Market & Portfolio Update

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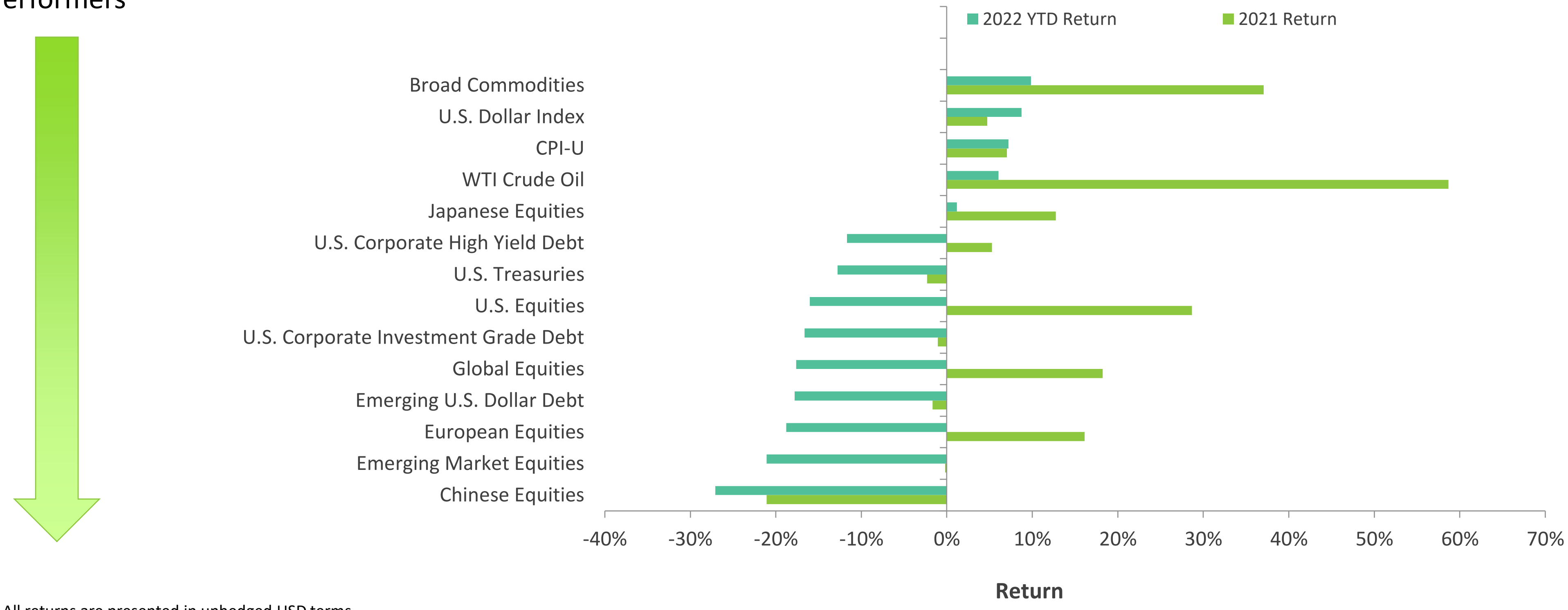
Market Performance:
2022 YTD* vs. 2021 Calendar Year

Commodities and oil are moving higher, but are off recent highs, while stock and bond markets are broadly selling off YTD

2022 Highest Performers



All returns are presented in unhedged USD terms
CPI-U YTD is as of previous month end (10/31/2022)
*YTD as of 11/17/2022

Global Equity Market Volatility

MSCI ACWI Intra-Year Declines vs. Calendar Year Returns

Despite average intra-year decline of 15.6%, annual returns were positive in 22 of 30 years

