

IN PERSON & VIRTUAL BOARD MEETING

*The Committee meeting will be held prior to the Board of Investments meeting.



TO VIEW VIA WEB



TO PROVIDE PUBLIC COMMENT

Members of the public may address the Committee orally and in writing. To provide Public Comment, you should visit the above link and complete the request form by selecting whether you will provide oral or written comment from the options located under Options next to the Committee meeting.

Attention: If you have any questions, you may email PublicComment@lacera.com. If you would like to make a public comment during the committee meeting, review the [Public Comment instructions](#).

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION
300 N. LAKE AVENUE, SUITE 650, PASADENA, CA

AGENDA

A SPECIAL MEETING OF THE CREDIT AND RISK MITIGATION COMMITTEE AND THE BOARD OF INVESTMENTS*

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION
300 N. LAKE AVENUE, SUITE 810, PASADENA, CALIFORNIA 91101

8:00 A.M., WEDNESDAY, APRIL 10, 2024

This meeting will be conducted by the Credit and Risk Mitigation Committee and Board of Investments both in person and by teleconference under California Government Code Section 54953(f).

Any person may view the meeting in person at LACERA's offices or online at <https://LACERA.com/leadership/board-meetings>

The Committee may take action on any item on the agenda, and agenda items may be taken out of order.

COMMITTEE TRUSTEES:

David Ryu, Chair
Mike Gatto, Vice Chair
Trevor G. Fay
Jason Green
Patrick Jones, Alternate

- I. CALL TO ORDER
- II. PROCEDURE FOR TELECONFERENCE MEETING ATTENDANCE UNDER AB 2449, California Government Code Section 54953(f)
 - A. Just Cause
 - B. Action on Emergency Circumstance Requests
 - C. Statement of Persons Present at AB 2449 Teleconference Locations

III. APPROVAL OF MINUTES

- A. Approval of the Minutes of the Credit and Risk Mitigation Committee Meeting of August 9, 2023.

IV. PUBLIC COMMENT

(Members of the public may address the Board orally and in writing. To provide Public Comment, you should visit <https://LACERA.com/leadership/board-meetings> and complete the request form by selecting whether you will provide oral or written comment from the options located under Options next to the Board meeting.

If you select oral comment, we will contact you via email with information and instructions as to how to access the meeting as a speaker. You will have up to 3 minutes to address the Board. Oral comment request will be accepted up to the close of the Public Comment item on the agenda.

If you select written comment, please input your written public comment or documentation on the above link as soon as possible and up to the close of the meeting. Written comment will be made part of the official record of the meeting. If you would like to remain anonymous at the meeting without stating your name, please leave the name field blank in the request form. If you have any questions, you may email PublicComment@lacera.com.)

V. REPORT

A. **Risk Reduction and Mitigation Performance Review**

Vache Mahseredjian, Principal Investment Officer

Chad Timko, Senior Investment Officer

Krista Powell, Investment Officer

Quoc Nguyen, Investment Officer

Jason Choi, Senior Investment Analyst

Josiah Bezet, Senior Investment Analyst

(Presentation) (Memo dated March 29, 2024)

VI. ITEMS FOR STAFF REVIEW

(This item summarizes requests and suggestions by individual trustees during the meeting for consideration by staff. These requests and suggestions do not constitute approval or formal action by the Board, which can only be made separately by motion on an agenda item at a future meeting.)

VII. ITEMS FOR FUTURE AGENDAS

(This item provides an opportunity for trustees to identify items to be included on a future agenda as permitted under the Board's Regulations.)

April 10, 2024

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VIII. GOOD OF THE ORDER
(For information purposes only)

IX. ADJOURNMENT

****The Board of Investments has adopted a policy permitting any member of the Board to attend a standing committee meeting open to the public. In the event five or more members of the Board of Investments (including members appointed to the Committee) are in attendance, the meeting shall constitute a joint meeting of the Committee and the Board of Investments. Members of the Board of Investments who are not members of the Committee may attend and participate in a meeting of a Committee but may not vote, make a motion, or second on any matter discussed at the meeting. The only action the Committee may take at the meeting is approval of a recommendation to take further action at a subsequent meeting of the Board.***

Documents subject to public disclosure that relate to an agenda item for an open session of the Board of Investments that are distributed to members of the Board of Investments less than 72 hours prior to the meeting will be available for public inspection at the time they are distributed to a majority of the Board of Investments Members at LACERA's offices at 300 N. Lake Avenue, Suite 820, Pasadena, CA 91101, during normal business hours of 9:00 a.m. to 5:00 p.m. Monday through Friday.

Requests for reasonable modification or accommodation of the telephone public access and Public Comments procedures stated in this agenda from individuals with disabilities, consistent with the Americans with Disabilities Act of 1990, may call the Board Offices at (626) 564-6000, Ext. 4401/4402 from 8:30 a.m. to 5:00 p.m. Monday through Friday or email PublicComment@lacera.com, but no later than 48 hours prior to the time the meeting is to commence.

MINUTES OF THE SPECIAL MEETING OF THE CREDIT AND RISK
MITIGATION COMMITTEE AND THE BOARD OF INVESTMENTS
LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION
300 N. LAKE AVENUE, SUITE 810, PASADENA, CALIFORNIA 91101

8:00 A.M., WEDNESDAY, August 9, 2023

This meeting was conducted by the Credit and Risk Mitigation Committee and Board of Investments both in person and by teleconference under California Government Code Section 54953 (f).

COMMITTEE TRUSTEES:

PRESENT: Onyx Jones, Acting Chair

David Ryu (Arrived at 8:08 a.m.)

Jason Green

ABSENT: Joseph Kelly

David Green, Alternate

OTHER BOARD OF INVESTMENT TRUSTEES:

Gina Sanchez

Herman Santos

Keith Knox

Patrick Jones (Arrived at 9:00 a.m.)

STAFF, ADVISORS, PARTICIPANTS:

Jonathan Grabel, Chief Investment Officer

Jude Perez, Deputy Chief Investment Officer

STAFF, ADVISORS, PARTICIPANTS (Continued):

Santos Kreimann, Chief Executive Officer

Steven Rice, Chief Legal Counsel

Vache Mahseredjian, Principal Investment Officer

Chad Timko, Senior Investment Officer

Krista Powell, Investment Officer

Quoc Nguyen, Investment Officer

Jason Choi, Senior Investment Analyst

Meketa

Timothy Filla, Managing Principal/Consultant

Albourne

Stephen Kennedy, Partner/Portfolio Analyst Coordinator

I. CALL TO ORDER

The meeting was called to order by Vice Chair Jones at 8:03 a.m. in the Board Room of Gateway Plaza.

II. PROCEDURE FOR TELECONFERENCE MEETING ATTENDANCE UNDER AB 2449, California Government Code Section 54953(f)

A. Just Cause

B. Action on Emergency Circumstance Requests

C. Statement of Persons Present at AB 2449 Teleconference Locations

There was nothing to report. No trustees participated under Section 54953(f).

III. APPROVAL OF MINUTES

- A. Approval of the Minutes of the Regular Credit and Risk Mitigation Committee Meeting of May 10, 2023.

This item was acted upon after Item V.

A motion was made by Trustee Ryu, seconded by Trustee O. Jones, to approve the Minutes of the Credit and Risk Mitigation Committee meeting of May 10, 2023. The motion passed by the following roll call vote:

Yes: Onyx Jones, David Ryu, Jason Green

Absent: Joe Kelly and David Green

IV. PUBLIC COMMENT

There were no requests from the public to speak.

V. NON-CONSENT ITEMS

- A. Recommendation as submitted by Vache Mahseredjian, Principal Investment Officer; Chad Timko, Senior Investment Officer; Krista Powell, Investment Officer; Quoc Nguyen, Investment Officer; and Jason Choi, Senior Investment Analyst: That the Committee advance the Credit Structure Review to the Board of Investments for approval. (Memo dated July 28, 2023).

Messrs. Mahseredjian, Timko, Nguyen, and Ms. Powell provided a presentation to and answered questions from the Committee and Board.

A motion was made by Trustee J. Green, seconded by Trustee Ryu, to advance the Credit Structure Review to the Board of Investments for approval, with the addition that, for this asset class, discretionary authority will be given to the Chief Investment Officer, followed by a report to the Board that will include the investment

V. NON-CONSENT ITEMS (continued)

made, due diligence efforts, and the results of consultant and LACERA investment committee review. The motion passed by the following roll call vote:

Yes: David Ryu, Jason Green

No: Onyx Jones

Absent: Joe Kelly and David Green

- B. Recommendation as submitted by Vache Mahseredjian, Principal Investment Officer; Chad Timko, Senior Investment Officer; Krista Powell, Investment Officer; Quoc Nguyen, Investment Officer; and Jason Choi, Senior Investment Analyst: That the Committee advance the Risk Reduction and Mitigation Structure Review. (Memo dated July 28, 2023).

Messrs. Mahseredjian, Timko, and Choi provided a presentation to and answered questions from the Committee and Board.

A motion was made by Trustee J. Green, seconded by Trustee Ryu, to advance the Risk Reduction and Mitigation Structure Review to the Board of Investments for approval. The motion passed by the following roll call vote:

Yes: Onyx Jones, David Ryu, Jason Green

Absent: Joe Kelly and David Green

VI. ITEMS FOR STAFF REVIEW

Trustee J. Green requested that future presentations have a separate slide prepared if a footnote contains important information.

VII. ITEMS FOR FUTURE AGENDAS

There was nothing to report.

August 9, 2023

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VIII. GOOD OF THE ORDER
(For information purposes only)

There was nothing to report.

IX. ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at approximately at 9:18 a.m.

April 1, 2024

TO: Trustees - Credit and Risk Mitigation Committee

FROM: Vache Mahseredjian, CFA, CAIA, FRM, ASA^{VM} Chad Timko, CFA, CAIA^{CT}
Principal Investment Officer Senior Investment Officer

Krista Powell^{KP}
Investment Officer

Quoc Nguyen, CFA^{QN}
Investment Officer

Jason Choi, CFA^{JC}
Senior Investment Analyst

Josiah Bezet^{JB}
Senior Investment Analyst

FOR: April 10, 2024 Credit and Risk Mitigation Committee Meeting

SUBJECT: **RISK REDUCTION AND MITIGATION PERFORMANCE REVIEW**

This Performance Review (**Attachment 1**) illustrates the role, objectives, implementation framework, and performance, of the Risk Reduction and Mitigation functional asset category. It reviews structure, performance, and portfolio objectives across portfolio components: Investment Grade Bonds, Long-Term Government Bonds, Hedge Funds and Cash. The presentation consists of an introductory overview followed by sections dedicated to each of the four portfolio components.

As a reminder, the target allocation to Risk Reduction and Mitigation from the most recent Strategic Asset Allocation is 19% of the total Fund. That 19% allocation is further subdivided into Investment Grade Bonds (7%) Long-term Government Bonds (5%), Hedge Funds (6%) and Cash (1%).

Attachment

Noted and Reviewed:



Jonathan Grabel
Chief Investment Officer

Risk Reduction and Mitigation

Performance Review

Credit and Risk Mitigation Committee Meeting

April 10, 2024

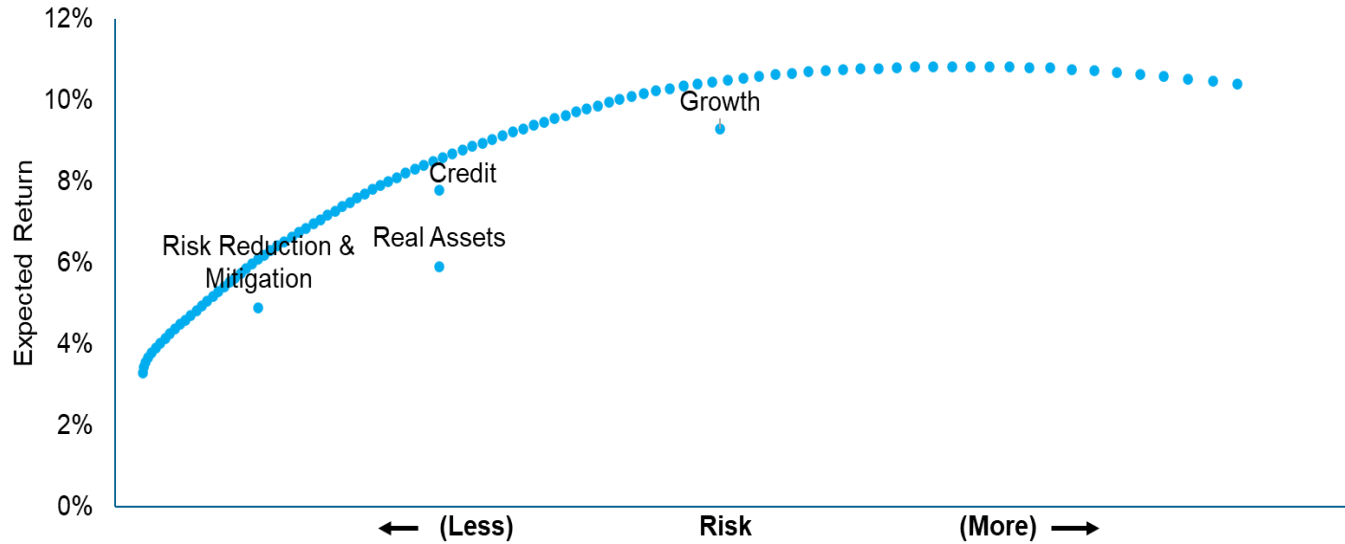
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Risk Mitigation: Role & Objectives



