

NORTH CAROLINA
DEPARTMENT OF STATE TREASURER



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INVESTMENT MANAGEMENT DIVISION

Inflation Portfolio Review

February 28, 2024



Role in the Portfolio

Inflation Protection

- Provide some degree of protection against the risks associated with inflation

Attractive Absolute Returns

- Provide an attractive return over the long-term by making investments that provide a nominal total return that rises with inflation

Competitive Relative Returns

- Achieve or exceed the return on the performance benchmark over a long period of time, within reasonable risk parameters

Diversification

- Enhance the diversification of the Fund's total investment portfolio relative to public equity and nominal fixed income

Liquidity

- Provide a source of liquidity to the Fund when other Portfolios are experiencing lower returns due to unanticipated inflation



Inflation Sensitive

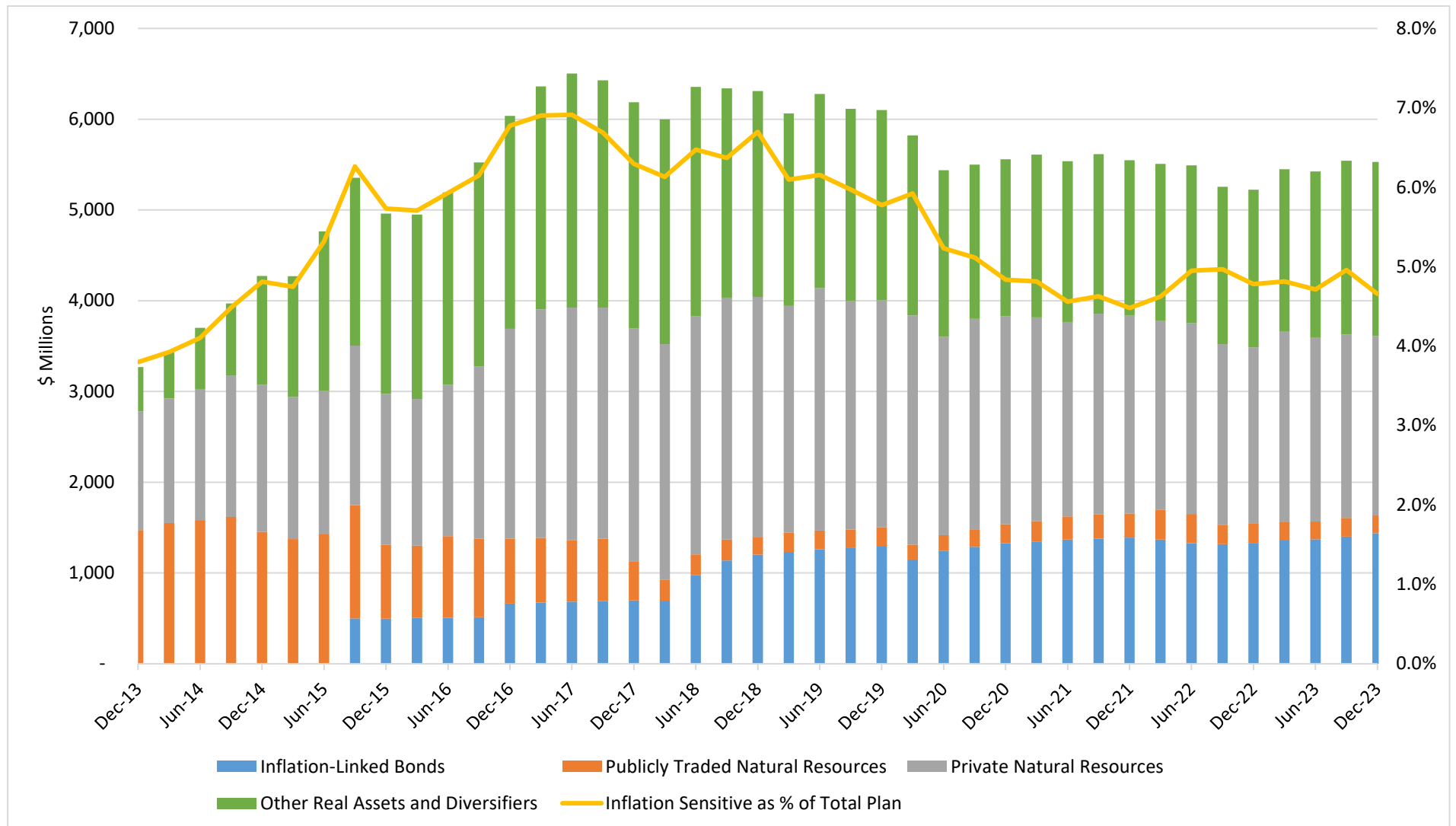
- Currently under-weight vs. target by 1.34%
- Additional capacity for more than \$1,500MM to achieve target weight

	Market Value (\$MM)	%	Target	Range		Relative %	Relative \$ (\$MM)
				Minimum	Maximum		
Growth	60,512	50.98%	55.0%	37.0%	68.0%	-4.02%	(4,774)
Public Equity	44,870	37.80%	38.0%	33.0%	43.0%	-0.20%	(237)
Private Equity	6,209	5.23%	7.0%	0.0%	8.8%	-1.77%	(2,100)
Non Core Real Estate	2,114	1.78%	3.0%	0.0%	8.0%	-1.22%	(1,447)
Opportunistic Fixed Income	7,319	6.17%	7.0%	0.0%	7.5%	-0.83%	(990)
Rates & Liquidity	43,849	36.94%	33.0%	23.0%	48.0%	3.94%	4,678
IG Fixed Income & Cash	33,955	28.61%	28.0%	23.0%	33.0%	0.61%	719
Pension Cash	9,894	8.34%	5.0%	0.0%	10.0%	3.34%	3,959
Inflation Sensitive & Diversifiers	11,888	10.02%	11.0%	4.0%	16.0%	-0.98%	(1,169)
Inflation Sensitive	5,528	4.66%	6.0%	2.0%	7.5%	-1.34%	(1,594)
Core Real Estate	6,360	5.36%	5.0%	2.0%	10.0%	0.36%	425
Multi-Strategy	2,452	2.07%	1.0%	0.0%	4.0%	1.07%	1,265
Grand Total	118,701	100.00%					

As of 12/31/23



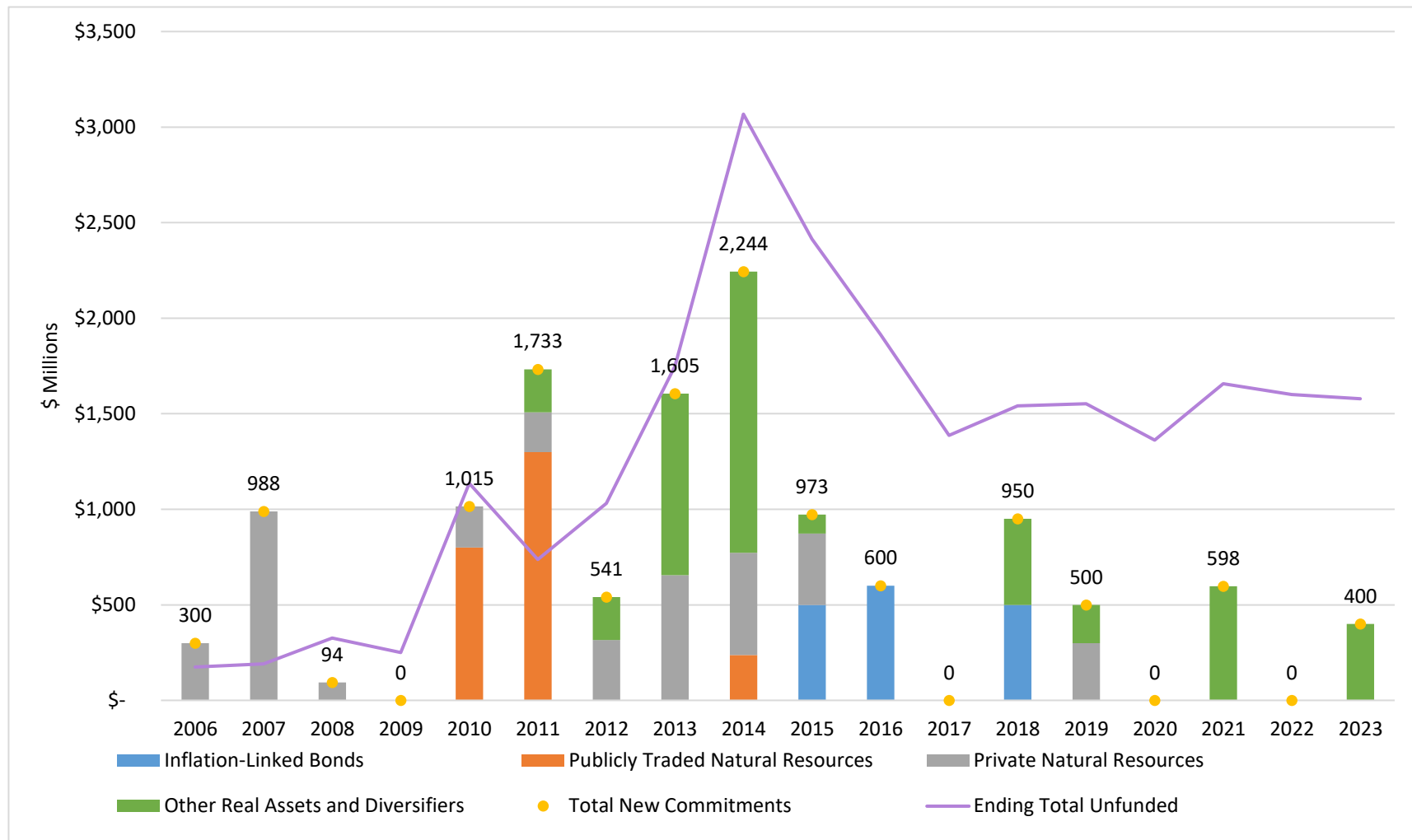
Portfolio History – Allocation by Sub-Strategy