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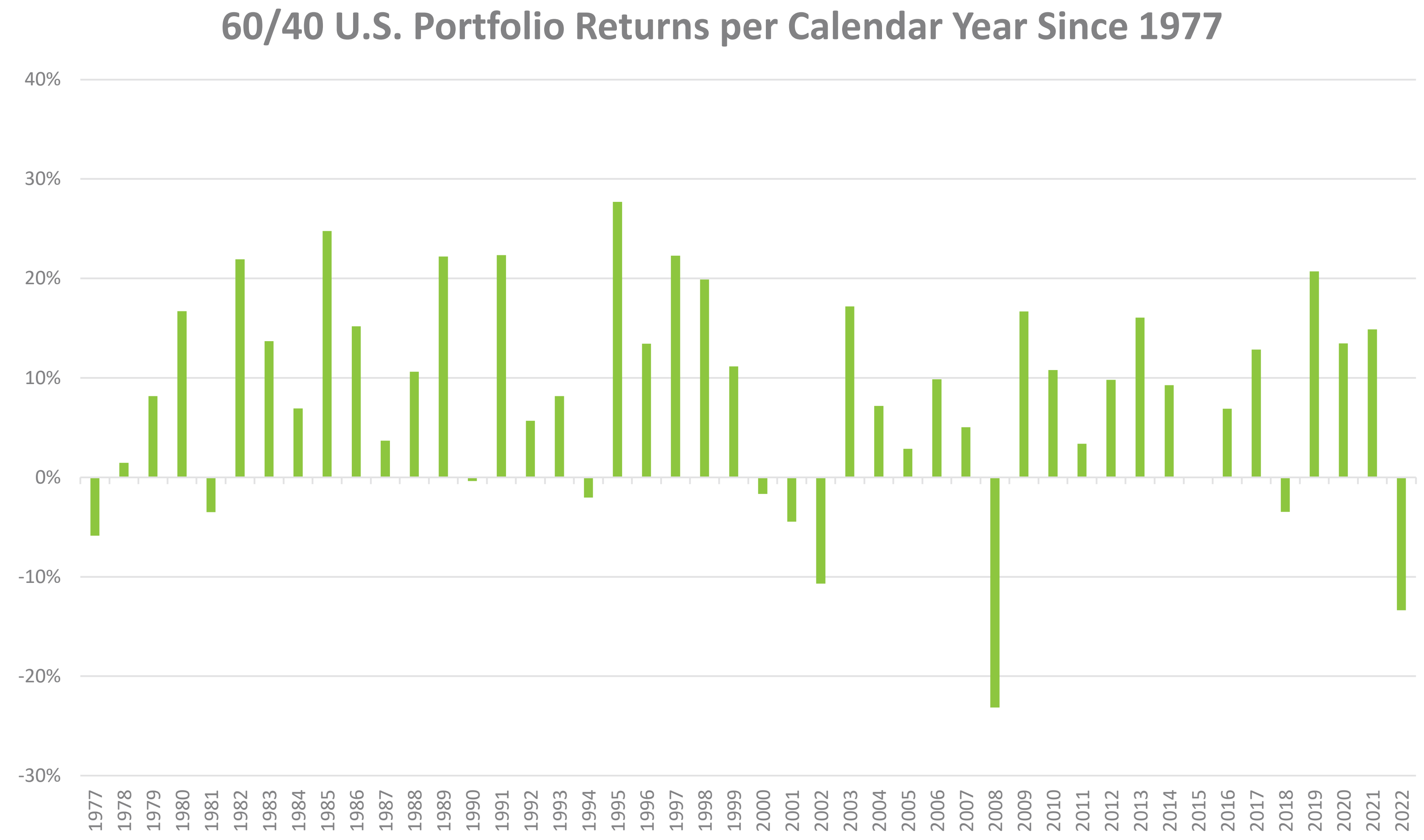
