discussion, Mr. Ross moved to recommend the firm referred to as Alpha to the Board for approval on December 14. Ms. Thomas seconded, and the motion passed 4-0.

5 Discuss and consider the Enterprise Risk Management Policy and Report

Mr. Christopher Hanson presented the Enterprise Risk Management Policy which had been revised based on discussion at the previous committee meeting. He also presented the 2022 Risk Management System Report that outlines risk categories, actions being taken to mitigate risks, who on staff is responsible for each risk category, and how the Board maintained oversight for each risk category. He explained that the report is meant to be an ongoing document, and as new risks are identified or changed, they can be incorporated into the existing framework.

Ms. Thomas moved to recommend the Board approve the Risk Management Policy and Report as presented. Mr. Ross seconded, and the motion passed 4-0.

6 Discuss and consider the 2022 administrative budget

Mr. Hanson presented the proposed 2022 administrative budget. He reported that the proposed 2022 budget represents a two percent increase in administrative expenses from the previous year. The proposed budget continues the focus on investing in COAERS' internal resources including personnel and information technology while supporting the overall strategic plan initiatives of plan sustainability, risk management, customer service, best practices, and innovation.

Mr. Ross moved to recommend the Board approve the 2022 administrative budget as presented. Ms. Thomas seconded, and the motion passed 4-0.

7 Receive Staff Reports:

A. Third quarter 2021 unaudited financial statements

Ms. Donna Boykin presented the financial statements and answered questions.

B. Cybersecurity update

Committee Chair Liu announced that the Committee would convene into Executive Session pursuant to Section 551.071, Texas Government Code, Section 1.05, Texas

Disciplinary Rules of Professional Conduct, and Section 551.089, Texas Government Code, to consult with legal counsel and deliberate security assessments or deployments relating to information resources technology, network security information described in Section 2059.055, Texas Government Code, and deployment and implementation of security personnel, critical infrastructure, and security devices.

The Committee convened into Executive Session at 11:15 a.m. and reconvened into public session at 11:29 a.m.

C. 2021 Administrative Budget

Mr. Hanson presented the 2021 expenditures year-to-date, noting that in some instances items have been ordered but not yet received or billed.

8 Review 2021 Committee Work Plan and discuss development of 2022 Committee Work Plan

Mr. Hanson noted that the Committee had completed all goals on the 2021 Work Plan except the required communications for the 12/31/2021 audit, which were moved to 2022 due to the Request for Proposal. A draft of the 2022 plan was presented.

9 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 other items to address, the meeting adjourned at 11:40 a.m.

5. Discuss and consider the December 31, 2021 financial statements including the following:

A. Review of the unaudited 2021 year-end financial statements

B. Presentation of required auditor communications in conjunction with the financial statement audit

5A Review of the unaudited 2021 year-end financial statements

AGENDA ITEM 5:

Discuss and consider the December 31, 2021 financial statements

A. Review of the unaudited 2021 year-end financial statements

AGENDA ITEM OBJECTIVE

This item presents the December 31, 2021 financial statements which show the net position of the fund and related financial details. These statements will be the subject of the annual financial statement audit currently underway.

RELEVANCE TO STRATEGIC PLAN

This agenda item meets **COAERS Strategic Plan Goal 2: Responsibly manage the risks of the System.**

RECOMMENDATION FOR COMMITTEE ACTION

For informational purposes only; no action required.

ATTACHMENT

1. COAERS financial statements for the year ending December 31, 2021, including the Statement of Fiduciary Net Position and the Statement of Changes in Fiduciary Net Position

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM
Statement of Fiduciary Net Position
December 31, 2021

	Unaudited		Variance Favorable (Unfavorable)
	12/31/2021	12/31/2020	
Assets			
Cash - operating account	\$19,242,506	\$9,719,756	\$9,522,750
Receivables:			
Employer contributions receivable	5,096,000	4,558,217	537,783
Employee contributions receivable	2,144,463	1,916,406	228,057
Other receivables	81,299	72,482	8,817
Total receivables	7,321,762	6,547,105	774,657
Investments, at fair value:			
US equities	1,214,039,057	1,032,502,489	181,536,568
Developed Markets Equities	524,373,588	532,321,696	(7,948,108)
Emerging Markets Equities	275,490,703	294,199,714	(18,709,011)
Fixed income	743,457,905	626,987,429	116,470,476
Real assets	568,291,309	449,111,486	119,179,823
Multi-asset	177,832,874	218,275,963	(40,443,089)
Cash and cash equivalents	35,247,303	29,743,310	5,503,993
Total investments	3,538,732,739	3,183,142,087	355,590,652
Capital assets, net	4,125,172	4,825,644	(700,472)
Total assets	3,569,422,179	3,204,234,592	365,187,587
Liabilities			
Payables			
Accrued expenses	603,253	1,813,752	1,210,499
Refunds and death benefits payable	3,659,082	2,854,257	(804,825)
Total liabilities	4,262,335	4,668,009	405,674
Net position restricted for pensions	\$3,565,159,844	\$3,199,566,583	\$365,593,261

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM
Statement of Changes in Fiduciary Net Position
For the Year ended December 31, 2021

	<u>Unaudited</u>		<u>Variance</u>
	<u>12/31/2021</u>	<u>12/31/2020</u>	Favorable (Unfavorable)
Additions:			
Contributions:			
Employer	\$141,417,796	\$130,913,743	\$10,504,053
Employee	59,127,585	57,671,454	1,456,131
Creditable service purchases	7,692,279	13,798,248	(6,105,969)
Total contributions	<u>208,237,660</u>	<u>202,383,445</u>	5,854,215
Investment Income:			
Realized gain/(loss) on investments	236,644,654	215,516,216	21,128,438
Unrealized gain/(loss) on investments	141,573,209	57,795,041	83,778,168
Net appreciation in fair value of investments	<u>378,217,863</u>	<u>273,311,257</u>	104,906,606
Dividends	30,200,042	27,946,305	2,253,737
Interest	9,540,959	12,545,383	(3,004,424)
Less: Investment expense	(6,749,253)	(6,513,904)	(235,349)
Net investment appreciation	<u>411,209,611</u>	<u>307,289,041</u>	103,920,570
Other income	962	174	788
Total additions	<u>619,448,233</u>	<u>509,672,660</u>	<u>109,775,573</u>
Deductions:			
Retirement annuities	231,848,624	219,581,719	(12,266,905)
Contributions refunded to terminating employees	4,266,759	3,656,402	(610,357)
DROP disbursements	4,724,045	4,093,912	(630,133)
Retiree lump-sum annuity	2,715,305	1,354,674	(1,360,631)
Death benefits	<u>3,771,740</u>	<u>2,877,910</u>	(893,830)
Total benefit payments, including refunds of member contributions	247,326,473	231,564,617	(15,761,856)
General and administrative expenses	6,528,499	6,594,536	66,037
Total deductions	<u>253,854,972</u>	<u>238,159,153</u>	<u>(15,695,819)</u>
Net increase in net position	365,593,261	271,513,507	94,079,754
Net position restricted for pensions:			
Beginning of year	<u>3,199,566,583</u>	<u>2,928,053,076</u>	271,513,507
End of year	<u>\$3,565,159,844</u>	<u>\$3,199,566,583</u>	<u>\$365,593,261</u>

5B Presentation of required auditor communications in conjunction with the financial statement audit

AGENDA ITEM 5:

Discuss and consider the December 31, 2021 financial statements

B. Presentation of required auditor communications in conjunction with the financial statement audit

AGENDA ITEM OBJECTIVE

Auditors are required to meet with the client prior to a financial statement audit. This agenda item serves this purpose.

RELEVANCE TO STRATEGIC PLAN

This agenda item meets **COAERS Strategic Plan Goal 2: Responsibly manage the risks of the System.**

RECOMMENDATION FOR COMMITTEE ACTION

For informational purposes only; no action required.

BACKGROUND

Ms. Bhakti Patel, a principal with CliftonLarsonAllen (CLA), will provide the Committee with an overview of the audit approach and brief the Committee on any recent accounting standards pronouncements.

