2025 MARKET THEMES & OPPORTUNITIES

NEPC MARKET OUTLOOK

JANUARY 2025

NEPC Asset Allocation

WHAT ARE WE TO MAKE OF MARKETS TODAY?

NEPC 2025 MARKET OUTLOOK

U.S. Equity sentiment is high, but not quite a "bubble"

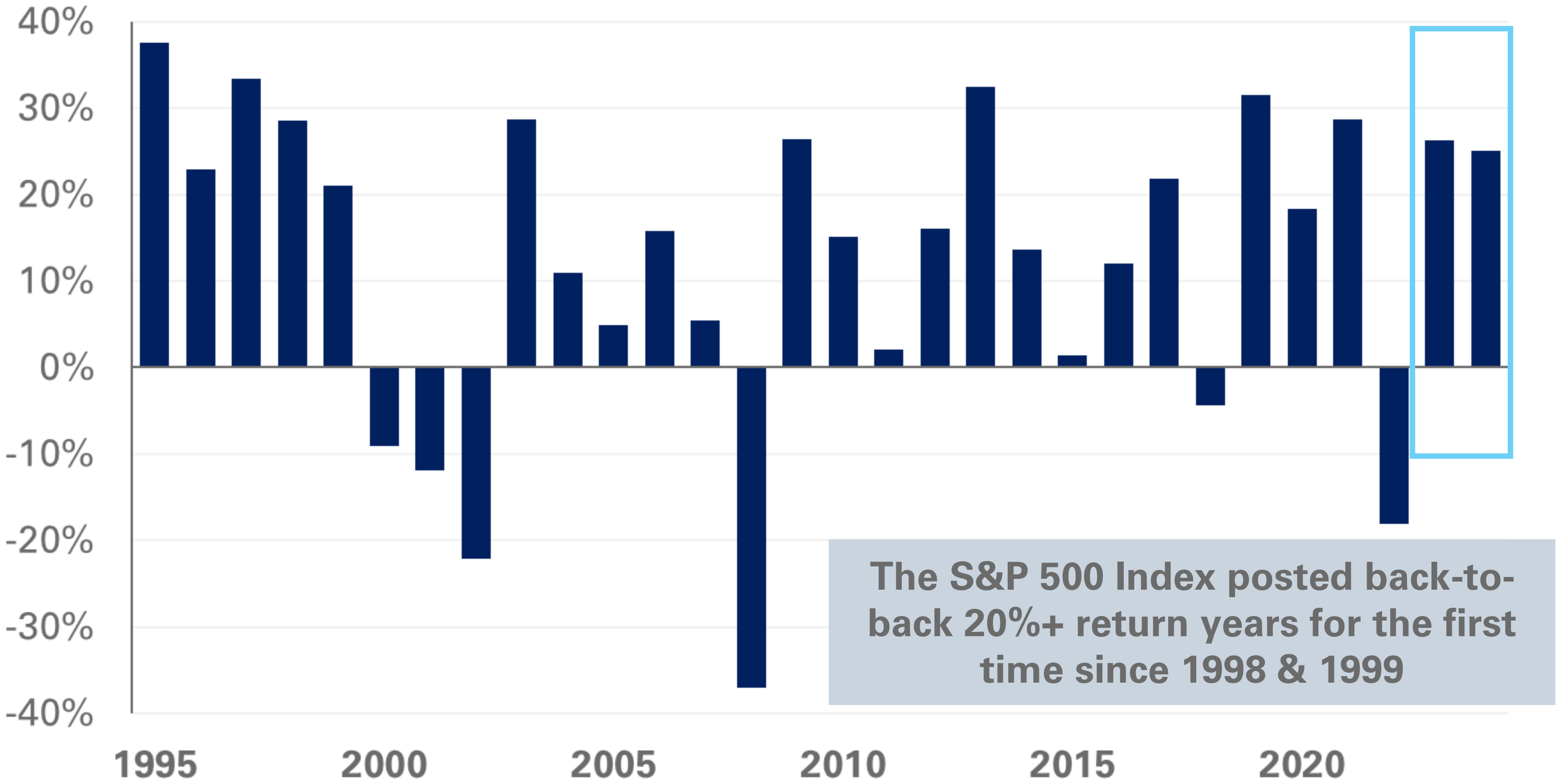
Inflation is lingering and can sprout in a habitable climate

The Fed is spooked but wants to cut interest rates in 2025

DIVERSIFICATION IS NOT A FOUR LETTER WORD

STRONG EQUITY RETURNS ECHO THE LATE-90s

S&P 500 CALENDAR YEAR RETURNS



Sources: S&P, FactSet

INVESTOR SENTIMENT CONTINUES TO RISE

INVESTORS INTELLIGENCE BULLISH SENTIMENT INDEX

Source: Investors Intelligence, FactSet

HALLMARKS OF A BUBBLE AND THE DEMISE

2025 MARKET OUTLOOK

IPO Activity and Speculative Supply	**Supply of new speculative companies is needed to fuel a bubble and feverishness**
Leverage and Credit Conditions	**Easy credit conditions and expanding leverage levels needed for a bubble**
Financial Instability	**"Minsky Moment", interconnections of speculation, investment, and free cash flow breed market instability**
The "Greater Fools"	**Overhyped assets are propelled higher by those who hear the music still playing**
Passage of Time	**Bubbles tend to last longer than we feel they should and tend to collapse on themselves from an external shock**

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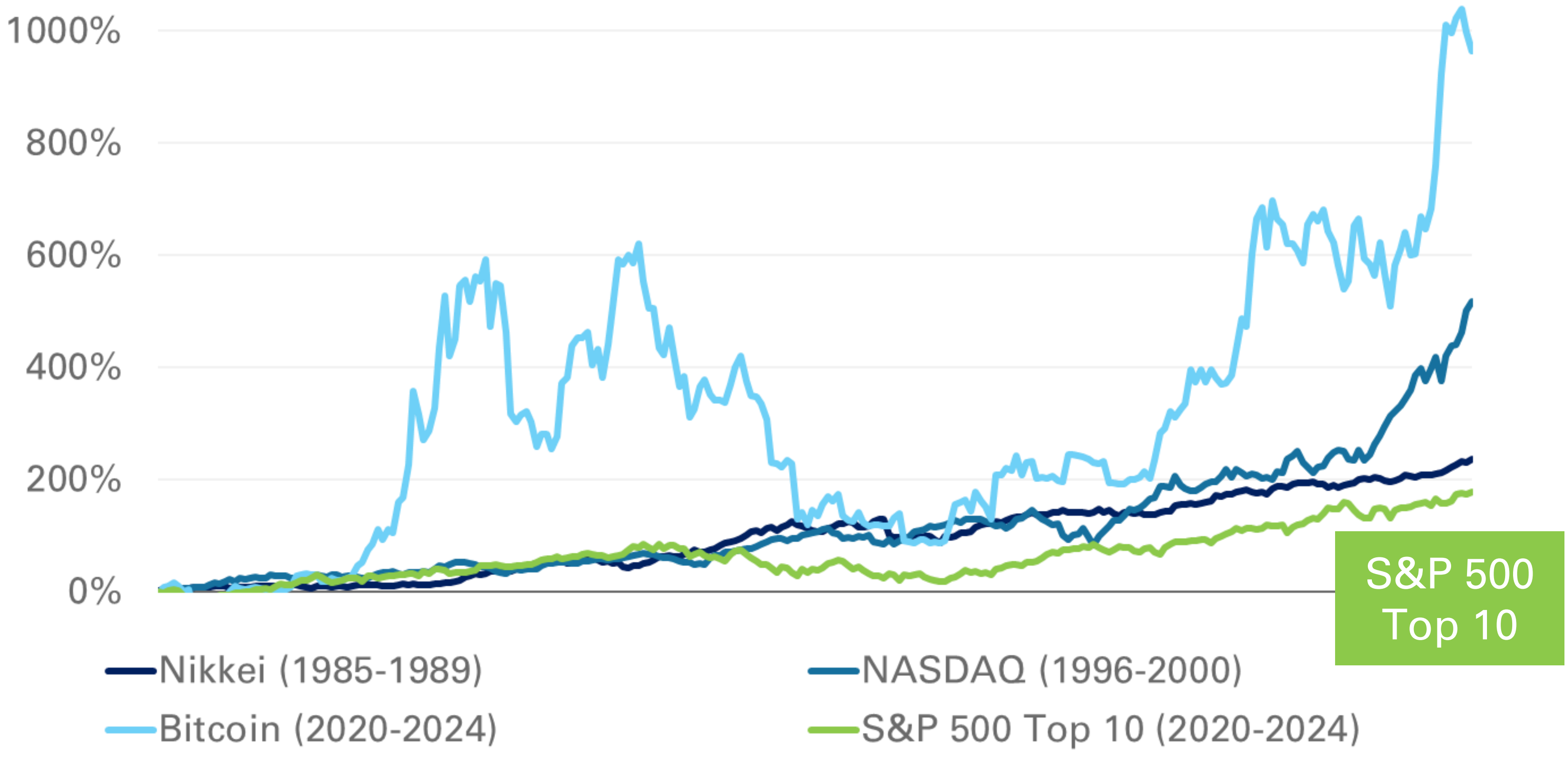
WHAT DO BUBBLES LOOK LIKE?

