OREGON
STATE
TREASURY

Oregon Investment Council

October 25, 2023

Cara Samples
Chair

Tobias Read
State Treasurer

Rex Kim
Chief Investment Officer

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Oregon State Treasury
Investment Division
16290 SW Upper Boones Ferry Road
Tigard, OR 97224

Agenda

October 25, 2023
9:00 AM

Time	**Tab**		**Presenter**
9:00	1	**Review & Approval of Minutes** September 6, 2023	Cara Samples OIC Chair
	2	**Committee Reports**	Rex Kim Chief Investment Officer
9:05 – 9:45	3	**State Accident Insurance Fund**	Karl Cheng Senior Investment Officer, PR&R Chip Terhune President, SAIF Gina Manley Chief Financial Officer, SAIF
9:45 – 10:20	4	**CEM Benchmarking**	Dave Randall Chief Investment Operating Officer Christopher Doll Director, CEM Benchmarking

--- BREAK ---

10:30 – 10:45	5	**Asset Class Consultant** (Action Item: Private Equity Consultant Recommendation)	Ahman Dirks Investment Officer, Private Equity
10:45 – 11:05	6	**Common School Fund Review**	Louise Howard Senior Investment Officer Michael Langdon Director of Private Markets Wil Hiles Investment Officer, Public Equity
--- BREAK ---			
11:15 – 11:35	7	**Public Equity** (Action Item: Manager Recommendation)	Louise Howard Senior Investment Officer
11:35 – 12:10	8	**OPERF Investment Policy Statement**	Mika Malone Managing Principal, Meketa Raneen Jalajel Associate Partner, Aon
12:10	9	**Calendar – Future Agenda Items**	Rex Kim
		Open Discussion	OIC Members, Staff, Consultants
		Public Comments	

TAB 1

REVIEW & APPROVAL OF MINUTES

State of Oregon
Office of the State Treasurer
16290 SW Upper Boones Ferry Road
Tigard, Oregon 97224

OREGON INVESTMENT COUNCIL

September 6, 2023

Meeting Minutes

Members Present:	Cara Samples, Lorraine Arvin, Pia Wilson-Body, Alline Akintore, Tobias Read, Kevin Olineck
Staff Present:	Rex Kim, David Randall, Karl Cheng, Ben Mahon, Louise Howard, Gloria Gil, Ahman Dirks, Chuck Christopher, Bryson Pate, Jennifer Kersgaard
Staff Participating Virtually:	Jaime Alvarez, Ryan Auclair, Kenny Bao, Sara Bayes, Osmel Bermudez, Tyler Bernstein, Taylor Bowman, Tan Cao, Austin Carmichael, Collin Cousar, Andrew Coutu, Bradley Curran, Ashley Daigle, Debra Day, Alli Gordon, Julie Hall, Will Hampson, Ania Henton, Wil Hiles, Ian Huculak, Claire Illo, Roy Jackson, Aliese Jacobsen, Kristi Jenkins, Josh Jones, Young Kim, Amanda Kingsbury, Jacqueline Knights, Jeremy Knowles, Paul Koch, Philip Larrieu, Perrin Lim, Michael Makale, Sommer May, Tim Miller, Tammie Nelson, Savanah Oliveira, Dmitri Palmateer, Lisa Pettinati, Jen Plett, Mohammed Quraishi, Rupa Raman, Jo Recht, Talia Riordan, Andrew Robertson, Scott Robertson, Holly Rohwer, Aaron Schaffer, Angela Schaffers, Faith Sedberry, Mark Selfridge, Aleshia Slaughter, Asia Slaughter, Alli Sorensen, Stacey Spencer, Jennifer Staub, Anna Totdahl, Kottur Vasanth, Andrey Voloshinov, Caitlyn Wang, Christine Wilson, Rachel Wray, Tiffany Zahas
Consultants Present:	Allan Emkin, Mika Malone, Colin Bebee, Eric Larsen, Tom Martin, Raneen Jalajel, Paola Nealon, Ashley Woeste
PERS Present:	Kevin Olineck
Legal Counsel Present:	Steve Marlowe (Department of Justice)

The September 6, 2023, OIC meeting was called to order at 9:03 am by Cara Samples, Chair.

Time	**Tab**		**Presenter**
9:00	1	**Review & Approval of Minutes** July 19, 2023	Cara Samples OIC Chair

Chair Samples opened the meeting and asked for approval of the July 19, OIC regular meeting minutes. At 9:04am Treasurer Read moved approval; Vice Chair Lorraine Arvin seconded the motion which then passed by a 5/0 vote.

	2	**Committee Reports**	Rex Kim Chief Investment Officer

Private Equity Committee:
None

Real Estate Committee:
None

Opportunity Committee:
None

Alternatives Portfolio Committee:
None

Staff Discretion
None

9:05 – 9:15	3	**Consultant Contracts** (Action Item: Contract Recommendation)	David Randall Chief Investment Operating Officer Ben Mahon Senior Investment Officer, Alternatives

Staff proposes that the OIC extend its current General consultant contracts with both Meketa and Aon. Treasurer Read moved approval at 9:10; Member Body-Wilson seconded the motion which then passed by a 5/0 vote.

Staff proposes the OIC extend its current consultant contracts for the Real Assets Portfolio and Diversifying Strategies Portfolio. Treasurer Read moved an approval at 9:11; Member Arvin seconded the motion which then passed by a 5/0 vote.

9:15 – 9:40	4	**OPERF Q2 Performance Review**	Paola Nealon Principal, Meketa Eric Larsen Vice President, Meketa

QTD, The Fund returned 1.5%, underperforming the OPERF Policy Benchmark (+2.8).
The portfolio is outperforming its 3-year benchmark by 1.9%

--- BREAK ---

9:50 – 10:30	5	**OPERF Leverage**	Karl Cheng Senior Investment Officer, Portfolio Risk & Research Allan Emkin Managing Principal, Meketa Mika Malone Managing Principal, Meketa

OPERF has 2 sources of system level leverage: Fixed Income Portfolio (FIP) and Synthetic Overlay Program. The OPERF FIP received OIC approval for system-level leverage at the December 2019 meeting that has not been implemented. The Synthetic Overlay Program resulted in a net leverage of 0%, there was a gross leverage of approximately 5.9%.

--- BREAK ---

10:40– 11:30	6	**Roles & Responsibilities**	Mika Malone Managing Principal, Meketa Raneen Jalajel Associate Partner, Aon

Consultants Mika Malone and Raneen Jalajel discussed manager selection oversight, monitoring structure and reporting, and examples of peer selection processes and reporting structures. They will work with Staff to develop a refined Investment Policy Statement for the Council's review.

11:30	7	**Calendar – Future Agenda Items**	Rex Kim
11:30	8	**Open Discussion**	OIC Members, Staff, Consultants

Public Comments

TAB 2

COMMITTEE REPORTS

Oregon Investment Council

OREGON STATE TREASURY

TAB 3

STATE ACCIDENT

INSURANCE FUND

SAIF Oregon Investment Council

Chip Terhune, President & CEO
Gina Manley, Chief Financial Officer

October 25, 2023

Bridging the financial gap

SAIF's charter, as defined in ORS 656.752 (2)(b), is "To make insurance available to as many Oregon employers as inexpensively as may be consistent with the overall integrity of the Industrial Accident Fund, in accordance with ORS 656.634 and sound principles of insurance."

Mission

SAIF's mission is to serve Oregon's workers and employers by making workers' compensation coverage widely available, affordable, and accessible, and by providing extraordinary service.

Who we are

- Largest workers' comp provider in Oregon
- Market share by premium is 54%, more than 55,000 policyholders
- Independent, not-for-profit, public corporation
- Governed by a board of directors, appointed by the governor
- We don't receive taxpayer money or state funding

How we fulfill our mission

- Get injured workers back to work as soon as they are able
- Our vision is to make Oregon the safest and healthiest place to work
- 78 safety and health experts—the largest network of workplace safety professionals of any insurance carrier in Oregon
- Affordable coverage, dividends
- SAIF specializes in insuring high-hazard industries

Areas of focus

2023-2024

The state of SAIF is strong

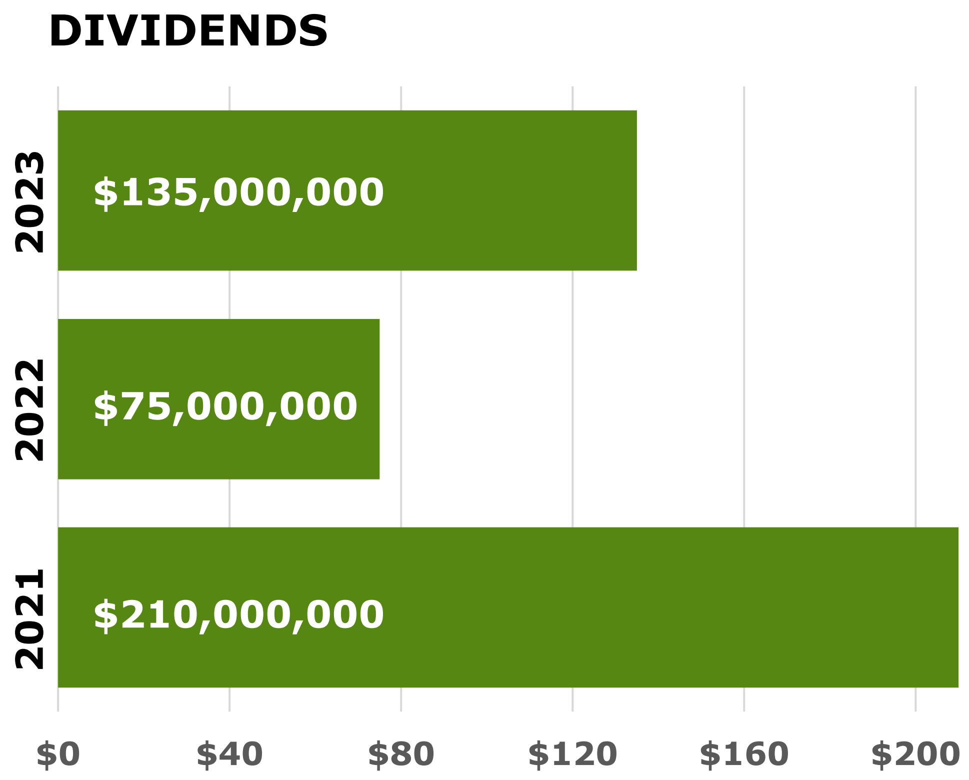
Market share is 54%

Pricing is competitive

Very strong safety program

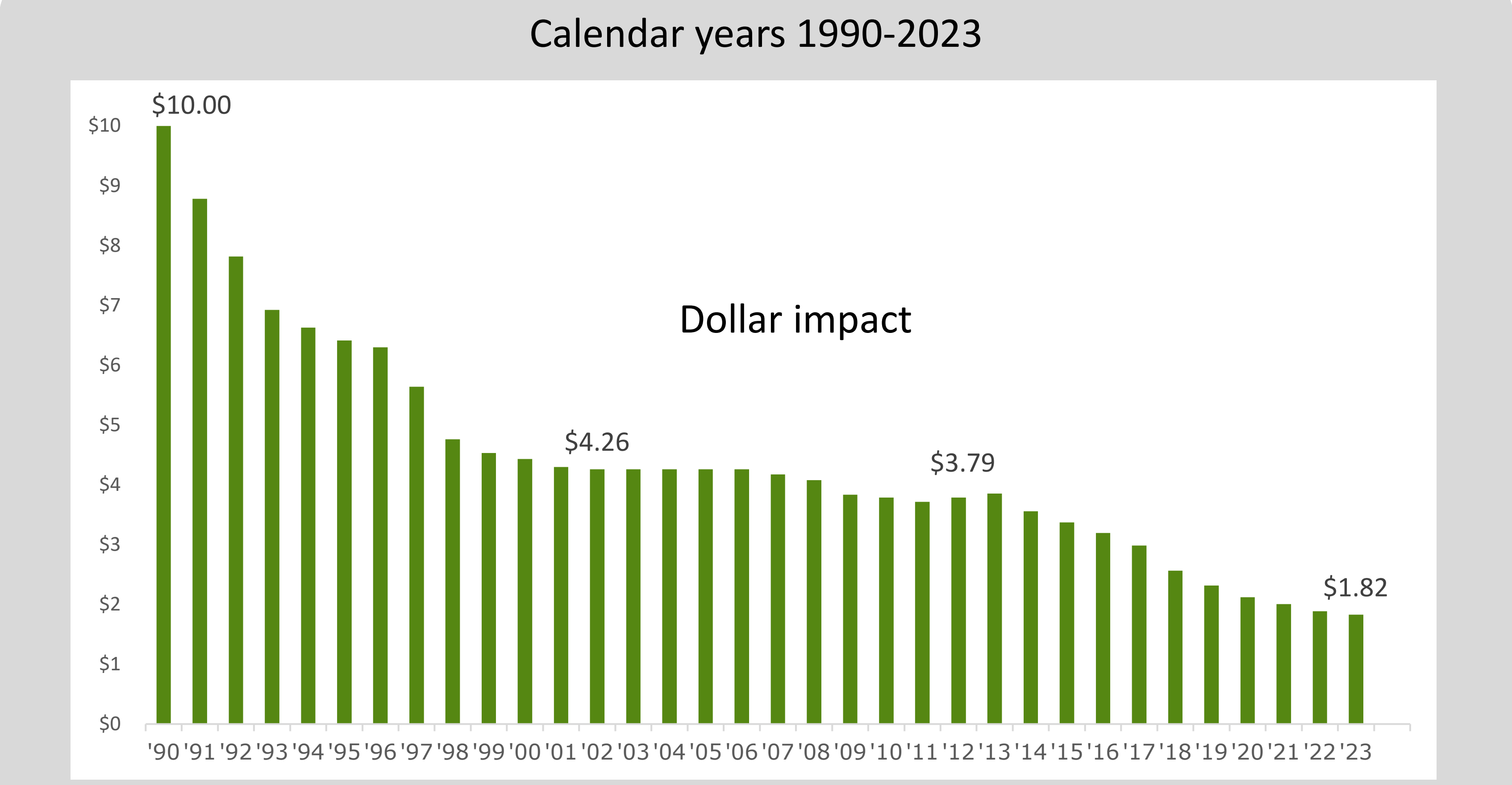
Market-leading service levels

The state of SAIF (continued)



- Customer retention rate over 97% for the last ten years
- The workers' comp system is stable and balanced
  - 2023 pure premium reduction of 3.2%
  - 2022 pure premium reduction of 5.8%

Impact of Oregon workers' comp premium rate changes



Source: National Council on Compensation Insurance (NCCI)

SAIF’s financial model

- Policies are priced below actual cost
- Investment returns subsidize pricing
- Changes to our $2.5B claims and related reserves have a big impact
- Goals:
  - Maintain stable, predictable pricing
  - Pay a dividend when appropriate

SAIF’s financial profile

Balance sheet

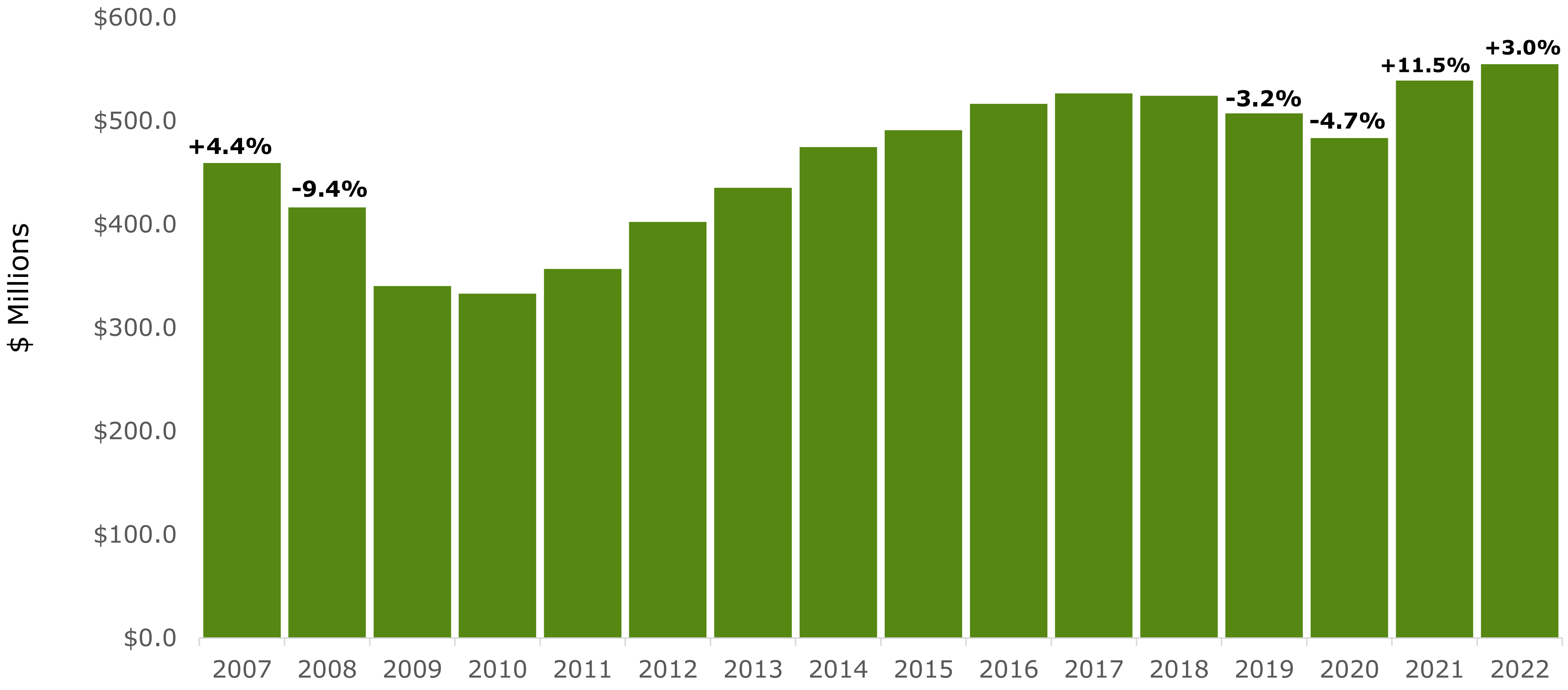
As of December 31

	2022
Invested assets	$4.7 billion
Other assets	$0.4 billion
Total assets	**$5.1 billion**
Claims reserves	$2.5 billion
Insurance payables and other	$0.4 billion
Total liabilities	**$2.9 billion**
Total surplus/capital	**$2.2 billion**
Total liabilities & surplus/capital	**$5.1 billion**

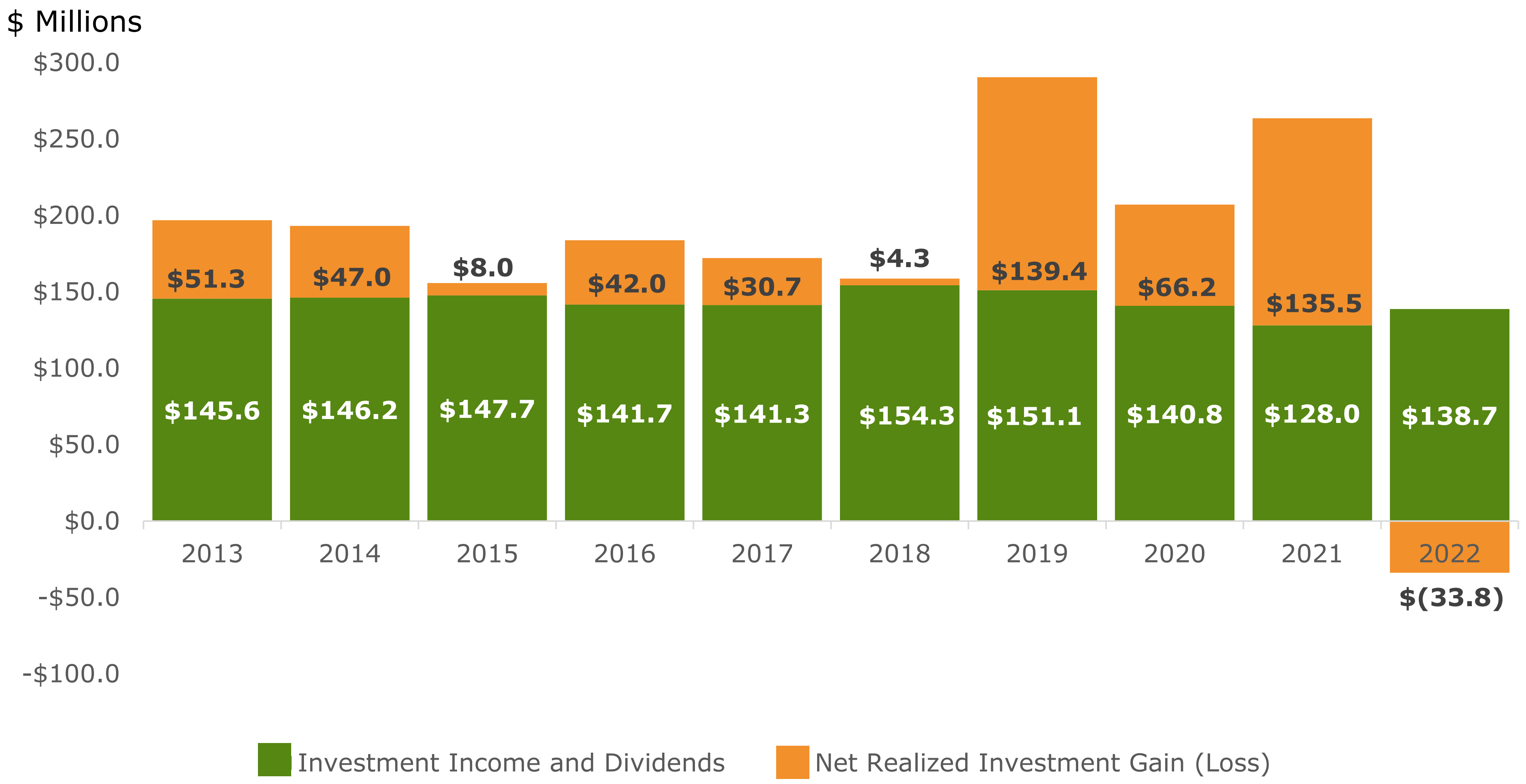
Income statement

$ in millions	2022
Premiums	$ 554.9
Claims	292.8
Loss adjustment, underwriting & other expense	233.6
Underwriting gain (loss)	**28.5**
Investment income & realized gains	104.9
Miscellaneous income	0.3
Net income before dividends	133.7
Policyholder dividends	75.0
Net income after dividends	**$ 58.7**

Net earned premium



Total investment income



SAIF’s investment priorities

- Preservation of capital
- Stable, predictable investment revenue
- Matching liquidity to SAIF cash needs
  - Availability of capital in a crisis
  - Availability of capital for project work

Investment allocation

Investment allocation approved at April 2019 OIC meeting:

	Previous Allocation	Aug. 2023 Allocation	Current Target Allocation
Fixed income	90%	83%	77%
Real estate funds	0%	6%	5%
Equities	10%	11%	10%
Bank loans & private credit	-	-	8%

SAIF began asset allocation study in September, 2023 in partnership with Treasury. The results will be presented to the SAIF board of directors and the OIC for approval.

Asset allocation study

- Study conducted at least every 5 years
- Last study completed in 2019 by RVK and they will perform the new study
- Coordination with SAIF staff, Treasury, and SAIF's investment advisors
- Results reviewed by SAIF's Board and approved by the OIC - end of Q1 or Q2 2024

Asset allocation study (continued)

- Portfolio allocation analysis
- Review and update SAIF’s detailed investment policy and performance benchmarks
- Asset/liability matching
- Risks and opportunities
- Peer comparison

Capital levels help determine:

- Pricing
  - Investment income offsets underwriting losses
- Dividends
  - Based on a snapshot in time and future outlook
- SAIF’s mission is to serve Oregon’s workers and employers by making workers’ compensation coverage widely available and affordable, and by providing extraordinary service.
  - Underwriting
  - Service levels

Capital levels help determine:

Recession

Earthquake

Medical cost escalation

Pandemics

Legislative/ regulatory changes

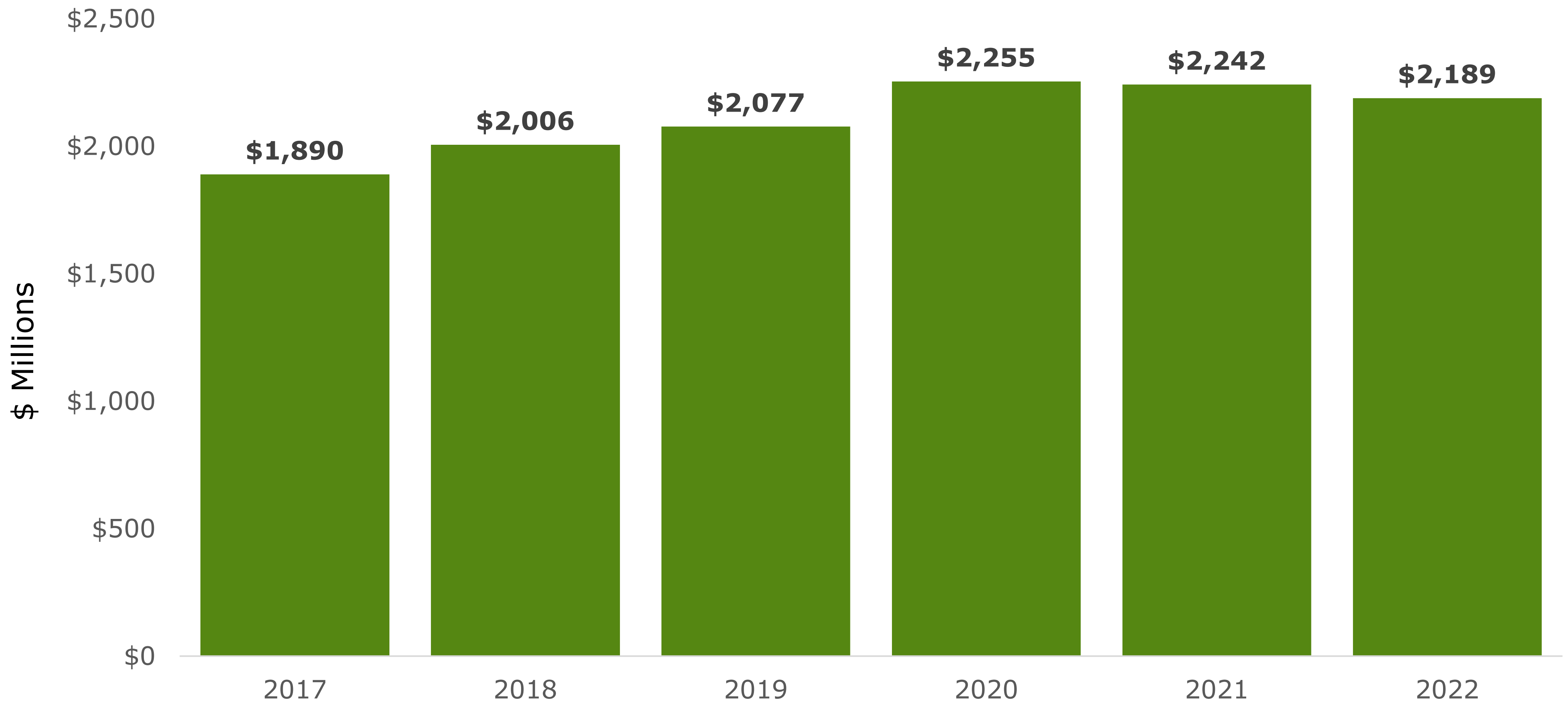
Changes in loss patterns

Our board adopts a risk tolerance statement:

Maintain a minimum surplus of 5.0 times CAL-RBC; risk models show the likelihood of capital falling below CAL-RBC over the next three years is less than .5%

Surplus/capital

as of December 31



SAIF's capital need is affected by:

- Lack of diversification
- No other sources of capital
- WC is a "long tail" line of insurance
- Necessary long-term investments

COVID-19 claims

- The number of COVID claims continues to decline

Paid COVID-19 claim costs by year:

$ in millions	2Q23 YTD	2022	2021	2020	Total
Paid	$3.1	$11.9	$7.6	$2.5	$25.2
Claim Count	483	3,047	2,142	2,295	7,967

Economic volatility

Key risks

On-going and future pandemic impacts

Changes in medical cost escalation

Fluctuations in policyholder payroll

Investment market volatility

Total investment revenue*

As of June 30, 2023

	2Q23	2Q22	Change
Bond interest income	$78.3 million	$66.4 million	18.0%
Realized gains (losses)	(12.3) million	(15.3) million	19.5%
Total investment revenue	$66.0 million	$51.1 million	29.2%

- As interest rates rise, investment income is increasing.
- Rising interest rates will also cause our current bond holdings to decrease in value driving realized losses.

*Results are reported using Statutory insurance accounting rules which do not reflect the full mark-to-market adjustments for bond holdings.

Investment returns: Market value

As of June 30, 2023

- Portfolio up 3.78% for the first half of 2023
  - Bonds up 3.58%
  - Stocks up 13.40%
  - Real estate funds down 6.92%
- Portfolio performed better than the benchmark by 0.63 percentage points
- In compliance with approved policy

Recession impact and planning

- Continue to take a long-term view
- Understand levers that we can pull in various scenarios (playbook exercises)
- Financial modeling & stress testing
  - Rising interest rates & inflation
  - Rising claims costs
  - Stress testing investment market declines

Other issues to watch

- Legislative/regulatory changes that threaten balance in WC system
- Economic and claim impacts from increased wildfire activity, drought, and record high temperatures.
- A “taking” of SAIF capital
- Medical escalation
- Managed care challenges

saif

Work.
Life.
Oregon.

MEKETA | 45 YEARS
CELEBRATING A MILESTONE

State Accident Insurance Fund

As of June 30, 2023

Q2 Performance Update

Table of Contents

Economic and Market Update

Data as of June 30, 2023

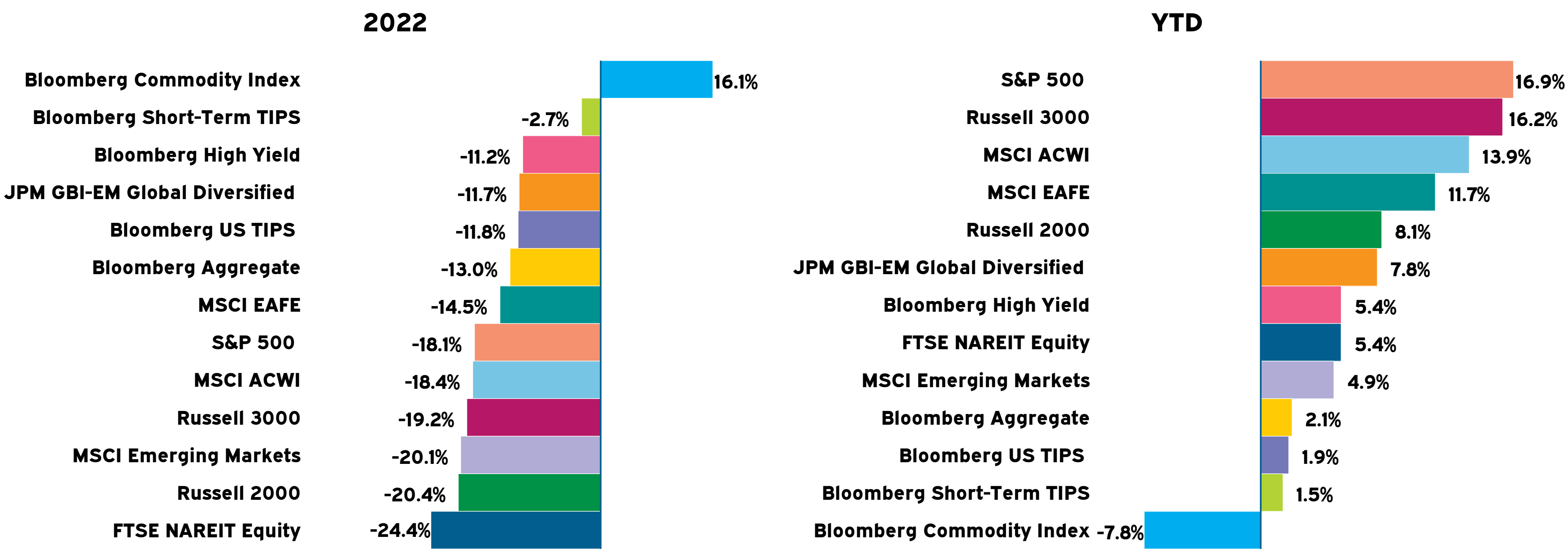
Commentary

→ Asset returns were positive in June with US and Non-US equities posting gains, while most fixed income sectors sold-off on expectations for further interest rate hikes later this year. Except for commodities, most public market asset classes remain up for the year.