ATTACHMENT

1. City of Austin Employees' Retirement System – Financial Statement Audit for the year ended December 31, 2021



City of Austin Employees' Retirement System – Financial Statement Audit for the year- ended December 31, 2021

March 10, 2022

WEALTH ADVISORY | OUTSOURCING | AUDIT, TAX, AND CONSULTING

Investment advisory services are offered through CliftonLarsonAllen Wealth Advisors, LLC, an SEC-registered investment advisor

Required Communications

- We will conduct our audit in accordance with auditing standards generally accepted in the United States of America (U.S. GAAS). Our responsibilities, as described by professional standards, are as follows:
 - Expressing an opinion about whether the financial statements are fairly presented, in all material respects, in conformity with accounting principles generally accepted in the United States of America.
 - Planning and performing the audit in accordance with auditing standards generally accepted in the United States of America to obtain reasonable, rather than absolute, assurance about whether the financial statements as a whole are free from material misstatement.
 - Considering the plan's internal control over financial reporting as a basis for designing our audit procedures, but not to provide any assurance on the effectiveness of the plan's internal control over financial reporting.
 - Communicating significant matters related to the financial statement audit that are, in our professional judgment, relevant to your responsibilities in overseeing the financial reporting process. However, we are not required to design procedures specifically to identify such matters.

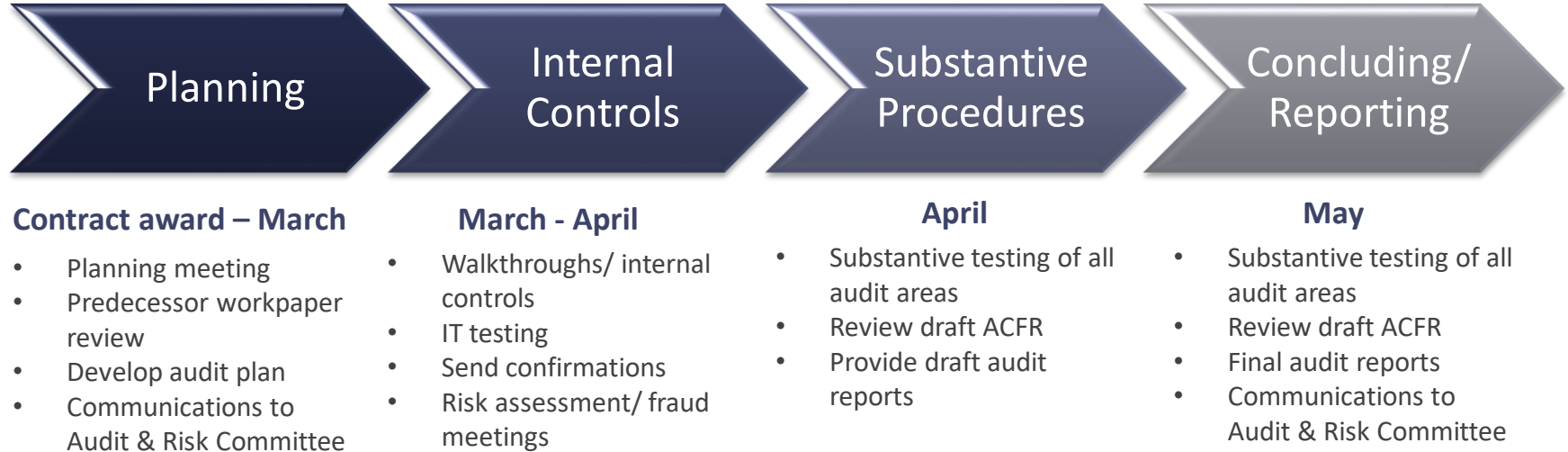


Summary of Services

- Independent Auditors' Report on the basic financial statements
- The following Required Supplementary Information will be subjected to certain limited procedures, but will not be audited:
 - Management's Discussion and Analysis
 - Schedule of Changes in Net Pension Liability and Related Ratios
 - Schedule of Employer Contributions
 - Schedule of Investment Returns
- Evaluate and report on the presentation of the following Supplementary Information accompanying the financial statements in relation to the financial statements as a whole:
 - Schedule of Administrative Expenses
 - Schedule of Investment Expenses
 - Schedule of Payments to Consultants
- Communications with Those Charged with Governance



Planned Scope and Timing of the Audit



Significant Audit Areas

- Investments
- Investment income
- Employer and employee contributions



Other Planning Matters

- Your understanding of the risks of fraud and the controls in place to prevent and
- Whether you are aware of any noncompliance with laws and regulations, including measures taken to address the noncompliance.
- If the plan uses a service organization, your knowledge of any fraud, noncompliance, or uncorrected misstatements affecting the plan's financial statements reported by the service organization or otherwise known to you.



Effective GASB Pronouncements

- For the fiscal year ended December 31, 2021
 - GASB Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period* (no significant impact anticipated)
- For the fiscal year ended December 31, 2022
 - GASB Statement No. 82, *Leases*
 - GASB Statement No. 91, *Conduit Debt Obligations*
 - GASB Statement No. 92, *Omnibus 2020*
 - GASB Statement No. 93, *Replacement of Interbank Offered Rates*



Questions?



[CLAconnect.com](https://www.claconnect.com)



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WEALTH ADVISORY | OUTSOURCING | AUDIT, TAX, AND CONSULTING

Investment advisory services are offered through CliftonLarsonAllen Wealth Advisors, LLC, an SEC-registered investment advisor

6. Discuss and consider COAERS
Enterprise Risk Management program
including the following:

A. Receive report on the following risk
categories: funding, market, and
personnel

B. Receive report on the cybersecurity
risk

6A Receive report on the following risk categories: funding, market, and personnel

AGENDA ITEM 6:

Discuss and consider COAERS Enterprise Risk Management program

A. Receive report on the following risk categories: funding, market, and personnel

AGENDA ITEM OBJECTIVE

This agenda item is for discussion of three of the risk categories in the Enterprise Risk Management Report.

RELEVANCE TO STRATEGIC PLAN

This agenda item meets **COAERS Strategic Plan Goal 2: Responsibly manage the risks of the System**. The Committee's regular review of COAERS Enterprise Risk Management System is one of the strategic objectives of Goal 2 and a key performance indicator is the successful implementation of all annual risk management activities.

RECOMMENDATION FOR COMMITTEE ACTION

At the Committee's discretion.

BACKGROUND

The 2022 Enterprise Risk Management Report contains 12 risk categories. Staff will present the full report in a new dashboard format and then conduct a deeper dive on select risk categories. For this agenda item, the categories are funding, market, and personnel.

ATTACHMENTS

1. Enterprise Risk Management Report Q1 2022
2. Staff Presentation: "Risks: Funding, Market, and Personnel"



Enterprise Risk Management Report

				Risk Level Q4 '21 (Prior Period)	Risk Level Q1 '22 (Current Period)	Expected Risk Level Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee
1st Quartile Risk	FUNDING	A lack of sound funding for the plan could lead to insufficient assets to pay for long-term benefits and financial obligations.	1	High	High	↔	Mitigate	Executive Director	Benefits and Services Committee
	MARKET	Too little or too much exposure to market risk could lead to undesirable investment outcomes.	2	High	High	↑	Accept	Chief Investment Officer	Investment Committee
	CYBER	Ineffective cyber security controls could lead to breaches or sabotage of COAERS systems. Unauthorized access of confidential information could result in state or federal law violations and harm the best interests of COAERS.	3	High	High	↑	Mitigate	Chief Information Officer	Audit and Risk Committee
2nd Quartile Risk	OPERATIONAL	Event causes a major business interruption	4	Medium	Medium	↔	Mitigate	Deputy Executive Director	Audit and Risk Committee
	GOVERNANCE	Not following processes and procedures in decision making	5	Medium	Medium	↓	Mitigate and Transfer	Board of Trustees	Governance and Human Resources Committee
	LEGISLATIVE	Legislative events lead to adverse relations, unfavorable legislation, and restricted funding	6	Medium	Medium	↔	Mitigate	Executive Director	Legislative Committee
3rd Quartile Risk	MISSION	Inability to make monthly retirement benefit payments	7	Medium	Medium	↔	Mitigate	Executive Director and Deputy Executive Director	Audit and Risk Committee, and Investment Committee
	COUNTERPARTY	Business partners or entities are unable to fulfill their obligations or do not complete transactions as agreed upon.	8	Medium	Medium	↔	Mitigate	Executive Director, Deputy Executive Director, and Chief Investment Officer	Investment Committee, Audit and Risk Committee, Benefits and Services Committee, and Policy Committee
	PERSONNEL	Ability to attract and retain talented staff; succession planning	9	Medium	Medium	↑	Mitigate	Executive Director	Governance and Human Resources Committee, and Board of Trustees
4th Quartile Risk	PHYSICAL	Inadequate facilities management; ineffective space utilization; staff effort to manage issues	10	Low	Low	↓	Mitigate	Executive Director and Deputy Executive Director	Board of Trustees
	REPUTATIONAL	Erosion of trust in organization either rapidly or slowly over a period of time	11	Low	Low	↑	Mitigate	Executive Director	Board of Trustees
	ADAPTABILITY	Inability to meet the strategic mission and vision of the organization; not achieving best outcomes for the system	12	Low	Low	↔	Mitigate	Executive Director	Board of Trustees