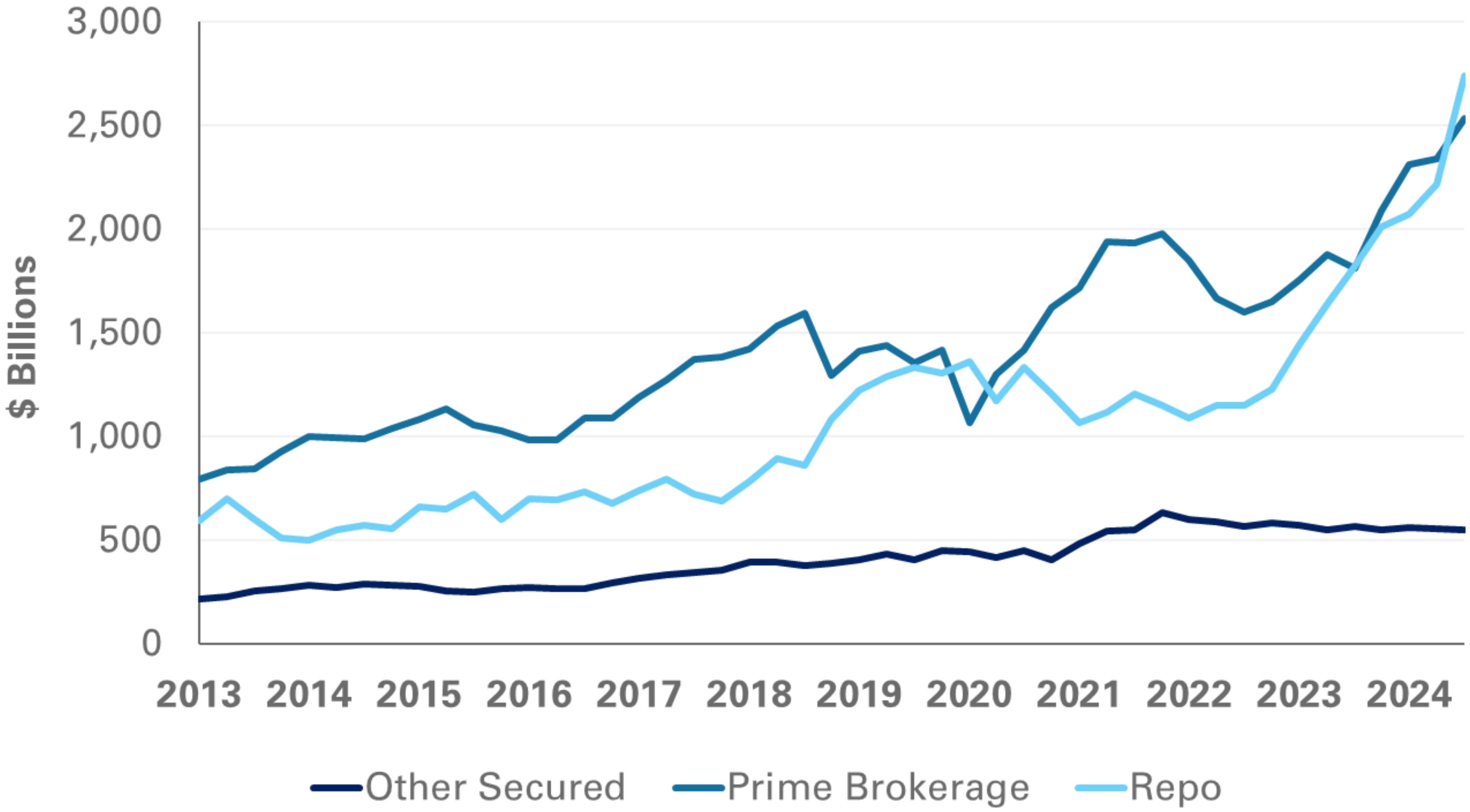
CUMULATIVE 5-YEAR RETURNS PRECEDING ALL-TIME HIGHS



