



Market & Portfolio Update

Amy C. McGarrity

Interim Executive Director/Chief Investment Officer

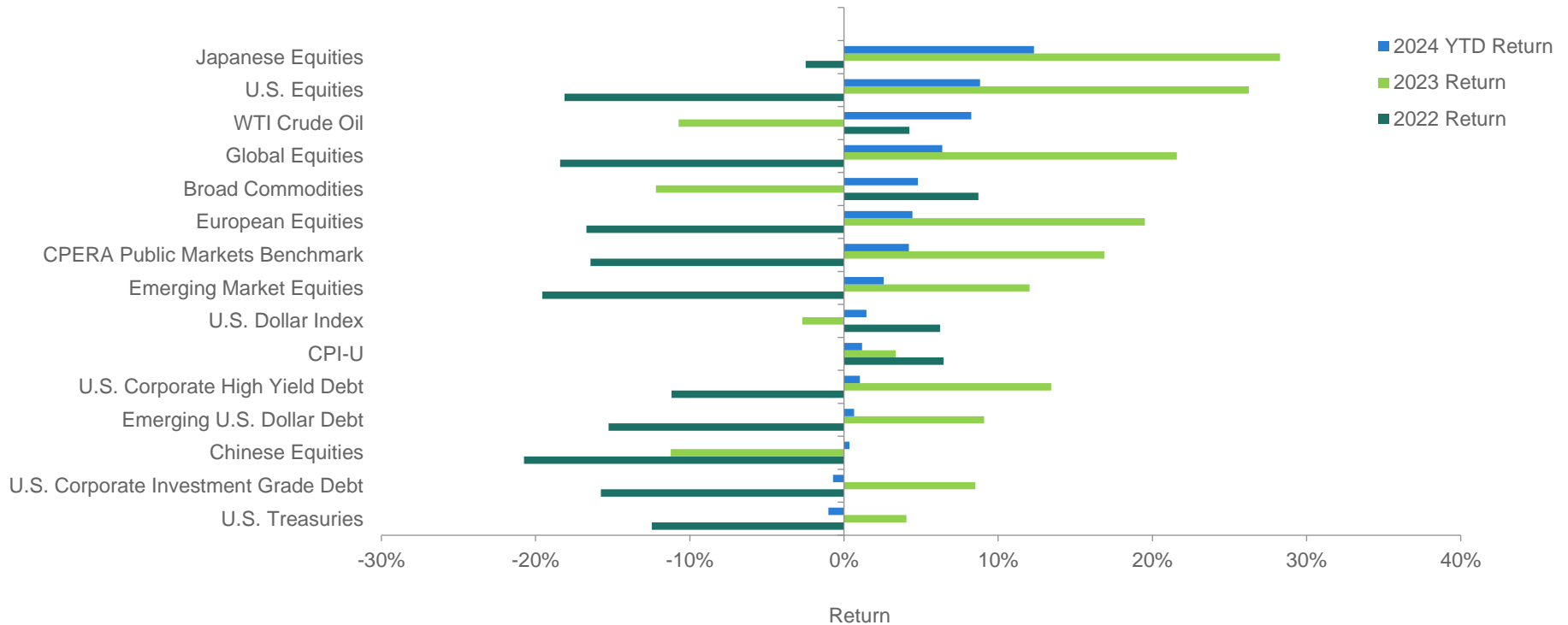
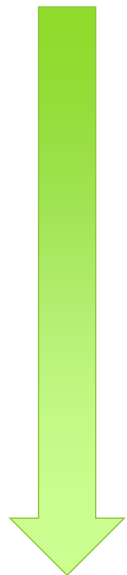
March 15, 2024

Market Performance: 2024 YTD* vs. 2023 and 2022 Calendar Years



Equities (non-China) have continued their upward trend from 2023. Fixed income is negative YTD and Chinese securities are slightly positive after two years of negative performance.

2024 Highest Performers



All returns are presented in unhedged USD terms
CPI-U YTD as of 2/29/2024
*YTD as of 3/12/2024

Correlation Between Equities and Fixed Income



Correlations between stock and bond returns remain modestly positive, after a brief normalization in the first half of 2023.