Risk Category	Risk Description	Rank	Risk Level Q4 '21 (Prior Period)	Risk Level Q1 '22 (Current Period)	Expected Risk Level Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee	
			High	High	↔				
FUNDING	A lack of sound funding for the plan could lead to insufficient assets to pay for long-term benefits and financial obligations.	1	High	High	↔	Mitigate	Executive Director	Benefits and Services Committee	
Current Status Summary (Trending)	Performance								
System funded ratio and amortization period have improved over the last year. Deferred gains and positive 2021 investment returns could mitigate any negative actuarial experience.	1. Amortization period decreased from 40 years to 32 years and funded ratio increased from 63.5% to 65.3%. 2. Strong investment performance and increase in City Contribution rate by 1% led to slight reduction in UAAL. 3. System has \$130 million in deferred gains to be recognized over next few years. 4. Funding period still extends beyond Board Funding Policy and COAERS consulting actuary recommends continued work on long-term sustainability.				1. Lower than expected investment performance would create headwind towards full funding. 2. Any reduction in contributions would extend the funding period and a material reduction of 7%-10% would lead to insolvency. 3. Large market drawdown in the next five to ten years could materially impact funding trajectory. 4. A significant reduction in the active population (1,000 - 2,000 employees) would extend the funding period between 7 to 16 years.				
Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities						Activity Status	
								OPEN	CLOSED
Assets insufficient to fund liabilities	Annual Actuarial Valuation and Board Funding Policy	Develop pension reform to address long-term sustainability with the City.						<input checked="" type="checkbox"/>	
Contribution rates are not sufficient to fund benefits	Asset/Liability Study	Conduct 12/31/2021 actuarial valuation. Review Funding Policy and continue reporting to Board and City.						<input checked="" type="checkbox"/>	
Unexpected increase in benefits payroll	Cash flow monitoring and monthly benefit reporting	Review Funding Policy and continue reporting to Board and City.							
Unexpected decline in sponsor payroll	Cash flow monitoring and monthly benefit reporting	Create new stakeholder meeting on funded status of the System.							
Actuarial miscalculations	Actuarial Audit by sponsor	Continue regular cash flow and benefit monitoring.						<input checked="" type="checkbox"/>	
Rate of Return assumption too aggressive	Actuarial Experience Studies								
Sponsor closes DB plan in favor of DC plan	Communication with membership								

1st Quartile Risk

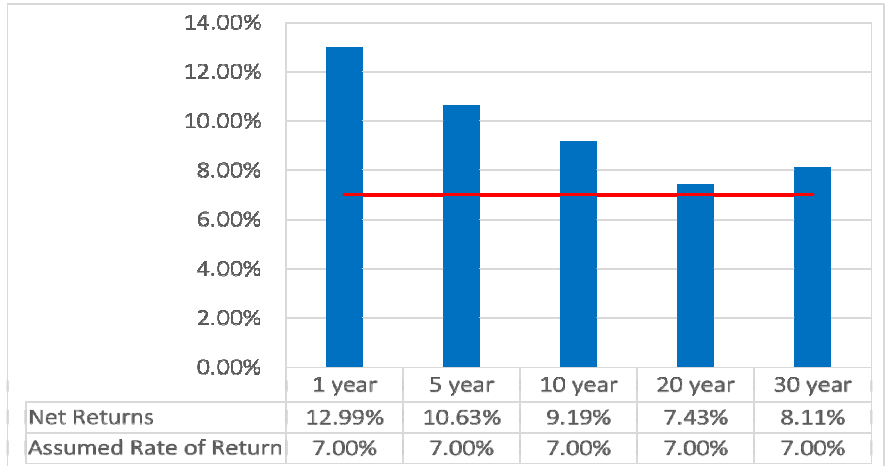
1st Quartile Risk

Risk Category	Risk Description	Rank	Risk Level Q4 '21	Risk Level Q1 '22	Risk Expected (Current Trend (next 12 months))	Risk Response	Risk Owner	Reporting and Oversight Committee
			High	High	↑			

MARKET	Too little or too much exposure to market risk could lead to undesirable investment outcomes.	2	High	High	↑	Accept	Chief Investment Officer	Investment Committee
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Current Status Summary (Trending) Performance

Realized short-term volatility has increased slightly above the target of 10-12% while longer term measures are still below target.



Notable Risks (Root Causes) Risk Management Strategies and Action Items 2022 Risk Management Activities Activity Status

Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities	Activity Status	
			OPEN	CLOSED
Lower longer-term performance vs. assumed rate	Strategic Asset Allocation Study and Asset-Liability Study	Seek to optimize risk as bearing investment risk is required as part of the current plan design.	<input checked="" type="checkbox"/>	
Large market drawdown	Investment Risk Framework	Target at least 4%-5% over risk free rate.	<input checked="" type="checkbox"/>	
Poor investment manager performance	Premier List	Conduct Strategic Asset Allocation review to re-underwrite risk-return profile.	<input checked="" type="checkbox"/>	
Poor value for investment fees paid	Premier List and CEM Investment Benchmarking			
Failure to adapt diversification strategy	Investment Risk Framework			
Chasing performance	Strategic Asset Allocation Reviews (annual)			

Risk Category	Risk Description	Rank	Risk Level Q4 '21	Risk Level Q1 '22	Expected Risk Level	Risk Response	Risk Owner	Reporting and Oversight Committee	
			(Prior Period)	(Current Period)	Trend (next 12 months)				
CYBER	Ineffective cyber security controls could lead to breaches or sabotage of COAERS systems. Unauthorized access of confidential information could result in state or federal law violations and harm the best interests of COAERS.	3	High	High	↑	Mitigate	Chief Information Officer	Audit and Risk Committee	
Current Status Summary (Trending)		Performance							
Cyber activity continues to increase globally. Breaches and attacks have grown significantly since the outset of the COVID-19 pandemic. While the System has taken significant steps to improve its cybersecurity posture, this activity would indicate this risk trend is increasing.									
Notable Risks (Root Causes)		Risk Management Strategies and Action Items				2022 Risk Management Activities		Activity Status	
Cyberattack causes loss of money, data, business disruption, or sponsor to miss contributions		MSSP and IT Security Program; Web Application Firewall; HA Palo Alto; Global Protect VPN and Wildfire subscriptions; SOC				Continue to develop and build security program utilizing NIST compliance.		OPEN	CLOSED
Phishing attack (ransomware, credential harvesting)		KnowBe4 Security Awareness Training and Phish Tests; HA Palo Alto				Continue build out of best-in class disaster recovery.		<input checked="" type="checkbox"/>	
Website attack (DDos, SQL Injection, Cross site scripting, Illegal resource access)		MSSP and IT Security Program; Web Application Firewall; HA Palo Alto				Continue to mature IT security program.		<input checked="" type="checkbox"/>	
Internal COAERS employee attack		KnowBe4 Security Awareness Training; Strict financial auditing controls and separation of duties; IT Security policies; Data management and classification				Evaluate third-party vendors across IT program.			
3rd party data breach		Annual 3rd party security reviews; Compliance Manager software; Vendor Risk Management				Evaluate cyber-insurance marketplace and possible options to transfer cyber risk.			
IT disruptions caused by outdated hardware and software		Asset management/Patch management							
Member Direct user imposter		LexisNexis MFA; Membership education on cybersecurity awareness							

Risk Category	Risk Description	Rank	Risk Level Q4 '21	Risk Level Q1 '22	Expected Risk Level (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee	
			Medium	Medium	↔				
OPERATIONAL	Event causes a major business interruption	4	Medium	Medium	↔	Mitigate	Deputy Executive Director	Audit and Risk Committee	
Current Status Summary (Trending)	Performance								
The organization's technology, personnel, and systems have operated without interruption fulfilling our mission despite the serious challenges brought about by the pandemic and severe weather conditions. As the pandemic is showing signs of moving towards an endemic, COAERS has drafted new Workplace Strategy and Guidelines which encourage finding opportunities to reframe the work environment.									
Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities						Activity Status	
								OPEN	CLOSED
Accounting and reporting	Financial Statement Audit	Conduct 12/31/2021 financial statement audit.						<input checked="" type="checkbox"/>	
Fraud	Internal controls, policies, and procedures								
Business Continuity	Backup & Disaster Recovery Plan/Testing	Begin implementation of RSM Rapid Assessment recommendations.							
Benefit payment inaccuracies	Internal controls, policies, and procedures	Consider possibilities to restructure work teams to mitigate effects of attrition and handle future demand for services.						<input checked="" type="checkbox"/>	
Customer service failures	Employee Training/Reviews/Internal Communication								
Failure to follow applicable laws, regulations and policies	Legal reviews by tax and general counsel								
Obsolescence of service delivery methods	Communication with membership regarding business operations								
IT disruptions	Capital Improvement Plan								
Pandemic or natural disaster	COAERS Workplace Strategy and Guidelines								
Records management	Electronic File & Delivery Systems								

