CAPITAL MARKET ASSUMPTIONS DISCUSSION

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

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CAPITAL MARKET ASSUMPTION BACKGROUND

CAPITAL MARKET ASSUMPTIONS OVERVIEW

- Across the financial services industry, a number of providers develop forward looking capital market return and risk assumptions.
- The process for developing these assumptions and the use cases amongst investors can vary widely.
- For institutional investors, long-term (10+ year) capital market assumptions are generally used to set strategic asset allocation policy.
- As noted, there is a wide range of methodologies used to develop assumptions.
- The purpose of today's discussion is to identify the capital market methodology to be used during the 2023 asset/liability study.

ASSUMPTION METHODOLOGY OVERVIEW

- **While the exact methodology for developing assumptions is likely to be different across every provider, there are a few common attributes that can help distinguish one provider from the next.**

- **Time Horizon**
  - 10- and 30-year time horizons are most common, with 20-year assumptions also utilized regularly
  - While some providers develop short-term (<10 year) assumptions, these are rarely used to set strategic asset allocation policy
- **Style**
  - Most providers blend quantitative and qualitative methods to generate assumptions
  - A “building block” approach is a common way to develop assumptions
  - The use of current market conditions (e.g. interest rate levels, equity market valuations, etc.) is also relatively common
- **Other Attributes**
  - Definitions across asset classes/strategies may vary between providers
  - Some providers include active management premiums (vs. beta-only assumptions)

CONSULTANT RETURN FORECAST COMPARISON

Return forecasts sourced directly from each provider.

CONSULTANT RETURN FORECAST COMPARISON

AS OF DECEMBER 31, 2022

	NEPC	Meketa	Cliffwater	Average	Range (Low - High)	
Global Equity (ACWI)	6.3%	8.8%	7.3%	7.5%	6.3%	8.8%
U.S. Large Cap Equities	5.4%	7.8%	7.3%	6.8%	5.4%	7.8%
Global Ex-U.S. Large Cap Eq.	5.6%	10.1%	7.3%	7.7%	5.6%	10.1%
Emerging Large Cap Equities	9.6%	10.3%	7.3%	9.1%	7.3%	10.3%
China-Broad Market Equities	8.7%	8.8%	N/A	8.7%	8.7%	8.7%
U.S. Cash	4.0%	3.1%	2.3%	3.1%	2.3%	4.0%
U.S. Aggregate Bonds	4.8%	4.8%	4.7%	4.8%	4.7%	4.8%
U.S. TIPS	4.4%	4.3%	3.9%	4.2%	3.9%	4.4%
U.S. Credit (All Maturities)	5.9%	N/A	5.4%	5.6%	5.4%	5.9%
U.S. Government (10+ Years)	4.0%	4.3%	3.9%	4.1%	3.9%	4.3%
U.S. Bank Loans	7.8%	7.6%	6.2%	7.2%	6.2%	7.8%
U.S. High Yield	7.1%	8.0%	6.9%	7.3%	6.9%	8.0%
USD EM Debt	7.1%	N/A	6.8%	7.0%	6.8%	7.1%
Local Currency EM Debt	7.2%	6.4%	N/A	6.8%	6.4%	7.2%
Hedge Funds (Global)	6.5%	5.4%	5.2%	5.7%	5.2%	6.5%
U.S. Private Equity (Buyout)	7.7%	9.7%	10.3%	9.2%	7.7%	10.3%
Commodities	4.2%	6.3%	2.5%	4.3%	2.5%	6.3%

Return forecasts sourced directly from each provider. Based on 10-year geometric return forecasts, where available.

ASSET MANAGER 10-YEAR RETURN FORECASTS

AS OF DECEMBER 31, 2022

	NEPC	BlackRock	Research Affiliates	Invesco	BNY Mellon	VOYA	Average	Average ex. NEPC	Range (Low - High)	
Global Equity (ACWI)	6.3%	n/a	7.1%	7.9%	6.9%	4.8%	6.6%	6.7%	4.8%	7.9%
U.S. Large Cap Equities	5.4%	7.9%	5.2%	7.7%	6.4%	4.8%	6.2%	6.4%	4.8%	7.9%
U.S. Small Cap Equities	6.5%	5.6%	8.3%	10.0%	7.1%	4.2%	7.0%	7.0%	4.2%	10.0%
Global Ex-U.S. Large Cap Eq.	5.6%	10.3%	10.3%	8.2%	6.9%	3.6%	7.5%	7.9%	3.6%	10.3%
Emerging Large Cap Equities	9.6%	11.0%	11.3%	9.7%	9.3%	3.8%	9.1%	9.0%	3.8%	11.3%
China-Broad Market Equities	8.7%	10.6%	10.8%	9.3%	n/a	n/a	9.8%	10.2%	8.7%	10.8%
U.S. Cash	4.0%	3.4%	2.5%	n/a	2.3%	2.3%	2.9%	2.6%	2.3%	4.0%
U.S. Aggregate Bonds	4.8%	4.2%	4.4%	4.4%	4.1%	4.0%	4.3%	4.2%	4.0%	4.8%
U.S. TIPS	4.4%	4.9%	4.7%	4.4%	4.4%	3.5%	4.4%	4.4%	3.5%	4.9%
U.S. Credit (All Maturities)	5.9%	4.3%	n/a	4.9%	5.0%	n/a	5.0%	4.7%	4.3%	5.9%
U.S. Government Bonds	4.2%	3.5%	n/a	n/a	3.6%	n/a	3.8%	3.6%	3.5%	4.2%
U.S. Credit (10+ Years)	5.8%	4.1%	2.9%	n/a	5.9%	n/a	4.7%	4.3%	2.9%	5.9%
U.S. Agency MBS	4.5%	4.9%	n/a	4.7%	4.2%	n/a	4.6%	4.6%	4.2%	4.9%
Global Ex-U.S. Gov't. Bonds	2.6%	4.5%	5.4%	4.2%	3.0%	2.7%	3.7%	4.0%	2.6%	5.4%
U.S. Government (10+ Years)	4.0%	3.2%	4.3%	3.0%	4.0%	3.8%	3.7%	3.7%	3.0%	4.3%
U.S. Bank Loans	7.8%	6.5%	5.0%	8.9%	5.6%	7.2%	6.8%	6.6%	5.0%	8.9%
U.S. High Yield	7.1%	6.6%	5.6%	7.8%	6.2%	6.9%	6.7%	6.6%	5.6%	7.8%
USD EM Debt	7.1%	5.8%	6.4%	6.8%	8.0%	7.5%	6.9%	6.9%	5.8%	8.0%
Local Currency EM Debt	7.2%	5.4%	6.8%	n/a	4.0%	n/a	5.8%	5.4%	4.0%	7.2%
Hedge Funds (Global)	6.5%	9.7%	n/a	6.4%	4.9%	n/a	6.9%	7.0%	4.9%	9.7%
U.S. Private Equity (Buyout)	7.7%	10.4%	4.1%	n/a	8.2%	n/a	7.6%	7.6%	4.1%	10.4%
Commodities	4.2%	n/a	4.8%	8.4%	2.9%	2.2%	4.5%	4.6%	2.2%	8.4%

Return forecasts sourced directly from each provider. All data is based on 10-year geometric assumptions. Research Affiliates data is as of 1/31/2023. BNY Mellon data is as of 9/30/2022