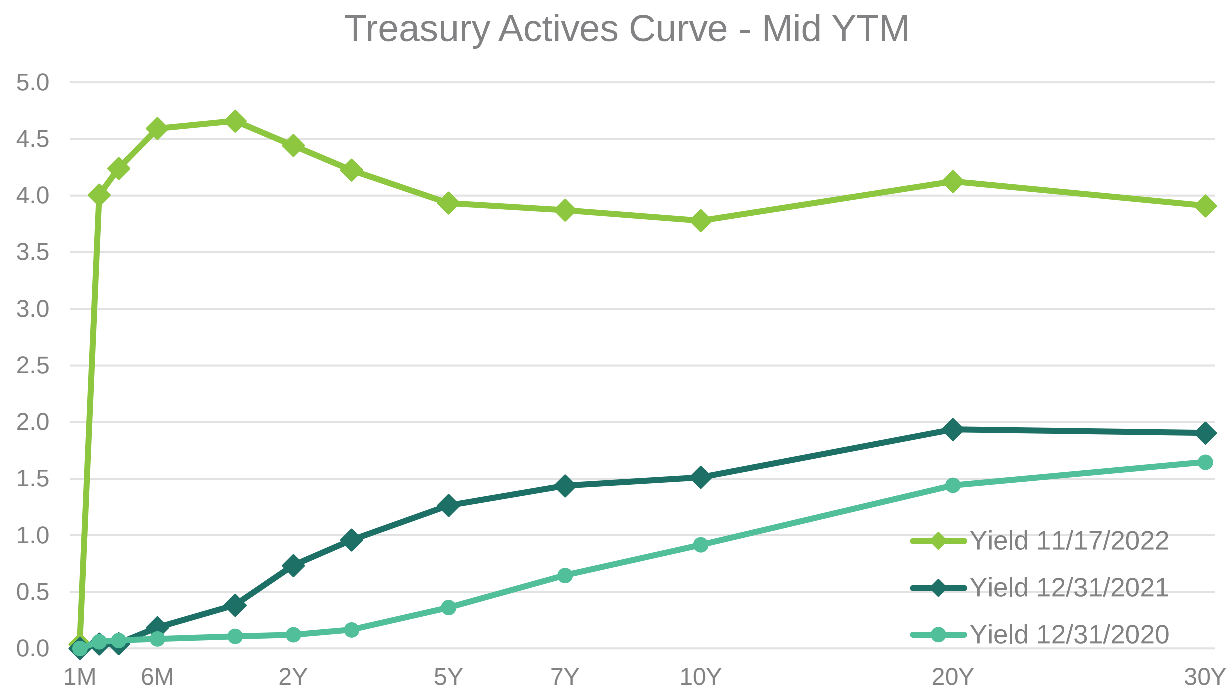
60/40 U.S. Portfolio Returns per Calendar Year Since 1977