Sources: Bloomberg, S&P, FactSet

LEVERAGE IS BUILDING IN THE MARKET

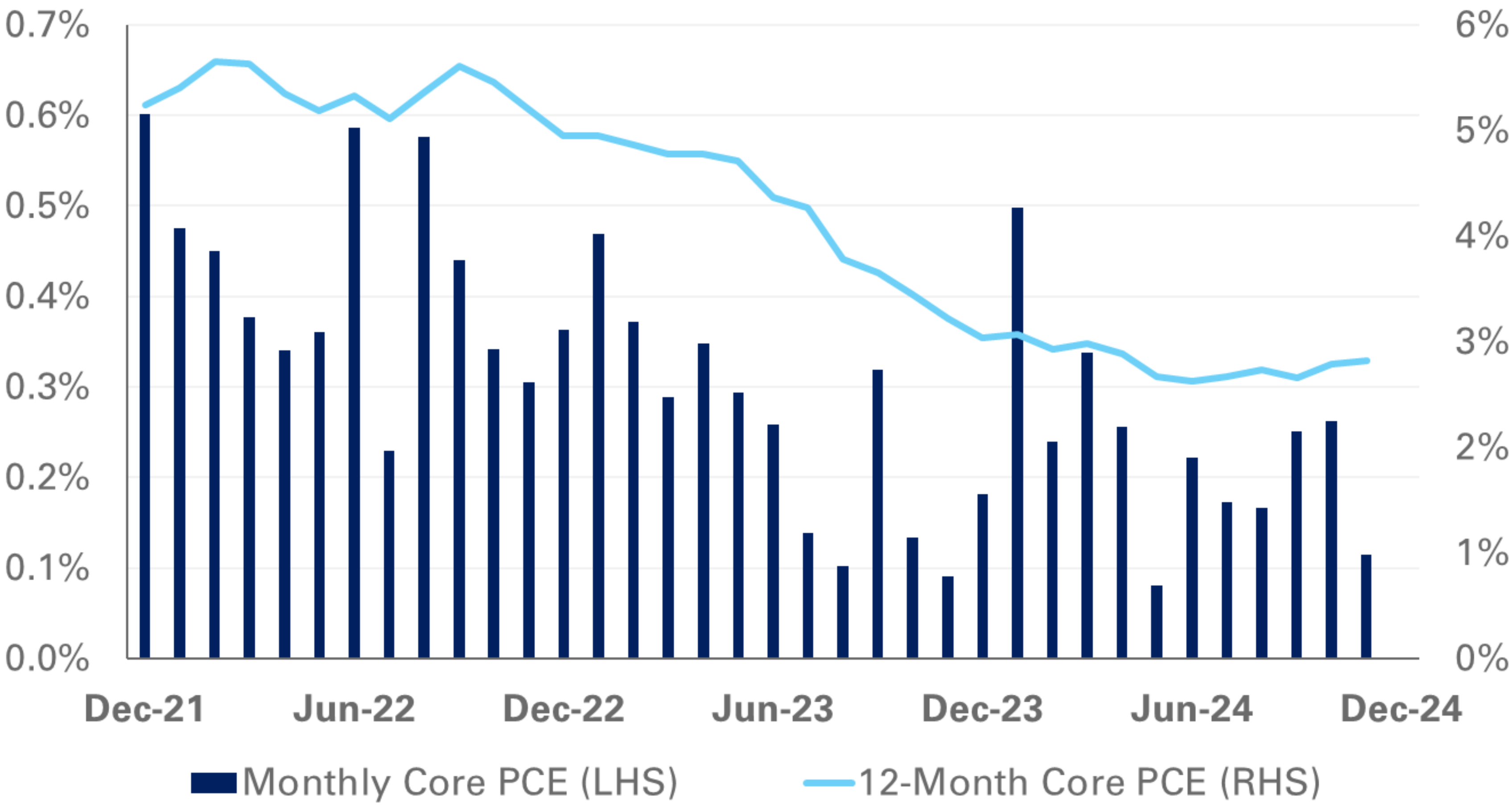
HEDGE FUND BORROWING



Source: Office of Financial Research

INFLATION IS TRENDING DOWN FROM PAST YEARS

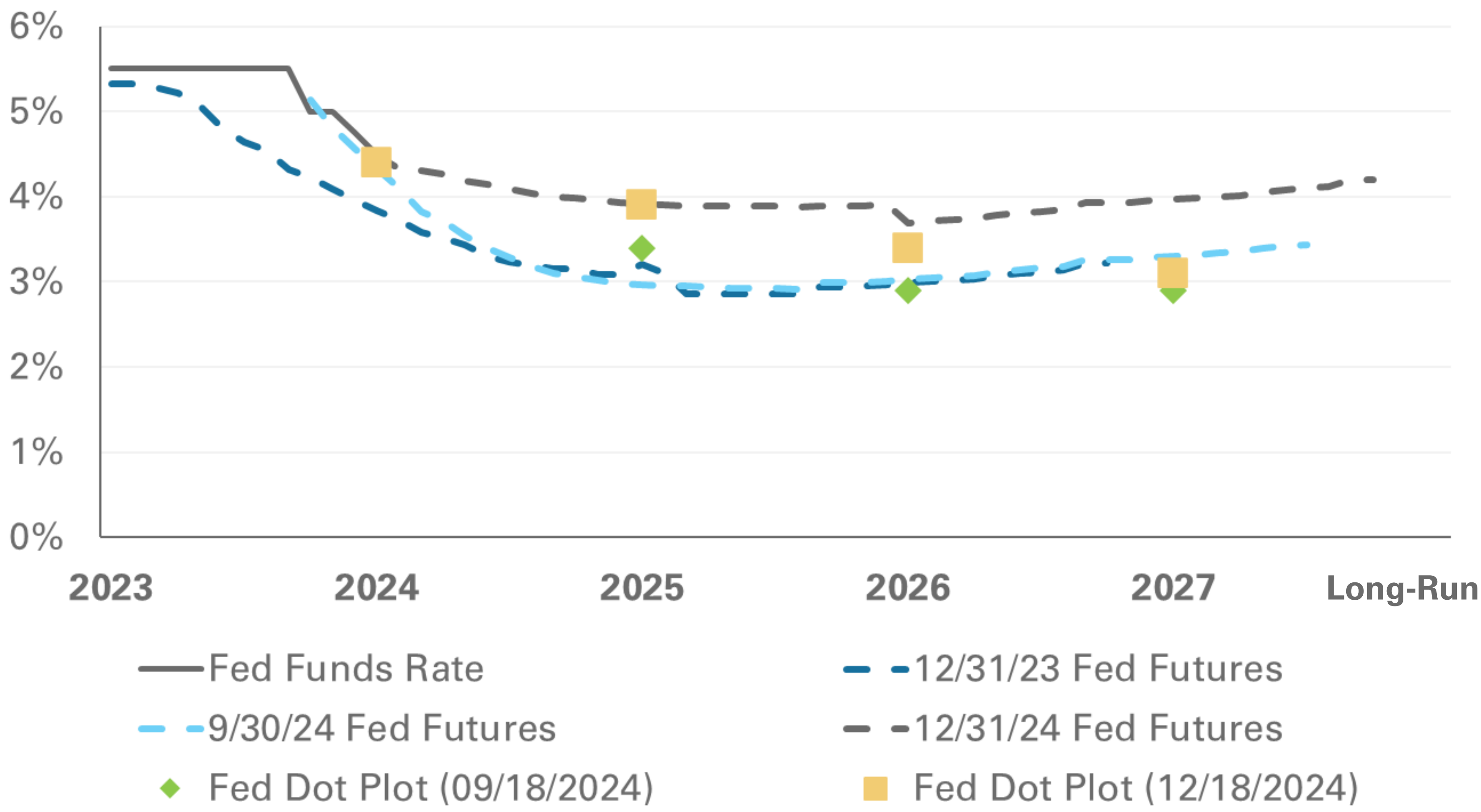
U.S. PCE EXCLUDING FOOD AND ENERGY



Sources: U.S. Bureau of Economic Analysis, FactSet