NEPC ASSUMPTIONS OVERVIEW

ASSET CLASS ASSUMPTIONS

DEVELOPMENT

- **Assumptions are published for over 70 asset classes**
  - NEPC publishes return forecasts for 10-year and 30-year periods
- **Market data as of 12/31/2022**
  - Assumptions are developed with NEPC valuations models and rely 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

ASSET CLASS BUILDING BLOCKS

METHODOLOGY

- **Asset models reflect current and forecasted market data to inform expected returns**
- **Systematic inputs are paired with a long-term trend to terminal values**
- **Model inputs are aggregated to capture key return drivers for each asset class**
- **Building block inputs will differ across asset class categories**

10-YEAR ASSET CLASS RETURN ASSUMPTIONS

	Asset Class	12/31/22 10-Year Return	12/31/21 10-Year Return	Delta
Equity	U.S. Large-Cap Equity	5.4%	4.3%	+1.1%
	Non-U.S. Developed Equity	5.6%	5.2%	+0.4%
	Emerging Market Equity	9.6%	8.3%	+1.3%
	Global Equity*	6.3%	5.4%	+0.9%
	Private Equity*	9.2%	9.0%	+0.2%
Fixed Income	Cash	4.0%	1.5%	+2.5%
	US Treasury Bond	4.2%	1.5%	+2.7%
	US Municipal Bond	4.4%	1.6%	+2.8%
	US Aggregate Bond*	4.8%	2.0%	+2.8%
	US TIPS	4.4%	1.4%	+3.0%
	US High Yield Corporate Bond	7.1%	3.2%	+3.9%
	Private Debt*	8.8%	6.6%	+2.2%
Real Assets	Commodity Futures	4.2%	0.4%	+3.8%
	REIT	6.2%	4.5%	+1.7%
	Gold	5.1%	3.3%	+1.8%
	Real Estate - Core	4.0%	4.7%	-0.7%
	Real Estate - Non-Core	5.3%	5.9	-0.6%
	Private Real Assets - Infrastructure	6.6%	5.3%	+1.3%

*Calculated as a blend of other asset classes

2019 ASSUMPTION COMPARISON

RETURN ASSUMPTIONS – 2023 AND 2019

	Asset Class	2023 Assumptions	2019 Assumptions	Delta
Equity	U.S. Large-Cap Equity	5.4%	6.1%	-0.7%
	Non-U.S. Developed Equity	5.6%	6.8%	-1.2%
	Emerging Market Equity	9.6%	9.3%	+0.3%
	Global Equity*	6.3%	7.0%	-0.7%
	Private Equity*	9.2%	10.0%	-0.8%
Fixed Income	Cash	4.0%	2.8%	+1.2%
	US Treasury Bond	4.2%	2.5%	+1.7%
	US Municipal Bond	4.4%	3.0%	+1.4%
	US Aggregate Bond*	4.8%	3.0%	+1.8%
	US TIPS	4.4%	3.0%	+1.4%
	US High Yield Corporate Bond	7.1%	5.3%	+1.8%
	Private Debt*	8.8%	8.5%	+0.3%
Real Assets	Commodity Futures	4.2%	4.3%	-0.1%
	REIT	6.2%	6.8%	-0.6%
	Real Estate - Core	4.0%	6.0%	-2.0%
	Real Estate - Non-Core	5.3%	7.0%	-1.7%
	Private Real Assets - Infrastructure	6.6%	6.3%	+0.3%

2023 Assumptions based on NEPC's 12/31/2022 10-year return forecasts. 2019 assumptions based on NEPC's 5-7 year return forecasts from the 2019 Asset/Liability study. *Calculated as a blend of other asset classes

ASSET CLASS RELATIVE ATTRACTIVENESS

Asset Class	2019 Rank	2023 Rank	Change
Private Equity*	1	2	-1
Emerging Market Equity	2	1	+1
Private Debt*	3	3	0
Global Equity*	4	6	-2
Real Estate - Non-Core	5	10	-5
Non-U.S. Developed Equity	6	8	-2
REIT	7	7	0
Private Real Assets - Infrastructure	8	5	+3
U.S. Large-Cap Equity	9	9	0
Real Estate - Core	10	16	-6
US High Yield Corporate Bond	11	4	+7
Commodity Futures	12	15	-3
US Municipal Bond	13	11	+2
US Aggregate Bond*	14	13	+1
US TIPS	15	12	+3
Cash	16	17	-1
US Treasury Bond	17	14	+3

2023 Assumptions based on NEPC's 12/31/2022 10-year return forecasts. 2019 assumptions based on NEPC's 5-7 year return forecasts from the 2019 Asset/Liability study. *Calculated as a blend of other asset classes

ERSRI CUSTOM ASSET CLASS ASSUMPTIONS

Bucket	Asset Class	Current Target	Individual Asset Classes Expected Return	Individual Asset Classes Expected Risk	2023 Functional Buckets Expected Return	2023 Functional Buckets Expected Risk	2019 Functional Buckets Expected Return	2019 Functional Buckets Expected Risk
Growth	US Equities	24.0%	5.4%	16.9%	6.9%	18.9%	8.2%	20.4%
	Int'l Equities	12.0%	5.6%	19.6%				
	Emerging Int'l Equities	4.0%	9.6%	28.6%				
	Global Equity	**40.0%**	**6.3%**	**18.1%**				
	Private Equity	12.5%	9.2%	25.7%				
	Non-Core Real Estate	2.5%	5.3%	18.5%				
	Private Growth	**15.0%**	**8.8%**	**23.4%**				
	TOTAL GROWTH	**55.0%**	**6.9%**	**18.9%**				
Income	Equity Options	2.0%	6.0%	11.1%	7.4%	9.3%	7.4%	13.7%
	Liquid Credit	3.0%	7.5%	9.5%				
	EMD (Blended)	2.0%	7.2%	12.6%				
	CLO Mezz/Equity	2.0%	5.8%	7.6%				
	Private Credit	3.0%	8.8%	11.8%				
	TOTAL INCOME	**12.0%**	**7.4%**	**9.3%**				
Stability	Long Treasuries	5.0%	4.0%	11.8%	5.7%	6.5%	4.4%	8.5%
	Systematic Trend	5.0%	5.8%	9.3%				
	CPC	**10.0%**	**5.1%**	**7.8%**				
	Core Real Estate	4.0%	4.0%	15.0%				
	Private Real Assets (ex-Real Estate)	4.0%	6.6%	12.4%				
	Inflation Protection	**8.0%**	**5.5%**	**11.8%**				
	Inv. Grade Fixed (ex-Treasuries)	6.5%	5.5%	7.7%				
	Absolute Return	6.5%	6.5%	8.6%				
	Strategic Cash	2.0%	4.0%	0.6%				
	Volatility Protection	**15.0%**	**5.9%**	**6.1%**				
	TOTAL STABILITY	**33.0%**	**5.7%**	**6.5%**				

2023 Assumptions based on NEPC's 12/31/2022 10-year return forecasts. 2019 assumptions based on NEPC's 5-7 year return forecasts from the 2019 Asset/Liability study. Return assumptions are geometric.