- Although the Fed skipped a rate-hike in June, Fed comments signaled further rate hikes in the 2H 2023; the US economy appears to be resilient supporting domestic demand and low unemployment.
- US equity markets (Russell 3000) rose in June (+6.8%) adding to YTD gains (+16.2%). Some of the largest technology names drove positive results. Growth stocks continued to outpace value stocks, particularly in the large cap space.
- Non-US developed equity markets rose in June (MSCI EAFE 4.6%) falling behind US equities in 2023 (+16.2% versus +11.7%). A strengthening US dollar weighed on returns.
- Emerging market equities rose in June (+3.8%) supported by positive returns in China (+4.0%). They significantly trail developed market equities YTD returning +4.9%, due partly to higher US-China tensions.
- Rates generally rose in June leading to bond markets declining, with the broad US bond market (Bloomberg Aggregate) falling 0.4% for the month. It remains positive (+2.1%) year-to-date, though, on declining inflation and expectations for the Fed to end their rate hikes soon.

→ This year, the paths of inflation and monetary policy, slowing global growth and the war in Ukraine will all be key.

Index Returns[1]



→ After a particularly difficult 2022, most public market assets are up thus far in 2023, building on gains from the fourth quarter of last year.

→ Risk sentiment has been supported by expectations that policy tightening could be ending soon, as inflation continues to fall, and growth has slowed.

[1] Source: Bloomberg and FactSet. Data is as of June 30, 2023.

Domestic Equity Returns[1]

Domestic Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	6.6	8.7	16.9	19.6	14.6	12.3	12.8
Russell 3000	6.8	8.4	16.2	19.0	13.9	11.4	12.3
Russell 1000	6.8	8.6	16.7	19.4	14.1	11.9	12.6
Russell 1000 Growth	6.8	12.8	29.0	27.1	13.7	15.1	15.7
Russell 1000 Value	6.6	4.1	5.1	11.5	14.3	8.1	9.2
Russell MidCap	8.3	4.8	9.0	14.9	12.5	8.4	10.3
Russell MidCap Growth	7.7	6.2	15.9	23.1	7.6	9.7	11.5
Russell MidCap Value	8.7	3.9	5.2	10.5	15.0	6.8	9.0
Russell 2000	8.1	5.2	8.1	12.3	10.8	4.2	8.2
Russell 2000 Growth	8.3	7.1	13.6	18.5	6.1	4.2	8.8
Russell 2000 Value	7.9	3.2	2.5	6.0	15.4	3.5	7.3

US Equities: Russell 3000 Index rose 8.4% in the second quarter and 16.2% YTD.

→ US stocks rose sharply in the second quarter of 2023. Most of the gains came in the month of June when the Fed kept its target rate unchanged for the first time since early 2022. Investors are expressing optimism that the Fed can tame inflation without widespread disruptions to the equity markets.

→ With the exception of energy and utilities, each sector of the Russell 3000 index appreciated during the second quarter. Technology led all sectors and was driven by enthusiasm for growth stocks, particularly those with exposure to artificial intelligence (e.g., NVIDIA).

→ Large cap stocks continue to outperform small cap stocks, driven by technology and the underperformance of small cap biotechnology stocks. Growth stocks continue to broadly outperform value stocks.

[1] Source: Bloomberg. Data is as of June 30, 2023.

Foreign Equity Returns[1]

Foreign Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	4.5	2.4	9.5	12.7	7.2	3.5	4.7
MSCI EAFE	4.6	3.0	11.7	18.8	8.9	4.4	5.4
MSCI EAFE (Local Currency)	3.6	4.3	12.1	17.5	11.7	6.4	7.7
MSCI EAFE Small Cap	2.9	0.6	5.5	10.2	5.7	1.3	6.2
MSCI Emerging Markets	3.8	0.9	4.9	1.8	2.3	0.9	2.9
MSCI Emerging Markets (Local Currency)	3.4	1.7	5.6	3.3	3.9	3.0	5.7
MSCI China	4.0	-9.7	-5.5	-16.8	-10.3	-5.3	3.0

Foreign Equity: Developed international equities (MSCI EAFE) rose 3.0% in the second quarter bringing the YTD results to +11.7%. Emerging market equities (MSCI EM) rose 0.9%. in the quarter, rising 4.9% YTD.

→ Eurozone and Japan markets continued their strength in June, wrapping up a strong second quarter. In Europe, financials and IT led returns whereas energy and communication services lagged. Enthusiasm for AI helped company fundamentals and prices for semiconductor stocks. Headline inflation was down in June, although core inflation was up slightly month over month. Energy and materials were the main drivers for falling UK equities, along with Bank of England rate hikes. Optimism continues to build for Japanese investors, while the Yen remains weak, and Bank of Japan remains dovish.

→ Emerging markets were laggards as China equities struggled from weak export demands and rising negative sentiments. Brazil, India, and Taiwan are bright spots in EM, the former due to good earnings and macro, the latter from AI and IT strength.

[1] Source: Bloomberg. Data is as of June 30, 2023.

Fixed Income Returns[1]

Fixed Income	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-0.2	-0.6	2.3	0.0	-3.4	1.0	1.8	5.2	6.3
Bloomberg Aggregate	-0.4	-0.8	2.1	-0.9	-4.0	0.8	1.5	4.8	6.5
Bloomberg US TIPS	-0.3	-1.4	1.9	-1.4	-0.1	2.5	2.1	4.6	6.8
Bloomberg Short-term TIPS	-0.2	-0.7	1.5	0.1	2.3	2.7	1.7	5.3	2.5
Bloomberg High Yield	1.7	1.7	5.4	9.1	3.1	3.4	4.4	8.5	4.1
JPM GBI-EM Global Diversified (USD)	3.3	2.5	7.8	11.4	-1.4	0.3	-0.6	6.6	5.0

Fixed Income: The Bloomberg Universal declined 0.6% in the second quarter as global sovereign debt yields generally rose. Bonds retained a positive start to the year (+2.3% YTD) though as inflation continues to decline.

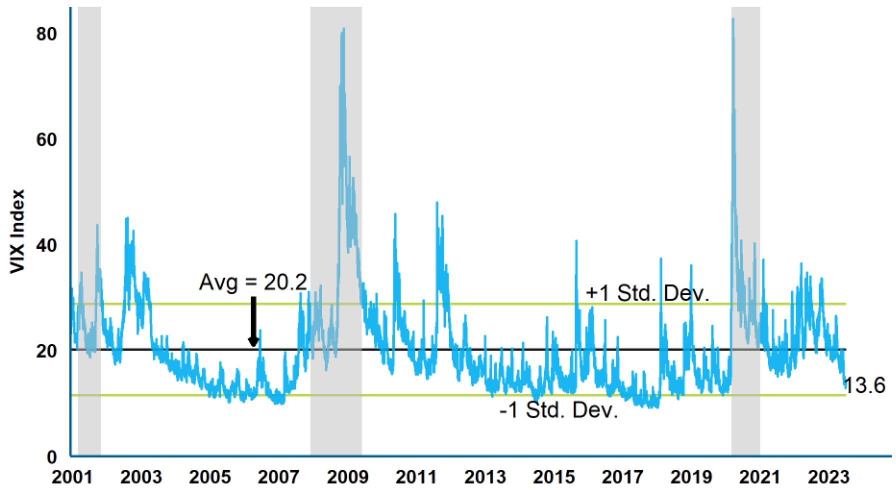
→ US Treasury yields generally rose over the month, with 1-year to 10-year maturity sector rising the most due to higher policy expectations.

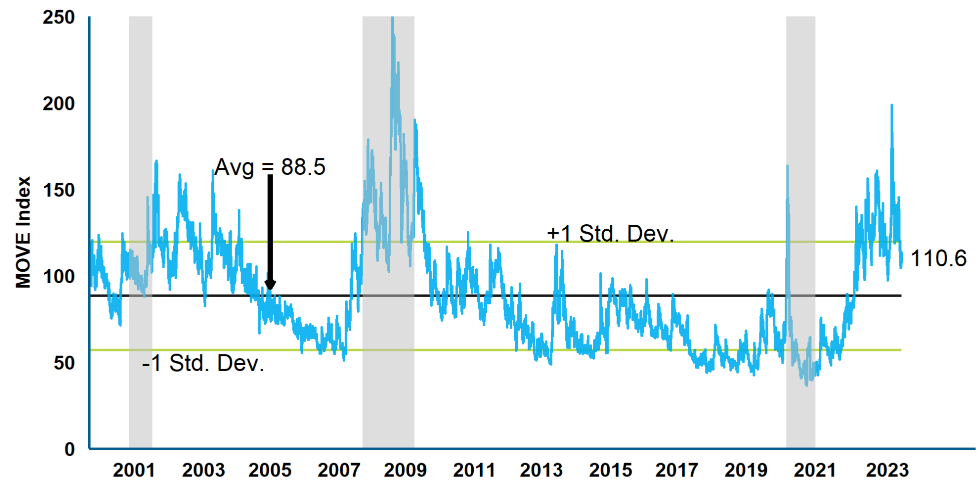
→ The TIPS index and the short-term TIPS index posted negative returns for the month as inflation concerns continued to ease.

→ Continued risk appetite drove high yield bond performance (1.7%) and outperformance versus the broad US bond market (Bloomberg Aggregate). Emerging market bonds (3.3%) also performed well on investor risk sentiment.

[1] Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of June 30, 2023. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.

Equity and Fixed Income Volatility[1]



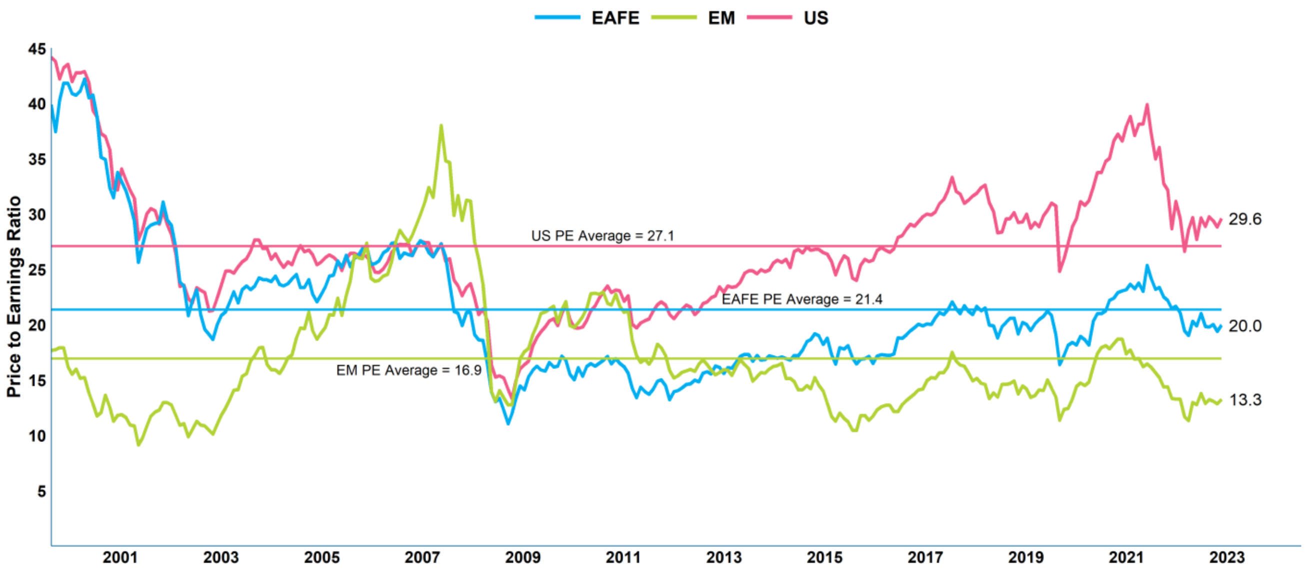


→ Volatility in equities (VIX) declined in June and remains low as investors continue to anticipate the end of the Fed's policy tightening.

→ In comparison, the bond market remains on edge after last year's historic losses and continued volatility in interest rates this year due to policy uncertainty and issues in the banking sector. The MOVE (fixed income volatility) remains well above (110.6) its long-run average (88.4), but off its recent peak during the heart of the banking crisis.

[1] Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of June 2023. The average line indicated is the average of the VIX and MOVE values between January 2000 and June 2023.

Equity Cyclically Adjusted P/E Ratios[1]

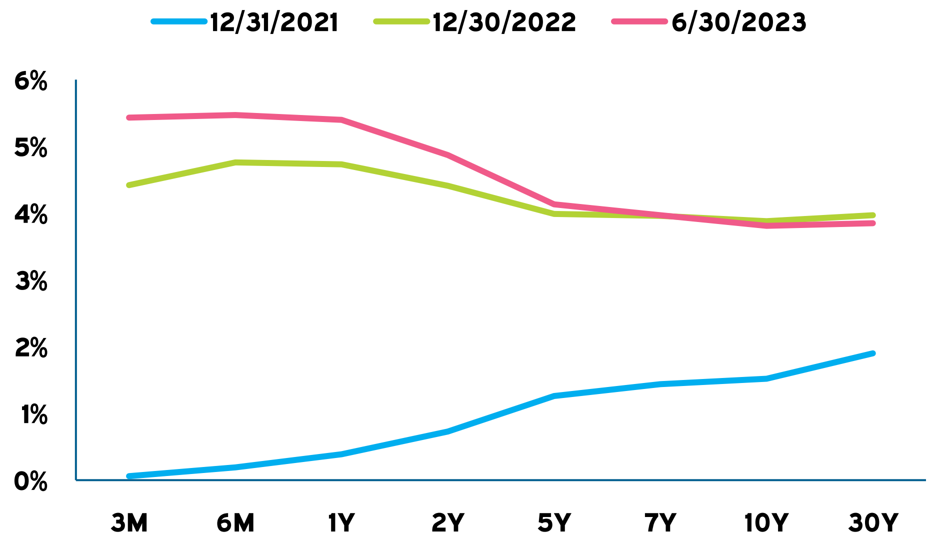


→ After its dramatic decline last year the US equity price-to-earnings ratio remains above its long-run (21st century) average.

→ International developed market valuations are below their own long-term average, with those for emerging markets the lowest and well under the long-term average.

[1] US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of June 2023. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to the recent month-end respectively.

US Yield Curve[1]

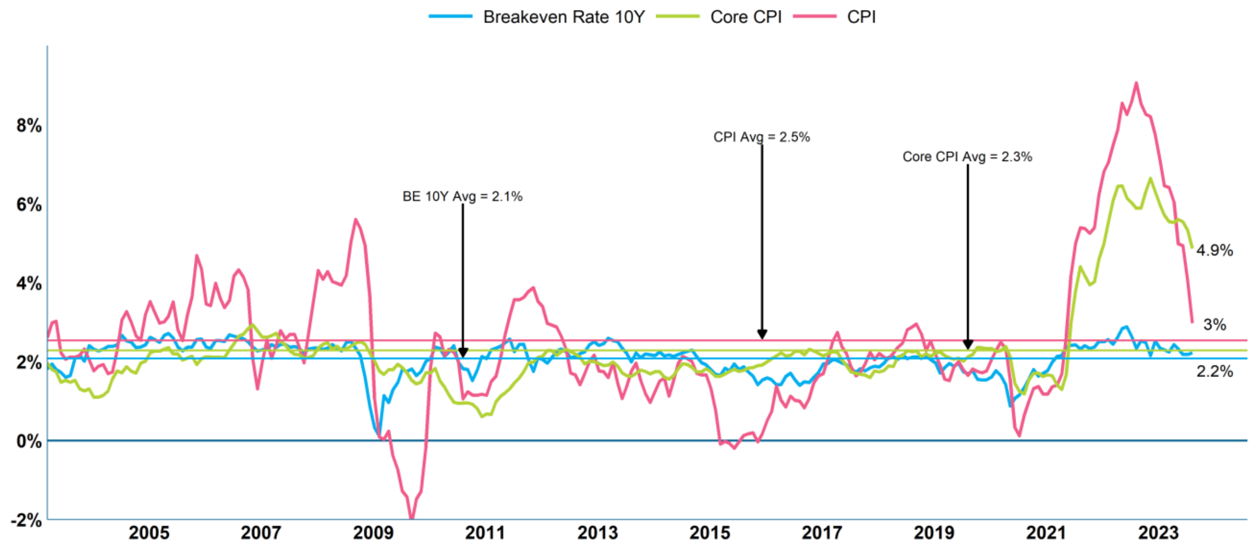


→ Interest rates have started rising again across the curve given policy maker guidance that policy rates are likely to rise further and potentially stay longer at the terminal rate than market participants expect. The rise in rates was particularly acute at the very front-end (< 1 year). Maturities from two years out also drifted higher as market participants considered the possibility of additional policy rate increases as economic data (mainly inflation and labor markets) remains strong.

→ The yield curve remains inverted with the spread between two-year and ten-year Treasuries finishing the month at -1.06%. The more closely watched measure (by the Fed) of the three-month and ten-year Treasuries spread also remained inverted at -1.62%. Inversions in the yield curve have often preceded recessions.

[1] Source: Bloomberg. Data is as of June 30, 2023.

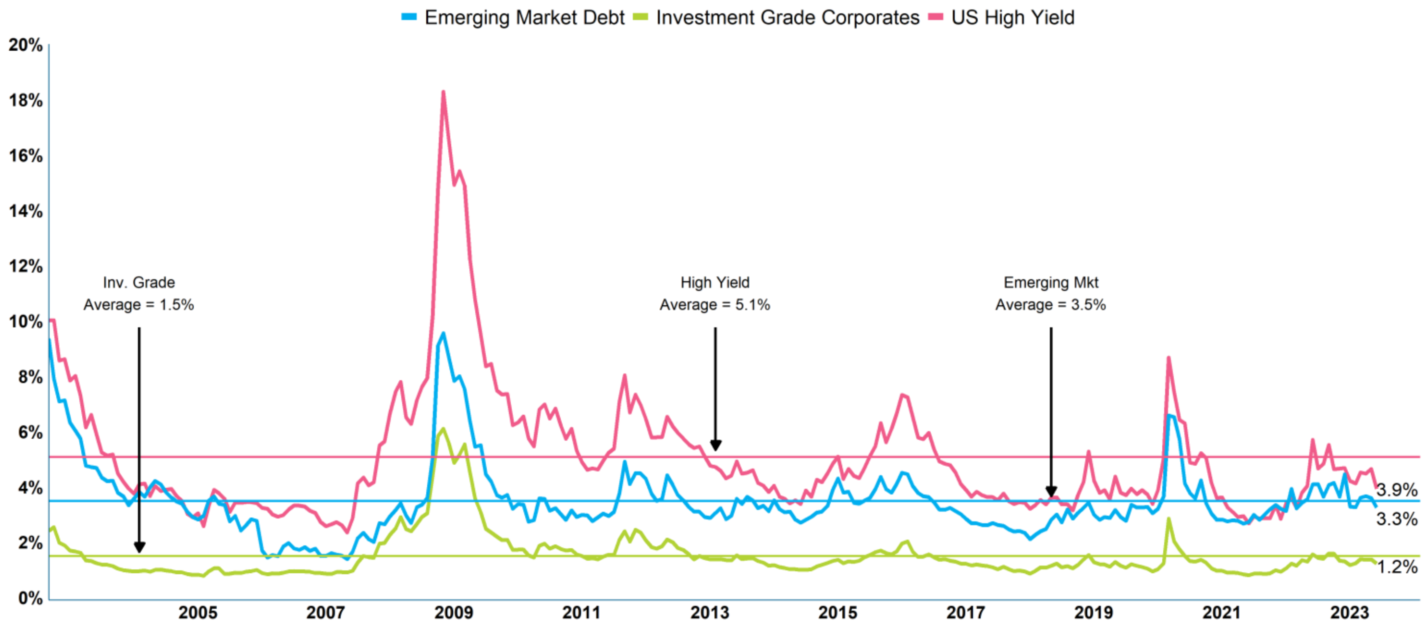
Ten-Year Breakeven Inflation and CPI[1]



- → Headline inflation continued to decline in June, with the year-over-year reading falling from 4.0% to 3.0% and coming in slightly below estimates. The month-over-month rate of price increases rose slightly (0.2% versus 0.1%), with food prices ticking up slightly (0.1%) and energy prices rose (0.6%).
- → Core inflation – excluding food and energy - fell (5.3% to 4.9%), coming in slightly above forecasts. It remains stubbornly high driven by shelter costs.
- → Inflation expectations (breakevens) remain well below current inflation as investors continue to expect inflation to track back toward the Fed's 2% average target.

[1] Source: Bloomberg. Data is as June 30, 2023. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

Credit Spreads vs. US Treasury Bonds[1]

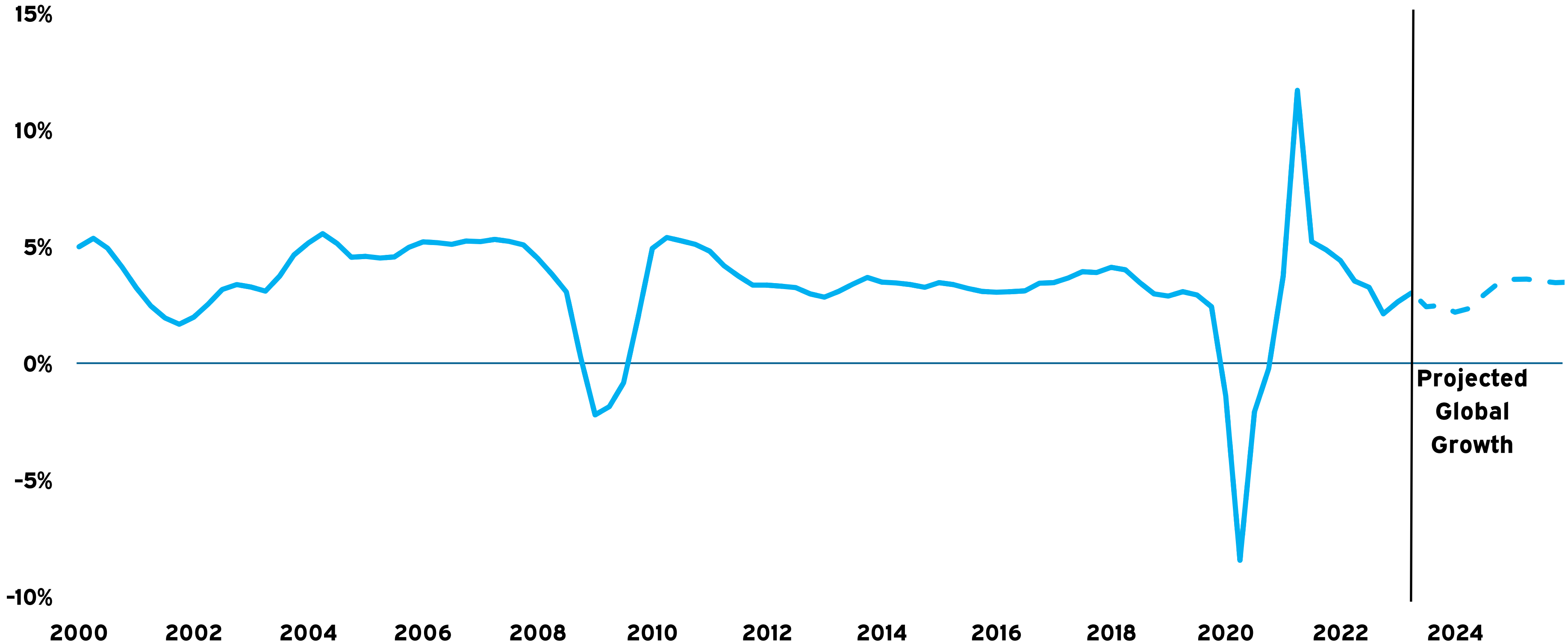


→ Spreads (the added yield above a comparable maturity Treasury) declined in June as risk appetite remained robust for respective credit exposures.

→ High yield spreads remain below their long-term average. Investment grade spreads and emerging market spreads are narrower than high yield spreads and close to their respective long-term averages.

[1] Sources: Bloomberg. Data is as of June 30, 2023. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the recent month-end, respectively.

Global Real Gross Domestic Product (GDP) Growth[1]



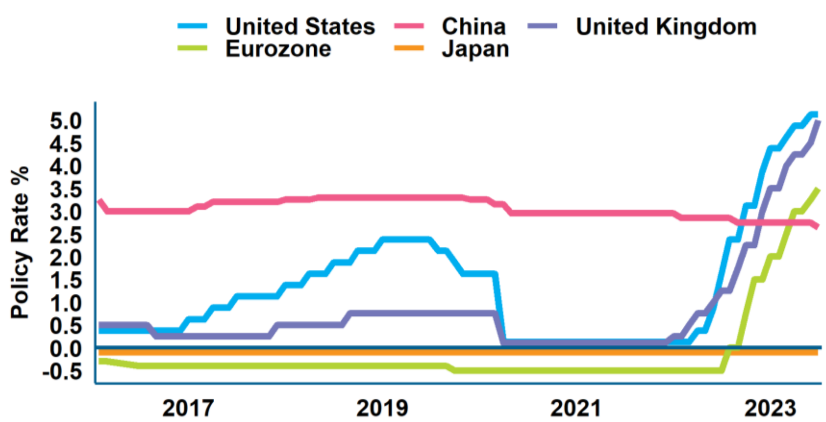
→ Global economies are expected to slow this year compared to 2022, with risks of recession as the impacts of policymakers' aggressive tightening to fight inflation flow through economies.

→ The delicate balancing act of central banks trying to reduce inflation without dramatically depressing growth will remain key.

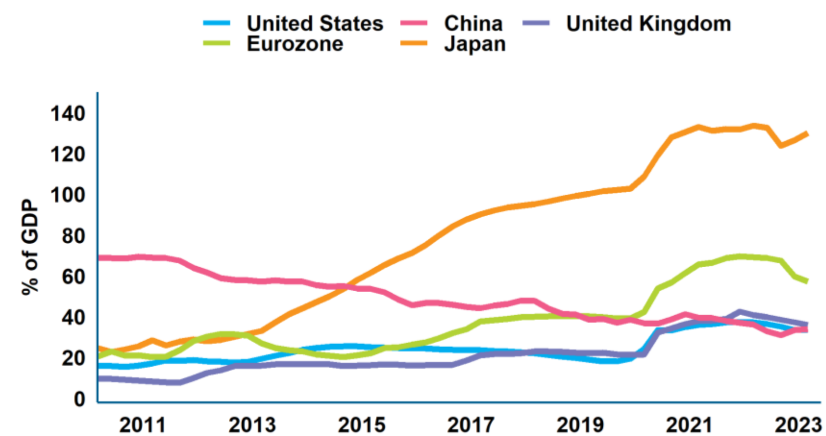
[1] Source: Oxford Economics (World GDP, US$ prices & PPP exchange rate, real, % change YoY). Updated June 2023.

Central Bank Response[1]

Policy Rates



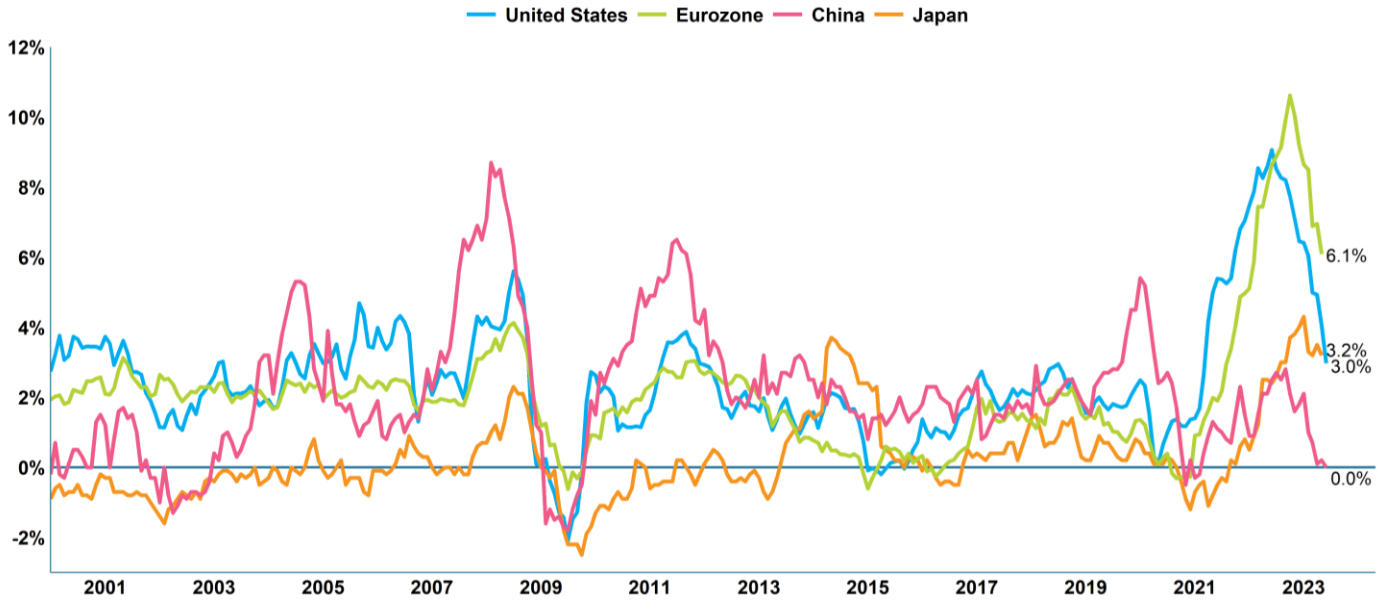
Balance Sheet as % of GDP



- → In 2022, many central banks aggressively reduced pandemic-era policy support in the face of high inflation, with the US taking the most aggressive approach. Slowing inflation and growth have led to expectations for reductions in policy tightening going forward.
- → In May the Fed raised rates another 25 basis points to a range of 5.0% to 5.25%. After month-end, the FOMC paused its tightening campaign but hinted that one or two additional rate hikes could come later this year.
- → In China, the central bank has continued to cut interest rates and inject liquidity into the banking system, as weaker than expected economic data appears to indicate a widespread slowdown.
- → Looking ahead, risks remain for a policy error as central banks attempt to balance multiple goals, bringing down inflation, maintaining financial stability, and supporting growth.

[1] Source: Bloomberg. Policy rate data is as of June 30, 2023. China policy rate is defined as the medium-term lending facility 1 year interest rate. Balance sheet as % of GDP is based on quarterly data and is as of March 31, 2023.

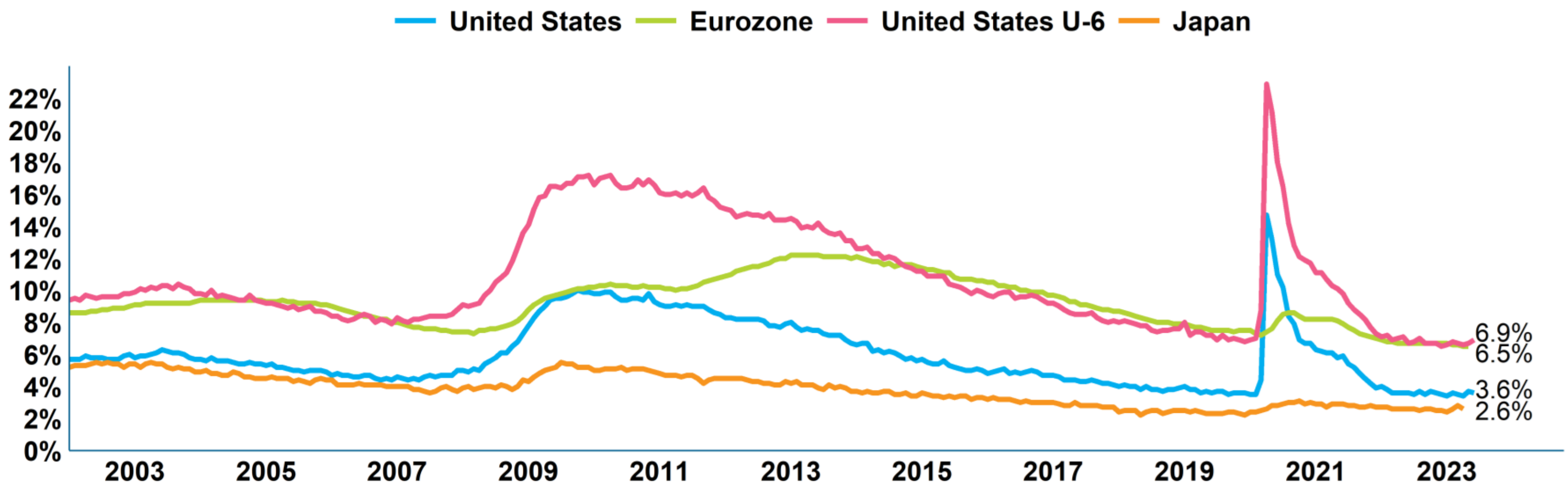
Inflation (CPI Trailing Twelve Months)[1]



- → Inflation pressures continued to decline globally due to the easing of supply chain issues from the pandemic, declining energy prices, and tighter monetary policy.
- → In the US, inflation fell to 3.0% at month-end, while eurozone inflation also fell (6.1% from 7.0%) a level well off its peak. Despite 2023's significant declines in the US and Europe, inflation levels remain elevated compared to central bank targets.
- → Inflation remains lower in China and Japan. In China, inflation levels were only slightly above 0% at month-end as the reopening of their economy has led to an uneven economic recovery.

[1] Source: Bloomberg. Data is as June 30, 2023. The most recent Japanese inflation data is as of May 2023.

Unemployment[1]



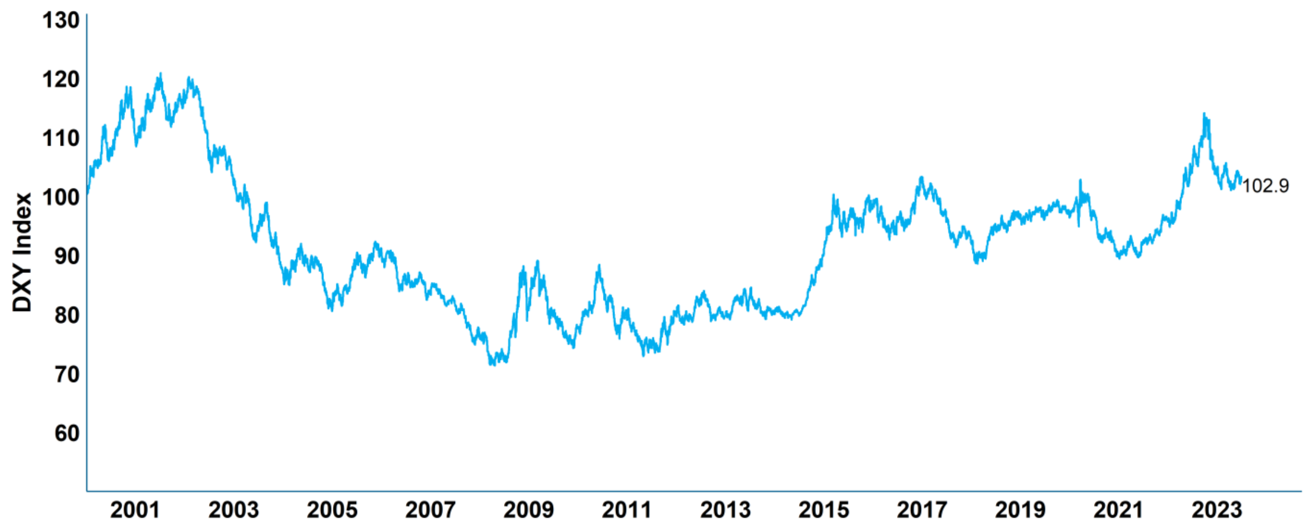
→ Despite slowing growth and high inflation, the US labor market still shows signs of resiliency. Unemployment in the US, which experienced the steepest rise, recently returned to pre-pandemic levels. Broader measures of unemployment (U-6) remain higher at 6.9% but also declined dramatically from their peak.

→ The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, leading to higher unemployment.

→ Unemployment in Europe has also declined but remains higher than the US, while levels in Japan have been flat through the pandemic given less layoffs.

[1] Source: Bloomberg. Data is as June 30, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of May 2023.

US Dollar versus Broad Currencies[1]



→ The dollar finished 2022 much higher than it started, due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows.

→ Late last year and into this year, the dollar declined, as weaker economic data and lower inflation led to investors anticipating the end of Fed tightening. In June, we did see a slight decline in the dollar though.

→ This year, the track of inflation across economies and the corresponding monetary policies will be key drivers of currency moves.

[1] Source: Bloomberg. Data as of June 30, 2023.

Summary

Key Trends:

→ The impacts of still relatively high inflation will remain key, with bond market volatility likely to stay high.

→ Recent issues related to the banking sector seem to have subsided for now but are a reminder that there is a delicate balance for central banks to continue to fight inflation but also to try to maintain financial stability.

→ Global monetary policies could diverge in 2023. The risk of policy errors remains elevated as central banks try to reduce persistent inflation while not tipping their economies into recession.

→ Growth is expected to slow globally this year, with many economies forecast to tip into recession. Inflation, monetary policy, and the war will all be key.

→ In the US, consumers could feel pressure as certain components of inflation remain high (e.g., shelter), borrowing cost are elevated, and the job market may weaken.

→ The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow.

→ Equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation weighing particularly on Europe, and China's sluggish economic reopening and on-going weakness in the real estate sector.

Executive Summary

Q2 2023

SAIF Executive Summary

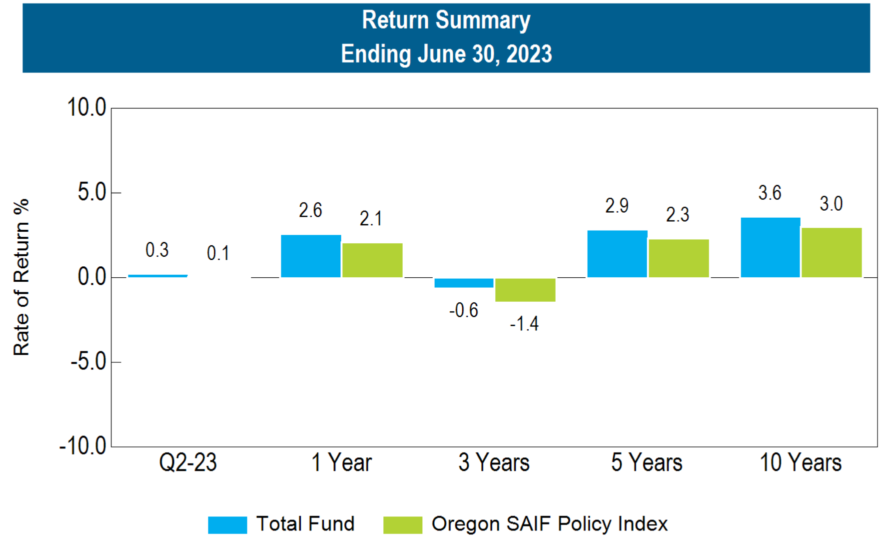
→ The State Accident Insurance Fund (SAIF) had a market value of $4.4 billion as of June 30, 2023.

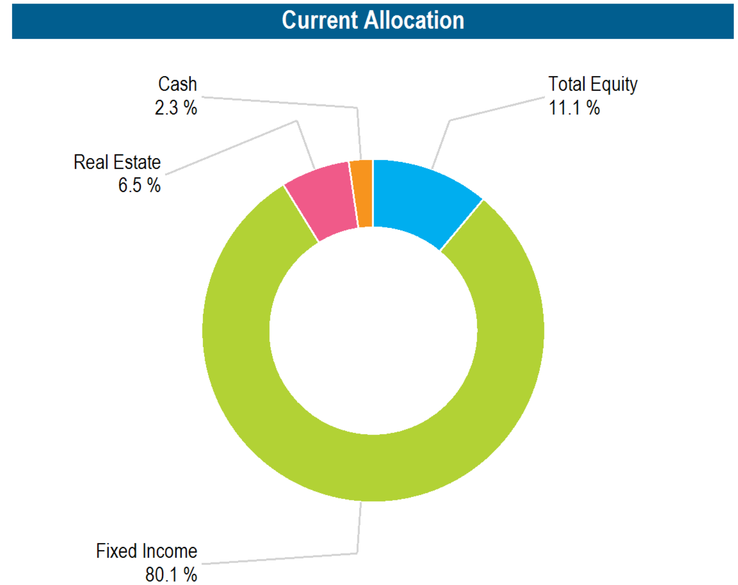
→ Total SAIF returned 0.3% over the second quarter compared to the Oregon SAIF Policy benchmark return of 0.1%. Over the trailing 1-year period the Total SAIF (+2.6%) outperformed Policy (+2.1%).

→ Total Public Equity (+16.5%) drove performance over the trailing 1-year period.

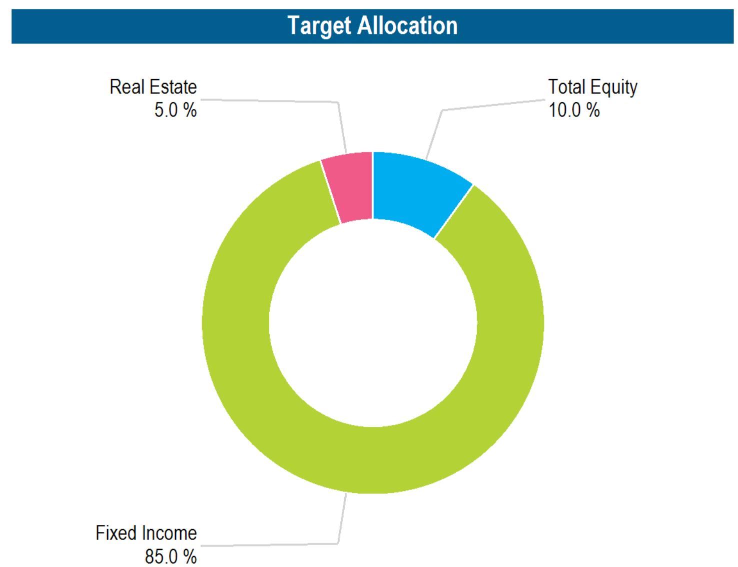
Performance Update

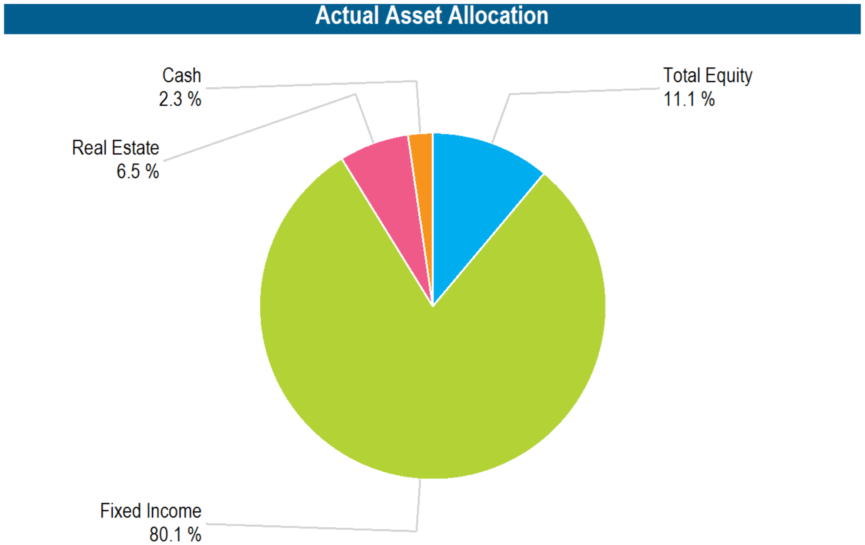
As of June 30, 2023

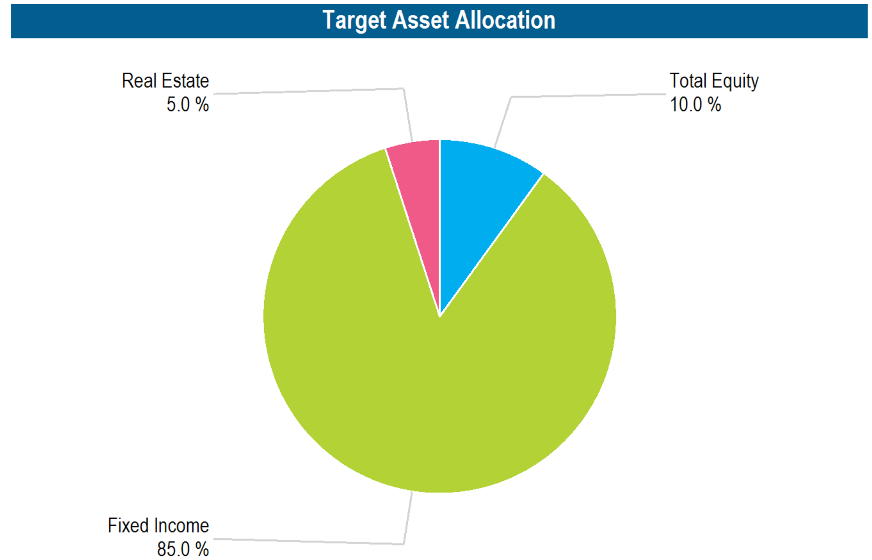




	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund	**0.3**	**2.6**	**-0.6**	**2.9**	**3.6**
Oregon SAIF Policy Index	*0.1*	*2.1*	*-1.4*	*2.3*	*3.0*
Excess Return	0.2	0.5	0.8	0.6	0.6





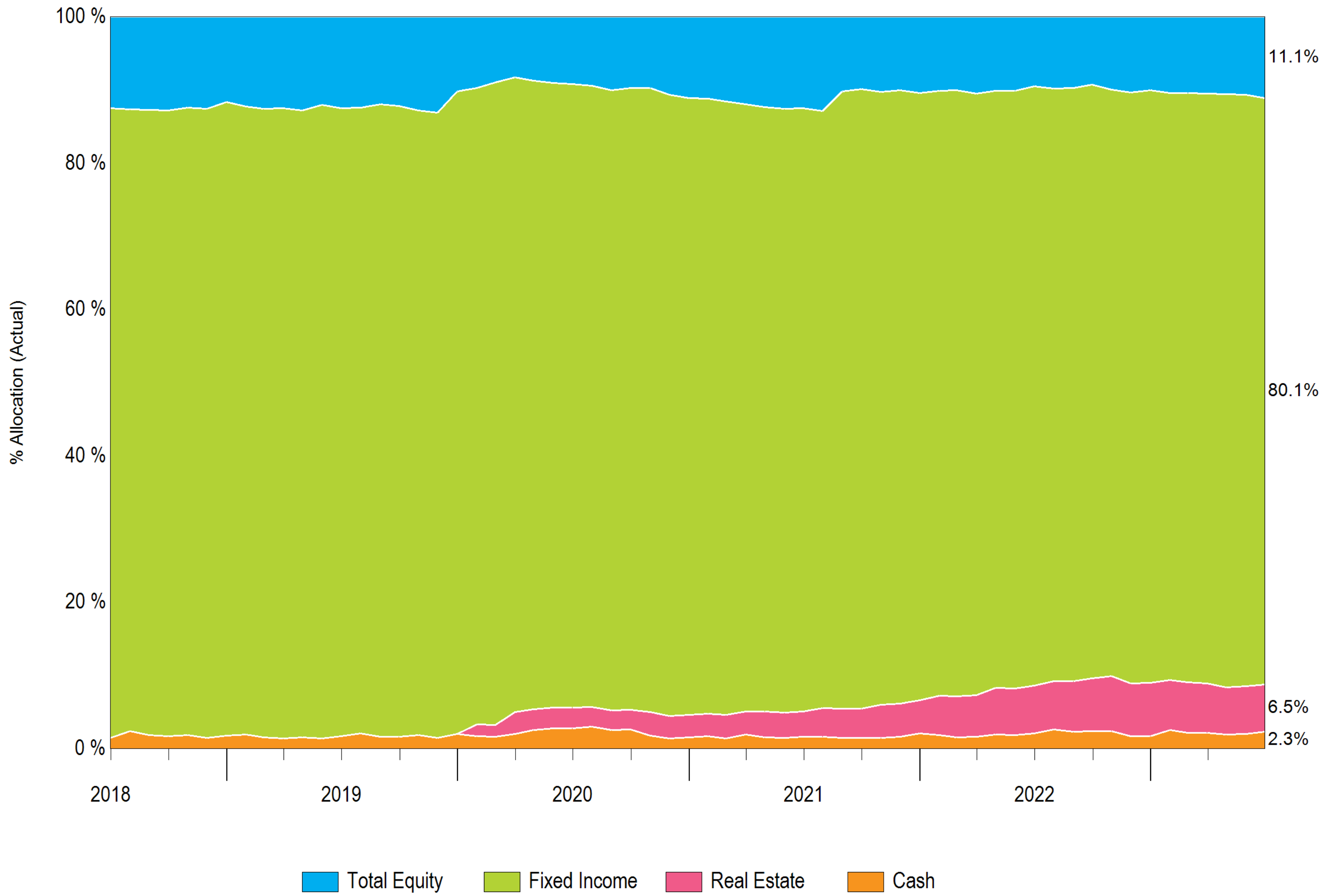


Asset Allocation vs. Target

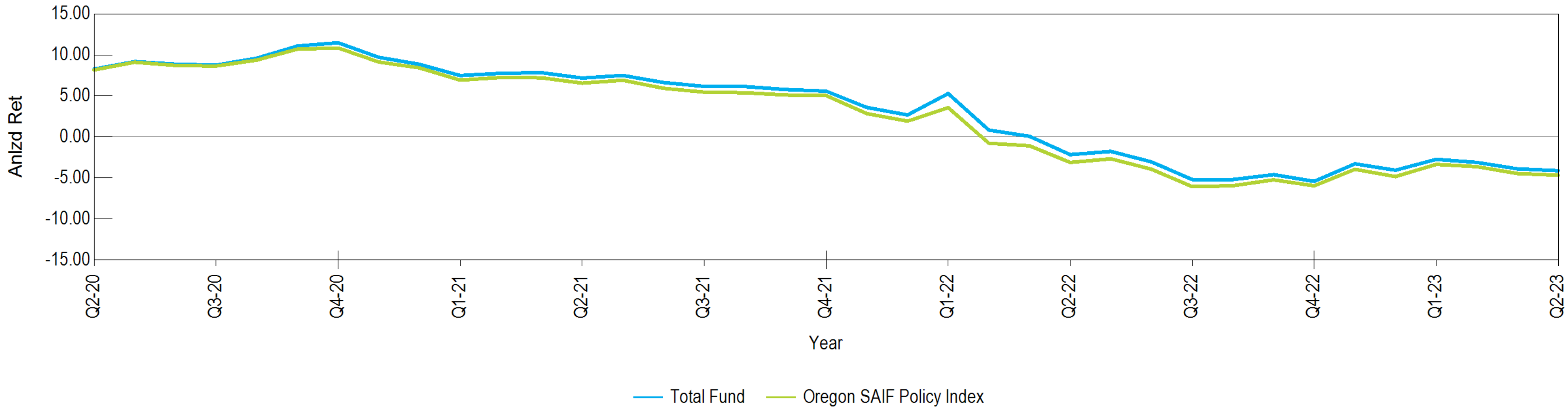
As Of June 30, 2023

	Current	Current	Policy	Difference	Policy Range	Within Range
Total Equity	$485,569,756	11.1%	10.0%	1.1%	7.0% - 13.0%	Yes
Fixed Income	$3,500,281,843	80.1%	85.0%	-4.9%	80.0% - 90.0%	Yes
Real Estate	$282,699,758	6.5%	5.0%	1.5%	0.0% - 7.0%	Yes
Cash	$100,549,307	2.3%	0.0%	2.3%	0.0% - 3.0%	Yes
Total	**$4,369,100,663**	**100.0%**	**100.0%**			

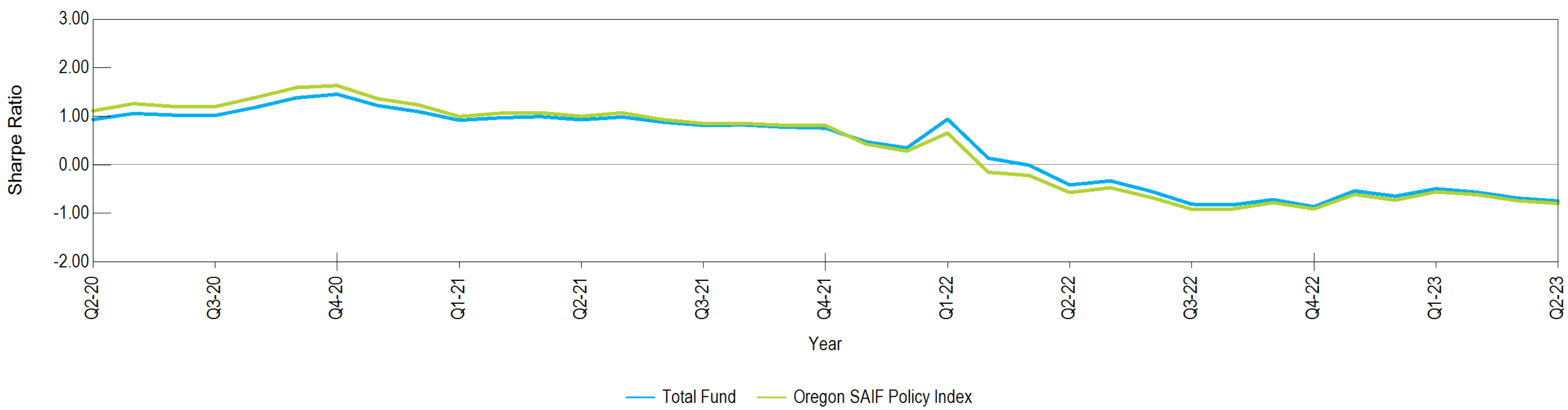
Asset Allocation History
5 Years Ending June 30, 2023



Rolling 3 Year Annualized Return (%)
Total Fund vs. Oregon SAIF Policy Index



Rolling 3 Year Sharpe Ratio
Total Fund vs. Oregon SAIF Policy Index



Asset Class Trailing Net Performance

	Market Value ($)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund	**4,369,100,663**	**100.0**	--	**0.3**	**3.8**	**2.6**	**-0.6**	**2.9**	**3.6**
Oregon SAIF Policy Index				*0.1*	*3.1*	*2.1*	*-1.4*	*2.3*	*3.0*
Total Domestic Equity - SAIF	**485,569,756**	**11.1**	**11.1**	**5.9**	**13.4**	**16.5**	**11.2**	**7.9**	**8.9**
MSCI ACWI IMI Net (Daily)				*5.9*	*13.2*	*16.1*	*11.0*	*7.6*	*8.6*
Total Fixed Income	**3,500,281,843**	**80.1**	**80.1**	**-0.2**	**3.6**	**1.3**	**-2.7**	**1.8**	**2.7**
Oregon SAIF FI Index				*-0.4*	*2.7*	*0.8*	*-3.2*	*1.4*	*2.2*
Total Real Estate	**282,699,758**	**6.5**	**6.5**	**-3.3**	**-6.9**	**-3.2**	**7.7**	--	--
NCREIF ODCE (Custom) (Adj.)				*-3.4*	*-8.4*	*-3.9*	*7.5*	*6.6*	*8.2*
Cash Invested in OSTF	**49,620,581**	**1.1**	**1.1**	**1.1**	**2.4**	**3.6**	**1.1**	**1.8**	**1.4**
ICE BofA US 3-Month Treasury Bill				*1.2*	*2.3*	*3.6*	*1.3*	*1.6*	*1.0*
Pledged Securities	**50,928,726**	**1.2**	**1.2**	**-0.8**	**1.2**	**-0.7**	**-2.3**	**0.3**	**0.4**
ICE BofA US 3-Month Treasury Bill				*1.2*	*2.3*	*3.6*	*1.3*	*1.6*	*1.0*

The current SAIF Policy Index is 10% MSCI ACWI IMI Net (Daily), 85% SAIF FI Index, and 5% NCREIF ODCE (Custom).

The SAIF FI Index is 50% BBG US Credit Corp Investment Grade, 20% BBG MBS Fixed Rate, 15% BBG US Gov, 10% BBG US Corp Int Investment Grade, 5% BBG US HY BA/B 2% Issr Cap).

Trailing Net Performance

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund	**4,369,100,663**	**100.0**	**0.3**	**3.8**	**2.6**	**-0.6**	**2.9**	**3.6**
Oregon SAIF Policy Index			*0.1*	*3.1*	*2.1*	*-1.4*	*2.3*	*3.0*
Total Domestic Equity - SAIF	**485,569,756**	**11.1**	**5.9**	**13.4**	**16.5**	**11.2**	**7.9**	**8.9**
MSCI ACWI IMI Net (Daily)			*5.9*	*13.2*	*16.1*	*11.0*	*7.6*	*8.6*
BlackRock ACWI IMI	485,569,756	11.1	5.9	13.4	16.5	11.2	7.9	8.9
MSCI ACWI IMI Net (Daily)			*5.9*	*13.2*	*16.1*	*11.0*	*7.6*	*8.6*
Total Fixed Income	**3,500,281,843**	**80.1**	**-0.2**	**3.6**	**1.3**	**-2.7**	**1.8**	**2.7**
Oregon SAIF FI Index			*-0.4*	*2.7*	*0.8*	*-3.2*	*1.4*	*2.2*
Wellington	1,745,996,812	40.0	-0.2	3.4	1.2	-2.7	1.7	2.7
Oregon SAIF FI Index			*-0.4*	*2.7*	*0.8*	*-3.2*	*1.4*	*2.2*
Western Asset	1,754,285,032	40.2	-0.2	3.7	1.7	-2.4	2.1	2.9
Oregon SAIF FI Index			*-0.4*	*2.7*	*0.8*	*-3.2*	*1.4*	*2.2*
Total Real Estate	**282,699,758**	**6.5**	**-3.3**	**-6.9**	**-3.2**	**7.7**	**--**	**--**
NCREIF ODCE (Custom) (Adj.)			*-3.4*	*-8.4*	*-3.9*	*7.5*	*6.6*	*8.2*
Morgan Stanley Core	151,216,092	3.5	-1.3	-4.9	-2.1	8.6	--	--
NCREIF ODCE (Custom) (Adj.)			*-3.4*	*-8.4*	*-3.9*	*7.5*	*6.6*	*8.2*
RREEF America	131,483,666	3.0	-5.6	-9.1	-4.5	6.6	--	--
NCREIF ODCE (Custom) (Adj.)			*-3.4*	*-8.4*	*-3.9*	*7.5*	*6.6*	*8.2*
Cash Invested in OSTF	**49,620,581**	**1.1**	**1.1**	**2.4**	**3.6**	**1.1**	**1.8**	**1.4**
ICE BofA US 3-Month Treasury Bill			*1.2*	*2.3*	*3.6*	*1.3*	*1.6*	*1.0*
Pledged Securities	**50,928,726**	**1.2**	**-0.8**	**1.2**	**-0.7**	**-2.3**	**0.3**	**0.4**
ICE BofA US 3-Month Treasury Bill			*1.2*	*2.3*	*3.6*	*1.3*	*1.6*	*1.0*

Calendar Year Performance

	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)
Total Fund	**-12.3**	**2.0**	**9.2**	**13.8**	**-2.3**	**7.9**	**6.4**	**-0.5**	**6.7**	**2.0**
Oregon SAIF Policy Index	*-12.7*	*1.3*	*8.9*	*12.8*	*-1.9*	*6.6*	*5.1*	*-0.1*	*6.1*	*1.1*
Total Domestic Equity - SAIF	**-18.1**	**18.4**	**16.6**	**26.6**	**-9.8**	**24.3**	**8.7**	**-1.9**	**4.2**	**24.0**
MSCI ACWI IMI Net (Daily)	*-18.4*	*18.2*	*16.3*	*26.4*	*-10.1*	*24.0*	*8.3*	*-2.1*	*3.8*	*23.5*
BlackRock ACWI IMI	-18.1	18.4	16.6	26.6	-9.8	24.3	8.7	-1.9	4.2	24.0
MSCI ACWI IMI Net (Daily)	*-18.4*	*18.2*	*16.3*	*26.4*	*-10.1*	*24.0*	*8.3*	*-2.1*	*3.8*	*23.5*
Total Fixed Income	**-14.1**	**-0.4**	**8.8**	**11.7**	**-0.8**	**5.9**	**5.6**	**0.4**	**7.2**	**-0.5**
Oregon SAIF FI Index	*-13.6*	*-0.9*	*8.2*	*11.3*	*-1.0*	*4.8*	*4.6*	*0.1*	*6.3*	*-1.1*
Wellington	-14.1	-0.4	8.8	11.7	-0.8	5.9	5.6	0.4	7.2	-0.5
Oregon SAIF FI Index	*-13.6*	*-0.9*	*8.2*	*11.3*	*-1.0*	*4.8*	*4.6*	*0.1*	*6.3*	*-1.1*
Western Asset	-13.5	-0.6	9.3	12.6	-1.6	6.2	6.8	-1.0	7.1	-0.2
Oregon SAIF FI Index	*-13.6*	*-0.9*	*8.2*	*11.3*	*-1.0*	*4.8*	*4.6*	*0.1*	*6.3*	*-1.1*
Total Real Estate	**21.1**	**11.8**	**-0.5**	--	--	--	--	--	--	--
NCREIF ODCE (Custom) (Adj.)	*21.0*	*13.6*	*0.6*	--	--	--	--	--	--	--
Morgan Stanley Core	20.8	12.5	-0.5	--	--	--	--	--	--	--
NCREIF ODCE (Custom) (Adj.)	*21.0*	*13.6*	*0.6*	--	--	--	--	--	--	--
RREEF America	21.5	10.4	0.4	--	--	--	--	--	--	--
NCREIF ODCE (Custom) (Adj.)	*21.0*	*13.6*	*0.6*	--	--	--	--	--	--	--
Cash Invested in OSTF	**0.5**	**0.1**	**1.6**	**3.3**	**2.0**	**1.3**	**1.2**	**0.5**	**0.5**	**0.7**
ICE BofA US 3-Month Treasury Bill	*1.5*	*0.1*	*0.7*	*2.3*	*1.9*	*0.9*	*0.3*	*0.0*	*0.0*	*0.1*

	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)
Pledged Securities	**-7.7**	**-0.2**	**2.7**	**4.0**	**1.1**	**-0.1**	**1.2**	**0.8**	**1.1**	**0.2**
ICE BofA US 3-Month Treasury Bill	*1.5*	*0.1*	*0.7*	*2.3*	*1.9*	*0.9*	*0.3*	*0.0*	*0.0*	*0.1*

Statistics Summary

1 Year Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Fund	2.59%	9.81%	0.97	0.99	-0.10	0.52%
Oregon SAIF Policy Index	2.09%	9.85%	--	1.00	-0.15	0.00%

Statistics Summary

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Fund	-0.61%	7.12%	1.29	0.98	-0.26	0.63%
Oregon SAIF Policy Index	-1.42%	7.22%	--	1.00	-0.37	0.00%

Statistics Summary

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Fund	2.85%	7.10%	0.54	1.04	0.19	1.01%
Oregon SAIF Policy Index	2.31%	6.75%	--	1.00	0.12	0.00%

Statistics Summary

10 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Fund	3.60%	5.47%	0.78	1.04	0.48	0.78%
Oregon SAIF Policy Index	2.98%	5.20%	--	1.00	0.39	0.00%

Disclaimer, Glossary, and Notes

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM", "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security).

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. Portfolio Return- [Risk Free Rate+Beta*(market return-Risk Free Rate)].

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about is future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a "basis book." For example, a 5% bond pays $5 a year interest on each $100 par value. To figure its current yield, divide $5 by $95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay $100 for the bond that can be bought now for $95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

5% (discount) / 5 (yrs. to maturity)	=	1% pro rata, plus 5.26% (current yield)	=	6.26% (yield to maturity)

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

NCREIF Property Index (NPI): Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.
The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.

TAB 4

CEM BENCHMARKING

CEM Benchmarking

Oregon Public Employees Retirement Fund

CEM Investment Benchmarking Report - 2022

October 25, 2023

Key Takeaways

Returns

- Your 5-year net total return was 7.7%. This was above both the U.S. Public median of 5.9% and the peer median of 6.5%.
- Your 5-year policy return was 5.7%. This was above both the U.S. Public median of 4.7% and the peer median of 5.1%.

Value added

- Your 5-year net value added was 2.0%. This was above both the U.S. Public median of 1.1% and the peer median of 1.4%.

Cost

- Your investment cost of 69.8 bps was below your benchmark cost of 71.2 bps. This suggests that your fund was slightly low cost compared to your peers.
- Your fund was slightly low cost because it paid less than peers for similar services.
- Your costs decreased by 6.6 bps, from 76.4 bps in 2018 to 69.8 bps in 2022, because you had a lower cost asset mix and had a lower cost implementation style. This was partly offset by paying more in total for similar investment styles.

This benchmarking report compares your cost and return performance to the 273 funds in CEM's extensive pension database.

• 146 U.S. pension funds participate. The median U.S. fund had assets of $8.7 billion and the average U.S. fund had assets of $28.8 billion. Total participating U.S. assets were $4.2 trillion.

• 68 Canadian funds participate with assets totaling $2.0 trillion.

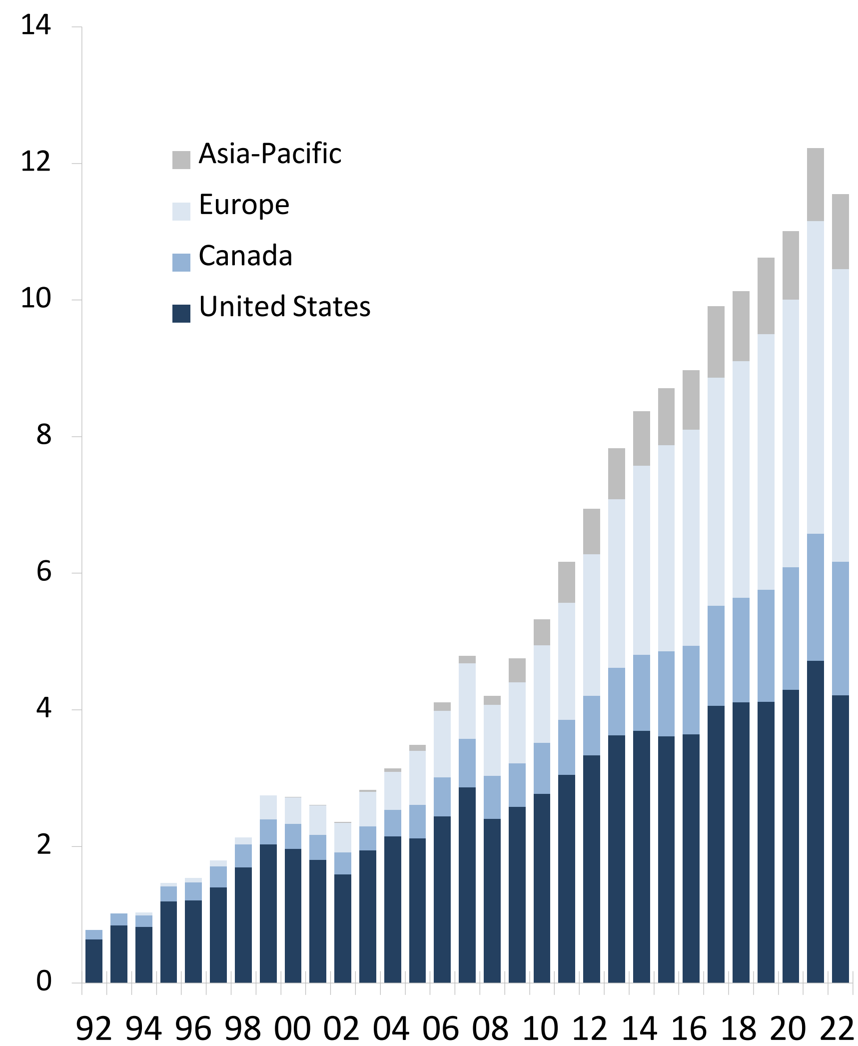
• 53 European funds participate with aggregate assets of $4.3 trillion. Included are funds from the Netherlands, Norway, Sweden, Finland, Ireland, Denmark and the U.K.

• 5 Asia-Pacific funds participate with aggregate assets of $1.1 trillion. Included are funds from Australia, New Zealand, China and South Korea.

• 1 funds from other regions participate.

The most meaningful comparisons for your returns and value added are to the U.S. Public universe, which consists of 41 funds.

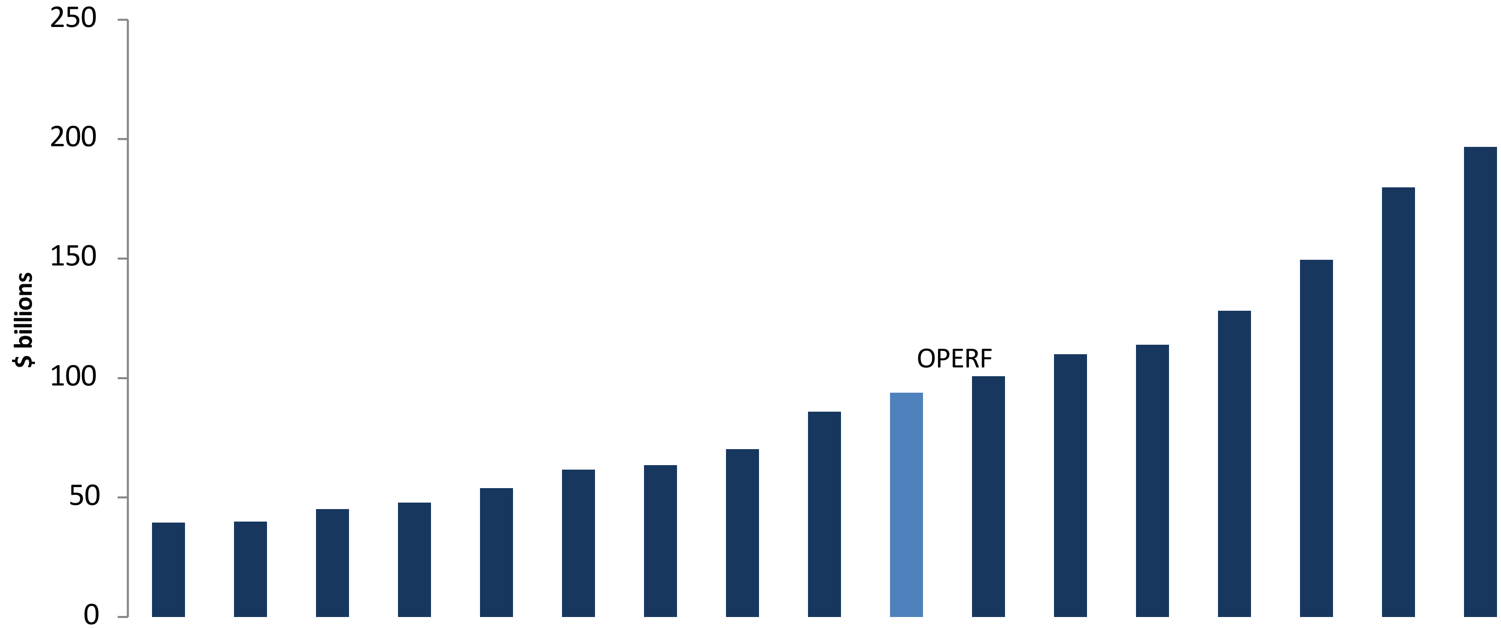
Participating assets ($ trillions)



The most valuable comparisons for cost performance are to your custom peer group because size impacts costs.

Peer group for Oregon Public Employees Retirement Fund

• 17 U.S. Public public sponsors from $39.3 billion to $196.8 billion
• Median size of $85.9 billion versus your $93.8 billion



To preserve client confidentiality, given potential access to documents as permitted by the Freedom of Information Act, we do not disclose your peers' names in this document. For some of the peers, 2021 cost data was used as a proxy for 2022.

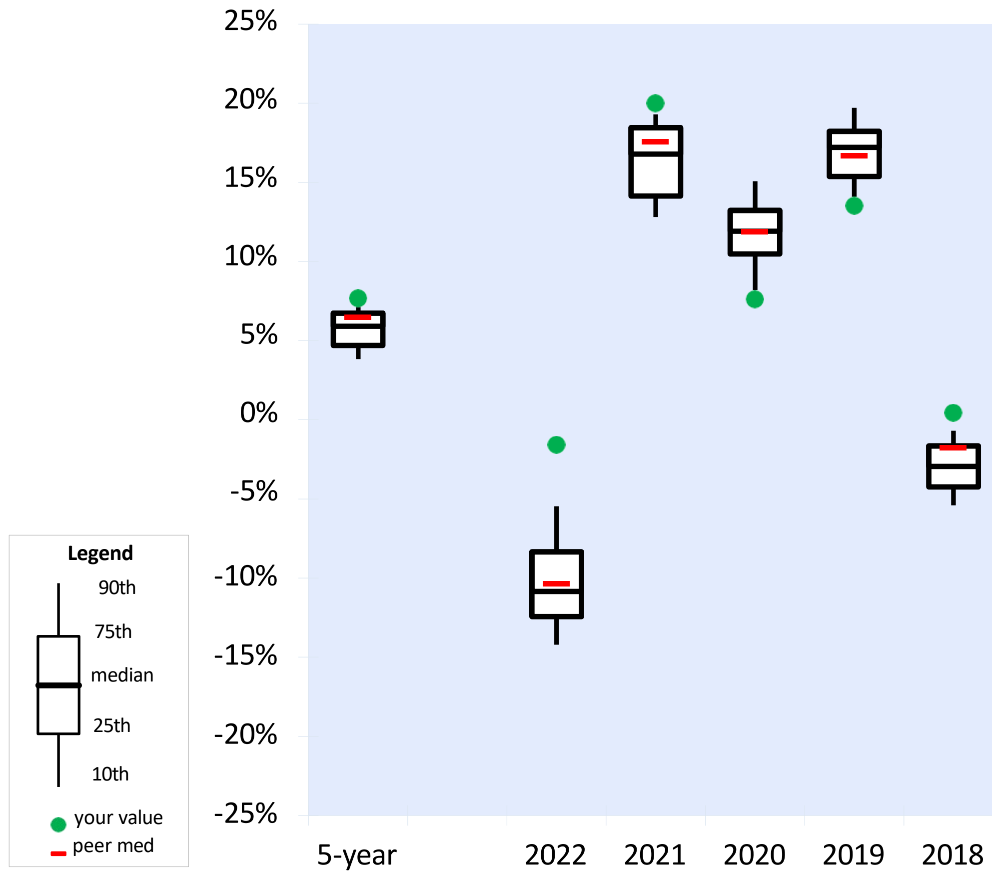
Your 5-year net total return of 7.7% was above both the U.S. Public median of 5.9% and the peer median of 6.5%.

Total returns, by themselves, provide little insight into the reasons behind relative performance. Therefore, we separate total return into its more meaningful components: policy return and value added.

	Your 5-year
Net total fund return	7.7%
- Policy return	5.7%
= Net value added	2.0%

This approach enables you to understand the contribution from both policy mix decisions (which tend to be the board's responsibility) and implementation decisions (which tend to be management's responsibility).

U.S. Public net total returns - quartile rankings



	5-year	2022	2021	2020	2019	2018
You	7.7%	-1.6%	20.0%	7.6%	13.5%	0.4%
Peer median	6.5%	-10.4%	17.6%	11.9%	16.7%	-1.8%
U.S. Public median	5.9%	-10.8%	16.8%	11.9%	17.2%	-2.9%

Your 5-year policy return of 5.7% was above both the U.S. Public median of 4.7% and the peer median of 5.1%.

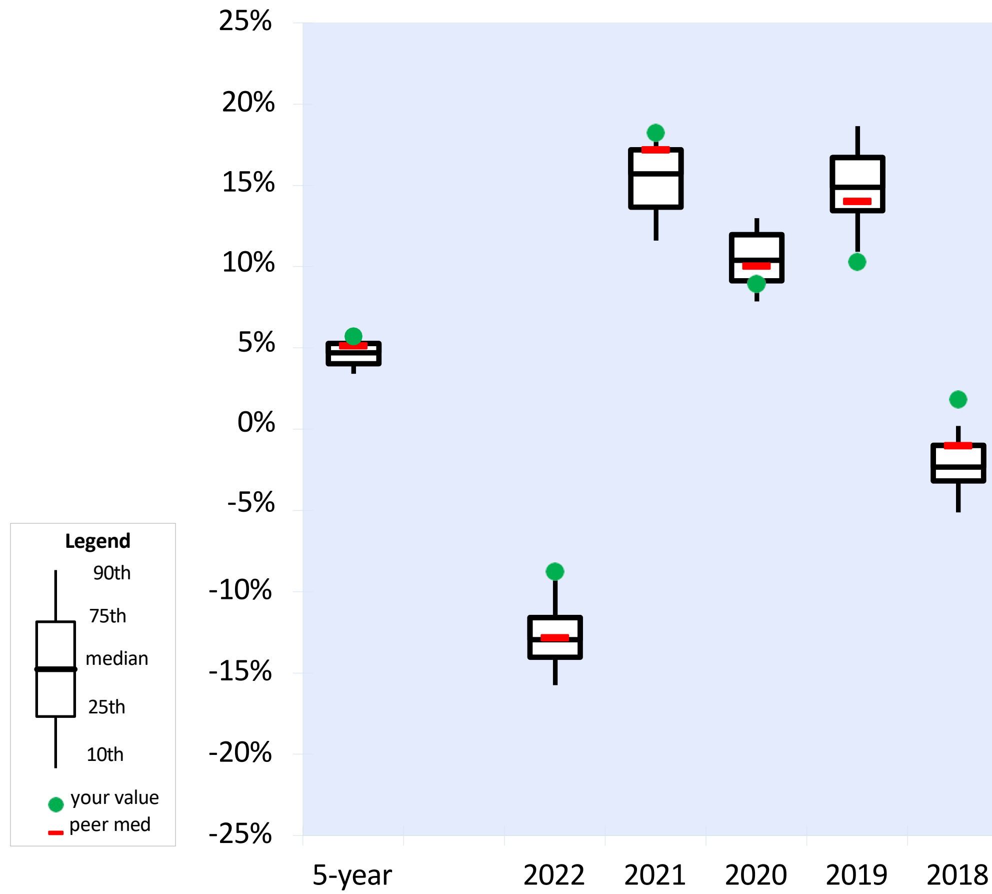
Your policy return is the return you could have earned passively by indexing your investments according to your policy mix.

Having a higher or lower relative policy return is not necessarily good or bad. Your policy return reflects your investment policy, which should reflect your:

- Long term capital market expectations
- Liabilities
- Appetite for risk

Each of these three factors is different across funds. Therefore, it is not surprising that policy returns often vary widely between funds.

U.S. Public policy returns - quartile rankings

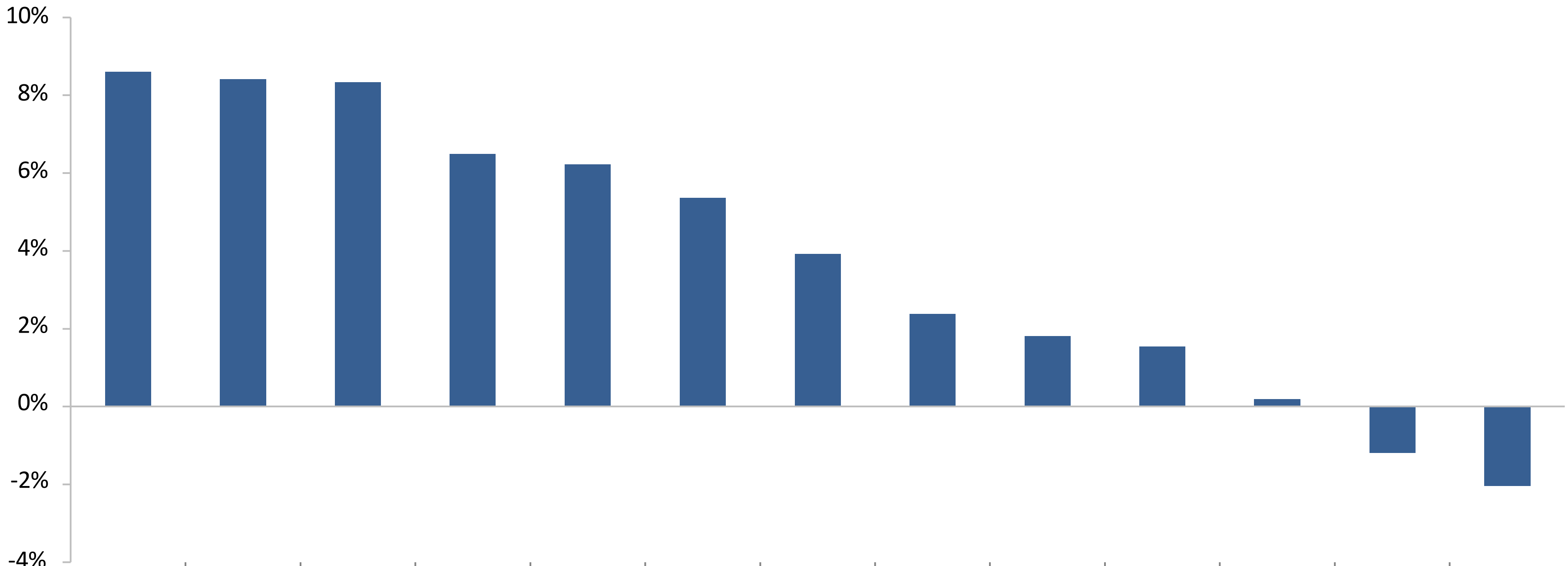


	5-year	2022	2021	2020	2019	2018
You	5.7%	-8.8%	18.2%	8.9%	10.3%	1.8%
Peer median	5.1%	-12.8%	17.2%	10.1%	14.0%	-1.0%
U.S. Public median	4.7%	-12.9%	15.7%	10.4%	14.9%	-2.3%

To enable fairer comparisons, the policy returns of all participants, including your fund, were adjusted to reflect private equity benchmarks based on lagged, investable, public-market indices. Prior to this adjustment, your 5-year policy return was 6.4%, 0.7% higher than your adjusted 5-year policy return of 5.7%. Mirroring this, your 5-year total fund net value added would be 0.7% lower.

Differences in policy returns are caused by differences in benchmarks and policy mix. The two best performing asset classes for the 5 years ending 2022 were Stock - U.S. and Infrastructure.

Average reported benchmark returns for common asset classes - 5-year returns



	Stock US	Infra-structure	Real Estate [1]	Private Equity [1]	Natural Resources	Stock Global	Hedge Funds [1]	REITs	Stock EAFE	Fixed Income Inflation Indexed	Fixed Income US	Stock Emerging	Fixed Income Long
Average Benchmark Return	8.6%	8.4%	8.3%	6.5%	6.2%	5.4%	3.9%	2.4%	1.8%	1.5%	0.2%	-1.2%	-2.0%

1. The private equity benchmark is the average of the default private equity benchmark returns applied to U.S. Public participants based on a blend of listed small cap proxies. The hedge fund and real estate benchmarks are the averages of benchmark returns reported by U.S. Public participants.

Your 5-year policy return of 5.7% was above the U.S. Public median of 4.7% primarily because of:

- The positive impact of your lower weight in Fixed Income (your 21% 5-year average weight versus a U.S. Public average of 28%). It was one of the worse performing asset classes of the past 5 years.

- The positive impact of your higher weight in Real estate incl. REITs (your 13% 5-year average weight versus a U.S. Public average of 9%). It was one of the better performing asset classes of the past 5 years.

5-year average policy mix

	Your Fund	U.S. Publ Avg.	More/ Less
Stock	34%	46%	-12%
Fixed Income	21%	28%	-8%
Risk parity	2%	1%	1%
Real estate incl. REITs	13%	9%	3%
Alternatives[1]	12%	6%	6%
Private equity	19%	10%	10%
Total	100%	100%	

1 Alternatives includes, commodities, natural resources, infrastructure and other diversifying strategies.

Net value added is the component of total return from active management. Your 5-year net value added was 2.0%.

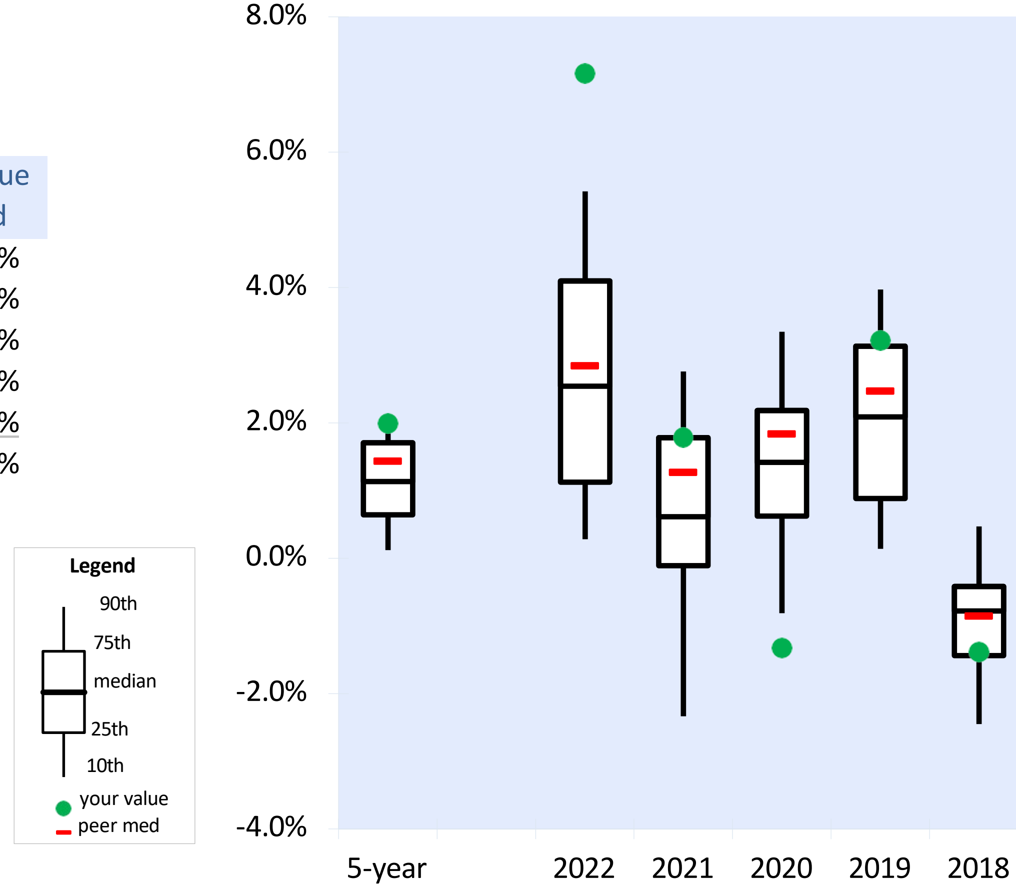
Net value added equals total net return minus policy return.

Value added for Oregon Public Employees Retirement Fund

Year	Net return	Policy return	Net value added
2022	-1.6%	-8.8%	7.2%
2021	20.0%	18.2%	1.8%
2020	7.6%	8.9%	-1.3%
2019	13.5%	10.3%	3.2%
2018	0.4%	1.8%	-1.4%
5-Year	7.7%	5.7%	2.0%

Your 5-year net value added of 2.0% compares to a median of 1.4% for your peers and 1.1% for the U.S. Public universe.

U.S. Public net value added - quartile rankings

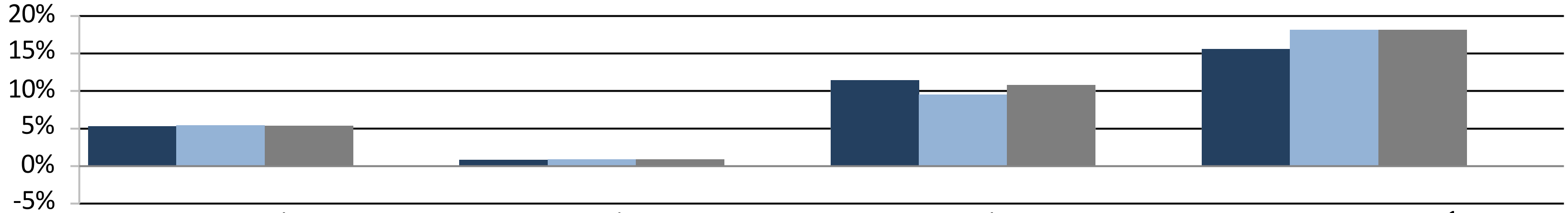


	5-year	2022	2021	2020	2019	2018
You	2.0%	7.2%	1.8%	-1.3%	3.2%	-1.4%
Peer median	1.4%	2.8%	1.3%	1.8%	2.5%	-0.9%
U.S. Public median	1.1%	2.5%	0.6%	1.4%	2.1%	-0.8%

To enable fairer comparisons, the value added for each participant including your fund was adjusted to reflect private equity benchmarks based on lagged, investable public market indices. Prior to this adjustment, your fund's 5-year total fund net value added was 1.3%.

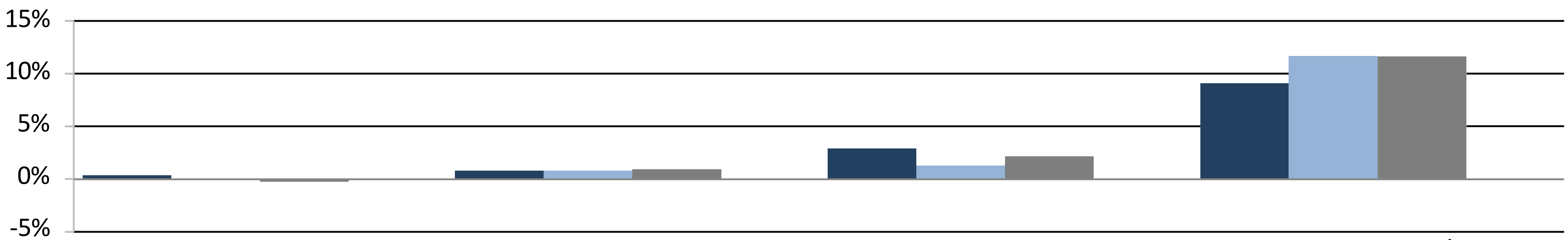
Comparisons of your 5-year net return and net value added by major asset class:

5-year average net return by major asset class



	Stock	Fixed Income	Real Estate	Private Equity[1]
Your fund	5.3%	0.8%	11.4%	15.6%
U.S. Public average	5.4%	0.9%	9.5%	18.1%
Peer average	5.4%	0.9%	10.8%	18.1%
Your % of assets	31.3%	19.6%	10.7%	26.2%

5-year average net value added by major asset class



	Stock	Fixed Income	Real Estate	Private Equity[1]
Your fund	0.4%	0.8%	2.9%	9.1%
U.S. Public average	0.0%	0.8%	1.3%	11.7%
Peer average	-0.2%	0.9%	2.2%	11.6%

1. To enable fairer comparisons, the private equity benchmarks of all participants, including your fund were adjusted to reflect lagged, investable, public-market indices. Prior to this adjustment, your fund's 5-year private equity net value added was 3.7%.

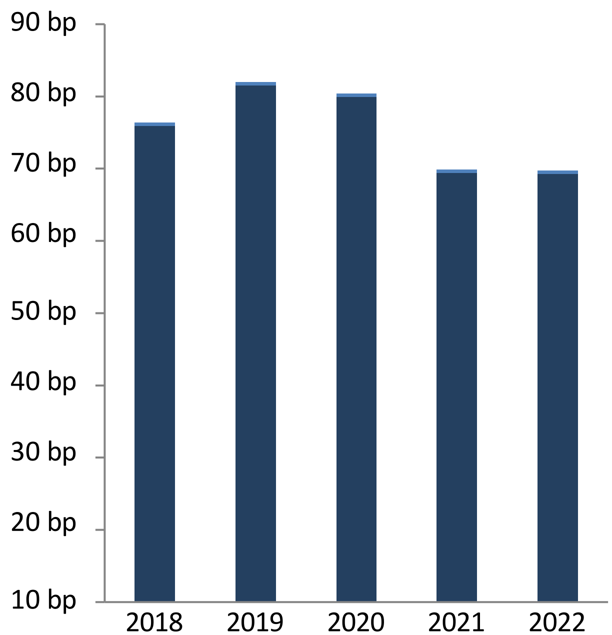
Your investment costs, excluding private asset performance fees, were $654.2 million or 69.8 basis points in 2022.

Asset management costs by asset class and style ($000s)	Internal Management			External Mgmt			
	Passive	Active	Overseeing of external[1]	Passive fees	Active base fees	Total[2]	
Stock	3,652		3,598		43,523	50,773	
Fixed Income	989	1,105	2,411		17,885	22,390	
Risk Parity			322		8,011	8,333	
Real Estate			6,450		95,875	102,325	
Alternatives[3]			7,329		125,891	133,219	
Private Equity[4]			9,898		315,127	325,025	
Derivatives/Overlays			1,759	939	4,600	7,298	
Total excluding priv. asset perf. fees	4,641	1,105	31,766	939	610,912	649,363	69.3bp
Oversight, custodial and other costs[5]							
Oversight of the fund						2,325	
Trustee & custodial						170	
Consulting and performance measurement						504	
Audit						537	
Other						1,274	
Total oversight, custodial & other costs						4,810	0.5bp
Total investment costs (excl. transaction costs & private asset performance fees)						654,173	69.8bp

1 Internal FTE and support costs have been allocated to asset classes based on CEM methodology. Refer to Appendix A2 for details.
2. Total cost excludes carry/performance fees for hedge funds, real estate, infrastructure, natural resources and private equity. Performance fees are included for the public market asset classes.
3. Alternatives include commodities, natural resources, infrastructure and other diversifying assets.
4. Default underlying costs were added: Private equity - Diversified - FoFs 154 bps.
Refer to Appendix A for full details regarding defaults.
5. Excludes non-investment costs, such as benefit insurance premiums and preparing cheques for retirees.

Your costs decreased by 6.6 bps, from 76.4 bps in 2018 to 69.8 bps in 2022, because you had a lower cost asset mix and had a lower cost implementation style. This was partly offset by paying more in total for similar investment styles.

Trend in cost



	2018	2019	2020	2021	2022
Oversight	0.4	0.5	0.5	0.5	0.5
Base*	75.9	81.5	79.9	69.4	69.3
Total	76.4	82.0	80.4	69.9	69.8

*Includes fees for managing internal assets and internal costs of monitoring external programs, where allocated.

Reasons why your costs decreased by 6.6 bps

	2018 cost	2022 cost	Impact in bps
1. Lower cost asset mix			
• Less Stock: 2018 38% vs 2022 24%			(4.2)
• More Real estate ex-REITs: 2018 9% vs 2022 14%			4.1
• More Alternatives[1] 2018 11% vs 2022 16%			2.6
• Less Private equity: 2018 32% vs 2022 26%			(8.2)
• All other mix changes			(0.5)
			(6.2)
2. Lower cost implementation style			
• More passive, less active			(0.8)
• More evergreen, less LP & FoF			(0.6)
• More LP, less FoF			(1.2)
• More co-investment as a % of LP/Co			(3.0)
			(5.5)
3. Paid more in total for similar investment styles	2018 cost	2022 cost	
• Higher Private Equity LP base fees	134.7 bp	145.5 bp	2.2
• Lower Real Estate ex-REITs base fees	82.7 bp	67.3 bp	(1.7)
• Higher internal investment management costs			0.1
• Higher costs for overlays and unfunded strategies	0.4 bp	0.8 bp	0.4
• Higher oversight, custodial & other costs	0.4 bp	0.5 bp	0.1
• All other differences			3.8
			5.0
Total decrease			(6.6)

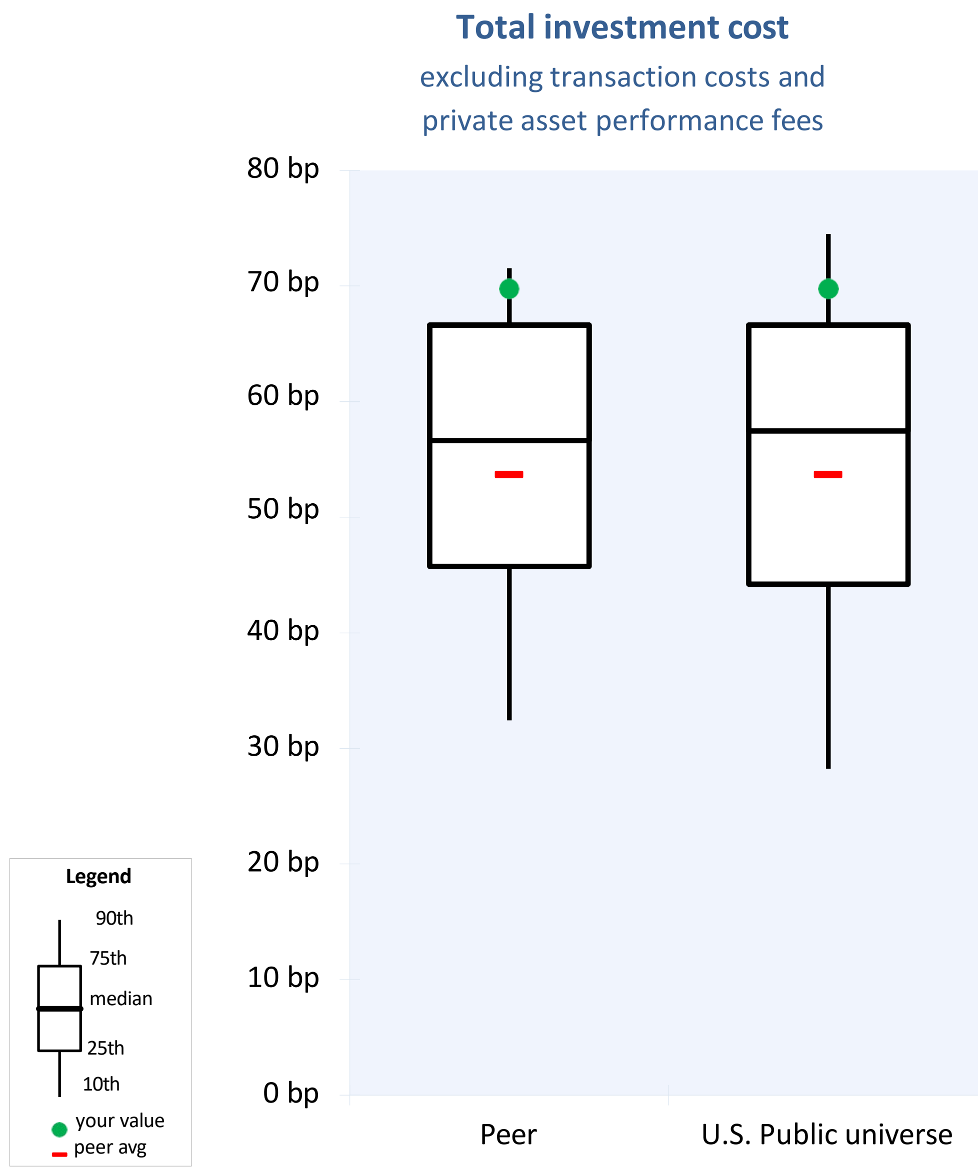
1. Alternatives include commodities, natural resources, infrastructure and other diversifying assets.

Your total investment cost of 69.8 bps was above the peer median of 56.6 bps.

Differences in total investment cost are often caused by two factors that are often outside of management's control:

- Asset mix, particularly holdings of the highest cost asset classes: real estate (excl. REITs), infrastructure, hedge funds, private equity and private credit. These high cost assets equaled 55% of your assets at the end of 2022 versus a peer average of 36%.
- Fund size. Bigger funds have advantages of scale.

Therefore, to assess whether your costs are high or low given your unique asset mix and size, CEM calculates a benchmark cost for your fund. This analysis is shown on the following page.



Benchmark cost analysis suggests that, after adjusting for fund size and asset mix, your fund was slightly low cost by 1.4 basis points in 2022.

Your benchmark cost is an estimate of what your cost would be given your actual asset mix and the median costs that your peers pay for similar services. It represents the cost your peers would incur if they had your actual asset mix.

Your total cost of 69.8 bp was slightly below your benchmark cost of 71.2 bp. Thus, your cost savings were 1.4 bp.

Your cost versus benchmark

	$000s	basis points
Your total investment cost	654,173	69.8 bp
Your benchmark cost	667,448	71.2 bp
Your excess cost	(13,275)	(1.4) bp

Your fund was slightly low cost because it paid less than peers for similar services.

Reasons for your low cost status

	Excess Cost/ (Savings) $000s	Excess Cost/ (Savings) bps
1. Higher cost implementation style		
• More active management, less lower cost passive	9,763	1.0
• Use of external management vs. lower cost internal	15,129	1.6
• Less LPs as a percentage of external	(1,615)	(0.2)
• Less fund of funds	(14,229)	(1.5)
• Co-investment usage	(3,689)	(0.4)
• More overlays	2,306	0.2
	7,665	0.8
2. Paying less than peers for similar services		
• External investment management costs	(16,977)	(1.8)
• Internal investment management costs	1,874	0.2
• Oversight, custodial & other costs	(5,837)	(0.6)
	(20,940)	(2.2)
Total savings	(13,275)	(1.4)

The table below summarizes why your fund is high/low cost relative to the peer-median by asset class.

Why are you high/(low) cost by asset class?

Asset class/category	Impl. style $000s	Paying more/(less) $000s	Total $000s	Total bps
Stock	14,324	481	14,805	1.6 bp
Fixed income	3,700	7,790	11,490	1.2 bp
Risk parity[2]	915	777	1,692	0.2 bp
Real estate, incl REITs	425	5,672	6,097	0.7 bp
Alternatives[1]	5,939	(18,235)	(12,296)	(1.3) bp
Private equity	(19,944)	(11,589)	(31,533)	(3.4) bp
Derivatives and overlays	2,306	0	2,306	0.2 bp
Oversight, custodial & other	n/a	(5,837)	(5,837)	(0.6) bp
Total	7,665	(20,940)	(13,275)	(1.4) bp

1. Alternatives include commodities, natural resources, infrastructure, and other diversifying strategies.
2. Risk parity portfolio was eliminated in Q1 2023.

Key Takeaways

Returns

- Your 5-year net total return was 7.7%. This was above both the U.S. Public median of 5.9% and the peer median of 6.5%.
- Your 5-year policy return was 5.7%. This was above both the U.S. Public median of 4.7% and the peer median of 5.1%.

Value added

- Your 5-year net value added was 2.0%. This was above both the U.S. Public median of 1.1% and the peer median of 1.4%.

Cost

- Your investment cost of 69.8 bps was below your benchmark cost of 71.2 bps. This suggests that your fund was slightly low cost compared to your peers.
- Your fund was slightly low cost because it paid less than peers for similar services.
- Your costs decreased by 6.6 bps, from 76.4 bps in 2018 to 69.8 bps in 2022, because you had a lower cost asset mix and had a lower cost implementation style. This was partly offset by paying more in total for similar investment styles.

Thank you

Christopher Doll

Director, Client Coverage

–

ChrisD@cembenchmarking.com

CEMbenchmarking.com


CEM Benchmarking

TAB 5

ASSET CLASS

CONSULTANT

Status Active PolicyStat ID 14188512

Origination	12/2010	Owner	Rex Kim: Chief Investment Officer
Last Approved	08/2023	Policy Area	Investments
Last Revised	09/2015		
Next Review	08/2024		

INV 210: Consulting Contracts

OREGON INVESTMENT COUNCIL POLICY

–

INTRODUCTION & OVERVIEW

–

Summary Policy Statement

This policy outlines the requirements and limitations of written contracts between the Oregon Investment Council (OIC) and external consultants.

Purpose and Goals

The goal of this policy is to establish the parameters within which the OIC may engage and enter into contractual agreements with external consultants.

Applicability

Classified represented, management service, unclassified executive service

POLICY PROVISIONS

Definitions

Placement Agent: includes any third party, affiliated or unaffiliated with an investment manager, investment advisory firm, or a general partnership, that is a party to an agreement or arrangement (whether oral or written) with an investment manager, investment advisory firm, or a general partnership for the direct or indirect payment of a Placement Fee in connection with an OIC investment.

Placement Fee: includes any compensation or payment, directly or indirectly, of a commission, finder's fee, or any other consideration or benefit paid to Placement Agent.

Policy Statements

1. The OIC shall engage consultants using written contracts. Consultants include, but are not limited to, full-service consultants and specific asset class advisors (e.g., real estate, private equity, etc.).
2. Consulting contracts shall have specified expiration dates, termination clauses and renewal/extension terms. Staff shall undertake a formal "request for proposal" (RFP) process before the end of the contract term (including any renewals or extensions) for the purpose of identifying new candidates, upgrading services, ensuring competitive pricing and acquiring any other information or benefits considered relevant to staff and the Council.
3. Consulting contracts shall be negotiated and executed in compliance with Council policy INV 208: Negotiation and Execution of Contracts.
4. Consulting contracts shall expire on a date not to exceed three years from the effective date of the contract.
5. Consulting contracts shall include a "no-cause" termination clause with a maximum 90-day notice period.
6. The Council directs staff to regularly review and evaluate the work of all contractors on an annual basis.
7. Consulting contracts are limited to a) two renewals or extensions beyond the original expiration date, and b) a final expiration date no more than four years beyond the original expiration date.
8. Upon final expiration of the original contract, or whenever directed by the Council, staff shall undertake and complete an RFP process to include the following:
    a. Identification of potential consulting candidates qualified to provide the required services;
    b. Creation of an RFP which shall include, but not be limited to:
        1. Description of services requested;
        2. Description of the potential or preliminary standards required of the candidates; and
        3. Request for pricing or fee schedule information.
9. Consultants under contract with the Council shall disclose, in written recommendations delivered to the Council, any Placement Agent contact Consultants may have had in connection with such Council recommendations.

Exceptions

None.

Failure to Comply

Failure to comply with this policy may be cause for disciplinary action up to and including dismissal.

PROCEDURES and FORMS

–

ADMINISTRATION

Feedback

Your comments are extremely important to improving the effectiveness of this policy. If you would like to comment on the provisions of this policy, you may do so by e-mailing the Policy Analyst. To ensure your comments are received without delay, *please list the policy number and name in your e-mail's subject*. Your comments will be reviewed during the policy revisions process and may result in changes to the policy.

Approval Signatures

Step Description	Approver	Date
Oregon Investment Council	Rex Kim: Chief Investment Officer	08/2023
	Deena Bothello: General Counsel	08/2023
	Rex Kim: Chief Investment Officer	08/2023

TAB 6

COMMON SCHOOL

FUND REVIEW

October 25, 2023

Common School Fund Review

Michael Langdon
Director of Private Markets

Louise Howard
Senior Investment Officer

Wil Hiles
Investment Officer

OREGON STATE TREASURY

Agenda

	LEGEND: OIC INVESTMENT AND MANAGEMENT BELIEFS
1	**THE OIC SETS POLICY AND IS ULTIMATELY RESPONSIBLE FOR THE INVESTMENT PROGRAM**
	A. Investment management is dichotomous -- part art and part science.
	B. The OIC is a policy-setting council that largely delegates investment management activities to the OST and qualified external fiduciaries.
	C. The OIC is vested with the authority to set and monitor portfolio risk. Both short-term and long-term risks are critical.
	D. To exploit market inefficiencies, the OIC should be long term, contrarian, innovative, andopportunistic in its investment approach.
2	**ASSET ALLOCATION DRIVES RISK AND RETURN**
	A. Asset allocation is the OIC's primary policy tool for managing the investment program's long-term risk/return profile.
	B. Portfolio construction, including diversification and correlation considerations, is essential to maximizing risk-adjusted returns.
3	**THE EQUITY RISK PREMIUM WILL BE REWARDED**
	A. Over the long-term, equity-oriented investments provide reliable return premiums relative to risk-free investments.
4	**PRIVATE MARKET INVESTMENTS CAN ADD SIGNIFICANT VALUE AND REPRESENT A CORE OIC/OST COMPETENCY**
	A. The OIC can capitalize on its status as a true, long-term investor by making meaningful allocations to illiquid, private market investments.
	B. Dispersion in private market investment returns is wide; accordingly, top-quartile manager selection, diversification across vintage year, strategy type, and geography, and careful attention to costs are
5	**CAPITAL MARKETS HAVE INEFFICIENCIES THAT CAN BE EXPLOITED**
	A. Inefficiencies that can be exploited by active management may exist in certain segments of the capital markets.
	B. Passive investment management in public markets will outperform the median active manager in those markets over time.
6	**COSTS DIRECTLY IMPACT INVESTMENT RETURNS AND SHOULD BE MONITORED AND MANAGED CAREFULLY**
	A. All fees, expenses, commissions, and transaction costs should be diligently monitored and managed in order to maximize net investment returns.
	B. External incentive structures should be carefully evaluated to ensure proper alignment with investment program objectives.
7	**FAIR AND EFFICIENT CAPITAL MARKETS ARE ESSENTIAL FOR THE LONG-TERM INVESTMENT SUCCESS**
	A. The OIC recognizes that the quality of regulation and corporate governance can affect the long-term value of its investments.
	B. The OIC also recognizes that voting rights have economic value.
8	**THE INTEGRATION OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) FACTORS, SIMILAR TO OTHER INVESTMENT FACTORS, MAY HAVE A BENEFICIAL IMPACT ON THE ECONOMIC OUTCOME OF AN INVESTMENT AND AID IN THE ASSESSMENT OF RISKS ASSOCIATED WITH THAT INVESTMENT**
	A. The consideration of ESG factors within the investment decision-making framework is importantin understanding the near-term and long-term impacts of investment decisions.
	B. Over time, there has been an evolution of multi-factor, or more holistic approaches, to identify opportunities and remediate risks, in a large globally-diversified investment portfolio.
9	**DIVERSITY, IN ALL ASPECTS, IS ACCRETIVE TO MEETING OIC OBJECTIVES**
	A. By embracing and enhancing diversity and inclusion efforts, the OIC ensures that the investment program will be exposed to and informed by a wide range of perspectives, ideas and opinions.

Fund Objectives

Investment Policy

- The Oregon Investment Council (OIC) formulates policies for the investment of funds under the control and administration of the Department of State Lands, known as the Common School Fund (the Fund)
- Investment policy provides guidance to Oregon State Treasury staff and investment consultants regarding approved asset classes, asset allocation, and reporting requirements
- The primary objective of the Common School Fund is to generate a real (inflation-adjusted) rate of return that is sufficient to support the mission of the Fund and its spending needs into perpetuity

Distribution Policy

- On an annual basis, the Common School Fund distributes 3.5% of the Fund's trailing three-year average market value to the Department of Education to support the State's K-12 education programs
- In addition, with the passage of SB 1566, certain funds (subject to a formula) are distributed to the State to pay down some of the PERS unfunded liability

Fund Evolution

2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025

Updated Strategic Asset Allocation: Added Real Estate & Alternatives (solely Diversifying Strategies) Asset Classes

Initial Build out of Real Estate & Alternatives (solely Diversifying Strategies) Portfolios

Reviewed Asset Allocation in response to passing of SB 1566

Reviewed Investment Policy Statement

Conducted Distribution Study & Reviewed Asset Allocation

Updated Strategic Asset Allocation: Bifurcated Alternatives into Diversifying Strategies & Real Assets

Increased Private Equity Allocation

Updated Investment Policy Statement

Implement Asset Allocation Changes

Build out Alternative Asset Classes

Enhance Manager Composition within Asset Class Portfolios

Implement remainder of Asset Allocation changes

Build out Alternative Asset Classes

Enhance Underlying Asset Class Portfolios

Conduct Distribution Study & Review Asset Allocation

Asset Allocation

Asset Class	Benchmark	Market Value	Current Allocation	Interim Target	Long-Term Target	Active Weight	Approved Range
Global Equity	MSCI ACWI IMI (Net)	$1.1B	51.3%	47.5%	45.0%	6.3%	40% - 50%
Private Equity	Russell 3000 + 300 bps	$178.1M	8.1%	12.5%	15.0%	-6.9%	10% - 20%
Fixed Income	Bloomberg US Aggregate Bond Index	$552.5M	25.1%	22.5%	20.0%	5.1%	15% - 25%
Real Estate	NCREIF ODCE QTR Lag (Net)	$204.9M	9.3%	10.0%	10.0%	-0.7%	5% - 15%
Real Assets	CPI + 4%	$37.4M	1.7%	2.5%	5.0%	-3.3%	0% - 10%
Diversifying Strategies	HFRI FOF: Consv Index	$80.2M	3.6%	5.0%	5.0%	-1.4%	0% - 10%
Cash	N/A	$18.3M	0.8%	0.0%	0.0%	0.8%	0% - 3%
Total Fund		**$2.2B**	**100%**				

Total Fund	Long-Term Target
10-Year Expected Nominal Return	7.1%
10-Year Expected Standard Deviation	12.5%

OREGON STATE TREASURY

Source: Asset Allocation and Performance provided by State Street, as of June 30, 2023; Expected Return and Risk provided by Aon.

Performance – Total Fund

- For the year ended June 30, 2023, the Common School Fund (Total Fund) returned 7.0%, slightly underperforming its benchmark, while providing positive to flat results over longer trailing time periods
- Global Equity and Real Assets provided strong absolute returns over the prior year, while returns for Private Equity, Real Estate and Diversifying strategies were negative
- The Fund's three-year relative outperformance was primarily driven by the Global Equity allocation

	1 Year	3 Years	5 Years	10 Years
Total Fund	7.0%	8.9%	6.3%	7.3%
Policy Benchmark	7.1%	7.6%	6.3%	7.3%
Excess Return	**-0.2%**	**1.2%**	**0.0%**	**0.0%**

OREGON STATE TREASURY

Policy Benchmark: From January 1, 2023 to present, 47.5% MSCI ACWI IMI Net (Daily), 12.5% Russell 3000+300 bps quarter lag, 22.5% BBG US Agg, 10% NCREIF ODCE (Custom) (Adj.), 2.5% CPI +4%, and 5% HFRI FOF: Conservative Index.
Source: State Street, as of June 30, 2023.

Strategic Priorities

- Implement asset allocation changes (approved by the OIC in November 2022) – notably, funding up Real Assets and Private Equity, while reducing Global Equity and Fixed Income exposure

- Review portfolio construction with asset class teams to refine investment manager composition – notably Global Equity and Fixed Income

- Consolidate asset class guidelines in unification with Investment Policy Statement

Appendix:
Asset Class Performance

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Performance – Global Equity

- For the year ended June 30, 2023, the Global Equity portfolio slightly outperformed its benchmark and is outperforming over longer, trailing time periods
- Global equities rallied on positive economic data and cooling inflation, after a difficult calendar year in 2022
- The U.S. stock market (represented by the S&P 500) gained 19.6%, while developed international countries (MSCI World Ex US Index) gained 17.4% and emerging markets (MSCI EM Index) gained a meager 1.8%
- Large cap stocks outperformed their small cap counterparts in developed markets, while smaller cap stocks outperformed in emerging markets
- Growth outperformed Value oriented stocks in developed markets, while Value outperformed in emerging markets

	Market Value	1 Year	3 Years	5 Years	10 Years
Global Equity	$1.1B	16.5%	14.1%	8.4%	9.3%
MSCI ACWI IMI (Net)		16.1%	11.0%	7.7%	8.6%
Excess Return		**0.3%**	**3.1%**	**0.7%**	**0.7%**

Source: State Street, as of June 30, 2023.

Performance – Fixed Income

- For the year ended June 30, 2023, the Fixed Income portfolio outperformed its benchmark and is also outperforming over longer, trailing time periods
- A combination of sector allocation (favoring spread sectors over Treasuries) and modestly tightening credit spreads contributed to recent outperformance
- Interest rates across the U.S. Treasury curve moved higher into June 2023, most notably in the short end of the curve, as the Federal Reserve attempts to combat inflation (2% target) through on-going quantitative tightening (+0.25% in May and skip in June)
- The U.S. economy remains resilient although signs of the impact of higher interest rates are starting to emerge

	Market Value	1 Year	3 Years	5 Years	10 Years
Fixed Income	$552.5M	0.5%	-3.5%	1.2%	2.1%
Bloomberg US Agg Bond Index		-0.9%	-4.0%	0.8%	1.6%
Excess Return		**1.4%**	**0.4%**	**0.4%**	**0.5%**

Source: State Street, as of June 30, 2023.

Performance – Private Equity

- For the year ended June 30, 2023, the Private Equity (PE) portfolio underperformed its benchmark and is also underperforming over longer, trailing time periods
- The PE market has begun to emerge with a slightly more favorable view towards the back half of ’23 with concerns of a looming recession somewhat lessening
- IPO markets have re-opened, albeit, still somewhat weak, aided in part by the S&P 500 and Nasdaq rallying through the first half of ‘23
- Fundraising has continued to slow, and fund closings timeframes have lengthened
- Deal volume through the first half of 2023 was down nearly 60% when compared to the same period in 2022
- General Partners (GPs), who had tremendous fund raises over recent years, will eventually face pressure to deploy capital. Coupled with a backlog of un-exited portfolio companies, Limited Partners (LPs) are starting to face depressed liquidity levels as they await capital to be returned from GPs

	Market Value	1 Year	3 Years	5 Years	10 Years
Private Equity	$178.1M	-8.0%	19.1%	13.6%	13.5%
Russell 3000 + 300 bps Qtr Lag		-5.8%	22.0%	13.7%	15.1%
Excess Return		**-2.1%**	**-2.9%**	**-0.2%**	**-1.5%**

Source: State Street, as of June 30, 2023.

Performance – Real Estate

- For the year ended June 30, 2023, the Real Estate portfolio outperformed its benchmark, and is also outperforming over longer, trailing time periods
- The Real Estate portfolio is currently comprised of 6 managers – evenly split between Core/Core-plus and Non-Core
- In the Core portfolio, further increases in capitalization and discount rates continued to drive depreciation
- Non-Core Funds are yet to post meaningful results, as all funds are early in their investment periods, with the bulk of capital remaining to be called

	Market Value	1 Year	3 Years	5 Years	10 Years
Real Estate	$204.9M	-2.2%	8.7%	7.2%	N/A
NCREIF ODCE QTR Lag (Net)		-3.9%	7.5%	6.6%	N/A
Excess Return		**1.7%**	**1.3%**	**0.6%**	**N/A**

Source: State Street, as of June 30, 2023.

Performance – Real Assets

- For the year ended June 30, 2023, the Real Assets portfolio outperformed its benchmark and is also outperforming over the 3-year period
- The Real Assets portfolio is currently comprised of 2 Infrastructure managers and 2 Natural Resources manager
- The Real Assets portfolio is still early in its lifecycle (initial funding in 2018), with approved managers still calling capital, resulting in an underweight to its long-term target allocation (currently 1.7% vs. 5.0% target)
- Additional managers/funds are expected to be approved and funded over the remainder of the year

	Market Value	1 Year	3 Years	5 Years	10 Years
Real Assets	$37.4M	9.7%	14.5%	N/A	N/A
CPI + 4%		7.1%	10.0%	N/A	N/A
Excess Return		**2.6%**	**4.5%**	**N/A**	**N/A**

Source: State Street, as of June 30, 2023.

Performance – Diversifying Strategies

- For the year ended June 30, 2023, the Diversifying Strategies portfolio underperformed its benchmark, with mixed results over longer time periods
- The Diversifying Strategies portfolio is still relatively early in its lifecycle (initial funding in 2018) and is nearing its long-term target allocation (currently 3.6% vs. 5.0% target)
- The Diversifying Strategies portfolio has been successfully restructured and is now diversified across 9 managers
- Commodity Trading Advisor (CTA), also known as (managed futures) Hedge Funds, and to a lesser extent, style premia managers continue to drive shorter term performance, while medium-term (3 and 5 year) performance can almost entirely be attributed to pronounced long/short Value style factor exposures

	Market Value	1 Year	3 Years	5 Years	10 Years
Diversifying Strategies	$80.2M	-2.6%	6.2%	-1.7%	N/A
HFRI FOF: Conservative Index		3.5%	6.0%	3.9%	N/A
Excess Return		**-6.1%**	**0.2%**	**-5.6%**	**N/A**

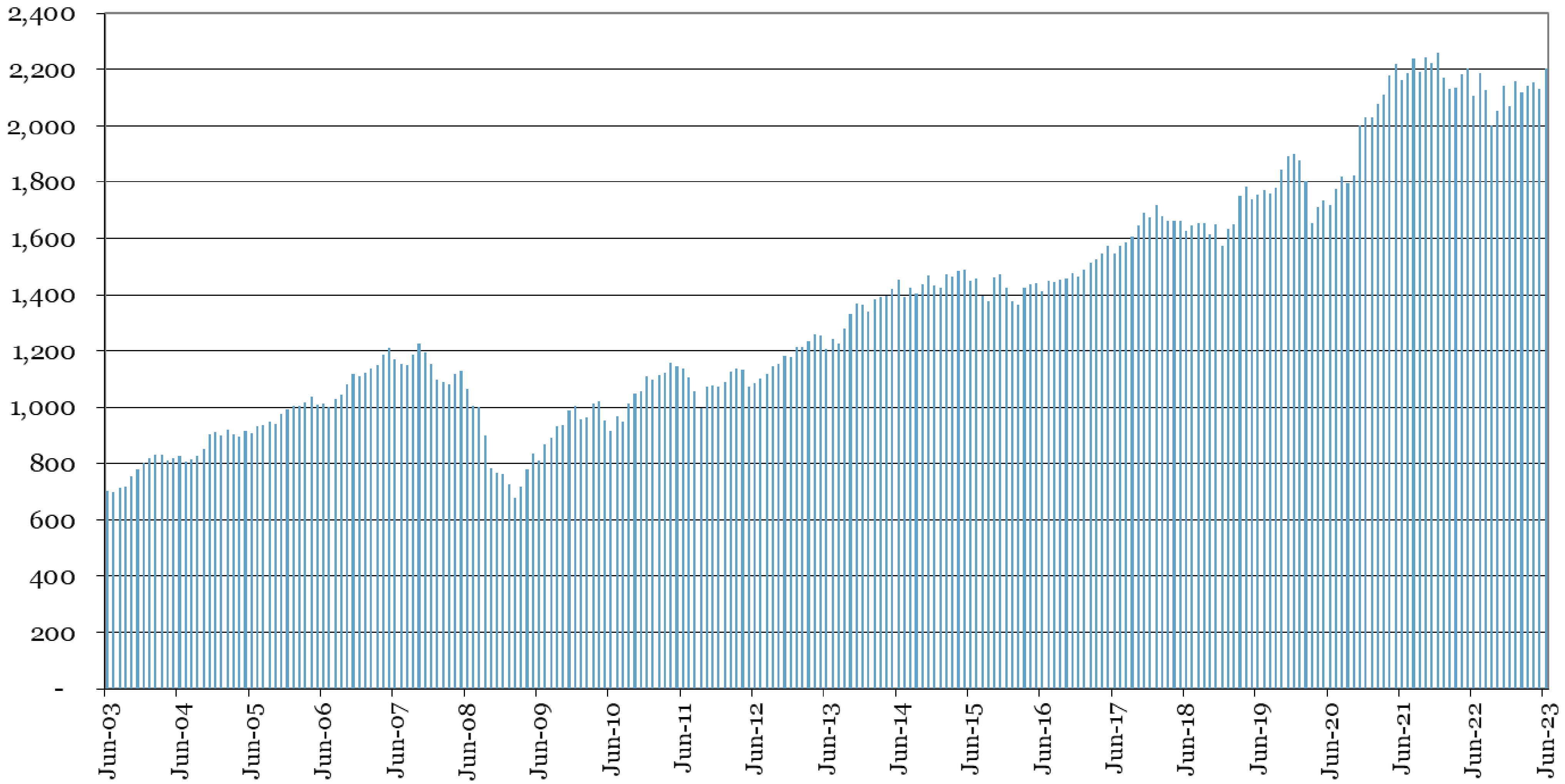
OREGON STATE TREASURY

Source: State Street, as of June 30, 2023.

Appendix: Total Fund Net Asset Value (NAV)

OREGON STATE TREASURY

Total Fund NAV ($ Millions)



OREGON STATE TREASURY

Source: State Street, as of June 30, 2023.

Appendix: Oregon State Treasury Team

OREGON
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TREASURY

Michael Langdon
Director of Private Markets
Tenure: 2015

As the Director of Private Markets, Mike manages teams with oversight of OPERF's private equity, real estate, real asset and opportunities portfolios with current net asset value of nearly $50 billion.

- Oversee $5-7 billion per annum of commitment pacing
- Chair OST's internal investment committee for private market portfolio
- Day to day portfolio manager for OPERF's ~$24 billion private equity portfolio
- Manage select, strategic external manager relationships

Education: BS Clemson University, CFA Charterholder

Wil Hiles
Investment Officer
Tenure: 2016

As Investment Officer, Wil supports the Public Equity team's day-to-day activities surrounding OPERF by serving as a key contact for internal groups, external investment managers, the custodian bank, and other third-party providers. Wil also assists in overseeing the Oregon Common School Fund and the Oregon Savings Growth Plan. Duties assigned include:

- Monitors and evaluates current and prospective investment managers
- Evaluates portfolio structure and makes recommendations to improve risk-adjusted returns
- Coordinates new account fundings, terminations, portfolio transitions, and cash raise activity
- Assist in overseeing proxy voting and commission recapture programs
- Conducts market research and analysis
- Serves as internal equity portfolio manager and trader

Education: BA in Finance from Linfield College; Master of Science in Finance (MSF) from Pacific University

Louise Howard
Senior Investment Officer
Tenure: 2022

As Senior Investment Officer, Louise leads the Public Equity team on the oversight of the OPERF public equity portfolio, the Common School Fund, and the Oregon Savings Growth Plan. She also:

- Leads the oversight of the $25 billion OPERF public equity program comprised of a mix of 34 internal and external investment strategies
- Directs the management of five internally managed portfolios totaling approximately $9.6 billion
- Leads the monitoring and evaluation efforts for the external and prospective investment managers
- Evaluates portfolio structure and makes recommendations to improve risk-adjusted returns
- Responsible for managing and coordinating the liquidity needs of OPERF by liquidating public equity assets for pension payments and private market capital calls
- Participates in private market Committee Meetings (Real Estate, Private Equity, Alternative, and Opportunistic)

Education & Certifications: BA University of New Orleans, MBA University of New Orleans, CFA Charterholder, CAIA Charterholder

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Tobias Read
Oregon State Treasurer

16290 SW Upper Boones Ferry Road
Tigard, OR 97224

oregon.gov/treasury

OREGON STATE TREASURY

Tobias Read
Oregon State Treasurer

Michael Kaplan
Deputy State Treasurer

To: The Oregon Investment Council

From: Jen Plett, Investment Officer, Portfolio Risk & Research

Re: Third Quarter 2023 Risk Report for the Common School Fund (CSF)

Executive Summary

This memo summarizes CSF's predicted volatility, as estimated by Aladdin, Treasury's end-to-end investment analytics platform built by BlackRock. As of September 30, 2023, Aladdin estimated a return volatility of 12.6% for CSF, in-line with staff's expectation. Therefore, staff recommends no additional action at this point.

CSF Asset Allocation

Investment Belief #2 in INV 1201: Statement of OIC Investment and Management Beliefs states: "*Asset Allocation Drives Risk and Return*". CSF's current Strategic Asset Allocation (SAA) was approved at the OIC meeting on July 20, 2022.

Applying AON's 10-Year Capital Market Assumptions to CSF's current target allocations produces an estimated return volatility of 12.5%. A "Reference Portfolio" can be constructed with 70% in the MSCI ACWI IMI and 30% in the Bloomberg U.S. Aggregate Bond Index that would reach a similar level of estimated volatility. Prior to current allocations, CSF's Reference Portfolio was approximated to be a 65/35 split between public equity and fixed income indices.

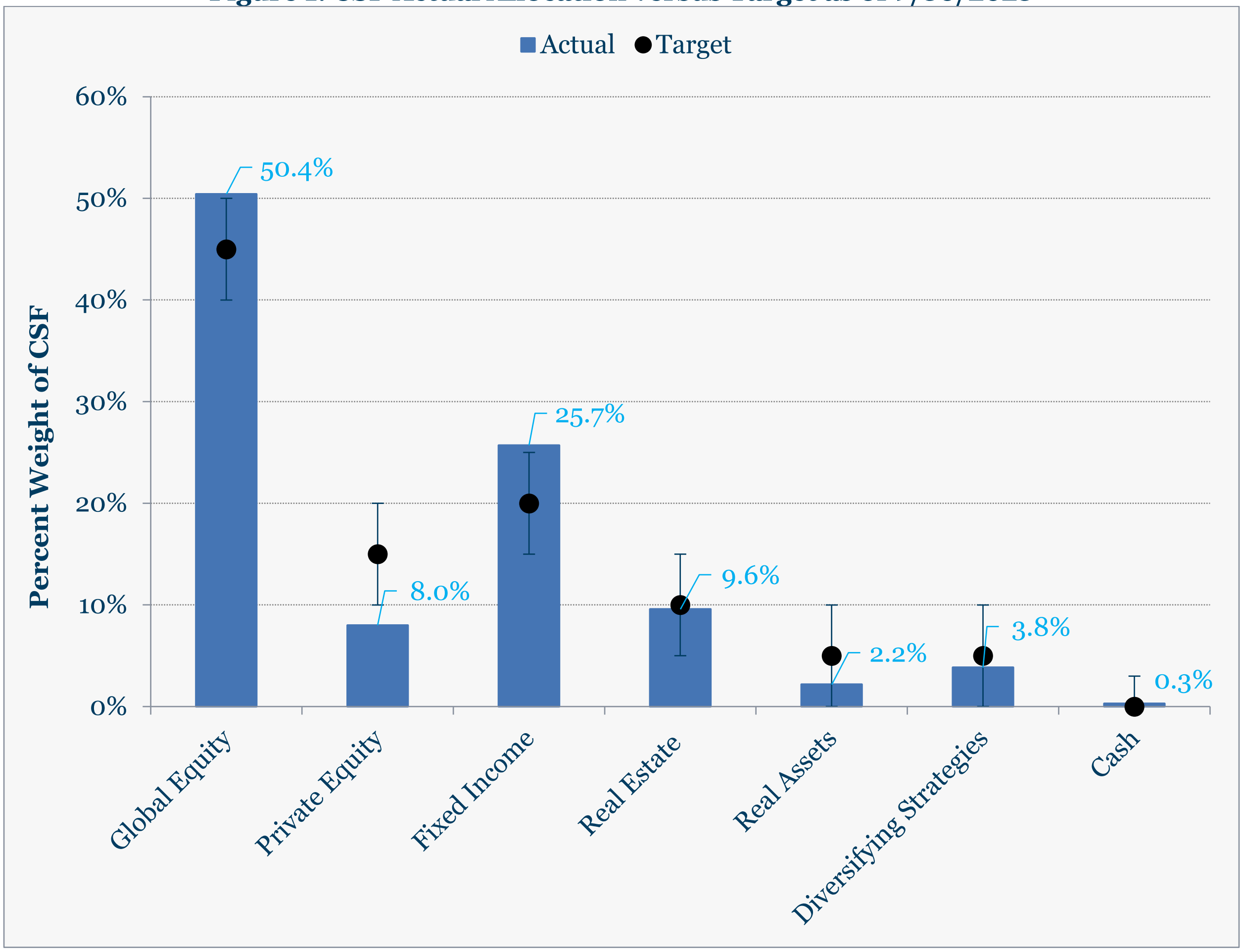
Shown in the table below are CSF'S target allocations as of 9/30/2023.

Table 1. CSF Target Asset Allocation as of 9/30/2023

Asset Class	Target Allocation (%)	Interim Target (%)	Rebalancing Range (%)
Global Equity	45	47.5	40 - 50
Private Equity	15	12.5	10 - 20
Fixed Income	20	22.5	15 - 25
Real Estate	10	10.0	5 - 15
Real Assets	5	2.5	0 - 10
Diversifying Strategies	5	5.0	0 - 10
Cash	0	0	0 - 3
Total Fund	**100**	**100.0**	

Figure 1 below shows CSF's actual allocation as of 9/30/2023.

Figure 1. CSF Actual Allocation versus Target as of 9/30/2023

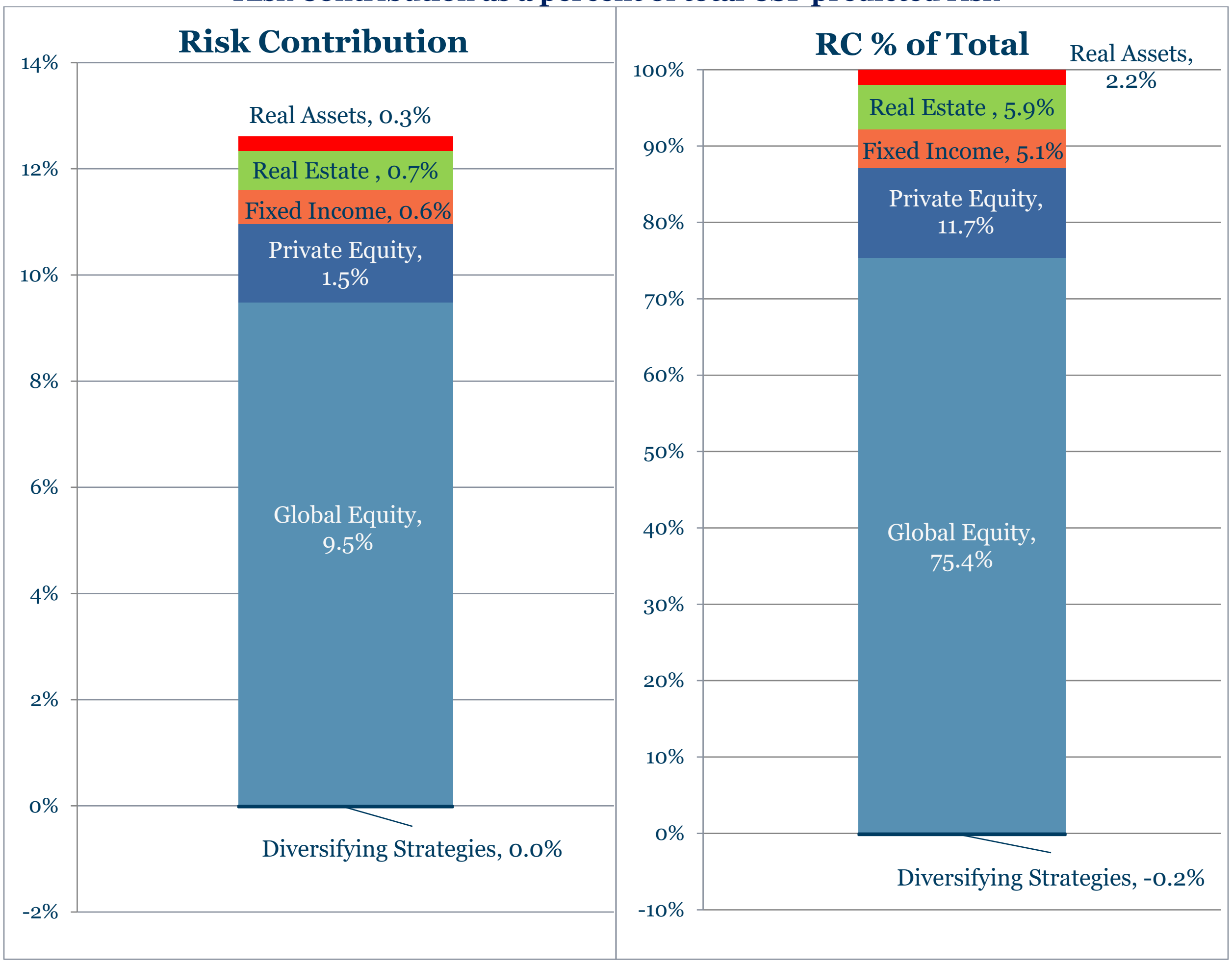


As of September 30, 2023, actual CSF asset allocations were within the policy tolerances relative to the established targets, except for Public Equity, Fixed Income and Private Equity, which the OIC approved lowering Fixed Income's allocation from 25% to 20% and increasing Private Equity's allocation from 10% to 15%.

CSF Predicted Risk

The risk estimates are shown in the charts below.

Figure 2. CSF Risk Contribution by Asset Class and Risk Contribution as a percent of total CSF predicted risk



The total predicted **standard deviation**, or **volatility**, for CSF is 12.6% as of September 30, 2023. Aladdin's risk model uses a medium-term, five-year lookback.

Another item of note from Figure 2 is that "equity" risk, that is the predicted risk contributions from Global Equity and Private Equity, is estimated to be 87% of CSF's predicted risk. Equity risk has always been the largest risk contributor to CSF. OIC Investment Belief #3 summarizes the Council's objective for investing in equity: "*Over the long-term, equity-oriented investments provide reliable return premiums relative to risk-free investments*." However, equity investments are much more volatile than investment grade fixed income and U.S. Treasuries.

Overtime the OIC-approved asset allocation changes have reduced CSF's volatility. Figure 3 below plots CSF's rolling 20-quarter realized beta to MSCI ACWI IMI as well as that of the Reference Portfolio of 70% MSCI ACWI IMI and 30% Bloomberg U.S. Aggregate Bond Index. CSF's realized beta was elevated during the Great Financial Crisis from 2007 to 2009 before steadily trending down. Part of that decline is due to an increasing allocation to illiquid investments, which have smoothed performances, but the other cause is the improved diversification.

Figure 3. CSF's Beta to MSCI ACWI IMI

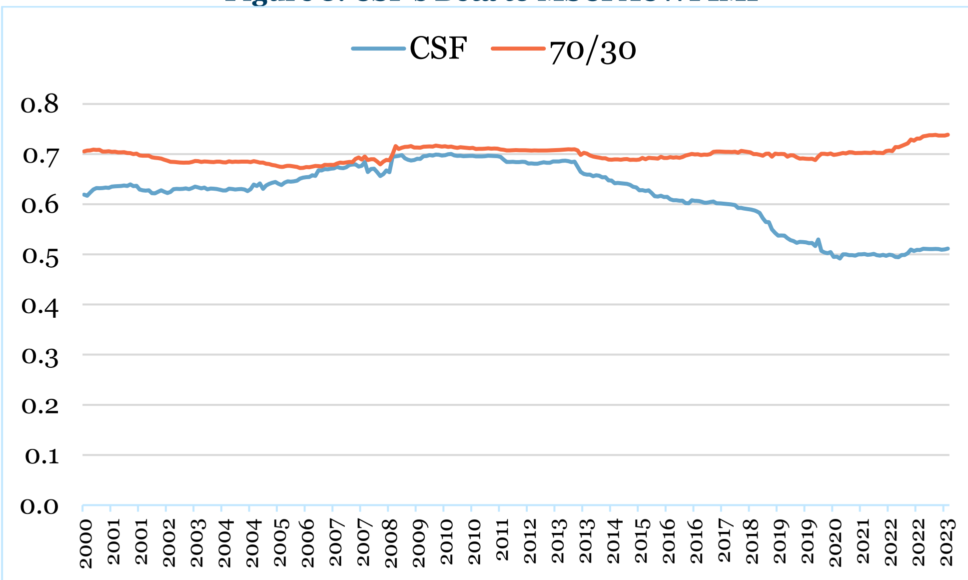
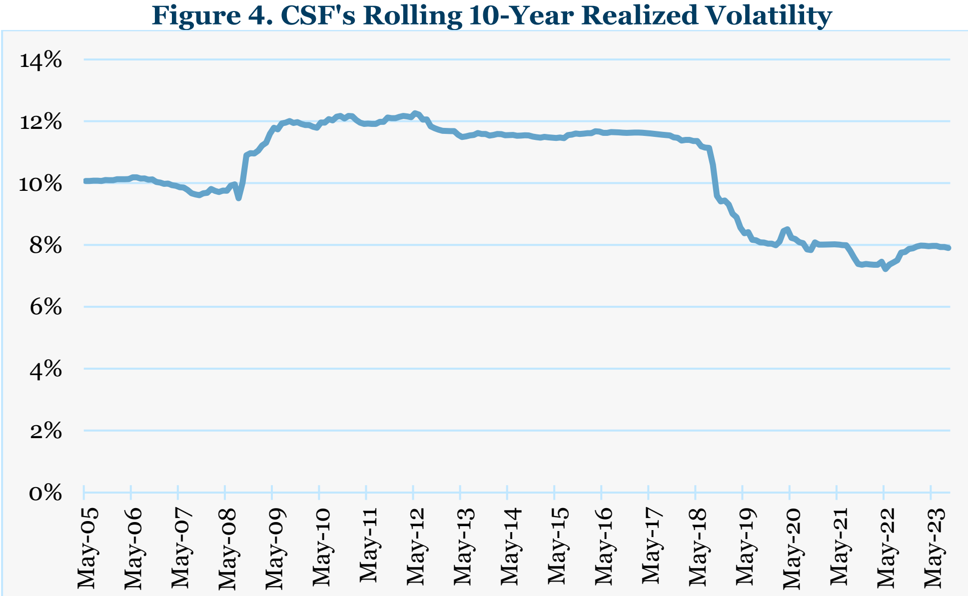


Figure 4. CSF's Rolling 10-Year Realized Volatility



MEKETA | 45 YEARS
CELEBRATING A MILESTONE

Common School Fund

As of June 30, 2023

Q2 Performance Update

Table of Contents

Economic and Market Update

Data as of June 30, 2023

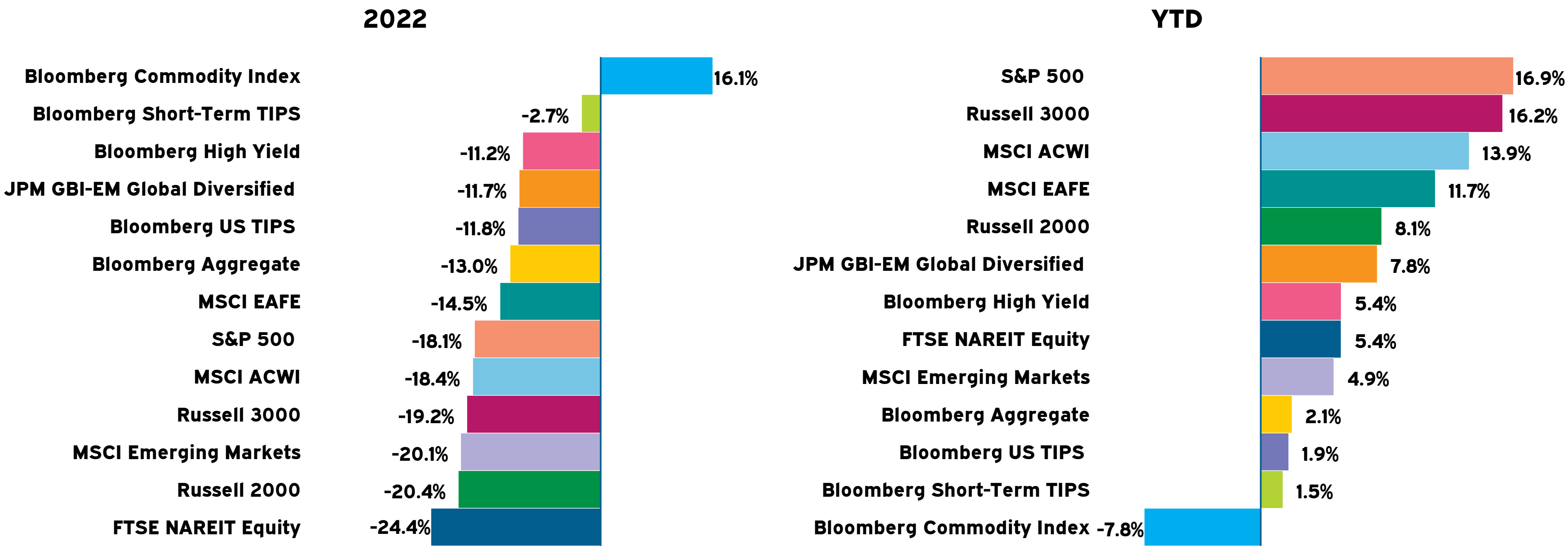
Commentary

→ Asset returns were positive in June with US and Non-US equities posting gains, while most fixed income sectors sold-off on expectations for further interest rate hikes later this year. Except for commodities, most public market asset classes remain up for the year.

- Although the Fed skipped a rate-hike in June, Fed comments signaled further rate hikes in the 2H 2023; the US economy appears to be resilient supporting domestic demand and low unemployment.
- US equity markets (Russell 3000) rose in June (+6.8%) adding to YTD gains (+16.2%). Some of the largest technology names drove positive results. Growth stocks continued to outpace value stocks, particularly in the large cap space.
- Non-US developed equity markets rose in June (MSCI EAFE 4.6%) falling behind US equities in 2023 (+16.2% versus +11.7%). A strengthening US dollar weighed on returns.
- Emerging market equities rose in June (+3.8%) supported by positive returns in China (+4.0%). They significantly trail developed market equities YTD returning +4.9%, due partly to higher US-China tensions.
- Rates generally rose in June leading to bond markets declining, with the broad US bond market (Bloomberg Aggregate) falling 0.4% for the month. It remains positive (+2.1%) year-to-date, though, on declining inflation and expectations for the Fed to end their rate hikes soon.

→ This year, the paths of inflation and monetary policy, slowing global growth and the war in Ukraine will all be key.

Index Returns[1]



→ After a particularly difficult 2022, most public market assets are up thus far in 2023, building on gains from the fourth quarter of last year.

→ Risk sentiment has been supported by expectations that policy tightening could be ending soon, as inflation continues to fall, and growth has slowed.

[1] Source: Bloomberg and FactSet. Data is as of June 30, 2023.

Domestic Equity Returns[1]

Domestic Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	6.6	8.7	16.9	19.6	14.6	12.3	12.8
Russell 3000	6.8	8.4	16.2	19.0	13.9	11.4	12.3
Russell 1000	6.8	8.6	16.7	19.4	14.1	11.9	12.6
Russell 1000 Growth	6.8	12.8	29.0	27.1	13.7	15.1	15.7
Russell 1000 Value	6.6	4.1	5.1	11.5	14.3	8.1	9.2
Russell MidCap	8.3	4.8	9.0	14.9	12.5	8.4	10.3
Russell MidCap Growth	7.7	6.2	15.9	23.1	7.6	9.7	11.5
Russell MidCap Value	8.7	3.9	5.2	10.5	15.0	6.8	9.0
Russell 2000	8.1	5.2	8.1	12.3	10.8	4.2	8.2
Russell 2000 Growth	8.3	7.1	13.6	18.5	6.1	4.2	8.8
Russell 2000 Value	7.9	3.2	2.5	6.0	15.4	3.5	7.3

US Equities: Russell 3000 Index rose 8.4% in the second quarter and 16.2% YTD.

→ US stocks rose sharply in the second quarter of 2023. Most of the gains came in the month of June when the Fed kept its target rate unchanged for the first time since early 2022. Investors are expressing optimism that the Fed can tame inflation without widespread disruptions to the equity markets.

→ With the exception of energy and utilities, each sector of the Russell 3000 index appreciated during the second quarter. Technology led all sectors and was driven by enthusiasm for growth stocks, particularly those with exposure to artificial intelligence (e.g., NVIDIA).

→ Large cap stocks continue to outperform small cap stocks, driven by technology and the underperformance of small cap biotechnology stocks. Growth stocks continue to broadly outperform value stocks.

[1] Source: Bloomberg. Data is as of June 30, 2023.

Foreign Equity Returns[1]

Foreign Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	4.5	2.4	9.5	12.7	7.2	3.5	4.7
MSCI EAFE	4.6	3.0	11.7	18.8	8.9	4.4	5.4
MSCI EAFE (Local Currency)	3.6	4.3	12.1	17.5	11.7	6.4	7.7
MSCI EAFE Small Cap	2.9	0.6	5.5	10.2	5.7	1.3	6.2
MSCI Emerging Markets	3.8	0.9	4.9	1.8	2.3	0.9	2.9
MSCI Emerging Markets (Local Currency)	3.4	1.7	5.6	3.3	3.9	3.0	5.7
MSCI China	4.0	-9.7	-5.5	-16.8	-10.3	-5.3	3.0

Foreign Equity: Developed international equities (MSCI EAFE) rose 3.0% in the second quarter bringing the YTD results to +11.7%. Emerging market equities (MSCI EM) rose 0.9%. in the quarter, rising 4.9% YTD.

→ Eurozone and Japan markets continued their strength in June, wrapping up a strong second quarter. In Europe, financials and IT led returns whereas energy and communication services lagged. Enthusiasm for AI helped company fundamentals and prices for semiconductor stocks. Headline inflation was down in June, although core inflation was up slightly month over month. Energy and materials were the main drivers for falling UK equities, along with Bank of England rate hikes. Optimism continues to build for Japanese investors, while the Yen remains weak, and Bank of Japan remains dovish.

→ Emerging markets were laggards as China equities struggled from weak export demands and rising negative sentiments. Brazil, India, and Taiwan are bright spots in EM, the former due to good earnings and macro, the latter from AI and IT strength.

[1] Source: Bloomberg. Data is as of June 30, 2023.

Fixed Income Returns[1]

Fixed Income	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-0.2	-0.6	2.3	0.0	-3.4	1.0	1.8	5.2	6.3
Bloomberg Aggregate	-0.4	-0.8	2.1	-0.9	-4.0	0.8	1.5	4.8	6.5
Bloomberg US TIPS	-0.3	-1.4	1.9	-1.4	-0.1	2.5	2.1	4.6	6.8
Bloomberg Short-term TIPS	-0.2	-0.7	1.5	0.1	2.3	2.7	1.7	5.3	2.5
Bloomberg High Yield	1.7	1.7	5.4	9.1	3.1	3.4	4.4	8.5	4.1
JPM GBI-EM Global Diversified (USD)	3.3	2.5	7.8	11.4	-1.4	0.3	-0.6	6.6	5.0

Fixed Income: The Bloomberg Universal declined 0.6% in the second quarter as global sovereign debt yields generally rose. Bonds retained a positive start to the year (+2.3% YTD) though as inflation continues to decline.

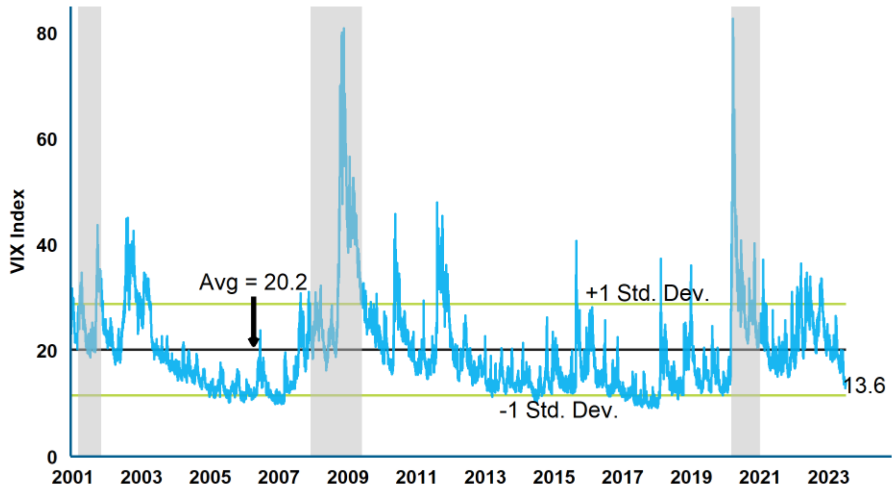
→ US Treasury yields generally rose over the month, with 1-year to 10-year maturity sector rising the most due to higher policy expectations.

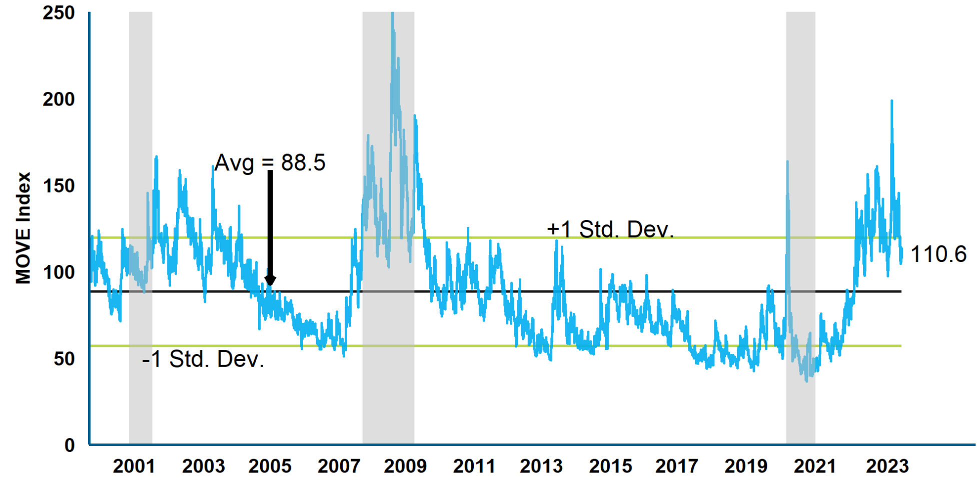
→ The TIPS index and the short-term TIPS index posted negative returns for the month as inflation concerns continued to ease.

→ Continued risk appetite drove high yield bond performance (1.7%) and outperformance versus the broad US bond market (Bloomberg Aggregate). Emerging market bonds (3.3%) also performed well on investor risk sentiment.

[1] Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of June 30, 2023. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.

Equity and Fixed Income Volatility[1]



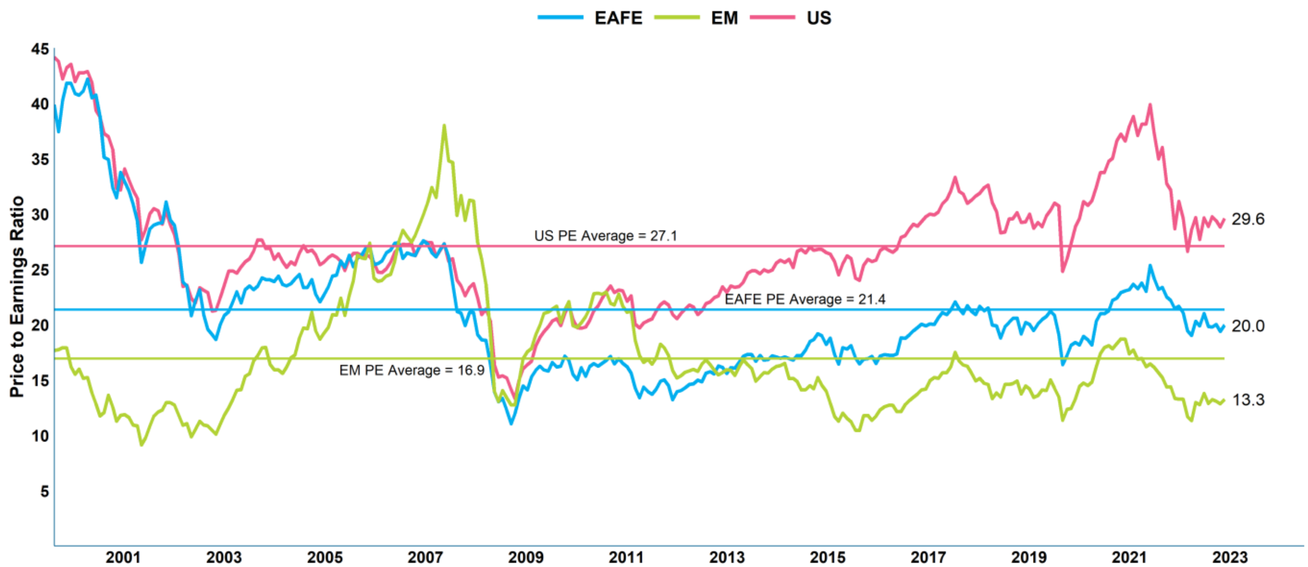


→ Volatility in equities (VIX) declined in June and remains low as investors continue to anticipate the end of the Fed's policy tightening.

→ In comparison, the bond market remains on edge after last year's historic losses and continued volatility in interest rates this year due to policy uncertainty and issues in the banking sector. The MOVE (fixed income volatility) remains well above (110.6) its long-run average (88.4), but off its recent peak during the heart of the banking crisis.

[1] Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of June 2023. The average line indicated is the average of the VIX and MOVE values between January 2000 and June 2023.

Equity Cyclically Adjusted P/E Ratios[1]

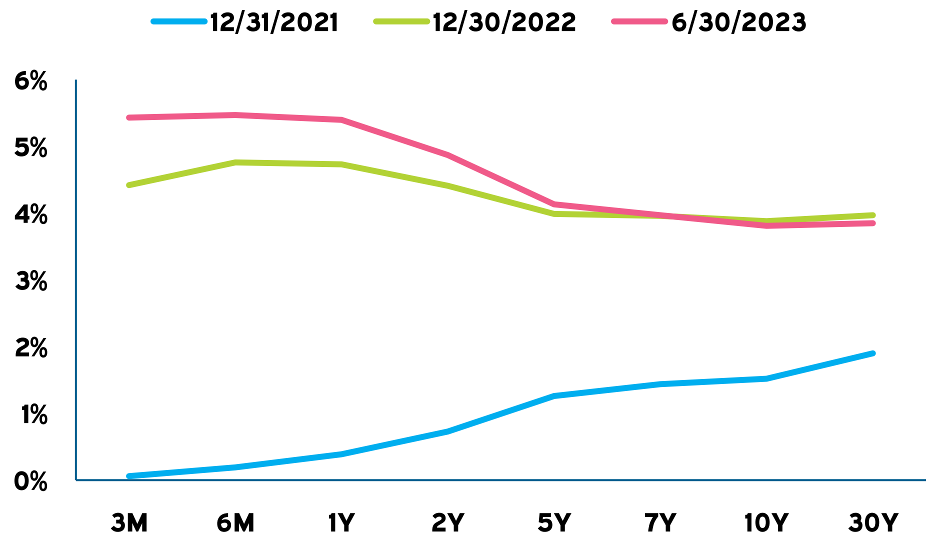


→ After its dramatic decline last year the US equity price-to-earnings ratio remains above its long-run (21st century) average.

→ International developed market valuations are below their own long-term average, with those for emerging markets the lowest and well under the long-term average.

[1] US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of June 2023. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to the recent month-end respectively.

US Yield Curve[1]

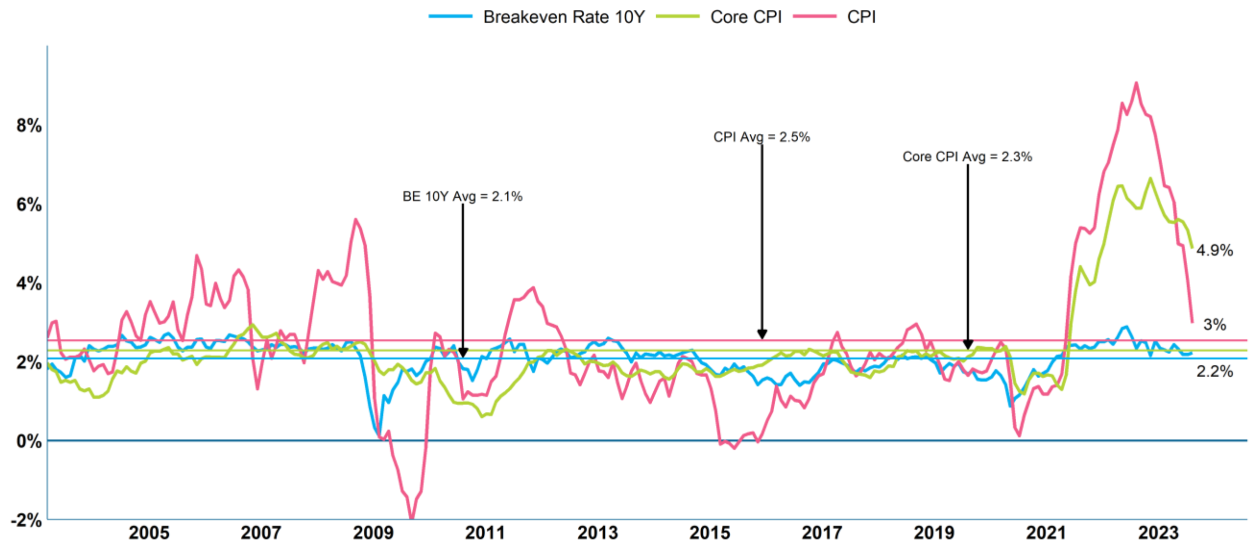


→ Interest rates have started rising again across the curve given policy maker guidance that policy rates are likely to rise further and potentially stay longer at the terminal rate than market participants expect. The rise in rates was particularly acute at the very front-end (< 1 year). Maturities from two years out also drifted higher as market participants considered the possibility of additional policy rate increases as economic data (mainly inflation and labor markets) remains strong.

→ The yield curve remains inverted with the spread between two-year and ten-year Treasuries finishing the month at -1.06%. The more closely watched measure (by the Fed) of the three-month and ten-year Treasuries spread also remained inverted at -1.62%. Inversions in the yield curve have often preceded recessions.

[1] Source: Bloomberg. Data is as of June 30, 2023.

Ten-Year Breakeven Inflation and CPI[1]



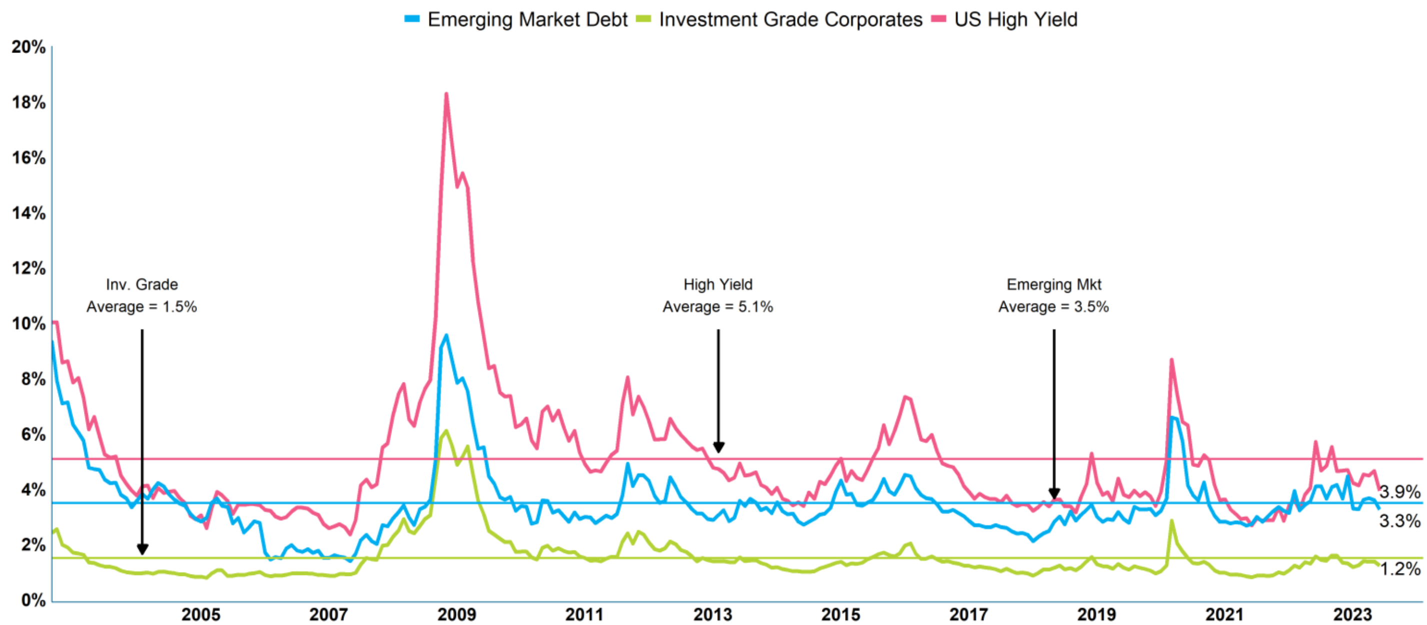
→ Headline inflation continued to decline in June, with the year-over-year reading falling from 4.0% to 3.0% and coming in slightly below estimates. The month-over-month rate of price increases rose slightly (0.2% versus 0.1%), with food prices ticking up slightly (0.1%) and energy prices rose (0.6%).

→ Core inflation – excluding food and energy - fell (5.3% to 4.9%), coming in slightly above forecasts. It remains stubbornly high driven by shelter costs.

→ Inflation expectations (breakevens) remain well below current inflation as investors continue to expect inflation to track back toward the Fed's 2% average target.

[1] Source: Bloomberg. Data is as June 30, 2023. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

Credit Spreads vs. US Treasury Bonds[1]

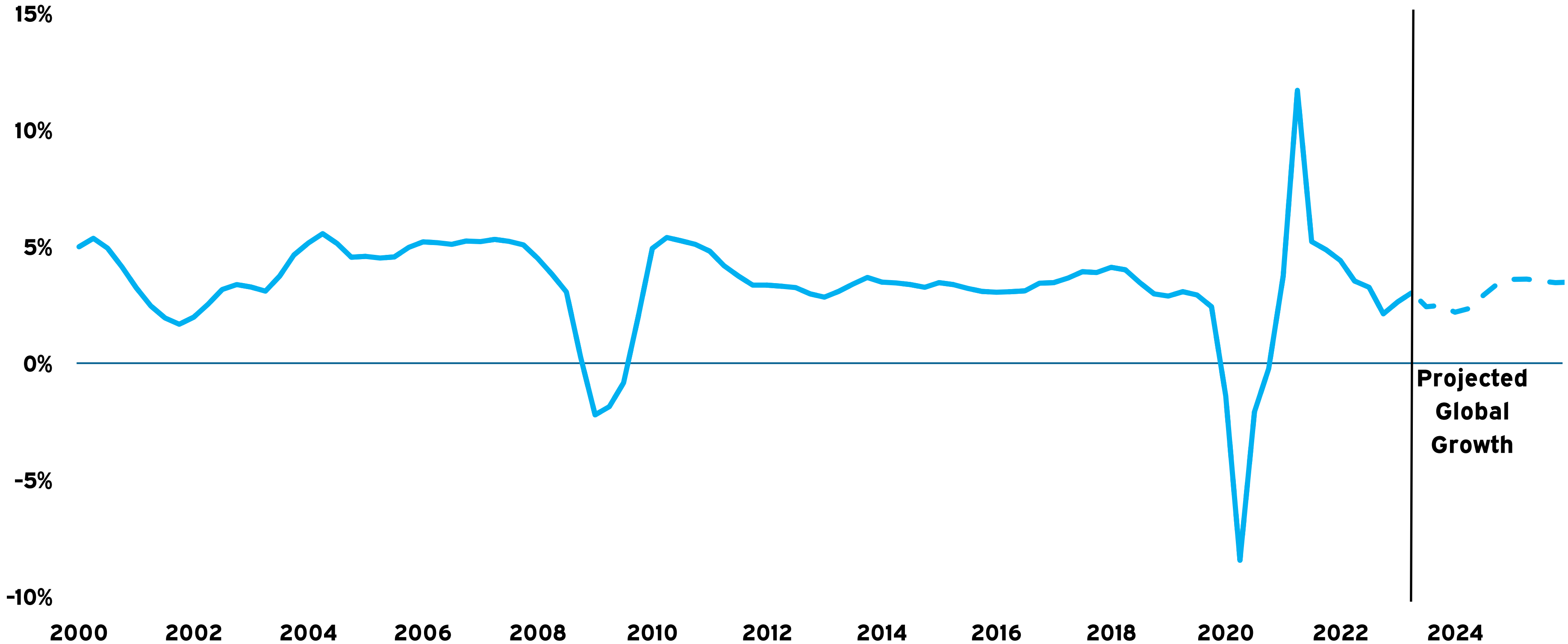


→ Spreads (the added yield above a comparable maturity Treasury) declined in June as risk appetite remained robust for respective credit exposures.

→ High yield spreads remain below their long-term average. Investment grade spreads and emerging market spreads are narrower than high yield spreads and close to their respective long-term averages.

[1] Sources: Bloomberg. Data is as of June 30, 2023. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the recent month-end, respectively.

Global Real Gross Domestic Product (GDP) Growth[1]



- → Global economies are expected to slow this year compared to 2022, with risks of recession as the impacts of policymakers' aggressive tightening to fight inflation flow through economies.
- → The delicate balancing act of central banks trying to reduce inflation without dramatically depressing growth will remain key.

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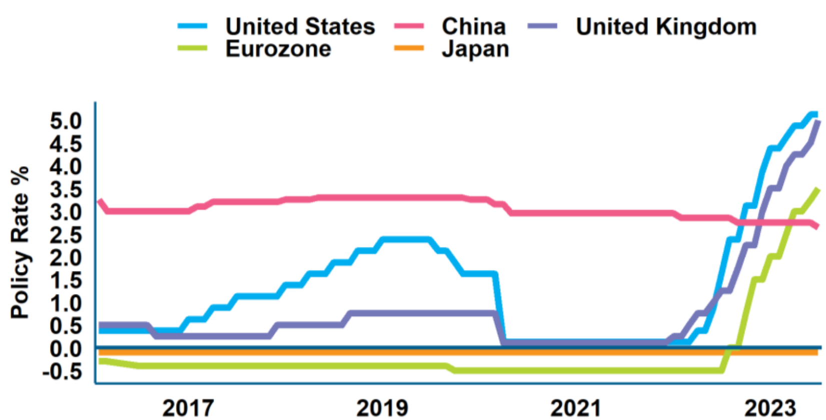
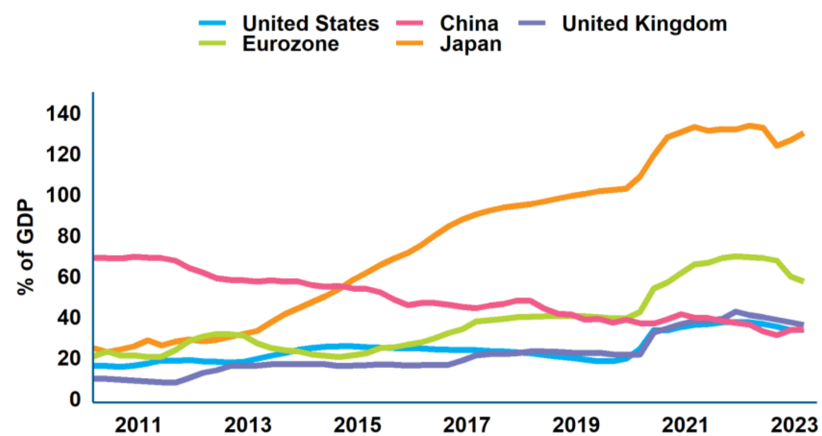
[1] Source: Oxford Economics (World GDP, US$ prices & PPP exchange rate, real, % change YoY). Updated June 2023.

Central Bank Response[1]

Policy Rates



Balance Sheet as % of GDP



→ In 2022, many central banks aggressively reduced pandemic-era policy support in the face of high inflation, with the US taking the most aggressive approach. Slowing inflation and growth have led to expectations for reductions in policy tightening going forward.

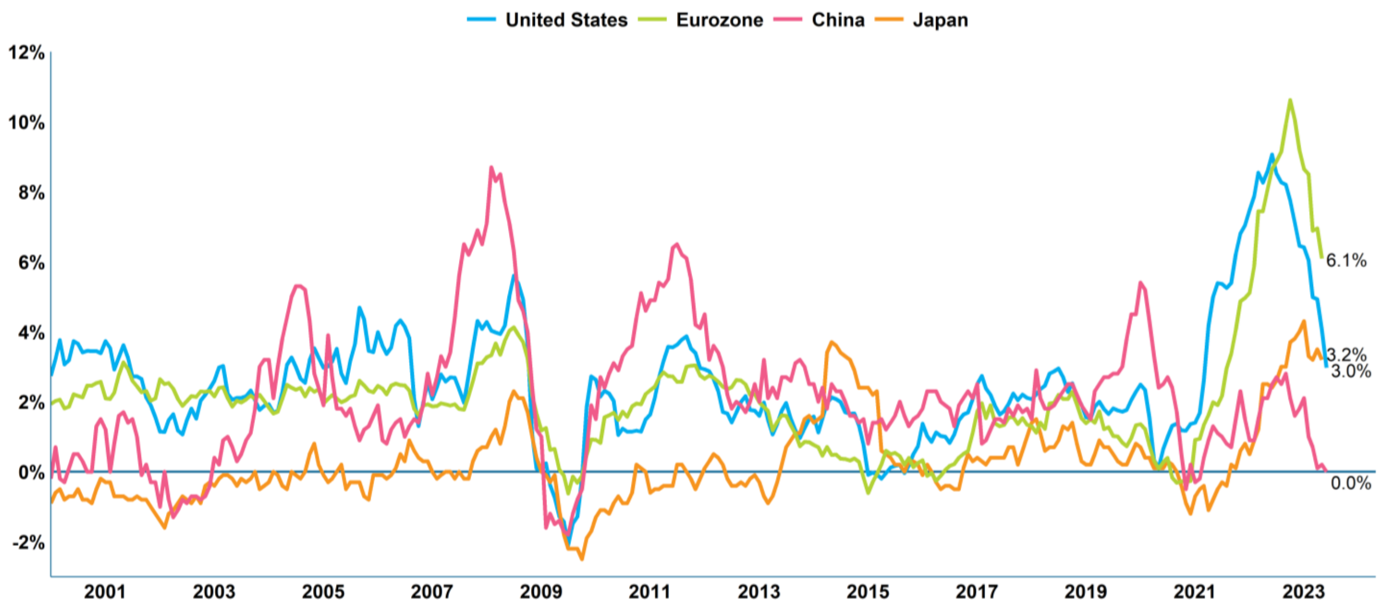
→ In May the Fed raised rates another 25 basis points to a range of 5.0% to 5.25%. After month-end, the FOMC paused its tightening campaign but hinted that one or two additional rate hikes could come later this year.

→ In China, the central bank has continued to cut interest rates and inject liquidity into the banking system, as weaker than expected economic data appears to indicate a widespread slowdown.

→ Looking ahead, risks remain for a policy error as central banks attempt to balance multiple goals, bringing down inflation, maintaining financial stability, and supporting growth.

[1] Source: Bloomberg. Policy rate data is as of June 30, 2023. China policy rate is defined as the medium-term lending facility 1 year interest rate. Balance sheet as % of GDP is based on quarterly data and is as of March 31, 2023.

Inflation (CPI Trailing Twelve Months)[1]



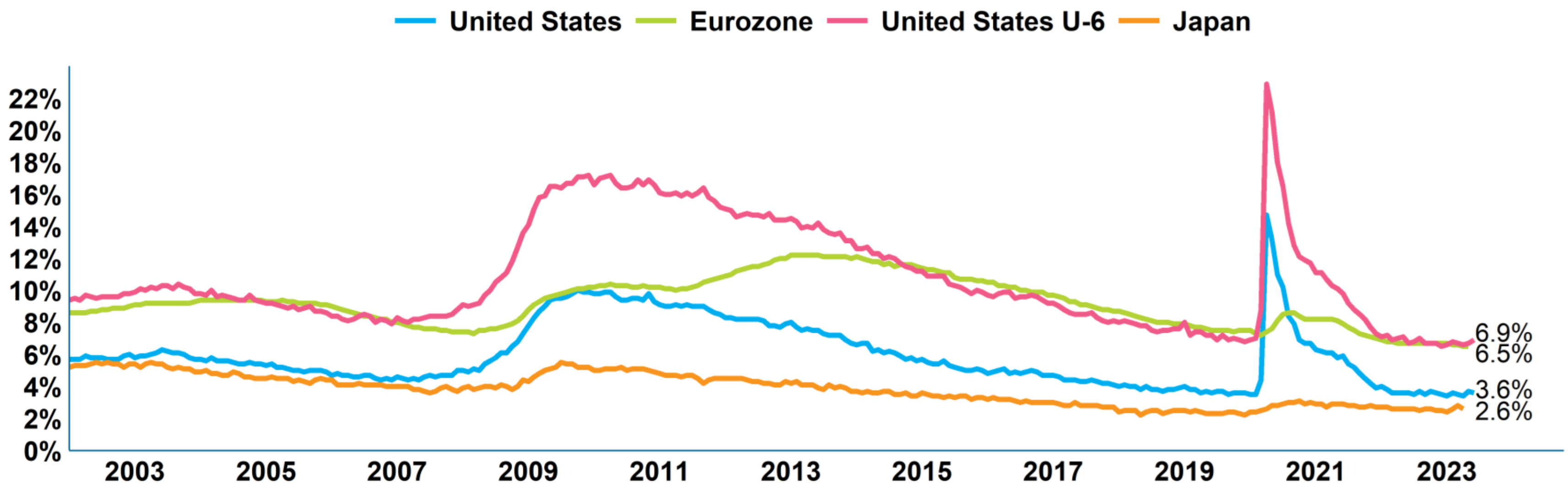
→ Inflation pressures continued to decline globally due to the easing of supply chain issues from the pandemic, declining energy prices, and tighter monetary policy.

→ In the US, inflation fell to 3.0% at month-end, while eurozone inflation also fell (6.1% from 7.0%) a level well off its peak. Despite 2023's significant declines in the US and Europe, inflation levels remain elevated compared to central bank targets.

→ Inflation remains lower in China and Japan. In China, inflation levels were only slightly above 0% at month-end as the reopening of their economy has led to an uneven economic recovery.

[1] Source: Bloomberg. Data is as June 30, 2023. The most recent Japanese inflation data is as of May 2023.

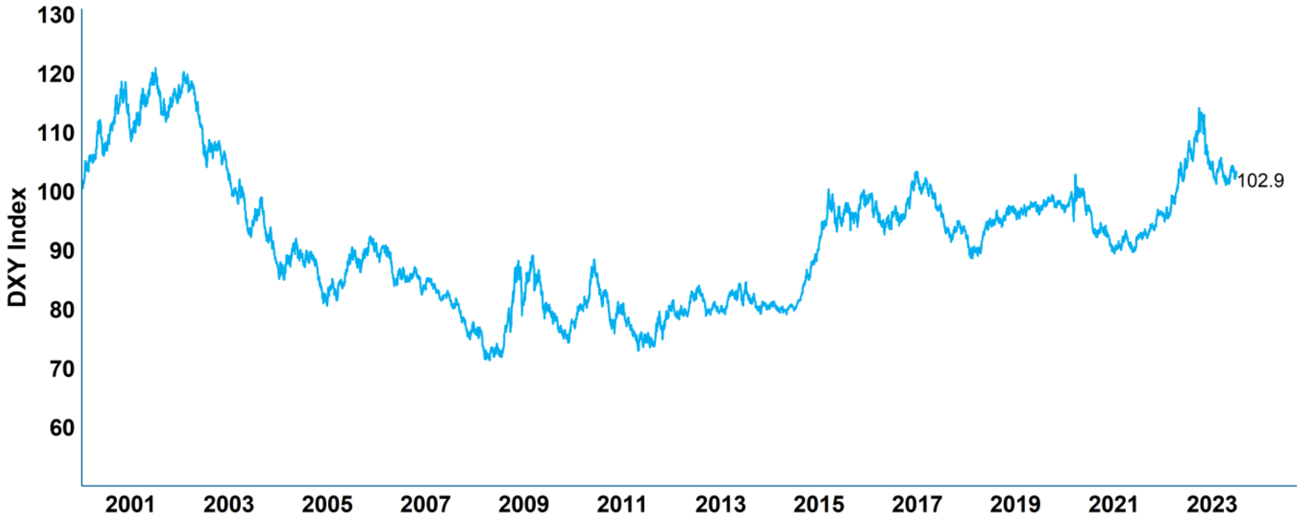
Unemployment[1]



- → Despite slowing growth and high inflation, the US labor market still shows signs of resiliency. Unemployment in the US, which experienced the steepest rise, recently returned to pre-pandemic levels. Broader measures of unemployment (U-6) remain higher at 6.9% but also declined dramatically from their peak.
- → The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, leading to higher unemployment.
- → Unemployment in Europe has also declined but remains higher than the US, while levels in Japan have been flat through the pandemic given less layoffs.

[1] Source: Bloomberg. Data is as June 30, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of May 2023.

US Dollar versus Broad Currencies[1]



- → The dollar finished 2022 much higher than it started, due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows.
- → Late last year and into this year, the dollar declined, as weaker economic data and lower inflation led to investors anticipating the end of Fed tightening. In June, we did see a slight decline in the dollar though.
- → This year, the track of inflation across economies and the corresponding monetary policies will be key drivers of currency moves.

[1] Source: Bloomberg. Data as of June 30, 2023.

Summary

Key Trends:

→ The impacts of still relatively high inflation will remain key, with bond market volatility likely to stay high.

→ Recent issues related to the banking sector seem to have subsided for now but are a reminder that there is a delicate balance for central banks to continue to fight inflation but also to try to maintain financial stability.

→ Global monetary policies could diverge in 2023. The risk of policy errors remains elevated as central banks try to reduce persistent inflation while not tipping their economies into recession.

→ Growth is expected to slow globally this year, with many economies forecast to tip into recession. Inflation, monetary policy, and the war will all be key.

→ In the US, consumers could feel pressure as certain components of inflation remain high (e.g., shelter), borrowing cost are elevated, and the job market may weaken.

→ The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow.

→ Equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation weighing particularly on Europe, and China's sluggish economic reopening and on-going weakness in the real estate sector.

Executive Summary

Q2 2023

CSF Executive Summary

→ The Common School Fund (CSF) had a market value of $2.2 billion as of June 30, 2023.

→ Total CSF returned 2.7% over the second quarter compared to the Oregon CSF Policy benchmark return of 3.3%. Over the trailing 1-year period the Total CSF (+7.0%) performed roughly in-line with Policy (+7.1%).

→ The Total CSF return trailed the InvMetrics Private Foundation > $50mm Net Universe of the most recent quarter and 1-year periods though has outperformed peers over longer trialing periods.

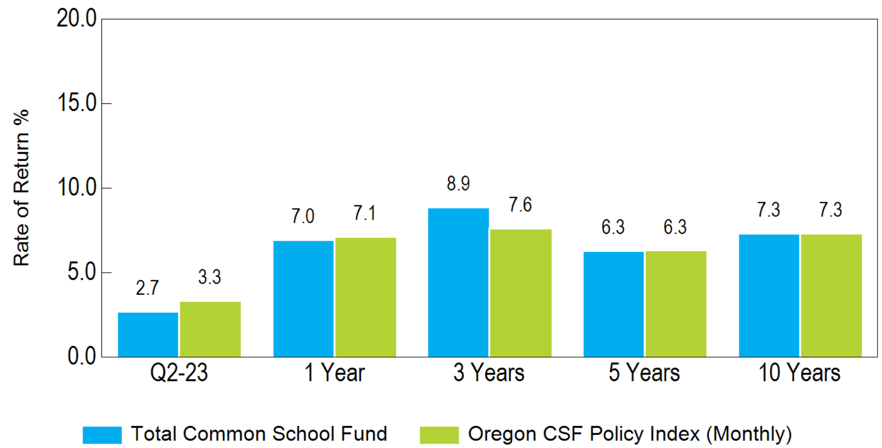
→ Performance drivers for the trialing 1-year period have been Total Public Equity (+16.5%) and Real Assets (+9.7%).

Performance Update

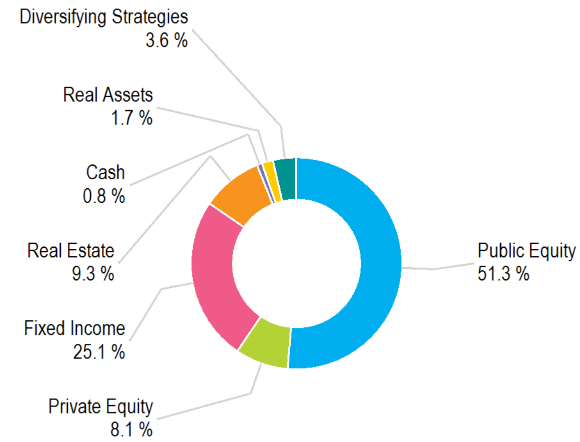
As of June 30, 2023

Total Common School Fund | As of June 30, 2023

Return Summary
Ending June 30, 2023

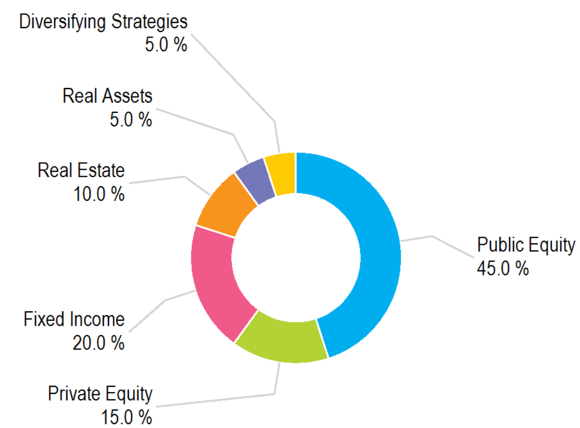


Current Allocation

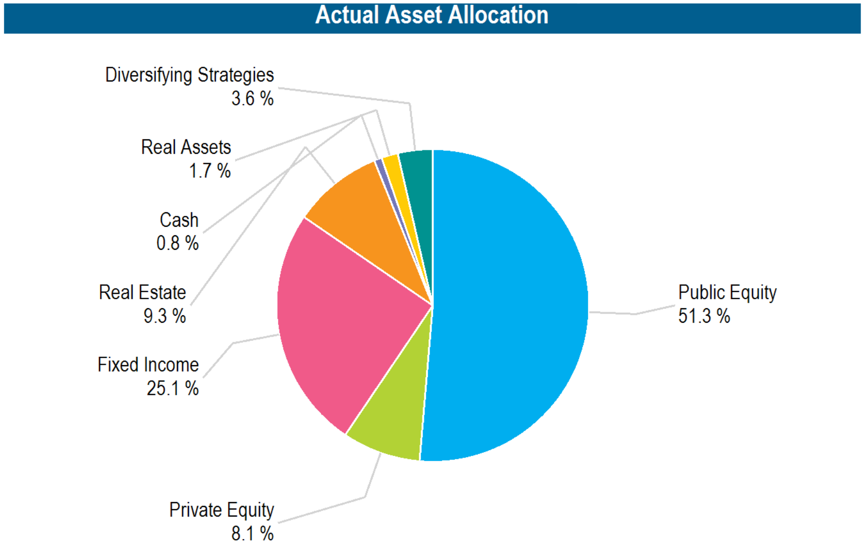


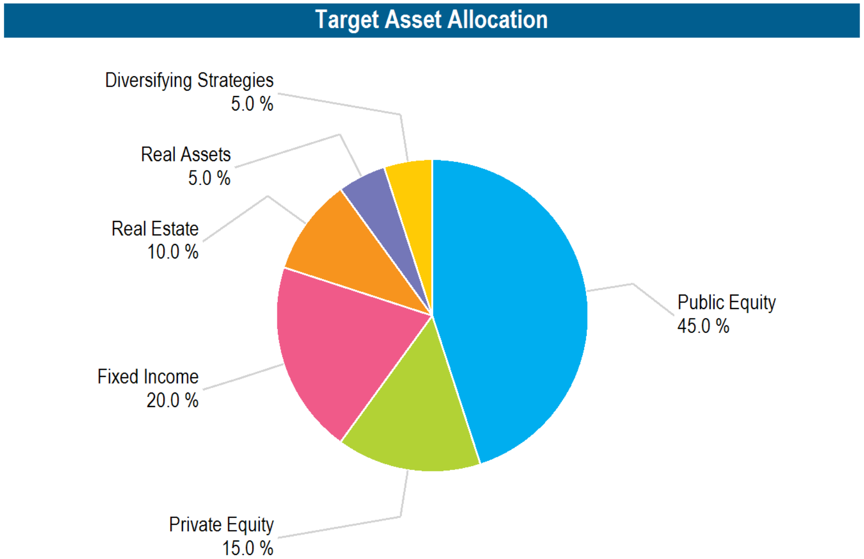
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Common School Fund	**2.7**	**7.0**	**8.9**	**6.3**	**7.3**
Oregon CSF Policy Index (Monthly)	*3.3*	*7.1*	*7.6*	*6.3*	*7.3*
Excess Return	-0.6	-0.1	1.3	0.0	0.0
InvMetrics Private Foundation > $50mm Net Rank	*65*	*77*	*32*	*45*	*38*
Median	*3.7*	*9.2*	*8.3*	*6.2*	*6.9*

Target Allocation



Total Common School Fund | As of June 30, 2023

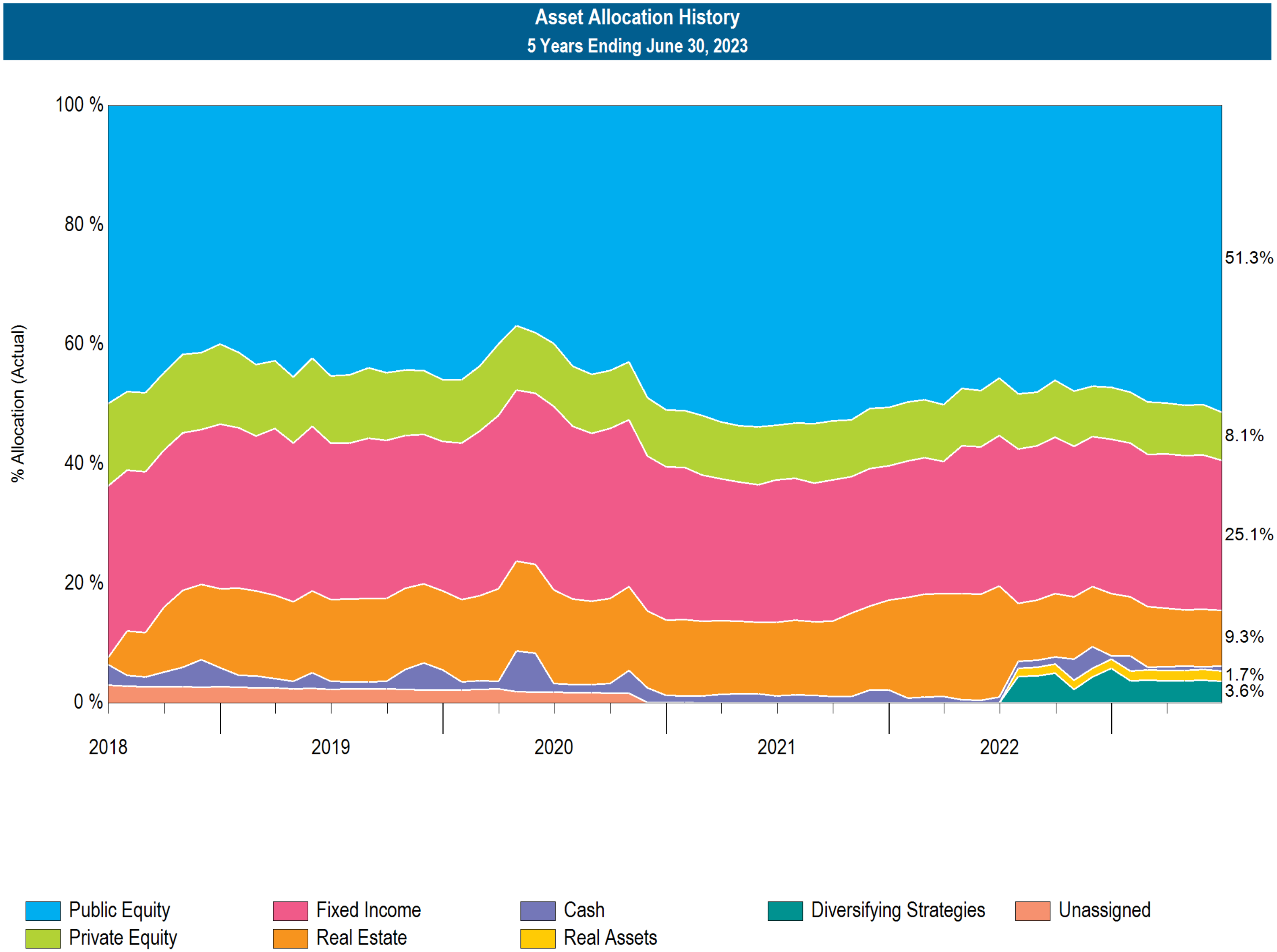




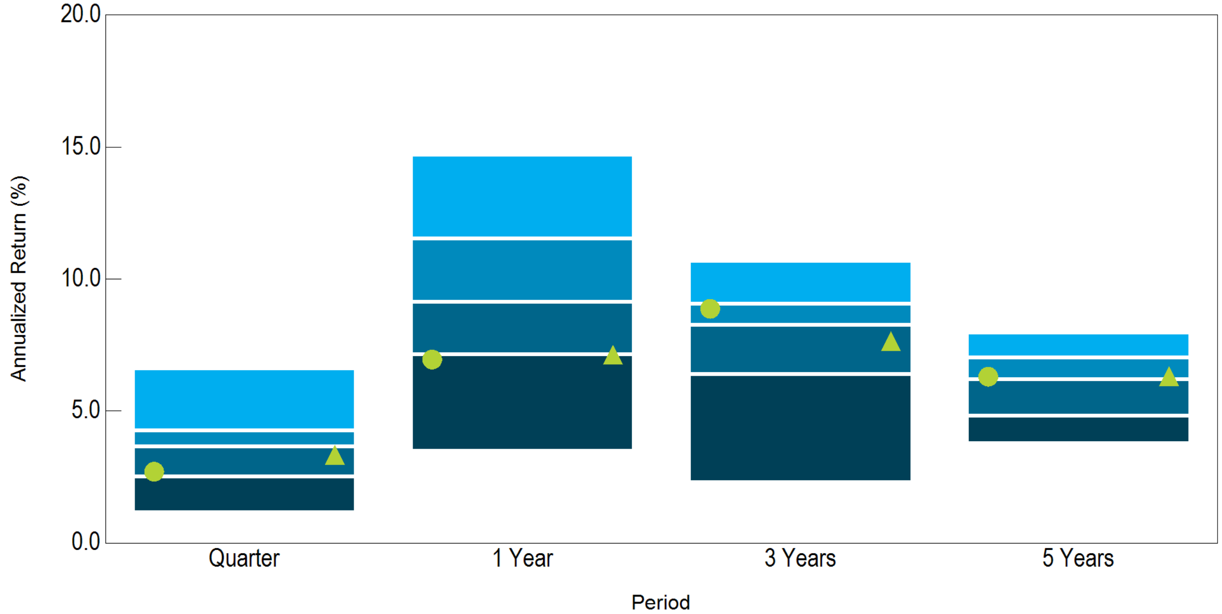
Asset Allocation vs. Target
As Of June 30, 2023

	Current	Current	Policy	Difference	Policy Range	Within Range
Public Equity	$1,130,225,520	51.3%	45.0%	6.3%	40.0% - 50.0%	No
Private Equity	$178,061,661	8.1%	15.0%	-6.9%	10.0% - 20.0%	No
Fixed Income	$552,480,769	25.1%	20.0%	5.1%	15.0% - 25.0%	No
Real Estate	$204,884,283	9.3%	10.0%	-0.7%	5.0% - 15.0%	Yes
Cash	$18,344,949	0.8%	0.0%	0.8%	0.0% - 3.0%	Yes
Real Assets	$37,430,682	1.7%	5.0%	-3.3%	0.0% - 10.0%	Yes
Diversifying Strategies	$80,248,312	3.6%	5.0%	-1.4%	0.0% - 10.0%	Yes
Total	**$2,201,676,176**	**100.0%**	**100.0%**			

Asset Allocation table reflects Long Term Policy Targets.


Asset Allocation History
5 Years Ending June 30, 2023
100 %
80 %
60 %
40 %
20 %
0 %
% Allocation (Actual)
51.3%
8.1%
25.1%
9.3%
1.7%
3.6%
2018
2019
2020
2021
2022
Public Equity
Private Equity
Fixed Income
Real Estate
Cash
Real Assets
Diversifying Strategies
Unassigned

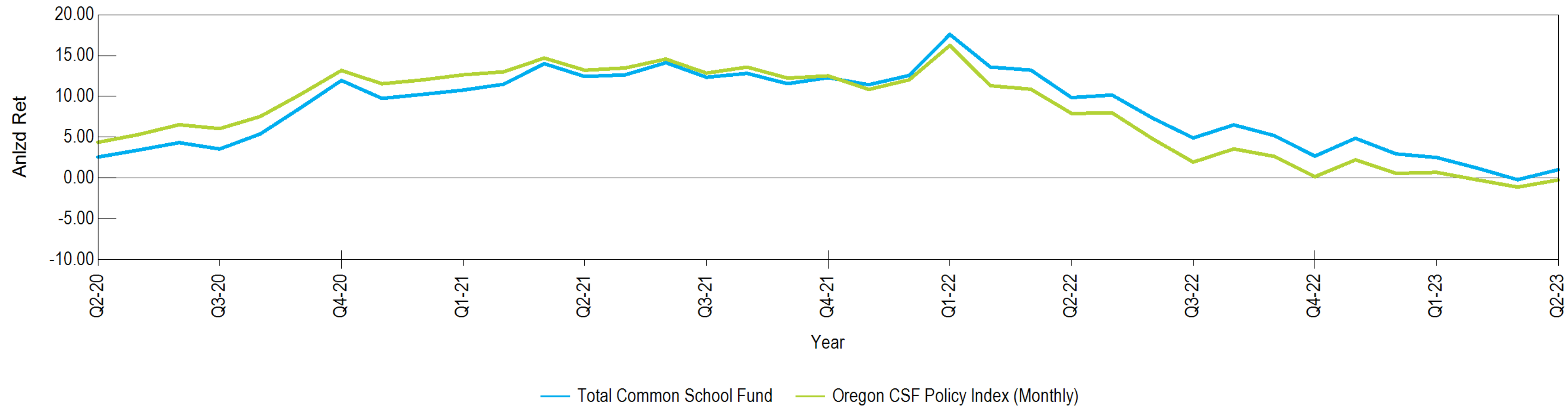
InvMetrics Private Foundation > $50mm Net Return Comparison
Ending June 30, 2023



	Return (Rank)							
5th Percentile	6.6		14.7		10.7		8.0	
25th Percentile	4.3		11.5		9.1		7.1	
Median	3.7		9.2		8.3		6.2	
75th Percentile	2.5		7.2		6.4		4.8	
95th Percentile	1.2		3.5		2.3		3.8	
# of Portfolios	31		31		30		25	
● Total Common School Fund	2.7	(65)	7.0	(77)	8.9	(32)	6.3	(45)
▲ Oregon CSF Policy Index (Monthly)	3.3	(57)	7.1	(76)	7.6	(63)	6.3	(45)

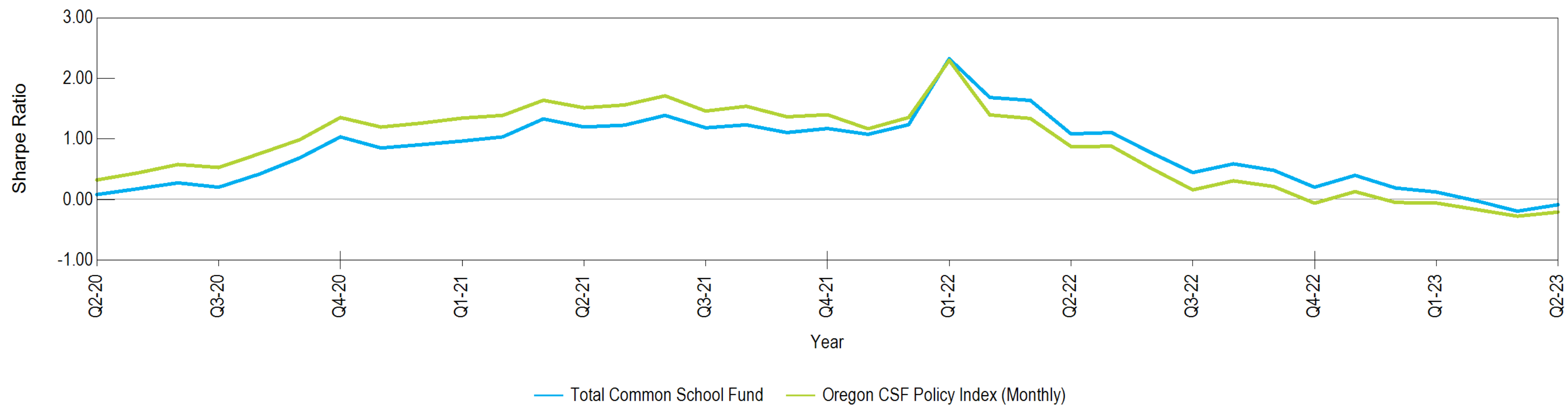
Rolling 3 Year Annualized Return (%)

Total Common School Fund vs. Oregon CSF Policy Index (Monthly)



Rolling 3 Year Sharpe Ratio

Total Common School Fund vs. Oregon CSF Policy Index (Monthly)



Total Common School Fund | As of June 30, 2023

Asset Class Trailing Net Performance	Market Value ($)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Common School Fund	2,201,676,176	100.0	--	2.7	6.5	7.0	8.9	6.3	7.3
Oregon CSF Policy Index (Monthly)				3.3	8.1	7.1	7.6	6.3	7.3
Oregon Reference Portfolio				3.7	9.7	10.8	6.4	5.8	6.6
InvMetrics Private Foundation > $50mm Net Median				3.7	8.2	9.2	8.3	6.2	6.9
InvMetrics Private Foundation > $50mm Net Rank				65	66	77	32	45	38
Total Public Equity	1,130,225,520	51.3	51.3	6.0	12.6	16.5	14.1	8.4	9.3
MSCI ACWI IMI Net (Daily)				5.9	13.2	16.1	11.0	7.6	8.6
Total Domestic Equity	621,574,968	28.2	55.0	7.3	13.7	18.6	16.2	10.8	11.8
Russell 3000 TR				8.4	16.2	19.0	13.9	11.4	12.3
Total International Equity	445,087,168	20.2	39.4	4.4	11.0	13.9	12.9	6.0	6.7
Oregon MSCI ACWI Ex US IMI (Net)				2.4	9.1	12.5	7.3	3.4	4.9
Total Fixed Income	552,480,769	25.1	25.1	-0.1	3.3	0.5	-3.5	1.2	2.0
BC US Aggregate				-0.8	2.1	-0.9	-4.0	0.8	1.6
Private Equity	178,061,661	8.1	8.1	-0.2	2.9	-7.9	19.1	13.6	13.5
Russell 3000 + 300 BPS QTR LAG (Adj.)				8.0	16.6	-5.8	22.0	13.7	15.1
Cash	18,344,948	0.8	0.8	1.1	2.4	3.6	1.1	1.8	1.4
ICE BofA US 3-Month Treasury Bill				1.2	2.3	3.6	1.3	1.6	1.0
Total Real Estate	204,884,283	9.3	9.3	-3.0	-6.8	-2.2	8.7	7.2	--
NCREIF ODCE (Custom) (Adj.)				-3.4	-8.4	-3.9	7.5	6.6	8.2
Diversifying Strategies	80,248,312	3.6	3.6	0.3	0.4	-2.6	6.2	-1.7	--
HFRI FOF Conservative Index				0.8	1.7	3.3	6.0	3.9	3.4
Real Assets	37,430,682	1.7	1.7	2.0	6.1	9.7	14.5	--	--
CPI +4%				2.1	4.8	7.1	9.9	8.0	6.8

The current policy benchmark is 47.5% MSCI ACWI IMI Net (Daily), 12.5% Russell 3000+30 bps quarter lag, 22.5% BBG US Agg, 10% NCREIF ODCE (Custom) (Adj.), 2.5% CPI +4%, and 5% HFRI FOF: Conservative Index.

The Oregon Reference Portfolio is comprised of 70% MSCI ACWI IMI Net and 30% Bloomberg US Aggregate.

Total Common School Fund | As of June 30, 2023

Trailing Net Performance	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Common School Fund	**2,201,676,176**	**100.0**	**2.7**	**6.5**	**7.0**	**8.9**	**6.3**	**7.3**
Oregon CSF Policy Index (Monthly)			*3.3*	*8.1*	*7.1*	*7.6*	*6.3*	*7.3*
Oregon Reference Portfolio			*3.7*	*9.7*	*10.8*	*6.4*	*5.8*	*6.6*
InvMetrics Private Foundation > $50mm Net Median			*3.7*	*8.2*	*9.2*	*8.3*	*6.2*	*6.9*
InvMetrics Private Foundation > $50mm Net Rank			*65*	*66*	*77*	*32*	*45*	*38*
Total Public Equity	**1,130,225,520**	**51.3**	**6.0**	**12.6**	**16.5**	**14.1**	**8.4**	**9.3**
MSCI ACWI IMI Net (Daily)			*5.9*	*13.2*	*16.1*	*11.0*	*7.6*	*8.6*
Total Domestic Equity	**621,574,968**	**28.2**	**7.3**	**13.7**	**18.6**	**16.2**	**10.8**	**11.8**
Russell 3000 TR			*8.4*	*16.2*	*19.0*	*13.9*	*11.4*	*12.3*
BlackRock S&P 500	300,568,981	13.7	8.7	17.0	19.7	14.6	12.4	12.9
S&P 500 Index (Daily)			*8.7*	*16.9*	*19.6*	*14.6*	*12.3*	*12.9*
DFA LCC	261,749,254	11.9	6.8	12.1	18.3	16.2	10.6	--
Russell 1000 (Daily)			*8.6*	*16.7*	*19.4*	*14.1*	*11.9*	*12.6*
Mellon	59,235,542	2.7	2.0	3.6	8.4	16.6	5.5	8.5
Russell 2000 Value TR			*3.2*	*2.5*	*6.0*	*15.4*	*3.5*	*7.3*
Total International Equity	**445,087,168**	**20.2**	**4.4**	**11.0**	**13.9**	**12.9**	**6.0**	**6.7**
Oregon MSCI ACWI Ex US IMI (Net)			*2.4*	*9.1*	*12.5*	*7.3*	*3.4*	*4.9*
Arrowstreet	314,784,144	14.3	5.9	13.3	16.9	18.5	9.0	9.9
Oregon CSF MSCI ex US IMI Net			*2.4*	*9.1*	*12.5*	*7.3*	*3.1*	*4.9*
Genesis	37,186,108	1.7	0.7	5.8	4.1	-0.5	0.0	2.5
MSCI Emerging Markets IMI Index			*1.6*	*5.6*	*3.2*	*3.6*	*1.4*	*3.2*

Total Common School Fund | As of June 30, 2023

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Lazard Intl CEF	93,046,210	4.2	0.9	6.0	8.4	4.3	--	--
Oregon MSCI ACWI Ex US (Net)			*2.4*	*9.5*	*12.7*	*7.2*	*3.5*	*4.8*
BlackRock ACWI IMI	63,563,384	2.9	5.9	13.4	16.4	11.2	--	--
MSCI ACWI IMI Net (Daily)			*5.9*	*13.2*	*16.1*	*11.0*	*7.6*	*8.6*
Total Fixed Income	**552,480,769**	**25.1**	**-0.1**	**3.3**	**0.5**	**-3.5**	**1.2**	**2.0**
BC US Aggregate			*-0.8*	*2.1*	*-0.9*	*-4.0*	*0.8*	*1.6*
Wellington	273,603,362	12.4	-0.6	3.0	-0.3	-3.9	1.0	1.8
BC US Aggregate			*-0.8*	*2.1*	*-0.9*	*-4.0*	*0.8*	*1.6*
Western Asset	278,877,407	12.7	0.3	3.7	1.3	-3.1	1.3	2.3
BC US Aggregate			*-0.8*	*2.1*	*-0.9*	*-4.0*	*0.8*	*1.6*
Private Equity	**178,061,661**	**8.1**	**-0.2**	**2.9**	**-7.9**	**19.1**	**13.6**	**13.5**
Russell 3000 + 300 BPS QTR LAG (Adj.)			*8.0*	*16.6*	*-5.8*	*22.0*	*13.7*	*15.1*
CSF - Private Equity	178,061,661	8.1	-0.2	2.9	-7.9	19.1	13.6	13.5
Russell 3000 + 300 BPS QTR LAG (Adj.)			*8.0*	*16.6*	*-5.8*	*22.0*	*13.7*	*15.1*
Cash	**18,344,948**	**0.8**	**1.1**	**2.4**	**3.6**	**1.1**	**1.8**	**1.4**
ICE BofA US 3-Month Treasury Bill			*1.2*	*2.3*	*3.6*	*1.3*	*1.6*	*1.0*
Cash	18,344,948	0.8						
SSB Transition	1	0.0						

Total Common School Fund | As of June 30, 2023

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Real Estate	**204,884,283**	**9.3**	**-3.0**	**-6.8**	**-2.2**	**8.7**	**7.2**	--
NCREIF ODCE (Custom) (Adj.)			*-3.4*	*-8.4*	*-3.9*	*7.5*	*6.6*	*8.2*
Value Add	1,229,790	0.1	-10.0	-10.0	--	--	--	--
NCREIF ODCE (Custom) (Adj.)			*-3.4*	*-8.4*	*-3.9*	*7.5*	*6.6*	*8.2*
Core Real Estate	199,788,449	9.1	-2.9	-6.8	-2.0	8.8	7.2	--
NCREIF ODCE (Custom) (Adj.)			*-3.4*	*-8.4*	*-3.9*	*7.5*	*6.6*	*8.2*
Opportunistic Real Estate	3,866,044	0.2	-5.3	-0.9	-0.9	--	--	--
NCREIF ODCE (Custom) (Adj.)			*-3.4*	*-8.4*	*-3.9*	*7.5*	*6.6*	*8.2*
Diversifying Strategies	**80,248,312**	**3.6**	**0.3**	**0.4**	**-2.6**	**6.2**	**-1.7**	--
HFRI FOF Conservative Index			*0.8*	*1.7*	*3.3*	*6.0*	*3.9*	*3.4*
Diversifying Strategies	80,248,312	3.6	0.3	0.4	-2.6	--	--	--
HFRI FOF Conservative Index			*0.8*	*1.7*	*3.3*	*6.0*	*3.9*	*3.4*
Real Assets	**37,430,682**	**1.7**	**2.0**	**6.1**	**9.7**	**14.5**	--	--
CPI +4%			*2.1*	*4.8*	*7.1*	*9.9*	*8.0*	*6.8*

Diversifying Strategies is a compilation of managers.

Calendar Year Performance

	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)
Total Common School Fund	**-9.7**	**16.8**	**8.0**	**16.0**	**-3.9**	**17.2**	**6.1**	**0.5**	**6.7**	**17.9**
Oregon CSF Policy Index (Monthly)	*-11.9*	*13.8*	*11.2*	*15.2*	*-1.4*	*17.5*	*8.0*	*-0.9*	*6.3*	*16.3*
InvMetrics Private Foundation > $50mm Net Median	*-13.2*	*13.9*	*11.1*	*17.6*	*-5.4*	*15.7*	*5.9*	*-1.8*	*4.2*	*15.4*
InvMetrics Private Foundation > $50mm Net Rank	*30*	*16*	*88*	*82*	*24*	*17*	*48*	*21*	*1*	*26*
Total Public Equity	**-14.6**	**21.8**	**13.2**	**26.3**	**-11.3**	**24.9**	**6.8**	**-0.6**	**4.7**	**27.0**
MSCI ACWI IMI Net (Daily)	*-18.4*	*18.2*	*16.3*	*26.4*	*-10.1*	*24.0*	*8.3*	*-2.1*	*3.8*	*23.5*
Total Domestic Equity	**-14.3**	**28.1**	**13.9**	**29.4**	**-7.7**	**23.7**	**9.2**	**1.5**	**11.2**	**33.9**
Russell 3000 TR	*-19.2*	*25.7*	*20.9*	*31.0*	*-5.3*	*21.1*	*12.8*	*0.5*	*12.6*	*33.6*
BlackRock S&P 500	-18.1	28.7	18.7	31.5	-4.5	21.9	12.0	1.4	13.7	32.4
S&P 500 Index (Daily)	*-18.1*	*28.7*	*18.4*	*31.5*	*-4.4*	*21.8*	*12.0*	*1.4*	*13.7*	*32.4*
DFA LCC	-12.8	28.0	12.6	29.3	-8.7	--	--	--	--	--
Russell 1000 (Daily)	*-19.1*	*26.5*	*21.0*	*31.4*	*-4.8*	--	--	--	--	--
Mellon	-10.9	26.0	5.2	24.4	-8.1	10.8	26.8	-5.8	2.6	36.5
Russell 2000 Value TR	*-14.5*	*28.3*	*4.7*	*22.4*	*-12.9*	*7.8*	*31.7*	*-7.5*	*4.3*	*34.5*
Total International Equity	**-13.9**	**15.7**	**11.5**	**22.8**	**-14.7**	**26.2**	**3.8**	**-2.2**	**-1.9**	**21.6**
Oregon MSCI ACWI Ex US IMI (Net)	*-16.6*	*8.5*	*11.1*	*21.6*	*-14.8*	*27.8*	*4.4*	*-4.6*	*-3.9*	*15.8*
Arrowstreet	-7.5	26.6	10.0	19.6	-12.9	26.5	5.8	2.6	-0.3	34.4
Oregon CSF MSCI ex US IMI Net	*-16.6*	*8.5*	*11.1*	*21.3*	*-14.7*	*25.2*	*3.0*	*-2.0*	*-4.5*	*21.6*
Genesis	-24.2	-7.3	17.3	29.3	-16.0	34.1	11.9	-15.2	-1.5	0.9
MSCI Emerging Markets IMI Index	*-19.8*	*-0.3*	*18.4*	*17.6*	*-15.0*	*36.8*	*9.9*	*-13.9*	*-1.8*	*-2.2*

	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)
Lazard Intl CEF	-26.0	3.8	--	--	--	--	--	--	--	--
Oregon MSCI ACWI Ex US (Net)	*-16.0*	*7.8*	--	--	--	--	--	--	--	--
BlackRock ACWI IMI	-18.2	18.4	16.6	--	--	--	--	--	--	--
MSCI ACWI IMI Net (Daily)	*-18.4*	*18.2*	*16.3*	--	--	--	--	--	--	--
Total Fixed Income	**-14.4**	**-1.4**	**8.8**	**10.6**	**-0.7**	**4.9**	**4.1**	**0.0**	**6.2**	**-0.8**
BC US Aggregate	*-13.0*	*-1.5*	*7.5*	*8.7*	*0.0*	*3.5*	*3.0*	*0.4*	*5.6*	*-1.3*
Wellington	-14.5	-1.5	9.3	9.5	-0.4	4.3	3.1	0.2	5.9	-1.4
BC US Aggregate	*-13.0*	*-1.5*	*7.5*	*8.7*	*0.0*	*3.5*	*3.0*	*0.4*	*5.6*	*-1.3*
Western Asset	-14.3	-1.4	8.2	11.6	-1.0	5.5	5.0	-0.2	6.4	-0.2
BC US Aggregate	*-13.0*	*-1.5*	*7.5*	*8.7*	*0.0*	*3.5*	*3.0*	*0.4*	*5.6*	*-1.3*
Private Equity	**-7.9**	**48.5**	**11.8**	**11.1**	**15.2**	**15.3**	**8.0**	**7.4**	**21.0**	**19.2**
Russell 3000 + 300 BPS QTR LAG (Adj.)	*-15.1*	*35.7*	*18.4*	*6.0*	*21.1*	*22.2*	*18.4*	*2.5*	*21.2*	*25.2*
CSF - Private Equity	-7.9	48.5	11.8	11.1	15.2	15.3	8.0	7.4	21.0	19.2
Russell 3000 + 300 BPS QTR LAG (Adj.)	*-15.1*	*35.7*	*18.4*	*6.0*	*21.1*	*22.2*	*18.4*	*2.5*	*21.2*	*25.2*
Cash	**0.5**	**0.1**	**1.6**	**3.3**	**2.0**	**1.3**	**1.2**	**0.5**	**0.5**	**0.7**
ICE BofA US 3-Month Treasury Bill	*1.5*	*0.1*	*0.7*	*2.3*	*1.9*	*0.9*	*0.3*	*0.0*	*0.0*	*0.1*
Cash										
SSB Transition										
Total Real Estate	**22.0**	**13.8**	**1.5**	**6.7**	--	--	--	--	--	--
NCREIF ODCE (Custom) (Adj.)	*21.0*	*13.6*	*0.6*	*4.7*	--	--	--	--	--	--

	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)
Value Add	--	--	--	--	--	--	--	--	--	--
NCREIF ODCE (Custom) (Adj.)	--	--	--	--	--	--	--	--	--	--
Core Real Estate	22.2	13.8	1.5	6.7	--	--	--	--	--	--
NCREIF ODCE (Custom) (Adj.)	*21.0*	*13.6*	*0.6*	*4.7*	--	--	--	--	--	--
Opportunistic Real Estate	--	--	--	--	--	--	--	--	--	--
NCREIF ODCE (Custom) (Adj.)	--	--	--	--	--	--	--	--	--	--
Diversifying Strategies	**4.2**	**13.5**	**-19.6**	**-1.5**	**-10.6**	**--**	**--**	**--**	**--**	**--**
HFRI FOF Conservative Index	*0.1*	*7.6*	*6.5*	*6.3*	*-0.9*	--	--	--	--	--
Diversifying Strategies	--	--	--	--	--	--	--	--	--	--
HFRI FOF Conservative Index	--	--	--	--	--	--	--	--	--	--
Real Assets	**11.9**	**18.5**	**8.6**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
CPI +4%	*10.4*	*11.3*	*5.4*	--	--	--	--	--	--	--

Total Common School Fund | As of June 30, 2023

Statistics Summary
1 Year Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Common School Fund	6.95%	11.18%	-0.15	0.97	0.30	1.22%
Oregon CSF Policy Index (Monthly)	7.13%	11.41%	--	1.00	0.31	0.00%

Statistics Summary
3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Common School Fund	8.87%	9.61%	0.65	0.98	0.79	1.89%
Oregon CSF Policy Index (Monthly)	7.64%	9.64%	--	1.00	0.66	0.00%

Statistics Summary
5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Common School Fund	6.30%	9.53%	-0.01	1.04	0.51	1.97%
Oregon CSF Policy Index (Monthly)	6.32%	8.96%	--	1.00	0.54	0.00%

Statistics Summary
10 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Common School Fund	7.31%	7.97%	-0.01	1.01	0.80	1.62%
Oregon CSF Policy Index (Monthly)	7.33%	7.75%	--	1.00	0.82	0.00%

Disclaimer, Glossary, and Notes

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INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM", "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security).

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. Portfolio Return- [Risk Free Rate+Beta*(market return-Risk Free Rate)].

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about is future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a "basis book." For example, a 5% bond pays $5 a year interest on each $100 par value. To figure its current yield, divide $5 by $95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay $100 for the bond that can be bought now for $95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\%\text{ (discount)}}{5\text{ (yrs. to maturity)}} = \begin{matrix}1\%\text{ pro rata, plus}\\ 5.26\%\text{ (current yield)}\end{matrix} = 6.26\%\text{ (yield to maturity)}$$

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

NCREIF Property Index (NPI): Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.
The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.

Oregon Investment Council

OREGON STATE TREASURY

TAB 7

PUBLIC EQUITY

October 25, 2023

OPERF Public Equity Portfolio

Manager Strategy Change Recommendation
EAM US & Non-US Small Cap

Louise Howard
Senior Investment Officer, Public Equity

OREGON
STATE
TREASURY

EAM US & Non-US Small Cap Equity

High-conviction fundamental, active investment manager focused on small and micro-capped securities

Investment Highlights	Investment Considerations
Retention of a high conviction manager	Asset outflows could introduce business risk
Ability to capture the momentum premium is a performance differentiator	Recent relative underperformance
Experienced and long-tenured investment team	
Majority employee ownership	
Favorable investment management fees	

OREGON STATE TREASURY

OREGON
STATE
TREASURY

Tobias Read
Oregon State Treasurer

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TAB 8

OPERF INVESTMENT

POLICY STATEMENT

Oregon Investment Council

OPERF Policy Review

October 25, 2023

Executive Summary

Aon and Meketa have conducted a comprehensive review of the various OPERF policy statements and have drafted a new Investment Policy Statement (IPS) with the following objectives in mind:

- Develop an Investment Policy Statement based on best practices and key components of an effective IPS
- Key content sourced from the following OIC and OPERF policy documents:
  - Statement of Funds Governance, Statement of Investment Objectives and Policy Framework, & Statement of Investment and Management Beliefs
- Streamline language/remove redundancies
- Clarify ambiguous language across documents
- Ensure all language aligns with Oregon state statutes
- Compare to industry best practices, including similar-sized peers to ensure all pertinent sections are reflected in the IPS
- Account for updated roles and responsibilities surrounding delegation of manager selection

The following slides summarize the key components of an effective IPS and the key enhancements made to the newly written OPERF IPS

Goal: OIC reviews and considers IPS language at October meeting to be prepared to approve by December meeting

A well-written, comprehensive IPS is the best form of documentation as it clearly articulates who is responsible for which roles, including forms of delegation, defines the purpose and objective of the asset pool, and provides clear guidelines for ongoing monitoring and execution

An IPS also ensures continuity by providing a framework for decision-making which is particularly important when personnel changes occur

Key Components of an Effective IPS for OPERF

Key Components	Description	Source Document	Comments on OPERF IPS
Overview and Purpose	Introduces the organization/asset pool, the scope of the IPS, appropriate fiduciary standards & the purpose and intent of the IPS	Public Pension Fund IPS Template	• Clearly articulates the purpose and intent of the IPS • Provides background on OPERF and its beneficiaries

Roles and Responsibilities	Clearly defines roles and responsibilities of all parties involved with managing the Fund's investments	INV 1202: Statement of Funds Governance	• Sourced key information from Statement of Funds Governance
			  ○ Simplified and clarified language as appropriate
			• Added total fund-policy leverage falls under OIC's responsibilities
			• Updated language around manager selection to note:
			  ○ OIC will approve investments that exceed 1% of total Plan assets
			  ○ OST Staff will approve investments below 1% of total Plan assets
			• Enhanced details on the role of Investment Consultants

Investment Philosophy	Clearly stated investment beliefs help create a consensus for how to manage and invest the Funds Investment beliefs should be created for the long-term with a clear vision shared by key constituents	INV 1201: Statement of Investment and Management Beliefs	• This section was ported word-for-word other than the preamble which was shortened • Recommend conducting a thorough review of the investment beliefs in 2024
Investment Objectives	Clearly stated investment objectives will help establish appropriate asset allocation guidelines and other polices Investment objectives are also important when reviewing the investment results	Public Pension Fund IPS Template	• Used public pension fund IPS template and tailored to OPERF's objectives • Added language on the use of leverage & the overlay program in the *Risk* section

Key Components of an Effective IPS for OPERF

Key Components	Description	Source Document	Comments on OPERF IPS
Asset Allocation Guidelines	Asset allocation may be the most important determinant of long-term success for the organization's investment program and should be described in the IPS Rebalancing guidelines help guide the actions of staff without requiring additional committee approval	INV 1203: Statement of Investment Objectives and Policy Framework	• Simplified rebalancing language • Added new *Investment, Risk Monitoring, and Compliance* section to address additional reporting requirements of OST Staff given recently approved delegation model
Strategic Role Guidelines	Outlining the strategic investment guidelines for each asset class helps serve as a framework for evaluating the asset allocation choices	Common School Fund (CSF)	• Used CSF IPS language as a starting point and tailored further for OPERF • Added specific language on internal management for Public Equity and Fixed Income • Enhanced Opportunity Portfolio language including added commentary on an investment's ability to graduate out of this allocation into a new or existing asset class
Performance Measurement & Evaluation	A regular review of performance helps the organization monitor the portfolio's progress toward the stated investment objectives Identifying benchmarks to help measure and evaluate the portfolio's performance provides tangible metrics to guide this process	Public Pension Fund IPS Template	• Used public pension fund IPS template and tailored to OPERF's performance objectives • Added objective to achieve the Fund's actuarial assumed rate of return over the long-term
Review and Amendment of the Policy	A regular review of the IPS is prudent to ensure it continues to reflect OIC's objectives and meet the needs of the Fund's participants	Public Pension Fund IPS Template	• It is prudent to review the IPS on a periodic basis
Appendix: Asset Allocation Strategy Targets & Range	Clearly define asset allocation targets and ranges as approved during most recent asset liability study, along with primary benchmarks for each asset class	INV 1203: Statement of Investment Objectives and Policy Framework	• No changes to this table

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TAB 9

CALENDAR – FUTURE

AGENDA ITEMS

2023-24 OIC Forward Calendar and Planned Agenda Topics

December 6, 2023	Q3 OPERF Performance Fixed Income Portfolio Review: OPERF
January 24, 2024	Public Equity Portfolio Review Private Equity Portfolio Review 2025 OIC Calendar Approval
March 6, 2024	2023 Performance Review: OPERF, CSF, SAIF Real Assets Portfolio Review Real Estate Portfolio Review
April 17, 2024	Diversifying Strategies Portfolio Review Opportunity Portfolio Review Individual Account Program (IAP) Review OSGP Annual Review
May 29, 2024	Q1 Performance Review: OPERF
July 17, 2024	OST Fixed Income Program Review
September 4, 2024	Q2 Performance Review: OPERF, CSF, SAIF
October 23, 2024	Operations Annual Review

TAB 10

OPEN DISCUSSION

TAB 11

PUBLIC COMMENTS

Public comments can now be found at the OIC website at:

https://www.oregon.gov/treasury/invested-for-oregon/pages/oregon-investment-council.aspx