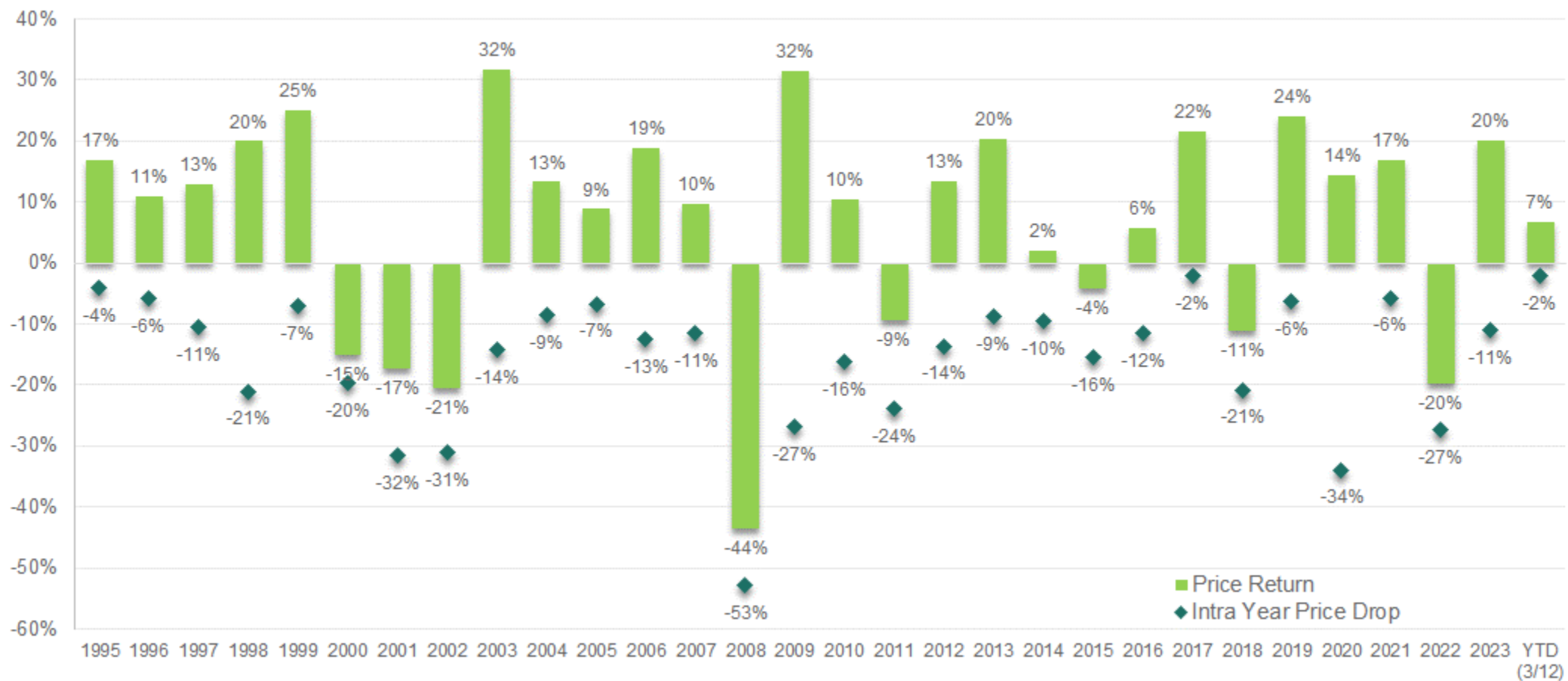


Correlation between S&P 500 Index and ICE U.S. Treasury 7-10 Year Bonds Index. Correlation calculated on a 50-day rolling basis. Returns data through 3/12/2024

Global Equity Market Volatility



MSCI ACWI Intra-Year Declines vs. Calendar Year Returns
 Despite average intra-year decline of 16%, annual returns were positive in 22 of 30 years



U.S. Stock (S&P 500 Index) Movers



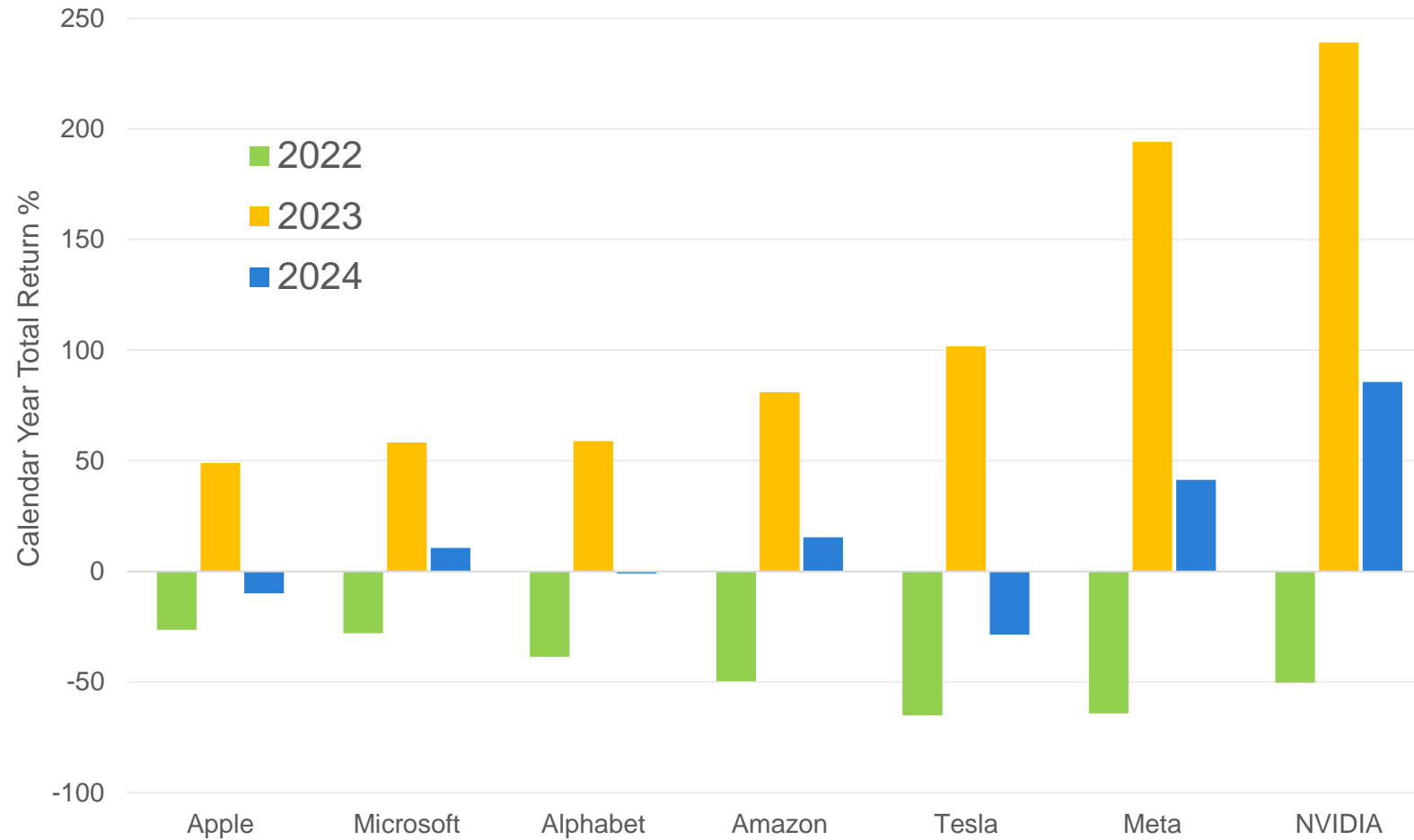
S&P 500: Percentage of Stocks that Outperformed the Index



Source: Bloomberg

Calendar Year Total Returns 1990-2023

Magnificent Seven Yearly Returns

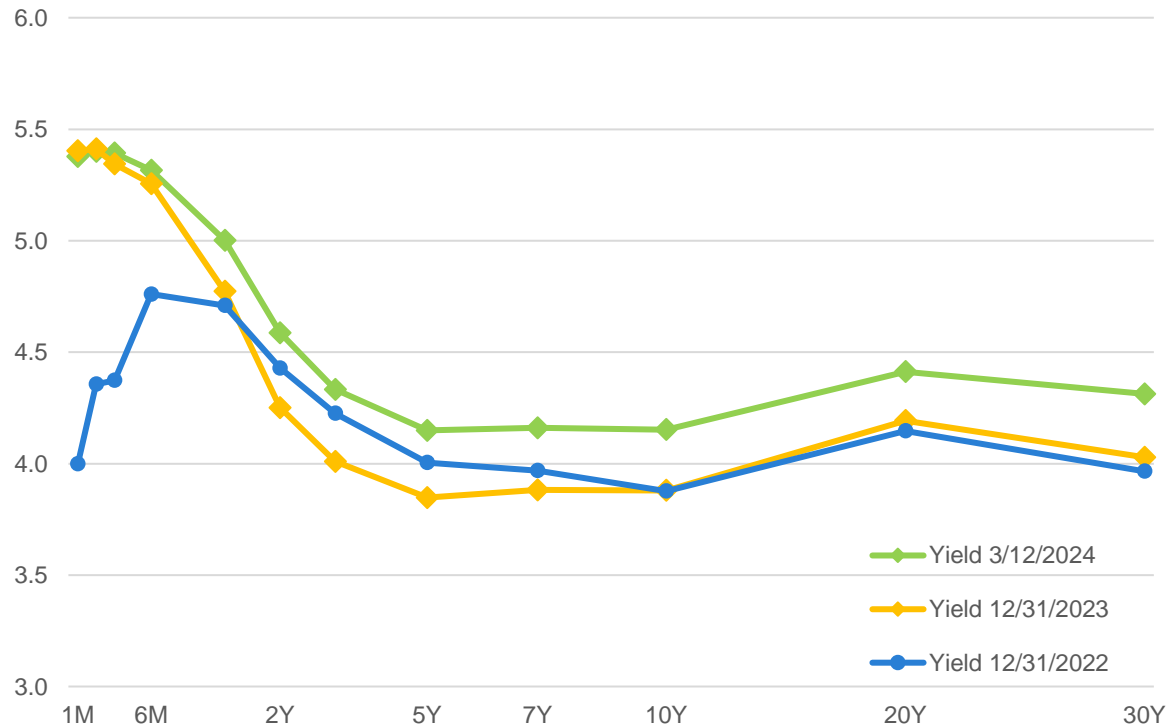


Source: Bloomberg

Treasury Yield Curve



Treasury Actives Curve - Mid YTM

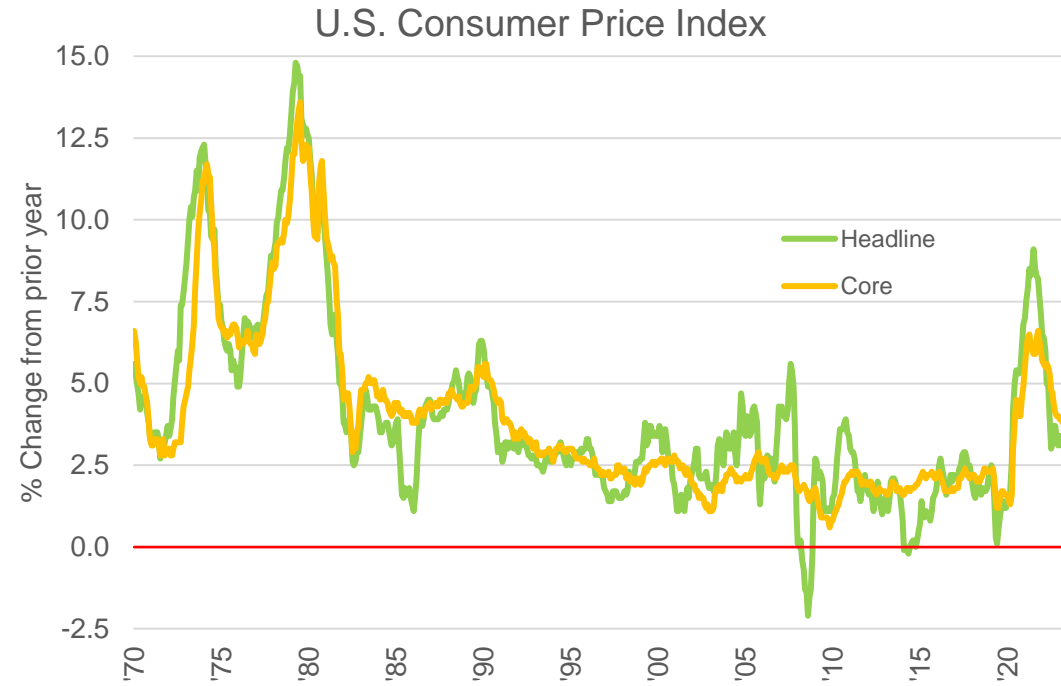
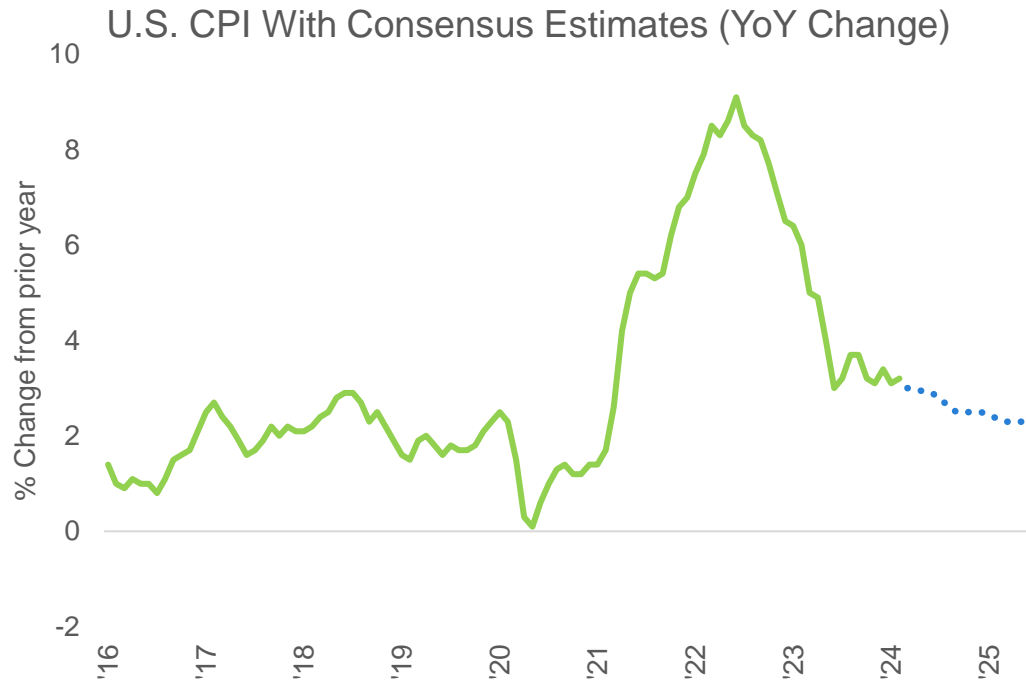


Tenor	Yield 3/12/24	Yield 12/31/23	Yield 12/31/22	Change Dec 22 - Mar 24
1M	5.38%	5.40%	4.00%	1.38%
2M	5.40	5.41	4.36	1.04
3M	5.39	5.34	4.37	1.02
4M	5.37	5.38	4.61	0.77
6M	5.32	5.26	4.76	0.56
1Y	5.00	4.77	4.71	0.29
2Y	4.59	4.25	4.43	0.16
3Y	4.33	4.01	4.23	0.11
5Y	4.15	3.85	4.01	0.14
7Y	4.16	3.88	3.97	0.19
10Y	4.15	3.88	3.88	0.28
20Y	4.41	4.19	4.15	0.27
30Y	4.31	4.03	3.97	0.35

- Concerns about inflation, interest rates, and the wars in Israel and Ukraine continue to cloud the macro backdrop
- Federal Funds Rate rose 525 bps since March 2022 (from near zero)

Inflation Estimates

Economist surveys point to a continuing reduction inflation trends over the next 18 months



Source: Bureau of Labor Statistics

Aon Updates

- January 2024: SEC settlement regarding a misstated return and subsequent actions with Pennsylvania State Employees Retirement System (PSERS)
 - Staff had multiple discussions with Aon regarding the matter, including one with Judge Freyre
 - Introduced a more significant role for the “Executive Sponsor” as an additional point of contact
 - Steve Voss had been Executive Sponsor; transitioning to Bryan Ward
 - Contact info for Katie Comstock, Richard Parker, and Bryan Ward more prominent in New Trustee Orientation materials and posted in Boardvantage under “Supplemental Investment Materials” (not shown here for privacy reasons)

» Investment Consultant—Aon Investments:

- Reports directly to the Board.
- Consultant for PERA since 2003.
- Katie Comstock is the Lead Consultant and the primary contact for general consulting needs. Richard Parker is also a Lead Consultant and the primary contact for asset allocation related topics. The Executive Sponsor is Bryan Ward who oversees the entire relationship at the executive level.
- Selected and evaluated by the Board.



Katie Comstock



Richard Parker



Bryan Ward

2024+ Projects: Investments/Collaborative



Project	Status
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Unitization	PERA is collaborating with Callan and Northern Trust about unitizing the Global Equity asset class during the second half of 2024.
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Modernization of Investment Systems	PERA's project management teams are importing Alternatives and Real Estate data into FundHub and defining the vendor's development tasks. Work continues in Athena to develop common field names across asset classes, which will simplify data management and reporting. We are expecting to receive custodial data via Snowflake in late March/early April.
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Investment Activities

- Alternatives RFP for investment research services
 - Responses were due March 1st
 - Staff is currently reviewing submissions
 - Will determine what, if any, firms to interview
- Proxy Voting Policy review kicked-off yesterday in Investment Committee
- Monitoring of additional Russian sanctions



Questions?





APPENDIX

Asset Allocation Policy

Policy

Asset class weights will be within permissible ranges

Status

All asset class weights within permissible ranges

Asset Class	Policy Benchmark Weight	Actual Weight* (Jan 31, 2024)	Range
Global Equity	54.0%	54.8%	48% - 60%
Fixed Income	23.0%	18.8%	18% - 28%
Private Equity	8.5%	8.4%	4% - 13%
Real Estate	8.5%	10.8%	4% - 13%
Alternatives	6.0%	6.7%	0% - 12%
Cash/Short Term**	0.0%	0.4%	0% - 3%
Total	100%	100%	

* December 2023 weights are preliminary. Transitional cash remains within respective asset classes

** Includes Cash Overlay

Active Risk Policy

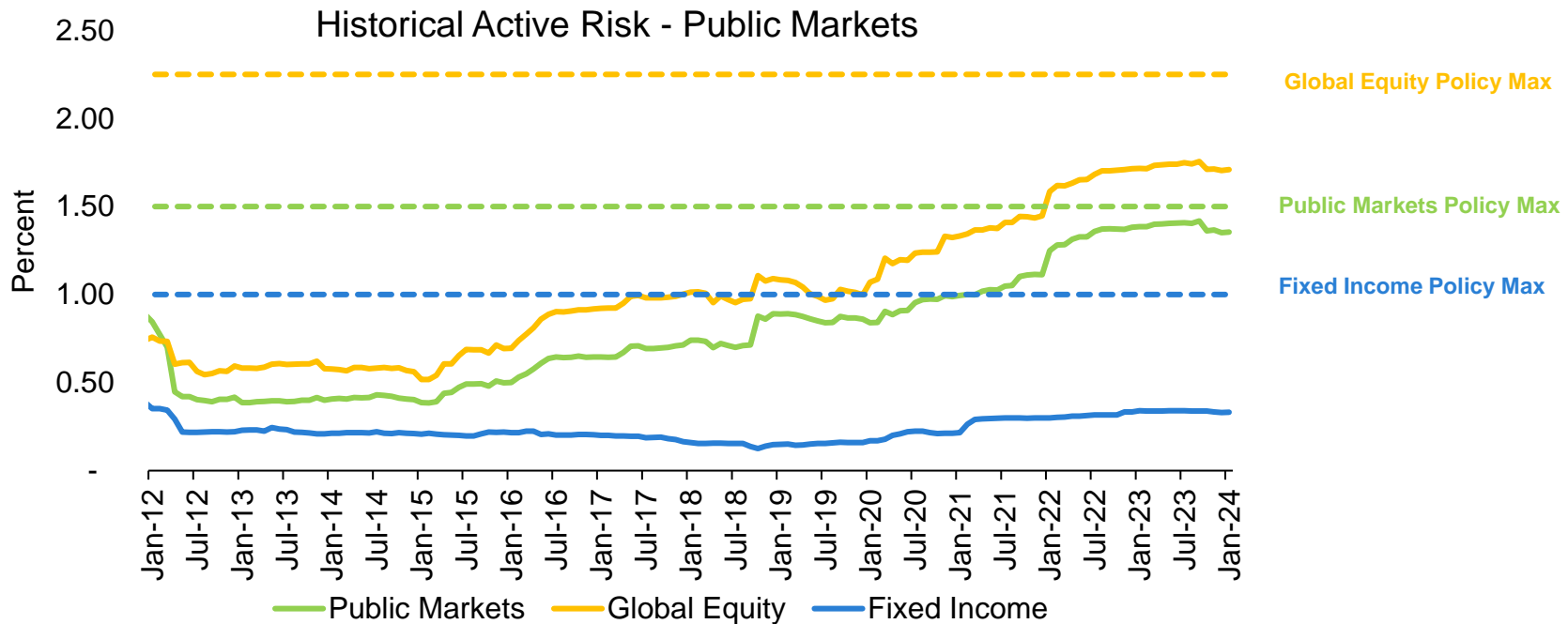
Policy

Active risk within public market asset classes (i.e., Global Equity and Fixed Income) and the total public markets portfolio will not exceed maximums

Status

Active risk levels are within policy limits

Active Risk		
Asset Class	Five-Year Tracking Error in Basis Points 31-Jan-24	Active Risk Policy Maximum in Basis Points
Global Equity	171	225
Fixed Income	33	100
Total Public Markets	135	150



*Active risk measurement was changed from trailing three years to trailing five years as of January 2020

Portfolio Monitor

ASSET CLASS

STRATEGY

Global Equity

Portfolio retains higher quality bias. No material sector or geographic overweights or underweights relative to the benchmark.

Fixed Income

The portfolio is biased to be overweight spread product, take on limited duration risk, and generate the majority of outperformance from security selection and asset allocation. Short term dislocations may cause volatility in performance; however, long term the portfolio is expected to outperform the benchmark.

Private Equity

Fundraising and investment activity continues at a slower pace. Vintage construction enhanced by previously closed, but uncalled opportunities. Focus on high quality re-up opportunities and one or two select new managers. Reviewing portfolio management options with existing PE sponsors.

Real Estate

Weakening real estate fundamentals and increased cost of borrowing has led to declining valuations. Capitalization rates have been rising yet transaction volume has slowed substantially. Portfolio overweight to industrial and multifamily has been strong yet appears to be reversing course due to both capital and economic headwinds.

Alternatives

Real assets including infrastructure, agriculture and timber offer attractive yields in a period of higher inflation. Certain asset-backed credit strategies, such as leasing also appear to offer good value, as banks continue to retrench from traditional finance activities. As older private debt issues reach maturity over the next two years, there will be demand for special situations capital which can provide flexible capital solutions for refinancing or restructuring debt. Existing distressed managers have substantial dry powder available to pursue value transactions in a risk off environment.