NEPC ASSUMPTION DETAIL

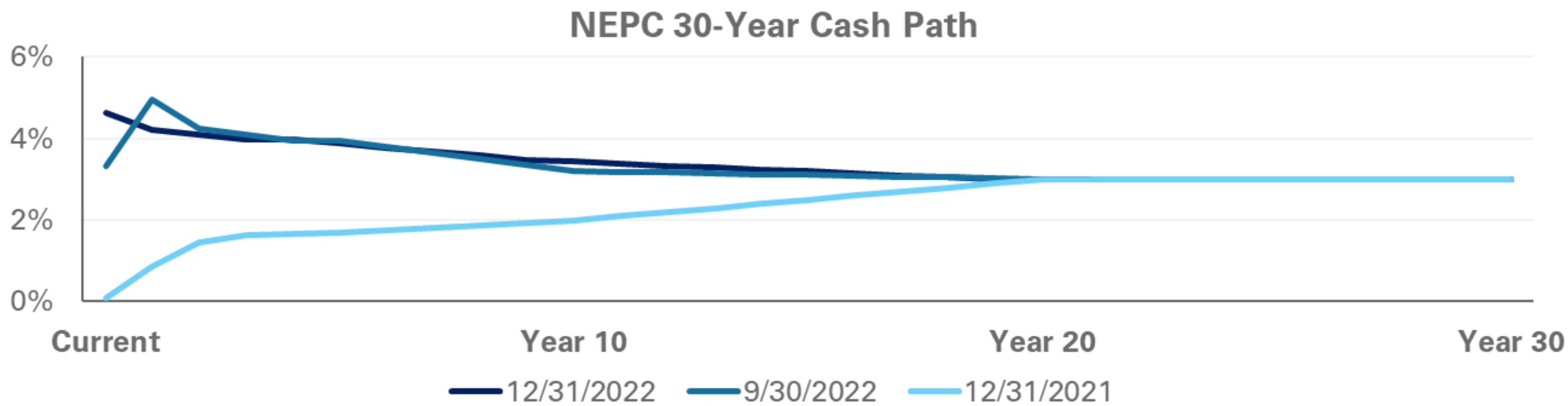
INFLATION ASSUMPTIONS

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**
  - Includes forecasts from international organizations (e.g. IMF), local consumer and producer price indices, global interest rate curves, and break-even inflation expectations
- **NEPC's U.S. inflation expectations reflect stickier inflation over the near-term, but a stable inflation outlook over the long-term**
  - We anticipate continued volatility among inflation measures as market-based inflation expectations diverge from current consumer inflation metrics

Region	10-Year Inflation Assumption	30-Year Inflation Assumption
United States	2.5%	2.6%

U.S. CASH
EXPECTATIONS



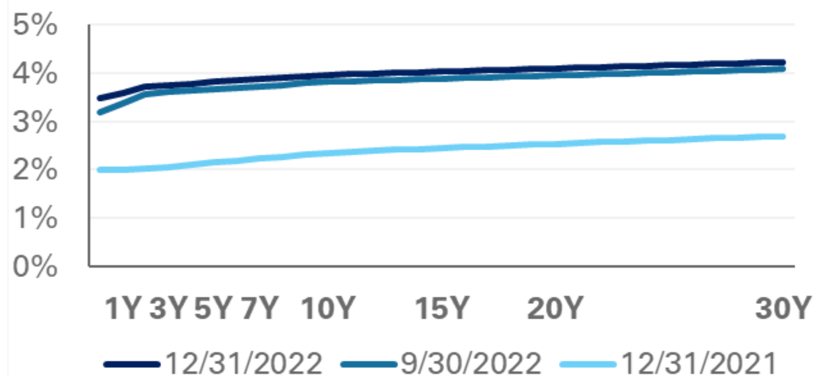
- **Cash is a foundational input for all asset class return expectations**
  - Cash + risk premia is an input for long-term asset class return projections
- **Cash assumptions reflect inflation and real interest rates**
- **U.S. nominal rate forecasts reflect continued tighter policy in the near-term, but long-term expectations remain subdued relative to history**

Sources: Bloomberg, FactSet, NEPC

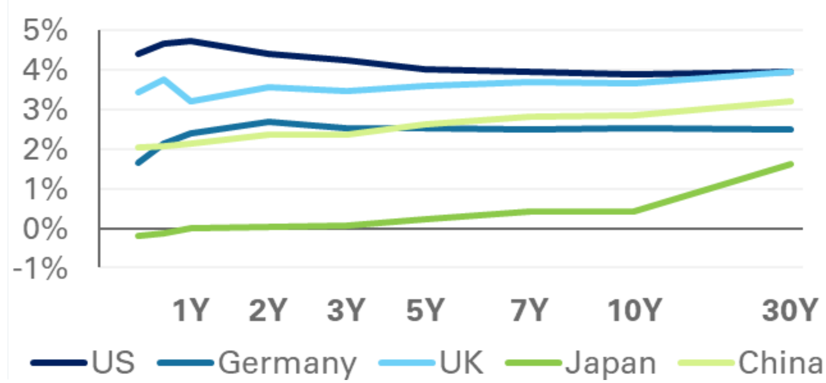
GLOBAL INTEREST RATE
EXPECTATIONS

- **Real yields have normalized, reflecting the transition to a tighter policy environment**
  - Higher real rates support returns in the long-term, but also signal a shift in risk posture for markets
- **The transition to tighter Fed policy has lifted bond yield forecasts**
- **The outlook is relatively poor for Non-U.S. developed markets due to the nominal yield differential**
- **Emerging market real rates and nominal interest rates are higher relative to the developed world**

NEPC 10-Year Forward Curve



Global Yield Curves



Sources: FactSet, NEPC

PUBLIC EQUITY

PUBLIC EQUITY ASSUMPTIONS

OVERVIEW

- **Current valuation multiples across public equities have moved lower, reflecting a tighter monetary policy and elevated inflation environment**
  - Equity valuation multiples are sensitive to higher interest rates, though inflation can positively impact nominal revenue growth
- **Long-term valuation multiples underlying equity return assumptions have lowered as well, reflecting the impact of higher interest rates**
- **NEPC's strategic equity targets reflect a bias to the U.S. and Emerging Markets over Non-U.S. Developed relative to the MSCI ACWI IMI**
  - The return assumption for emerging markets is highest among public equities, driven by the long-term opportunities in Asia
- **NEPC encourages a strategic bias to small-cap with the use of active management relative to small-cap exposure in the MSCI ACWI IMI**