EVENTS IN Q4 SHIFTED FED PROJECTIONS HIGHER

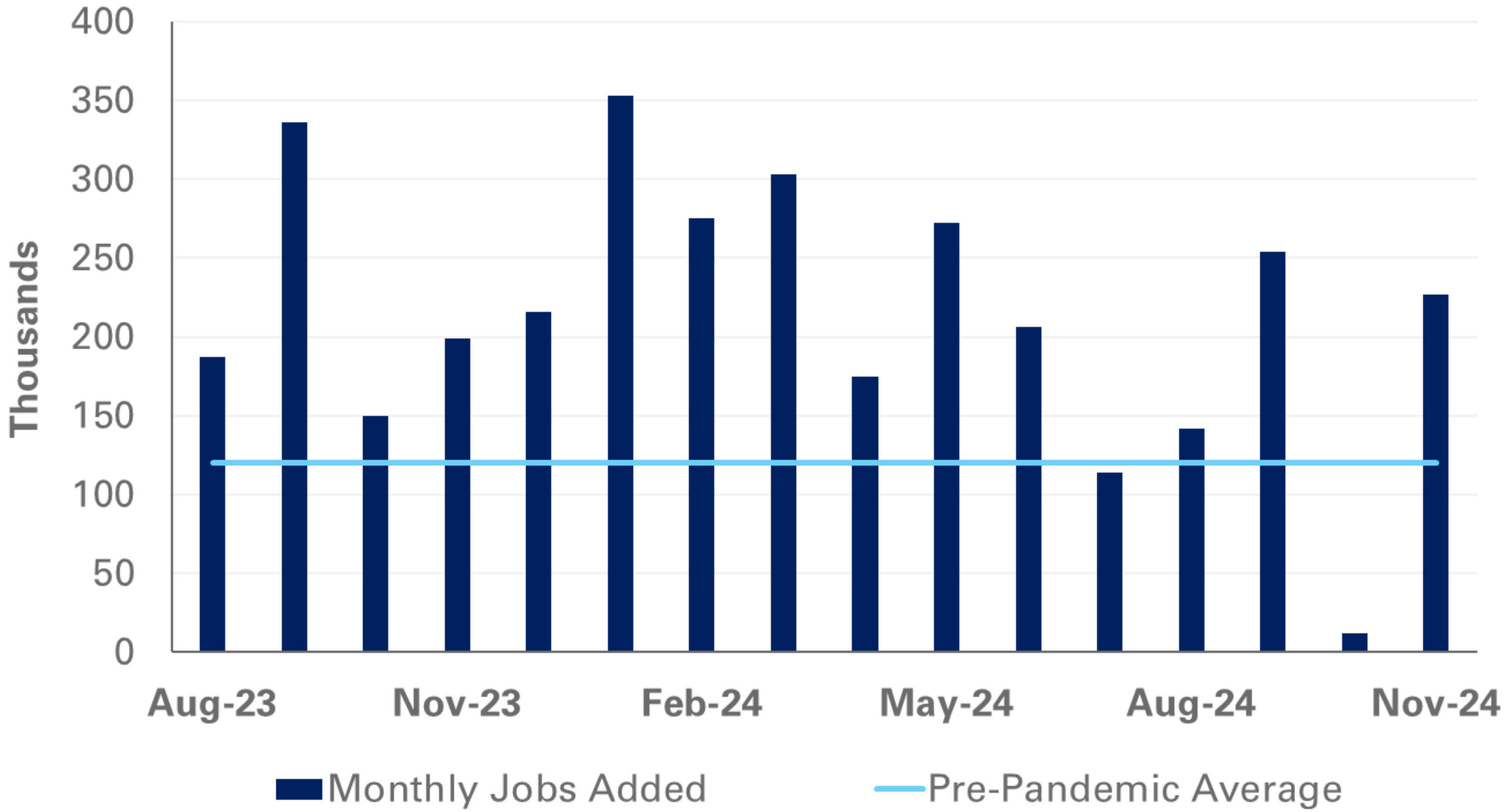
FED FUNDS FUTURES AND FOMC PROJECTIONS



Source: FactSet

U.S JOB MARKET APPEARS TO BE HEALTHY

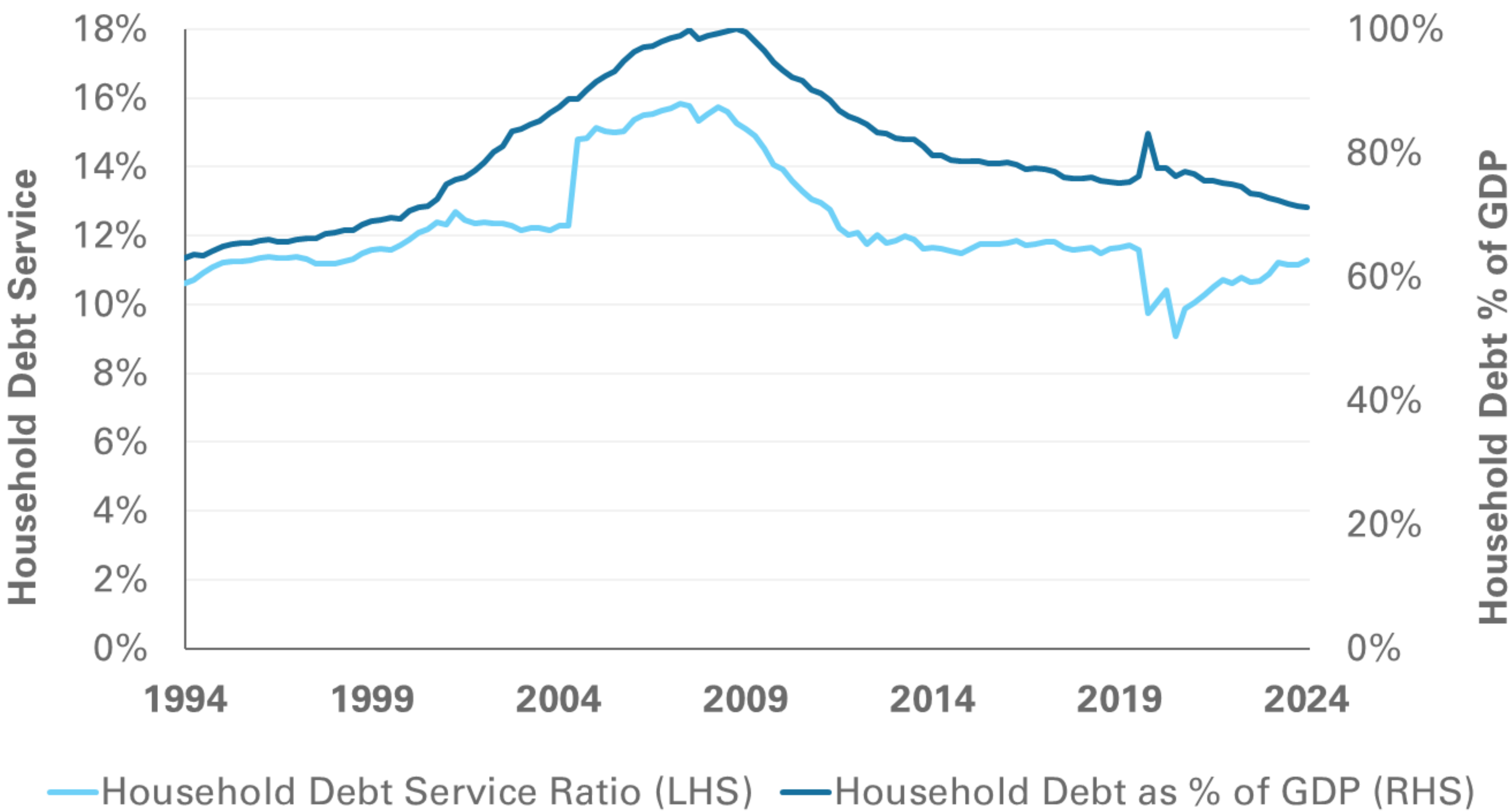
U.S. NONFARM PAYROLLS – MONTHLY JOBS ADDED



Note: Pre-pandemic average calculated 1965-2019
Sources: U.S. Department of Labor, FactSet