Risk Reduction & Mitigation

- Source of liquidity
- Capital preservation
- Moderate income and total return
- Low correlation to growth risks

Cash

- Primary source of total Fund liquidity
- Capital preservation
- Cash and cash equivalent exposures

Investment Grade Bonds

- Secondary source of total Fund liquidity
- Capital preservation
- Moderate duration interest rate risk exposure

Long-Term Government Bonds

- Source of liquidity for the total Fund
- Negative historical correlation to growth assets
- Long duration interest rate risk exposure

Hedge Funds

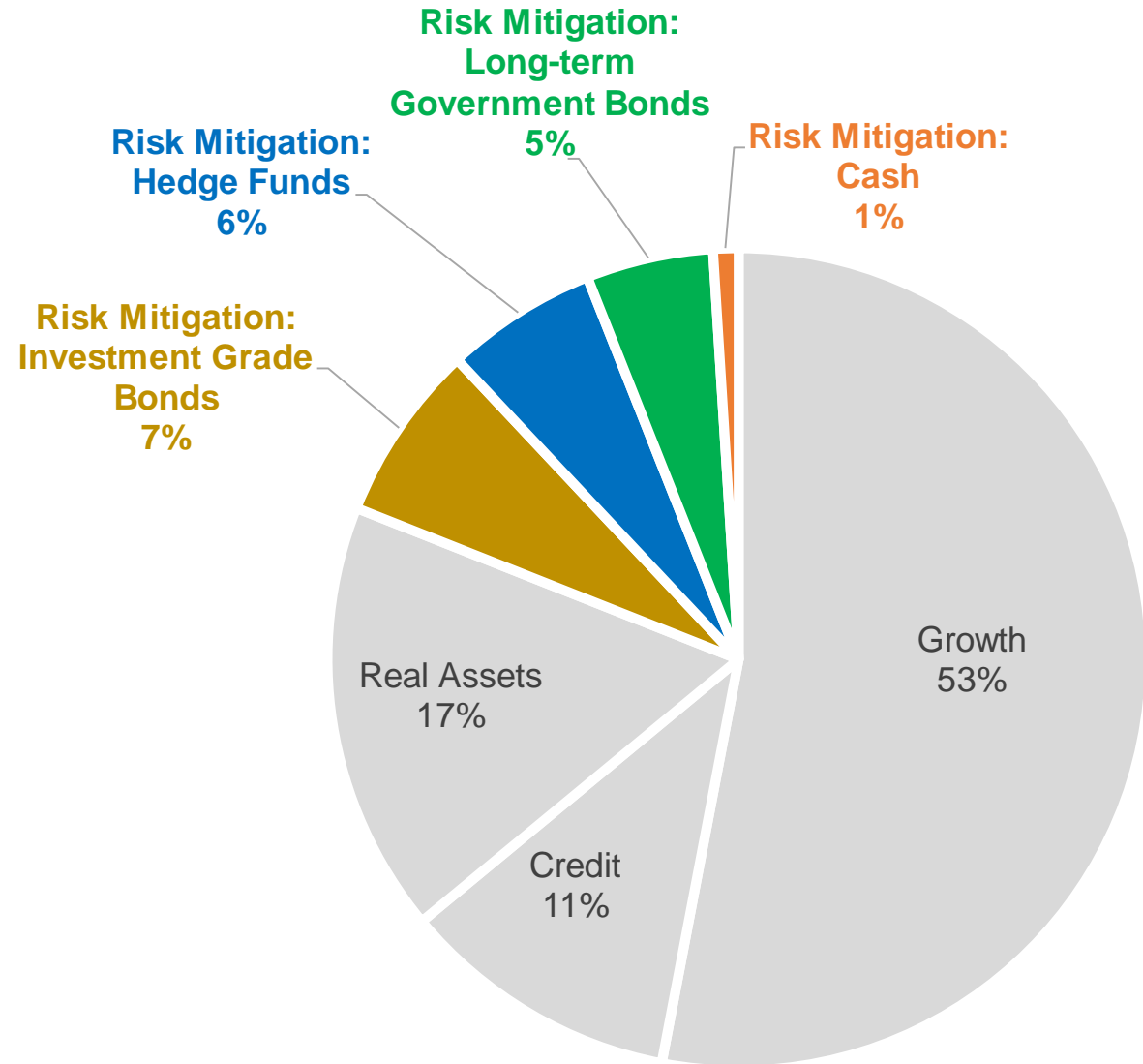
- Reduce total Fund risk
- Enhance total Fund diversification
- Downside protection
- Low sensitivity to major markets

Data sourced from Meketa

Risk Mitigation: Allocation Targets



- LACERA's Risk Mitigation portfolio has a 19% total Fund target allocation with four sub-categories
- Target allocations for the sub-categories are shown in the pie chart
- Each sub-category has nuanced objectives and characteristics



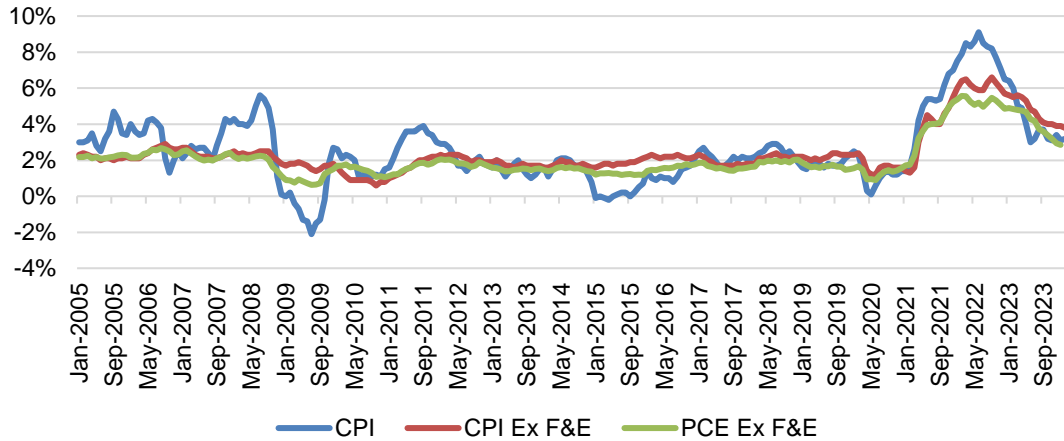
Allocation targets were approved by the BOI in 2021 as part of a strategic asset allocation study

Economic Environment

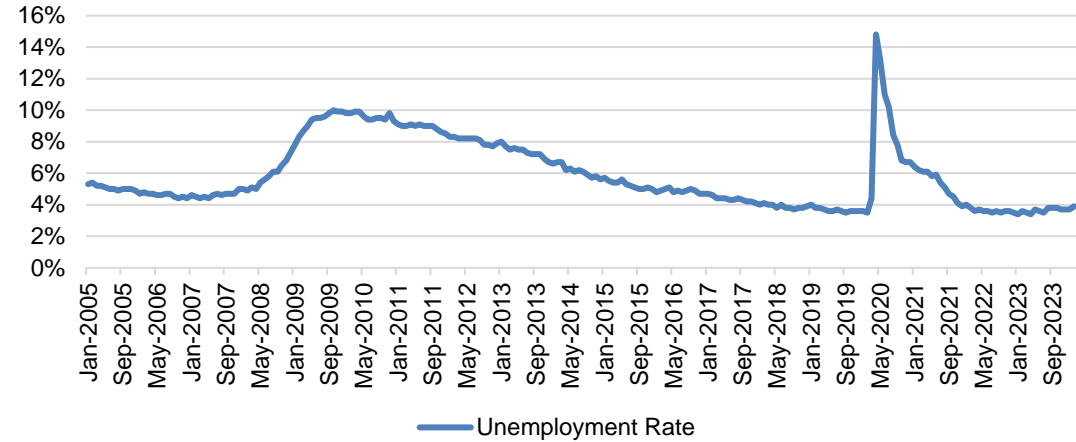


The Fed's dual mandate is to achieve stable prices and maximum sustainable employment

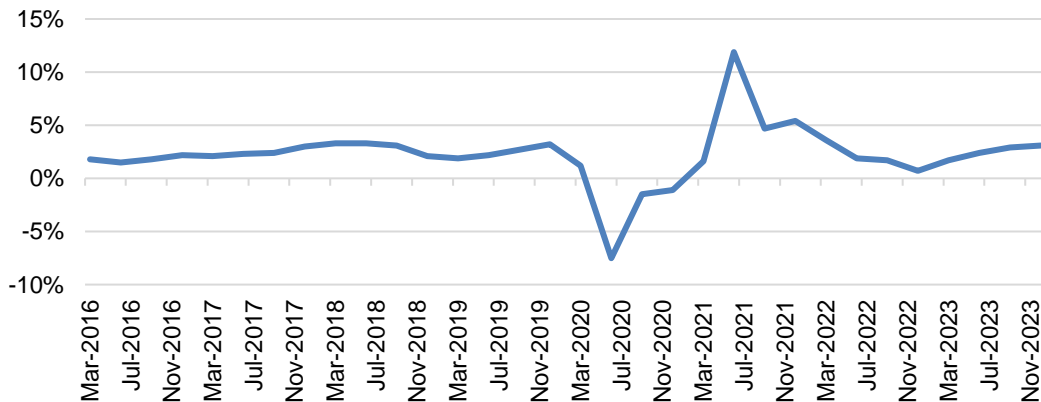
U.S. Inflation Rates



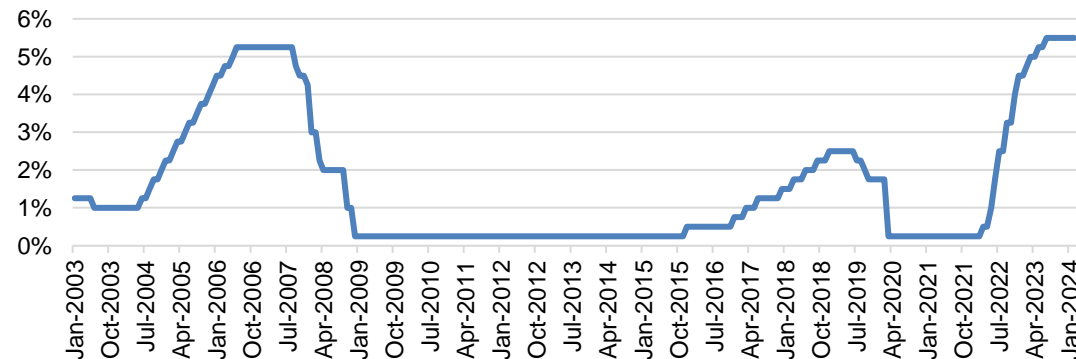
U.S. Unemployment Rate



US GDP (Year over Year)

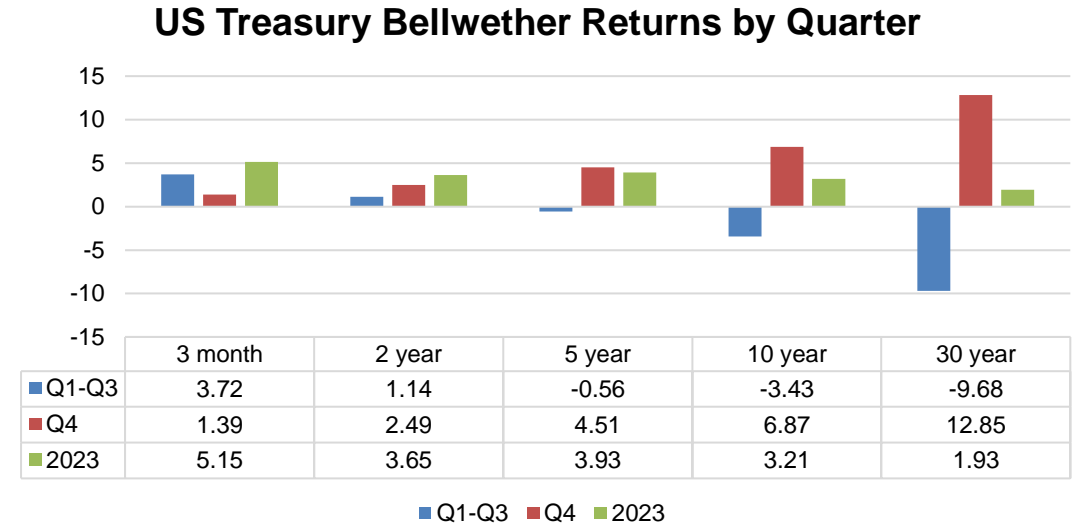
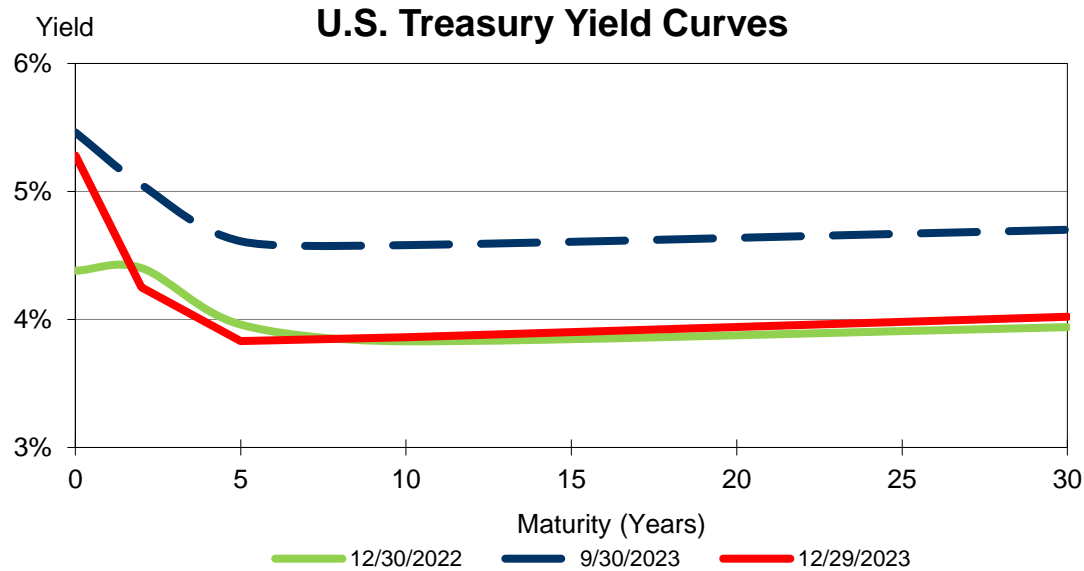