2nd Quartile Risk

2nd Quartile Risk	Risk Category	Risk Description	Rank	Risk Level Q4 '21 (Prior Period)	Risk Level Q1 '22 (Current Period)	Expected Risk Level Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee	
	GOVERNANCE	Not following processes and procedures in decision making	5	Medium	Medium	↓	Mitigate and Transfer	Board of Trustees	Governance and Human Resources Committee	
	Current Status Summary (Trending)	Performance								
	The implementation of the 2020 Governance Effectiveness Assessment is in progress, with nearly all of the short and medium term recommendations reviewed and implemented.									
	Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities						Activity Status	
								OPEN	CLOSED	
	Policies and procedures not followed or established	Regular Policy Review	Review and possible implementation of final recommendations from Governance Effectiveness Assessment.						<input checked="" type="checkbox"/>	
	Policy-making versus administration lines not held	Training/Policy & Procedure	Onboarding of new trustees.						<input checked="" type="checkbox"/>	
	Effectiveness of board governance declines	Board Governance Effectiveness Survey Follow-Up	Trustee continuing education and utilization of Board Skills Matrix to expand trustee training options.						<input checked="" type="checkbox"/>	
	Ineffective Board leadership	Board and Trustee Self-Evaluation	Follow-up survey to the 2020 Governance Effectiveness Assessment.							
Lack of appropriate skills	Board Skills Matrix and Board Education Policy									
Lack of trust between trustees	Communication/Board Workshops									

Risk Category	Risk Description	Rank	Risk Level Q4 '21 (Prior Period)	Risk Level Q1 '22 (Current Period)	Expected Risk Level Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee	
			Medium	Medium	↔				
LEGISLATIVE	Legislative events lead to adverse relations, unfavorable legislation, and restricted funding	6	Medium	Medium	↔	Mitigate	Executive Director	Legislative Committee	
Current Status Summary (Trending)	Performance								
No regular legislative session is scheduled for 2022, though the possibility of special legislative sessions exist. The Board recently approved the creation of a Legislative Committee which will provide oversight of legislative activities.									
Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities						Activity Status	
								OPEN	CLOSED
State forces legislative changes to plan	Engagement with governmental relations firms; development of legislative priorities and agenda; Increase stakeholder engagement on legislative agenda through events and meetings	Development and adoption of COAERS legislative priorities for the 88th session.							
Lack of relationships with key offices	Communications planning for legislative agenda messaging	Continue to work collaboratively with City on legislation for 88th Session.						<input checked="" type="checkbox"/>	
Lack of alignment with plan sponsor	Develop and maintain strong communication with appropriate plan sponsor liaisons	Engage stakeholders regarding legislative priorities.							
Outside organizations promoting anti-DB policies	Identify potential opposition groups and stakeholders and create unified messaging to combat misinformation								

3rd Quartile Risk	Risk									
	Risk Category	Risk Description	Rank	Risk Level Q4 '21 (Prior Period)	Risk Level Q1 '22 (Current Period)	Expected Risk Level Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee	
				Medium	Medium	↔				
	MISSION	Inability to make monthly retirement benefit payments	7	Medium	Medium	↔	Mitigate	Executive Director and Deputy Executive Director	Audit and Risk Committee, Investment Committee	
	Current Status Summary (Trending)		Performance							
	Trust fund liquidity and cash management activities continue to ensure promised benefits are paid. Long-term sustainability has improved recently. Additional training in mission-critical areas has provided further risk mitigation. The implementation of a new disaster-recovery and backup system will allow for more rapid response in the event of an initial business disruption.									
	Notable Risks (Root Causes)		Risk Management Strategies and Action Items		2022 Risk Management Activities				Activity Status	
									OPEN	CLOSED
	Lack of liquidity to make annuity payments		Liquidity monitoring		Cash projections and liquidity management.				<input checked="" type="checkbox"/>	
	Failure to transmit bank files for payments		Cash management program		Testing of disaster recovery for IT systems.					
IT system outages		Business continuity and disaster recovery plans		Continue to develop cross-training.						
Sponsor contribution not made timely		Communication with plan sponsor		Evaluate team restructuring to mitigate attrition.				<input checked="" type="checkbox"/>		
Employee turnover at critical positions		Succession planning and cross-training								
Cyberattack causes loss of money, data, business disruption, or sponsor to miss contributions		Managed Service Security Provider/Security Program								

Risk Category	Risk Description	Rank	Risk Level			Expected Risk Level Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee
			Q4 '21 (Prior Period)	Q1 '22 (Current Period)	Q1 '22 (Current Period)				
COUNTERPARTY	Business partners or entities are unable to fulfill their obligations or do not complete transactions as agreed upon.	8	Medium	Medium	↔	Mitigate	Executive Director, Deputy Executive Director, and Chief Investment Officer	Investment Committee, Audit and Risk Committee, Benefits and Services Committee, and Policy Committee	
Current Status Summary (Trending)	Performance								
Successful completion of the custodial bank transition has reduced counterparty risk. Deployment of third-party IT vendor compliance reviews should provide insight into growing this risk management capability across other vendors and platforms.									
Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities						Activity Status	
								OPEN	CLOSED
Custodial banks	IC Dashboard to monitor counterparty ratings	Continual underwriting of premier list managers.						<input checked="" type="checkbox"/>	
IT security providers and consultants	Annual 3rd party security reviews; Compliance Manager software; Vendor Risk Management	Annual review to Committees of key service providers.							
Investment managers	Premier List; Due Diligence								
Brokers and related vendors	Transaction Cost Analysis	Develop annual security compliance audit.							
Operating bank	Monitor operating bank counterparty ratings; conduct security assessment; revisit interest credit rates; research alternative vendors								
Actuary	Actuarial audits								
Legal counsel	Engagement with specialized counsel								
Medical consultants	Engagement with multiple parties including outsourced medical service provider program								
City of Austin contribution issues	Communication with plan sponsor; cash management program								

3rd Quartile Risk

3rd Quartile Risk	3rd Quartile Risk								
	Risk Category	Risk Description	Rank	Risk Level Q4 '21 (Prior Period)	Risk Level Q1 '22 (Current Period)	Expected Risk Level Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee
	PERSONNEL	Ability to attract and retain talented staff; succession planning	9	Medium	Medium	↑	Mitigate	Executive Director	Governance and Human Resources Committee, and Board of Trustees
	Current Status Summary (Trending)	Performance							
	Labor market trends are increasing risk for employee turnover. COAERS already has slightly elevated risk due to retirement eligibility of mission-critical employees. Departure of Chief Investment Officer in 2021 highlights industry-related challenges. COAERS Workplace Strategy and Guidelines positions the organization for future work needs.								
	Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities					Activity Status	
							OPEN	CLOSED	
	Lack of succession planning	Succession planning	Market compensation study.						
	Employee retention and turnover	Cross-training for each position; Workplace Strategy and Guidelines	Continue to focus on cross-training.					<input checked="" type="checkbox"/>	
	Ability to attract top talent	Market compensation studies; Well-articulated compensation philosophy	Implement HR technology for more efficient and employee-friendly HR experience.					<input checked="" type="checkbox"/>	
Lack of training opportunities	Professional development and continuing education	Hiring of Chief Investment Officer.					<input checked="" type="checkbox"/>		
Employee burnout	Health insurance "fit to work"								
Employees performing inadequately in position	Performance appraisals; Professional development; Training; Personnel Policy and Employee Handbook								
Accidents/Injury/Health	Workplace Safety Policy								
Employee resistance to culture change	Management promoting culture statement								

Risk Category	Risk Description	Rank	Risk Level Q4 '21 (Prior Period)	Risk Level Q1 '22 (Current Period)	Expected Risk Level Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee	
			Low	Low	↓				
PHYSICAL	Inadequate facilities management; ineffective space utilization; staff effort to manage issues	10	Low	Low	↓	Mitigate	Executive Director and Deputy Executive Director	Board of Trustees	
Current Status Summary (Trending)	Performance								
	COAERS will need to evaluate its long-term facility needs beginning in 2022. Existing Northpoint facilities remain adequate for current staffing, though property management company is problematic. Existing policies and procedures will need to be reviewed due to increased usage of COAERS facilities.								
Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities						Activity Status	
								OPEN	CLOSED
Global pandemic	Workplace Strategy and Guidelines; Air quality monitoring; PPE where appropriate	Begin assessment of long-term facility needs.						<input checked="" type="checkbox"/>	
Accidents or injury	Workplace Safety Policy	Refine COAERS Workplace Strategy and Guidelines according to appropriate data.						<input checked="" type="checkbox"/>	
Threats to physical safety of employees	RAVE application; Workplace Safety Policy; Fire Drills and Training								
Physical risks created by facility management	Facility management plan								
Public spaces in building	Key card system; Camera system								