PUBLIC EQUITY ASSUMPTIONS

BUILDING BLOCKS

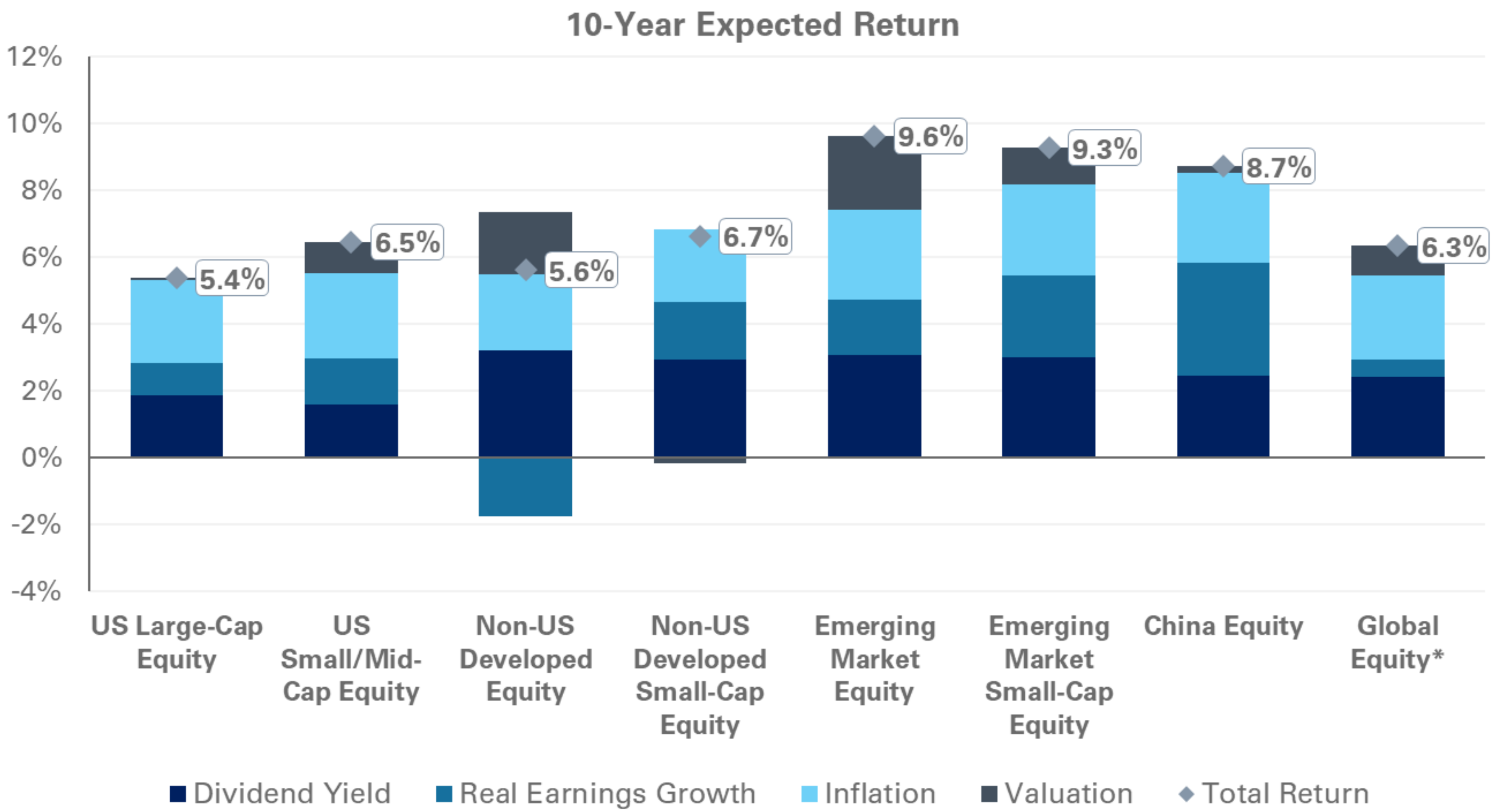
Illiquidity Premium	The return expected for assets with illiquidity risk
Valuation	Represents P/E multiple contraction or expansion relative to long-term trend
Inflation	Market-specific inflation based on country-level revenue exposure
Real Earnings Growth	Market-specific real growth based on a weighted-average of country revenue exposure and GDP growth
Dividend Yield	Income distributed to shareholders adjusted to reflect market trends

Asset Class	12/31/22 10-Yr Return	12-Month Change
U.S. Large-Cap Equity	5.4%	+1.1%
U.S. Small/Mid-Cap Equity	6.5%	+0.9%
Non-U.S. Developed Equity	5.6%	+0.4%
Non-U.S. Developed Small-Cap Equity	6.7%	+0.8%
Emerging Market Equity	9.6%	+1.3%
Emerging Market Small-Cap Equity	9.3%	+1.7%
China Equity	8.7%	-0.1%
Hedge Fund - Equity	6.0%	+1.9%
Global Equity*	6.3%	+0.9%
Private Equity*	9.2%	+0.2%

Source: NEPC

*Calculated as a blend of other asset classes

PUBLIC EQUITY
BUILDING BLOCKS



Source: NEPC
*Calculated as a blend of other classes

FIXED INCOME

FIXED INCOME ASSUMPTIONS

OVERVIEW

- **Fixed income return assumptions are higher, reflecting the transition to tighter monetary policy to offset ongoing inflationary pressures**

- **NEPC remains committed to a dedicated Treasury allocation given the upward movement in interest rates and return expectations**

- **Safe-haven fixed income exposure is a critical liquidity source for the portfolio and offers downside protection in periods of market stress**
  - Sizing of the safe-haven exposure is a strategic exercise and reflects investor return objectives, risk-tolerance, and private market pacing plan needs

- **High-quality fixed income is an asset class designed to support lower volatility portfolios and larger strategic targets to fixed income**
  - Investment grade credit and TIPS offer exposure to nominal and real interest rates plus cyclical diversification benefits to the overall fixed income portfolio

- **The use of return-seeking credit investments requires a more dynamic posture to manage shifts in credit spreads and market cycles**