60% S&P 500 Index / 40% Bloomberg U.S. Aggregate Index
2022 is YTD through 11/16/22

Treasury Yield Curve

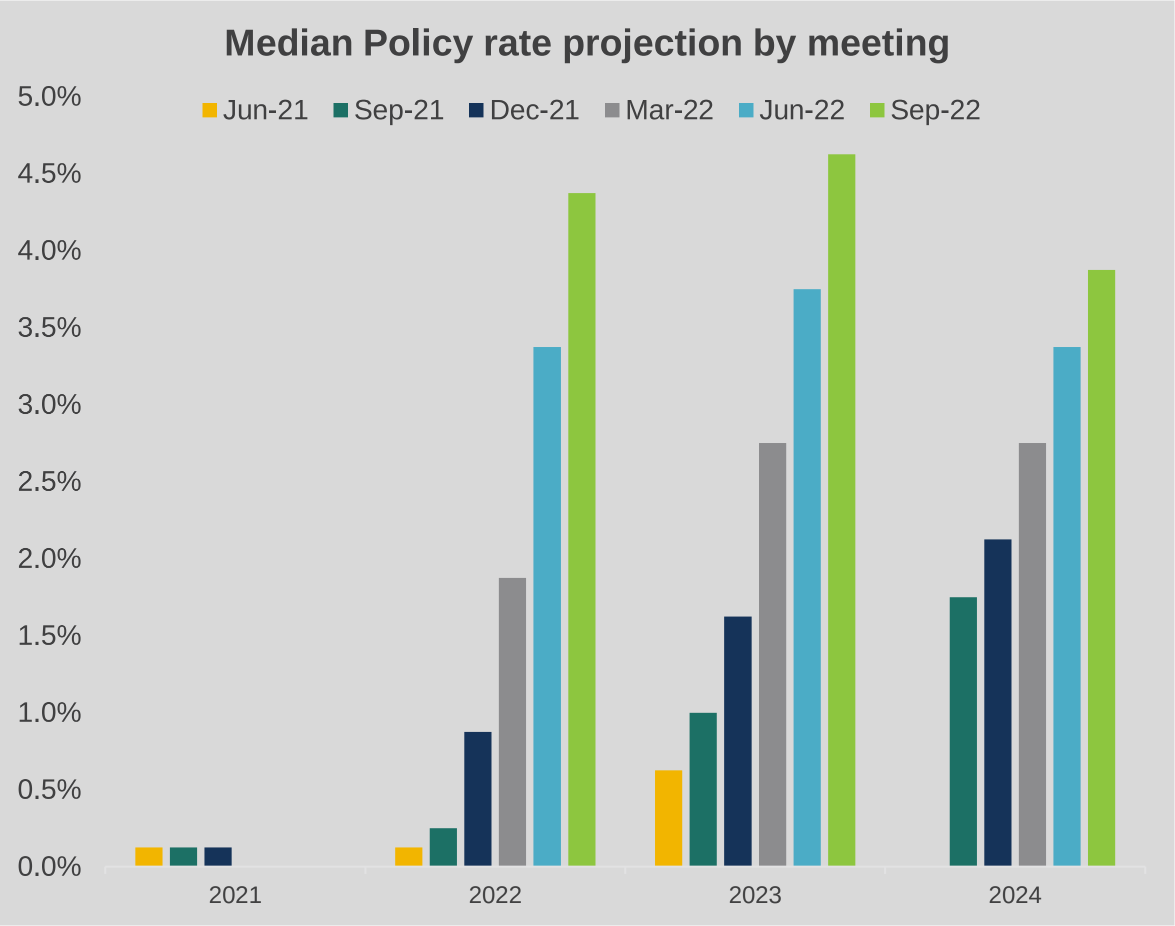


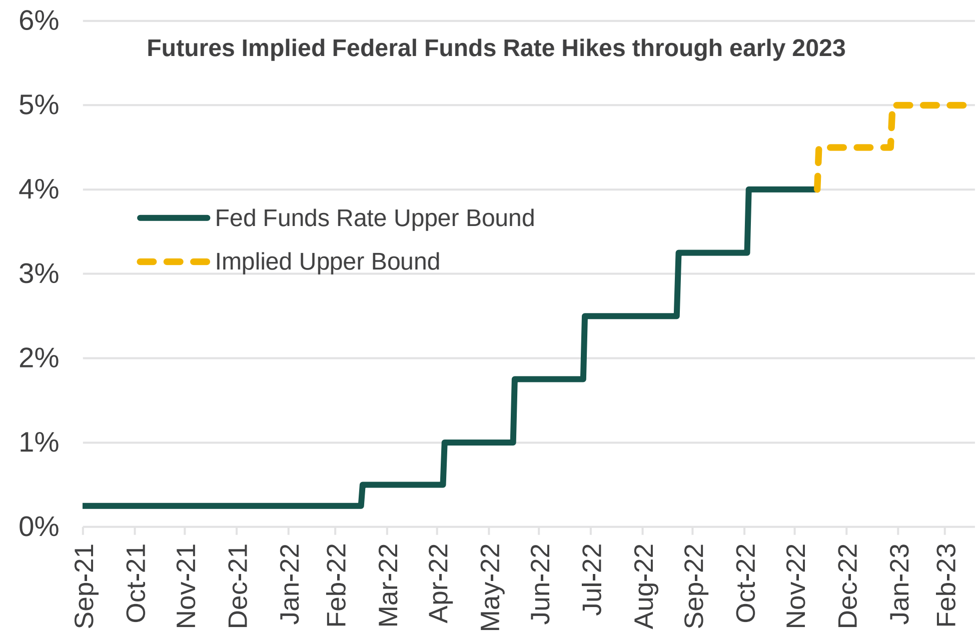
Tenor	Yield 11/17/22	Yield 12/31/21	Yield 12/31/20	Change Dec 20 – Nov 22
1M	3.71%	0.03%	0.04%	3.67%
2M	4.01	0.04	0.06	3.95
3M	4.24	0.04	0.07	4.17
6M	4.59	0.19	0.09	4.51
1Y	4.66	0.38	0.11	4.55
2Y	4.44	0.73	0.12	4.32
3Y	4.23	0.96	0.17	4.06
5Y	3.94	1.26	0.36	3.57
7Y	3.87	1.44	0.65	3.23
10Y	3.78	1.51	0.92	2.86
20Y	4.13	1.94	1.44	2.68
30Y	3.91	1.90	1.65	2.27