4th Quartile Risk	Risk Category	Risk Description	Rank	Risk Level Q4 '21 (Prior Period)	Risk Level Q1 '22 (Current Period)	Expected Risk Level Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee	
	REPUTATIONAL	Erosion of trust in organization either rapidly or slowly over a period of time	11	Low	Low	↑	Mitigate	Executive Director	Board of Trustees	
	Current Status Summary (Trending)		Performance							
	Adoption of Board Communications Policy provides clear guidance on media and other communications. Annual member meeting has significant increase in participation with positive feedback from membership.									
	Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities						Activity Status	
									OPEN	CLOSED
	Unauthorized release of confidential information	Control procedures and processes/financial audit	Continue to highlight and leverage resources to promote COAERS value.						<input checked="" type="checkbox"/>	
	Negative or inaccurate media content	Develop relationships with industry media; Proactive media outreach; Engage consulting/crisis communications	Maintain contacts with industry media.						<input checked="" type="checkbox"/>	
	Illegal/Unethical behavior	Code of Ethics, Whistleblower Policy; Personnel Policy	Respond rapidly and effectively as situations develop.						<input checked="" type="checkbox"/>	
	Unauthorized contact with media	Communications Policy	Evaluate future needs of service delivery.						<input checked="" type="checkbox"/>	
Social media comments	Social Media Policy									
Poor outcomes for organization	Customer service training; Engaging with stakeholders; Transparency									

4th Quartile Risk	Risk Category	Risk Description	Rank	Risk Level Q4 '21 (Prior Period)	Risk Level Q1 '22 (Current Period)	Expected Risk Level Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee	
	ADAPTABILITY	Inability to meet the strategic mission and vision of the organization; not achieving best outcomes for the system	12	Low	Low	↔	Mitigate	Executive Director	Board of Trustees	
	Current Status Summary (Trending)	Performance								
	Strategic focus on innovation continues to allow COAERS to fulfill the visions of the Board.									
	Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities						Activity Status	
	Inability to innovate	Implement technology and industry best practices; Professional development; Promote innovation internally	Strategic KPIs for innovation.						OPEN	CLOSED
	Inability to use analytics and data	Utilize data and analytics	Engagement with NACD, NCPERS, NASRA.						<input checked="" type="checkbox"/>	
	Complacency and "we've always done it this way"	Challenge traditional thinking; Engaging industry leading organizations; Executive Leadership	Review and development of key organizational strengths and weaknesses.							
	Employee resistance to culture change	Culture statement; Executive Leadership	Continue to promote culture statement internally and assess effectiveness through survey.						<input checked="" type="checkbox"/>	



Risks: Funding, Market, and Personnel

Audit and Risk Committee

March 10, 2022

Enterprise Risk Management Report



Risk Category	Risk Description	Rank	Risk Level Q4 '21 (Prior Period)	Risk Level Q1 '22 (Current Period)	Expected Risk Level Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee
1st Quartile Risk	FUNDING	1	High	High	↔	Mitigate	Executive Director	Benefits and Services Committee
	MARKET	2	High	High	↑	Accept	Chief Investment Officer	Investment Committee
	CYBER	3	High	High	↑	Mitigate	Chief Information Officer	Audit and Risk Committee
2nd Quartile Risk	OPERATIONAL	4	Medium	Medium	↔	Mitigate	Deputy Executive Director	Audit and Risk Committee
	GOVERNANCE	5	Medium	Medium	↓	Mitigate and Transfer	Board of Trustees	Governance and Human Resources Committee
	LEGISLATIVE	6	Medium	Medium	↔	Mitigate	Executive Director	Legislative Committee
3rd Quartile Risk	MISSION	7	Medium	Medium	↔	Mitigate	Executive Director and Deputy Executive Director	Audit and Risk Committee, and Investment Committee
	COUNTERPARTY	8	Medium	Medium	↔	Mitigate	Executive Director, Deputy Executive Director, and Chief Investment Officer	Investment Committee, Audit and Risk Committee, Benefits and Services Committee, and Policy Committee
	PERSONNEL	9	Medium	Medium	↑	Mitigate	Executive Director	Governance and Human Resources Committee, and Board of Trustees
4th Quartile Risk	PHYSICAL	10	Low	Low	↓	Mitigate	Executive Director and Deputy Executive Director	Board of Trustees
	REPUTATIONAL	11	Low	Low	↑	Mitigate	Executive Director	Board of Trustees
	ADAPTABILITY	12	Low	Low	↔	Mitigate	Executive Director	Board of Trustees





Funding Risks

Risk Description	Rank	Risk Level	Risk Level	Expected	Risk Response	Risk Owner	Reporting and Oversight Committee	
		Q4 '21 (Prior Period)	Q1 '22 (Current Period)	Risk Level Trend (next 12 months)				
FUNDING	1	High	High	↔	Mitigate	Executive Director	Benefits and Services Committee	
Current Status Summary (Trending)	Performance							
System funded ratio and amortization period have improved over the last year. Deferred gains and positive 2021 investment returns could mitigate any negative actuarial experience.	1. Amortization period decreased from 40 years to 32 years and funded ratio increased from 63.5% to 65.3%. 2. Strong investment performance and increase in City Contribution rate by 1% led to slight reduction in UAAL. 3. System has \$130 million in deferred gains to be recognized over next few years. 4. Funding period still extends beyond Board Funding Policy and COAERS consulting actuary recommends continued work on long-term sustainability.			1. Lower than expected investment performance would create headwind towards full funding. 2. Any reduction in contributions would extend the funding period and a material reduction of 7%-10% would lead to insolvency. 3. Large market drawdown in the next five to ten years could materially impact funding trajectory. 4. A significant reduction in the active population (1,000 - 2,000 employees) would extend the funding period between 7 to 16 years.				
Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities					Activity Status	
							OPEN	CLOSED
Assets insufficient to fund liabilities	Annual Actuarial Valuation and Board Funding Policy	Develop pension reform to address long-term sustainability with the City.					<input checked="" type="checkbox"/>	
Contribution rates are not sufficient to fund benefits	Asset/Liability Study	Conduct 12/31/2021 actuarial valuation. Review Funding Policy and continue reporting to Board and City.					<input checked="" type="checkbox"/>	
Unexpected increase in benefits payroll	Cash flow monitoring and monthly benefit reporting	Review Funding Policy and continue reporting to Board and City.						
Unexpected decline in sponsor payroll	Cash flow monitoring and monthly benefit reporting	Create new stakeholder meeting on funded status of the System.						
Actuarial miscalculations	Actuarial Audit by sponsor	Continue regular cash flow and benefit monitoring.					<input checked="" type="checkbox"/>	
Rate of Return assumption too aggressive	Actuarial Experience Studies							
Sponsor closes DB plan in favor of DC plan	Communication with membership							