FIXED INCOME ASSUMPTIONS

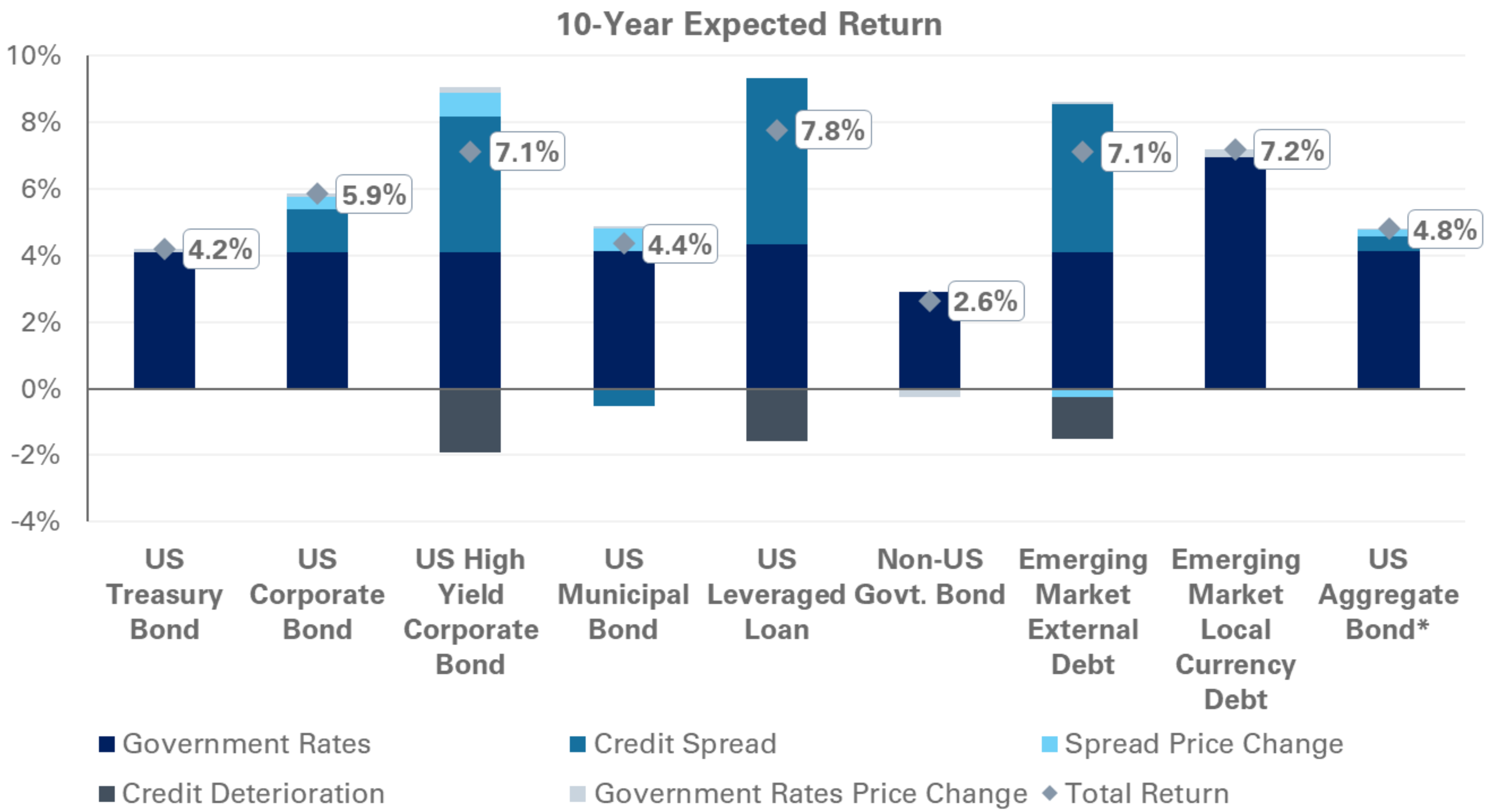
BUILDING BLOCKS

Illiquidity Premium	The return expected for assets with illiquidity risk
Government Rates Price Change	Change due to shifts in current yields relative to forecasted rates
Credit Deterioration	The average loss for credit assets due to defaults and recovery rates
Spread Price Change	Valuation change due to changes in credit spreads relative to long-term targets
Credit Spread	Yield premium provided by securities with credit risk
Government Rates	The yield attributed to sovereign bonds that do not have credit risk

Asset Class	12/31/22 10-Yr Return	12-Month Change
U.S. TIPS	4.4%	+3.0%
U.S. Treasury Bond	4.2%	+2.7%
U.S. Corporate Bond	5.9%	+3.1%
U.S. MBS	4.5%	+2.7%
U.S. High Yield Corporate	7.1%	+3.9%
U.S. Leveraged Loan	7.8%	+3.1%
EMD External Debt	7.1%	+3.0%
EMD Local Currency Debt	7.2%	+1.5%
Non-U.S. Govt. Bond	2.6%	+1.5%
U.S. Muni Bond (1-10 Year)	3.2%	+2.0%
U.S. High Yield Muni Bond	5.7%	+3.6%
Hedge Fund – Credit	7.1%	+2.9%
U.S. Aggregate Bond*	4.8%	+2.8%
Private Debt*	8.8%	+2.2%

Source: NEPC
*Calculated as a blend of other asset classes

FIXED INCOME
BUILDING BLOCKS



Source: NEPC
*Calculated as a blend of other classes

REAL ASSET

REAL ASSET ASSUMPTIONS

OVERVIEW

- **The strategic outlook for real assets reflects a high level of uncertainty due to the elevated near-term inflation environment**
  - Real assets offer a meaningful portfolio diversification benefit, but are sensitive to a wide range of potential inflation scenarios
- **Real assets exhibit different betas to inflation and each asset class is exposed to various economic factors**
  - Diversification and correlation benefits are helpful to a portfolio but must be carefully considered relative to the expected risk premium
- **Strategic asset allocation targets for real assets are determined by investor objectives, including the need for portfolio inflation sensitivity**
  - Short-term changes in market inflation dynamics should not dictate a portfolio's strategic need for real asset exposure
- **Building portfolio inflation sensitivity is a strategic exercise and is well-aligned with an appropriately sized private real assets pacing program**
  - The strategic outlook for real assets is volatile as market expectations conflict with the near-term inflation path and longer-term deflationary forces

REAL ASSET ASSUMPTIONS

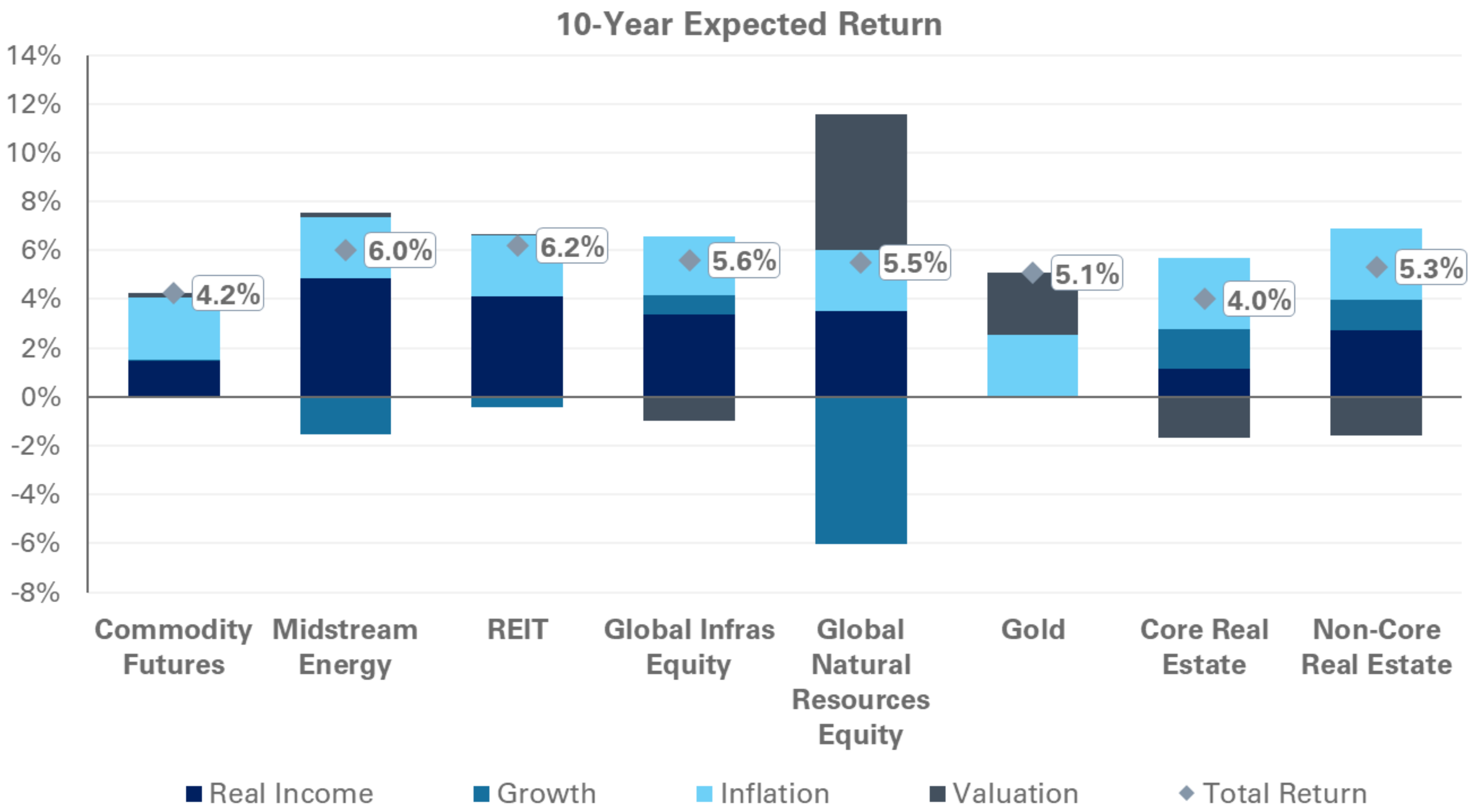
BUILDING BLOCKS

Illiquidity Premium	The return expected for assets with illiquidity risk
Valuation	The change in price of the asset moving to a terminal value or real average level
Inflation	Based on the inflation path as defined by breakeven-inflation rates and NEPC assumptions
Growth	Market-specific real growth based on a weighted-average of country-level revenue exposure and GDP growth
Real Income	The inflation-adjusted income produced by the asset