ECONOMY AND CONSUMER ARE LOOKING GOOD

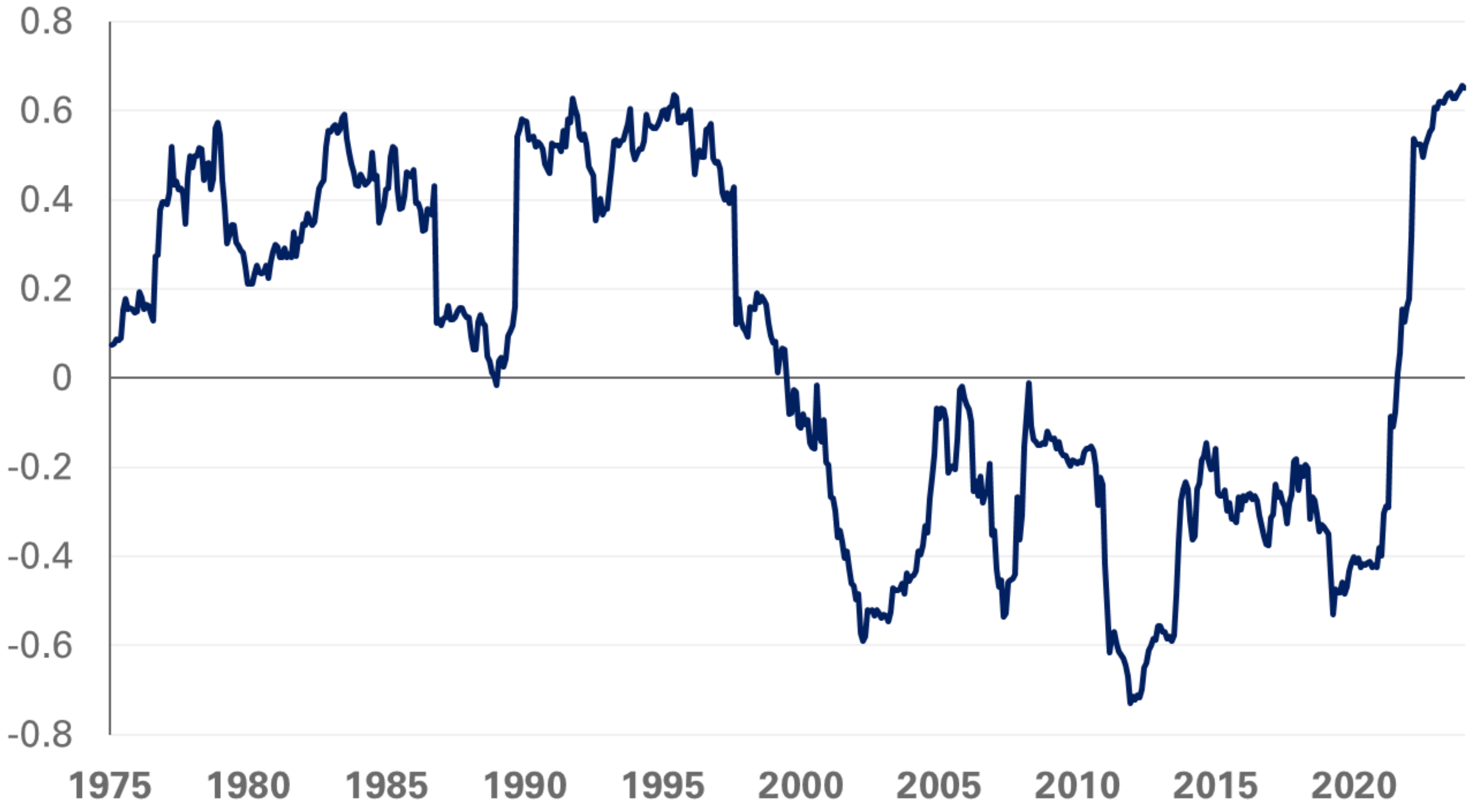
U.S. HOUSEHOLD DEBT: AS % OF GDP AND DEBT SERVICE RATIO



Sources: Federal Reserve, FactSet

PORTFOLIO DIVERSIFICATION IS HARDER

3-YEAR ROLLING CORRELATION S&P 500 AND U.S. TREASURIES



Sources: S&P, Bloomberg, FactSet

2025 MARKET THEMES

2025 MARKET THEMES

NEPC MARKET OUTLOOK

- **At the start of each year, we identify the Market Themes that we believe will impact the investment landscape over the next 12 months**
- **Market Themes represent essential factors for investors and are likely to exert significant influence on market pricing and investor sentiment**
- **Disruptions in these factors will reveal new investment opportunities and likely alter our understanding of market dynamics**

2025 Market Themes

1	2	3	4
Pockets of Euphoria	AI Spending	Tariffs Explained	World Affairs

POCKETS OF EUPHORIA

2025 MARKET THEMES

Magnificent 7 & AI	**Concentration is high but financial profile is far from extreme dot-com valuations**
Cryptocurrency	**Mirrors the mania of past bubbles but link to broader financial system is not clear**
Credit Spreads	**Spreads near historic lows and risk-aversion priced away but debt and maturity profile is quite healthy**
M&A Activity	**Deal volume is low but regulatory shift and lower Fed Funds can spur activity**
Debt Expansion	**Fed policy has slowed consumer and corporate debt expansion, federal debt issuance is the exception**

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ARTIFICIAL INTELLIGENCE SPENDING

2025 MARKET THEMES

Faith in AI Adoption	AI adoption across economy and jobs must be widespread to support current and expected AI spending
AI as a Tool	AI need to deliver sizable productivity gains to capture ROI from vast spending
Financing AI	AI leverage is not in the system and spend is partially sourced from free cash flow
Data Centers	Data centers are the engines for AI and capex is driving rapid expansion and excess demand for power consumption
Data is a Commodity	Is data, chips, or electricity the key AI commodity? Accessibility of data needs to be unfettered to support AI growth

TARIFFS EXPLAINED

2025 MARKET THEMES

Separate Fact and Fiction	**What tariff proposals have economic rationale vs. what is a negotiating tool?**
Mechanics Matter	**How tariffs are implemented will dictate timeline and scope of potential actions**
Speculation is Dangerous	**Tariffs don’t exist in a vacuum; scope, exemptions, potential retaliations are key**
Economic Implications	**Tariffs likely to have a muted economic impact, but escalation restricting the flow of goods poses a broader risk**
Market Sensitivity is High	**Tariff threats likely fuel volatility given the market’s binary expectations for negative growth-inflation consequences**

WORLD AFFAIRS

2025 MARKET THEMES

Geopolitical Tensions	**Potentially exposes economic tail risks and increases market volatility**
Post-Election Dust Settling	**Policy uncertainty is high as new governments take office following the global election "supercycle" in 2024**
Protectionist Policy Push	**Global shift to protectionist policies can aggravate inflation and growth pressures**
Fiscal Spending	**Bloated debt levels and elevated rates may challenge the ability for governments to leverage fiscal policy**
Market Sensitivity Often Short-Lived	**Markets generally look past geopolitical headlines – look to rebalance amid market drawdowns and volatility**

PORTFOLIO CONSIDERATIONS

2025 MARKET THEMES

Embrace Diversification	**Can you afford to be different? Look to diversifiers across real assets and hedge fund approaches**
Be A Liquidity Provider	**Opportunities are present with consistent pacing across private market investments**
Importance of Alpha	**Active management takes on greater importance when betas are expensive**
Are Real Assets For You?	**We see a favorable environment for diversified real assets exposure relative to geopolitical risks and inflation surprises**
Be Boring	**Don’t stretch for returns; look to conduct a strategic policy review and review investment policy benchmarks**

PORTFOLIO POSITIONING VIEWS

CURRENT OPPORTUNITIES

Diversify S&P 500 exposure and complement with value and quality factors to produce a balanced U.S. large-cap position

Global equity strategies offer a compelling alpha opportunity, we **encourage greater use of active equity approaches**

With **attractive real interest rates**, we recommend introducing dedicated U.S. TIPS exposure to strategic policy targets

We are comfortable holding excess liquidity and maintaining neutral duration targets relative to safe-haven fixed income

CAPITAL MARKET ASSUMPTIONS

CAPITAL MARKET ASSUMPTIONS OVERVIEW

We adjusted our equity assumption methodology to better reflect the pathway for valuation multiples, profit margins, and share buybacks

Our outlook for forward interest rates is largely unchanged, even as market rate expectations shifted higher in the final quarter of 2024

Expected returns across fixed income assets remain relatively attractive, reflecting the impact of elevated base rates

We see a favorable environment for a diversified real assets exposure given ongoing geopolitical and surprise inflation risks

CORE ASSET CLASS RETURN ASSUMPTIONS

	Asset Class	12/31/2024 10-Year Return	12/31/2023 10-Year Return	Delta
	Cash	4.1%	3.9%	+0.2%
	U.S. Inflation	2.6%	2.6%	-
Equity	U.S. Large-Cap Equity	5.6%	4.4%	+1.2%
Equity	Non-U.S. Developed Equity	5.3%	4.6%	+0.7%
Equity	Emerging Market Equity	8.0%	8.6%	-0.6%
Equity	Global Equity*	6.1%	5.4%	+0.7%
Equity	Private Equity*	8.5%	9.0%	-0.5%
Fixed Income	U.S. Treasury Bond	4.7%	4.2%	+0.5%
Fixed Income	U.S. Municipal Bond	3.8%	3.5%	+0.3%
Fixed Income	U.S. Aggregate Bond*	5.0%	4.6%	+0.4%
Fixed Income	U.S. TIPS	4.9%	4.6%	+0.3%
Fixed Income	U.S. High Yield Corporate Bond	6.3%	6.1%	+0.2%
Fixed Income	Private Debt*	8.3%	8.3%	-
Real Assets	Commodity Futures	4.4%	4.6%	-0.2%
Real Assets	REIT	5.3%	6.0%	-0.7%
Real Assets	Gold	4.7%	4.9%	-0.2%
Real Assets	Real Estate - Core	5.9%	5.4%	+0.5%
Real Assets	Private Real Assets - Infrastructure	6.0%	6.8%	-0.8%
Multi-Asset	60% S&P 500 & 40% U.S. Aggregate	5.7%	4.8%	+0.9%
Multi-Asset	60% MSCI ACWI & 40% U.S. Agg.	6.0%	5.4%	+0.6%
Multi-Asset	Hedge Fund*	6.4%	6.1%	+0.3%

*Calculated as a blend of other asset classes. NEPC's capital market assumptions reflect proprietary forecasts for expected returns, volatility, and correlations. Return expectations may differ from an investor's realized returns after accounting for fees, taxes, or other aspects that can influence actual returns. Return forecasts and methodology are reviewed on an ongoing basis and are subject to change over time.