Fed Funds Target (Upper End of Range)



Data is sourced from Bloomberg through February 2024
 Select terms are further described in the Glossary

U.S. Treasury Bond Market Yields and Returns



- Treasury Yields rose in the first three quarters, but declined in the fourth quarter, almost to start-of-year levels
- As a result, strong returns in the fourth quarter more than offset losses earlier in the year
- The 30-year Treasury bond generated a return of 12.85% in Q4, but for the full year, 3-month T-bills outperformed longer- maturity Treasury securities

Data is sourced from Bloomberg
Select terms are further described in the Glossary

Investment Grade Bond Market Returns

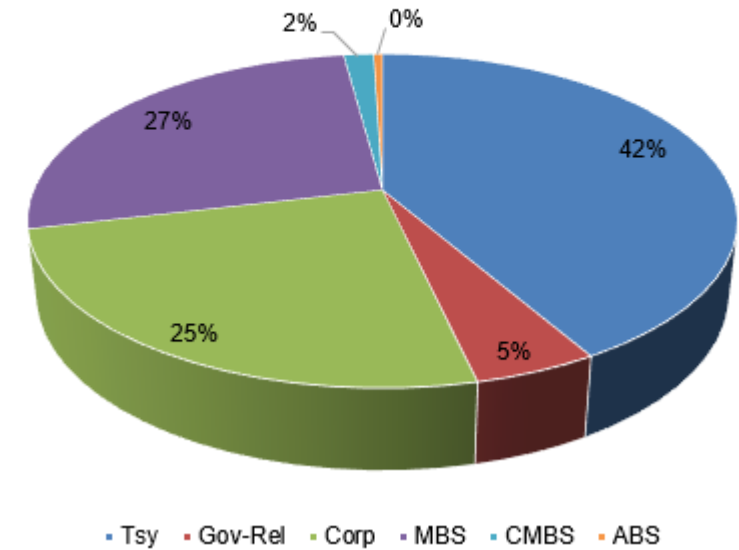


US Aggregate Bond Index Returns



- Corporate bonds were the top performing sector of the Bloomberg Aggregate Bond Index in 2023

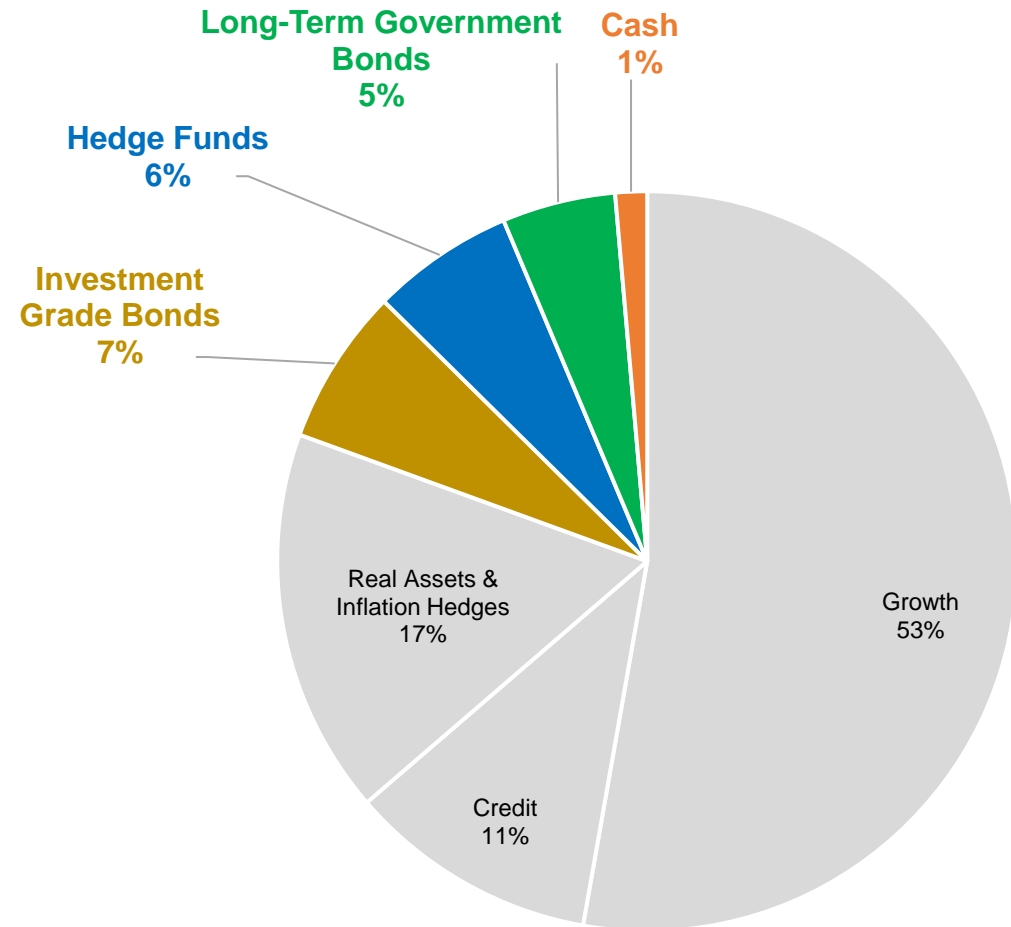
Bloomberg U.S. Aggregate Bond Index Sector Composition



- The combination of Treasury, Government-related, and Agency mortgage-backed securities (MBS) sectors means that over 70% of the Bloomberg Aggregate Bond Index has little-to-no credit risk

Data is sourced from Bloomberg
Select terms are further described in the Glossary

Risk Mitigation: Benchmarks



Asset Class	Policy Target	Benchmark	Description	Investable
Risk Reduction & Mitigation	19%	Custom Blend	-	-
Investment Grade Bonds	7%	BBG Barc U.S. Aggregate TR Index	Bloomberg Barclays U.S. Aggregate Bond Total Return Index, an index that constitutes broad market exposure to US investment grade bonds	Yes
Hedge Funds	6%	FTSE 3-Month U.S. Treasury Bill Index +250 bps (1-Month lagged)	Financial Times Stock Exchange 3-month U.S. Treasury Bill Index, an index that tracks the daily performance of 3-month US Treasury bills +250 bps with 1-Month of lag	No
Long-Term Government Bonds	5%	BBG Barc U.S. Long Treasury Bond Index	Bloomberg Long U.S. Treasury Bond Index, an index consisting of U.S. Treasury bonds with maturities greater than 10 years	Yes
Cash	1%	FTSE 3-Month U.S. Treasury Bill Index	Financial Times Stock Exchange 3-month U.S. Treasury Bill Index, an index that tracks the daily performance of 3-month US Treasury bills	Yes

Allocation targets were approved by the BOI in 2021 as part of a strategic asset allocation study



Investment Grade Bonds

Investment Grade Bonds: Role and Objectives

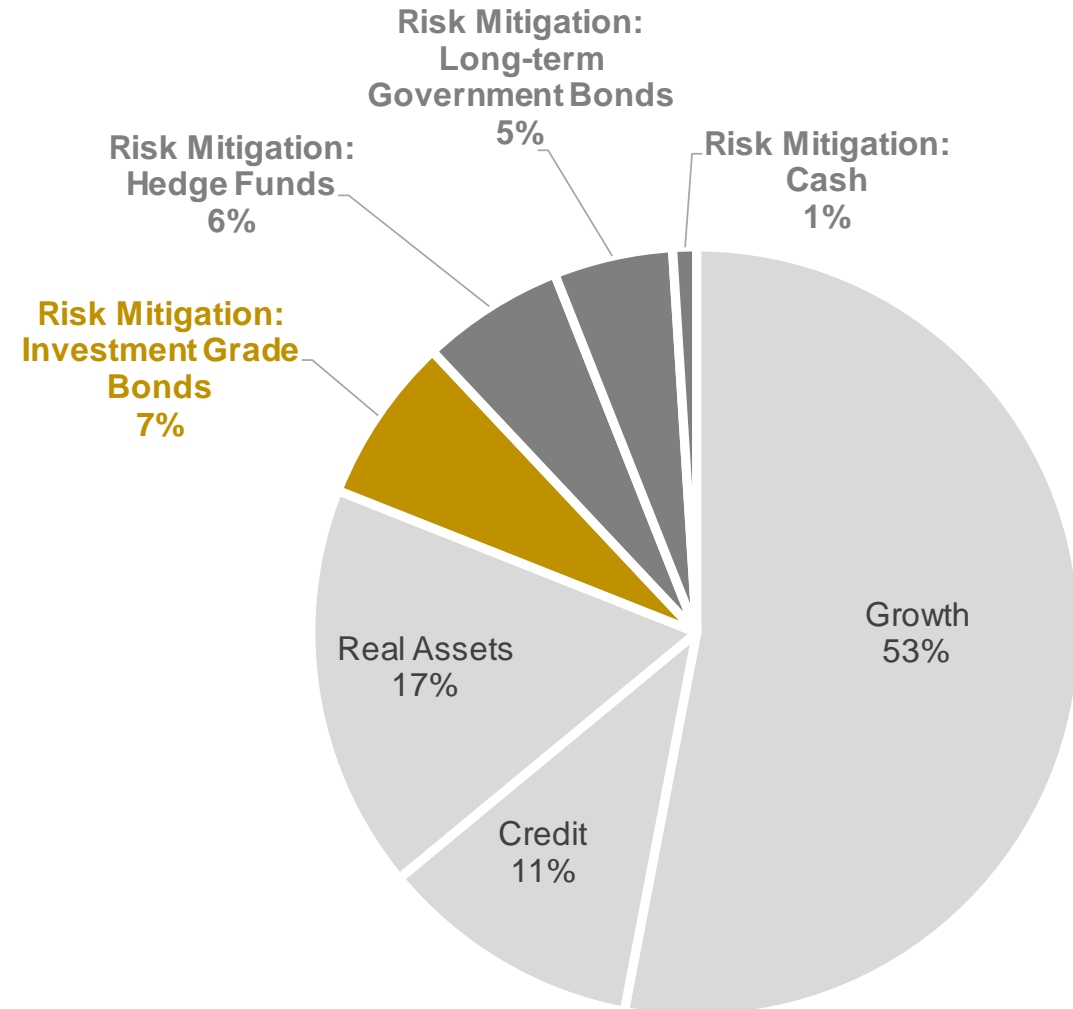


Role

- Secondary source of near-term liquidity for the total Fund (after cash)
- Generate income
- Gain interest rate risk exposure

Objectives

- Provide diversification by complementing economic growth risk
- Preserve capital when there is a “flight to safety” or investors otherwise seek high quality assets
- Reduce total Fund portfolio risk by having a low correlation to growth assets and low to moderate volatility



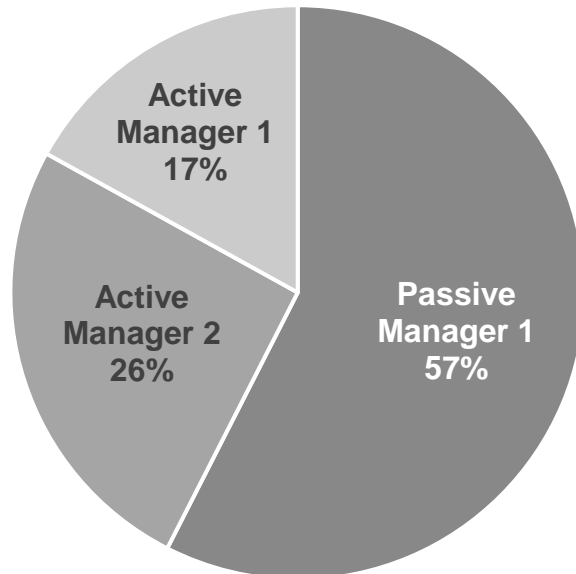
Investment Grade Bonds: Portfolio Structure



Portfolio Structure

- A hybrid approach with both passive and active implementations
- Designed to be low active risk, low expected alpha