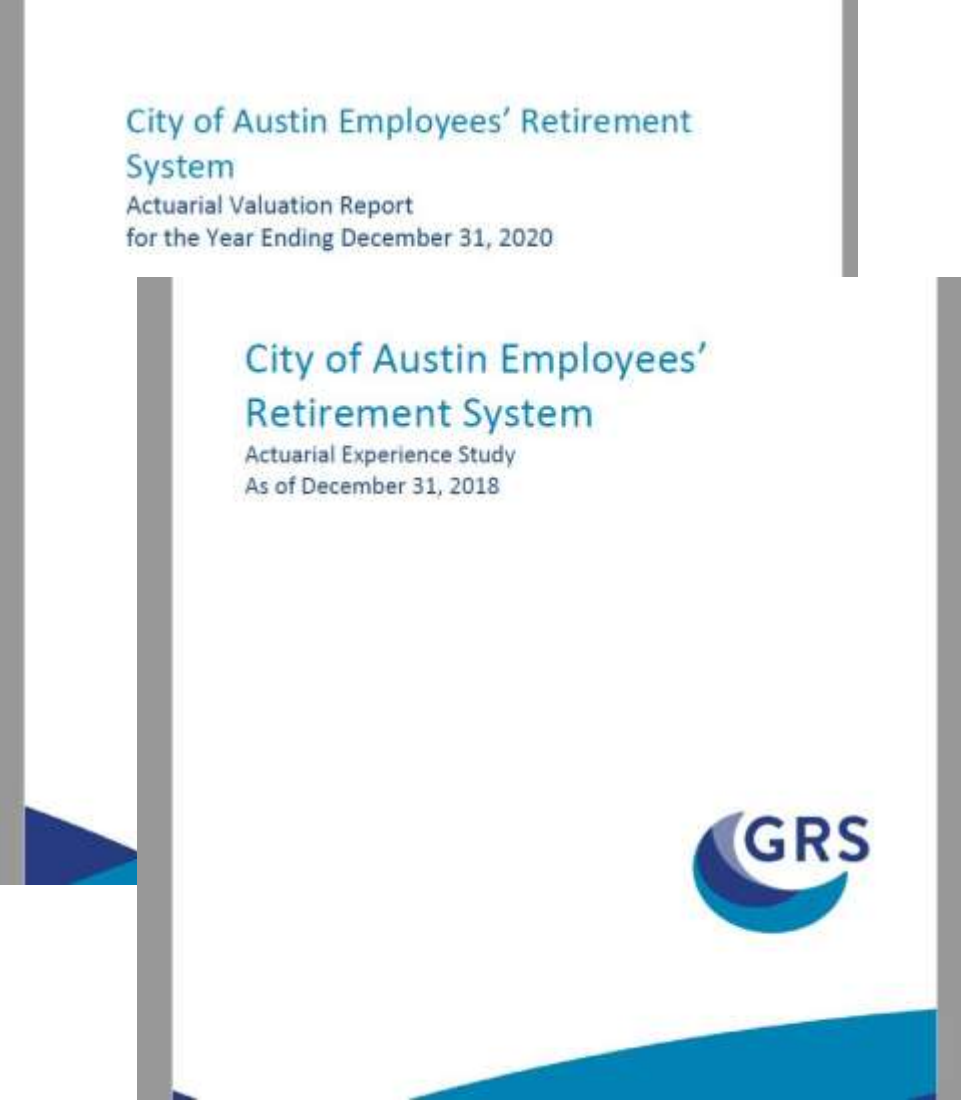
Meeting the System's Obligations: Providing Promised Benefits

- The Board of Trustees has a fiduciary duty to monitor the funded status of the System.
- The mission statement of COAERS: Provide our members their promised benefits.
- COAERS Strategic Plan Goal #1: Achieve and maintain a funding level that ensures the long-term sustainability of the retirement system.

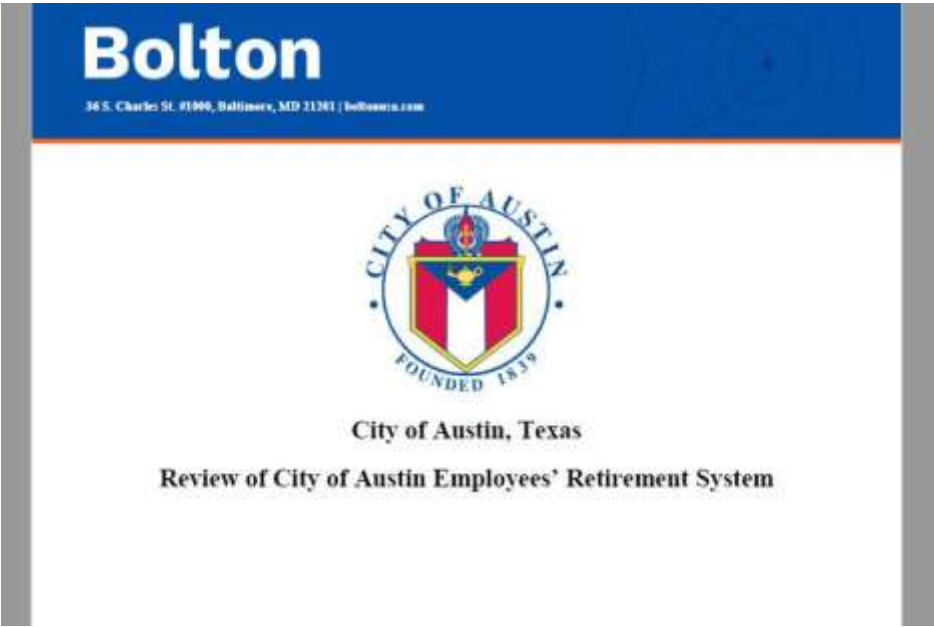


Reporting of Actuarial and System Funding

- The Board receives regular actuarial and system funding reports to monitor the ability of the System to meet its obligations:



Reports from GRS Consulting



Actuarial Audit of GRS Actuary



Funding Dashboard

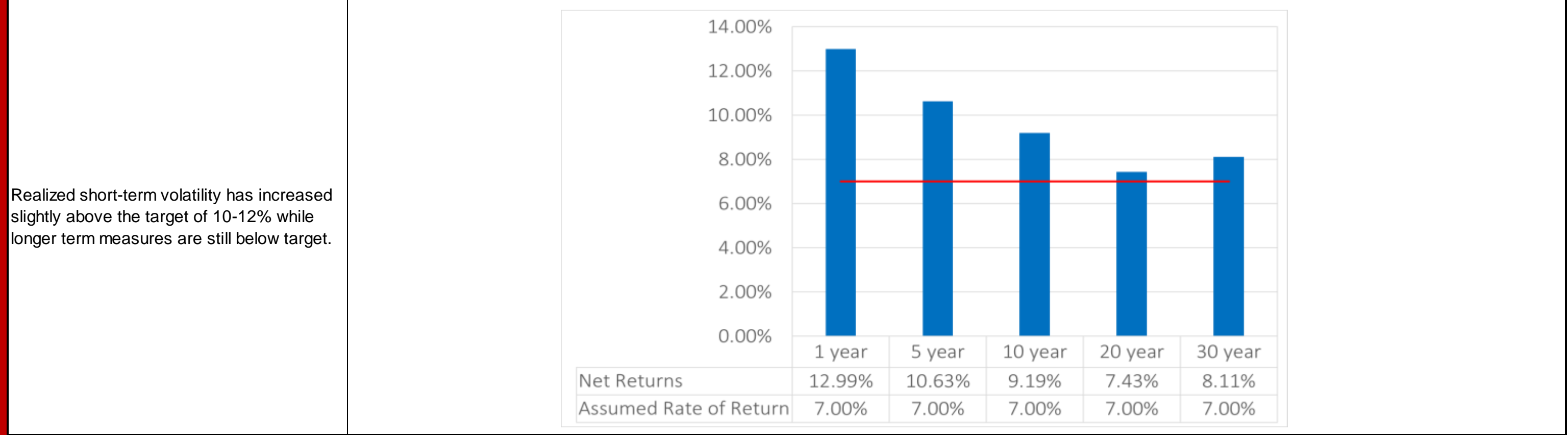


Market Risks

	Risk Description	Rank	Risk Level Q4 '21 (Prior Period)	Risk Level Q1 '22 (Current Period)	Risk Expected Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee
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MARKET	Too little or too much exposure to market risk could lead to undesirable investment outcomes.	2	High	High	↑	Accept	Chief Investment Officer	Investment Committee
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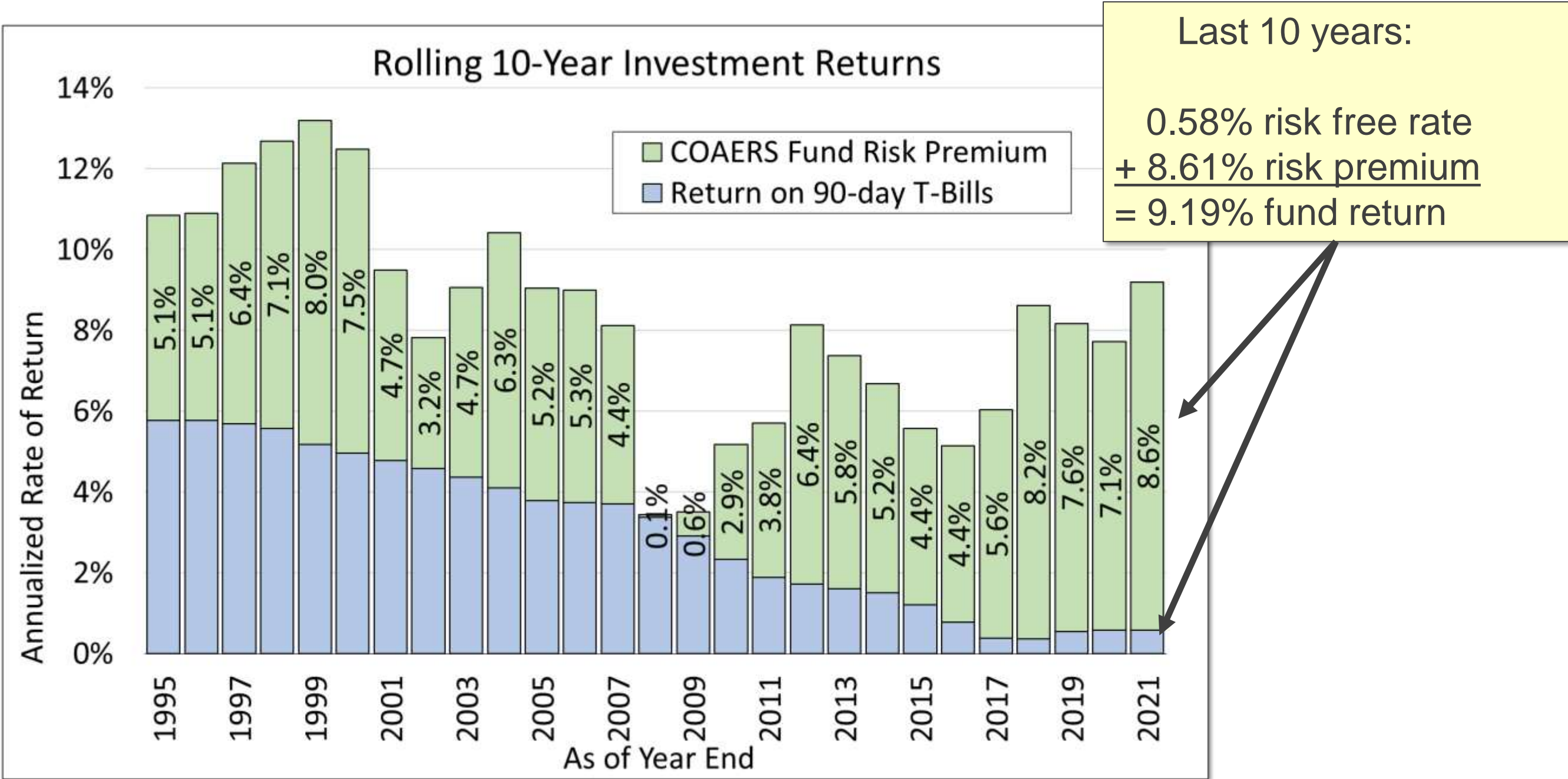
Current Status Summary (Trending) Performance



Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities	Activity Status	
			OPEN	CLOSED
Lower longer-term performance vs. assumed rate	Strategic Asset Allocation Study and Asset-Liability Study	Seek to optimize risk as bearing investment risk is required as part of the current plan design.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Large market drawdown	Investment Risk Framework	Target at least 4%-5% over risk free rate.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Poor investment manager performance	Premier List	Conduct Strategic Asset Allocation review to re-underwrite risk-return profile.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Poor value for investment fees paid	Premier List and CEM Investment Benchmarking		<input type="checkbox"/>	<input type="checkbox"/>
Failure to adapt diversification strategy	Investment Risk Framework		<input type="checkbox"/>	<input type="checkbox"/>
Chasing performance	Strategic Asset Allocation Reviews (annual)		<input type="checkbox"/>	<input type="checkbox"/>

Earning the Market Risk Premium

- Returns for the COAERS Fund have averaged 5.3% above the risk-free rate on rolling ten-year horizons over the last 25 years
- This extra return represents realized compensation for bearing investment risk, which is often referred to as the **“market risk premium”**



Source: Staff analysis of RVK data

Effective Risk Management Is Critical

- Over time the risk of the COAERS fund has varied significantly from the long-term expected range in the IPS, both on the upside and downside
- Highly variable risk hurts compound returns by incurring unnecessary losses in volatile environments and underearning in more placid states



Hold cash in high-risk periods to help preserve capital

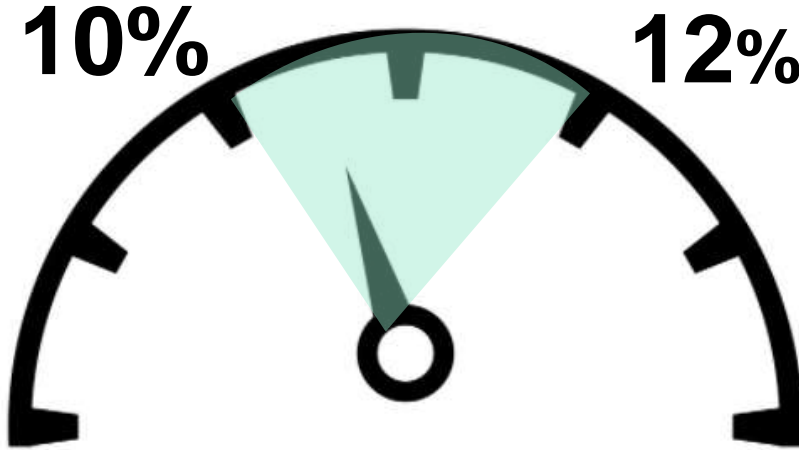


Add leverage in low-risk periods to help earn returns

Source: Staff analysis of data from RVK

Risk is Central to the Investment Process

ABSOLUTE

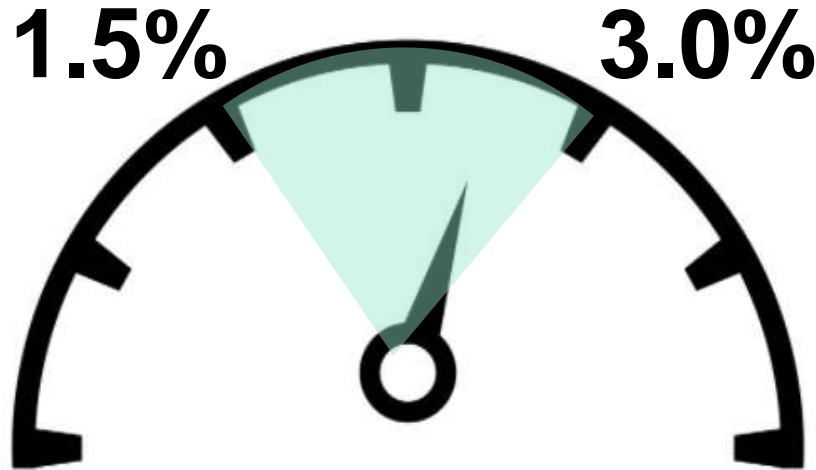


TARGET VOLATILITY

Sharpe ratio of **0.4** on **10-12%** volatility implies a **4-5%** passive market risk premium



RELATIVE



TARGET TRACKING ERROR

Information ratio of **0.5** on **1.5-3.0%** tracking error implies a **0.75-1.50%** excess return

**Processes to manage these risks:
Investment Risk Framework and Premier List**

Risk Management via the Investment Risk Framework

- The IPS/IIP requires the development of the Investment Risk Framework (IRF) to provide risk management and inform Fund positioning
- The IRF seeks to identify the most balanced portfolio given the prevailing market conditions with an emphasis on achieving the Fund's risk budget

"SET IT & FORGET IT" APPROACH

- Uses static capital market assumptions
- Revisit once every five years or so
- Rebalance to fixed targets regardless of risk level
- Poor outcomes, tends to chase performance

INVESTMENT RISK FRAMEWORK

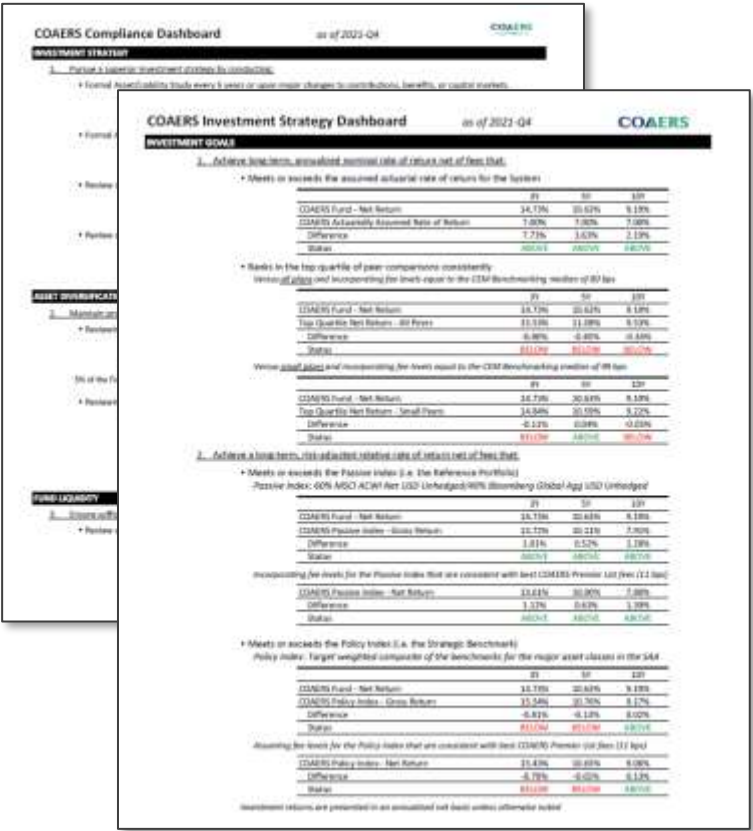
- ✓ Uses market-based inputs and Staff expertise
- ✓ Revisits assumptions on an ongoing basis
- ✓ Rebalance to diversified portfolio with target risk
- ✓ Consistent process for better results

Risk Reporting

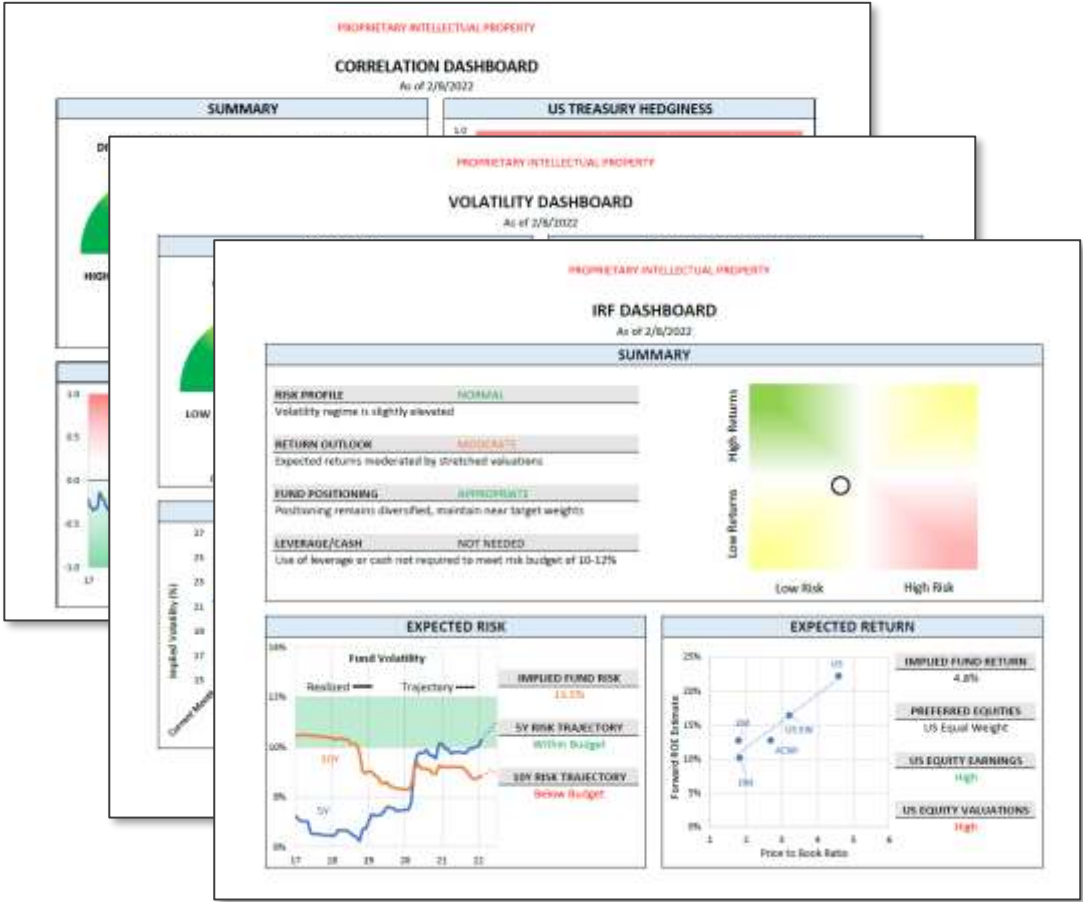
- Staff monitors the market environment and specific risks to the Fund, reporting the key conclusions to the IC each quarter



RVK Reporting



Strategy and Compliance Dashboards



Summary and Detailed IRF Dashboards



Personnel Risks

Risk Category	Risk Description	Rank	Risk Level Q4 '21 (Prior Period)	Risk Level Q1 '22 (Current Period)	Expected Risk Level Trend (next 12 months)	Risk Response	Risk Owner	Reporting and Oversight Committee	
			Medium	Medium	↑				
PERSONNEL	Ability to attract and retain talented staff; succession planning	9	Medium	Medium	↑	Mitigate	Executive Director	Governance and Human Resources Committee, and Board of Trustees	
Current Status Summary (Trending)	Performance								
Labor market trends are increasing risk for employee turnover. COAERS already has slightly elevated risk due to retirement eligibility of mission-critical employees. Departure of Chief Investment Officer in 2021 highlights industry-related challenges. COAERS Workplace Strategy and Guidelines positions the organization for future work needs.									
Notable Risks (Root Causes)	Risk Management Strategies and Action Items	2022 Risk Management Activities						Activity Status	
								OPEN	CLOSED
Lack of succession planning	Succession planning	Market compensation study.							
Employee retention and turnover	Cross-training for each position; Workplace Strategy and Guidelines	Continue to focus on cross-training.						<input checked="" type="checkbox"/>	
Ability to attract top talent	Market compensation studies; Well-articulated compensation philosophy	Implement HR technology for more efficient and employee-friendly HR experience.						<input checked="" type="checkbox"/>	
Lack of training opportunities	Professional development and continuing education	Hiring of Chief Investment Officer.						<input checked="" type="checkbox"/>	
Employee burnout	Health insurance "fit to work"								
Employees performing inadequately in position	Performance appraisals; Professional development; Training; Personnel Policy and Employee Handbook								
Accidents/Injury/Health	Workplace Safety Policy								
Employee resistance to culture change	Management promoting culture statement								

3rd Quartile Risk

2022 Personnel Challenges and COAERS Response

The great resignation has spurred unprecedented turnover

- Succession planning has mitigated impact, internal promotional opportunities provided
- Cross training has also mitigated impact and supported mission critical activities
- Previous market studies positioned COAERS salaries to be competitive
- Market studies scheduled for Q3 of 2022
- Continue restructuring to explore additional internal promotional opportunities
- Continue engagement with internal and external professional development opportunities

The workplace continues to transform - from office to remote and now to hybrid

- “Workforce Strategy and Guidelines” - Updated as events change
- Constant updates from management about strategy
- Providing tools needed to be productive no matter location
- Promote productivity and controls, but allow flexibility where appropriate
- Culture promotes “Work Smarter” and “Be Adaptable”
- Promote the value of the work we perform for our members and beneficiaries

6B Receive report on the cybersecurity risk

1. Convene into Executive Session pursuant to Section 551.071, Texas Government Code, Section 1.05, Texas Disciplinary Rules of Professional Conduct, and Section 551.089, Texas Government Code, to consult with legal counsel and deliberate security assessments or deployments relating to information resources technology, network security information described in Section 2059.055, Texas Government Code, and deployment and implementation of security personnel, critical infrastructure, and security devices

2. Reconvene into open session to take action as determined appropriate regarding security assessments or deployments relating to information resources technology, network security information described in Section 2059.055, Texas Government Code, and deployment and implementation of security personnel, critical infrastructure, and security devices

AGENDA ITEM 6:

Discuss and consider COAERS Enterprise Risk Management program

B. Receive report on the cybersecurity risk

AGENDA ITEM OBJECTIVE

This agenda item is for discussion of the cyber risk category in the Enterprise Risk Management Report.

RELEVANCE TO STRATEGIC PLAN

This agenda item meets **COAERS Strategic Plan Goal 2: Responsibly manage the risks of the System**. The Committee's regular review of COAERS Enterprise Risk Management System is one of the strategic objectives of Goal 2 and a key performance indicator is the successful implementation of all annual risk management activities.

RECOMMENDATION FOR COMMITTEE ACTION

At the Committee's discretion.

BACKGROUND

The 2022 Enterprise Risk Management Report contains 12 risk categories. For this agenda item, the Committee will review cyber risk.

ATTACHMENTS

1. Staff Presentation: "Cybersecurity Program Update"

7. Review key meeting takeaways and call for future agenda items

AGENDA ITEM 7:

Review key meeting takeaways and 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.