- Concerns about inflation and the war in Ukraine are adding confusion to the economic picture
- Federal Funds Rate raised to 400 bps through November 2, 2022; market is pricing in 50 bps additional by year end

Interest Rate Expectations

Since March 2021, the Fed has become increasingly hawkish

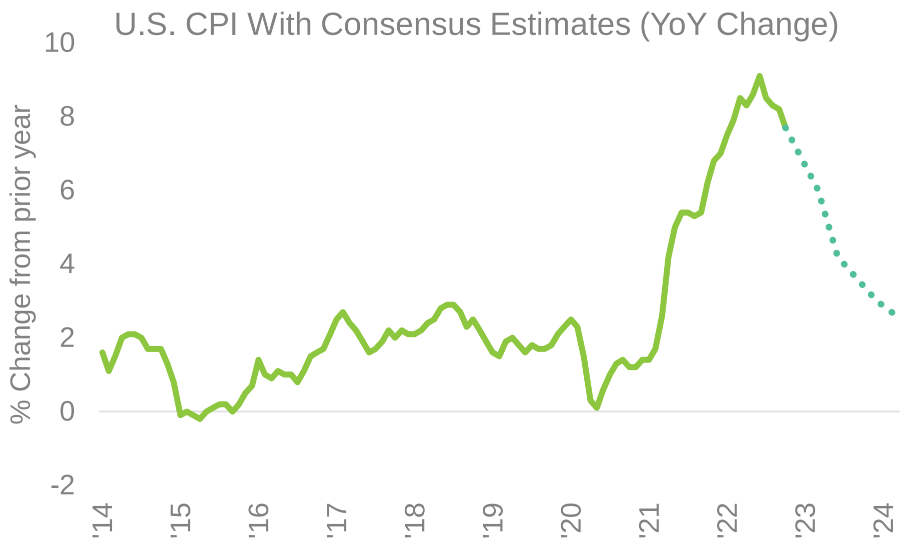


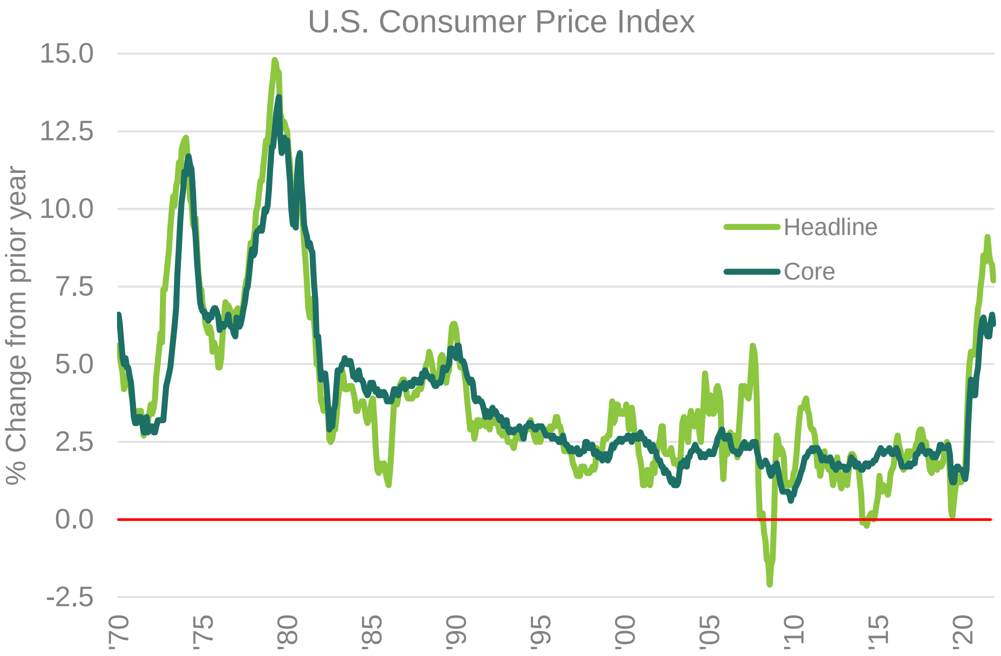


Last rate projection was in September. November not available.
Source: FOMC Summary of Economic Projections

Inflation Estimates

Economist surveys point to a renormalization of inflation trends over the next 18 months





Source: Bureau of Labor Statistics

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Learning Library

Investment-related modules on Director’s Desk > Learning Library:

Cash Overlay

Characteristics of Alternative Investments

Investment Division Overviews

Investment Performance Measurements

Investment Risk

- Asset/Liability Studies and Active Risk Limits
- Fireside Chat
- Investment Risk Definitions
- What is investment risk?

Proxy Voting

Securities Lending Educational Session

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2022+ Projects: Investments/Collaborative

Project	Status
Unitization	Team is researching potential next phase of unitization project.
Refreshed Technology Roadmap	Project team focusing in on private asset classes, though ongoing upgrades, and software evaluations are in process throughout department. Team is focused on efficient use and optimization of technology.

Investment Activities

- Implemented Kyriba in October for public asset class and investment cash forecasting and reconciliation
- Fixed Income division evaluating the securities lending program, including vendors and design
- Investment Ops and IT are in the middle of a software upgrade for the investment data warehouse

APPENDIX

Asset Allocation Policy

Policy

Asset class weights will be within permissible ranges

Status

All asset class weights within permissible ranges

Asset Class	2022 Policy Benchmark Weight	Actual Weight* (Sept 30, 2022)	Range
Global Equity	55.0%	51.2%	49% - 61%
Fixed Income	23.5%	20.0%	18.5% - 28.5%
Private Equity	8.5%	9.9%	4% - 13%
Real Estate	8.5%	11.9%	4% - 13%
Alternatives	4.5%	6.2%	0% - 12%
Cash/Short Term**	0.0%	0.8%	0% - 3%
Total	100%	100%	