Note: Information is based on market value as of 12/31/2023



Portfolio History – New & Unfunded Commitments



Note: Unfunded values are as of each respective calendar year end 2023



Current Portfolio Allocation

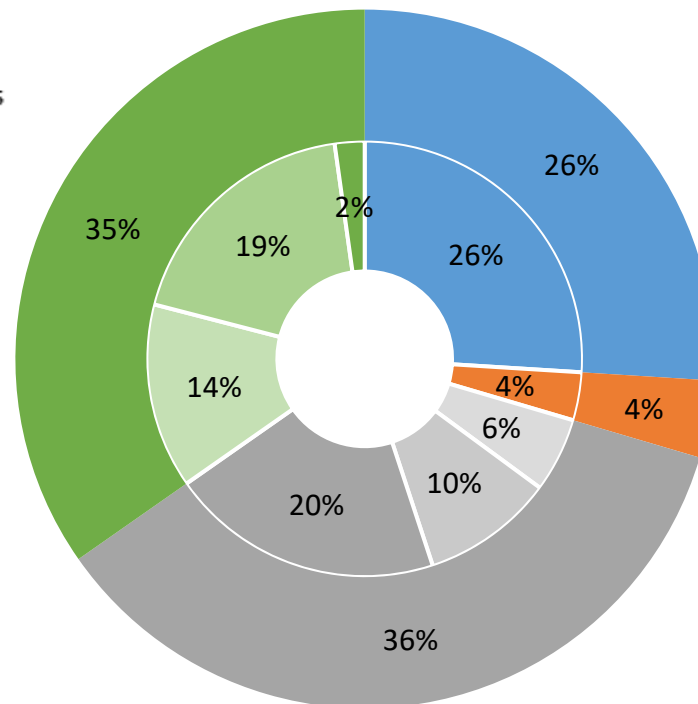
Allocation by Component and Sub-Strategy

Components (Outer):

- Inflation-Linked Bonds
- Publicly Traded Natural Resources
- Private Natural Resources
- Other Real Assets and Diversifiers

Sub-Strategies (Inner):

- Inflation-Linked Bonds
- Publicly Traded Natural Resources
- Energy
- Private Natural Resources Lending
- Timber
- Infrastructure
- Real Assets
- Real Asset Lending

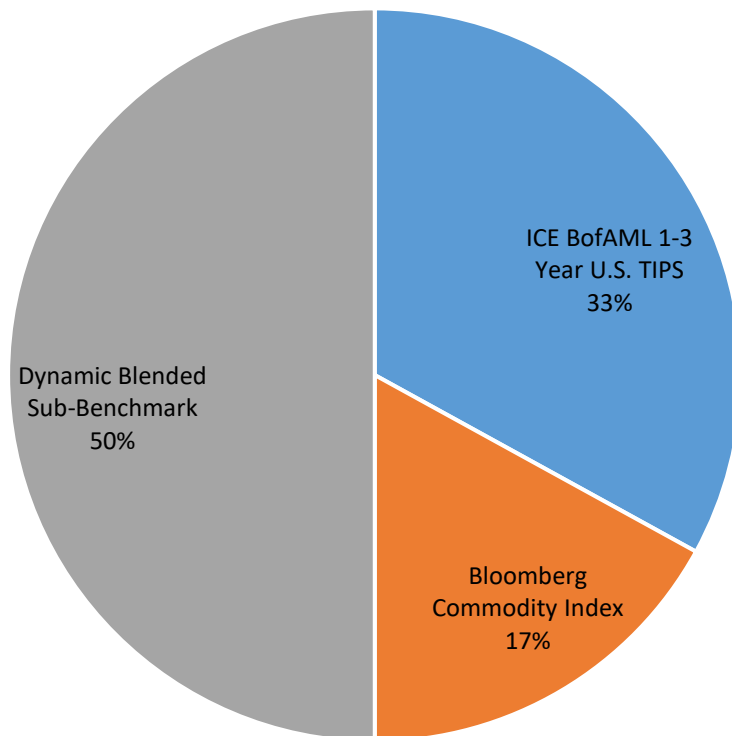


Note: Information is based on market value as of 12/31/2023

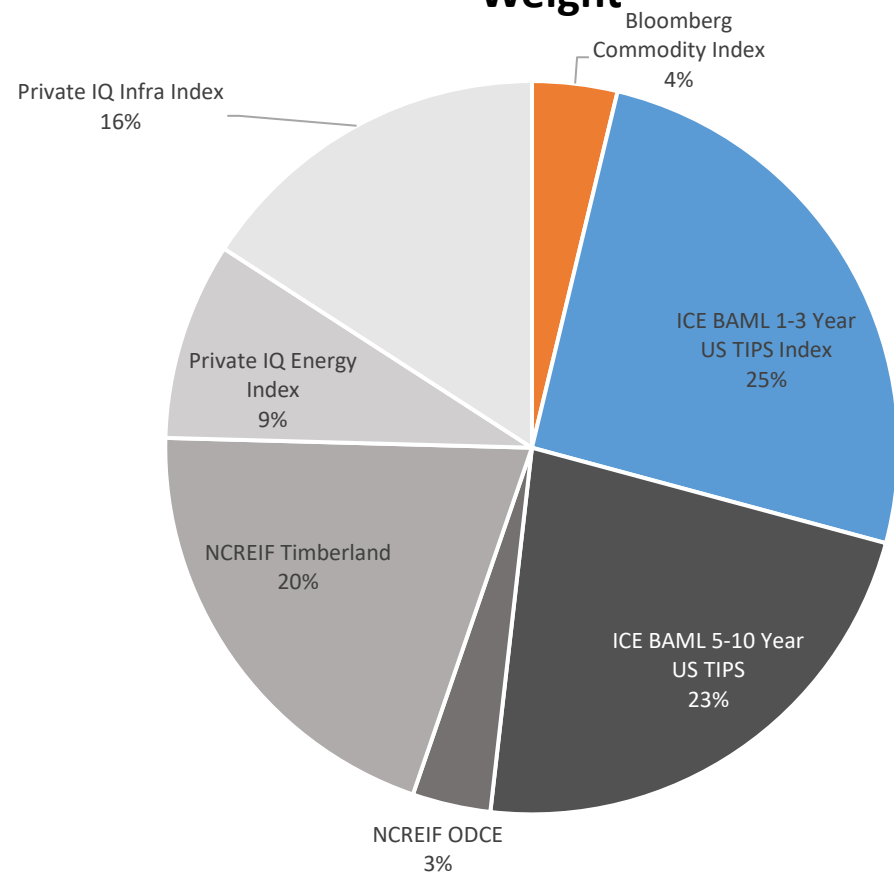


Inflation Sensitive Benchmark Composition

Long-Term Target Benchmark



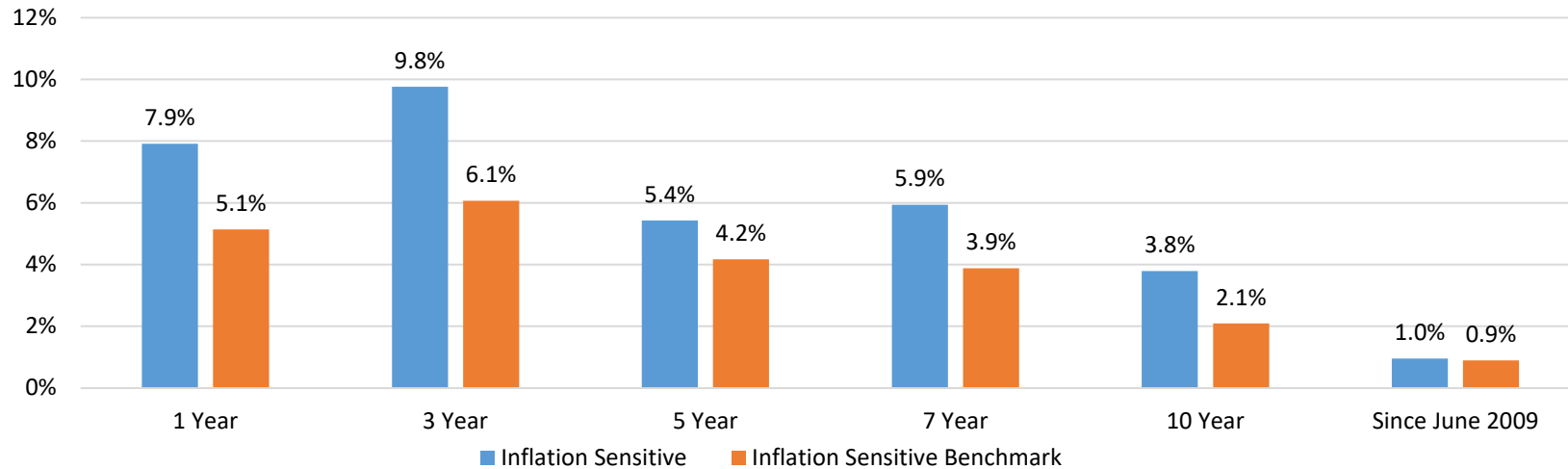
Benchmark Composition by Current Market Weight