ERSRI PORTFOLIO EXPECTATIONS

FORWARD LOOKING RETURN/RISK

		Current Target
Growth	**Global Equity**	**40.0%**
	Private Equity	12.5%
	Non-Core Real Estate	2.5%
	Private Growth	15.0%
	TOTAL GROWTH	**55.0%**
Income	Equity Options	2.0%
	Liquid Credit	5.0%
	CLO Mezz/Equity	2.0%
	Private Credit	3.0%
	TOTAL INCOME	**12.0%**
Stability	Long Treasuries	5.0%
	Systematic Trend	5.0%
	CPC	**10.0%**
	Core Real Estate	4.0%
	Private Real Assets (ex-Real Estate)	4.0%
	Inflation Protection	**8.0%**
	Inv. Grade Fixed (ex-Treasuries)	6.5%
	Absolute Return	6.5%
	Strategic Cash	2.0%
	Volatility Protection	**15.0%**
	TOTAL STABILITY	**33.0%**
	TOTAL PORTFOLIO	**100.0%**

- **Long-term portfolio returns for the ERSRI portfolio are between 7-8% (depending on the specific time period)**
- **Return forecasts are largely unchanged since 2023 when the most recent asset/liability study was completed**

	Dec. 2024	Dec. 2022	Change
EXPECTED RETURN - GEOMETRIC (10Y)	6.7%	6.9%	-0.1%
EXPECTED RETURN - GEOMETRIC (30Y)	7.8%	7.6%	0.3%
EXPECTED RISK	13.1%	13.1%	0.0%
EXPECTED SHARPE RATIO (30Y)	0.32	0.32	0.01

Source: NEPC Capital Market Assumptions

APPENDIX

ASSET CLASS ASSUMPTIONS

DEVELOPMENT

- **Capital market assumptions are published for over 70 core asset classes and over 30 composites**
- **Market data as of 12/31/2024**
- **NEPC proprietary models used to develop return forecasts based on a building block approach**
- **The 10-year return outlook is intended to support strategic asset allocation analysis**
- **30-year return assumptions are used for actuarial inputs and long-term planning**

Asset Allocation Process

1. Finalize list of new asset classes
2. Calculate asset class volatility and correlation assumptions
3. Set model terminal values, growth, and inflation inputs
4. Model data updated at quarter-end
5. Review model outputs and produce asset class return assumptions
6. Assumptions released on the 15th calendar day after quarter-end

CAPITAL MARKET ASSUMPTION PRINCIPLES

HOW SHOULD RETURN ASSUMPTIONS BE INTERPRETED

- **NEPC return assumptions are meant to reflect a nominal return expectation for a buy-and-hold investor, net of fees, over a 10-year and 30-year investment horizon**
- **With this in mind, NEPC asset class return assumptions look to include all sources of return that flow to an asset class over time**
  - Each major contributing source of return is a building block in our models
- **NEPC's asset class models are designed to be forward-looking and not to replicate the past, which requires both model scrutiny and iteration**
- **Forecasting asset class returns, requires forward-looking assumptions about building block contributors and how they evolve over time**
- **Developing market trends require scrutiny and time to analyze data and research market shifts to understand whether they are cyclical or structural inputs contributing to an asset class's building blocks**

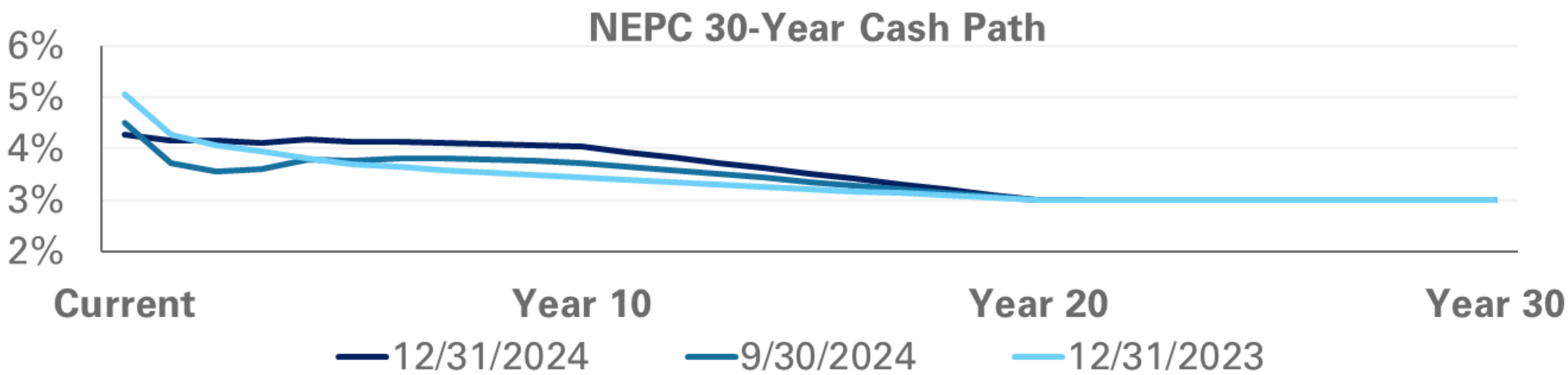
U.S. INFLATION ASSUMPTIONS

OVERVIEW

- **Inflation is a key building block to develop asset class assumptions**
- **Inflation assumptions are model-driven and informed by multiple inputs for both the U.S. and global assets**
- **NEPC's inflation assumption forecasts near-term paths for major Consumer Price Index (CPI) components including food, energy, core services, and shelter costs**
  - CPI is expected to converge with breakeven inflation forecast over the long-term
- **The composite inflation assumption reflects a blend of NEPC's inflation forecast and market-implied breakeven inflation rates**

U.S. Inflation Assumption		
Time Horizon	Current	12-Month Change
10-Year	2.6%	—
30-Year	2.7%	+0.1%

U.S. CASH
EXPECTATIONS



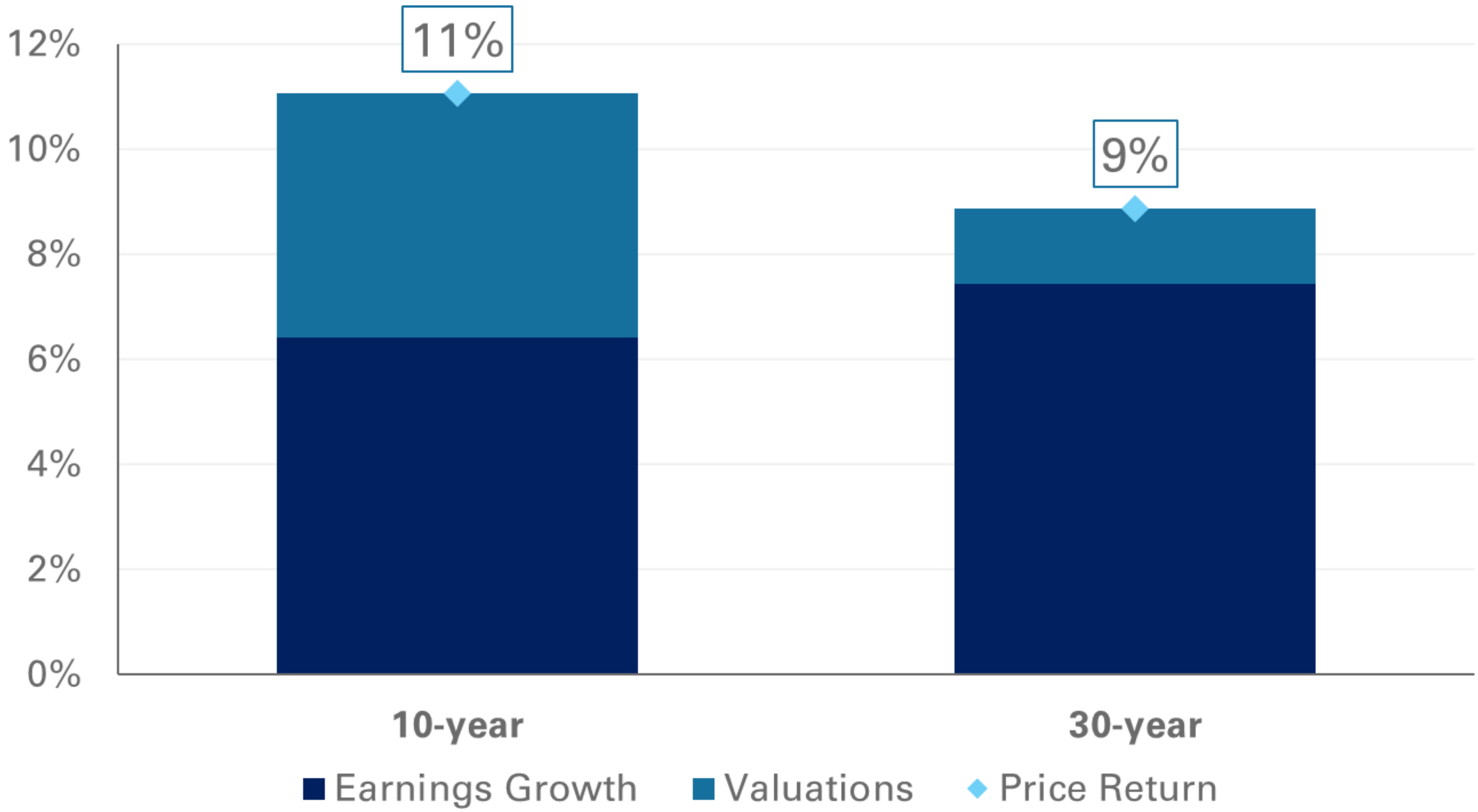
- **Cash is a foundational input for all asset class return expectations that reflects forward expectations of inflation and real interest rates**
  - Cash + risk premia is an input for long-term asset class return projections
- **The composite cash assumption is built from a blend of NEPC's cash forecast and market forward pricing of short-term interest rates**

Time Horizon	Current	12-Month Change
10-Year	4.1%	+0.2%
30-Year	3.6%	+0.2%

Sources: Bloomberg, FactSet, NEPC

VALUATIONS MATTER LESS OVER LONG TERM

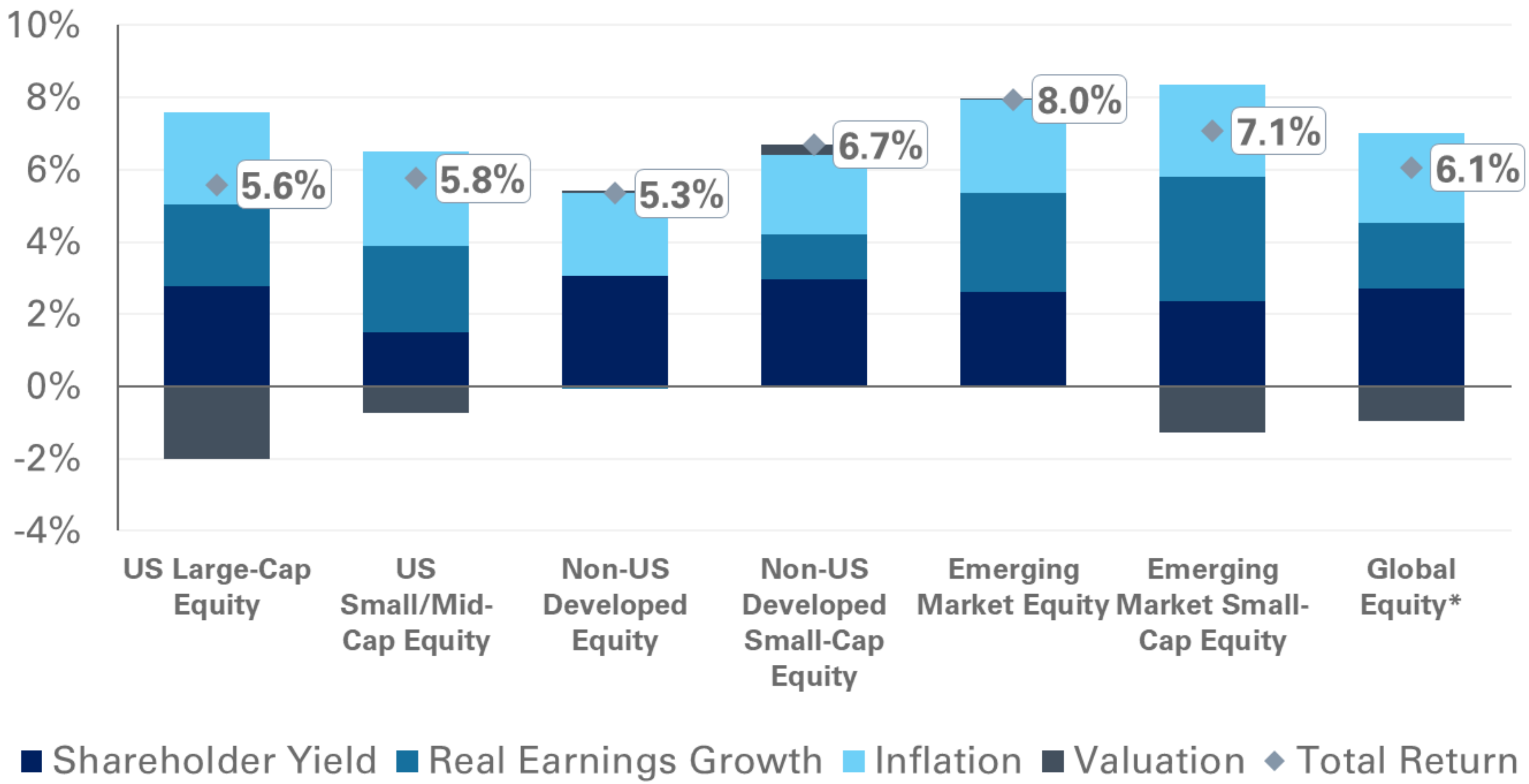
HISTORICAL S&P 500 PRICE RETURN COMPONENTS



Source: S&P, FactSet, NEPC
Notes: Historical returns determined as of 12/31/2024 and exclude dividends

PUBLIC EQUITY

BUILDING BLOCKS: 10-YEAR EXPECTED RETURN

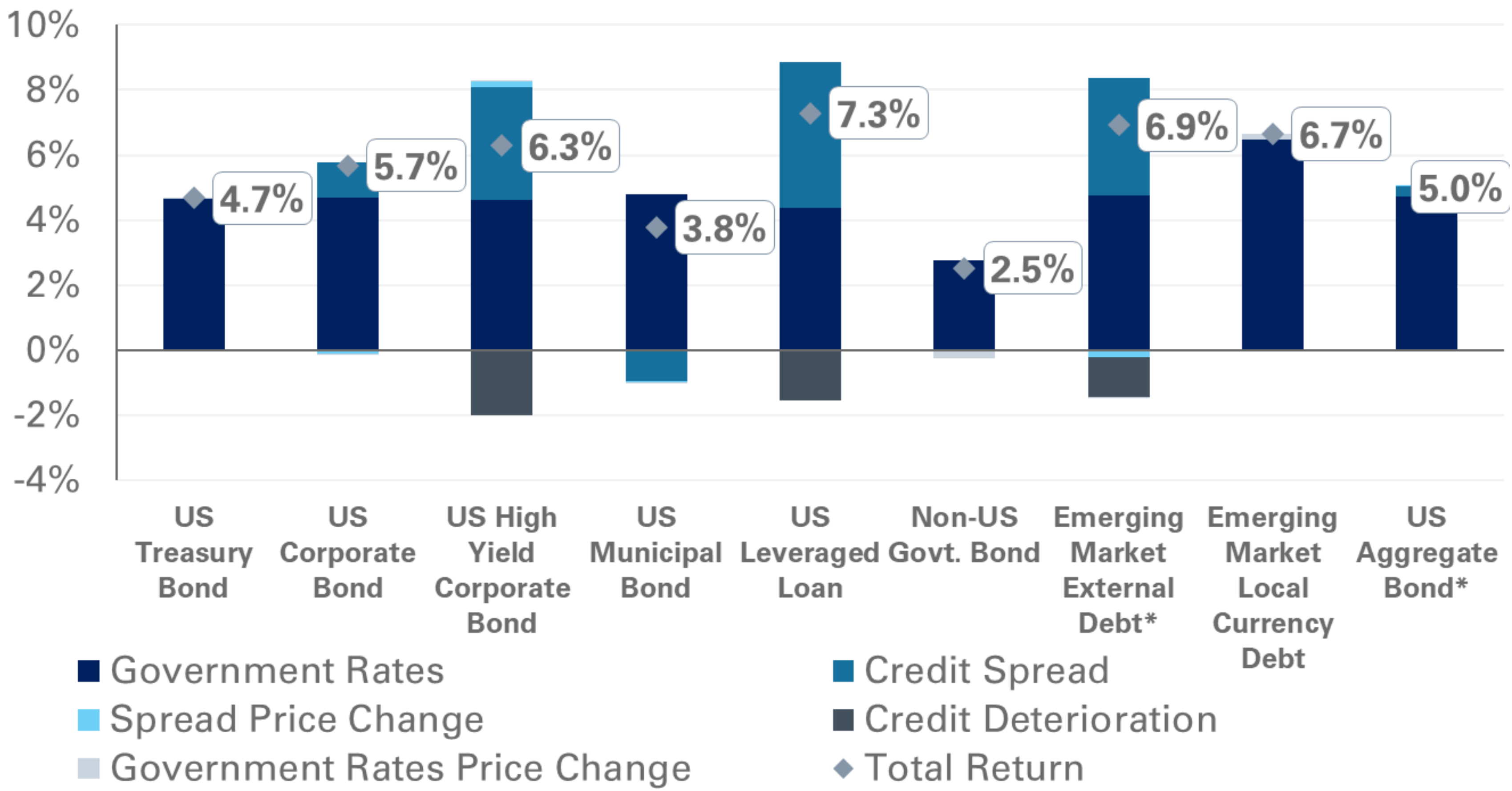


Note: NEPC's capital market assumptions reflect proprietary forecasts for expected returns, volatility, and correlations. Return expectations may differ from an investor's realized returns after accounting for fees, taxes, or other aspects that can influence actual returns. Return forecasts and methodology are reviewed on an ongoing basis and are subject to change over time.

Source: NEPC

FIXED INCOME

BUILDING BLOCKS: 10-YEAR EXPECTED RETURN



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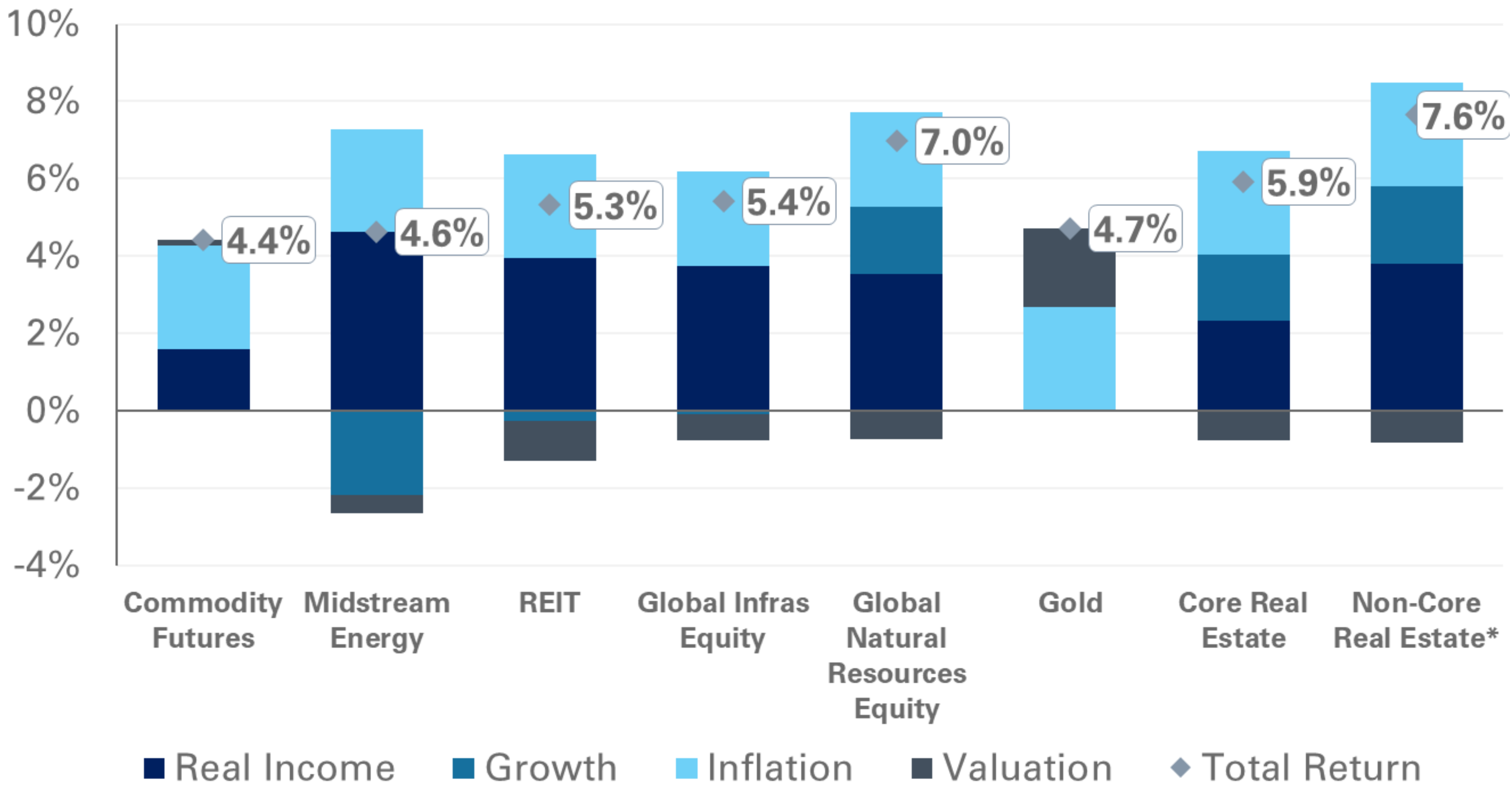
Source: NEPC

REAL ASSET

BUILDING BLOCKS: 10-YEAR EXPECTED RETURN



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Source: NEPC

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