Asset Class	12/31/22 10-Yr Return	12-Month Change
Commodity Futures	4.2%	+3.8%
Midstream Energy	6.0%	-0.7%
REIT	6.2%	+1.7%
Global Infrastructure Equity	5.6%	-
Global Natural Resources Equity	5.5%	-
Gold	5.1%	+1.8%
Real Estate - Core	4.0%	-0.7%
Real Estate – Non-Core	5.3%	-0.6%
Private Debt - Real Estate	5.8%	+1.2%
Private Real Assets - Natural Resources	8.1%	+1.0%
Private Real Assets - Infrastructure	6.6%	+1.3%

Source: NEPC
*Calculated as a blend of other asset classes

REAL ASSET
BUILDING BLOCKS

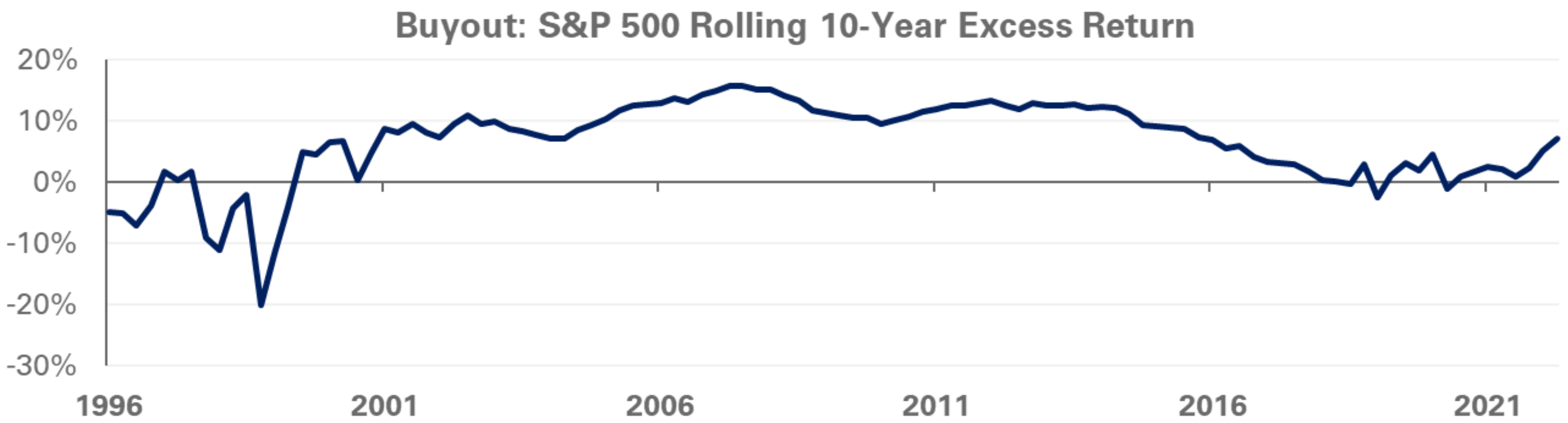


Source: NEPC

ALTERNATIVE ASSETS

ALTERNATIVE ASSETS

METHODOLOGY

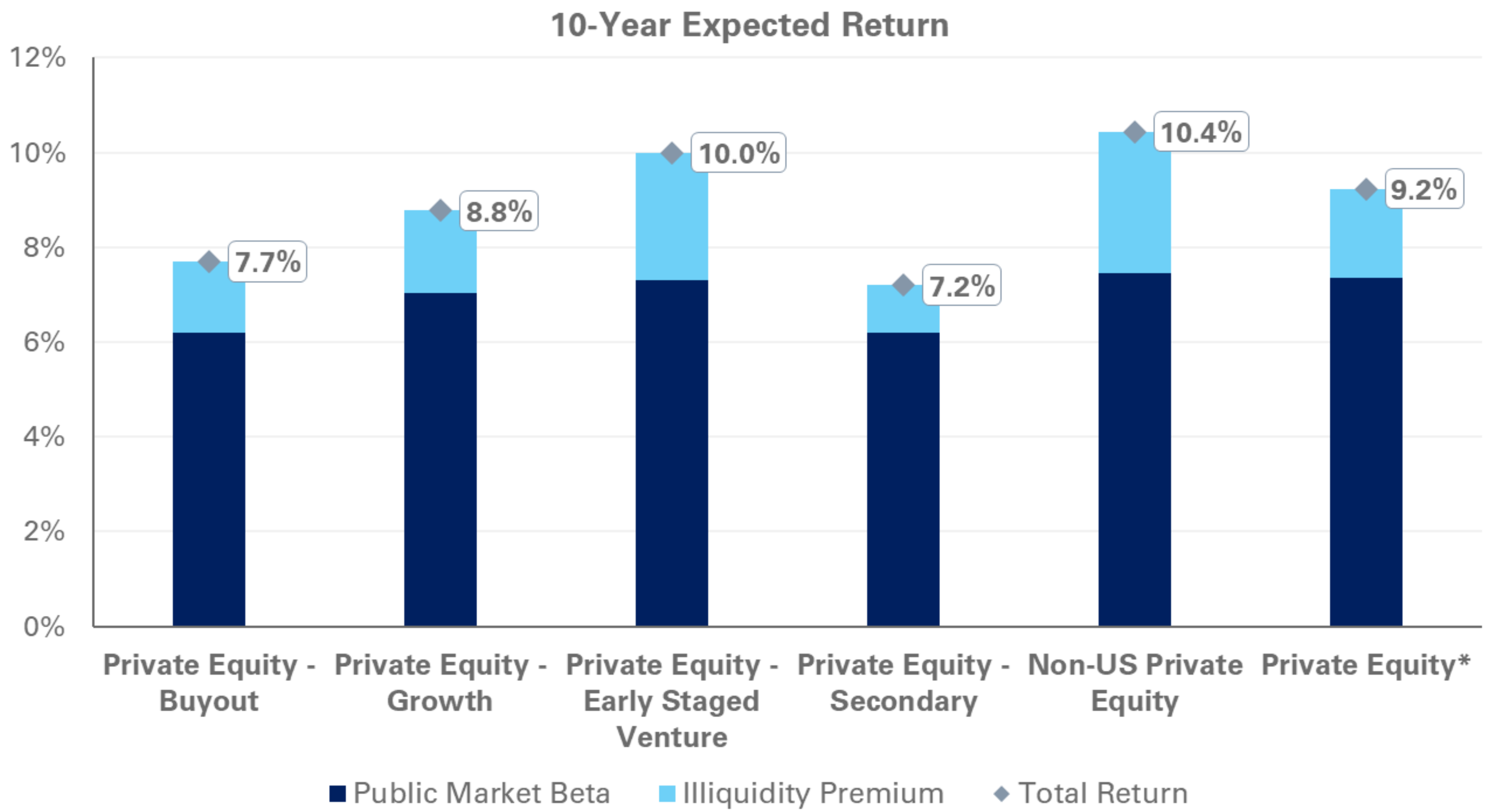


- **Private market assumptions are constructed from betas to public markets with an added illiquidity premia**
  - Historically, the observed illiquidity premium has been a significant component driving private market returns