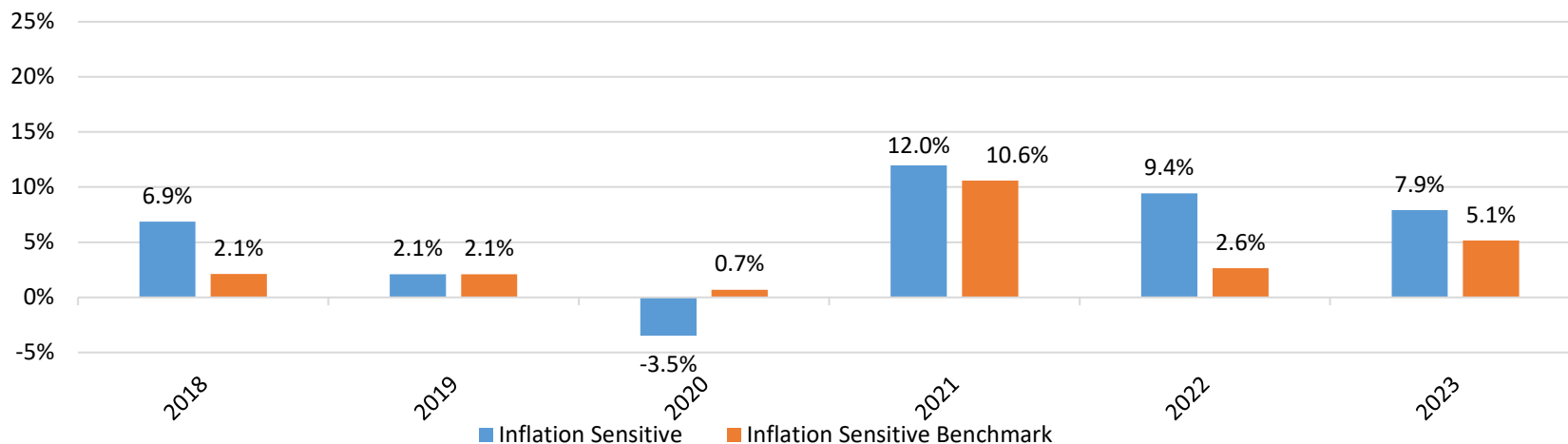


Portfolio Performance

Annualized Performance



Calendar Year Performance



Notes:

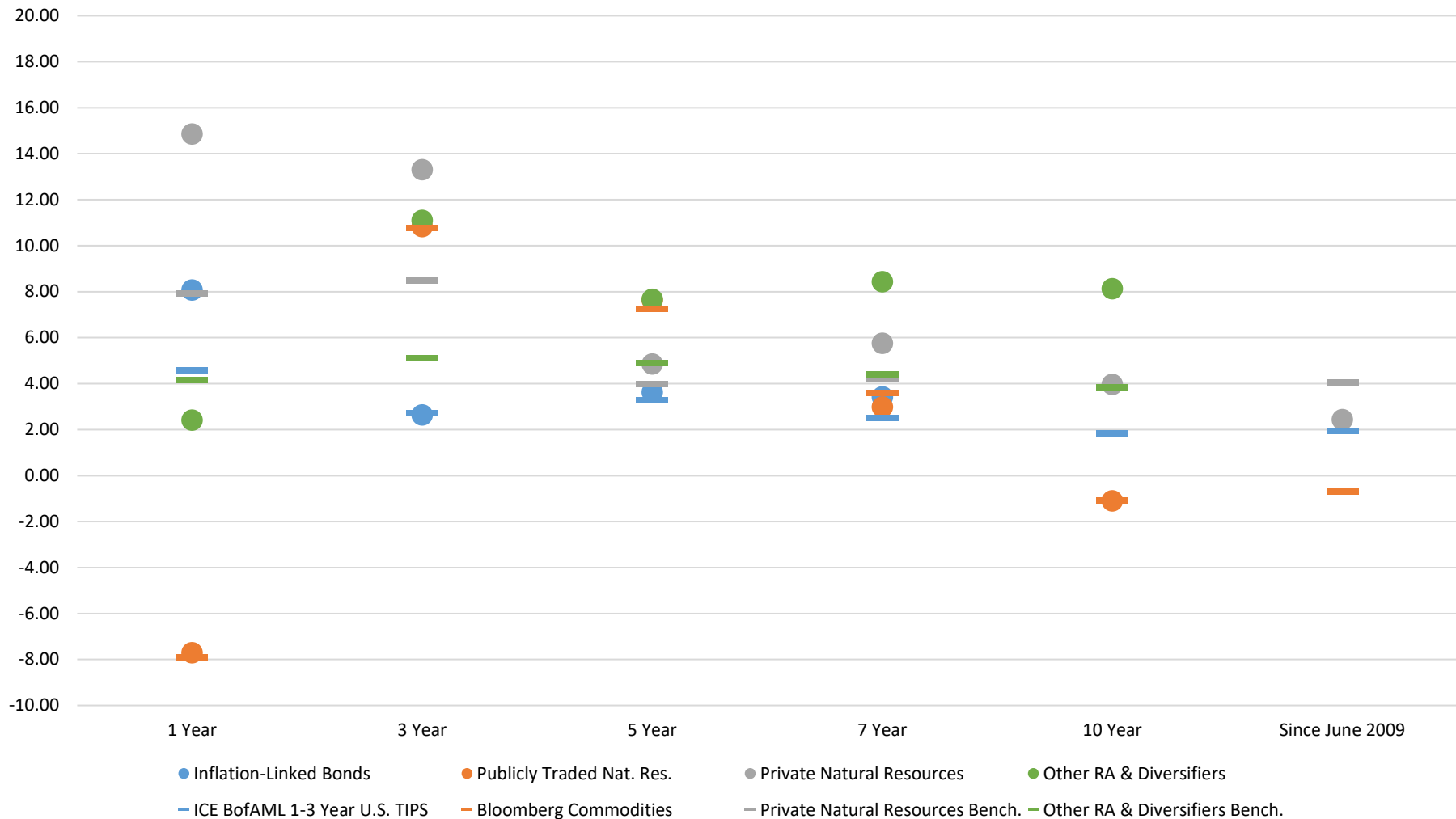
Periods greater than one year are annualized as of 12/31/2023

See slides 7 and 27 for details on the composition of the Inflation Sensitive Benchmark



Portfolio Performance

Performance by Component



Notes:

Periods greater than one year are annualized as of 12/31/2023

See slides 7 and 27 for details on the composition of the Inflation Sensitive Benchmark



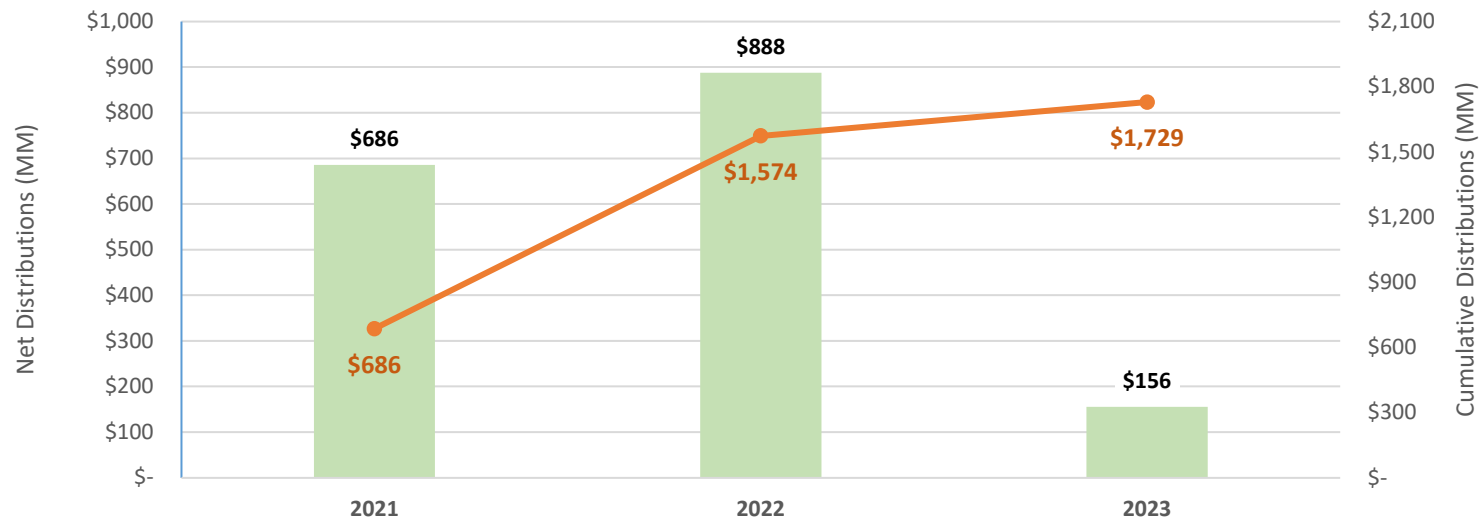
Portfolio Performance

Asset class providing value as a diversifier

Inflation Sensitive Portfolio Correlation

	Total Pension Plan	Public Equity	Private Equity	Non-Core Real Estate	Core Real Estate	Opportunistic Fixed Income	Investment Grade Fixed Income	Multi-Strategy
3 - Year Correlation	(0.15)	(0.22)	0.49	0.42	0.33	0.25	(0.22)	(0.24)
5 - Year Correlation	(0.07)	(0.12)	0.49	0.31	0.33	0.63	(0.42)	0.24

Inflation Sensitive Portfolio's Net & Cumulative Distributions

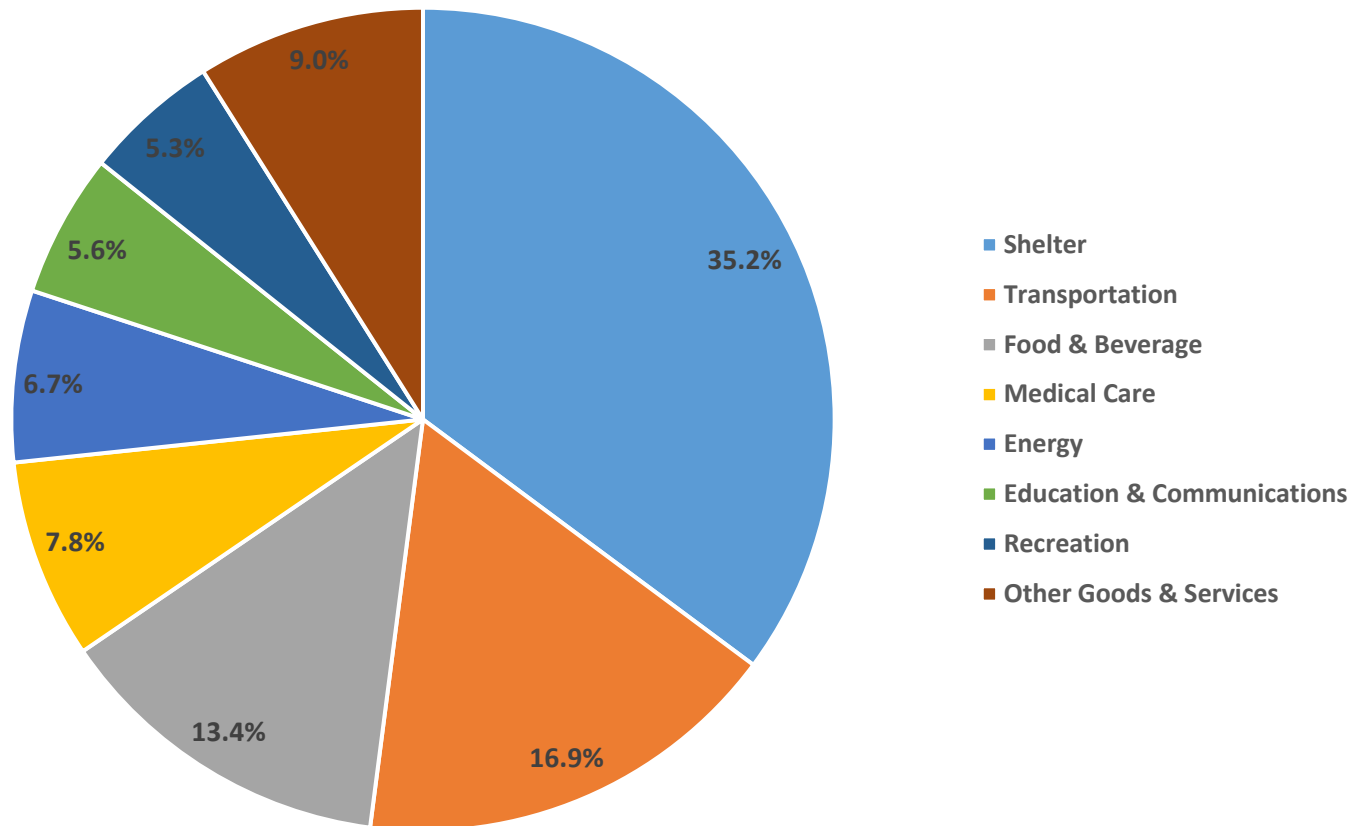


Note: Information is based on market value as of 12/31/2023



CPI Composition

All Urban Consumers (CPI-U) U.S. Average

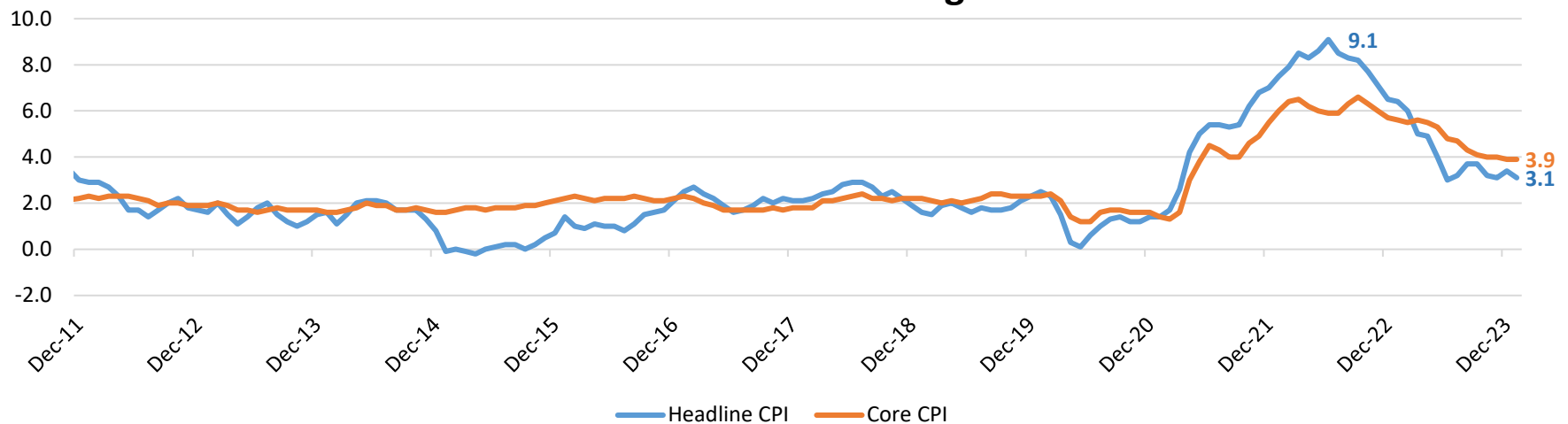




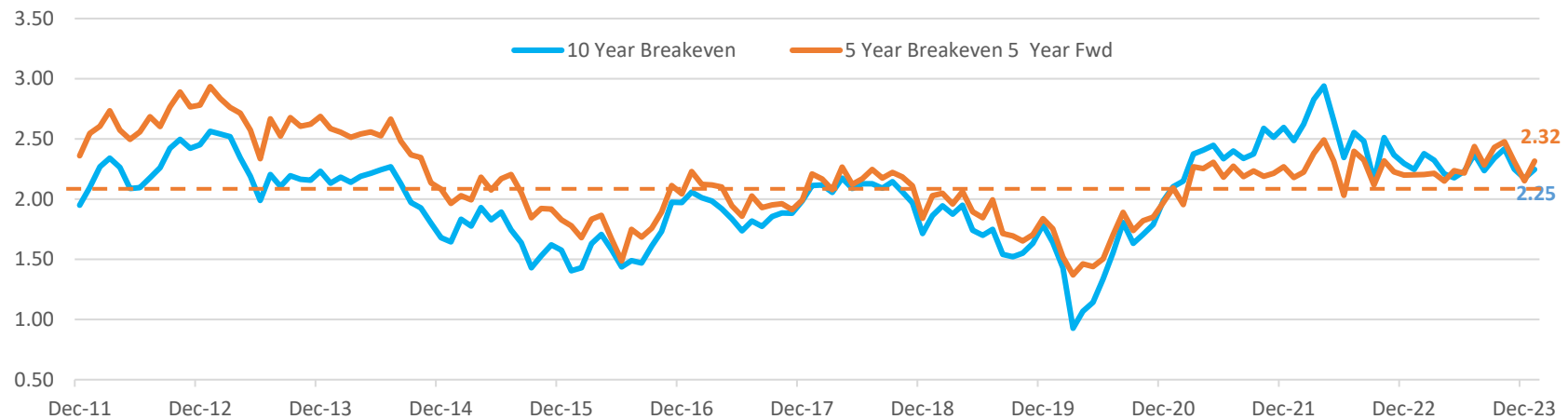
Current Inflation Environment

CPI normalized toward Fed target in 2023 as breakeven barely registered any long-term concerns.

CPI Year over Year Change



Inflation Breakeven Rates

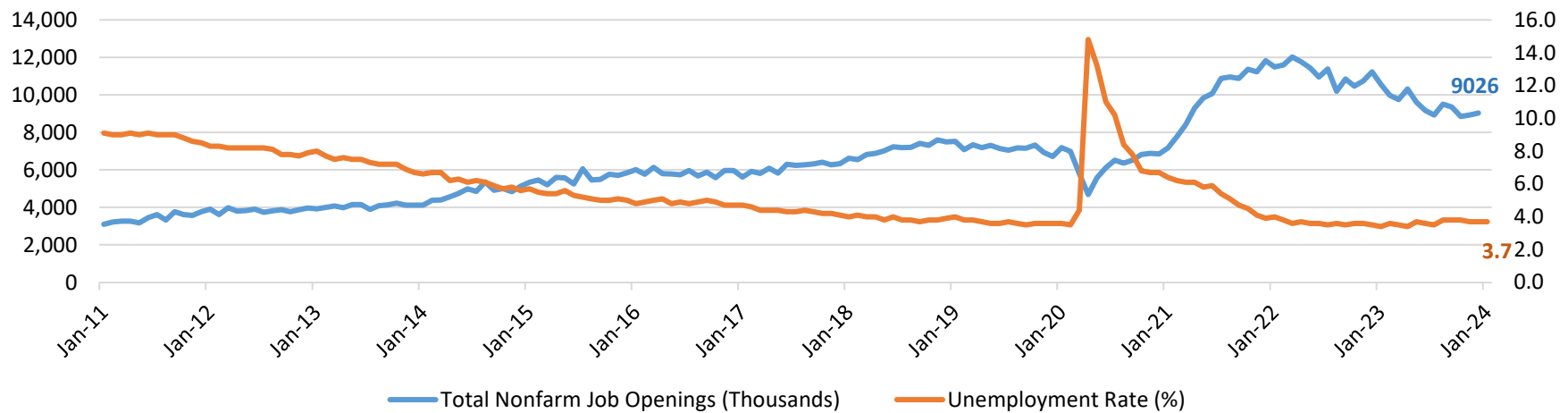




Current Inflation Environment: Labor

Job market remains tight, keeping wage pressure high.

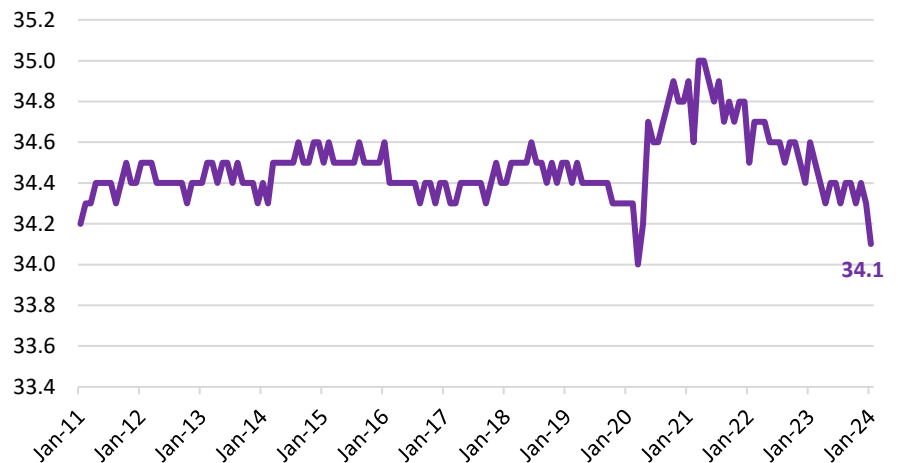
Vacancies vs. Unemployment



Average Hourly Earnings – YoY Change



Average Weekly Hours – Private Sector

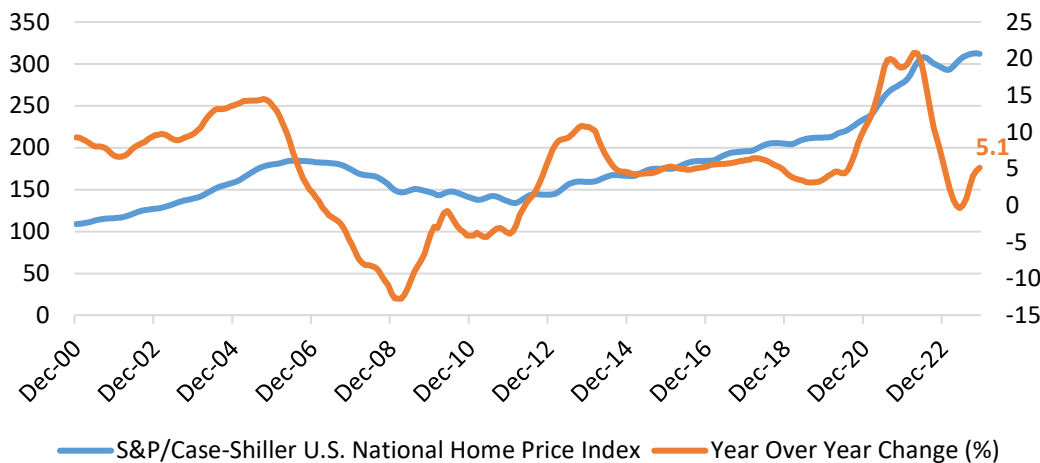




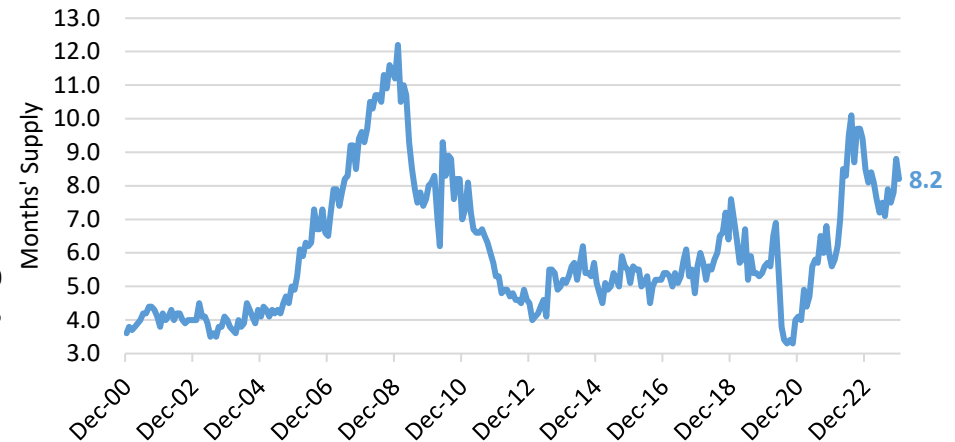
Housing Market Review

Higher rates result in record-low affordability, but household real estate equity at record-high.

Home Price Appreciation



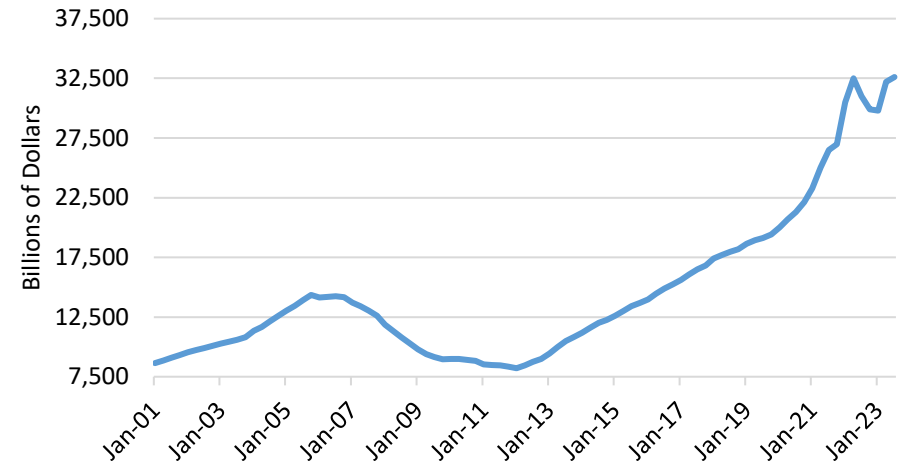
U.S. Months' Supply of Houses



Housing Affordability Index



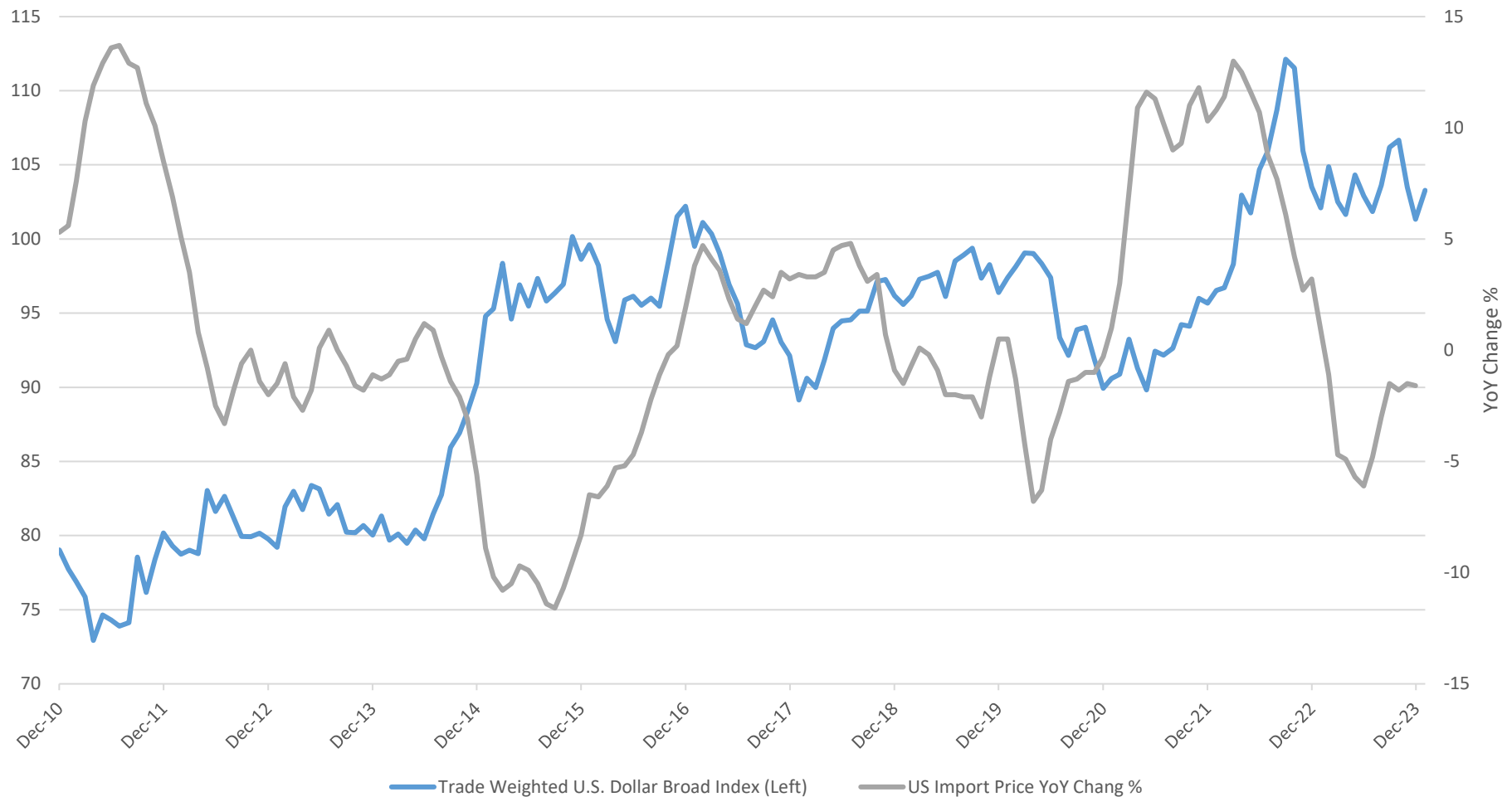
U.S. Household Owners' Equity in Real Estate





Current Inflation Environment

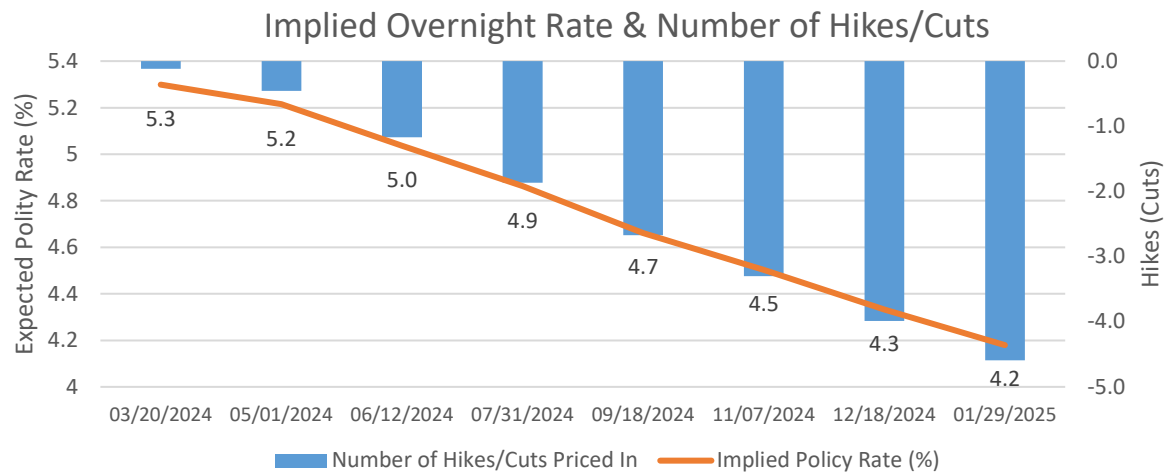
Higher rates led to a strong dollar environment that curbs imported inflation.



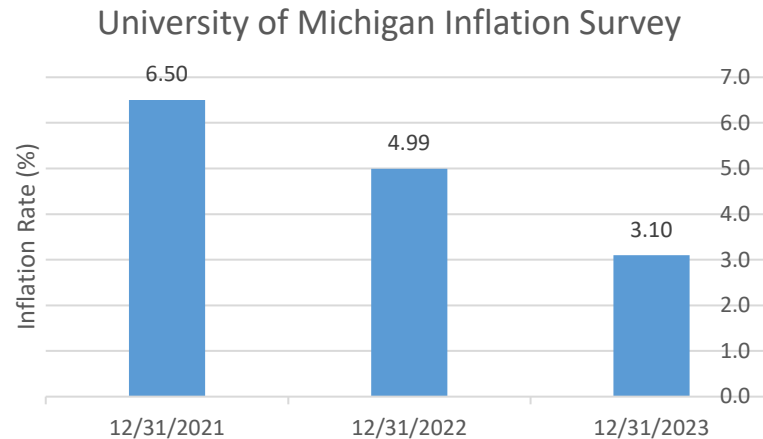


Current Inflation Environment

Participants believe there will be rate cuts and that inflation is falling



Data provided by Bloomberg as of 2/15/2023

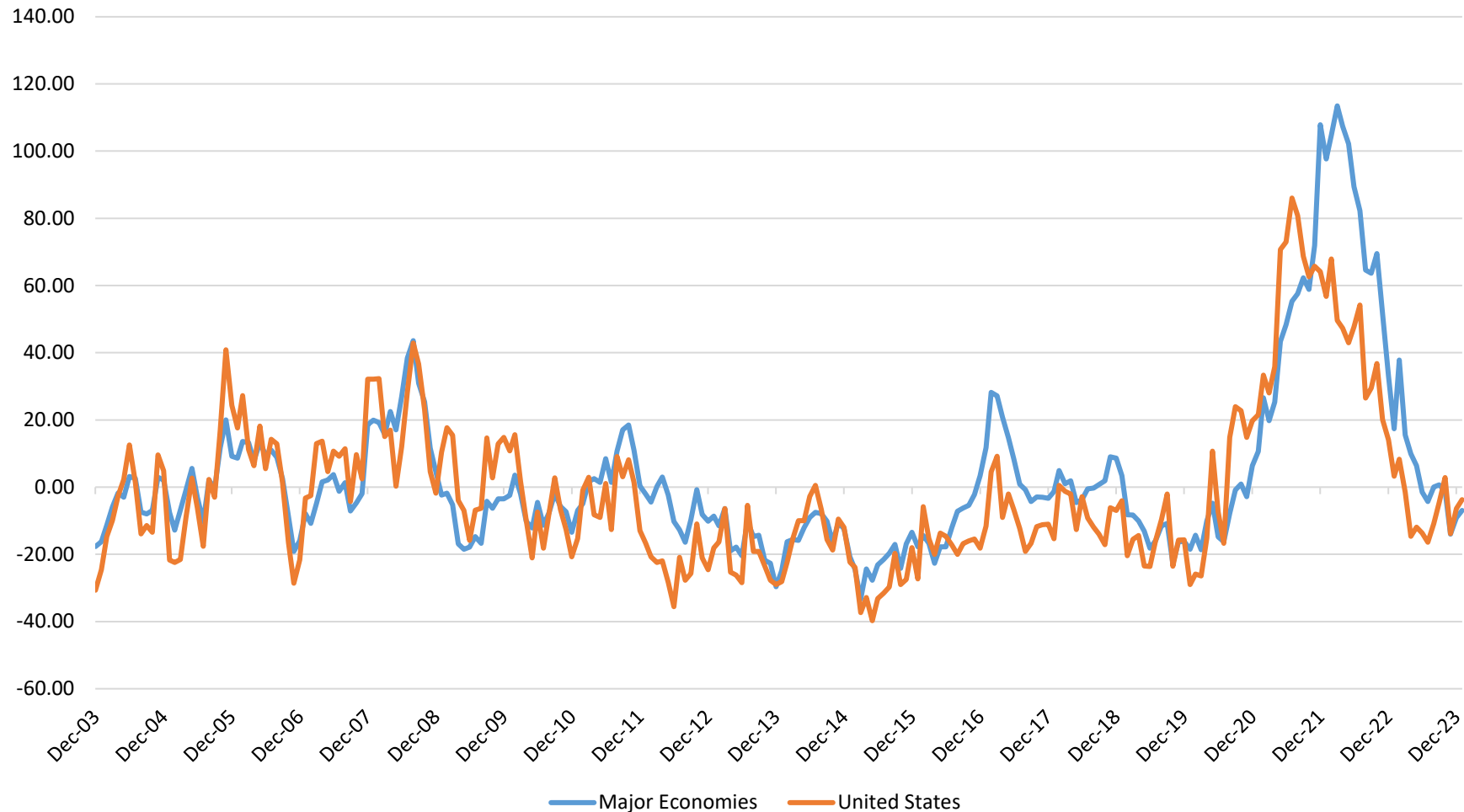


Data provided by the University of Michigan inflation survey as of 12/31/2023



Current Inflation Environment

Citi Inflation Surprise Index





Risks to the Current Inflationary Outlook

Downward Pressure

- Federal Reserve Maintaining High Rates
- Recession
- Lower Wage Growth

Uncertain

- Shift in Central Bank Policy
- Soft Landing
- Changes in Demographics

Upward Pressure

- Continued Supply Chain Disruptions
- Impact of War(s)
- Higher Shipping Costs
- Unresolved US/China Trade War



Strategies of Interest

Other

- Real Asset and Infrastructure focused Secondary LP interest
- High quality debt
- Capital solutions driven by financing dislocations
- Continuation vehicles

Technology & Data

- Cell Towers
- Data Centers
- Fiber
- Music Royalties
- Intellectual Property

Logistics and Other Essential Infrastructure

- Transportation (i.e., leasing assets)
- Storage
- Utilities
- Traditional Infrastructure
- Toll Roads

Health Care

- Drug Royalties
- Real Estate for Medical Practices

Real Estate

- Capital Solutions driven by financing dislocations
- CMBS
- RMBS
- First Lien Debt
- Core Real Estate



Strategic Considerations for 2024

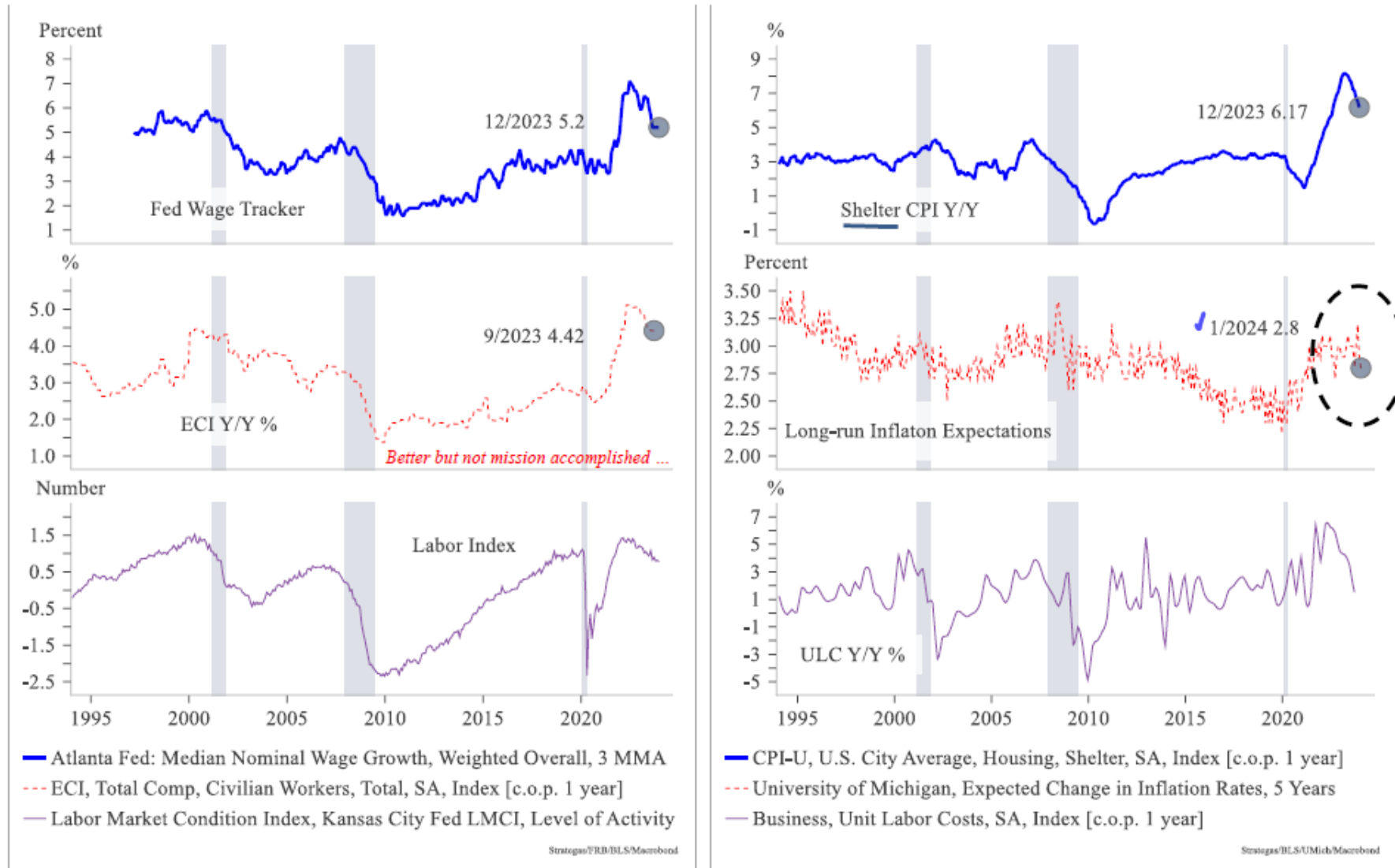
- 1) Focus on high conviction opportunities with limited downside risk through customized mandates
- 2) Consider monetizing strategies that may be more susceptible to deflationary pressures
- 3) Opportunistically increase exposure to high quality real assets and infrastructure assets with desirable characteristics



Appendix

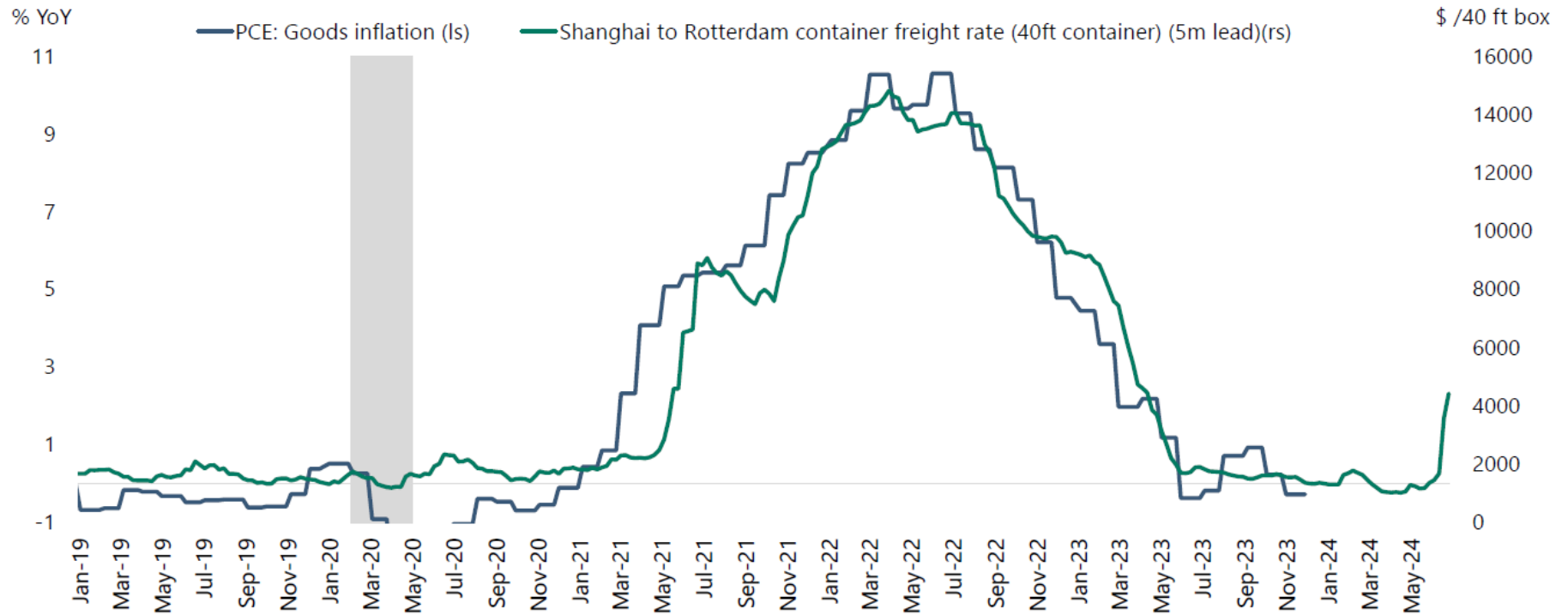


U.S. WAGE / PRICE SPIRAL WATCH ... SO FAR NOT ENTRENCHED





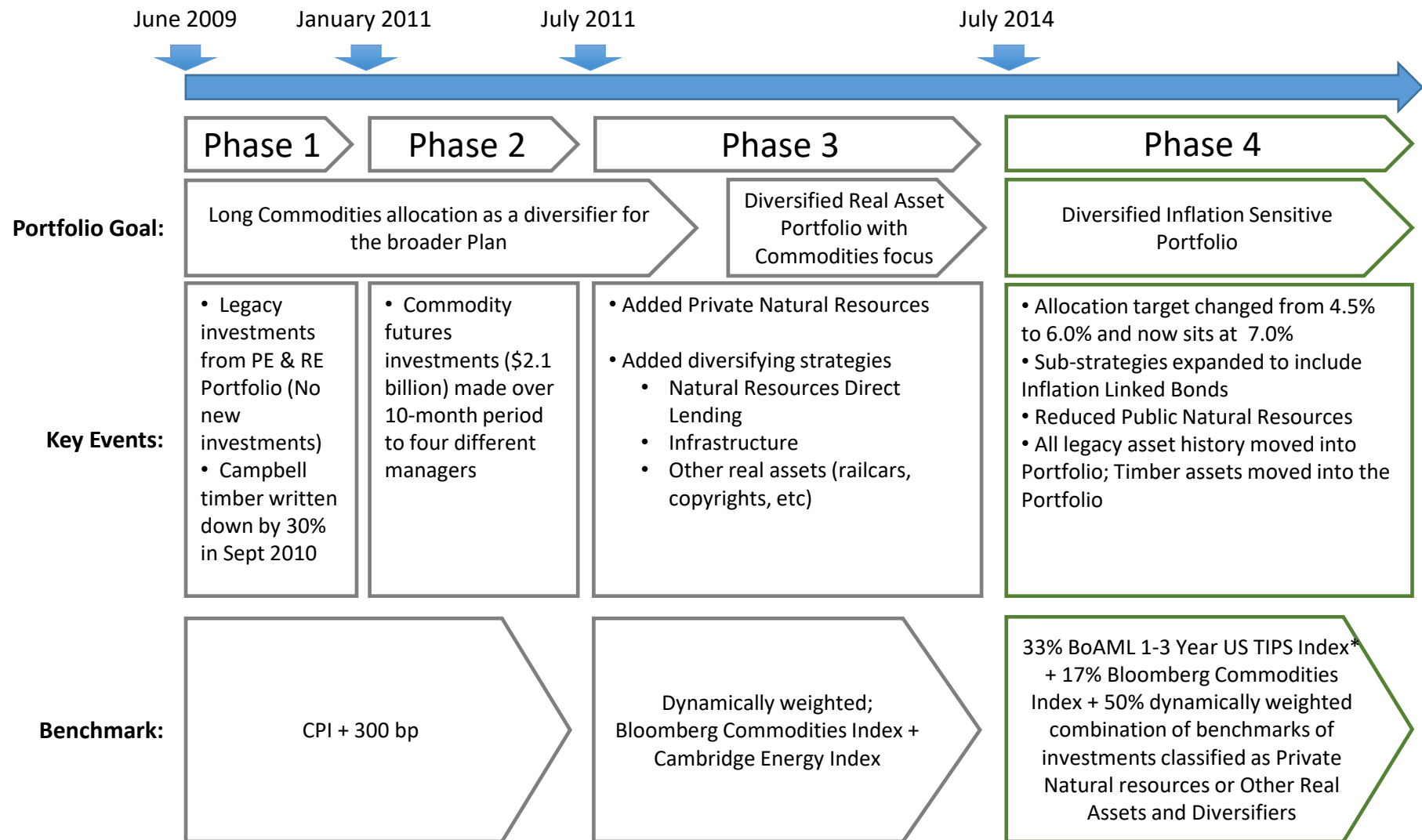
Rise in shipping costs could boost goods inflation



Source: BEA, Bloomberg, Apollo Chief Economist



Portfolio History

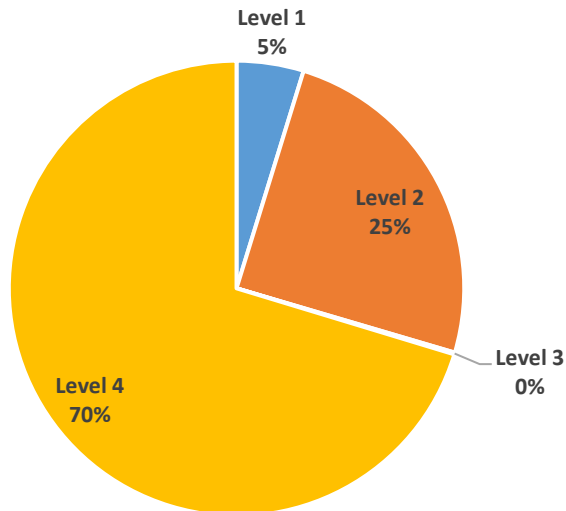


*Source: BofA Merrill Lynch, used with permission; see disclaimer on page 28

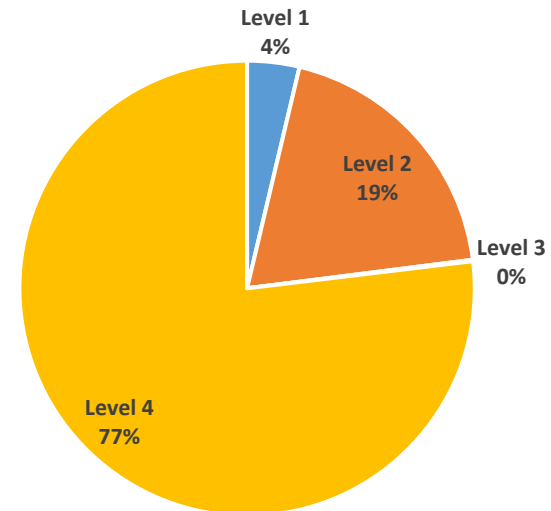


Portfolio Liquidity

Market Value



Market Value + Unfunded



Note: as of 12/31/2023; Level 1 Liquidity = T+3; Level 2 = T+3 to 12 Months; Level 3 = 12 to 24 Months; Level 4 = Greater than 24 Months



Inflation Portfolio IRR by Vintage Year

As of December 31, 2023

Vintage	Inflation Linked Bonds	Publicly Traded Natural Resources	Private Natural Resources	Other Real Assets & Diversifiers	All
1993			9.38		9.38
2006			1.76		1.76
2007			-7.36		-7.73
2008			-5.67		-5.67
2010		-3.98	-27.34		
2011		-10.33	1.45	2.1	-5.76
2012			3.82	7.21	5.35
2013			4.8	7.82	7.08
2014		-3.97	9.43	7.96	7.31
2015	1.67		12.74	8.88	8.46
2016	3.41				3.41
2017			8.21		8.21
2018				21.98	21.98
2019			28.93	28.48	28.77
2021				32.38	32.38
2023				-0.99	-0.99
All	3.21	-6.36	3.11	8.09	2.59



Notes:

All data presented are based on currently available information at time of publication and may be revised subsequently.

The Inflation Sensitive Benchmark is the dynamically weighted combination of the ICE Bank of America Merrill Lynch 1-3 Years U.S. Inflation-Linked Treasury Index (Inflation-Linked Bonds)*, the Bloomberg Commodities Index (Public Natural Resources), and a combination of the benchmarks of investments classified within Private Natural Resources or Other Real Assets and Diversifiers.

The Private Natural Resources Benchmark is the dynamically weighted combination of the benchmarks of investments classified within Private Natural Resources.

The Other Real Assets and Diversifiers Benchmark is the dynamically weighted combination of the benchmarks of investments classified within Other Real Assets and Diversifiers.

The Inflation Sensitive asset class (G.S. 147-69.2(b)(9a)) was created by the General Assembly in June 2009. It included some investments that were previously authorized under other provisions of G.S. 147-69.2.

*Source: BofA Merrill Lynch, used with permission. See disclaimer on next page.



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