Portfolio as of 12/31/23



	Target Allocation	Allocation Ranges
Passive	70%	50% - 100%
Active	30%	0% - 50%

Portfolio Guidelines

Benchmark	Bloomberg Barclays U.S. Aggregate Bond Index
Aggregate Duration	Benchmark duration +/- 0.3 years
Eligible Investments	Investments consistent with the benchmark, which contains investment grade, U.S. dollar denominated, fixed rate taxable bonds. Index sectors include U.S. Treasuries, government-related and corporate securities, agency mortgage-backed securities, asset-backed securities, and commercial mortgage-backed securities. Also eligible are exchange-traded funds benchmarked to the index, U.S. Treasury bond futures, and money market instruments
Prohibited Investments	Bonds from sectors not included in the index and purchasing securities on margin
Leverage	Not permitted

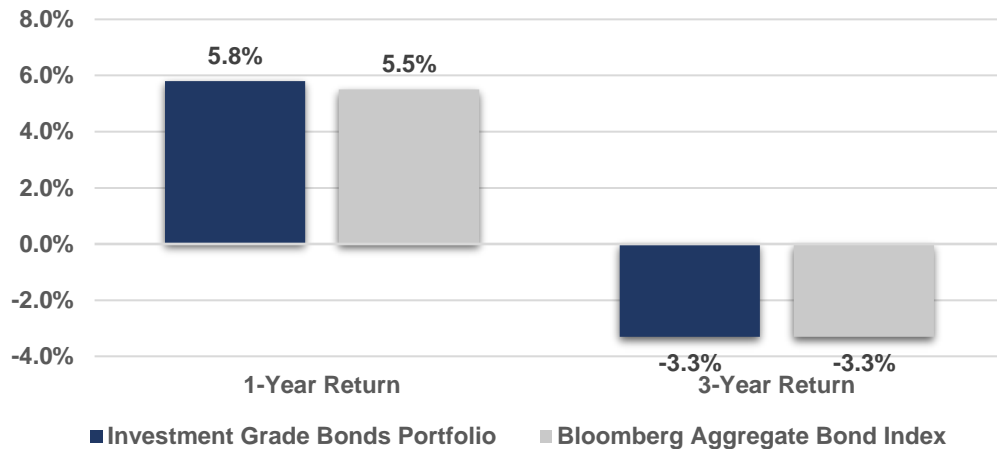
Investment Grade Bonds: Performance



- **Performed in-line** with market benchmark, consistent with goals and portfolio structure
- Achieved portfolio objectives to be a **source of income** and **provide liquidity** for benefit payments or portfolio rebalancing

Effective Duration	Yield to Worst (YTW)
6.4 years	4.5%

Trailing 1-year and 3-year returns as of 12/31/2023
Investment Grade Bonds



- Exposures consistent with higher credit quality of the index e.g. U.S. Treasuries, agency mortgage-backed securities, and Aaa rated corporate bonds
- For Investment Grade Bonds, the primary risk factor is interest rate risk, which is represented by duration
- The rise of U.S. interest rates beginning in 2022 had a material impact on the fixed income space, including investment grade bonds

*Data is from State Street as of December 31, 2023
Select terms are further described in the Glossary*



Long-Term U.S. Treasury Bonds

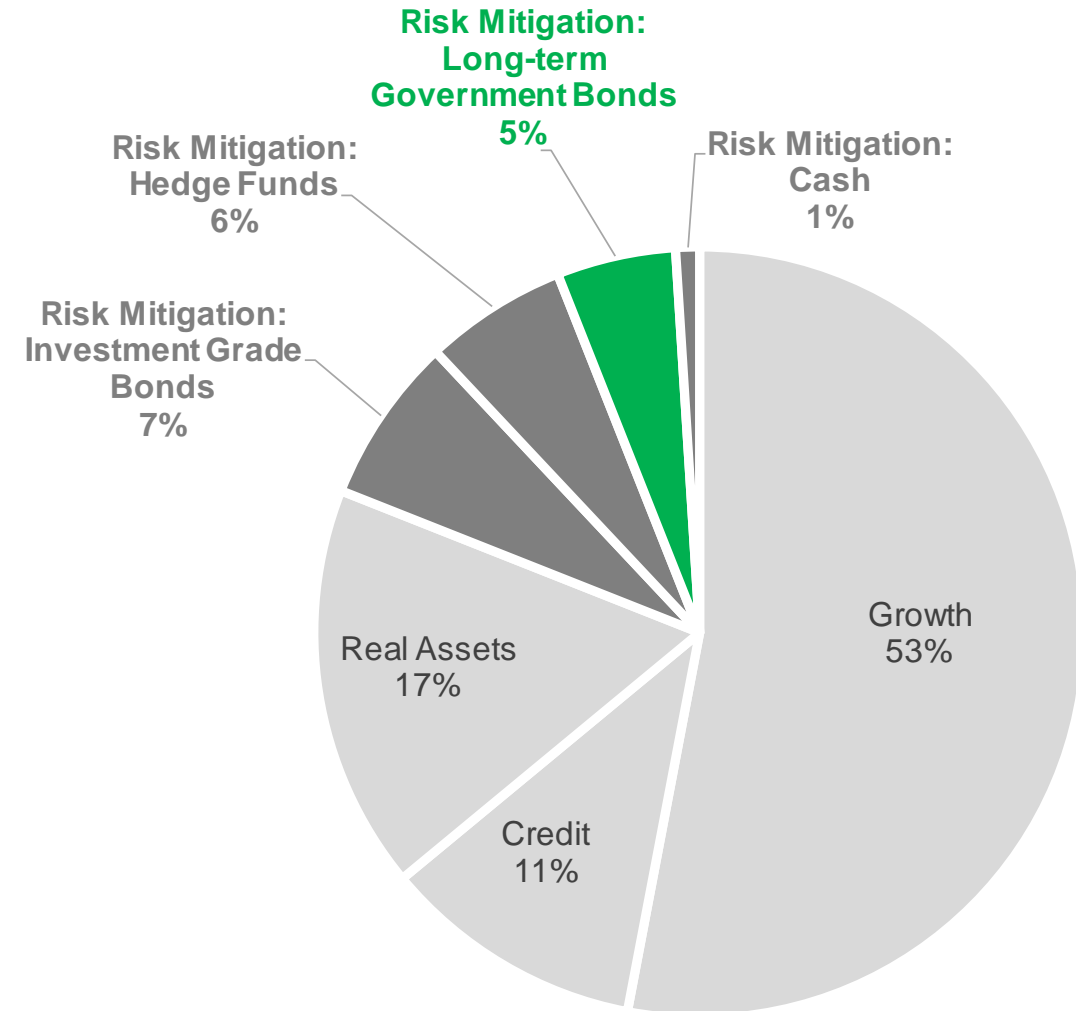
Long-Term Government Bonds: Role and Objectives

Role

- Be a source of liquidity for the Total Fund
- Generate income
- Gain long duration interest rate risk exposure

Objectives

- Diversify and reduce overall risk to total Fund given its negative historical correlation to growth assets
- Preserve capital when there is a “flight to safety” or investors otherwise seek high quality assets
- Provide capital efficient way to access interest rate risk exposure



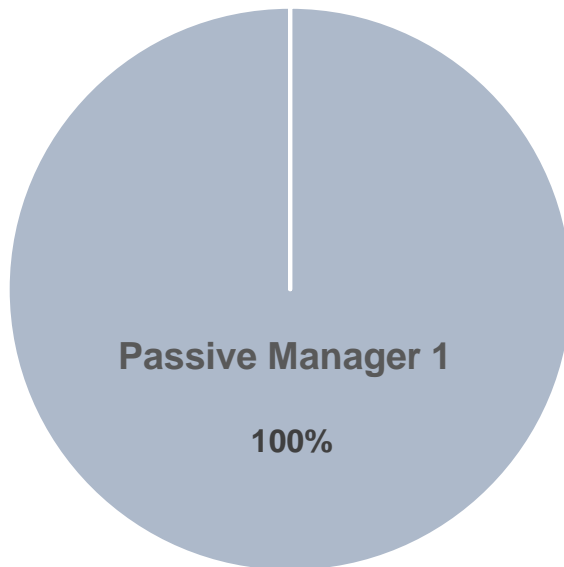
Long-Term Government Bonds: Portfolio Structure



Portfolio Structure

- A passive strategy approach
- Designed to replicate benchmark positioning and performance

Portfolio as of 12/31/23



	Target Allocation	Allocation Ranges
Passive	100%	100%

Portfolio Guidelines

Benchmark	Bloomberg Long U.S. Treasury Bond Index
Aggregate Duration	Benchmark duration +/- 0.3 years
Eligible Investments	Investments consistent with the benchmark such as: U.S. Treasury securities, U.S. Treasury futures, U.S. Treasury bond exchange traded funds, money market securities and instruments, cash, and cash equivalents
Prohibited Investments	Purchasing securities on margin and uncovered short sales
Leverage	Not permitted

Long-Term Government Bonds: Performance

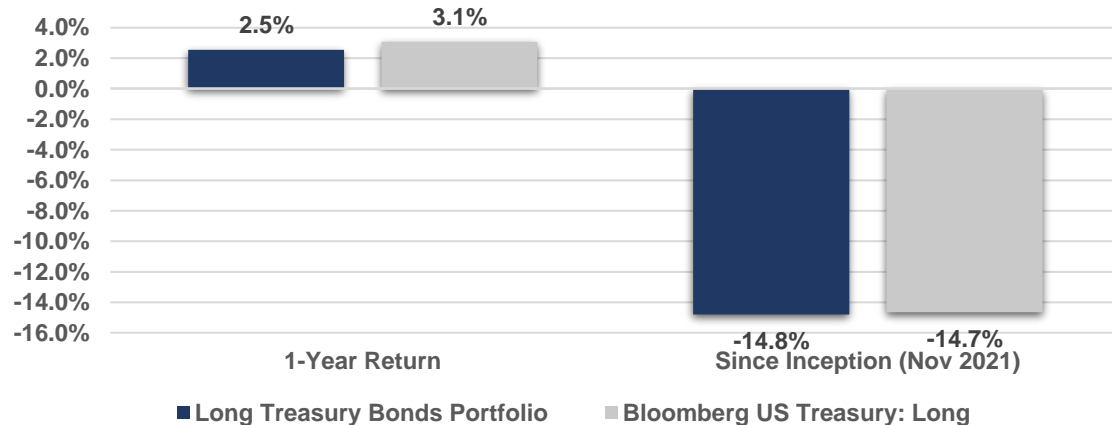


- **Performed in-line** with market benchmark, consistent with goals and portfolio structure
- Achieved portfolio objectives to be a **source of income**
- Provided a **capital efficient** way for the total Fund to access **interest rate risk exposure**

Effective Duration	Yield to Worst (YTW)
15.8 years	4.1%

Trailing 1-year and since inception returns as of 12/31/2023

US Long-Term Government Bonds



- As with Investment Grade Bonds, the primary driver of risk for long term treasuries is interest rate risk
- The rise in U.S. interest rates in 2022 had a material negative impact on Long-Term Government Bond returns
- Long-Term Government Bonds provide risk mitigation characteristics by providing capital efficiency for the total Fund, and have historically performed positively when equity markets perform negatively, notwithstanding calendar year 2022
- Deviation in performance is overstated due to pricing method differences between manager and custodian

Data is from State Street as of December 31, 2023
Select terms are further described in the Glossary



Hedge Funds

Hedge Funds: Role and Objectives

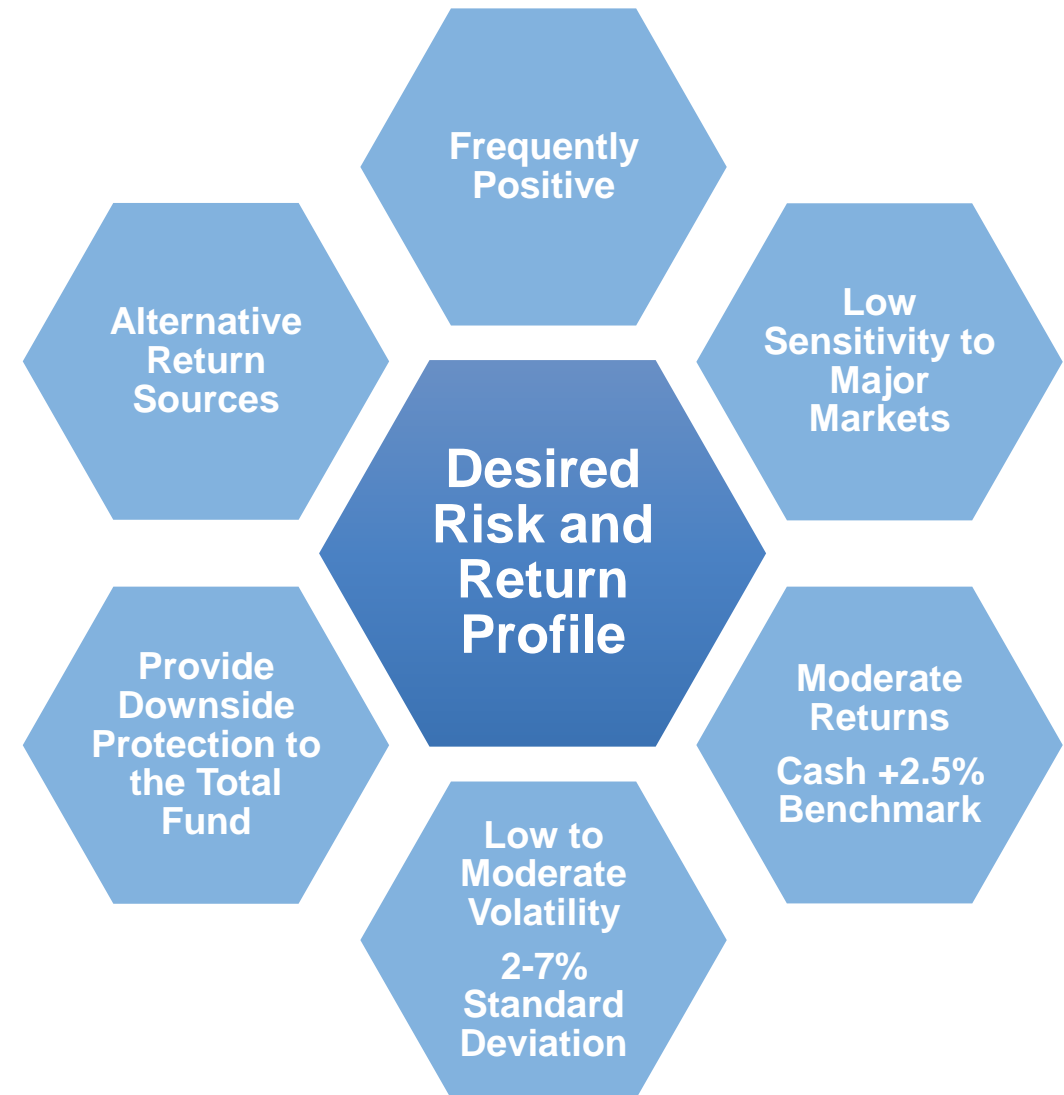


Role:

- Reduce total Fund risk
- Enhance total Fund diversification

Objective:

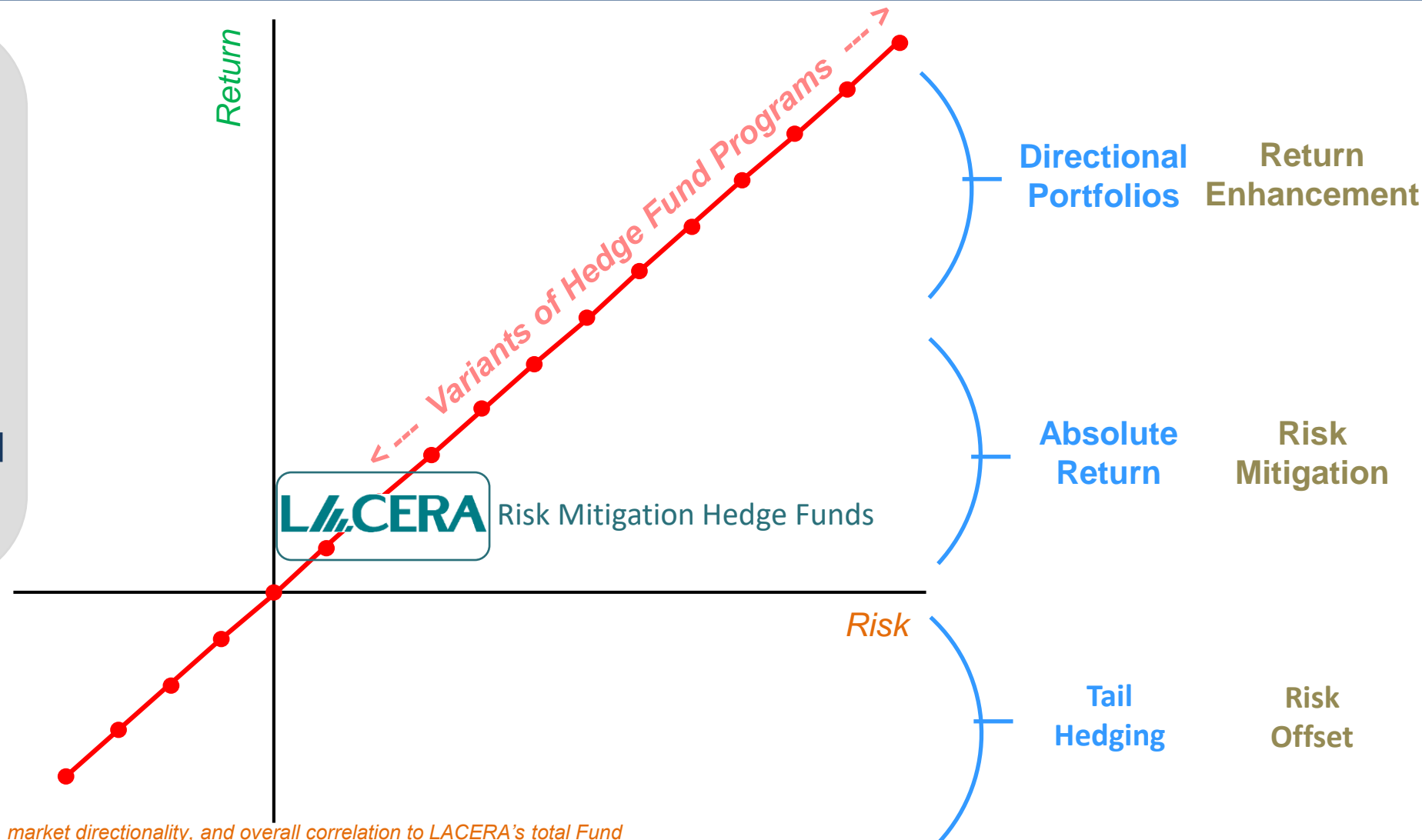
- Downside protection
- Low sensitivity to major markets
- Frequently positive
- Moderate returns
- Cash + 2.5% per year benchmark



Hedge Funds: Portfolio Structure



- LACERA's Hedge Fund portfolio:
 - Risk Mitigation objectives
 - “Absolute return” approach
 - Less risky and less directional compared to many hedge fund portfolios



Risk as graphed is a measure of return volatility, market directionality, and overall correlation to LACERA's total Fund

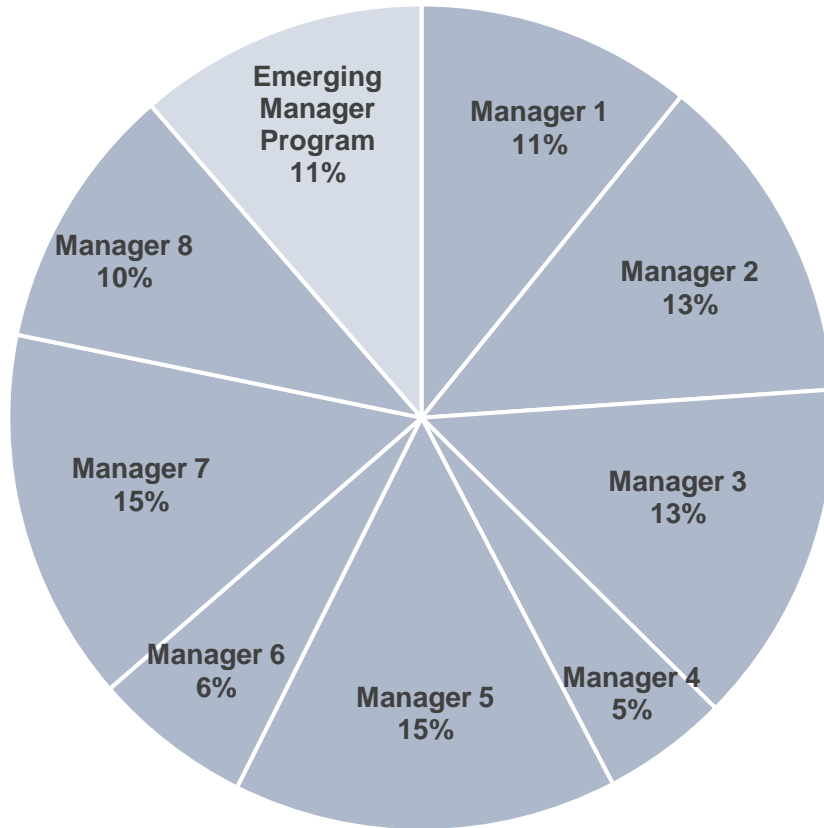
Absolute Return and Risk Offset are further described in the glossary at the end of this presentation

Approved by the BOI in the 2023 Risk Reduction and Mitigation Structure Review

Hedge Funds: Portfolio Structure



Portfolio as of 12/31/23



Initiatives Underway:

- Continue to ramp the size of the emerging manager program towards the board approved target of ~15% of hedge fund portfolio
- Continue to build a pipeline of potential hedge fund managers to the extent portfolio adjustments are necessary
- Continue to monitor the portfolio, managers, and underlying exposures

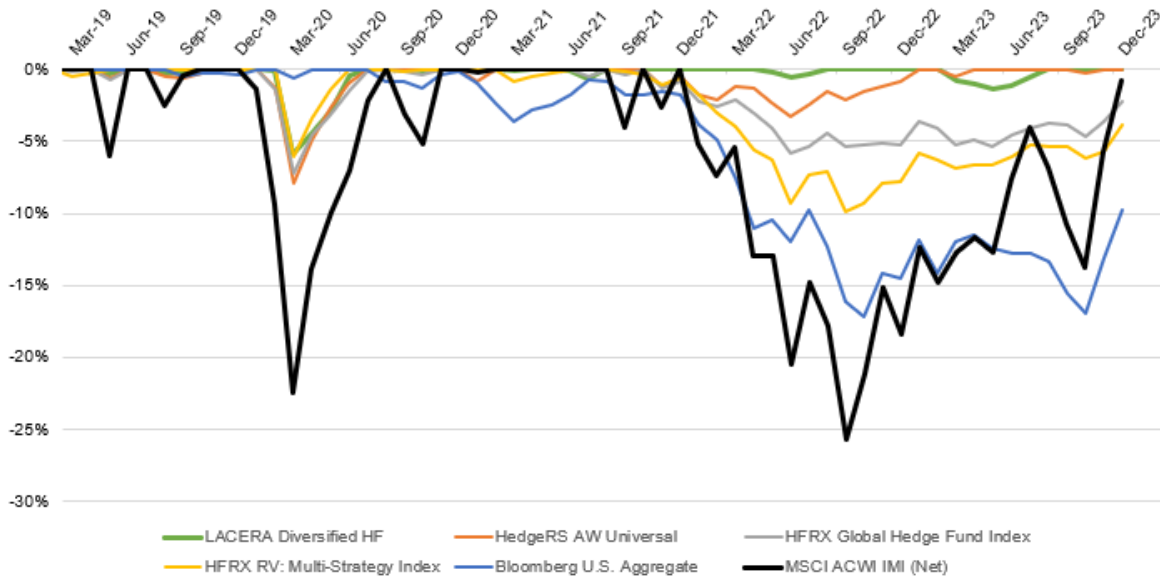
Expected Future Initiatives

- Consider the merit of graduations from the emerging manager program to the main portfolio

Hedge Funds: Risk Composition

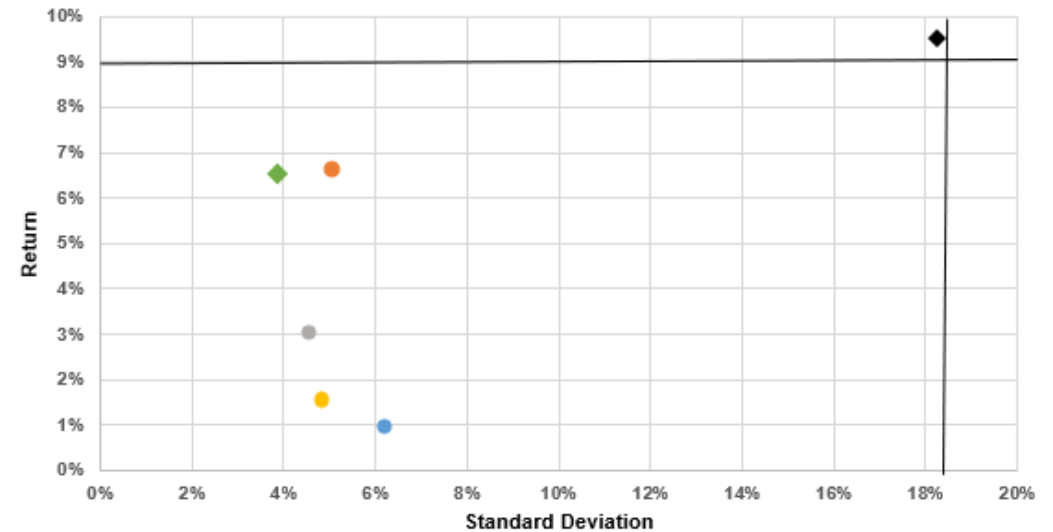


Historical Drawdowns
March 2019 - December 2023



- The Diversified Hedge Funds portfolio has experienced low downside volatility as shown in the “Historical Drawdowns” graphic
- On a three-year trailing basis, the portfolio has little-to-no sensitivity to the equity markets with a beta of 0.00
- On a risk adjusted basis, the portfolio is performing more efficiently relative to comparable indices

Risk / Return
March 2019 - December 2023



◆ LACERA Diversified HF
 ● HedgeRS AW Universal
 ● HFRX Global Hedge Fund Index
● HFRX RV: Multi-Strategy Index
 ● Bloomberg U.S. Aggregate
 ◆ MSCI ACWI IMI (Net)

Diversified Hedge Funds vs MSCI ACWI (Net)	Jensen's Alpha	Beta	Standard Deviation	Sharpe Ratio	Sortino Ratio	Up Capture	Down Capture	Up / Down Capture Spread	% of Positive Months
12-Month	-0.9%	0.03	2.1%	-0.2	-0.3	6.0%	-16.7%	22.7%	75%
24-Month	2.5%	0.00	2.0%	1.1	1.8	6.0%	-16.6%	22.6%	79%
36-Month	3.8%	0.00	2.3%	1.6	3.4	7.6%	-21.0%	28.6%	75%

Data as of December 31, 2023

Source of returns for LACERA Diversified Hedge Funds is State Street (unlagged by 1-month)

Source of returns for the remaining line items and risk statistics are from Zephyr

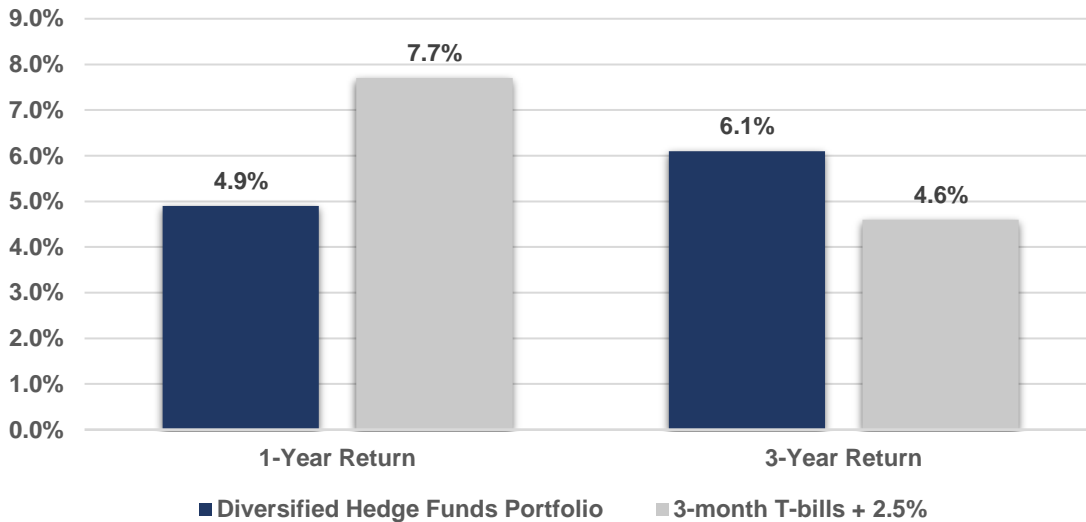
Select terms are further described in the Glossary

Hedge Funds: Performance



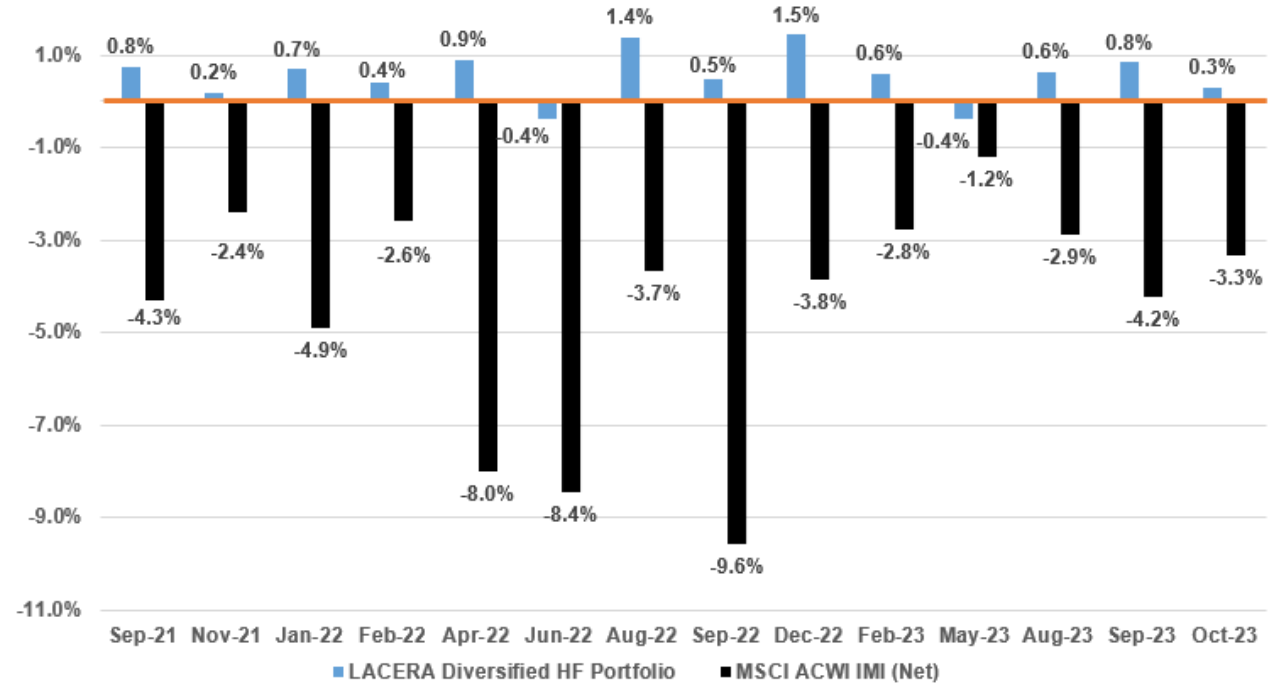
Trailing 1-year and 3-year returns as of 12/31/2023

Diversified Hedge Funds Portfolio



- The benchmark of 3-month T-bills (cash) + 2.5% is not directly investable and may be a challenging or less instructive criterion during:
 - any short time period such as one quarter or one year
 - any period of elevated interest (cash) rates

LACERA Hedge Fund Performance in Negative Equity Months



- The Hedge Fund portfolio underperformed its benchmark over a 1-year period but has outperformed by 2.5% annualized over a 3-year period
- The portfolio delivered a 7.3% return in 2022, when global equity markets (MSCI ACWI IMI) and the U.S. bond market (Bloomberg U.S. Aggregate) fell 18% and 14%, respectively
- The portfolio has performed positively during negative equity months, with few exceptions

Trailing 1-year and 3-year returns data as of December 31, 2023 are from State Street lagged by 1-month
 Source of returns for LACERA Diversified Hedge Funds is State Street (unlagged by 1-month)
 Source of returns for MSCI ACWI is Zephyr

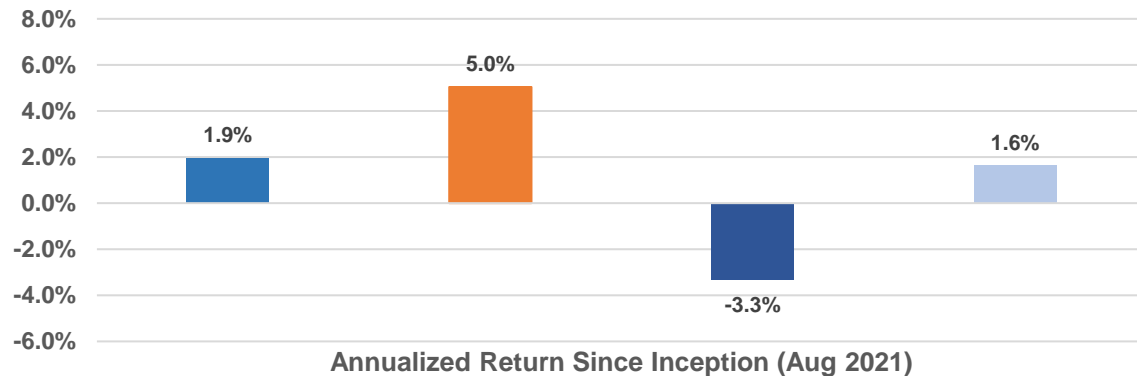
Hedge Funds: Emerging Manager Program Update



Snapshot of Program as of December 31, 2023

Separate Account Manager	Stable Asset Management
Portfolio Net Asset Value ¹	\$539 million
Portfolio Inception	2021
Emerging Managers	8
Revenue Sharing Accounts	6
Beta to Global Equities ²	-0.03

Hedge Funds Emerging Manager Program¹



■ Hedge Fund EMP
■ Bloomberg Aggregate Bond Index

■ 3-Month T-bills + 2.5%
■ MSCI ACWI IMI Index

Key Takeaways

- The Program is approximately 74% invested relative to its target allocation (15% of hedge funds) and in line with program guidelines
- Since inception, the Program has preserved capital while outperforming investment grade bonds and global equities
- LACERA shares in the success of the emerging manager firms as revenue sharing is structured into most mandates
- Several managers stand out as potential future graduation prospects based on early positive performance metrics and firm development

¹ Hedge Fund EMP data and benchmark data from State Street and reported on a 1-month lag. Bloomberg Aggregate Bond and MSCI ACWI IMI Index data is from Zephyr

² The portfolio beta is measured since Program inception and to the MSCI ACWI IMI global equity index and is calculated by Zephyr



Cash

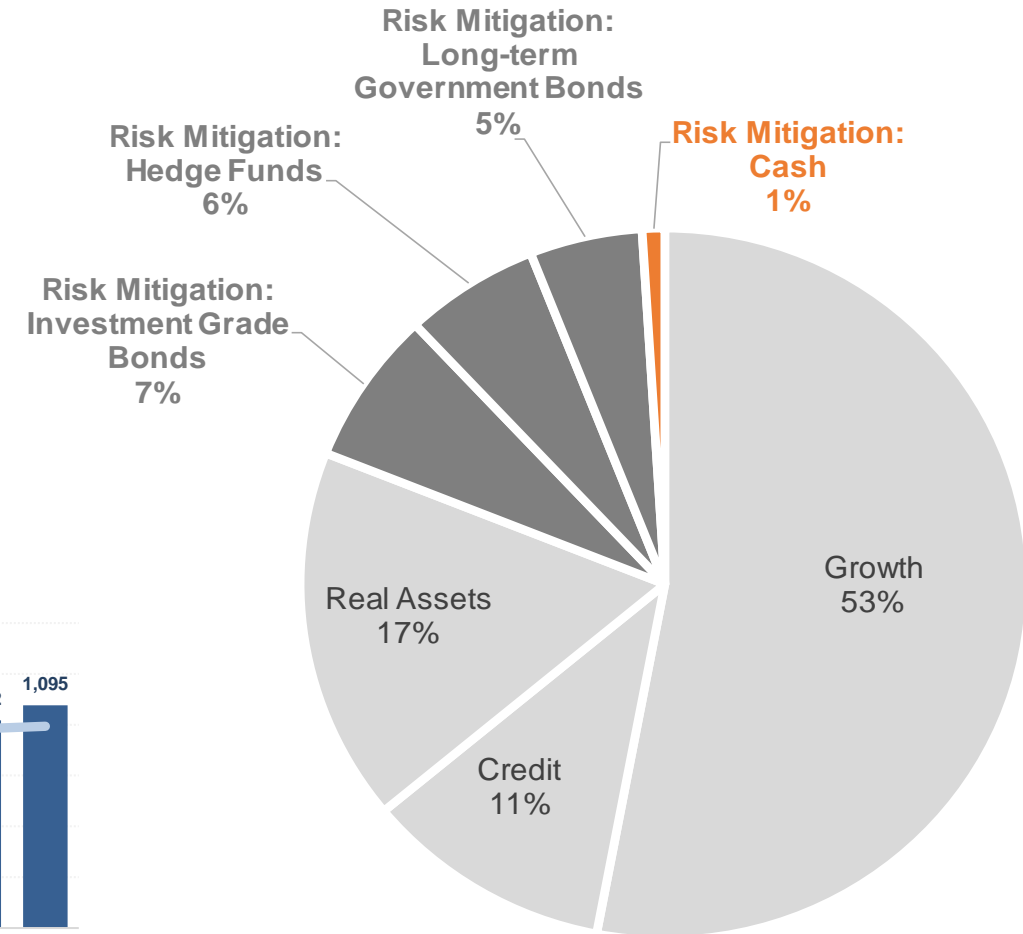
Cash: Role and Objectives



Role

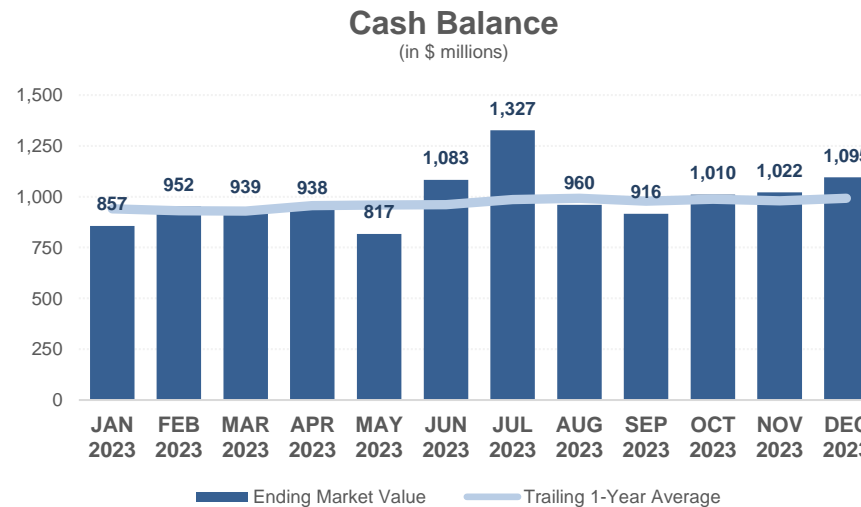
- Primary source of total Fund liquidity
- Facilitate funding of retirement benefits payments, new investments, and expenses as well as settle redemptions

Portfolio Characteristics as of December 31, 2023	
Separate Account Active Manager	State Street Global Advisors
Portfolio Net Asset Value	\$792 million
1-Day Yield %	5.4



Objectives

- Paramount to LACERA's mission of providing the promised benefits
- Nexus for all rebalancing
- Capital preservation
- Liquidity



Approved by the BOI in the 2023 Risk Reduction and Mitigation Structure Review

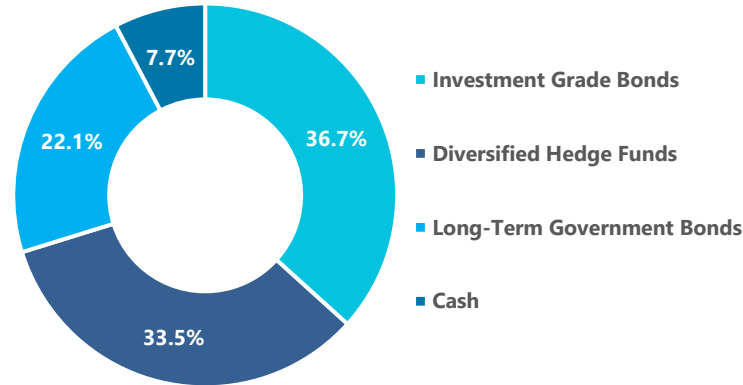
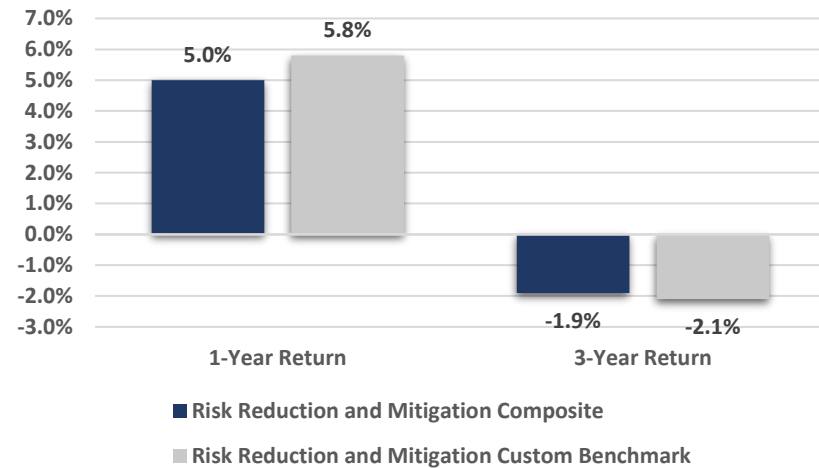


Performance Summary

Risk Mitigation: Performance

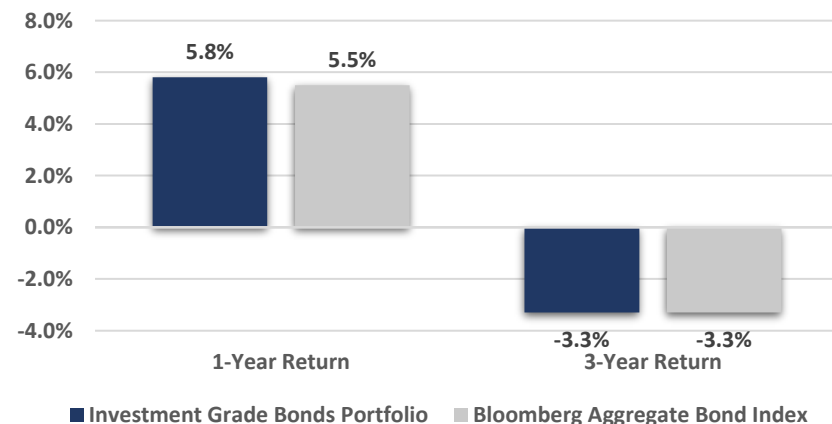


Risk Reduction and Mitigation

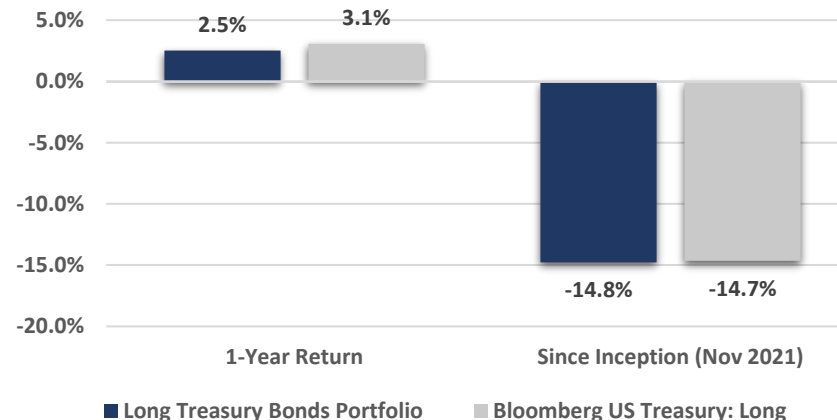


- The composite underperformed the benchmark by 80 bps over the 1-year period and outperformed by 20 bps annualized over the 3-year period
- The composite's 3-year returns were negatively impacted by Investment Grade and Long-Term Government Bonds
- Diversified Hedge Funds have delivered positive relative and absolute returns over the 3-year period

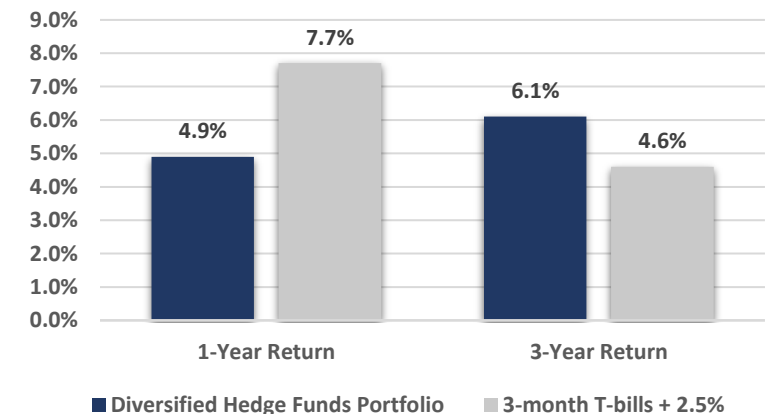
Investment Grade Bonds



US Long Term Government Bonds



Diversified Hedge Funds Portfolio

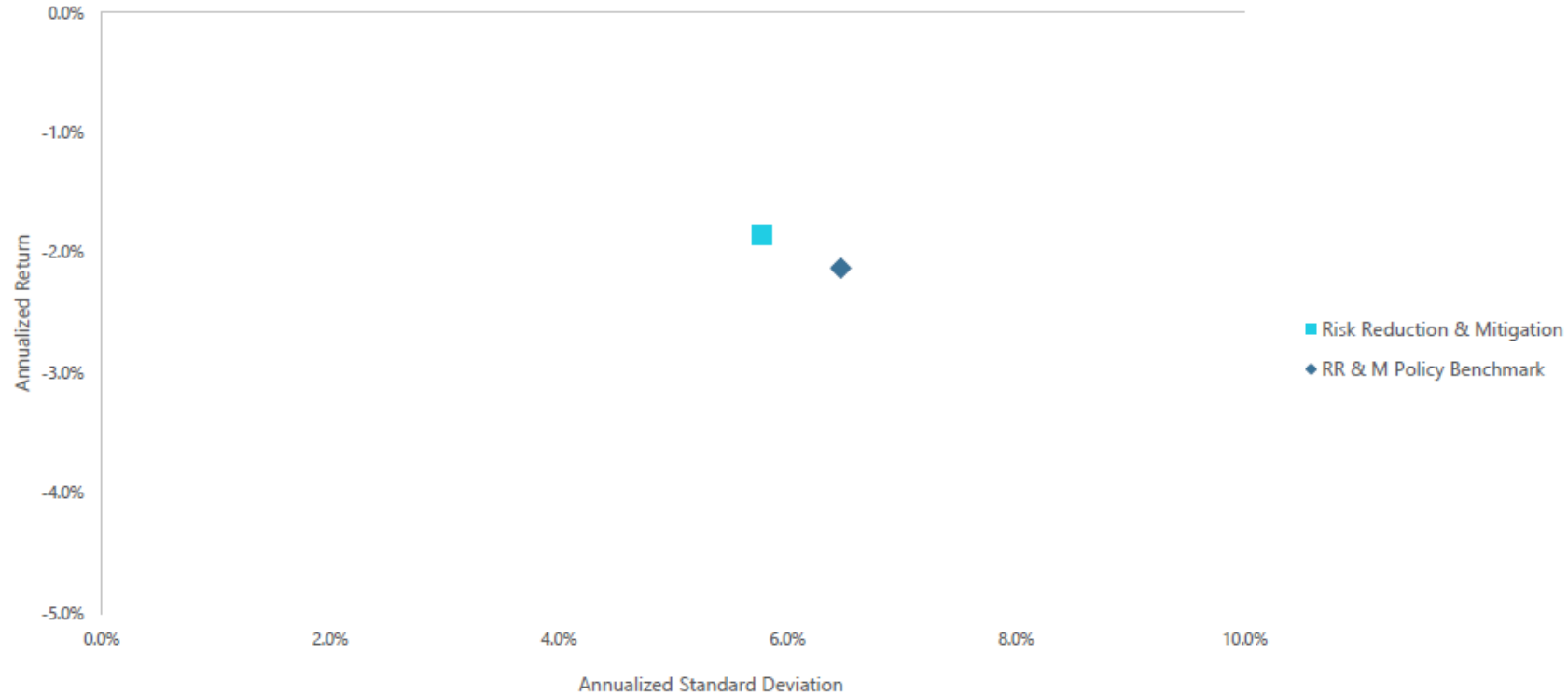


Data is from State Street as of December 31, 2023. Diversified Hedge Funds Returns are reported on a 1-month lag

Risk Mitigation: Risk vs. Return



3 Year (Annualized)



	Annualized Return	Standard Deviation	Sharpe Ratio	Information Ratio	Beta	Tracking Error
Risk Reduction & Mitigation	-1.9%	5.8%	-0.66	0.26	0.89	0.9%
RR & M Policy Benchmark	-2.1%	6.5%				

Data is from State Street as of December 31, 2023

Graphic provided is from the Total Fund 4Q23 Performance Report presented to the BOI in March 2024

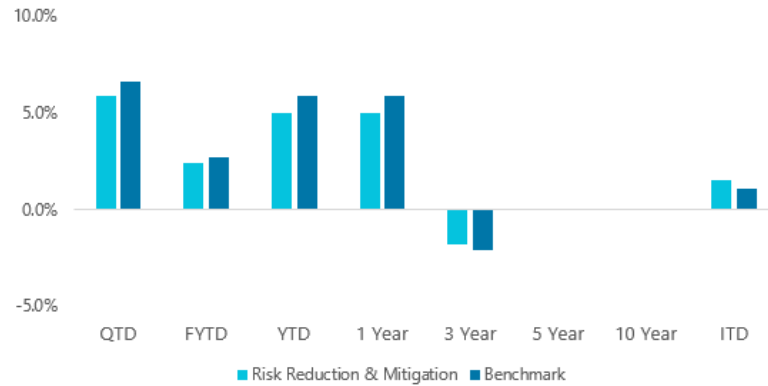


Appendix

Risk Mitigation: Performance Detail

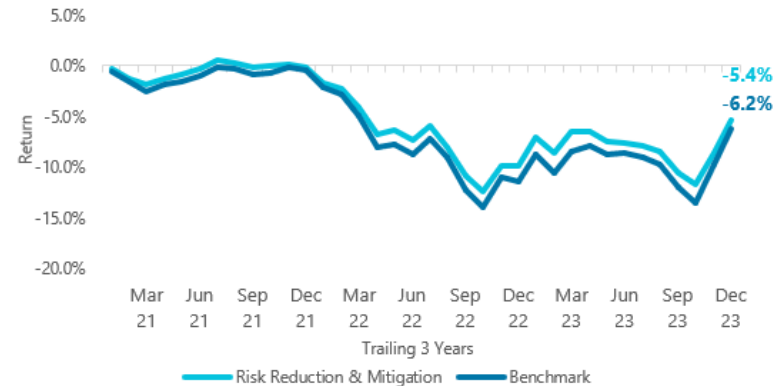


Performance (net)



	QTD	FYTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD
Risk Reduction & Mitigation	5.8%	2.4%	5.0%	5.0%	-1.9%	--	--	1.5%
Benchmark	6.6%	2.7%	5.8%	5.8%	-2.1%	--	--	1.0%
Excess	-0.8%	-0.3%	-0.9%	-0.9%	0.3%	--	--	0.5%

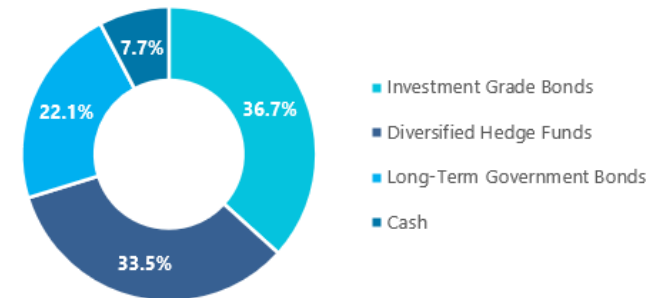
Cumulative Return



Functional Category

	QTD	FYTD	YTD	1 Year	3 Year
Investment Grade Bonds	6.8%	3.4%	5.8%	5.8%	-3.3%
BBG BC Aggregate Bond Index	6.8%	3.4%	5.5%	5.5%	-3.3%
Excess	0.0%	0.0%	0.3%	0.3%	0.0%
Diversified Hedge Funds	1.8%	3.4%	5.3%	5.3%	6.5%
Diversified Hedge Funds Policy Benchmark	2.0%	4.0%	7.7%	7.7%	4.6%
Excess	-0.2%	-0.6%	-2.4%	-2.4%	1.9%
Long-Term Government Bonds	12.3%	-1.1%	2.5%	2.5%	--
Bloomberg U.S. Treasury: Long	12.7%	-0.6%	3.1%	3.1%	--
Excess	-0.4%	-0.5%	-0.5%	-0.5%	--
Cash	1.8%	2.4%	5.6%	5.6%	3.2%
Cash Policy Benchmark	1.4%	2.8%	5.3%	5.3%	2.2%
Excess	0.4%	-0.4%	0.4%	0.4%	1.0%

Exposure



Data is from State Street as of December 31, 2023

Graphic provided is from the Total Fund 4Q23 Performance Report presented at the BOI in March 2024

Returns shown for hedge funds in this appendix represent performance lagged by one month, as is standard practice for LACERA's quarterly performance book, and may not match returns shown previously in this presentation where performance is unlagged to conduct analytics across same time periods

Risk Mitigation: Performance Detail



Annualized Net Returns

	% of Composite	Ending Market Value (mm)	Prior Quarter Ending MV (mm)	QTD	FYTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
Risk Reduction & Mitigation	100.0%	14,202	13,267	5.8%	2.4%	5.0%	5.0%	-1.9%	--	--	1.5%	Apr-2019
RR & M Policy Benchmark				6.6%	2.7%	5.8%	5.8%	-2.1%	--	--	1.0%	
Investment Grade Bonds	36.7%	5,213	4,883	6.8%	3.4%	5.8%	5.8%	-3.3%	1.3%	2.1%	5.2%	Nov-1994
BBG BC Aggregate Bond Index				6.8%	3.4%	5.5%	5.5%	-3.3%	1.1%	1.8%	4.7%	
Allspring/Wells	9.4%	1,329	1,243	6.9%	3.6%	6.2%	6.2%	-3.1%	1.6%	2.2%	3.9%	Mar-2004
BTC US Debt Index Fund	21.1%	2,993	2,804	6.7%	3.3%	5.7%	5.7%	-3.3%	1.1%	1.9%	3.9%	Nov-1999
MHLP	0.1%	9	9	-0.6%	0.6%	3.2%	3.2%	4.5%	4.8%	5.5%	5.3%	Apr-2005
Pugh Capital Mgmt	6.2%	883	827	6.8%	3.3%	5.7%	5.7%	-3.4%	1.3%	1.9%	3.3%	Jul-2005
Diversified Hedge Funds	33.5%	4,759	4,676	1.8%	3.4%	5.3%	5.3%	6.5%	--	--	6.4%	Apr-2019
Diversified Hedge Funds Policy Benchmark				2.0%	4.0%	7.7%	7.7%	4.6%	--	--	4.4%	
AM Asia Strategies	1.7%	234	230	1.9%	-4.5%	8.0%	8.0%	--	--	--	1.5%	Jun-2021
Brevan Howard Master Fund	4.5%	640	631	1.5%	2.5%	-1.5%	-1.5%	--	--	--	5.3%	Apr-2021
Capula GRV	5.0%	713	694	2.7%	5.6%	11.1%	11.1%	8.1%	7.6%	--	7.4%	Dec-2018
Caxton Global Investments	2.1%	296	283	4.3%	4.9%	-0.4%	-0.4%	--	--	--	6.3%	Feb-2021
DK Institutional Partners	3.6%	513	506	1.4%	3.3%	5.6%	5.6%	4.3%	5.2%	--	4.8%	May-2018
Grosvenor HFOF	0.1%	16	20	--	--	--	--	--	--	--	--	Nov-2011
HBK Multi-strategy	4.4%	621	604	2.8%	6.0%	7.4%	7.4%	7.0%	6.2%	--	5.8%	Jun-2018
Hudson Bay	4.9%	693	684	1.2%	3.2%	6.6%	6.6%	8.9%	--	--	9.5%	Jul-2020
Polar	3.5%	494	491	0.6%	2.1%	5.8%	5.8%	5.1%	--	--	9.1%	May-2020
Stable Asset Management	3.8%	539	532	1.3%	3.7%	4.4%	4.4%	--	--	--	1.7%	Aug-2021
Long-Term Government Bonds	22.1%	3,135	2,792	12.3%	-1.1%	2.5%	2.5%	--	--	--	-13.6%	Nov-2021
Bloomberg U.S. Treasury: Long				12.7%	-0.6%	3.1%	3.1%	--	--	--	-14.1%	Nov-2021
BlackRock Long Treasury Bonds	22.1%	3,135	2,792	12.3%	-1.1%	2.5%	2.5%	--	--	--	-13.6%	Nov-2021
Cash	7.7%	1,095	916	1.8%	2.4%	5.6%	5.6%	3.2%	2.6%	1.8%	2.0%	Jun-2001
Cash Policy Benchmark				1.4%	2.8%	5.3%	5.3%	2.2%	1.9%	1.3%	1.6%	

Data is from State Street as of December 31, 2023

Table provided is from the Total Fund 4Q23 Performance Report presented at the BOI in March 2024

Returns shown for hedge funds in this appendix represent performance lagged by one month, as is standard practice for LACERA's quarterly performance book, and may not match returns shown previously in this presentation where performance is unlagged to conduct analytics across same time periods

Risk Mitigation: Manager Scorecards



Los Angeles County Employees Retirement Association

PUBLIC MARKETS MANAGER SCORECARD

4th Quarter 2023

			Performance 1 to 5 (with 5 the best)	Organization & Operations S+, S, or S- (with S+ the best)	ESG 1 to 5 (with 5 the best)	Partnership A, B, or C (with A the best)	Fees & Terms 1 to 5 (with 5 the best)
Manager	Market Value (in \$ millions)	% of Total Fund	SCORE	SCORE	SCORE	SCORE	SCORE
INVESTMENT GRADE BONDS							
Allspring/Wells	1,328.7	1.8%	5	S	3	B	5
BTC US Debt Index Fund	2,992.7	3.9%	4	S	—	B	5
Pugh Capital Mgmt	882.8	1.2%	3	S	2	A	3
LONG-TERM GOVERNMENT BONDS							
BlackRock	3,134.7	4.1%	* 3	S	—	B	5
CASH							
SSGA Cash	792.1	1.0%	3	S	—	A	5



Los Angeles County Employees Retirement Association

PRIVATE MARKETS MANAGER SCORECARD

4th Quarter 2023

			Performance 1 to 5 (with 5 the best)	Organization & Operations S+, S, or S- (with S+ the best)	ESG 1 to 5 (with 5 the best)	Partnership A, B, or C (with A the best)	Fees & Terms 1 to 5 (with 5 the best)
Manager	Market Value (in \$ millions)	% of Total Fund	SCORE	SCORE	SCORE	SCORE	SCORE
DIVERSIFIED HEDGE FUNDS							
AM Asia	234.4	0.3%	3	S	2	A	5
Brevan Howard	640.4	0.8%	5	S	2	A	2
Capula GRV	713.3	0.9%	5	S	2	B	3
Caxton	295.5	0.4%	4	S	3	B	3
DK Institutional Partners	513.4	0.7%	4	S-	2	C	3
HBK Multistrategy	620.9	0.8%	4	S	2	B	3
Hudson Bay	693.0	0.9%	5	S	2	B	3
Polar	494.2	0.7%	4	S	2	B	4
Stable	538.6	0.7%	* 3	S+	2	A	5

Graphic provided is from the Total Fund 4Q23 Performance Report presented at the BOI in March 2024

Bond Index Characteristics



Bloomberg Bond Index Characteristics (as of 12/31/23)

	Number Issues (Statistics)	Duration (Mod. Adj.)	Coupon	Maturity	Price	Spread	Yield to Worst	Amt Outstanding (MM)	Market Value (MM)
U.S. Aggregate	13,334	6.24	3.09	8.46	91.70	51.02	4.53	28,889,184	26,665,228
U.S. Treasury	285	6.18	2.54	7.92	91.41	-0.85	4.08	12,069,198	11,102,814
US Aggregate: Government-Related	1,230	5.28	3.20	8.26	94.96	48.21	4.59	1,329,358	1,273,468
U.S. Corporate Investment Grade	7,756	7.09	4.04	10.82	93.57	100.61	5.06	7,007,437	6,628,376
U.S. Mortgage Backed Securities	938	5.89	3.06	7.45	89.85	81.32	4.68	7,878,232	7,098,486
CMBS: Erisa Eligible	2,644	4.42	3.14	4.98	91.29	128.28	5.27	476,259	434,787
Asset-Backed Securities	481	2.70	4.25	3.66	98.68	66.90	4.96	128,700	127,298
Long Treasury	80	15.69	2.79	22.74	80.33	2.80	4.14	2,811,764	2,278,494

Data sourced from Bloomberg as of 12/31/2023

Glossary of Terms



Term	Definition
Absolute Return	A strategy that is independent of traditional benchmarks such as the S&P 500 Index or the Barclays U.S. Aggregate Bond Index. These strategies tend to operate independently of market direction.
Active Risk	A measure of the difference relative to a benchmark. For example, if a portfolio's return is 5%, and the benchmark's return is 3%, then the portfolio's active return is 2%. A portfolio's active risk is the risk associated with the volatility of active returns. Active weight is the portfolio's weight in an asset minus the benchmark's weight in the same asset. Active exposure is the portfolio's exposure to a factor minus the benchmark's exposure to that same factor.
Asset Backed Securities (ABS)	Financial instruments that derive their value from an underlying pool of assets. These assets typically generate cash flow from debt, such as loans, leases, credit card balances, or receivables.
Beta	A measure of the sensitivity of an asset to movements in the market or other benchmark; thus, a measure of its non-diversifiable or systematic risk. A beta of one 1.0 indicates that, on average, the asset is expected to move in tandem with the market or benchmark.
Bps or bps	An acronym for basis points where one bps equals one hundredth of one percent or 0.01%.
Commercial Mortgage Backed Securities (CMBS)	Investment products, similar to bonds, backed by mortgages on commercial properties, such as office buildings, hotels, malls, and apartment complexes.
Correlation	A statistical measure of how closely related two variables are.
Down Capture	Measure of an investment's performance during down markets, calculated as the strategy's returns divided by the returns of the benchmark index during the down market. A lower down market capture ratio means an investment was less negatively impacted during market downturns.
Duration (or Effective Duration)	A measure of the price sensitivity of bonds with respect to a parallel shift of the discount curve that is particularly useful for bonds with embedded options (e.g., callable bonds, putable bonds, and mortgage-backed securities).
Fed Funds Rate	The Federal Funds Target Rate is a crucial interest rate set by the Federal Open Market Committee (FOMC) that influences other interest rates in the economy.
Jensen's Alpha	Jensen's alpha measures the risk-adjusted return a portfolio adds above and beyond a referenced benchmark after adjusting for the risk-free rate and beta of the portfolio.

Glossary of Terms (continued)



Term	Definition
Maximum Drawdown	The compounded but not annualized maximum loss over a time period.
Mortgage Backed Securities (MBS)	Investment product, similar to bonds, backed by a bundle of home loans and other real estate debt.
Risk Offset	Strategies designed to perform well during a significant market downturn. These strategies are similar to buying insurance where there is a cost of premium associated with receiving a payoff when an adverse market event occurs.
Selection Risk	Risk that is specific to an asset and is uncorrelated (or negligibly correlated) with the risks of other assets. Asset selection risk is the portion of an asset's risk that is unexplained by the risk model. Also called specific, unique, idiosyncratic, or independent risk.
Sharpe Ratio	Measures risk-adjusted performance of an investment compared to a risk-free asset.
Sortino Ratio	Measures risk-adjusted performance by calculating returns per unit of downside risk (standard deviation negative returns).
Standard Deviation	Volatility of monthly returns that measures the average deviation from the mean.
Total Risk	The total (gross) risk to an asset, which is the standard deviation of the asset's total return distribution, expressed in percent. The total risk for an asset depends on the asset's exposures to the risk factors, the factor variance/covariance matrix, and the forecast selection risk of the asset.
Up Capture	Measure of an investment's performance during up markets, calculated as returns divided by the returns of the benchmark index during the up market. A high up capture ratio means an investment outperformed the index during up markets.
Up / Down Capture Spread	A measurement of the difference between up capture and down capture.
Yield to Worst (YTW)	Yield of a bond adjusted for any embedded options. Equals the lowest yield, among all possible redemption dates, for a given bond.
Yield Curve	A graph that plots the interest rates of bonds with equal credit quality but differing maturities.