** Transitional cash remains within respective asset classes*
*** Includes Cash Overlay*

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Active Risk Policy

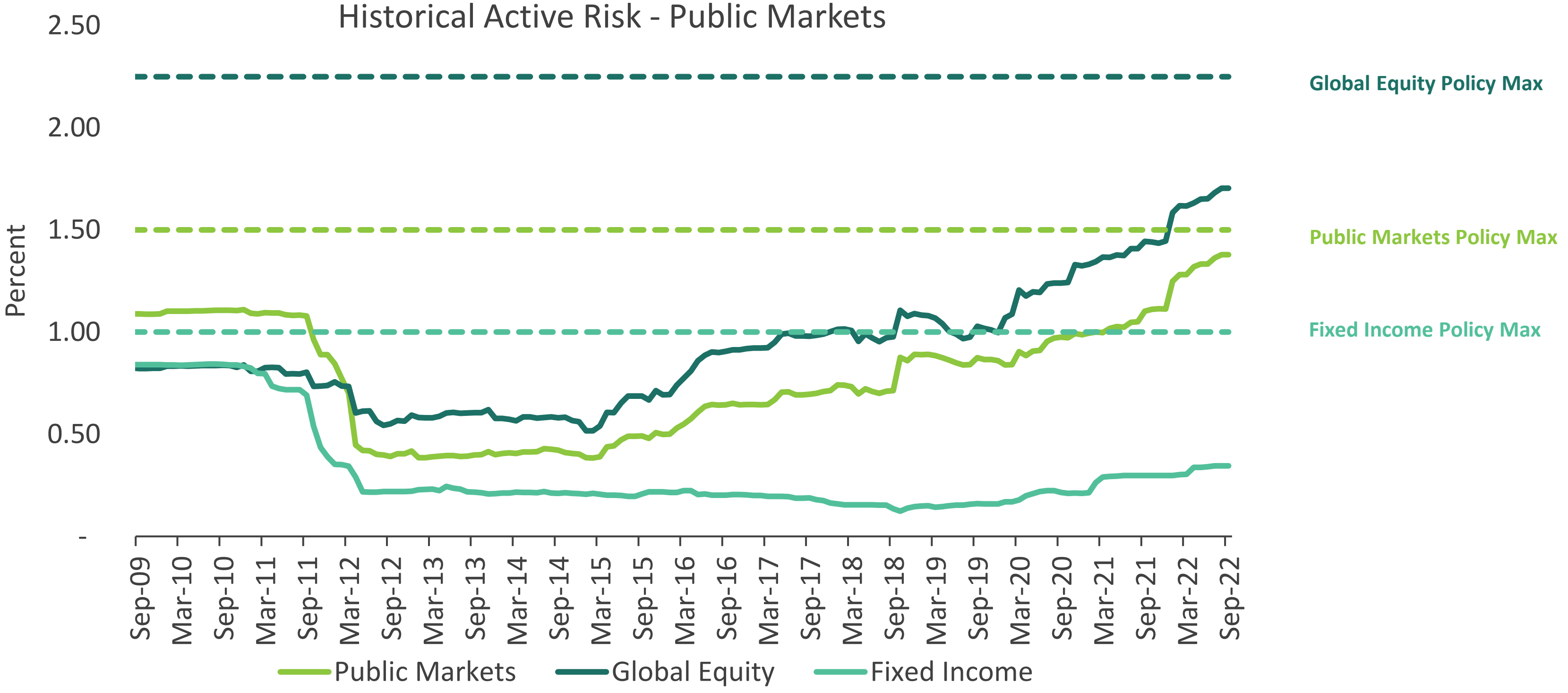
Policy

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 30-Sep-22	Active Risk Policy Maximum in Basis Points
Global Equity	170	225
Fixed Income	34	100
Total Public Markets	**138**	**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	PE metrics showing signs of slowing due to macro headwinds resulting in lower activity in both new deals and exits. Focused on finalizing commitments for 2022 and planning on the 2023 pipeline of re-up opportunities. Liquidity push nearing completion at year end.
Real Estate	Real Estate fundamentals and supply dynamics remain strong in Industrial and Multifamily while traditional Office and Retail continue to tell a mixed story with winners and losers in terms of tenant demand. Cost of Real Estate debt is headed higher leading to rising capitalization rates. General economic concerns coupled with material shortages beginning to impact real estate values. Focus remain on durable well leased properties in high employment markets.
Alternatives	Real assets including infrastructure, agriculture and timber offer solid income in a low return environment and may benefit from rising inflation. Also, special situations in Europe and select Emerging Markets are becoming interesting due to rising volatility and macro uncertainty. Existing distressed managers have substantial dry powder available to pursue value transactions in a risk off environment.