- **Hedge fund assumptions are constructed from betas to public markets with an added alpha assumption**

Sources: Thomson One, S&P, FactSet

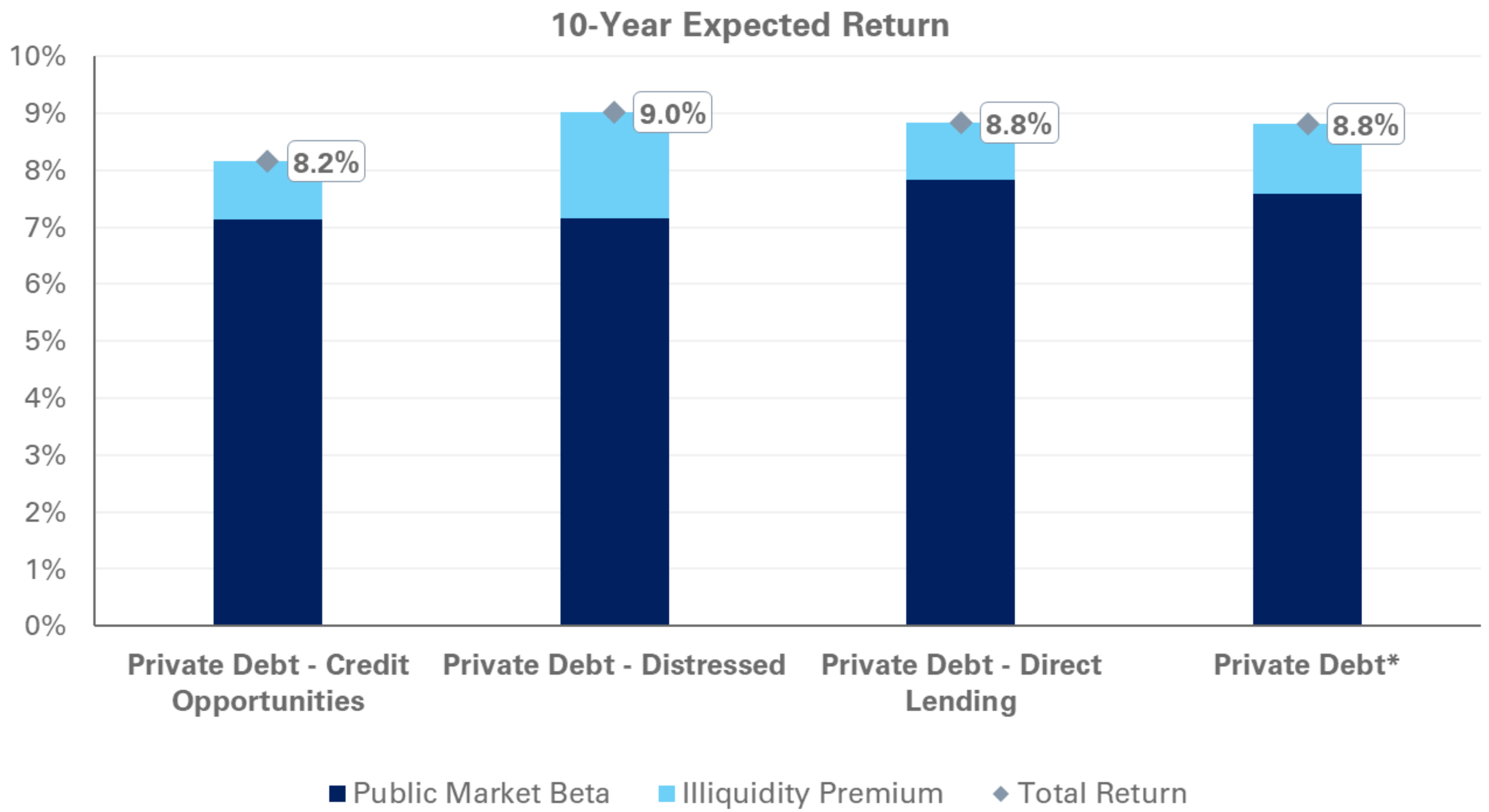
PRIVATE EQUITY
BUILDING BLOCKS



Source: NEPC

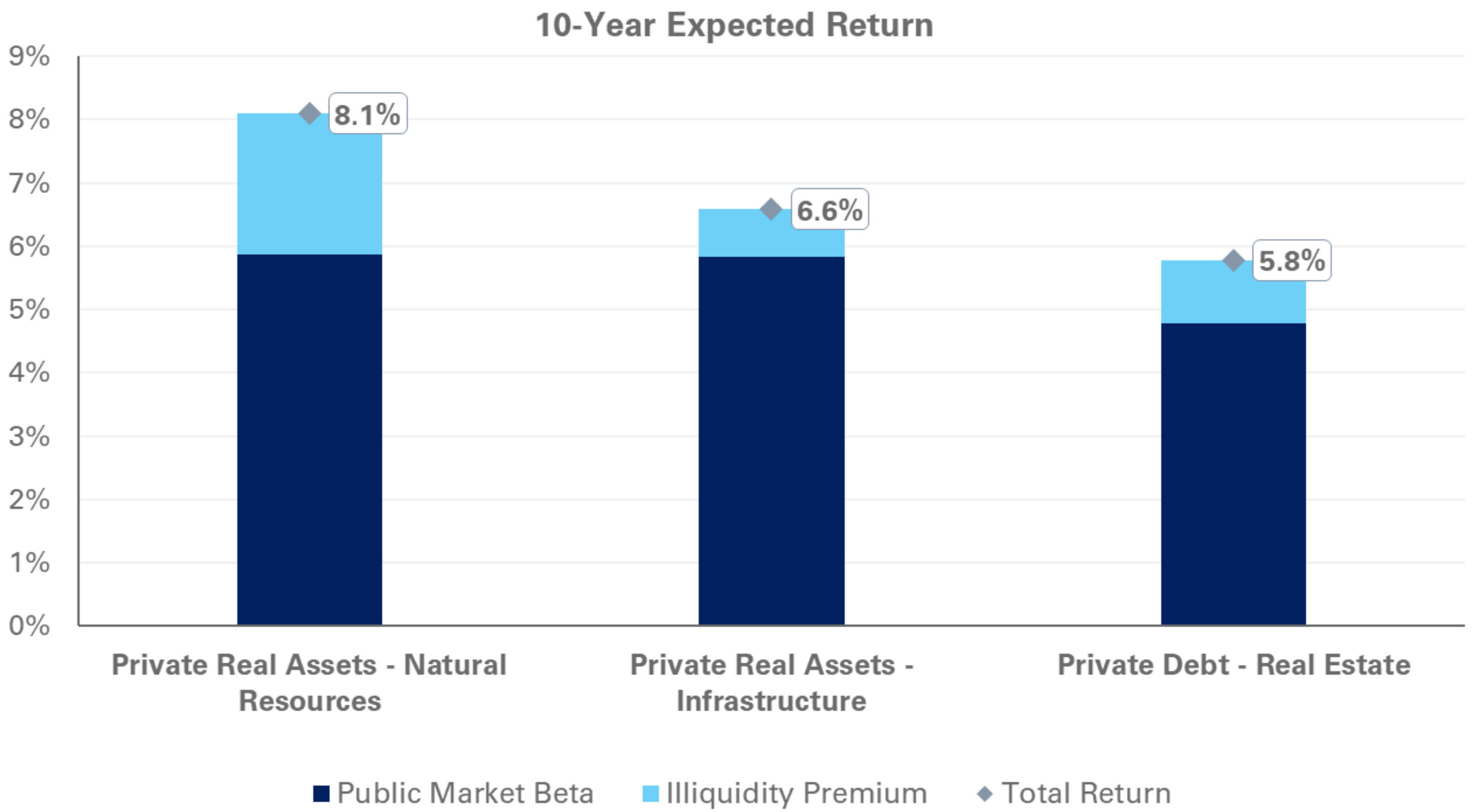
*Private Equity is a derived composite of 34% U.S. Buyout, 34% U.S. Growth, 8.5% U.S. Secondary, 8.5% U.S. Venture, 15% Non-U.S. PE

