



**OREGON
STATE
TREASURY**

Oregon Investment Council

May 29, 2024

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

May 29, 2024
9:00 AM

<u>Time</u>	<u>Tab</u>		<u>Presenter</u>
9:00 – 9:05	1	Review & Approval of Minutes April 17, 2024	Cara Samples <i>OIC Chair</i>
9:05 – 9:10	2	Committee Reports	Rex Kim <i>Chief Investment Officer</i>
9:10 – 10:00	3	Real Estate Market Update	Kevin White <i>Global Head of Real Estate Research & Strategy, DWS</i> Taylor Anderson <i>Americas Head of Sustainable Portfolio Solutions, DWS</i> Laura Gaylord <i>Head of Core Institutional Coverage Americas, DWS</i>
10:00 – 10:30	4	OPERF Q1 Performance Review	Mika Malone <i>Managing Principal, Meketa</i>

Cara Samples
Chair

Lorraine Arvin
Vice-Chair

Pia Wilson-Body
Member

Alline Akintore Kabbatende
Member

Tobias Read
State Treasurer

Kevin Olineck
PERS Director

OIC Meeting Agenda
May 29, 2024

--- BREAK ---

10:40 – 11:40	5	Treasurer Read Net Zero Plan Review	Sarah Bernstein <i>Managing Principal, Meketa</i> Daniel Ingram <i>Partner, Aon</i>
11:40 – 12:00	6	OPERF Guidelines	Raneen Jalajel <i>Partner, Aon</i> Mika Malone <i>Managing Principal, Meketa</i>
12:00	7	Forward Calendar	Rex Kim <i>Chief Investment Officer</i>
12:00	8	Open Discussion	OIC Members, Staff, Consultants
--- BREAK ---			
12:00 – 12:30	9	Public Comments	



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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

April 17, 2024

Meeting Minutes

Members Present: Treasurer Tobias Read, Cara Samples, Lorraine Arvin, Pia Wilson-Body, Alline Akintore

Staff Present: Rex Kim, David Randall, Karl Cheng, Louise Howard, Jamie McCreary, Ben Mahon, Mike Mueller, Claire Illo, Kenny Bao, Eric Engelson, Tim Sayre, Dan McNally, Chuck Christopher, Bryson Pate, Jennifer Kersgaard

Staff Participating Virtually: Aliese Jacobsen, Alli Gordon, Amanda Kingsbury, Andrew Coutu, Andrey Voloshinov, Anna Totdahl, Asia Slaughter, Bradley Curran, Bri Naber, Bryan Hernandez, Byron Williams, Carmen Lieva, Dana Millican, Debra Day, Ellis Williams, Eric Messer, Faith Sedberry, George Naughton, Gisela Verdeja, Ian Huculak, Jen Plett, Jerry Walker, Jo Recht, Julie Hall, Karen Davis, Kiara Cruz, Kristi Jenkins, Lisa Pettinati, Loren Terry, Mark Selfridge, Melissa Sloan, Michael Thompson, Mohammed Quraishi, Oyinkansola Ajayi, Paul Koch, Perrin Lim, Rachel Wray, Roy Jackson, Ryan Auclair, Savannah Oliveira, Scott Robertson, Sommer May, Talia Riordan, Tan Cao, Tiffany Zahas, Tim Miller, Tyler Bernstein, Wendi Nelson, Wil Hiles, Young Kim

Consultants Present: Allan Emkin, Mika Malone, Tom Martin, Raneen Jalajel, Paola Nealon, Ashley Woeste, Stephen Kennedy, Ryan Fitzgerald, Chris Nikolich, Elena Wang, Uvan Tseng, Anne Heaphy, Sam Paris

PERS Present: Kevin Olineck

Legal Counsel Present: Steve Marlowe (Department of Justice)

The January 24, 2024, OIC meeting was called to order at 9:05am by Cara Samples, Chair

<u>Time</u>	<u>Tab</u>		<u>Presenter</u>
9:00 – 9:05	1	Review & Approval of Minutes March 6, 2024 Chair Samples asked for approval of the March 6, 2024, OIC regular meeting minutes. Member Arvin moved approval at 9:07 am, member Wilson-Body seconded the motion which then passed by a 5/0 vote.	Cara Samples <i>OIC Chair</i>
9:05 – 9:10	2	Committee Reports	Rex Kim <i>Chief Investment Officer</i>

Cara Samples
Chair

Lorraine Arvin
Vice-Chair

Pia Wilson-Body
Member

Alline Akintore Kabbatende
Member

Tobias Read
State Treasurer

Kevin Olineck
PERS Director

OST Investment Committee:

March 11 th	Alternatives Portfolio	Stonepeak Infrastructure Fund V, L.P.	\$350M USD
March 11 th	Private Equity Portfolio	Veritas Capital Fund IX, L.P.	\$250M USD
March 11 th	Private Equity Portfolio	Thoma Bravo Fund XVI	\$250M USD
March 27 th	Private Equity Portfolio	Luminate Capital Partners IV, L.P.	\$150M USD
March 27 th	Private Equity Portfolio	Pathway Private Equity Fund III-Co. L.P.	\$500M USD

Staff Discretion

None

- 9:10 – 9:40 3 **OPERF Opportunity Portfolio Review** Michael Mueller
Investment Officer, Alternatives
Ben Bronson
Senior Portfolio Advisor, Aksia

Michael Mueller, Investment Officer, Alternatives, along with Ben Bronson, Senior Portfolio Advisor with Aksia, presented the OPERF Opportunity Portfolio Review. The presentation included a discussion of the Opportunity Portfolio's history, a review of the 2023 performance and active investments, and a look forward into 2024 positioning and benefits.

OPERF's Opportunity Portfolio returns is exceeding the benchmarks for the 3-year and 5-year periods by 0.9% and 1%, respectively.

- 9:40 – 10:20 4 **OPERF Diversifying Strategies Review** Ben Mahon
Senior Investment Officer, Alternatives
Stephen Kennedy
Partner/Portfolio Analyst, Albourne
Ryan Fitzgerald
Portfolio Analyst, Albourne

Ben Mahon, Senior Investment Officer, Alternatives along with Stephen Kennedy, Partner/Portfolio Analyst with Albourne, and Ryan Fitzgerald, Portfolio Analyst with Albourne, presented the OPERF Diversifying Strategies Review. The presentation included an overview of the strategic role of the portfolio, a performance review and executive summary, a market review, a project pathfinder update, and a 2024 preview of portfolio priorities.

OPERF's Private Equity 2023 returns is exceeding indices 2.3% in the short-term, outperformed the 3-year benchmark by 6.5%, but trailed the 5-year benchmark by -1.1%.

--- BREAK ---

- 10:30 – 11:00 5 **OIC Investment Beliefs** Allan Emkin
(Action Item: Approve adoption of OIC
Investment Beliefs) *Managing Principal, Meketa*

Mika Malone
Managing Principal, Meketa
Raneen Jalajel
Associate Partner, Aon

Allan Emkin, Managing Principal with Meketa, Mika Malone, Managing Principal with Meketa, and Raneen Jalajel, Associate Partner with Aon, presented the OIC Investment Beliefs. The presentation included proposed modifications and key refinements made to the investment beliefs.

Treasurer Read moved approval to adopt the OIC Investment Beliefs at 10:46am, Member Arvin seconded the motion which then Passed by a 5/0 vote.

11:00 – 11:25 6 **IAP Annual Review**

Jamie McCreary
Service Model Manager
Chris Nikolich
Head of Glide Path Strategies, AB
Elena Wang
Portfolio Manager, AB

Jamie McCreary, Service Model Manager, along with Chris Nikolich, Head of Glide Path Strategies with Alliance Bernstein, and Elena Wang, Portfolio Manager with Alliance Bernstein, presented the IAP Annual Review. The presentation included a plan overview, plan evolution, Custom Target-Date Fund totals, and glide path construction.

All vintages outperformed the S&P indices by an average of 1.1% per year and outperformed the Morningstar Average by an average of 2.8% per year.

11:25 – 11:50 7 **OSGP Annual Review**

Jamie McCreary
Service Model Manager
Uvan Tseng
Senior Vice President, Callan
Anne Heaphy
Senior Vice President, Callan
Sam Paris
Chief Operating Officer, PERS

Jamie McCreary, Service Model Manager, along with Uvan Tseng, Senior Vice President with Callan, Anne Heaphy, Senior Vice President with Callan, and Sam Paris, Chief Operating Officer with PERS, presented the OSGP Annual Review. The presentation included a plan overview, plan highlights from PERS, and a performance update from Callan.

There were 39,837 OSGP participants in 2023, with 31% of plan assets invested in LifePath options.

11:50 8 **Open Discussion** OIC Members, Staff, Consultants

--- BREAK ---

12:00 – 12:30 9 **Public Comments**



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TAB 2
COMMITTEE REPORTS



OREGON
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TAB 3
REAL ESTATE
MARKET UPDATE



OREGON
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TAB 4
OPERF Q1
PERFORMANCE REVIEW

Oregon Investment Council

May 29, 2024

Q1 Performance Update
As of March 31, 2024

Table of Contents

1. Introduction
2. Economic and Market Update as of March 31, 2024
3. Executive Summary
4. Performance Update as of March 31, 2024
5. Disclaimer, Glossary, and Notes

Introduction

OPERF Executive Summary – Notable Items

- Most major asset classes delivered positive returns in the first quarter, with risk assets performing well more broadly compared to the largely US Growth story of 2023. Investment Grade Fixed Income was slightly negative for the quarter as rate uncertainty drove yields higher.
- OPERF returned 2.3% which lagged most peers and its benchmark in part due to its lower exposure to public equity markets.
- Meketa and AON, together with Staff feedback, are working towards refining and updating the Asset Class Guidelines. These should be presented at the fall OIC meeting.
- Following the Net Zero presentation on February 6, Meketa and AON have been working towards providing feedback to Treasurer Reed's proposal. We look forward to discussing the ways this plan impacts the OPERF staff and portfolio at this meeting.

Economic and Market Update

Data as of March 31, 2024

Commentary

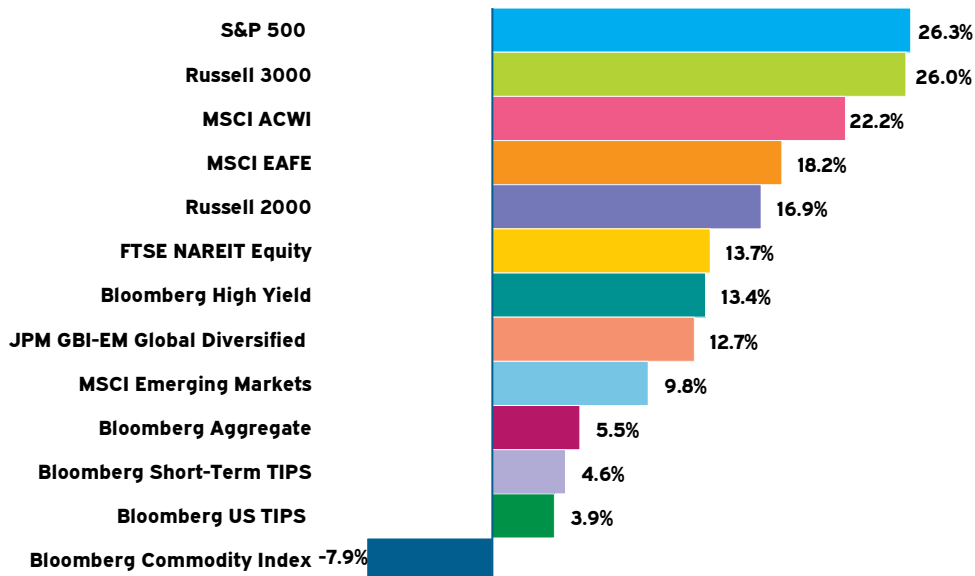
→ Resilient economic data drove global equities higher and pushed out the timing of the expected first Fed rate cut, weighing on bonds.

- Major central banks have largely paused interest rate hikes with expectations that many will still cut rates, but the uneven pace of falling inflation and economic growth could desynchronize the pace of rate cuts.
- In general, inflation pressures have eased in most countries from their pandemic peaks, but some uncertainty remains and levels are still above most central bank targets. Headline inflation in the US rose in March (3.2% to 3.5%) by more than expected, while core inflation was unchanged (3.8%) when it was predicted to decline to 3.7%. Notably, prices in China were up only slightly in March, as the impacts of the recent holiday faded.
- US equity markets (Russell 3000 index) rose 10.0% in the first quarter after a very strong 2023 (+26.0%). The technology sector continued to perform well, with energy gaining on geopolitical tensions.
- Non-US developed equity markets increased 5.8% in the quarter, helped by Japanese equities which hit multi-decade highs. A strengthening US dollar drove the weaker relative results for US investors with returns in local currency terms 4.2% higher (10.0% versus 5.8%).
- Emerging market equities (+2.4%) had the weakest equity returns, depressed by China (-2.2%). While policy efforts to support mainland stock prices helped to stabilize Chinese equities, recent efforts by the US to discourage investments in China weighed on results. The stronger dollar also hurt performance in emerging markets for US investors with returns in local currency terms 2.1% higher.
- Rising interest rates weighed on bonds with the broad US bond market declining 0.8% for the quarter.

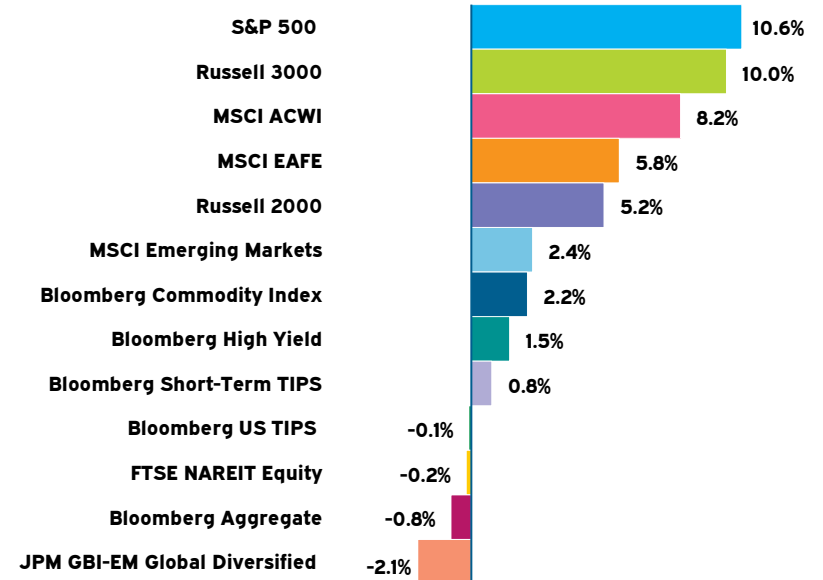
→ Looking to the rest of this year, the paths of inflation and monetary policy, China's economic disorder and slowing economic growth, the many looming elections, and the wars in Ukraine and Israel will be key.

Index Returns¹

2023



Q1 2024



→ In the first quarter, global equity markets continued their strong performance from 2023 with the US leading the way.

→ Resilient economic data weighed on bond markets domestically and dashed hopes of a near-term cut in interest rates.

¹ Source: Bloomberg. Data is as of March 31, 2024.

Domestic Equity Returns¹

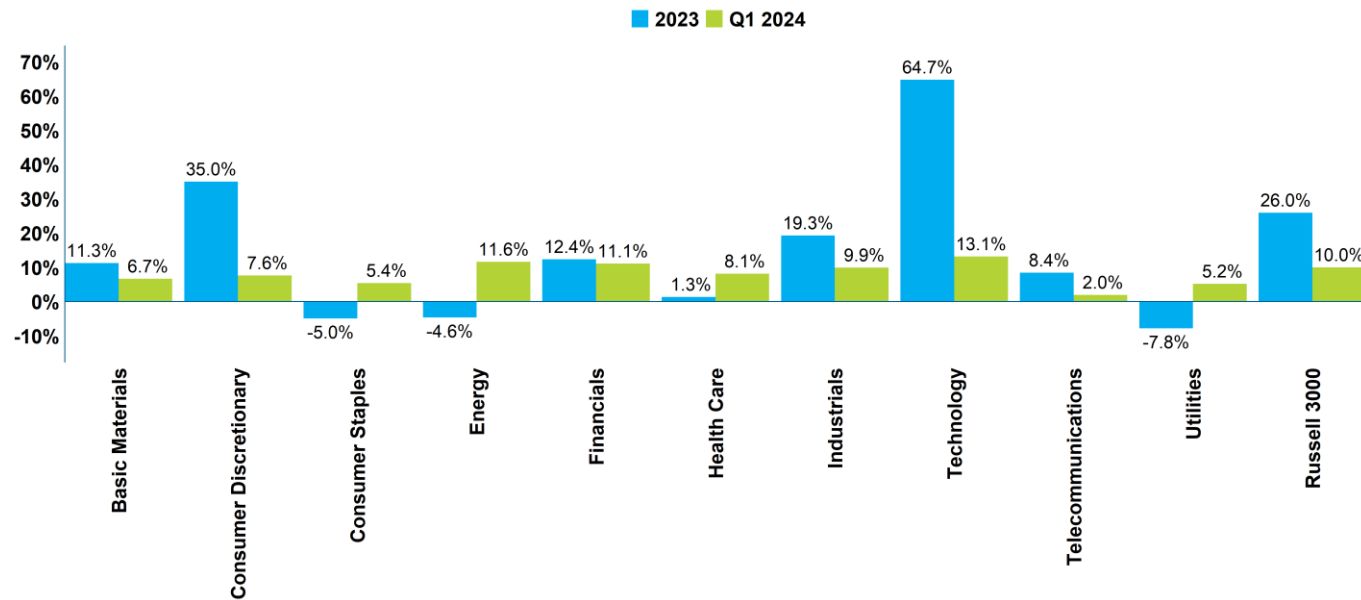
Domestic Equity	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	3.2	10.6	29.9	11.5	15.1	13.0
Russell 3000	3.2	10.0	29.3	9.8	14.3	12.3
Russell 1000	3.2	10.3	29.9	10.5	14.8	12.7
Russell 1000 Growth	1.8	11.4	39.0	12.5	18.5	16.0
Russell 1000 Value	5.0	9.0	20.3	8.1	10.3	9.0
Russell MidCap	4.3	8.6	22.3	6.1	11.1	9.9
Russell MidCap Growth	2.4	9.5	26.3	4.6	11.8	11.4
Russell MidCap Value	5.2	8.2	20.4	6.8	9.9	8.6
Russell 2000	3.6	5.2	19.7	-0.1	8.1	7.6
Russell 2000 Growth	2.8	7.6	20.3	-2.7	7.4	7.9
Russell 2000 Value	4.4	2.9	18.8	2.2	8.2	6.9

US Equities: The Russell 3000 increased an impressive 10.0% in the first quarter of the year.

- US equities continued their ascent after a strong finish to 2023. The gains were driven by strong economic data and corporate earnings, despite signs of interest rates remaining higher for longer.
- Growth stocks outperformed value stocks across the market cap spectrum. Technology stocks continued to be a key driver of results, with NVIDIA and Microsoft alone contributing nearly 30% of the quarter’s gains.
- Large cap stocks produced almost double the return of their small cap peers during the first quarter. The underperformance of small cap financials contributed to this dynamic as fear of further turmoil for regional banks resurfaced.

¹ Source: Bloomberg. Data is as of March 31, 2024.

Russell 3000 Sector Returns¹



- All sectors posted positive returns in the first quarter. The technology sector (13.1%) continued to lead the way due to the influence of the so-called “Magnificent Seven”.
- Technology was followed by energy (11.6%) and financials (11.1%), driven respectively by increased geopolitical tensions and the strong economic environment. Traditionally defensive sectors like consumer staples (5.4%) and utilities (5.2%) joined the rally but trailed other sectors.

¹ Source: Bloomberg. Data is as of March 31, 2024.

Foreign Equity Returns¹

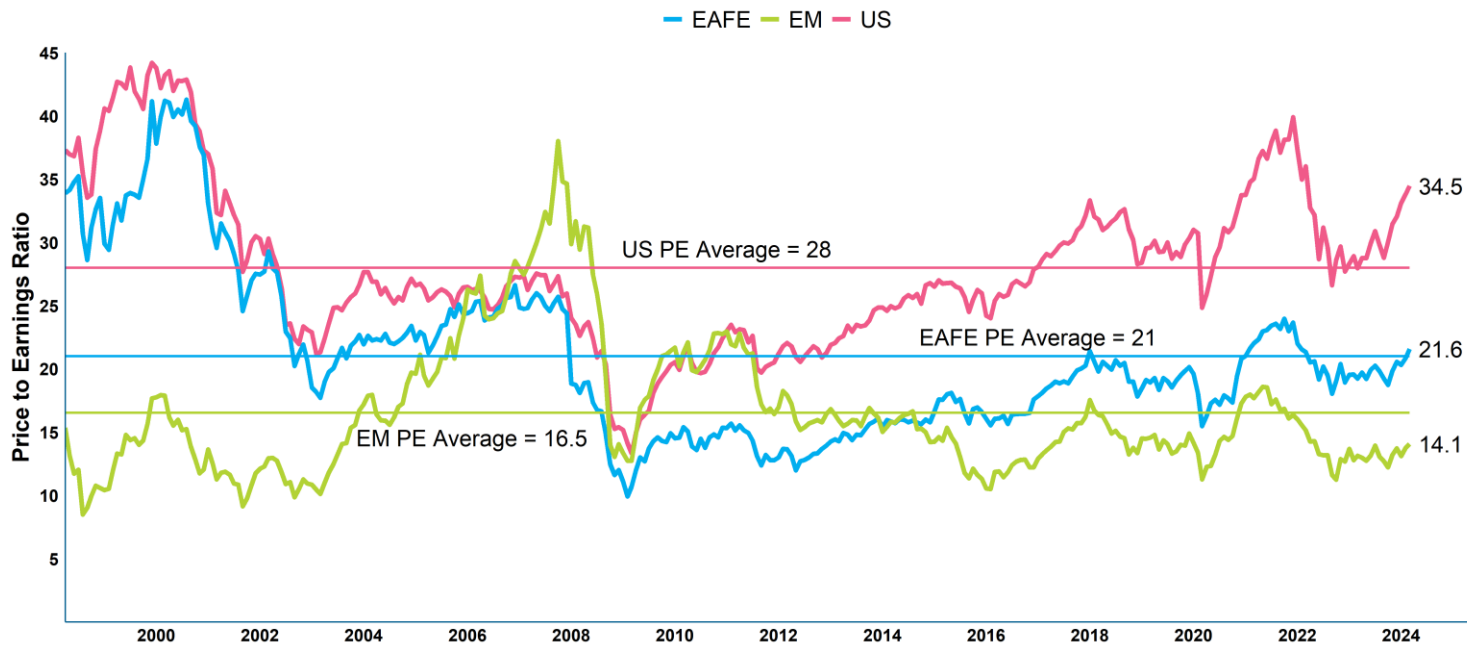
Foreign Equity	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	3.1	4.7	13.3	1.9	6.0	4.3
MSCI EAFE	3.3	5.8	15.3	4.8	7.3	4.8
MSCI EAFE (Local Currency)	4.0	10.0	18.8	9.4	9.4	7.7
MSCI EAFE Small Cap	3.7	2.4	10.4	-1.4	4.9	4.7
MSCI Emerging Markets	2.5	2.4	8.2	-5.1	2.2	2.9
MSCI Emerging Markets (Local Currency)	3.0	4.5	10.6	-2.4	4.4	5.7
MSCI EM ex. China	3.0	4.0	20.5	2.2	6.4	4.2
MSCI China	0.9	-2.2	-17.1	-18.9	-6.3	1.2

Foreign Equity: Developed international equities (MSCI EAFE) gained 5.8% during the quarter and emerging market equities (MSCI EM) rose 2.4%.

- Developed international equity markets matched the US for the quarter in local terms but the appreciation of the dollar decreased returns for US investors by over 4.0% (5.8% versus 10.0%). Eurozone and UK equities had gains for the quarter, but Japan was the real standout performer, with the TOPIX returning 18.1% in local terms and the Nikkei breaking the 40,000 level for the first time.
- Emerging market equities again trailed developed markets largely due to China falling 2.2%. Slowing growth, issues in the property sector, and recent efforts by the US to discourage investments into China all weighed on results. Outside of China, interest rate sensitive markets like Brazil were particularly impacted by expectations of delayed interest rate cuts by the Fed. Stripping out China, emerging markets returned 4.0% in the quarter.

¹ Source: Bloomberg. Data is as of March 31, 2024.

Equity Cyclically Adjusted P/E Ratios¹



- At the end of the first quarter, the US equity price-to-earnings ratio increased further above its 21st century average, as price appreciation exceeded earnings growth.
- International market valuations also rose in the quarter and remain well below the US. In the case of developed markets, valuations are now slightly above the long-term average, while emerging market valuations remain well below its 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: Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of March 2024. The average line is the long-term average of the US, EM, and EAFE PE values from April 1998 to the recent month-end respectively.

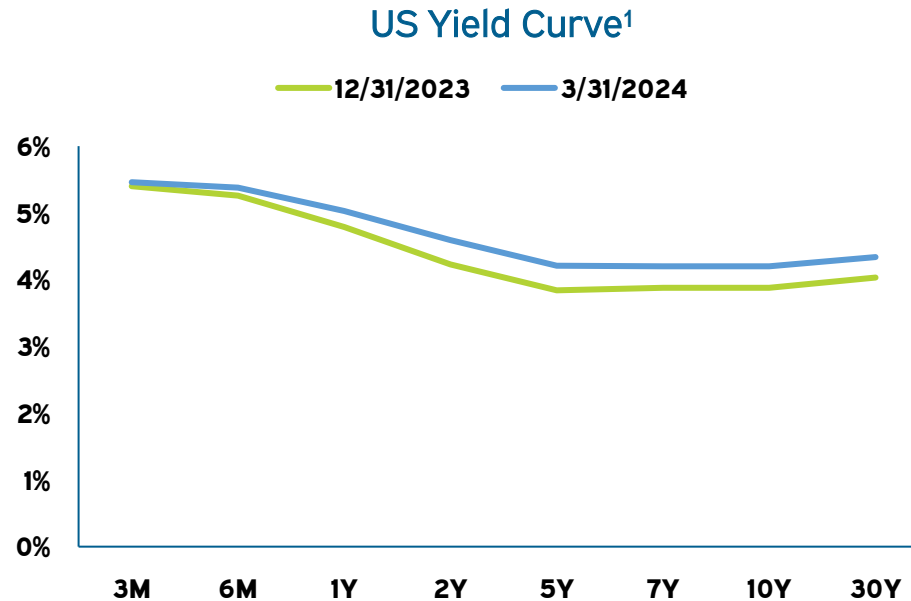
Fixed Income Returns¹

Fixed Income	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	1.0	-0.5	2.7	-2.1	0.7	1.8	5.1	6.0
Bloomberg Aggregate	0.9	-0.8	1.7	-2.5	0.4	1.5	4.8	6.2
Bloomberg US TIPS	0.8	-0.1	0.5	-0.5	2.5	2.2	4.6	6.8
Bloomberg Short-term TIPS	0.6	0.8	3.2	2.3	3.2	2.1	4.8	2.4
Bloomberg High Yield	1.2	1.5	11.2	2.2	4.2	4.4	7.7	3.7
JPM GBI-EM Global Diversified (USD)	0.0	-2.1	4.9	-1.6	0.1	-0.3	6.4	5.0

Fixed Income: The Bloomberg Universal index fell 0.5% in the first quarter.

- Strong economic growth and inflation readings above forecasts shifted interest rate expectations pushing back the anticipated start date of rate cuts as well as the number of cuts for 2024.
- In this environment the broad US bond market (Bloomberg Aggregate) fell 0.8% with TIPS declining only slightly (0.1%).
- High yield bonds (1.5%) led the way for the quarter as risk appetite continues to be robust and overall yields remain attractive despite the recent tightening of spreads to Treasury equivalents.

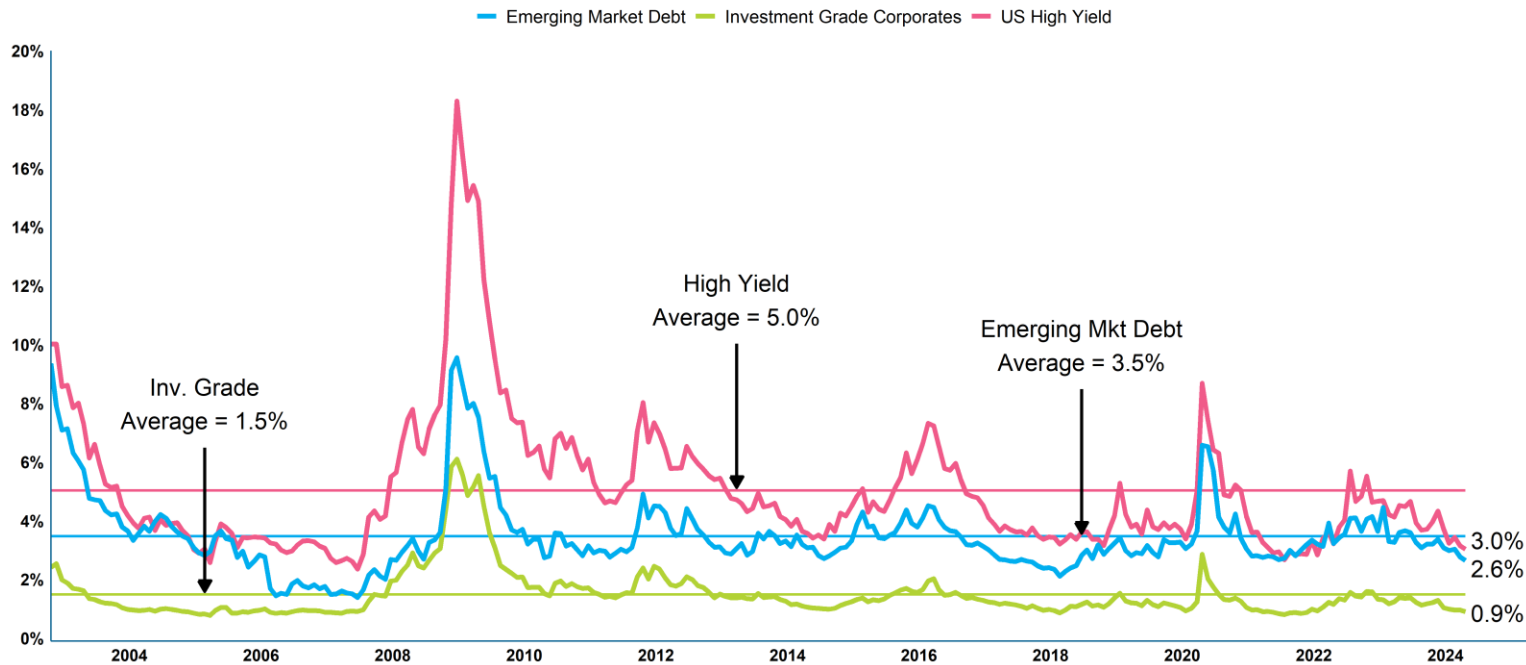
¹ Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of March 31, 2024. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.



- Overall interest rates moved higher over the quarter due to the strong economic data and the related shifts in monetary policy expectations.
- The more policy sensitive two-year Treasury yield rose from 4.3% to 4.6% in the first quarter while the ten-year Treasury yield increased from 3.9% to 4.2%.
- The yield curve remained inverted at quarter-end despite a recent flattening trend. The yield spread between the two-year and ten-year Treasury was -0.4% at the end of the quarter.

¹ Source: Bloomberg. Data is as of March 31, 2024.

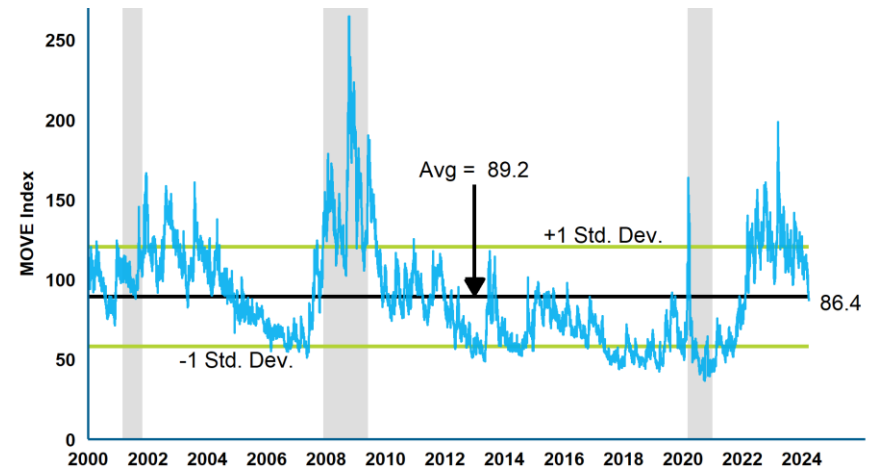
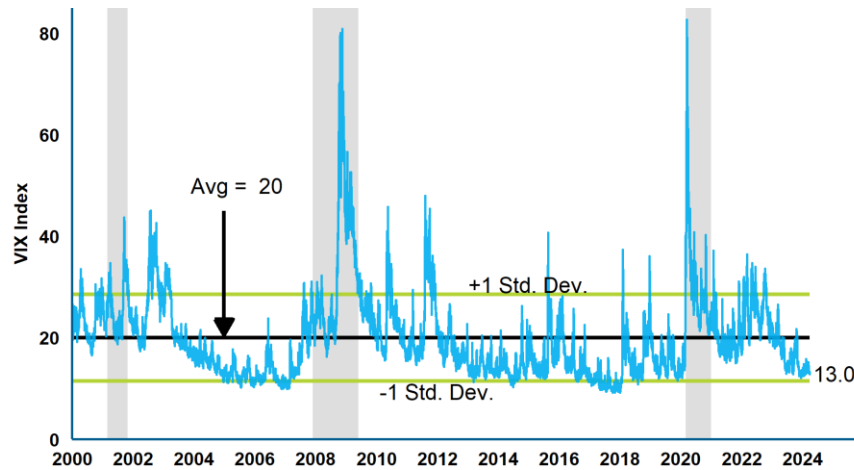
Credit Spreads vs. US Treasury Bonds¹



- A positive economic outlook along with expectations of lower interest rates has led to an increased risk appetite. This has benefited credit, with spreads (the added yield above a comparable maturity Treasury) narrowing.
- This trend continued in the first quarter particularly for riskier bonds. High yield spreads fell from 3.2% to 3.0% and emerging market spreads dropped from 3.0% to 2.6%. Spreads for investment grade corporate bonds fell only slightly over the quarter (1.0% to 0.9%).
- All spreads remain below their respective long-run averages, particularly within high yield.

¹ Source: Bloomberg. Data is as of March 31, 2024. Average lines denote the average of the investment grade, high yield, and emerging market spread values from September 2002 to the recent month-end, respectively.

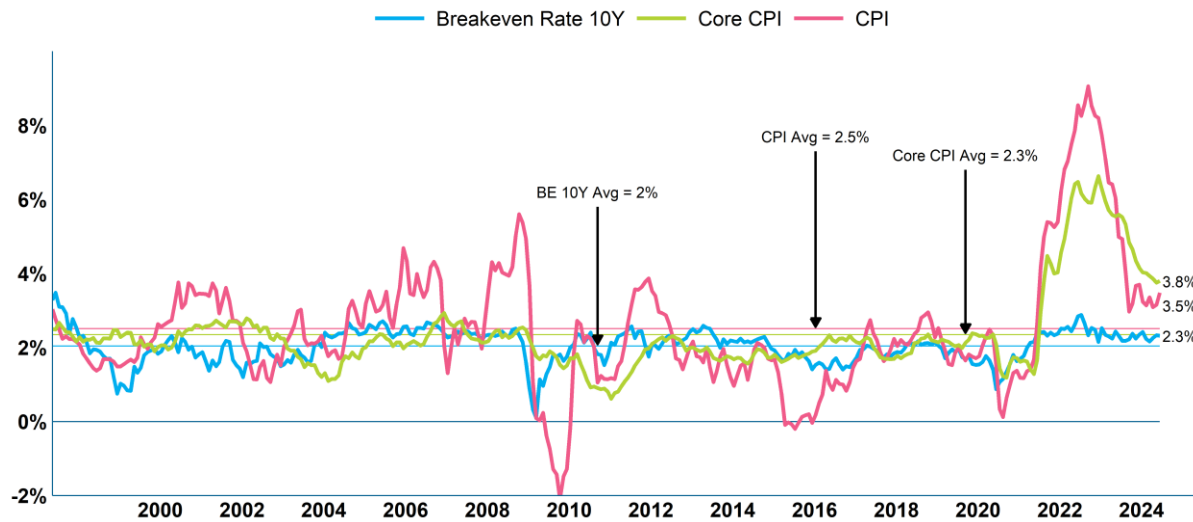
Equity and Fixed Income Volatility¹



- Volatility in equities (VIX) finished the quarter close to one standard deviation below the long-term average as the focus shifted late last year to peaking policy rates and the potential for a soft landing.
- Volatility in the bond market (MOVE) fell significantly over the quarter to a level below the long run average (86.4 versus 89.2). Declining volatility surrounding policy expectations and the more positive growth outlook both contributed to lower volatility in the bond market.

¹ Equity Volatility – Source: FRED. 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 March 2024. The average line indicated is the average of the VIX and MOVE values between January 2000 and March 2024.

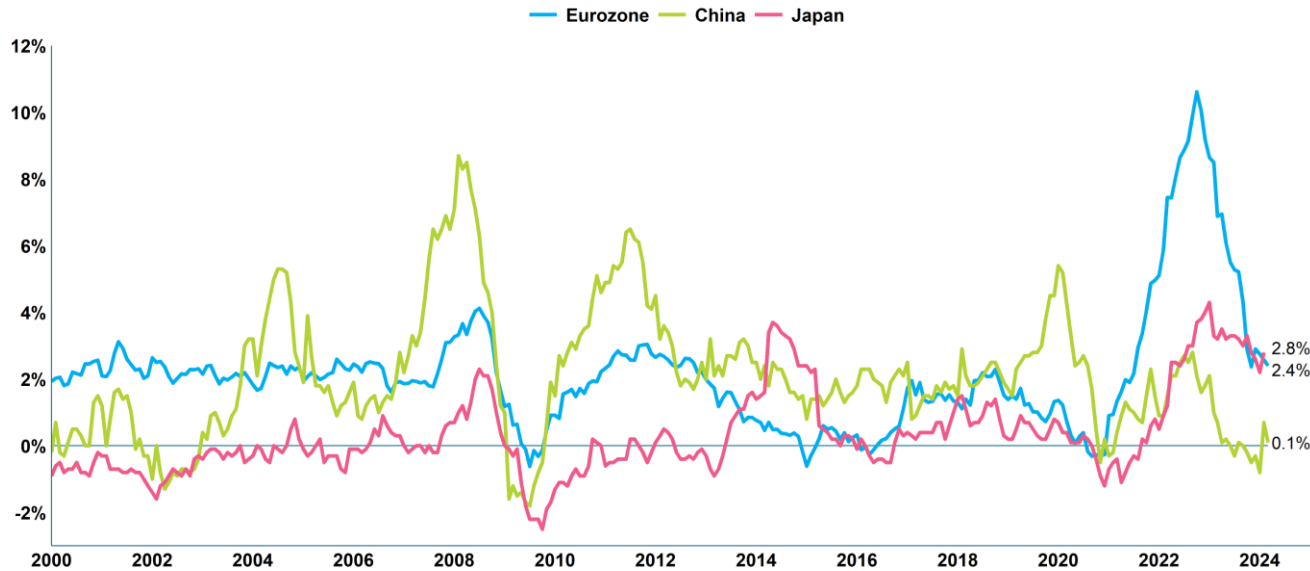
US Ten-Year Breakeven Inflation and CPI¹



- Year-over-year headline inflation rose in March (3.2% to 3.5%) and came in slightly above expectations. Prices in service sectors, particularly shelter, remain a key driver of inflation staying above the Fed’s 2% average target, with a recent rise in energy prices contributing too.
- Month-over-month inflation rose 0.4% which was the same as February, but above expectations of a 0.3% reading.
- Core inflation (excluding food and energy) remained at 3.8% but also came in above expectations. Core goods prices dropped, while core services including shelter and transportation prices continued to show persistence.
- Inflation expectations (breakevens) have remained relatively stable despite the significant volatility in inflation.

¹ Source: FRED. Data is as March 2024. The CPI and 10 Year Breakeven average lines denote the average values from February 1997 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

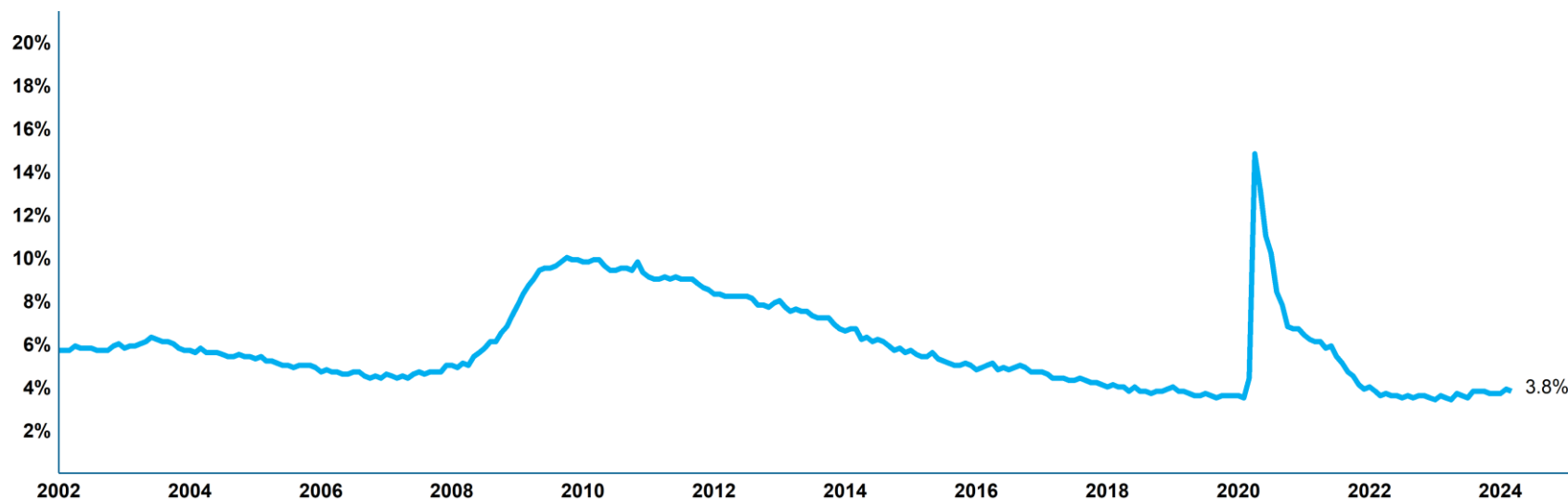
Global Inflation (CPI Trailing Twelve Months)¹



- Outside the US, inflation is also easing across major economies from the recent peaks.
- In the eurozone, prices experienced a dramatic decline last year but remain above the central bank’s 2% target. In March, inflation fell further (2.6% to 2.4%), a level below the 3.5% year-over-year reading in the US.
- Inflation in Japan has slowly declined from the early 2023 peak of 4.3%, but it remains near levels not seen in a decade. In the most recent reading, inflation rose from 2.4% to 2.8% largely due to the falling impact of government energy subsidies introduced at the same time last year.
- The impacts from spending during the Lunar New Year holiday in China waned in March with inflation falling to just about 0%.

¹ Source: Bloomberg. Data is March 31, 2024, except Japan which is as of February 28, 2024.

US Unemployment¹

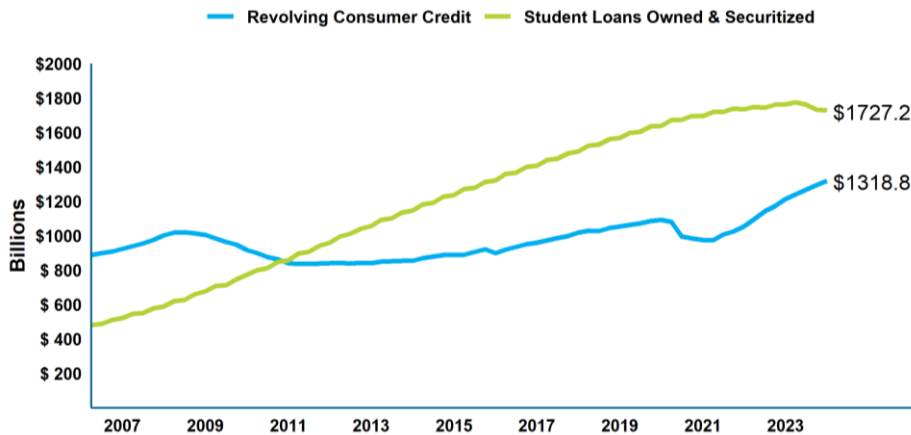


- Overall, the US labor market remains healthy, with the unemployment rate low, wage growth now positive in real terms, and initial claims for unemployment staying subdued.
- Each of the payroll readings over the quarter exceeded expectations. In March, the number of jobs added in the US was 303,000 compared to a 214,000 forecast. The healthcare (72,000), government (71,000), and construction (39,000) sectors added the most jobs.
- The unemployment rate fell from 3.9% to 3.8%, while wage growth dropped slightly from 4.3% to 4.1% compared to a year prior, a level well off the 6.0% peak but above inflation levels.
- Quit rates have declined, and layoffs are stable, with 1.4 job openings per unemployed worker.

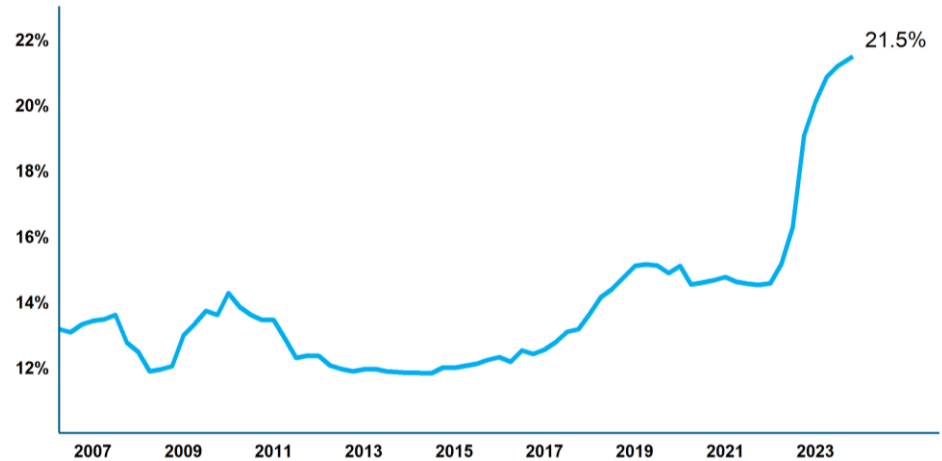
¹ Source: FRED. Data is as March 31, 2024.

US Consumer Under Stress?¹

Revolving Consumer Credit & Student Loans (\$B)



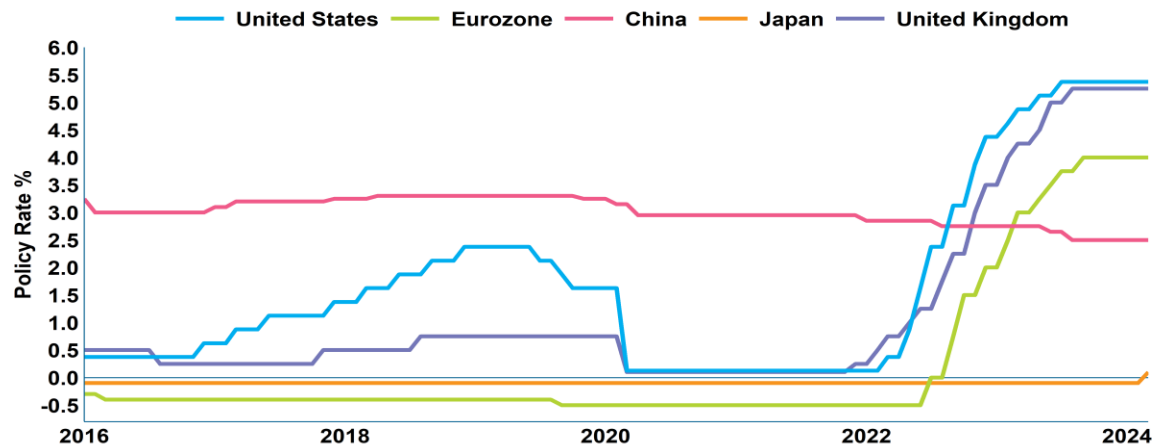
Consumer Credit Card Interest Rates (%)



- Despite the strong labor market and higher wages, pressures have started to build on the US consumer. This is an important consideration as consumer spending has been a key driver of economic growth.
- Revolving consumer credit surged to new highs in 2023 even as credit card interest rates hit levels not seen before (the prior peak was around 19% in the 1980s). Recently, we have also seen payment delinquencies on credit cards and auto loans start to increase, particularly for younger people.
- The return of student loan repayments after a three-year pandemic-related reprieve could add to pressures on consumers' budgets. This might be partially mitigated by recently initiated repayment and forgiveness programs.
- As we look ahead, the strength of the US consumer will remain key as this sector makes up most of the domestic economy (GDP).

¹ Source: FRED. Data is as of December 31, 2023. Revolving Consumer Credit data is seasonally adjusted to remove distortions during the holiday season.

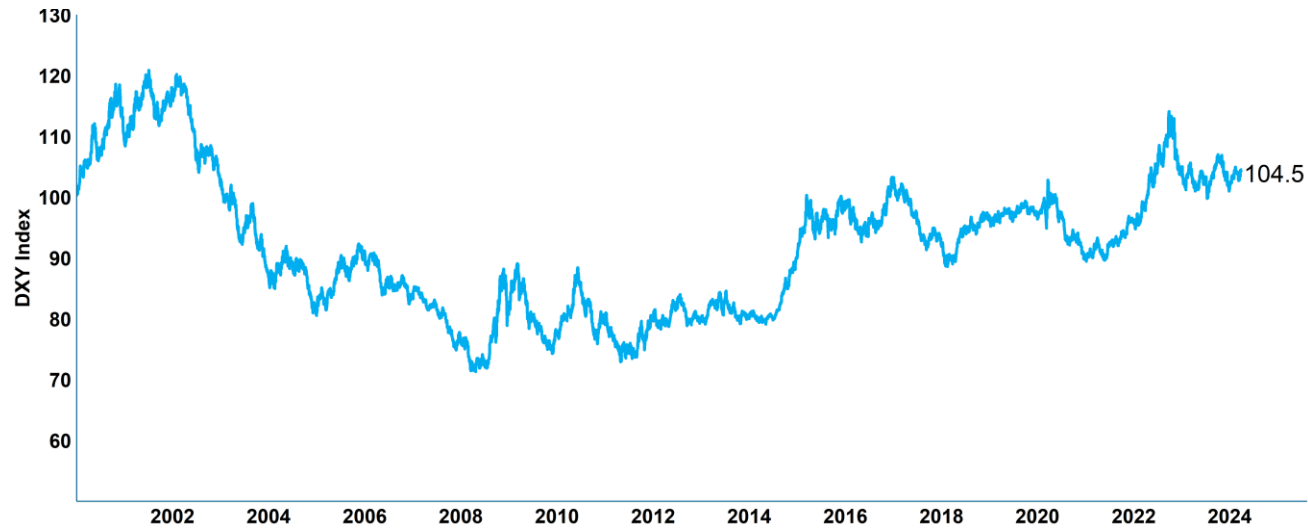
Policy Rates¹



- The Fed has been on hold since July 2023 when it raised rates to a range of 5.25%-5.50%. Markets are now pricing in fewer than two rate cuts this year down from close to seven late last year, as economic data has come in better than expectations and inflation persists. Market pricing for the first rate cut has also dramatically changed from an original expectation of a March cut to the probability priced below 50% for a rate cut at all remaining Fed meetings in 2024.
- The European and UK central banks also recently paused their rate increases on slowing inflation. It appears that the ECB could be one of the first central banks to cut rates with expectations close to 90% for a June cut.
- Given the return of inflation driven by wage growth the Bank of Japan (BOJ) recently ended the final negative interest rate policy, stopped purchasing ETFs, and moved away from its yield curve control.
- The central bank in China has maintained interest rates at record low levels and continues to inject liquidity into the banking system, as weaker-than-expected economic data appears to indicate a widespread slowdown.

¹ Source: Bloomberg. Data is as of March 31, 2024.

US Dollar vs. Broad Currencies¹



- The dollar increased by close to 3% over the quarter versus a basket of major trading partners.
- Strong economic data in the US may delay policy rate cuts this year, which could contribute to continued upward pressure on the dollar as other countries pivot to rate cuts.

¹ Source: Bloomberg. Data as of March 31, 2024.

Summary

Key Trends:

- According to the IMF, global growth this year is expected to match the 2023 estimate at around 3.1% with most major economies predicted to avoid a recession. Continued strong economic growth does run the risk of inflation and interest rates staying higher for longer.
- Key economic data in the US is still coming in above forecasts with expectations dramatically evolving for the timing and pace of interest rate cuts. If data remains strong the Federal Reserve may keep rates elevated increasing the risk of an economic slowdown.
- Outside the US we could see other central banks start cutting rates ahead of the Fed, with the ECB particularly in focus. The risk of policy errors remains elevated as central banks try to further reduce inflation toward targets while not tipping their economies into recession.
- US consumers could feel pressure as certain components of inflation (e.g., shelter) remain high, borrowing costs are elevated, and the job market may weaken.
- A focus for US equities going forward will be whether earnings can remain resilient if growth slows. Also, the future paths of the large technology companies that have driven market gains will be important.
- Equity valuations remain lower in emerging and developed markets, but risks remain, including China's economic uncertainty and on-going weakness in the real estate sector which could spill over into key trading partners' economies. Japan's recent tightening of monetary policy along with changes in corporate governance in the country could influence relative results.

Executive Summary

Q1 2024

Performance Review Summary

Category	QTD Results	5 Year Results
Performance vs. OPERF Policy Benchmark	Underperform 2.3% vs. 4.2%	Underperform 8.4% vs. 8.8%
Performance vs. 6.9% Actuarial Rate	NA	Outperform 8.4% vs. 6.9%
Performance vs. InvMetrics All DB > \$5B Net Median	Underperform 2.3% vs. 3.5%	Outperform 8.4% vs. 7.4%
Actively Managed Public Markets ¹ vs. Benchmarks	16 of the 28 actively managed stock and bond portfolios outperformed their respective benchmarks (after fees)	15 of the 19 actively managed stock and bond portfolios outperformed their respective benchmarks (after fees)

Category	Quarter-End	Notes
Compliance with Targets ²	Out of Compliance	Private Equity remains well above target, while public equity and fixed income are underweight. Real Assets are also overweight.

→ Per the Russell Overlay Report dated March 31, 2023 allocations including synthetic positions were as follows.

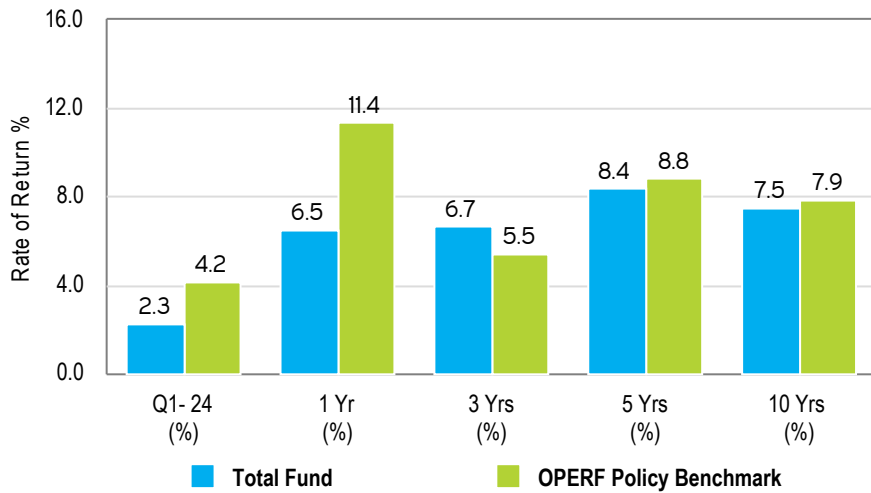
	Physical	Synthetic	Net	Target	Range
Public Equity	18.9%	-2.9%	16.0%	27.5%	22.5% - 32.5%
Private Equity	28.5%	0.0%	28.5%	20.0%	17.5% - 27.5%
Fixed Income	18.3%	5.1%	23.4%	25.0%	20.0% - 30.0%
Cash	2.2%	-2.1%	0.0%	0.0%	--

¹ Actively Managed Public Markets includes managers with at least one quarter of performance. Managers currently being liquidated are excluded.

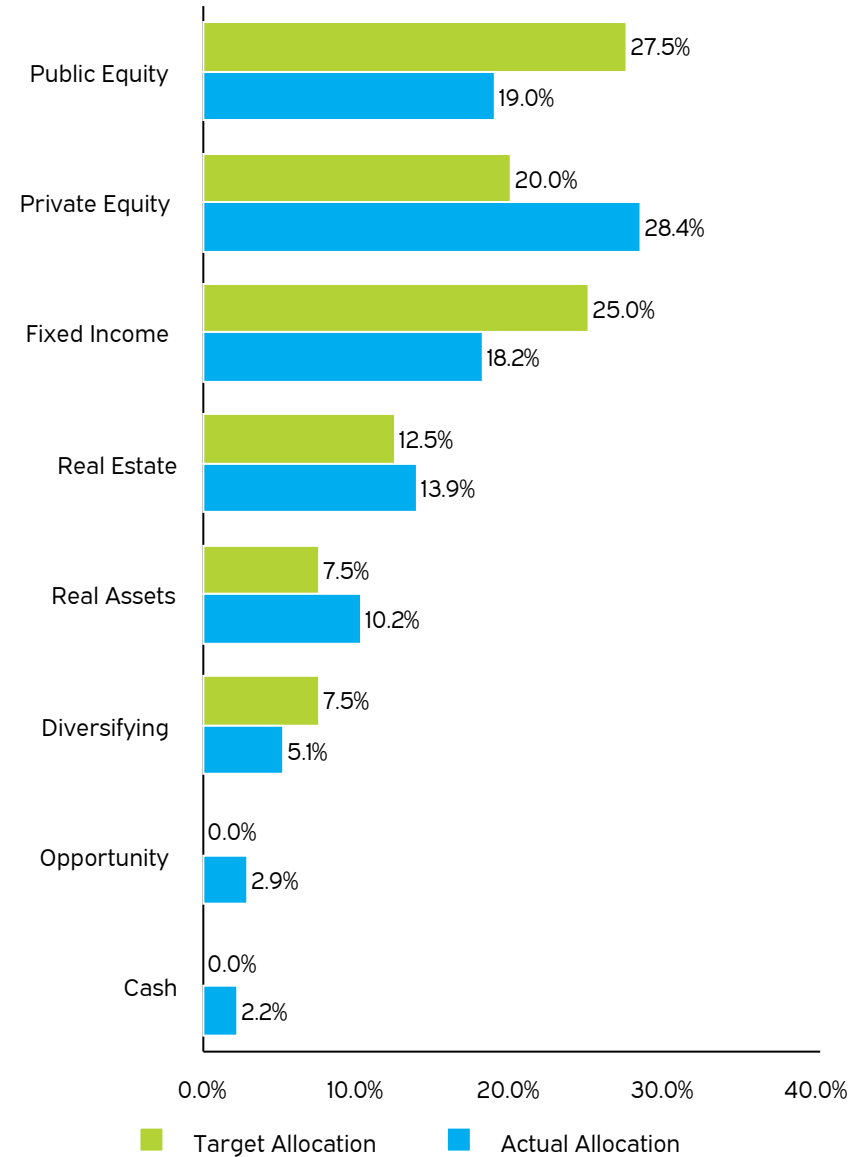
² Compliance with Targets reflects physical allocation not inclusive of overlay positions.

Total Fund | As of March 31, 2024

Return Summary
Ending March 31, 2024

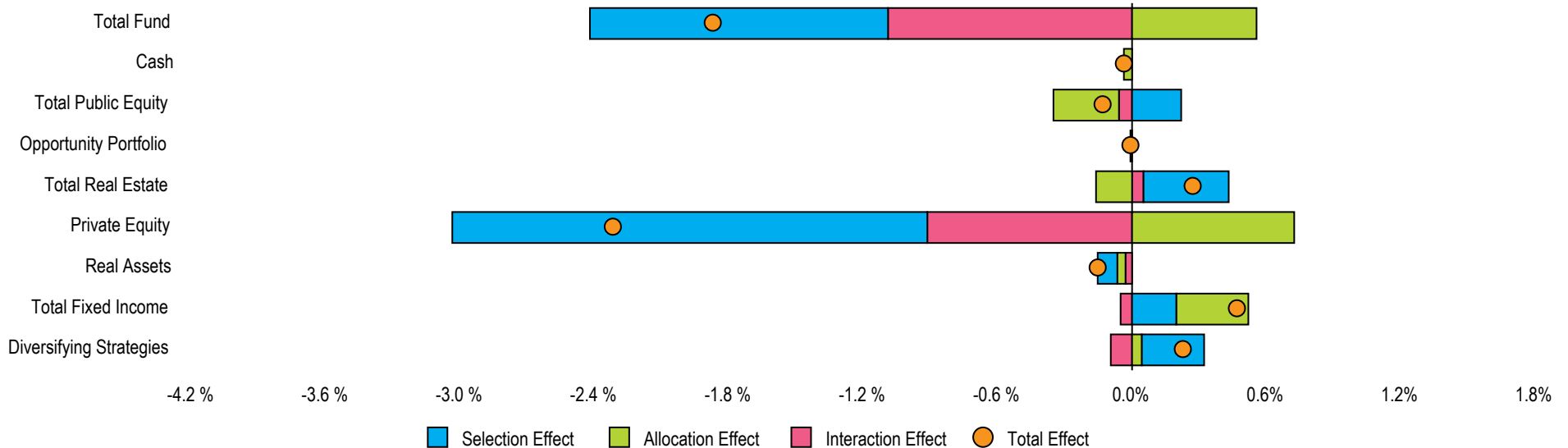


	Q1- 24 (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund	2.3	6.5	6.7	8.4	7.5
<i>OPERF Policy Benchmark</i>	<i>4.2</i>	<i>11.4</i>	<i>5.5</i>	<i>8.8</i>	<i>7.9</i>
Excess Return	-1.9	-4.9	1.2	-0.4	-0.4
<i>InvMetrics All DB > \$5B Median</i>	<i>3.5</i>	<i>10.4</i>	<i>4.3</i>	<i>7.4</i>	<i>6.7</i>
Total Fund Rank	86	83	1	11	7



Quarterly Commentary

Attribution Effects
1 Quarter Ending March 31, 2024



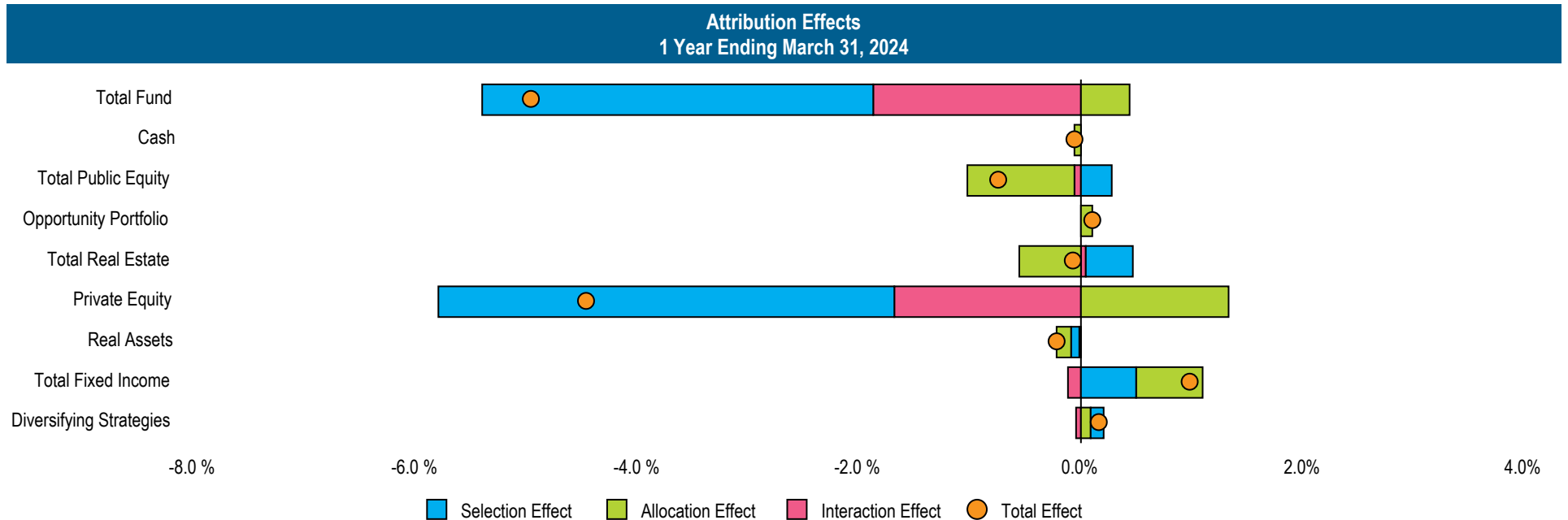
→ Key Contributors

- Fixed Income – Underweight to Policy and performance within the credit sleeves (Non-Core Fixed Income, Emerging Markets Debt, and Structured Credit Products) contributed to benchmark relative returns.
- Real Estate – Manager selection (performance) relative to benchmark drove returns.

→ Key Detractors

- Private Equity – Manager selection (performance) was primary detractor. Benchmark is a public market equivalent lagged one quarter which can lead to short-term volatility versus the index. This is especially prevalent during a period of strong public equity market returns.

One Year Commentary



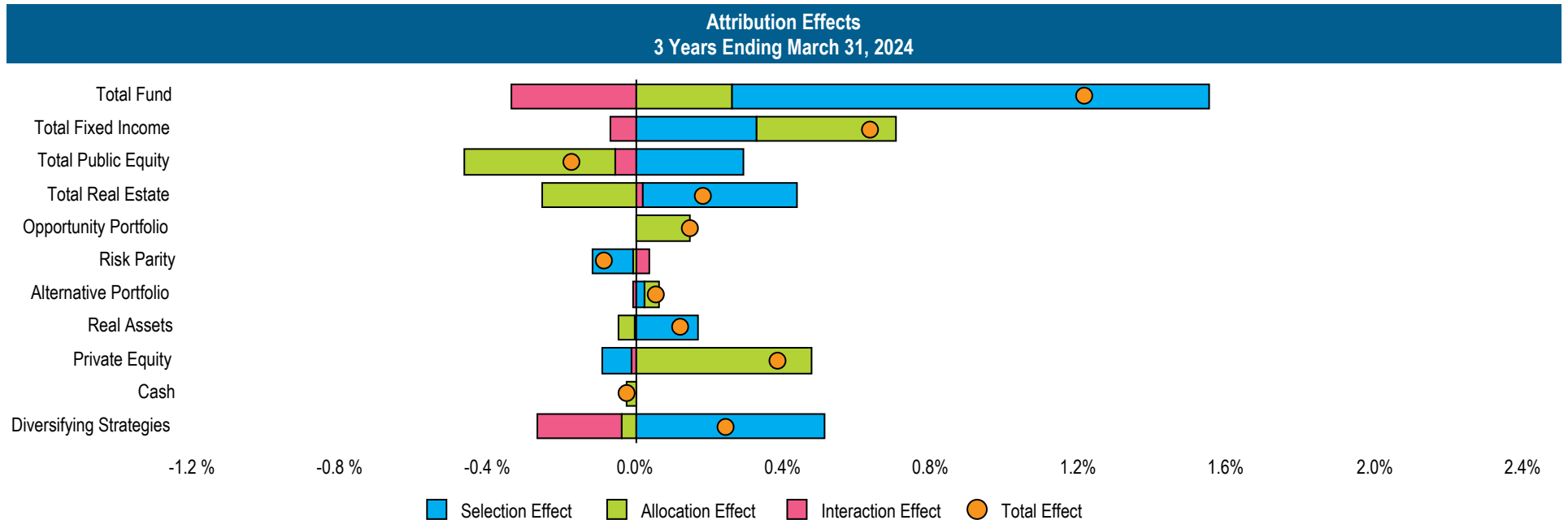
→ Key Contributors

- Total Fixed Income – Strongest contributor relative to the benchmark. Underweight relative to Policy and outperformance in the Core and None-Core Fixed Income were primary drivers of benchmark relative performance.

→ Key Detractors

- Private Equity – Largest detractor from benchmark relative returns as a result of manager selection (performance). Benchmark is a public market equivalent lagged one quarter.
- Total Public Equity – Positive absolute and benchmark relative returns. Underweight vs. Policy detracted from benchmark relative returns.

Three Year Commentary



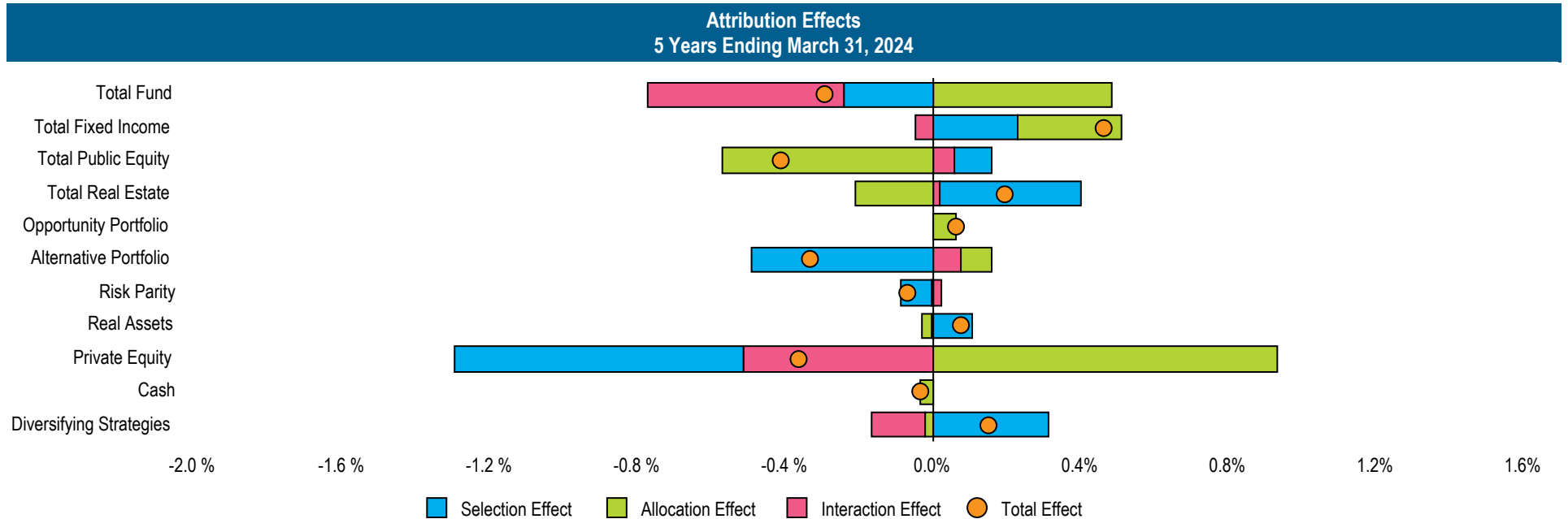
→ Key Contributors

- Total Fixed Income - Strongest contributor relative to the benchmark. Both the asset class underweight (allocation) and manager selection (performance) contributed meaningfully.
- Private Equity – Strong absolute returns combined with a persistent overweight have positively impacted Total Fund returns on an absolute and relative basis.

→ Key Detractors

- Total Public Equity – Positive absolute returns. Underweight vs. Policy detracted from benchmark relative returns. This impact is partially offset given the underweight is a result of the Private Equity overweight which was a key contributor for the period.

Five Year Commentary



→ Key Contributors

- Total Fixed Income – The portfolio underweight was a contributor to benchmark relative returns. Additionally, selection (performance) within the Core and Non-Core Fixed Income portfolios provided additional contribution.
- Total Real Estate - Strong outperformance relative to the benchmark due to manager selection. Overweight vs. Policy was a slight detractor.

→ Key Detractors

- Private Equity – Weakest performance relative to benchmark. Benchmark is a public market equivalent lagged one quarter. The negative selection attribution was partially offset by the overweight allocation vs target.
- Public Equity - Positive absolute returns. Underweight vs. Policy detracted from benchmark relative returns. Allocation effect is partially offset as a result of the overweight and better performing Private Equity portfolio during the period.

1 Year Ending March 31, 2024						
	Return	Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Fund	6.5	2.8	-1.8	0.5	0.4	2.6
OPERF Policy Benchmark	11.4	5.0	-	1.0	1.2	0.0

3 Years Ending March 31, 2024						
	Return	Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Fund	6.7	4.9	0.3	0.6	0.8	3.3
OPERF Policy Benchmark	5.5	6.8	-	1.0	0.4	0.0

5 Years Ending March 31, 2024						
	Return	Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Fund	8.4	5.8	-0.2	0.8	1.0	3.0
OPERF Policy Benchmark	8.8	7.0	-	1.0	1.0	0.0

10 Years Ending March 31, 2024						
	Return	Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Fund	7.5	5.2	-0.1	0.8	1.1	2.3
OPERF Policy Benchmark	7.9	6.0	-	1.0	1.1	0.0

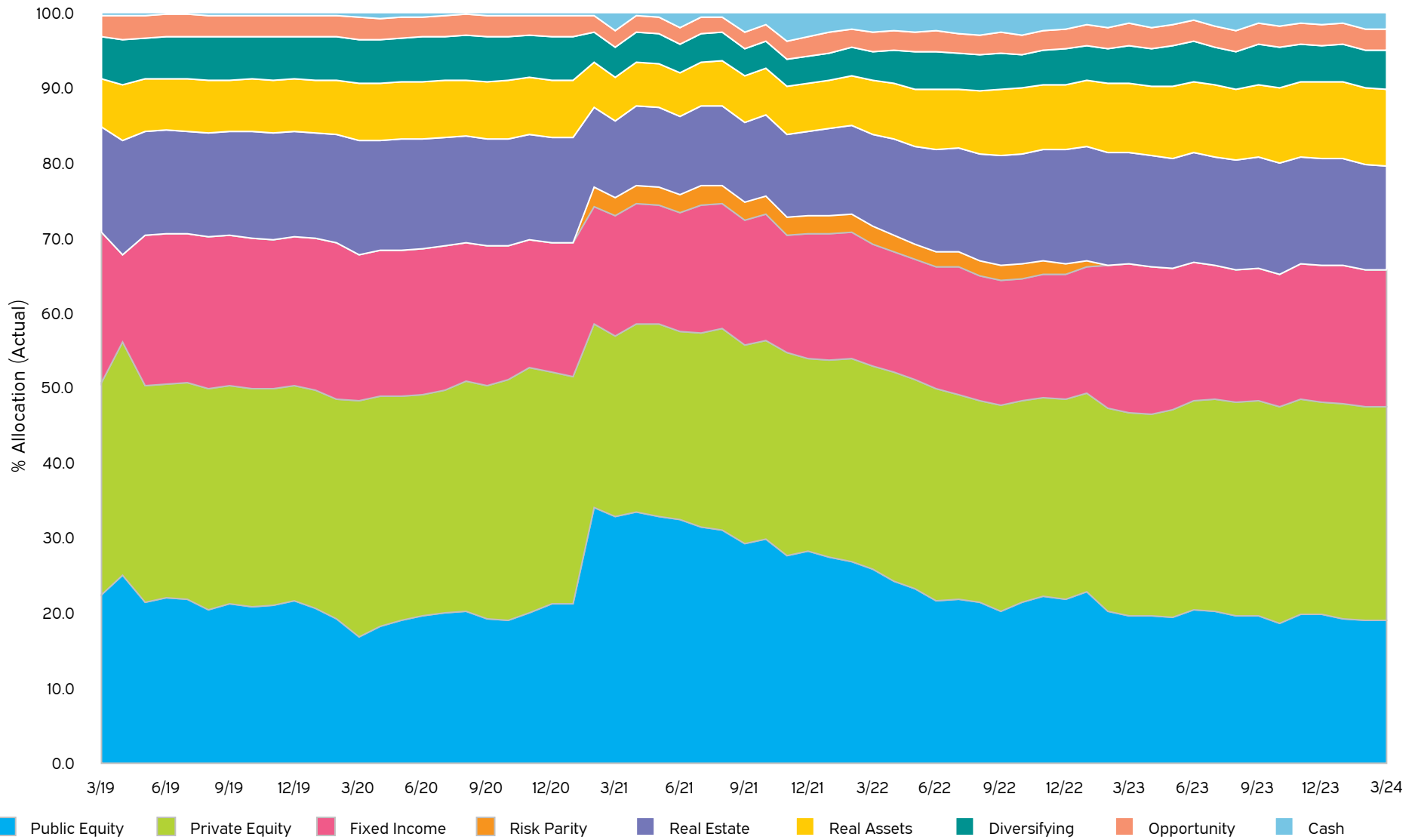
Performance Update
As of March 31, 2024

Asset Allocation vs Target As of March 31, 2024						
	Current Balance (\$)	Current Allocation (%)	Policy (%)	Difference (%)	Policy Range (%)	Within IPS Range?
Public Equity	17,905,781,391	19.0	27.5	-8.5	22.5 - 32.5	No
Private Equity	26,843,256,568	28.4	20.0	8.4	17.5 - 27.5	No
Fixed Income	17,208,890,691	18.2	25.0	-6.8	20.0 - 30.0	No
Real Estate	13,134,079,832	13.9	12.5	1.4	9.0 - 16.5	Yes
Real Assets	9,631,034,074	10.2	7.5	2.7	2.5 - 10.0	No
Diversifying	4,842,800,707	5.1	7.5	-2.4	2.5 - 10.0	Yes
Opportunity	2,709,788,106	2.9	0.0	2.9	0.0 - 5.0	Yes
Cash	2,097,961,522	2.2	0.0	2.2	0.0 - 100.0	Yes
Total	94,373,592,890	100.0	100.0	0.0		

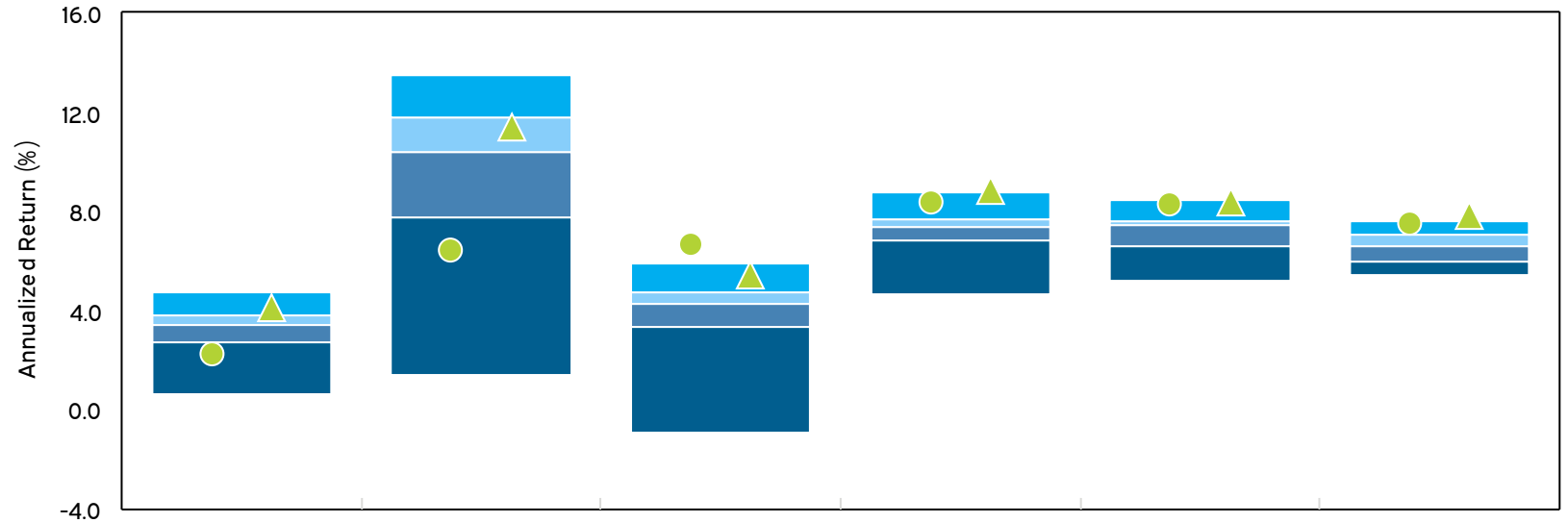
The table above reflects physical asset allocation and excludes Overlay impact.
 Total Public Equity includes Other Equity and Cash includes Russell Overlay Cash Balance for allocation purposes.
 The target allocation was revised effective April 1, 2023. Plan rebalancing is currently underway.

Historical Asset Allocation | 5 Years Ending March 31, 2024

Asset Allocation History
5 Years Ending March 31, 2024



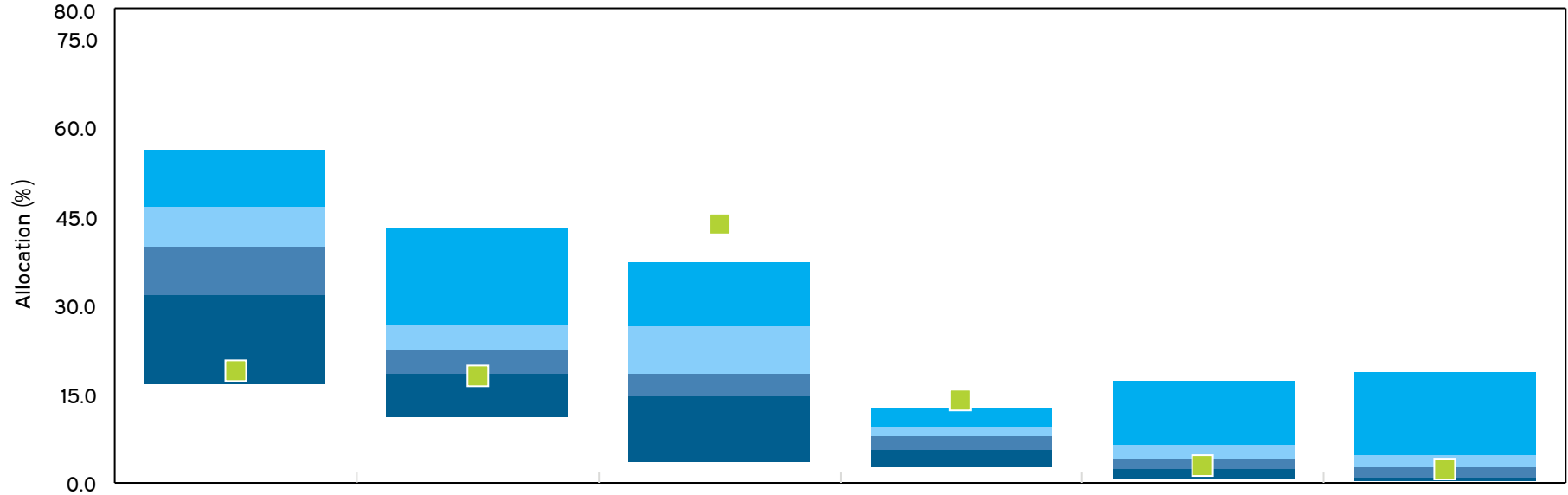
InvMetrics All DB > \$5B Net Return Comparison Ending March 31, 2024



	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
● Total Fund	2.3 (86)	6.5 (83)	6.7 (1)	8.4 (11)	8.3 (9)	7.5 (7)
▲ OPERF Policy Benchmark	4.2 (17)	11.4 (35)	5.5 (11)	8.8 (5)	8.4 (6)	7.9 (1)
5th Percentile	4.8	13.5	5.9	8.8	8.4	7.6
1st Quartile	3.8	11.8	4.8	7.7	7.6	7.1
Median	3.5	10.4	4.3	7.4	7.5	6.7
3rd Quartile	2.8	7.8	3.4	6.8	6.6	6.0
95th Percentile	0.6	1.4	-0.9	4.7	5.2	5.4
Population	41	22	14	13	13	12

Parentheses contain percentile rankings.

Total Plan Allocation vs. InvMetrics All DB > \$5B



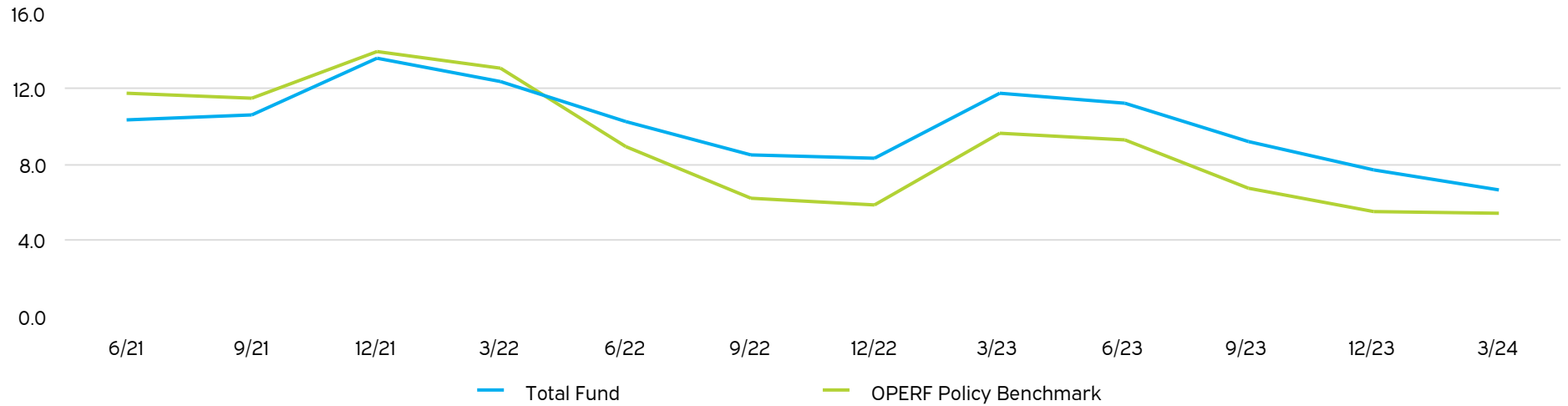
	Total Equity	Total Fixed Income	Alternatives	Total Real Estate	Multi-Asset	Cash & Equivalents
■ Total Fund	19.0 (90)	18.2 (77)	43.8 (2)	13.9 (3)	2.8 (70)	2.2 (54)
5th Percentile	56.4	43.3	37.4	12.6	17.3	18.7
1st Quartile	46.7	26.9	26.6	9.2	6.4	4.7
Median	40.1	22.4	18.3	8.0	4.0	2.6
3rd Quartile	31.9	18.5	14.6	5.7	2.3	0.9
95th Percentile	16.7	11.2	3.4	2.7	0.5	0.3

Parentheses contain percentile rankings.

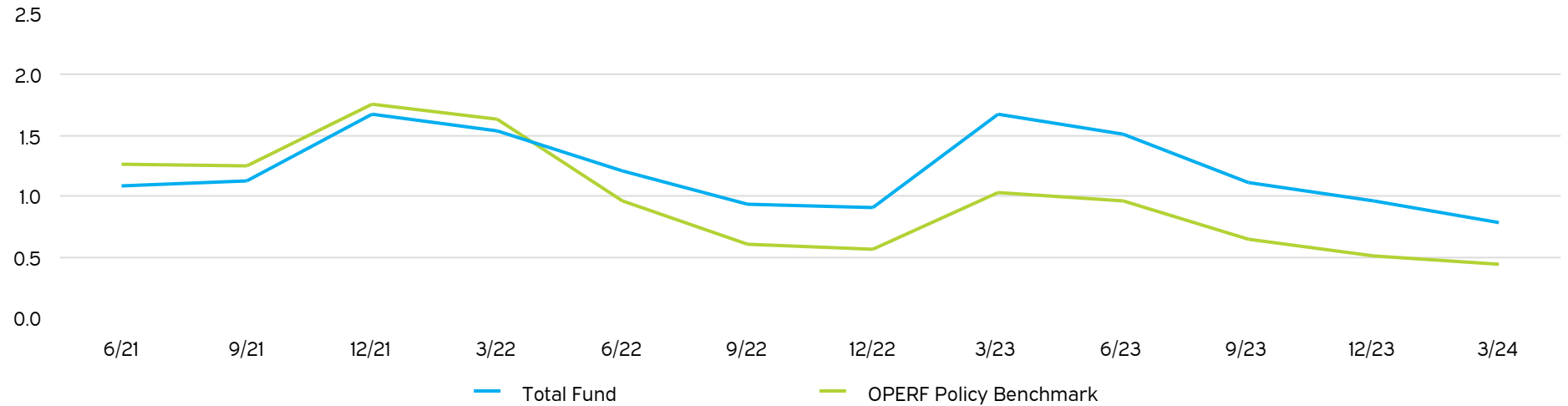
Alternatives is classified to contain the following sub-asset classes: Hedge Funds, Venture Capital, Private Equity, Real Assets, and Commodities.

Multi-Asset is classified to contain the following sub-asset classes: Balanced, Tactical Asset Allocation, and Other.

Rolling 3 Year Annualized Return (%)
Total Fund vs OPERF Policy Benchmark



Rolling 3 Year Sharpe Ratio
Total Fund vs OPERF Policy Benchmark



Asset Class Performance Summary							
	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund	94,373,592,890	100.0	2.3	6.5	6.7	8.4	7.5
<i>OPERF Policy Benchmark</i>			4.2	11.4	5.5	8.8	7.9
<i>InvMetrics All DB > \$5B Median</i>			3.5	10.4	4.3	7.4	6.7
<i>InvMetrics All DB > \$5B Rank</i>			86	83	1	11	7
Total Fixed Income	17,208,890,691	18.2	0.0	3.6	-1.1	1.4	1.9
<i>Oregon Custom FI Benchmark</i>			-0.8	1.7	-2.4	0.4	1.3
Core Fixed Income	5,059,984,725	5.4	-0.4	2.7	-2.2	0.9	2.0
<i>Oregon Custom External FI BM</i>			-0.8	1.7	-2.5	0.4	1.5
U.S. Government	7,380,698,518	7.8	-0.8	0.1	-2.7	0.0	0.5
<i>Government Blended Index</i>			-1.0	0.1	-2.7	-0.1	0.5
Non-Core Fixed Income	2,224,373,856	2.4	2.6	13.4	6.9	6.7	5.2
<i>Custom Non-Core Fixed Income Index</i>			2.2	12.1	5.1	5.2	4.5
Emerging Markets Debt	246,058,711	0.3	2.4	11.2	--	--	--
<i>JPM EMBI Global Diversified</i>			2.0	11.3	-1.4	0.7	3.0
Structured Credit Products	1,470,649,539	1.6	1.2	5.6	--	--	--
<i>Oregon Structured Credit Products FI BM</i>			1.0	5.1	--	--	--
Investment Grade Credit	824,355,102	0.9	-0.1	6.9	--	--	--
Total Public Equity	17,905,781,391	19.0	8.5	23.7	7.4	11.1	8.8
<i>MSCI ACWI IMI Net (Daily)</i>			7.7	22.5	6.3	10.6	8.4
U.S. Equity	9,782,038,033	10.4	9.8	26.6	8.6	12.9	11.0
<i>Russell 3000 Index</i>			10.0	29.3	9.8	14.3	12.3
Small Cap Growth	265,760,407	0.3	12.7	16.8	-2.1	11.2	8.7
<i>Russell 2000 Growth Index</i>			7.6	20.3	-2.7	7.4	7.9

See appendix for custom Policy Benchmark descriptions.

Total Fund | As of March 31, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Small Cap Value	1,704,713	0.0	-1.2	6.1	2.5	8.0	6.6
<i>Russell 2000 Value Index</i>			<i>2.9</i>	<i>18.8</i>	<i>2.2</i>	<i>8.2</i>	<i>6.9</i>
Market Oriented (CORE)	9,514,572,913	10.1	9.9	27.2	9.0	13.3	11.5
<i>Russell 3000 Index</i>			<i>10.0</i>	<i>29.3</i>	<i>9.8</i>	<i>14.3</i>	<i>12.3</i>
Non-U.S. Equity	5,662,423,076	6.0	5.8	18.0	5.1	8.9	6.3
<i>Oregon MSCI ACWI Ex US IMI (Net)</i>			<i>4.3</i>	<i>13.2</i>	<i>1.7</i>	<i>6.0</i>	<i>4.3</i>
Total International Overlay Accounts	70,790,683	0.1					
International Market Oriented (Core)	2,716,727,714	2.9	7.9	18.8	5.7	9.0	6.6
<i>MSCI World ex U.S. IMI Index (Net)</i>			<i>5.2</i>	<i>14.6</i>	<i>4.1</i>	<i>7.2</i>	<i>4.8</i>
International Value	1,067,868,062	1.1	4.5	19.8	7.5	9.1	6.1
<i>Oregon MSCI ACWI Ex US Value IMI (Net)</i>			<i>3.3</i>	<i>15.4</i>	<i>4.4</i>	<i>5.5</i>	<i>3.4</i>
International Growth	854,667,134	0.9	4.4	10.9	3.5	8.8	7.4
<i>Oregon MSCI WORLD Ex US (Net)</i>			<i>5.6</i>	<i>15.3</i>	<i>4.9</i>	<i>7.5</i>	<i>4.8</i>
International Small Cap	318,745,921	0.3	3.9	17.0	4.8	9.0	5.3
<i>MSCI World ex U.S. Small Value (Net)</i>			<i>2.9</i>	<i>12.9</i>	<i>2.2</i>	<i>5.8</i>	<i>4.1</i>
Emerging Markets	633,623,562	0.7	2.0	20.8	1.8	8.5	5.8
<i>ORE MSCI Emerging Markets IMI (Net)</i>			<i>2.2</i>	<i>9.8</i>	<i>-3.9</i>	<i>3.0</i>	<i>3.2</i>
Global Equity	2,442,924,815	2.6	10.1	27.2	9.2	10.2	8.2
<i>MSCI ACWI IMI Net (Daily)</i>			<i>7.7</i>	<i>22.5</i>	<i>6.3</i>	<i>10.6</i>	<i>8.4</i>
Global Equity Low Volatility	1,070,031,670	1.1	8.8	23.8	8.4	9.7	--
<i>MSCI AC World (Daily Const)</i>			<i>8.2</i>	<i>23.2</i>	<i>7.0</i>	<i>10.9</i>	<i>8.7</i>
Other Equity	18,395,467	0.0					

See appendix for custom Policy Benchmark descriptions.

Total Fund | As of March 31, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Real Estate	13,134,079,832	13.9	-2.1	-10.0	7.4	6.3	7.9
<i>NCREIF ODCE (Custom) (Adj)</i>			<i>-5.0</i>	<i>-12.7</i>	<i>4.0</i>	<i>3.3</i>	<i>6.3</i>
Real Estate excluding REITS	12,850,440,243	13.6	-2.1	-10.4	7.5	6.6	8.5
Total REITS	283,639,588	0.3	-0.8	9.2	5.4	2.9	5.2
Opportunity Portfolio	2,709,788,106	2.9	4.0	15.2	11.1	11.2	8.7
<i>Opportunity Custom Benchmark</i>			<i>4.2</i>	<i>11.4</i>	<i>11.8</i>	<i>10.0</i>	<i>8.2</i>
Alternative Portfolio	14,473,834,781	15.3	3.2	7.2	12.1	6.6	4.6
<i>CPI +4%</i>			<i>2.8</i>	<i>7.6</i>	<i>9.8</i>	<i>8.3</i>	<i>6.9</i>
Diversifying Strategies	4,842,800,707	5.1	6.2	8.5	10.1	3.9	3.4
<i>HFRI FOF Conservative Index</i>			<i>2.5</i>	<i>7.1</i>	<i>4.0</i>	<i>5.0</i>	<i>3.5</i>
Real Assets	9,631,034,074	10.2	1.7	6.5	13.6	8.7	5.9
<i>CPI +4%</i>			<i>2.8</i>	<i>7.6</i>	<i>9.8</i>	<i>8.3</i>	<i>6.9</i>
Private Equity	26,843,256,568	28.4	2.0	7.8	12.0	14.5	12.8
<i>Russell 3000 + 300 BPS QTR LAG (Adj)</i>			<i>12.9</i>	<i>29.7</i>	<i>11.8</i>	<i>18.6</i>	<i>14.8</i>
Cash	1,418,701,070	1.5	1.4	5.6	2.4	2.2	1.8
<i>ICE BofA 3 Month U.S. T-Bill</i>			<i>1.3</i>	<i>5.2</i>	<i>2.6</i>	<i>2.0</i>	<i>1.4</i>

See appendix for custom Policy Benchmark descriptions.

Asset Allocation & Performance | As of March 31, 2024

Trailing Net Performance							
	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund	94,373,592,890	100.0	2.3	6.5	6.7	8.4	7.5
<i>OPERF Policy Benchmark</i>			4.2	11.4	5.5	8.8	7.9
<i>60% MSCI ACWI / 40% Bloomberg Aggregate</i>			4.6	14.3	3.3	6.9	6.0
<i>70% MSCI ACWI/30% Barclays Agg</i>			5.5	16.5	4.2	7.9	6.7
<i>InvMetrics All DB > \$5B Median</i>			3.5	10.4	4.3	7.4	6.7
<i>InvMetrics All DB > \$5B Rank</i>			86	83	1	11	7
Total Fixed Income	17,208,890,691	18.2	0.0	3.6	-1.1	1.4	1.9
<i>Oregon Custom FI Benchmark</i>			-0.8	1.7	-2.4	0.4	1.3
<i>Blmbg. U.S. Aggregate Index</i>			-0.8	1.7	-2.5	0.4	1.5
<i>Fixed Income Weighted BM</i>			-0.4	2.5	-1.7	0.7	1.8
Core Fixed Income	5,059,984,725	5.4	-0.4	2.7	-2.2	0.9	2.0
<i>Oregon Custom External FI BM</i>			-0.8	1.7	-2.5	0.4	1.5
Blackrock	1,658,747,204	1.8	-0.5	2.3	-2.2	0.8	1.9
<i>Oregon Custom External FI BM</i>			-0.8	1.7	-2.5	0.4	1.5
Wellington	1,697,206,700	1.8	0.0	3.0	-2.2	1.0	2.2
<i>Oregon Custom External FI BM</i>			-0.8	1.7	-2.5	0.4	1.5
Western Asset	1,704,030,821	1.8	-0.7	2.5	-2.3	1.0	2.2
<i>Oregon Custom External FI BM</i>			-0.8	1.7	-2.5	0.4	1.5
U.S. Government	7,380,698,518	7.8	-0.8	0.1	-2.7	0.0	0.5
<i>Government Blended Index</i>			-1.0	0.1	-2.7	-0.1	0.5
Government Portfolio	7,380,698,518	7.8	-0.8	0.1	-2.7	0.0	--
<i>Government Blended Index</i>			-1.0	0.1	-2.7	-0.1	0.5
Non-Core Fixed Income	2,224,373,856	2.4	2.6	13.4	6.9	6.7	5.2
<i>Custom Non-Core Fixed Income Index</i>			2.2	12.1	5.1	5.2	4.5
KKR Asset Management	23,177,310	0.0	-21.7	-20.4	-12.7	-4.8	-0.9
<i>KKR Custom Leveraged Loans & Bond Index</i>			2.1	12.0	4.7	5.0	4.5

Asset Allocation & Performance | As of March 31, 2024

	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Oak Hill <i>Oak Hill Custom Lev Loan & Bond Index</i>	1,806,948,825	1.9	3.1 <i>2.3</i>	14.4 <i>12.3</i>	7.4 <i>5.5</i>	7.1 <i>5.3</i>	5.9 <i>4.6</i>
Beach Point <i>Beachpoint Custom FI Benchmark</i>	394,247,721	0.4	1.8 <i>2.0</i>	10.5 <i>11.8</i>	-- <i>--</i>	-- <i>--</i>	-- <i>--</i>
Emerging Markets Debt	246,058,711	0.3	2.4	11.2	--	--	--
<i>JPM EMBI Global Diversified</i>			<i>2.0</i>	<i>11.3</i>	<i>-1.4</i>	<i>0.7</i>	<i>3.0</i>
Ashmore EMD <i>JPM EMBI Global Diversified</i>	4,788	0.0	0.0 <i>2.0</i>	-1.6 <i>11.3</i>	-- <i>-1.4</i>	-- <i>0.7</i>	-- <i>3.0</i>
Global Evolution EMD <i>JPM EMBI Global Diversified</i>	124,450,133	0.1	2.5 <i>2.0</i>	12.1 <i>11.3</i>	-- <i>-1.4</i>	-- <i>0.7</i>	-- <i>3.0</i>
PGIM EMD <i>JPM EMBI Global Diversified</i>	121,608,578	0.1	2.3 <i>2.0</i>	11.1 <i>11.3</i>	-- <i>-1.4</i>	-- <i>0.7</i>	-- <i>3.0</i>
Structured Credit Products	1,470,649,539	1.6	1.2	5.6	--	--	--
<i>Oregon Structured Credit Products FI BM</i>			<i>1.0</i>	<i>5.1</i>	<i>--</i>	<i>--</i>	<i>--</i>
Schroders SCP <i>ICE BofA AA-BBB US Asset Backed Sec Idx</i>	862,812,321	0.9	1.1 <i>2.0</i>	6.0 <i>7.0</i>	-- <i>1.0</i>	-- <i>2.3</i>	-- <i>2.8</i>
Guggenheim SCP <i>ICE BofA AA-BBB US Asset Backed Sec Idx</i>	607,837,218	0.6	1.4 <i>2.0</i>	7.6 <i>7.0</i>	-- <i>1.0</i>	-- <i>2.3</i>	-- <i>2.8</i>
Investment Grade Credit	824,355,102	0.9	-0.1	6.9	--	--	--
<i>Bloomberg US Credit</i>			<i>-0.4</i>	<i>4.1</i>	<i>-1.9</i>	<i>1.4</i>	<i>2.5</i>
Fidelity <i>Bloomberg US Credit</i>	824,355,102	0.9	-0.1 <i>-0.4</i>	6.9 <i>4.1</i>	-- <i>-1.9</i>	-- <i>1.4</i>	-- <i>2.5</i>

Asset Allocation & Performance | As of March 31, 2024

	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Public Equity	17,905,781,391	19.0	8.5	23.7	7.4	11.1	8.8
<i>MSCI ACWI IMI Net (Daily)</i>			<i>7.7</i>	<i>22.5</i>	<i>6.3</i>	<i>10.6</i>	<i>8.4</i>
U.S. Equity	9,782,038,033	10.4	9.8	26.6	8.6	12.9	11.0
<i>Russell 3000 Index</i>			<i>10.0</i>	<i>29.3</i>	<i>9.8</i>	<i>14.3</i>	<i>12.3</i>
Small Cap Growth	265,760,407	0.3	12.7	16.8	-2.1	11.2	8.7
<i>Russell 2000 Growth Index</i>			<i>7.6</i>	<i>20.3</i>	<i>-2.7</i>	<i>7.4</i>	<i>7.9</i>
EAM MicroCap Growth	265,760,407	0.3	12.7	16.8	-2.1	11.2	9.1
<i>Russell Microcap Growth Index (Daily)</i>			<i>6.6</i>	<i>15.4</i>	<i>-11.0</i>	<i>4.2</i>	<i>3.8</i>
Small Cap Value	1,704,713	0.0	-1.2	6.1	2.5	8.0	6.6
<i>Russell 2000 Value Index</i>			<i>2.9</i>	<i>18.8</i>	<i>2.2</i>	<i>8.2</i>	<i>6.9</i>
Mellon Asset Management	1,704,713	0.0	-1.2	5.7	0.4	7.0	6.8
<i>Russell 2000 Value Index</i>			<i>2.9</i>	<i>18.8</i>	<i>2.2</i>	<i>8.2</i>	<i>6.9</i>
Market Oriented (CORE)	9,514,572,913	10.1	9.9	27.2	9.0	13.3	11.5
<i>Russell 3000 Index</i>			<i>10.0</i>	<i>29.3</i>	<i>9.8</i>	<i>14.3</i>	<i>12.3</i>
Russell 2000 Synthetic - OST managed	320,830,508	0.3	2.5	16.1	2.3	9.4	8.2
<i>S&P 600 Custom</i>			<i>2.5</i>	<i>15.9</i>	<i>2.3</i>	<i>9.2</i>	<i>7.8</i>
S&P 500 - OST managed	3,779,766,259	4.0	10.5	29.9	11.5	15.1	13.0
<i>S&P 500 Index (Daily)</i>			<i>10.6</i>	<i>29.9</i>	<i>11.5</i>	<i>15.1</i>	<i>13.0</i>
S&P 400 - OST managed	676,455,257	0.7	10.0	23.4	7.0	11.7	10.1
<i>S&P 400 Midcap Index (Daily)</i>			<i>10.0</i>	<i>23.3</i>	<i>7.0</i>	<i>11.7</i>	<i>10.0</i>
OST Risk Premia Strategy	1,064,374	0.0	0.5	16.7	4.3	10.5	11.3
<i>MSCI USA Index</i>			<i>10.4</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
BR Russell 3000	3,126,779,786	3.3	10.0	--	--	--	--
<i>Russell 3000 Index</i>			<i>10.0</i>	<i>29.3</i>	<i>9.8</i>	<i>14.3</i>	<i>12.3</i>

Asset Allocation & Performance | As of March 31, 2024

	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
DFA All Cap Core <i>Russell 3000 Index</i>	1,610,741,103	1.7	10.4 <i>10.0</i>	-- <i>29.3</i>	-- <i>9.8</i>	-- <i>14.3</i>	-- <i>12.3</i>
Non-U.S. Equity	5,662,423,076	6.0	5.8	18.0	5.1	8.9	6.3
<i>Oregon MSCI ACWI Ex US IMI (Net)</i>			<i>4.3</i>	<i>13.2</i>	<i>1.7</i>	<i>6.0</i>	<i>4.3</i>
Total International Overlay Accounts	70,790,683	0.1					
PERS-Adrian Lee Active Currency	48,564,591	0.1					
PERS-P/E Global Active Currency	22,225,703	0.0					
PERS-Aspect Cap Active Currency	389	0.0					
International Market Oriented (Core)	2,716,727,714	2.9	7.9	18.8	5.7	9.0	6.6
<i>MSCI World ex U.S. IMI Index (Net)</i>			<i>5.2</i>	<i>14.6</i>	<i>4.1</i>	<i>7.2</i>	<i>4.8</i>
Arrowstreet Capital <i>Oregon MSCI ACWI Ex US IMI (Net)</i>	737,410,062	0.8	10.6 <i>4.3</i>	25.1 <i>13.2</i>	13.5 <i>1.7</i>	13.7 <i>6.0</i>	10.4 <i>4.3</i>
Lazard International CEF <i>Oregon MSCI ACWI Ex US (Net)</i>	561,898,923	0.6	3.7 <i>4.7</i>	9.1 <i>13.3</i>	-4.8 <i>1.9</i>	5.7 <i>6.0</i>	5.8 <i>4.3</i>
OST Int'l Risk Premia <i>MSCI World x US Custom Div Multiple-Factor</i> <i>MSCI World ex USA Net Index</i>	1,417,418,729	1.5	8.4 <i>8.6</i> <i>5.6</i>	20.5 <i>20.5</i> <i>15.3</i>	8.2 <i>7.9</i> <i>4.9</i>	9.4 <i>9.0</i> <i>7.5</i>	-- <i>--</i> <i>4.8</i>
International Value	1,067,868,062	1.1	4.5	19.8	7.5	9.1	6.1
<i>Oregon MSCI ACWI Ex US Value IMI (Net)</i>			<i>3.3</i>	<i>15.4</i>	<i>4.4</i>	<i>5.5</i>	<i>3.4</i>
Acadian Asset Management <i>Oregon MSCI ACWI Ex US Value IMI (Net)</i>	693,988,828	0.7	6.6 <i>3.3</i>	19.4 <i>15.4</i>	6.0 <i>4.4</i>	9.6 <i>5.5</i>	6.7 <i>3.4</i>
Brandes Investment Partners <i>Oregon MSCI ACWI Ex US Value (Net)</i>	373,879,233	0.4	1.2 <i>3.4</i>	19.9 <i>15.3</i>	9.1 <i>4.6</i>	8.8 <i>5.4</i>	5.4 <i>3.2</i>

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	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
International Growth	854,667,134	0.9	4.4	10.9	3.5	8.8	7.4
<i>Oregon MSCI WORLD Ex US (Net)</i>			<i>5.6</i>	<i>15.3</i>	<i>4.9</i>	<i>7.5</i>	<i>4.8</i>
Walter Scott Management	854,667,134	0.9	4.4	10.9	3.5	8.8	8.1
<i>Oregon MSCI WORLD Ex US (Net)</i>			<i>5.6</i>	<i>15.3</i>	<i>4.9</i>	<i>7.5</i>	<i>4.8</i>
International Small Cap	318,745,921	0.3	3.9	17.0	4.8	9.0	5.3
<i>MSCI World ex U.S. Small Value (Net)</i>			<i>2.9</i>	<i>12.9</i>	<i>2.2</i>	<i>5.8</i>	<i>4.1</i>
Harris Associates	153,144,999	0.2	0.9	13.5	4.0	9.2	5.3
<i>MSCI AC World ex USA Small Value (Net)</i>			<i>2.4</i>	<i>15.7</i>	<i>3.2</i>	<i>6.5</i>	<i>4.5</i>
EAM International Micro Cap	165,600,922	0.2	7.9	21.6	2.4	11.4	--
<i>Oregon FTSE Global Ex US Micro Cap</i>			<i>1.8</i>	<i>12.7</i>	<i>0.3</i>	<i>8.3</i>	<i>--</i>
Emerging Markets	633,623,562	0.7	2.0	20.8	1.8	8.5	5.8
<i>ORE MSCI Emerging Markets IMI (Net)</i>			<i>2.2</i>	<i>9.8</i>	<i>-3.9</i>	<i>3.0</i>	<i>3.2</i>
Arrowstreet Emerging Markets	315,959,861	0.3	2.2	16.6	3.7	12.4	7.7
<i>ORE MSCI Emerging Markets IMI (Net)</i>			<i>2.2</i>	<i>9.8</i>	<i>-3.9</i>	<i>3.0</i>	<i>3.2</i>
Westwood Global Investment	147,624,051	0.2	-1.2	17.3	5.2	7.3	5.2
<i>MSCI Emerging Markets IMI (Net)</i>			<i>2.2</i>	<i>9.8</i>	<i>-3.9</i>	<i>3.0</i>	<i>3.2</i>
William Blair and Company	170,039,650	0.2	4.5	11.6	-7.2	5.6	4.7
<i>MSCI Emerging Markets Growth (Net)</i>			<i>3.4</i>	<i>5.2</i>	<i>-8.9</i>	<i>2.2</i>	<i>3.6</i>

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	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Global Equity	2,442,924,815	2.6	10.1	27.2	9.2	10.2	8.2
<i>MSCI ACWI IMI Net (Daily)</i>			<i>7.7</i>	<i>22.5</i>	<i>6.3</i>	<i>10.6</i>	<i>8.4</i>
Cantillion	928,531,771	1.0	7.8	27.2	--	--	--
<i>MSCI ACWI IMI Net (Daily)</i>			<i>7.7</i>	<i>22.5</i>	<i>6.3</i>	<i>10.6</i>	<i>8.4</i>
GQG Global Equity	444,361,374	0.5	19.6	--	--	--	--
<i>Oregon MSCI ACWI Ex US (Net)</i>			<i>4.7</i>	<i>13.3</i>	<i>1.9</i>	<i>6.0</i>	<i>4.3</i>
Global Equity Low Volatility	1,070,031,670	1.1	8.8	23.8	8.4	9.7	--
<i>MSCI AC World (Daily Const)</i>			<i>8.2</i>	<i>23.2</i>	<i>7.0</i>	<i>10.9</i>	<i>8.7</i>
LACM Global Equity Low Volatility	533,730,756	0.6	8.1	19.8	6.0	9.3	--
<i>MSCI AC World (Daily Const)</i>			<i>8.2</i>	<i>23.2</i>	<i>7.0</i>	<i>10.9</i>	<i>8.7</i>
Arrowstreet Global Low Volatility	536,300,914	0.6	9.4	27.8	10.3	12.8	--
<i>MSCI ACWI IMI Net (Daily)</i>			<i>7.7</i>	<i>22.5</i>	<i>6.3</i>	<i>10.6</i>	<i>8.4</i>
Other Equity	18,395,467	0.0					
Transitional & Closed Accounts	18,282,315	0.0					
Transition & Closed Accounts II - International Equity	113,151	0.0					

Asset Allocation & Performance | As of March 31, 2024

	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Real Estate	13,134,079,832	13.9	-2.1	-10.0	7.4	6.3	7.9
<i>NCREIF ODCE (Custom) (Adj)</i>			<i>-5.0</i>	<i>-12.7</i>	<i>4.0</i>	<i>3.3</i>	<i>6.3</i>
Real Estate excluding REITS	12,850,440,243	13.6	-2.1	-10.4	7.5	6.6	8.5
<i>NCREIF ODCE (Custom) (Adj)</i>			<i>-5.0</i>	<i>-12.7</i>	<i>4.0</i>	<i>3.3</i>	<i>6.3</i>
Total REITS	283,639,588	0.3	-0.8	9.2	5.4	2.9	5.2
ABKB - LaSalle Advisors	283,639,588	0.3	-1.0	9.4	6.4	7.8	9.5
<i>FTSE NAREIT All Equity REITs</i>			<i>-1.3</i>	<i>8.0</i>	<i>2.5</i>	<i>4.0</i>	<i>6.9</i>
Opportunity Portfolio	2,709,788,106	2.9	4.0	15.2	11.1	11.2	8.7
<i>Opportunity Custom Benchmark</i>			<i>4.2</i>	<i>11.4</i>	<i>11.8</i>	<i>10.0</i>	<i>8.2</i>
<i>OPERF Policy Benchmark</i>			<i>4.2</i>	<i>11.4</i>	<i>5.5</i>	<i>8.8</i>	<i>7.9</i>
Portfolio Holdings - Opportunity	78,750,000	0.1	6.8	33.8	--	--	--
Alternative Portfolio	14,473,834,781	15.3	3.2	7.2	12.1	6.6	4.6
<i>CPI +4%</i>			<i>2.8</i>	<i>7.6</i>	<i>9.8</i>	<i>8.3</i>	<i>6.9</i>
Diversifying Strategies	4,842,800,707	5.1	6.2	8.5	10.1	3.9	3.4
<i>HFRI FOF Conservative Index</i>			<i>2.5</i>	<i>7.1</i>	<i>4.0</i>	<i>5.0</i>	<i>3.5</i>
Diversifying Strategies	4,842,800,707	5.1	6.2	8.5	10.1	3.9	--
<i>HFRI FOF Conservative Index</i>			<i>2.5</i>	<i>7.1</i>	<i>4.0</i>	<i>5.0</i>	<i>3.5</i>

The Opportunity Portfolio benchmark changed from CPI +5% to OPERF Policy Benchmark beginning April 1, 2023.

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	Market Value \$	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Real Assets	9,631,034,074	10.2	1.7	6.5	13.6	8.7	5.9
<i>CPI +4%</i>			<i>2.8</i>	<i>7.6</i>	<i>9.8</i>	<i>8.3</i>	<i>6.9</i>
Infrastructure	6,815,656,306	7.2	2.2	7.3	11.9	10.7	--
<i>CPI +4%</i>			<i>2.8</i>	<i>7.6</i>	<i>9.8</i>	<i>8.3</i>	<i>6.9</i>
Natural Resources	2,815,377,768	3.0	0.4	4.5	16.9	6.6	--
<i>CPI +4%</i>			<i>2.8</i>	<i>7.6</i>	<i>9.8</i>	<i>8.3</i>	<i>6.9</i>
Private Equity	26,843,256,568	28.4	2.0	7.8	12.0	14.5	12.8
<i>Russell 3000 + 300 BPS QTR LAG (Adj.)</i>			<i>12.9</i>	<i>29.7</i>	<i>11.8</i>	<i>18.6</i>	<i>14.8</i>
<i>MSCI ACWI+3% (1 quarter lagged)</i>			<i>11.9</i>	<i>25.9</i>	<i>8.9</i>	<i>15.1</i>	<i>11.2</i>
Cash	1,418,701,070	1.5	1.4	5.6	2.4	2.2	1.8
<i>ICE BofA 3 Month U.S. T-Bill</i>			<i>1.3</i>	<i>5.2</i>	<i>2.6</i>	<i>2.0</i>	<i>1.4</i>
PERS-Russell Overlay Cash Balance	679,260,452	0.7					

Asset Allocation & Performance | As of March 31, 2024

	Calendar Year Performance									
	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Total Fund	6.0	-1.5	20.0	7.7	13.6	0.5	15.4	7.1	2.0	7.3
<i>OPERF Policy Benchmark</i>	11.4	-8.6	15.6	12.4	14.0	1.2	15.6	9.0	1.6	8.2
<i>60% MSCI ACWI / 40% Bloomberg Aggregate</i>	15.4	-16.0	10.2	13.5	19.4	-5.5	15.4	5.9	-1.0	5.0
<i>70% MSCI ACWI/30% Barclays Agg</i>	17.1	-16.6	12.2	14.3	21.2	-6.5	17.5	6.4	-1.3	4.8
<i>InvMetrics All DB > \$5B Median</i>	10.5	-11.1	15.3	12.5	17.4	-3.1	16.2	7.8	0.3	6.8
<i>InvMetrics All DB > \$5B Rank</i>	97	1	9	96	92	4	68	87	14	38
Total Fixed Income	7.0	-11.3	-0.9	7.7	8.8	0.3	3.7	2.8	0.6	3.5
<i>Oregon Custom FI Benchmark</i>	5.5	-13.0	-0.9	7.3	8.3	0.3	3.3	2.5	0.2	3.0
Core Fixed Income	6.7	-13.9	-1.1	8.7	9.8	-0.2	4.6	3.4	0.6	6.9
<i>Oregon Custom External FI BM</i>	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.7	0.6	6.0
Blackrock	6.2	-13.2	-1.4	9.1	8.9	0.1	3.8	2.8	0.9	6.7
<i>Oregon Custom External FI BM</i>	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.7	0.6	6.0
Wellington	6.7	-14.3	-0.9	9.6	9.8	-0.4	4.6	4.0	0.8	6.5
<i>Oregon Custom External FI BM</i>	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.7	0.6	6.0
Western Asset	6.9	-14.9	-1.2	9.4	11.6	-0.7	5.6	3.7	0.4	7.0
<i>Oregon Custom External FI BM</i>	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.7	0.6	6.0
U.S. Government	4.1	-12.5	-2.3	8.1	6.9	0.9	2.3	-1.6	0.9	1.0
<i>Government Blended Index</i>	4.1	-12.5	-2.3	8.0	6.9	0.9	2.3	-1.3	0.7	0.8
Government Portfolio	4.1	-12.5	-2.3	8.1	6.9	0.9	--	--	--	--
<i>Government Blended Index</i>	4.1	-12.5	-2.3	8.0	6.9	0.9	2.3	-1.3	0.7	0.8
Non-Core Fixed Income	14.7	0.3	6.4	3.7	10.5	0.1	4.9	10.1	0.2	2.4
<i>Custom Non-Core Fixed Income Index</i>	13.4	-3.3	5.3	3.9	10.1	-0.2	5.0	12.0	-1.7	1.8
KKR Asset Management	18.4	-31.9	13.8	2.6	10.5	-0.4	3.4	9.3	-0.2	2.5
<i>KKR Custom Leveraged Loans & Bond Index</i>	13.4	-4.4	5.2	4.3	10.6	-0.5	5.3	12.7	-2.1	1.9

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	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Oak Hill	14.8	1.3	5.7	4.9	10.5	0.5	6.3	11.2	0.9	2.2
<i>Oak Hill Custom Lev Loan & Bond Index</i>	<i>13.4</i>	<i>-2.2</i>	<i>5.2</i>	<i>3.6</i>	<i>9.5</i>	<i>0.0</i>	<i>4.6</i>	<i>11.2</i>	<i>-1.3</i>	<i>1.7</i>
Beach Point	--	--	--	--	--	--	--	--	--	--
<i>Beachpoint Custom FI Benchmark</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
Emerging Markets Debt	10.5	-18.4	--	--	--	--	--	--	--	--
<i>JPM EMBI Global Diversified</i>	<i>11.1</i>	<i>-17.8</i>	<i>-1.8</i>	<i>5.3</i>	<i>15.0</i>	<i>-4.3</i>	<i>10.3</i>	<i>10.2</i>	<i>1.2</i>	<i>7.4</i>
Ashmore EMD	-0.2	-21.1	--	--	--	--	--	--	--	--
<i>JPM EMBI Global Diversified</i>	<i>11.1</i>	<i>-17.8</i>	<i>-1.8</i>	<i>5.3</i>	<i>15.0</i>	<i>-4.3</i>	<i>10.3</i>	<i>10.2</i>	<i>1.2</i>	<i>7.4</i>
Global Evolution EMD	11.8	-16.6	--	--	--	--	--	--	--	--
<i>JPM EMBI Global Diversified</i>	<i>11.1</i>	<i>-17.8</i>	<i>-1.8</i>	<i>5.3</i>	<i>15.0</i>	<i>-4.3</i>	<i>10.3</i>	<i>10.2</i>	<i>1.2</i>	<i>7.4</i>
PGIM EMD	10.5	-17.6	--	--	--	--	--	--	--	--
<i>JPM EMBI Global Diversified</i>	<i>11.1</i>	<i>-17.8</i>	<i>-1.8</i>	<i>5.3</i>	<i>15.0</i>	<i>-4.3</i>	<i>10.3</i>	<i>10.2</i>	<i>1.2</i>	<i>7.4</i>
Structured Credit Products	7.0	-9.3	--	--	--	--	--	--	--	--
<i>Oregon Structured Credit Products FI BM</i>	<i>7.3</i>	<i>-9.0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
Schroders SCP	8.1	-6.5	--	--	--	--	--	--	--	--
<i>ICE BofA AA-BBB US Asset Backed Sec Idx</i>	<i>8.3</i>	<i>-7.6</i>	<i>1.7</i>	<i>4.2</i>	<i>5.2</i>	<i>3.0</i>	<i>4.2</i>	<i>3.4</i>	<i>2.0</i>	<i>3.2</i>
Putnam SCP	-2.0	-14.9	--	--	--	--	--	--	--	--
<i>Blmbg. U.S. Mortgage Backed Securities</i>	<i>5.0</i>	<i>-11.8</i>	<i>-1.0</i>	<i>3.9</i>	<i>6.4</i>	<i>1.0</i>	<i>2.5</i>	<i>1.7</i>	<i>1.5</i>	<i>6.1</i>
Guggenheim SCP	9.2	-5.9	--	--	--	--	--	--	--	--
<i>ICE BofA AA-BBB US Asset Backed Sec Idx</i>	<i>8.3</i>	<i>-7.6</i>	<i>1.7</i>	<i>4.2</i>	<i>5.2</i>	<i>3.0</i>	<i>4.2</i>	<i>3.4</i>	<i>2.0</i>	<i>3.2</i>
Investment Grade Credit	10.6	--	--	--	--	--	--	--	--	--
<i>Bloomberg US Credit</i>	<i>8.2</i>	<i>-15.3</i>	<i>-1.1</i>	<i>9.4</i>	<i>13.8</i>	<i>-2.1</i>	<i>6.2</i>	<i>5.6</i>	<i>-0.8</i>	<i>7.5</i>
Fidelity	10.6	--	--	--	--	--	--	--	--	--
<i>Bloomberg US Credit</i>	<i>8.2</i>	<i>-15.3</i>	<i>-1.1</i>	<i>9.4</i>	<i>13.8</i>	<i>-2.1</i>	<i>6.2</i>	<i>5.6</i>	<i>-0.8</i>	<i>7.5</i>

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	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Total Public Equity	19.8	-14.3	20.0	12.7	25.3	-10.5	24.5	9.8	-1.7	3.3
<i>MSCI ACWI IMI Net (Daily)</i>	<i>21.6</i>	<i>-18.4</i>	<i>18.2</i>	<i>16.3</i>	<i>26.4</i>	<i>-10.1</i>	<i>24.0</i>	<i>8.3</i>	<i>-2.1</i>	<i>3.8</i>
U.S. Equity	20.4	-16.0	27.2	13.6	29.0	-7.9	20.3	14.9	-0.8	9.8
<i>Russell 3000 Index</i>	<i>26.0</i>	<i>-19.2</i>	<i>25.7</i>	<i>20.9</i>	<i>31.0</i>	<i>-5.2</i>	<i>21.1</i>	<i>12.7</i>	<i>0.5</i>	<i>12.6</i>
Small Cap Growth	3.6	-23.9	19.6	38.9	33.9	-4.7	26.8	6.3	-5.0	-3.6
<i>Russell 2000 Growth Index</i>	<i>18.7</i>	<i>-26.4</i>	<i>2.8</i>	<i>34.6</i>	<i>28.5</i>	<i>-9.3</i>	<i>22.2</i>	<i>11.3</i>	<i>-1.4</i>	<i>5.6</i>
EAM MicroCap Growth	3.6	-23.9	19.6	38.9	33.9	-4.7	26.8	6.3	-5.7	1.8
<i>Russell Microcap Growth Index (Daily)</i>	<i>9.1</i>	<i>-29.8</i>	<i>0.9</i>	<i>40.1</i>	<i>23.3</i>	<i>-14.2</i>	<i>16.7</i>	<i>6.9</i>	<i>-3.9</i>	<i>4.3</i>
Small Cap Value	8.0	-7.2	35.6	0.3	21.3	-14.1	7.5	31.4	-5.2	3.0
<i>Russell 2000 Value Index</i>	<i>14.6</i>	<i>-14.5</i>	<i>28.3</i>	<i>4.6</i>	<i>22.4</i>	<i>-12.9</i>	<i>7.8</i>	<i>31.7</i>	<i>-7.5</i>	<i>4.2</i>
Mellon Asset Management	8.9	-11.2	25.8	5.2	24.2	-8.0	10.8	26.8	-5.8	2.6
<i>Russell 2000 Value Index</i>	<i>14.6</i>	<i>-14.5</i>	<i>28.3</i>	<i>4.6</i>	<i>22.4</i>	<i>-12.9</i>	<i>7.8</i>	<i>31.7</i>	<i>-7.5</i>	<i>4.2</i>
Market Oriented (CORE)	21.2	-16.3	26.6	15.2	30.1	-7.1	22.0	14.8	-1.7	11.1
<i>Russell 3000 Index</i>	<i>26.0</i>	<i>-19.2</i>	<i>25.7</i>	<i>20.9</i>	<i>31.0</i>	<i>-5.2</i>	<i>21.1</i>	<i>12.7</i>	<i>0.5</i>	<i>12.6</i>
Russell 2000 Synthetic - OST managed	16.2	-16.2	27.1	11.8	23.4	-11.3	14.5	23.4	-3.6	5.8
<i>S&P 600 Custom</i>	<i>16.1</i>	<i>-16.1</i>	<i>26.8</i>	<i>11.3</i>	<i>22.8</i>	<i>-11.0</i>	<i>14.7</i>	<i>21.3</i>	<i>-4.4</i>	<i>4.9</i>
S&P 500 - OST managed	26.3	-18.2	28.7	18.4	31.7	-4.4	21.8	12.0	1.5	13.7
<i>S&P 500 Index (Daily)</i>	<i>26.3</i>	<i>-18.1</i>	<i>28.7</i>	<i>18.4</i>	<i>31.5</i>	<i>-4.4</i>	<i>21.8</i>	<i>12.0</i>	<i>1.4</i>	<i>13.7</i>
S&P 400 - OST managed	16.5	-13.0	24.6	13.5	26.6	-10.9	16.7	21.1	-2.0	10.0
<i>S&P 400 Midcap Index (Daily)</i>	<i>16.4</i>	<i>-13.1</i>	<i>24.8</i>	<i>13.7</i>	<i>26.2</i>	<i>-11.1</i>	<i>16.3</i>	<i>20.7</i>	<i>-2.2</i>	<i>9.8</i>
OST Risk Premia Strategy	19.5	-17.6	24.3	15.8	31.3	-5.5	27.1	10.8	4.5	13.0
<i>MSCI USA Index</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>21.4</i>	<i>31.6</i>	<i>-4.5</i>	<i>22.0</i>	<i>11.6</i>	<i>1.3</i>	<i>13.4</i>
BR Russell 3000	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 Index</i>	<i>26.0</i>	<i>-19.2</i>	<i>25.7</i>	<i>20.9</i>	<i>31.0</i>	<i>-5.2</i>	<i>21.1</i>	<i>12.7</i>	<i>0.5</i>	<i>12.6</i>
DFA All Cap Core	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 Index</i>	<i>26.0</i>	<i>-19.2</i>	<i>25.7</i>	<i>20.9</i>	<i>31.0</i>	<i>-5.2</i>	<i>21.1</i>	<i>12.7</i>	<i>0.5</i>	<i>12.6</i>

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	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Non-U.S. Equity	19.5	-14.3	12.7	13.5	22.6	-14.9	30.4	4.6	-2.6	-2.9
<i>Oregon MSCI ACWI Ex US IMI (Net)</i>	<i>15.6</i>	<i>-16.6</i>	<i>8.5</i>	<i>11.1</i>	<i>21.6</i>	<i>-14.8</i>	<i>27.8</i>	<i>4.4</i>	<i>-4.6</i>	<i>-3.9</i>
Total International Overlay Accounts										
PERS-Adrian Lee Active Currency										
PERS-P/E Global Active Currency										
PERS-Aspect Cap Active Currency										
International Market Oriented (Core)	17.5	-13.5	13.1	12.5	23.2	-14.3	31.0	2.5	-1.2	-2.6
<i>MSCI World ex U.S. IMI Index (Net)</i>	<i>17.2</i>	<i>-15.3</i>	<i>12.4</i>	<i>8.3</i>	<i>22.9</i>	<i>-14.7</i>	<i>25.2</i>	<i>3.0</i>	<i>-2.0</i>	<i>-4.5</i>
Arrowstreet Capital	21.7	-5.5	24.5	9.1	23.2	-10.3	35.4	4.7	0.4	0.8
<i>Oregon MSCI ACWI Ex US IMI (Net)</i>	<i>15.6</i>	<i>-16.6</i>	<i>8.5</i>	<i>11.1</i>	<i>21.6</i>	<i>-14.8</i>	<i>27.8</i>	<i>4.4</i>	<i>-4.6</i>	<i>-3.9</i>
Lazard International CEF	10.5	-25.7	4.5	30.2	29.0	-17.2	39.8	0.1	-0.2	0.6
<i>Oregon MSCI ACWI Ex US (Net)</i>	<i>15.6</i>	<i>-16.0</i>	<i>7.8</i>	<i>10.7</i>	<i>21.5</i>	<i>-14.2</i>	<i>27.2</i>	<i>4.5</i>	<i>-5.5</i>	<i>-3.9</i>
OST Int'l Risk Premia	19.8	-11.5	15.6	7.7	22.8	-12.0	--	--	--	--
<i>MSCI World x US Custom Div Multiple-Factor</i>	<i>19.3</i>	<i>-11.8</i>	<i>15.0</i>	<i>7.3</i>	<i>22.4</i>	<i>-12.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
<i>MSCI World ex USA Net Index</i>	<i>17.9</i>	<i>-14.3</i>	<i>12.6</i>	<i>7.6</i>	<i>22.5</i>	<i>-14.1</i>	<i>24.2</i>	<i>2.8</i>	<i>-3.0</i>	<i>-4.3</i>
International Value	23.2	-10.9	18.0	4.9	17.8	-12.4	25.7	9.8	-4.5	-4.3
<i>Oregon MSCI ACWI Ex US Value IMI (Net)</i>	<i>17.3</i>	<i>-9.3</i>	<i>11.0</i>	<i>-0.1</i>	<i>16.3</i>	<i>-14.6</i>	<i>23.6</i>	<i>8.8</i>	<i>-8.9</i>	<i>-5.0</i>
Acadian Asset Management	16.5	-13.9	21.7	11.5	19.4	-15.4	35.1	11.8	-7.2	-3.7
<i>Oregon MSCI ACWI Ex US Value IMI (Net)</i>	<i>17.3</i>	<i>-9.3</i>	<i>11.0</i>	<i>-0.1</i>	<i>16.3</i>	<i>-14.6</i>	<i>23.6</i>	<i>8.8</i>	<i>-8.9</i>	<i>-5.0</i>
Brandes Investment Partners	32.3	-7.4	14.1	-1.3	16.4	-9.4	16.3	7.9	-1.6	-5.0
<i>Oregon MSCI ACWI Ex US Value (Net)</i>	<i>17.3</i>	<i>-8.6</i>	<i>10.5</i>	<i>-0.8</i>	<i>15.7</i>	<i>-14.0</i>	<i>22.7</i>	<i>8.9</i>	<i>-10.1</i>	<i>-5.1</i>
International Growth	19.2	-21.0	12.4	19.9	28.1	-6.4	27.5	1.3	1.9	-4.3
<i>Oregon MSCI WORLD Ex US (Net)</i>	<i>17.9</i>	<i>-14.3</i>	<i>12.6</i>	<i>7.6</i>	<i>22.5</i>	<i>-14.1</i>	<i>24.2</i>	<i>2.8</i>	<i>-3.0</i>	<i>-4.3</i>
Walter Scott Management	19.2	-21.0	12.4	19.9	28.0	-6.3	27.5	6.4	1.2	-3.1
<i>Oregon MSCI WORLD Ex US (Net)</i>	<i>17.9</i>	<i>-14.3</i>	<i>12.6</i>	<i>7.6</i>	<i>22.5</i>	<i>-14.1</i>	<i>24.2</i>	<i>2.8</i>	<i>-3.0</i>	<i>-4.3</i>

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	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
International Small Cap	19.8	-15.0	18.1	9.3	24.1	-24.3	30.2	4.9	6.1	-6.5
<i>MSCI World ex U.S. Small Value (Net)</i>	<i>14.7</i>	<i>-14.0</i>	<i>13.3</i>	<i>2.6</i>	<i>22.8</i>	<i>-18.4</i>	<i>27.9</i>	<i>7.9</i>	<i>1.1</i>	<i>-5.9</i>
Harris Associates	20.7	-13.8	20.1	5.0	33.4	-24.1	27.2	7.1	1.0	-6.7
<i>MSCI AC World ex USA Small Value (Net)</i>	<i>17.2</i>	<i>-13.6</i>	<i>14.2</i>	<i>4.7</i>	<i>20.3</i>	<i>-18.2</i>	<i>29.7</i>	<i>8.2</i>	<i>-1.3</i>	<i>-4.5</i>
EAM International Micro Cap	17.5	-25.2	17.8	38.4	20.3	-33.6	45.3	2.2	23.5	--
<i>Oregon FTSE Global Ex US Micro Cap</i>	<i>14.5</i>	<i>-21.1</i>	<i>18.0</i>	<i>27.9</i>	<i>16.6</i>	<i>-20.0</i>	<i>31.4</i>	<i>6.0</i>	<i>2.9</i>	<i>--</i>
Emerging Markets	24.3	-16.9	4.3	23.5	22.1	-17.4	35.7	10.3	-14.5	1.2
<i>ORE MSCI Emerging Markets IMI (Net)</i>	<i>11.7</i>	<i>-19.8</i>	<i>-0.3</i>	<i>18.4</i>	<i>17.6</i>	<i>-15.0</i>	<i>37.0</i>	<i>9.9</i>	<i>-13.9</i>	<i>-1.8</i>
Arrowstreet Emerging Markets	21.3	-10.5	9.6	32.1	23.7	-19.5	35.4	11.2	-15.8	1.1
<i>ORE MSCI Emerging Markets IMI (Net)</i>	<i>11.7</i>	<i>-19.8</i>	<i>-0.3</i>	<i>18.4</i>	<i>17.6</i>	<i>-15.0</i>	<i>37.0</i>	<i>9.9</i>	<i>-13.9</i>	<i>-1.8</i>
Westwood Global Investment	22.8	-4.1	3.6	10.1	9.8	-9.3	29.5	19.0	-16.1	0.2
<i>MSCI Emerging Markets IMI (Net)</i>	<i>11.7</i>	<i>-19.8</i>	<i>-0.3</i>	<i>18.4</i>	<i>17.7</i>	<i>-15.0</i>	<i>36.8</i>	<i>9.9</i>	<i>-13.9</i>	<i>-1.8</i>
William Blair and Company	10.7	-33.3	4.4	41.4	29.1	-21.6	50.2	1.9	-14.1	5.7
<i>MSCI Emerging Markets Growth (Net)</i>	<i>5.8</i>	<i>-24.0</i>	<i>-8.4</i>	<i>31.3</i>	<i>25.1</i>	<i>-18.3</i>	<i>46.8</i>	<i>7.6</i>	<i>-11.3</i>	<i>-0.3</i>
Global Equity	19.3	-9.8	15.5	7.4	21.6	-7.9	22.3	9.4	-3.3	6.9
<i>MSCI ACWI IMI Net (Daily)</i>	<i>21.6</i>	<i>-18.4</i>	<i>18.2</i>	<i>16.3</i>	<i>26.4</i>	<i>-10.1</i>	<i>24.0</i>	<i>8.3</i>	<i>-2.1</i>	<i>3.8</i>
Cantillon	--	--	--	--	--	--	--	--	--	--
<i>MSCI ACWI IMI Net (Daily)</i>	<i>21.6</i>	<i>-18.4</i>	<i>18.2</i>	<i>16.3</i>	<i>26.4</i>	<i>-10.1</i>	<i>24.0</i>	<i>8.3</i>	<i>-2.1</i>	<i>3.8</i>
GQG Global Equity	--	--	--	--	--	--	--	--	--	--
<i>Oregon MSCI ACWI Ex US (Net)</i>	<i>15.6</i>	<i>-16.0</i>	<i>7.8</i>	<i>10.7</i>	<i>21.5</i>	<i>-14.2</i>	<i>27.2</i>	<i>4.5</i>	<i>-5.5</i>	<i>-3.9</i>
Global Equity Low Volatility	17.2	-9.2	15.2	7.9	21.7	-5.5	22.5	--	--	--
<i>MSCI AC World (Daily Const)</i>	<i>22.2</i>	<i>-18.4</i>	<i>18.5</i>	<i>16.3</i>	<i>26.6</i>	<i>-9.4</i>	<i>24.0</i>	<i>7.9</i>	<i>-2.4</i>	<i>4.2</i>
LACM Global Equity Low Volatility	15.8	-14.9	15.4	15.0	23.1	-6.6	22.7	--	--	--
<i>MSCI AC World (Daily Const)</i>	<i>22.2</i>	<i>-18.4</i>	<i>18.5</i>	<i>16.3</i>	<i>26.6</i>	<i>-9.4</i>	<i>24.0</i>	<i>7.9</i>	<i>-2.4</i>	<i>4.2</i>
Arrowstreet Global Low Volatility	20.0	-2.7	15.1	12.6	22.3	-2.7	--	--	--	--
<i>MSCI ACWI IMI Net (Daily)</i>	<i>21.6</i>	<i>-18.4</i>	<i>18.2</i>	<i>16.3</i>	<i>26.4</i>	<i>-10.1</i>	<i>24.0</i>	<i>8.3</i>	<i>-2.1</i>	<i>3.8</i>

Asset Allocation & Performance | As of March 31, 2024

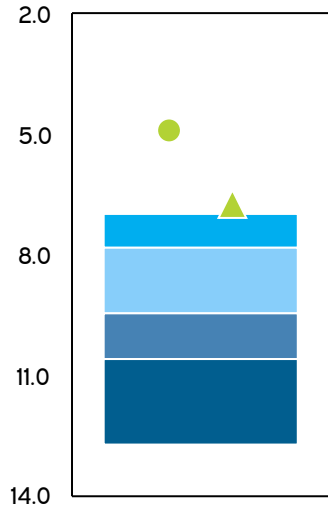
	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Other Equity										
Transitional & Closed Accounts										
Transition & Closed Accounts II - International Equity										
Total Real Estate	-10.2	20.0	19.0	2.7	7.2	8.0	10.0	7.9	9.9	14.2
<i>NCREIF ODCE (Custom) (Adj.)</i>	<i>-12.9</i>	<i>21.0</i>	<i>13.6</i>	<i>0.6</i>	<i>4.7</i>	<i>7.7</i>	<i>6.7</i>	<i>8.9</i>	<i>13.5</i>	<i>11.3</i>
Real Estate excluding REITS	-10.7	21.6	18.6	3.0	7.3	8.9	11.2	10.0	12.7	12.0
<i>NCREIF ODCE (Custom) (Adj.)</i>	<i>-12.9</i>	<i>21.0</i>	<i>13.6</i>	<i>0.6</i>	<i>4.7</i>	<i>7.7</i>	<i>6.7</i>	<i>8.9</i>	<i>13.5</i>	<i>11.3</i>
Total REITS	14.4	-16.4	28.2	-0.9	7.2	-2.0	9.8	1.1	2.0	22.2
ABKB - LaSalle Advisors	15.6	-18.6	36.2	3.0	29.9	3.2	7.4	5.4	2.9	32.1
<i>FTSE NAREIT All Equity REITs</i>	<i>11.4</i>	<i>-24.9</i>	<i>41.3</i>	<i>-5.1</i>	<i>28.7</i>	<i>-4.0</i>	<i>8.7</i>	<i>8.6</i>	<i>2.8</i>	<i>28.0</i>
Opportunity Portfolio	13.9	1.3	22.7	10.2	6.2	5.8	10.5	6.1	2.1	8.8
<i>Opportunity Custom Benchmark</i>	<i>10.1</i>	<i>11.7</i>	<i>12.4</i>	<i>6.4</i>	<i>7.4</i>	<i>7.0</i>	<i>7.2</i>	<i>7.2</i>	<i>5.8</i>	<i>5.8</i>
<i>OPERF Policy Benchmark</i>	<i>11.4</i>	<i>-8.6</i>	<i>15.6</i>	<i>12.4</i>	<i>14.0</i>	<i>1.2</i>	<i>15.6</i>	<i>9.0</i>	<i>1.6</i>	<i>8.2</i>
Portfolio Holdings - Opportunity	37.8	-15.5	--	--	--	--	--	--	--	--
Alternative Portfolio	5.3	19.1	14.8	-6.6	-1.3	-2.4	8.3	6.6	-4.3	4.4
<i>CPI +4%</i>	<i>7.5</i>	<i>10.4</i>	<i>11.3</i>	<i>5.4</i>	<i>6.4</i>	<i>6.0</i>	<i>6.2</i>	<i>6.2</i>	<i>4.8</i>	<i>4.8</i>
Diversifying Strategies	0.8	21.4	8.7	-12.1	-1.0	-11.5	8.0	0.5	6.4	9.0
<i>HFRI FOF Conservative Index</i>	<i>5.5</i>	<i>0.1</i>	<i>7.6</i>	<i>6.5</i>	<i>6.3</i>	<i>-0.9</i>	<i>4.1</i>	<i>1.9</i>	<i>0.4</i>	<i>3.1</i>
Diversifying Strategies	0.8	21.4	8.7	-12.1	-1.0	-11.5	8.0	--	--	--
<i>HFRI FOF Conservative Index</i>	<i>5.5</i>	<i>0.1</i>	<i>7.6</i>	<i>6.5</i>	<i>6.3</i>	<i>-0.9</i>	<i>4.1</i>	<i>1.9</i>	<i>0.4</i>	<i>3.1</i>

Asset Allocation & Performance | As of March 31, 2024

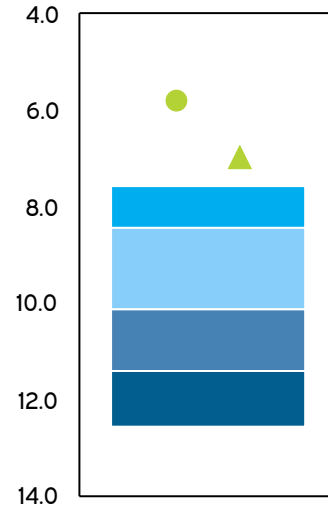
	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Real Assets	7.8	18.2	19.0	-2.0	-1.6	4.9	8.4	9.0	-7.9	3.1
<i>CPI +4%</i>	7.5	10.4	11.3	5.4	6.4	6.0	6.2	6.2	4.8	4.8
Infrastructure	8.6	13.9	16.6	5.6	8.9	--	--	--	--	--
<i>CPI +4%</i>	7.5	10.4	11.3	5.4	6.4	6.0	6.2	6.2	4.8	4.8
Natural Resources	5.9	27.7	23.9	-12.8	-12.5	--	--	--	--	--
<i>CPI +4%</i>	7.5	10.4	11.3	5.4	6.4	6.0	6.2	6.2	4.8	4.8
Private Equity	6.4	1.2	41.8	12.7	11.1	18.1	17.3	6.3	7.3	15.9
<i>Russell 3000 + 300 BPS QTR LAG (Adj.)</i>	24.0	-15.1	35.7	18.4	6.0	21.1	22.2	18.4	2.5	21.2
<i>MSCI ACWI+3% (1 quarter lagged)</i>	24.4	-18.3	31.3	13.8	4.4	13.1	22.2	15.3	-3.9	14.7
Cash	5.5	0.5	0.1	1.6	3.3	2.0	1.3	1.2	0.5	0.5
<i>ICE BofA 3 Month U.S. T-Bill</i>	5.0	1.5	0.0	0.7	2.3	1.9	0.9	0.3	0.1	0.0

PERS-Russell Overlay Cash Balance

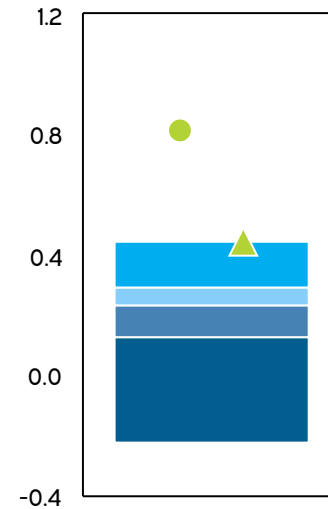
**Annualized Standard Deviation
3 Years Ending March 31, 2024**



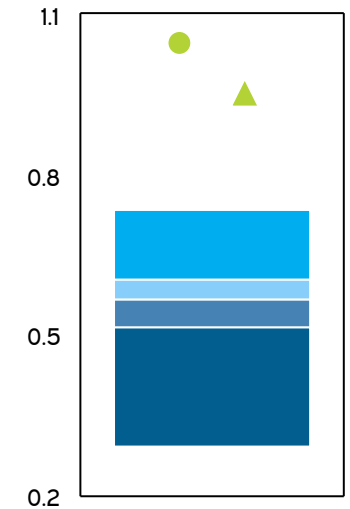
**Annualized Standard Deviation
5 Years Ending March 31, 2024**



**Sharpe Ratio
3 Years Ending March 31, 2024**



**Sharpe Ratio
5 Years Ending March 31, 2024**



Total Fund 4.9 (1)
OPERF Policy Benchmark 6.8 (2)

5th Percentile 7.0
1st Quartile 7.9
Median 9.5
3rd Quartile 10.6
95th Percentile 12.7

Population 14

Total Fund 5.8 (1)
OPERF Policy Benchmark 7.0 (1)

5th Percentile 7.6
1st Quartile 8.5
Median 10.1
3rd Quartile 11.4
95th Percentile 12.6

Population 13

Total Fund 0.8 (1)
OPERF Policy Benchmark 0.4 (3)

5th Percentile 0.4
1st Quartile 0.3
Median 0.2
3rd Quartile 0.1
95th Percentile -0.2

Population 14

Total Fund 1.0 (1)
OPERF Policy Benchmark 1.0 (1)

5th Percentile 0.7
1st Quartile 0.6
Median 0.6
3rd Quartile 0.5
95th Percentile 0.3

Population 13

Parentheses contain percentile rankings.

Benchmark History

Total Fixed Income

10/01/2021	Present	100.0% Blmbg. U.S. Aggregate Index
03/01/2016	10/01/2021	46.0% Blmbg. U.S. Aggregate Index, 37.0% Blmbg. U.S. Treasury Index, 4.0% ICE BofA U.S. High Yield Index, 13.0% Morningstar LSTA U.S. Leveraged Loan

Total Public Equity

07/01/1997	Present	MSCI ACWI IMI Net (Daily)
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Total Real Estate

07/01/1997	Present	NCREIF ODCE (Custom) (Adj.)
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Opportunity Portfolio

04/01/2023	Present	100.0% OPERF Policy Benchmark
09/01/2006	04/01/2023	100.0% CPI + 5%

Diversifying Strategies

12/31/2010	Present	100.0% HFRI FOF: Conservative Index
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Real Assets

07/01/2011	Present	CPI +4%
------------	---------	---------

Private Equity

07/01/1997	Present	Russell 3000 + 300 BPS QTR LAG (Adj.)
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Cash

12/01/1989	Present	ICE BofA 3 Month U.S. T-Bill
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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. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

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 its 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%.

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

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.



To: The Oregon Investment Council

From: Karl Cheng, Senior Investment Officer, Portfolio Risk & Research

Re: First Quarter 2024 Risk Report for the Oregon Public Employees Retirement Fund

Executive Summary

This memo summarizes OPERF’s predicted volatility, as estimated by Aladdin, Treasury’s end-to-end investment analytics platform built by BlackRock. As of March 31, 2024, OPERF has an estimated return volatility of 14.9%, higher than that for the OIC-approved target allocation, last presented by Meketa Investment Group (“Meketa”) at the December 2022 meeting. This elevated volatility is primarily driven by the overallocations versus the OIC-approved targets to private market asset classes.

The realized tracking error and the predicted active risk for the Fixed Income Portfolio remain above the OIC-approved guideline limit. The volatilities of U.S. interest rates, the biggest drivers of the Portfolio’s ex ante and ex post risks, are still substantially above where they were pre-2020. The combination of high-rate volatilities and the Portfolio’s short duration results in elevated volatilities. The Public Equity Portfolio’s predicted active risk is below the OIC-approved guideline limit given the restructuring of the Portfolio by the Public Equity team. **Staff recommends no action at this time.**

OPERF Asset Allocation

One of the Council’s Investment Beliefs is “*Asset Allocation Drives Risk and Return*”. Shown in the table below are OPERF’s target allocations approved by the Council at the December 2022 meeting.

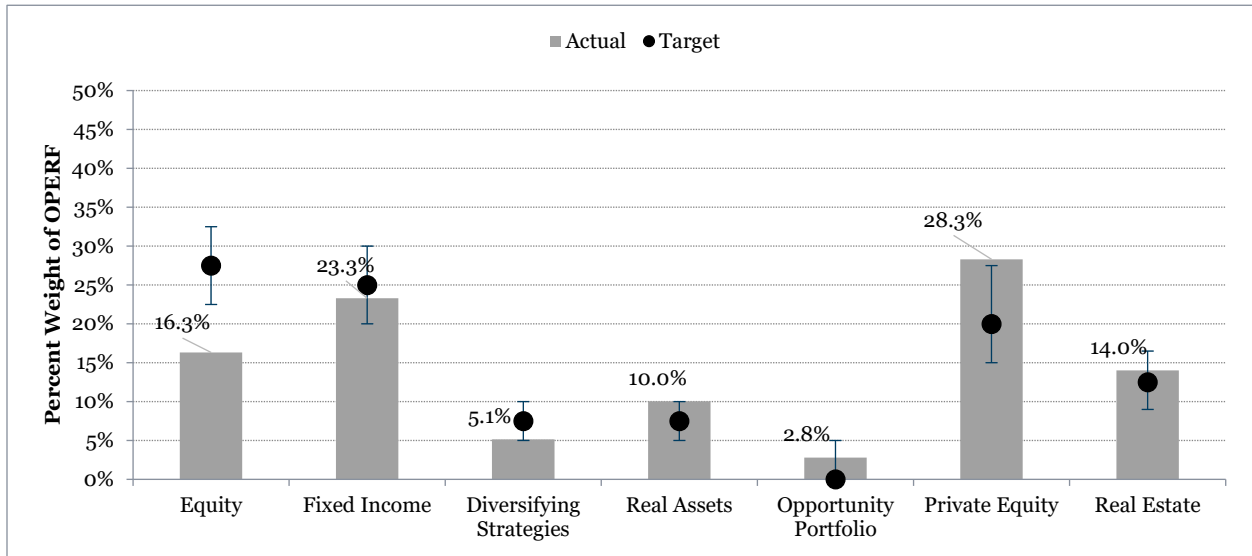
Table 1. OPERF Target Asset Allocation

Asset Class	Target Allocation (%)	Rebalancing Range (%)
Public Equity	27.5	22.5 – 32.5
Private Equity	20.0	15.0 – 27.5
Fixed Income	25.0	20.0 – 30.0
Real Estate	12.5	9.0 – 16.5
Real Assets	7.5	5.0 – 10.0
Diversifying Strategies	7.5	5.0 – 10.0
Total Fund	100.0	



Including the synthetic overlays exposures managed by Russell Investments, Figure 1 below shows OPERF's allocation.

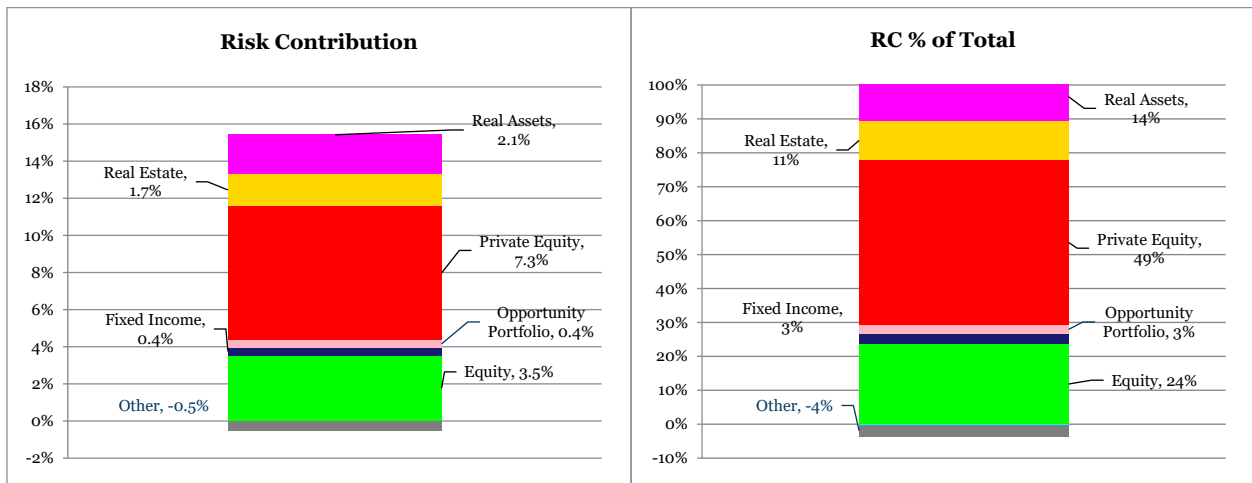
Figure 1. OPERF Actual Allocation versus Target



OPERF Predicted Risk

The risk estimates are shown in the charts below.

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



In Figure 2 above, the negative risk contribution of “Other” are mainly due to the Synthetic and Currency Overlay Programs, with Risk Contributions of -0.4% and -0.1% respectively. OPERF has a persistent overallocation to “Equity” (the total of Public and Private) and under allocation to Fixed Income in actual “physical” values. The Synthetic Overlay Program both overlays the Fund’s “free” cash and systematically rebalances OPERF back to the target allocations using liquid exchange-traded futures. As of the end of the quarter, the Synthetic Overlay Program was long \$4.8 billion of Fixed Income and short \$2.8 billion of Public Equity, which in aggregate has a large negative correlation to “Equity”. By design, the Currency Overlay Program is long U.S. dollar and short foreign currencies, which Aladdin also estimates a negative correlation to “Equity”.

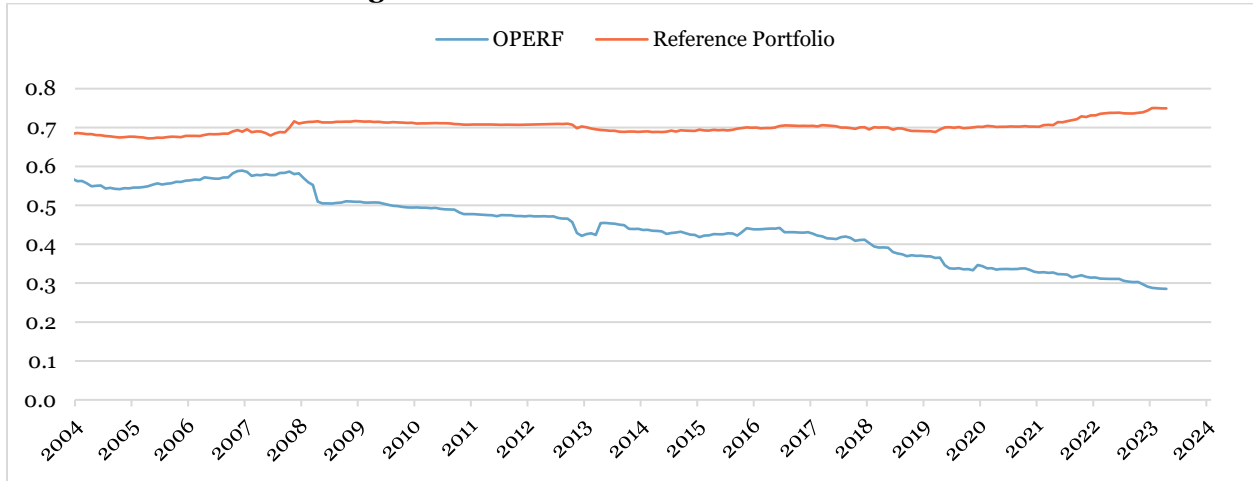
The total predicted **standard deviation**, or **volatility**, for OPERF is 14.9% as of March 31, 2024. To put that in context, Meketa, the OIC’s investment consultant, estimated OPERF’s long-term volatility to be 11.4% using their 2022 Capital Market Assumptions, which are a blend of 10- to 20-year assumptions from staff, Meketa, and Aon Investments, the Council’s secondary investment consultant. Aladdin’s model uses a medium-term, five-year lookback period so there will almost always be some difference between the two estimates. OPERF’s current “excess” volatility relative to the Capital Market Assumptions can be attributed to two sources: elevated estimated market volatilities relative to the long-term assumptions; and the Fund’s overallocation to private market asset classes. Modeling a “what if” portfolio using the Strategic Asset Allocation and the March 2024 risk estimates produces a predicted risk of 12.2%. A very rough interpretation is that, relative to the Capital Market Assumptions, the current market environment added 0.8% (12.2% minus 11.4%) to the estimated risk while the Fund’s misweights added another 2.7% (14.9% minus 12.2%).

Another item of note from Figure 2 is that “equity” risk, that is the predicted risk contributions from the Public Equity and Private Equity Portfolios, is estimated to be 73% of OPERF’s predicted risk, the largest risk contributor to OPERF. This is consistent with one of the OIC’s Investment Beliefs: “*Over the long-term, equity-oriented investments provide return premiums relative to risk-free investments.*”

The OIC-approved changes to asset allocation, mainly lowering the allocation to Public Equity and raising those of Real Assets and Diversifying Strategies, have reduced OPERF’s realized volatility. Figure 3 below plots OPERF’s rolling 20-quarter realized beta to MSCI ACWI IMI, a global public equity index, as well as that of the “Reference Portfolio”, which is a blend of 67.5% MSCI ACWI IMI & 32.5% Bloomberg U.S. Aggregate Index, a U.S. fixed income index. OPERF’s realized beta hovered around +0.60 in the earlier portion of the analysis period before starting a steady decline. A significant contributor to that decline is the increasing allocation to illiquid investments, which have performance smoothing, but also provide diversification.

It is worth noting that the 20-quarter beta of the Reference Portfolio increased over the past few years due to increasing correlation between the two component indices.

Figure 3. OPERF's Beta to MSCI ACWI IMI

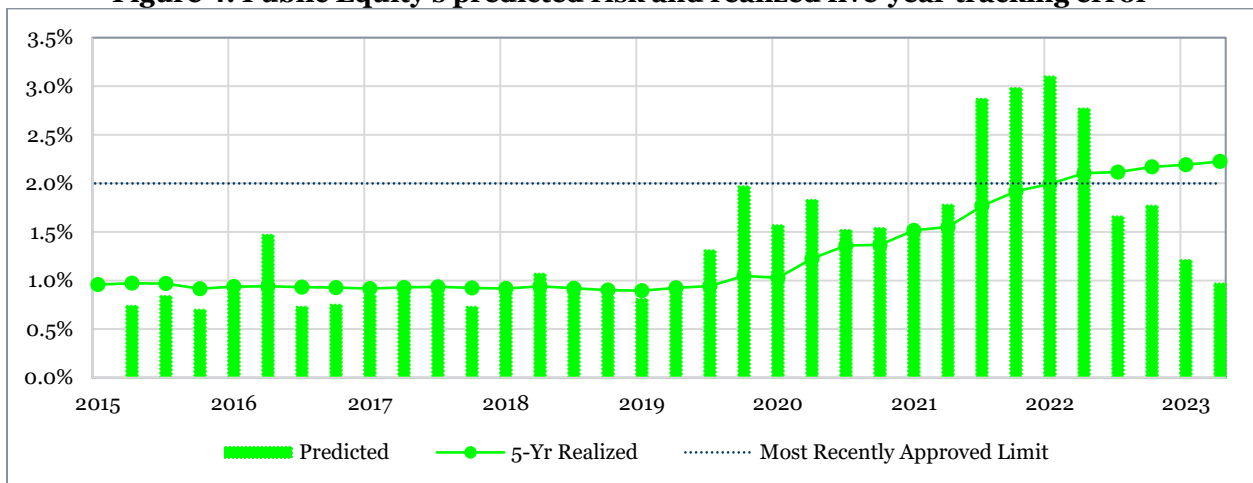


Capital Markets

Public Equity

The Public Equity Portfolio has an OIC-approved **tracking error** range of 0.75% to 2.00%. Using monthly performance data from State Street, the custodian bank, the five-year *ex post* tracking error for the Portfolio through March 31, 2024 is 2.2%, slightly above the upper end of the approved range. However, Aladdin estimates an *ex ante* active risk of 1.0%, substantially lower than the peak of 3.1% for December 31, 2022. The Public Equity team continues to raise cash for the Fund, rebalancing the Portfolio each time to reduce the active factor exposures. That implementation, in conjunction with the moderation of factor correlations, lowered the predicted active risk of the Portfolio.

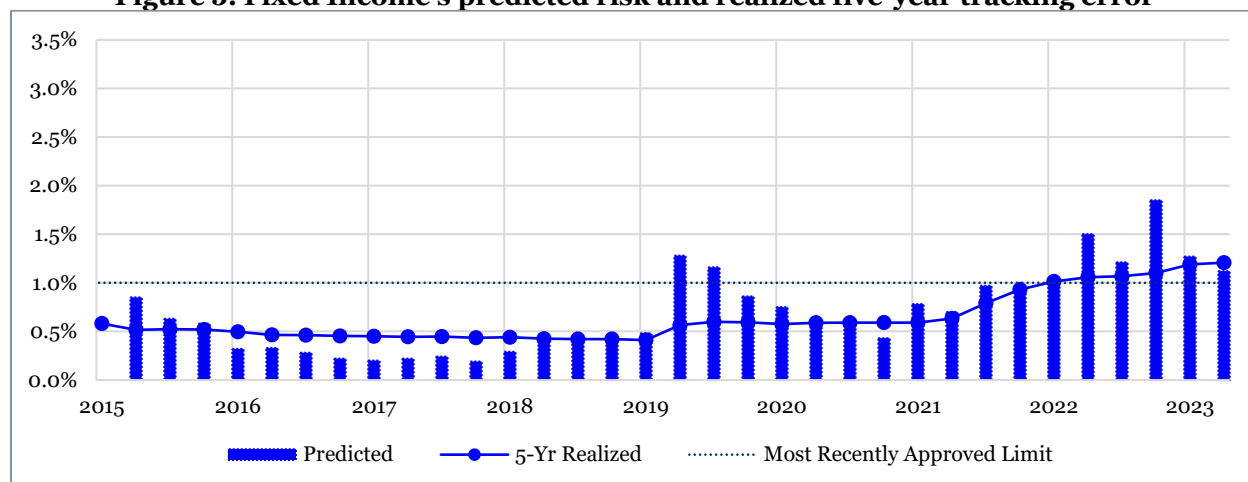
Figure 4. Public Equity's predicted risk and realized five-year tracking error



Fixed Income

The Fixed Income Portfolio has an OIC-approved **tracking error** of up to 1.0%. Using monthly performance data from State Street, the five-year tracking error for the Portfolio through March 31, 2024 is 1.2%, slightly above the upper end of the approved range. Furthermore, the predicted active risk of 1.1% is also above the approved range. This elevation in predicted active risk is mainly due to the Portfolio's short duration exposure of -0.8 relative to its benchmark, the Bloomberg U.S. Aggregate, exacerbated by the pickup in interest rate volatility. The Fixed Income team initiated several rebalancing in the second half of 2023 to start reducing the Portfolio's short duration.

Figure 5. Fixed Income's predicted risk and realized five-year tracking error



OPERF Cash Flow

Table 2 below summarizes approximate net investment cash flow and pension cash flow for Year-to-Date 2024 and for the past five years.

Table 2. OPERF Net Cash Flow by Portfolio by Time Period

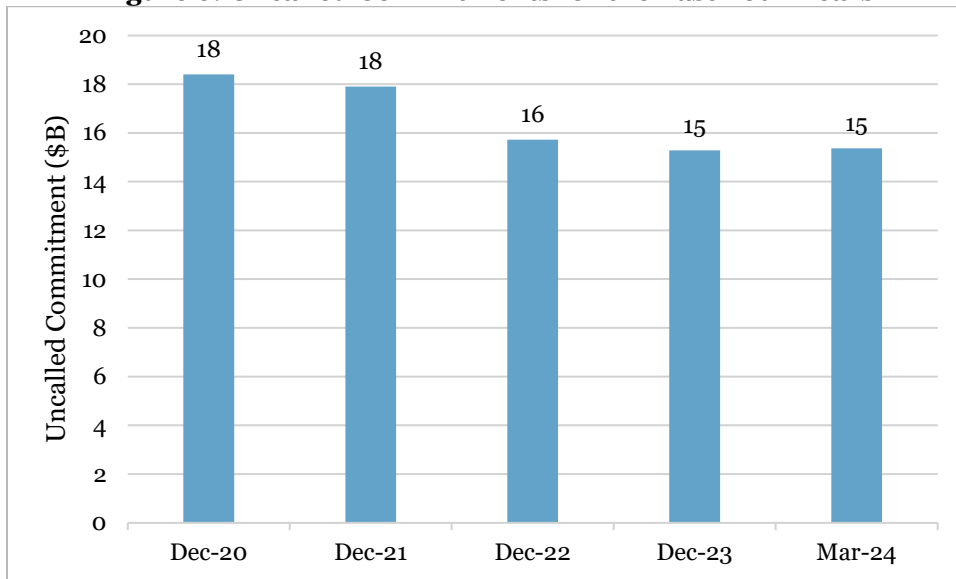
Asset Class	Net Cash Flow (\$M)					
	YTD (2024)	2023	2022	2021	2020	2019
Public Equity	637	4,536	3,327	4,047	3,436	2,813
Private Equity	11	-542	464	2,503	50	285
Fixed Income	35	-1,384	-1,544	-2,653	3,154	327
Real Estate	-126	-930	-883	-396	15	-48
Real Assets	-23	-804	-706	-572	-509	-578
Diversifying Strategies	-4	-3	-11	381	-621	-490
Opportunity	4	122	-165	-248	86	26
Other*	-391	961	663	-227	-2,249	283
Total Fund	142	1,956	1,144	2,836	3,362	2,617
<i>Net Pension</i>	<i>-206</i>	<i>-2,742</i>	<i>-2,605</i>	<i>-1,743</i>	<i>-3,041</i>	<i>-2,659</i>

*Including cash flows from the terminated OPERF Risk Parity Portfolio.

The estimated uncalled commitments from the private market portfolios are tabulated below.

Asset Class Portfolio	Uncalled Commitment (\$B)
Private Equity	\$6.9
Real Assets	\$4.1
Real Estate	\$3.1
Opportunity	\$1.3
Total	\$15.4

Figure 6. Uncalled Commitments for the Past Four Years





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TAB 5
TREASURER READ
CLIMATE PLAN REVIEW

TO: Council Members, Oregon Investment Council (“OIC”)
FROM: Meketa Investment Group (“Meketa”)/Aon
DATE: May 29, 2024
RE: Opinion Memo – Initial Comments on Treasurer’s Net Zero Proposal for OPERF

In February 2024, the OIC Chair, Cara Samples, requested that Meketa and Aon conduct a preliminary and high-level review of Treasurer Read’s Net Zero Plan for OPERF (“Plan”). The goal was to check for consistency with the existing OPERF Investment Policy Statement (“Policy”). How OPERF chooses to manage climate-related investment risks and opportunities can have a direct impact on its fiduciary duty and its principal goal to maximize the likelihood of achieving and/or exceeding the Investment Objectives outlined in the Policy over the long-term.

Executive Summary / Opinion

In our opinion, climate change presents material financial risk and opportunities to OPERF. We reviewed the Treasurer’s proposed Net Zero Plan first for whether it could be implemented within OPERF’s existing Investment Policy, and second, if, as presented, it should be viewed as a best approach for OPERF to addressing climate risks and opportunities.

First, from our review, the Treasurer’s proposed Net Zero plan is not fully consistent with the OPERF’s current Investment Policy.

Second, from our perspective, the Treasurer’s Net Zero plan imposes potentially negative investment constraints and reduced diversification from setting top-down, prescriptive and time-bound targets to decarbonize OPERF’s investment portfolio. Portfolio decarbonization is not equivalent to decarbonizing the economy and simply having exposure to companies with lower carbon emissions is not equivalent to reducing OPERF’s exposure to the broad range of climate risks.

To protect against climate risks and benefit from climate investment opportunities, OPERF could seek to evaluate and source investment managers that are very skilled at identifying, balancing and timing climate risks (regulatory, physical, product, etc.) alongside other investment risks and actively engage with its investment managers and portfolio companies. These steps may be included within current Policy.

The dislocations and inefficiencies that come from decarbonizing the economy present OPERF with a significant opportunity to outperform the market. It is possible for OPERF to increase its allocation to climate positive investments from its existing asset class allocation and measure performance against traditional benchmarks. However, it is unclear about how best to size and time this allocation and what tradeoffs, for example, with liquidity, fees and returns may be involved. It may be that current OST staff



have the skill, edge and knowledge to increase OPERF's allocation to climate positive investments, however, it is worth noting many plans have chosen to add dedicated internal investment resources.

We recommend building on the Treasurer's proposed Net Zero plan to:

1. Design a climate change strategy which is more appropriate for OPERF to implement that serves the goal of maximizing long-term risk-adjusted returns of the portfolio.
2. Develop an appropriate implementation timeline that balances timeliness with required and available resources.

Background

- There is widespread acknowledgement that limiting global warming is an urgent imperative; however, views vary on the role investors can play.
- The Treasurer's Plan focuses on decarbonizing the OPERF investment portfolio.
- Investors consider climate change from different perspectives such as protecting their portfolios against financial risks, benefiting from growth opportunities in climate solutions, and/or having a positive impact on decarbonizing the real economy.
- These objectives may overlap or be implemented differently. No one-size-fits-all approach exists for considering climate-related investment risks and opportunities, in areas such as energy transition, physical impacts, and biodiversity losses.
- Investors must assess which strategy best supports their financial goals (and if applicable, non-financial goals), in alignment with their fiduciary responsibilities.

OPERF's Approach as a Fiduciary

- Treasurer Read's proposed Net Zero Plan presents thoughtful, detailed analysis and recommendations that aim to provide an overarching framework for OPERF to reach net zero greenhouse gas ("GHG") emissions by 2050, in line with the Paris Agreement.
- The intention of the Treasurer's proposed Plan is to minimize the impact on OPERF's existing investment policy by keeping all recommendations aligned with the existing Investment Policy asset allocation.
- OPERF's current investment policy states that "the integration of systems to evaluate and monitor environmental, social and governance ("ESG") risks, including proxy voting, similar to other investment risks have the potential to have a beneficial impact on the economic outcome of an investment and aid in the assessment of that investment (9).
- While climate change, or its management, is not explicitly stated in the Policy, we believe that the general tone and flexible nature of the language above can apply to climate change. Further, OST staff have allocated resources, including two FTE dedicated to ESG.
- However, the majority of the recommendations in the Plan are not general in tone- they are specific and time-bound and would require significant:



1. Revisions to OPERF’s Policy, including adjustments within asset classes that could be expected to reduce OPERF’s diversification and potentially effect long-term risk-adjusted returns.
2. Additional staff and external resources to monitor investments, increase stewardship activities, and implement the Plan’s recommendations.

Examples of Plan Recommendations and Consistency with Policy

Our preliminary analysis is that all recommendations in the Plan either require Policy change or may require Policy change. Below we include a non-exhaustive illustration of eight specific Plan recommendations and their consistency with Policy.

Example	Plan Recommendation Examples (from page 25 or page 45 of the Plan, unless otherwise stated)	Consistency with Policy
1	Achieve Net Zero portfolio emissions by no later than 2050 across OPERF.	<p>Requires Policy Change</p> <p>A top-down Net Zero goal can have a direct impact on OPERF’s principal goal to maximize the likelihood of achieving and/or exceeding the Investment Objectives outlined in the Policy over the long-term.</p>
2	By 2035, 30% passive of public markets investments to be climate or transition aligned.	<p>Requires Policy Change</p> <p>Some investors have started reducing the amount of carbon exposure in their portfolios (‘decarbonizing’ portfolios) or investing in low-carbon indices and can present an efficient way to tilt the portfolio away from heavy benchmark emitters. This is not accounted for in the current Policy and involves increasing tracking error.</p> <p>Whether a company has higher or lower benchmark or peer-relative carbon emissions tells us very little about how resilient or vulnerable their business model will be to climate-related, physical or transition, risks. Simply having exposure to companies with lower carbon emissions is not equivalent to reducing the portfolio’s exposure to climate risk.</p>



- 3 By 2035, triple climate-positive investments (in private equity and real assets).

May require Policy change

The dislocations and inefficiencies that will come from decarbonizing the economy present OPERF with a significant opportunity to outperform the market. Investors can generate excess returns if they skillfully use information about climate-related costs and opportunities as part of their overall investment process, balancing climate-related factors with other risks and opportunities. Such strategies may include investments in carbon-intensive securities where active managers have considered the physical and transition risks from climate change.

It is possible for OPERF to triple its allocation to climate positive investments from its existing asset class allocation and measure performance against traditional benchmarks. However, it is unclear about sizing, pacing, valuations and the size of this allocation may involve tradeoffs with liquidity, fees and returns.

It may be that current OST staff have the skill, edge and knowledge to implement this recommendation. It is worth noting however many plans have chosen to add dedicated internal resources in these areas if investments in this space are desired.

- 4 Engage companies on their transition plans either directly or through stewardship coalitions.

May require Policy change

While the Policy does not explicitly reference stewardship or engagement, the OIC has separate policy to codify the process through which it exercises its voting rights. This separate policy is narrow in scope purely concerning the exercising of voting rights and does not directly translate into engaging companies on their transition plans.

It may be that current OST staff have the skill, edge and knowledge to implement any additional scope from this recommendation. It is worth noting however many plans have chosen to add dedicated internal stewardship resources.

While there are a wide range of well-established and new stewardship coalitions, it is worth noting there may be direct and indirect costs involved. Some asset managers have recently found the costs outweigh the benefits of this approach.



- 5 Monitor portfolio emissions of current and new funds and integrate indicators into fund and manager selection processes

May require Policy change

OPERF's manager selection process is driven by the pension plan's principal goal of meeting its risk and return objectives not by whether a manager has higher or lower portfolio emissions than a benchmark.

Whether a company has higher or lower benchmark or peer-relative carbon emissions tells us very little about how resilient or vulnerable their business model will be to climate-related, physical, transition, or biodiversity risks. Simply having exposure to companies with lower carbon emissions is not equivalent to reducing the portfolio's exposure to climate risk.

Therefore, we find value in a broader assessment of an investment manager's ability to integrate climate risk analysis to their investment decision-making process instead of focusing on one risk metric, portfolio emissions. Additionally, portfolio emissions data continue to be developed and can be difficult to find reliable, consistent estimates over time in public markets and challenging to gather for private asset classes.

If the Plan called for holistic, qualitative and integrated assessment of a manager's skill in identifying, balancing and timing climate risks (regulatory, physical, product, etc.) alongside other investment risks, this could be within Policy.

- 6 By Feb 2025, review investments that derive >20% of revenues from thermal coal, oil sands and shale oil and gas and restrict new investments in private equity and real asset funds primarily focused on fossil fuels.

Requires Policy change

While investors may exclude fossil fuels for values-based reasons, from an investment perspective, implementing these recommendations will reduce OPERF's opportunity set and, on an ex-ante basis, it may reduce expected portfolio return and increase risk (tracking error). Subject to House Bill 4083, determining which thermal coal companies should be divested would require additional resources to monitor individual thermal coal companies.

Note: OPERF will be mandated to divest from thermal coal companies when House Bill 4083 goes into effect on 1/1/2025, subject to divestment and reinvestment being accomplished without



monetary loss to the funds through reasonable, prudent and product investment in companies generating returns that are comparable to the returns generated by the companies subject to divestment. In addition, the State Treasurer may retain an investment in a thermal coal company if the company demonstrates that it is transitioning to clean energy on a reasonable timeline.

7 By 2035: Evolve portfolio to lower intensity sectors and for Private Equity: Materials, Energy and Utilities Shifts to 0% from 6% in 2022 before 2035

Requires Policy change

See examples 5 and 6 above. Eliminating all exposures to materials, energy & utilities will lower the diversification of investments in these asset classes and may significantly narrow the investable universe of funds which meet this requirement.

8 By 2035: Increase share of portfolio emissions covered by credible net-zero transition plans, including 90% of real estate emissions, and 65% of emissions across both real assets and private equity

Requires Policy change

See examples 5 and 6 above. May require divestment which could mean selling properties or private assets at discounts to achieve this goal.

Next Steps

- Like other asset owners, OPERF is seeking to understand and manage climate-related risks and opportunities, while carefully balancing its approach alongside its stated goals such as liquidity, diversification, risk and return.
- We recommend the Council consider three basic steps as it embarks on this process:
 1. **Education: Continue ongoing education to** understand the different types of climate-related risks and opportunities and consider the pros / cons of different management approaches.
 2. **Design a prudent climate change strategy:** Design a climate change strategy which is more appropriate for OPERF to implement that serves the goal of maximizing long-term risk-adjusted returns of the portfolio.
 3. **Implement the Strategic Plan:** Implement agreed-upon plan: develop appropriate implementation timeline that balances timeliness with required and available resources.



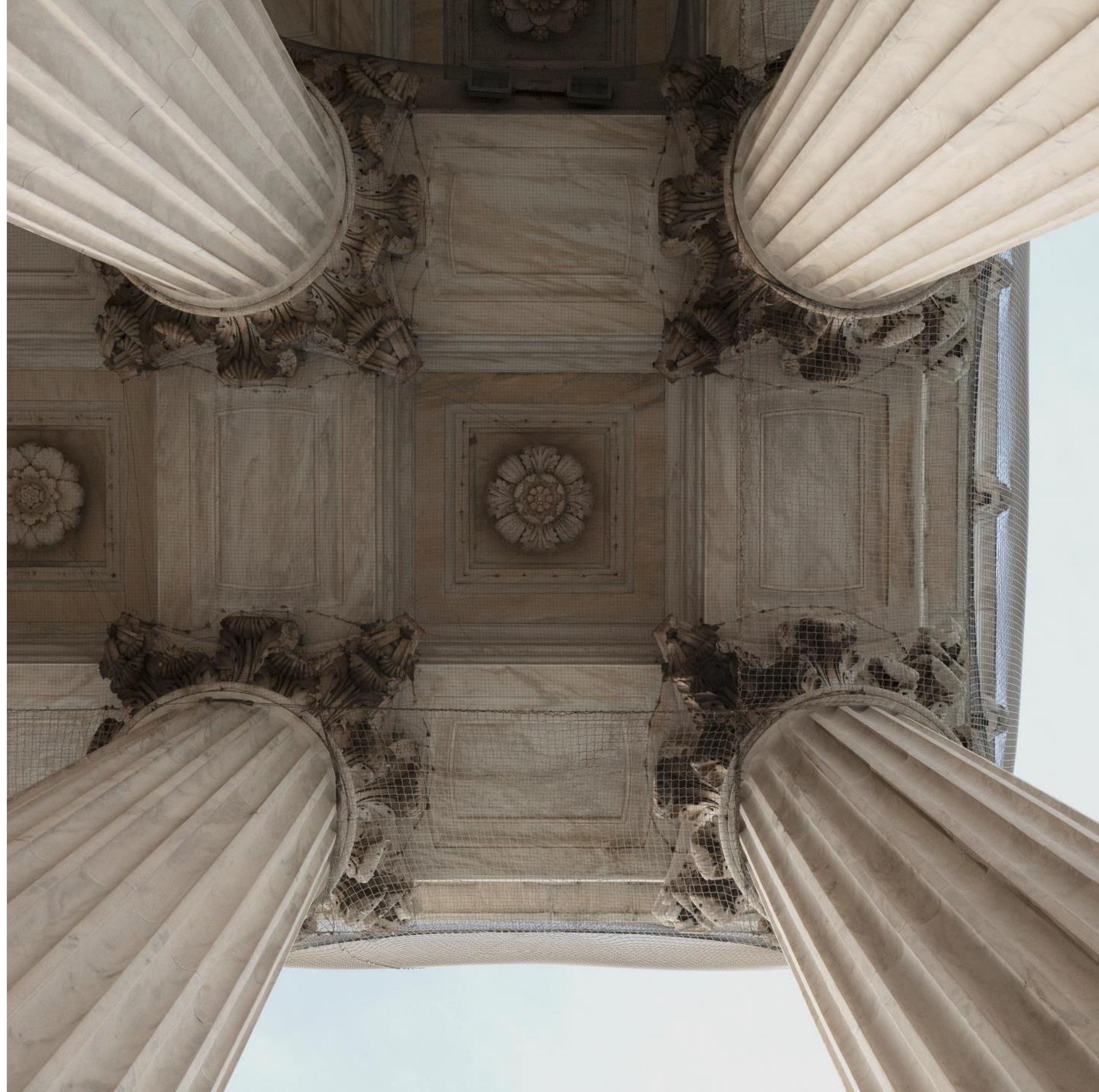
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TAB 6
OPERF, CSF
GUIDELINES

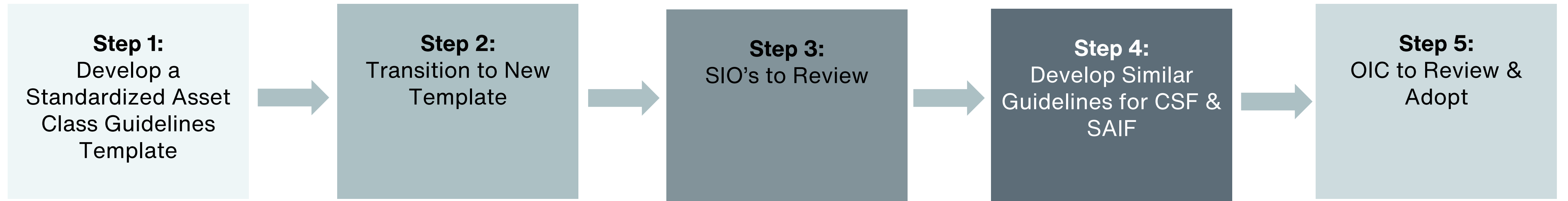


Oregon Investment Council Investment Guidelines Project Update

May 29, 2024



Investment Guidelines Project Plan



- OPERF’s consultants developed a standard asset class guidelines template with the following key components:
 - Scope
 - Purpose
 - Investment Objective
 - Allocation
 - Investable and Restricted Inv.
 - Risk Management
 - Manager Selection Process
 - Roles and Responsibilities
 - Monitoring and Reporting

- OPERF’s consultants will lift language from existing OST asset class guidelines to their appropriate categories in the new standardized template
- Streamline language/remove redundancies
- Highlight areas where there is a gap between existing guidelines and new template

- Each asset class SIO will review the new asset class guidelines for completeness
- SIO’s will evaluate the existing guidelines to assess if it aligns with portfolio construction objectives and current practices around risk management controls and manager selection approval process, etc.

- Develop similar asset class guidelines template for CSF and SAIF

- OIC to review new asset class guidelines, provide feedback, and adopt final version



Investment Guidelines Project - Team Overview

	Public Equity	Fixed Income	Private Equity	Real Estate	Real Assets	Diversifying Strategies	Opportunity Portfolio
Primary Consultant Assigned	Aon	Meketa	Aksia	Meketa	Aksia	Albourne	Aksia
SIO Assigned	Louise Howard	Louise Howard	Michael Langdon	Gloria Gil	Ben Mahon	Ben Mahon	Michael Mueller
OST Policies Impacted	Strategic Role of Public Equity INV 601 Internal Public Equity Portfolio Objectives and Strategies INV 603	Strategic Role of Fixed Income INV 401 Internal Fixed Income Portfolio Investments INV 402	Private Equity Portfolio Standards and Procedures INV 701	Acquiring and Managing Equity Real Estate INV 501	Real Assets Portfolio Standards and Procedures INV 710	Diversifying Strategies Portfolio Standards and Procedures INV 711	Opportunity Portfolio Standards and Procedures INV 703

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TAB 7
CALENDAR – FUTURE
AGENDA ITEMS

2024-25 OIC Forward Calendar and Planned Agenda Topics

July 17, 2024

Cancelled

September 4, 2024

Q2 Performance Review: OPERF, CSF
Policy Changes Update

October 23, 2024

Operations Annual Review
OPERF, CSF Guidelines Changes
OPERF Pacing Discussion
SAIF Asset Allocation, Annual Review

December 4, 2024

Q3 OPERF Performance
Fixed Income Portfolio Review: OPERF
Diversifying Strategies Portfolio Review

January 22, 2025

Public Equity Portfolio Review
Private Equity Portfolio Review
2026 OIC Calendar Approval

March 5, 2025

2024 Performance Review: OPERF, CSF, SAIF
Real Assets Portfolio Review
Real Estate Portfolio Review

April 16, 2025

Individual Account Program (IAP) Review
OSGP Annual Review

May 28, 2025

Q1 Performance Review: OPERF



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TAB 8
OPEN DISCUSSION



TAB 9

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>