PRIVATE DEBT
BUILDING BLOCKS



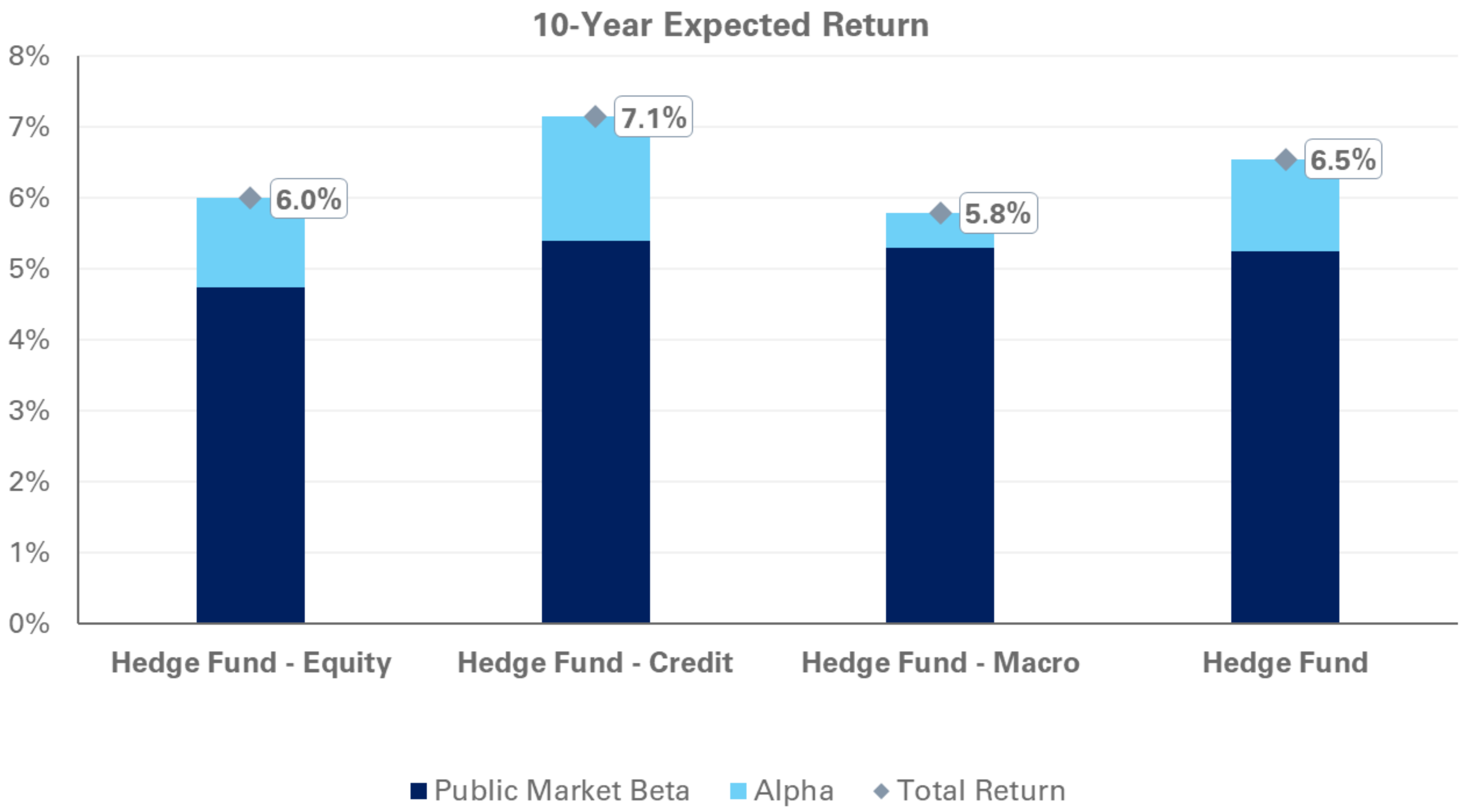
Source: NEPC
*Private Debt is a derived composite of 25% Mezzanine, 25% Distressed, 50% Direct Lending

PRIVATE REAL ASSET
BUILDING BLOCKS



Source: NEPC

HEDGE FUND
BUILDING BLOCKS



Source: NEPC
*Hedge Funds is a derived composite of 40% Long/Short, 40% Credit, 20% Macro

APPENDIX

GOALS AND OBJECTIVES FROM 2019 STUDY

- **Asset Allocation Review process should incorporate philosophy expressed in current IPS document**
  - Desire to maintain a diversified portfolio
  - Use of active and passive management
  - Consideration of inflation sensitivity and hedging

- **Understanding of risk tolerance should incorporate liabilities**

- **Continue progress towards full funding of plan liabilities**
  - Preference to mitigate potential declines in funded status
  - Staff, NEPC and GRS to evaluate appropriate thresholds vs. down market scenarios

- **Evaluate impact of any changes in assumptions or to Policy portfolio on required plan contributions**

QUANTITATIVE OBJECTIVES FROM 2019 STUDY

<u>SIC Goals</u>

Improving Fund sustainability and progressing towards a fully funded plan

- Maintain or improve probability of 100% funding ratio in 20 years

<u>Risk Constraints</u>

Achieve a more stable return path by managing and mitigating risks accordingly

- Limit the probability of funding level falling below 50% in next 5 years (current funding level 54%) to ~15%
- Limit the probability of a 2% absolute increase in employer contribution rate (expressed as a percentage of payroll) to ~25% in any given year within next 10 years
- Within 90% confidence, maintain at least 3x the annual benefit payment amount in assets with daily/weekly liquidity profile in a recessionary scenario

DRAFT ASSET/LIABILITY STUDY TIMELINE

- **We anticipate the full asset/liability study will take 4 to 5 months to complete.**
- **The schedule below provides a high-level overview of the steps involved and the estimated timing to complete each step.**

Step/Milestone	Timing
Kickoff – Capital Market Assumptions, Asset Class Opportunity Set, Return Target, Risk tolerance	Month 1
NEPC Coordinates with Plan Actuary on Data Needs	Month 1
NEPC Prepares Baseline Forecast Results	Month 2
Discuss Baseline Results and Alternative Portfolios	Month 2
NEPC Prepares Analysis of Alternative Portfolios	Month 3
Discuss Alternative Portfolios and Preliminary Findings	Month 3
NEPC and State of RI Staff Prepare Recommendation	Month 4
Final Recommendation Delivered to SIC	Month 4
Portfolio Implementation Discussion	Post-A/L Study

Note: Timing is estimated and subject to change.

NEPC DISCLOSURES

Past performance is no guarantee of future results.

All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.

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The opinions presented herein represent the good faith views of NEPC as of the publication date and are subject to change at any time.

This presentation contains summary information regarding the investment management approaches described herein but is not a complete description of the investment objectives, portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches.