

# **2025 Capital Market Assumptions**

# Santa Barbara County Employees' Retirement System

March 2025

PORTLAND BOISE CHICAGO NEW YORK

### **Capital Market Assumptions**

#### Philosophy

- Each year, RVK's general consulting and research teams collaborate to review the capital market environment and update long-term, forward-looking capital market (CM) expectations for each asset class utilized by our clients.
- The forecast horizon is for long-term periods, typically 10 years or more.
- The three (3) components we estimate include:
  - Return
  - Risk (volatility of returns)
  - Correlation (relationship of asset class returns with all other asset classes)
- Return assumptions are generally index-based, net of fees, and <u>assume no</u> <u>investment manager alpha</u>.
- Annual updates are typically gradual and incorporate historical performance, current valuations, as well as the overall economic environment.



### What does it mean to get CMAs "right"?

#### Relative accuracy is more important...

- **Relative Accuracy:** Assumptions capture the relative relationships between asset classes, which are vitally important to trade-off decisions when modeling.
  - Having some assumptions that are spot on, and others that are far off, will produce unbalanced and poorly diversified portfolios.

#### ...but "absolute" accuracy matters too – though perhaps not as much

- **Absolute Accuracy:** Assumptions reflect the absolute values actually experienced in future long-term market environments.
  - Having assumptions that are too high or too low across the board can cause a Plan to believe it can distribute more than it can afford or restrict spending more than necessary.



### **Themes for 2025 Capital Markets Assumptions**

- Past and future inflation levels are studied and considered given market conditions, break-even indications, sovereign intervention, and inflation component pricing behavior.
  - The 2025 inflation assumption remained unchanged at 2.5% to reflect the continued near-term uncertainty of inflation trajectory, while also accounting for longer-term deflationary factors such as deficits, debt, demographics, automation and globalization.
- Return decomposition models are run and examined in light of current and possible future market conditions.
  - Domestic equity return assumptions were decreased, driven by increased valuation levels and lower dividend yields following the strong market returns experienced in 2024. International equity return assumptions were mixed, with developed markets unchanged year-over-year while emerging markets decreased as earnings expectations, yields, and valuations worsened.
- Yield history, current environment, and prospective environments are considered.
  - Most fixed income return assumptions were increased, reflecting higher current yields and expectations for a "higher-for-longer" interest rate environment.

Asset Class	Return Expectation	Rationale
US Equity		Higher Valuations & Lower Yields
Non-US Equity	+	Higher Valuations & Lower Yields
Fixed Income	1	Higher Yields



#### **Building Block Methodology**

Approach: The sum of the building blocks equals expected return

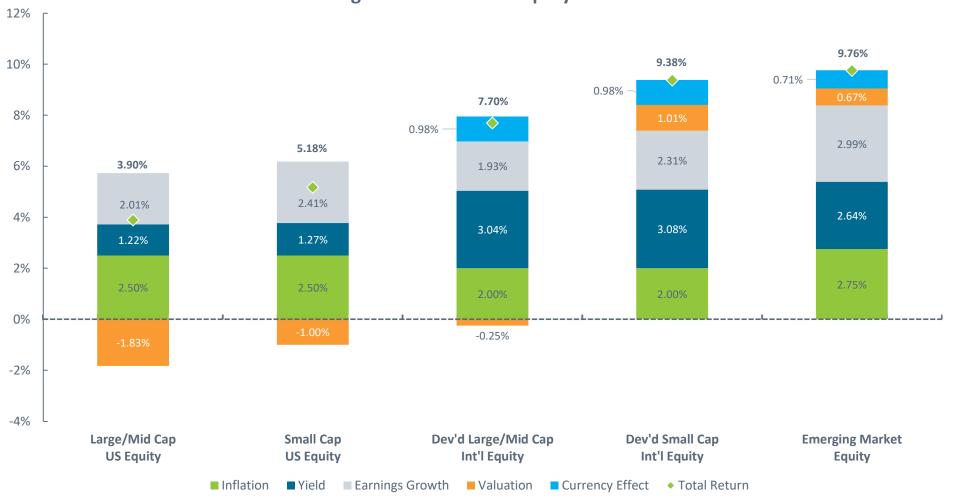


#### **Expected Return Building Blocks**

For illustrative purposes only. While the above factors generally inform the direction and magnitude of the capital market assumptions, RVK also considers qualitative, triangulation, and other factors as needed, when arriving at final assumption values. Real Growth includes GDP and profit margin growth.



#### **RVK Return Methodology for Equities**

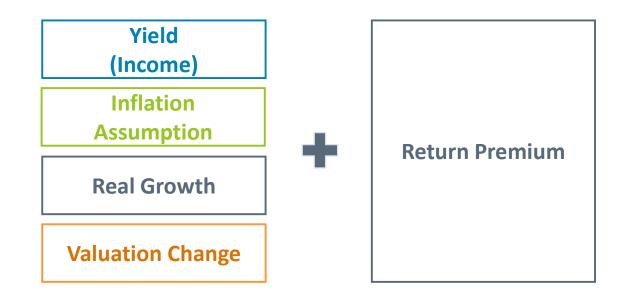


#### 2025 Decomposition of the Building Blocks for Public Equity Asset Classes



# **Build-Up/Spread Methodology**

**Output:** The sum of the building blocks equals expected return

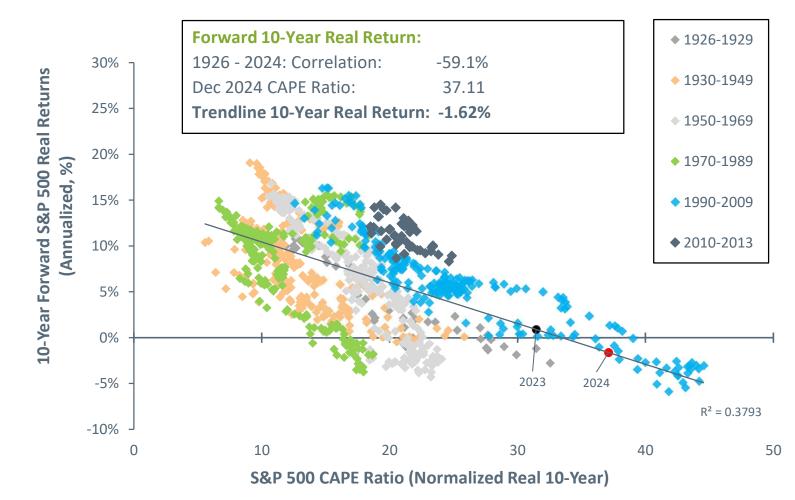


#### **Expected Return Inputs**

For illustrative purposes only. While the above factors generally inform the direction and magnitude of the capital market assumptions, RVK also considers qualitative, triangulation, and other factors as needed, when arriving at final assumption values. Real Growth includes GDP and profit margin growth.



### **US Equity Valuations**



#### Relationship between Shiller P/E and Forward 10-Year Returns

**Shiller P/E (S&P 500 CAPE Ratio)** – The cyclically adjusted price-to-earnings ratio is a valuation measure applied to the S&P 500 Index, which represents U.S. Large Cap Equities. It is defined as price divided by the average of ten years of earnings, adjusted for inflation. The ratio was invented by American economist Robert J. Shiller and is used to gauge whether the index is undervalued of overvalued by comparing the current market price to its inflation-adjusted historical earnings record.



RVK Broad US Equity assumption is a combination of 95.3% Large/Mid Cap US Equity and 4.7% Small Cap US Equity. Source: RVK, based on data from FactSet (2025). December 2024 CAPE ratio uses the S&P 500 earnings estimate for the Q4 2024. December 2023 CAPE Ratio: 31.34

## **US Fixed Income Valuations**

#### Relationship between YTW and Forward 10-Year Returns



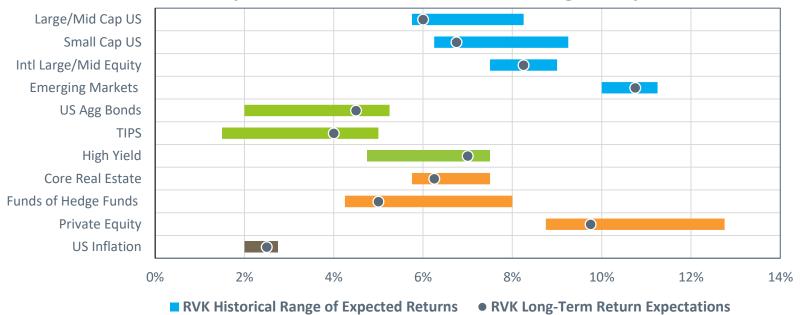
Barclays US Aggregate Bond Index YTW (Annualized)



### **Historical Perspective of Expected Returns**



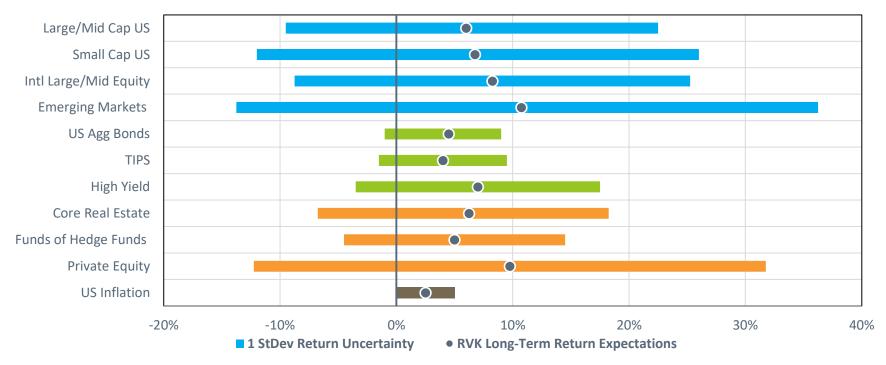
#### 2025 Expected Returns vs. RVK Historical Range of Expected Returns<sup>2</sup>



<sup>1</sup> Historical range shows the minimum and maximum 20-year annualized return for a given asset class based on monthly rolling 20-year annualized return series starting from Jan 1926. Large/Mid Cap US is represented by SBBI US Large Stock; Small Cap US by SBBI US Small Stock; US Int./Agg Bonds by SBBI US Intermediate Government Jan 1926 – December 1999 and Bloomberg US Aggregate Bond Index thereafter; US Inflation by SBBI US Inflation. <sup>2</sup> Data shown includes 2006 through 2025 Capital Market Assumptions for selected asset classes.



### **Range of Potential Outcomes for Expected Returns**

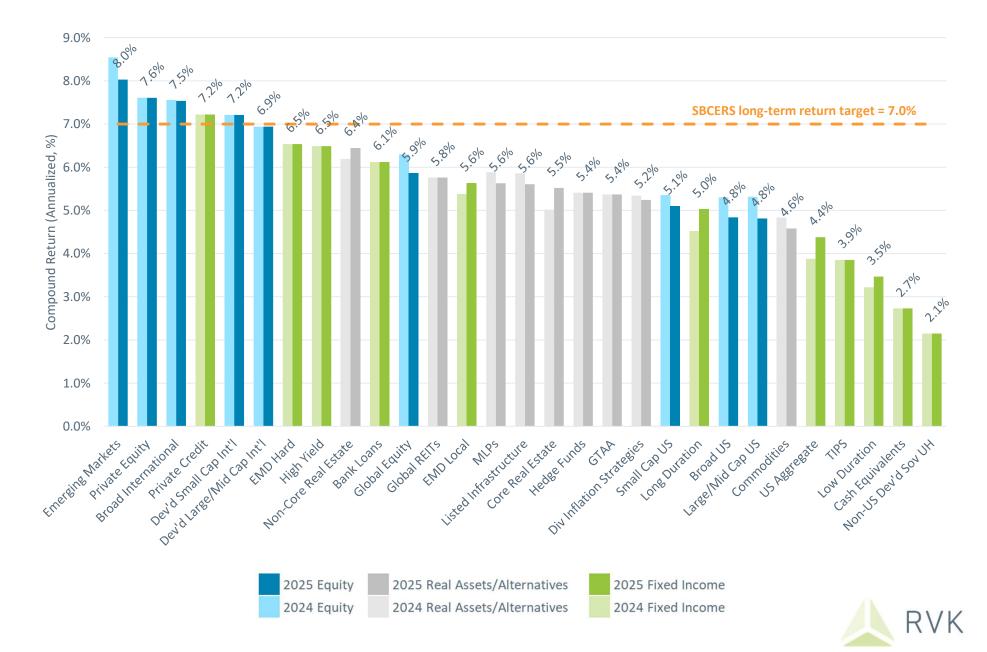


#### RVK 2025 Long-Term Expected Returns and Uncertainty of Returns Distribution

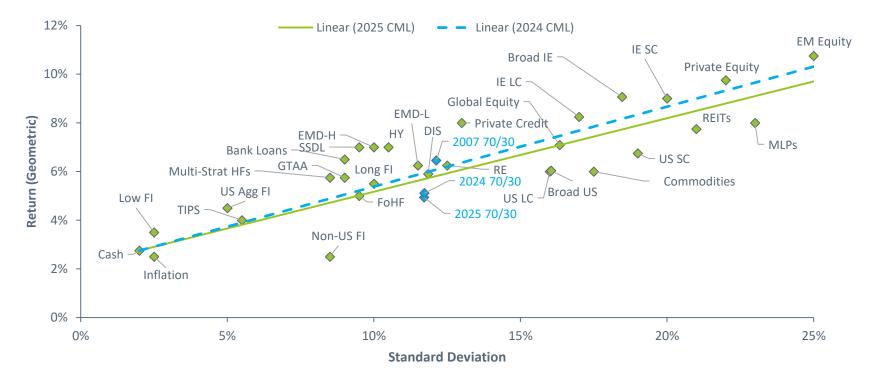


\* StDev return uncertainty is based on RVK 2025 CMA risk assumption for each asset class.

#### **Expected Compound Returns**



#### Capital Markets Line – 2025 vs. 2024

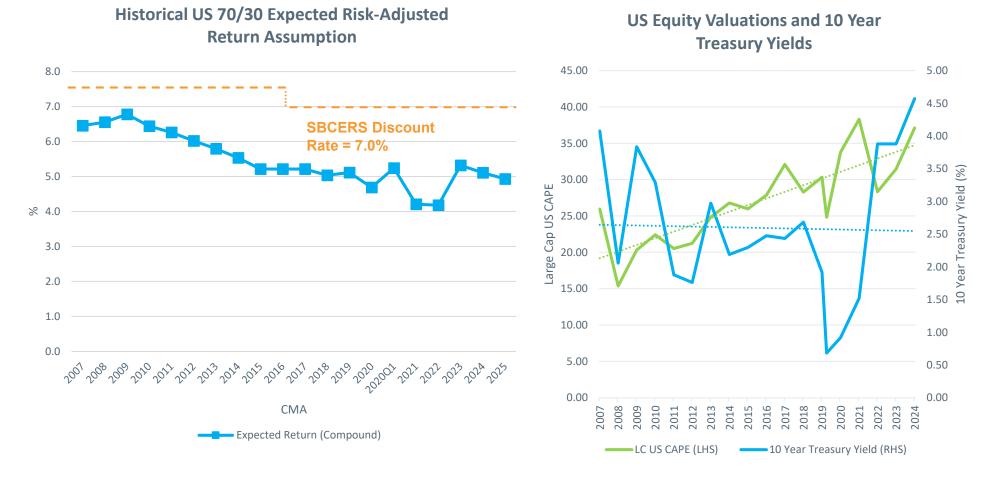


Data Labels	Asset Class	Data Labels	Asset Class
US LC	Large/Mid Cap US Equity	Low FI	Low Duration Fixed Income
US SC	Small Cap US Equity	Long FI	Long Duration Fixed Income
Broad US	Broad US Equity	HY	High Yield
IE LC	Dev'd Large/Mid Cap Int'l Equity	Private Credit	Private Credit
IE SC	Dev'd Small Cap Int'l Equity	SSDL	Senior Secured Direct Lending
EM Equity	Emerging Markets Equity	Bank Loans	Bank Loans
Broad IE	Broad International Equity	RE	Core Real Estate
Global Equity	Global Equity	REITS	Global REITs
2025 70/30	2025 Assumption 70/30 US Equity/FI	MLPs	MLPs
2024 70/30	2024 Assumption 70/30 US Equity/FI	FoHF	Funds of Hedge Funds
2007 70/30	2007 Assumption 70/30 US Equity/FI	Multi-Strat HFs	Multi-Strategy Hedge Funds
US Agg FI	US Aggregate Fixed Income	GTAA	GTAA
Non-US FI	Non-US Dev'd Sovereign Fixed Income UH	Private Equity	Private Equity
		Commodities	Commodities
EMD-H	Emerging Markets Debt Hard Currency	DIS	Diversified Inflation Strategies
EMD-L	Emerging Markets Debt Local Currency	Inflation	US Inflation
TIPS	TIPS	Cash	Cash Equivalents



Capital Markets Line is based on risk and return assumptions for Cash and Global Equity.

#### **Traditional 70/30 Return Expectations over Time**



	2014	2024	10 Year Difference
10 Year Treasury Yield (%)	2.17	4.58	+2.41
Large/Mid Cap US Equity Valuations (CAPE Ratio)	26.79	37.11	+10.32

Historical US 70/30 assumptions consist of 70% Broad US Equity and 30% US Aggregate Fixed Income. SBCERS reduced its Discount Rate from 7.5% to 7.0% in 2016. The CAPE (Cyclically Adjusted Price-to-Earnings) Ratio is a valuation measure defined as: *CAPE Ratio = (Share Price) / (10 Year Average, Inflation-Adjusted Earnings)* 



#### Factors to keep in mind when evaluating assumptions

- While excessively high capital market assumptions provide the hope of higher rates of expected return, this prospect may not actually materialize if the market environment is not supportive and can often lead to suboptimal portfolio structures.
- A well-structured and executed investment program will be best positioned to benefit from the available market returns *regardless of the forecasts for total return*.
- Well-structured asset allocations (and the resulting outcomes) are largely produced by the relative accuracy of assumptions, not simply by forecasting higher absolute returns.



### **SBCERS 2025 Capital Market Assumptions**

		2(	)24		2025				Change (2025 – 2024)			
Asset Class	Nominal Return (Geo.)	Risk (St. Dev)	Nominal Return (Arith.)	Return/ Risk Ratio (Geo.)	Nominal Return (Geo.)	Risk (St. Dev)	Nominal Return (Arith.)	Return/ Risk Ratio (Geo.)	Nominal Return (Geo.)	Risk (St. Dev)	Nominal Return (Arith.)	Return/ Risk Ratio (Geo.)
Broad US Equity	5.30	16.10	6.50	0.33	4.84	16.04	6.04	0.30	-0.46	-0.06	-0.46	-0.03
Developed Int'l Equity	6.94	17.00	8.25	0.41	6.94	17.00	8.25	0.41	-	-	-	-
EM Equity	8.54	25.00	11.25	0.34	8.03	25.00	10.75	0.32	-0.51	-	-0.50	-0.02
Core FI	3.88	5.00	4.00	0.78	4.38	5.00	4.50	0.88	0.50	-	0.50	0.10
Non-Core Fl	6.46	7.56	6.73	0.85	6.48	7.64	6.76	0.85	0.02	0.08	0.03	-
Real Return	6.30	8.63	6.65	0.73	6.49	9.65	6.93	0.67	0.19	1.02	0.28	-0.06
Real Estate	5.73	15.09	6.79	0.38	6.14	15.41	7.23	0.40	0.41	0.32	0.44	0.02
Private Equity	7.61	22.00	9.75	0.35	7.61	22.00	9.75	0.35	-	-	-	-
Total Fund	6.47	10.69	7.00	0.61	6.52	10.75	7.05	0.61	0.05	0.06	0.05	-

#### Drivers of Year-over-Year Changes to Custom Assumptions:

- Non-Core Fixed Income: Changes to expected risk and return were minimal.
- **Real Return:** Return assumption increased and risk assumption increased due to the new private/public assets split of 75%/25% (previously 60%/40%).
- **Real Estate:** Return assumption increased and risk assumption increased due to an increased allocation to non-core real estate compared to last year (46% to 49%).

Favorable change relative to 2024 Unfavorable change relative to 2024



#### **SBCERS' FY Returns Since Discount Rate Revision**



SBCERS Fiscal Year Returns Relative to RVK Assumptions and Assumed Actuarial Rate

\*9-Yr Average of 7.62% represents the annualized return for FY2016-FY2024. FYTD 2025 return is as of 01/31/2025.



## Appendix

## **Summary of Expected Return Methodology**

Building Block Methodology	Yield Inflation Real Valuation   Growth Change								
Cash Equivalents	Income								
Fixed Income	Income + OAS change + Expected interest rate changes (and duration impact)								
TIPS	Real Income + Inflation								
Public Equity	Income + Inflation + Real GDP/earnings growth + / - Valuation								
Core Real Estate	Income + Inflation + / - Valuation – Investment fees								
Hedge Funds	Income (collateral return, cash) + Beta return + Alpha return								
Commodities	Collateral return (cash assumption) + Spot return (inflation assumption) + Roll return								

Build-Up/Spread Methodology	Beta assumption	+	Illiquidity premium				
Private Credit	Bank loan assumption + Return premium						
Private Equity	US large/mid cap equity assumption + Return premium						

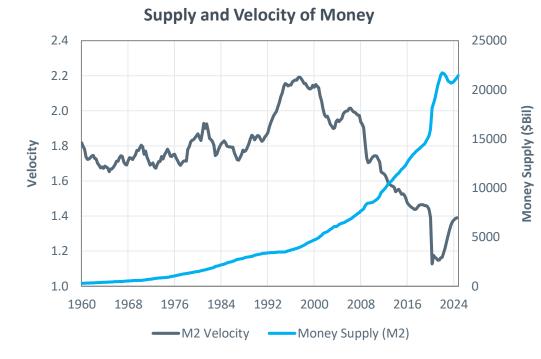
Asset Blend Methodology	
GTAA	30% global equity + 25% US Agg fixed income + 5% int'l developed fixed income + 10% EMD (local) + 10% TIPS + 10% high yield + 10% commodities
Diversified Inflation Strategies	1/3 TIPS + 1/3 commodities + 1/3 global REITs

While the above factors generally inform the direction and magnitude of the capital market assumptions, RVK also considers qualitative, triangulation, and other factors as needed, when arriving at final assumption values.



# **US Inflation & Cash Equivalents**

US Inflation & Cash Equivalents										
		2024			2025			One Year Adjustment		
Asset Class	Nominal Return	Risk (StDev)	Nominal Return (Geo.)	Nominal Return	Risk (StDev)	Nominal Return (Geo).	Nominal Return	Risk (StDev)	Nominal Return (Geo.)	
US Inflation	2.50%	2.50%	2.47%	2.50%	2.50%	2.47%				
Cash Equivalents	2.75%	2.00%	2.73%	2.75%	2.00%	2.73%				



- The inflation assumption remained unchanged, balancing the uncertainty of near-term inflationary pressures and long-term deflationary factors.
- The cash assumption maintained a positive real return and was unchanged.

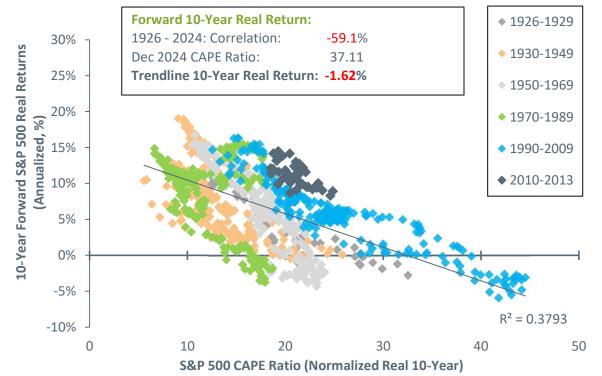
As of December 31, 2024	5-Year	7-Year	10-Year	20-Year	30-Year
Treasury Yield	4.38%	4.48%	4.58%	4.86%	4.78%
TIPS Yield	2.00%	2.13%	2.24%	2.41%	2.48%
Implied Expected Inflation	2.38%	2.35%	2.34%	2.45%	2.30%



## **Public Equity – Domestic**

	Public Equity: US										
		2024			2025		One	Year Adjustn	nent		
Asset Class	Nominal Return	Risk (StDev)	Nominal Return (Geo.)	Nominal Return	Risk (StDev)	Nominal Return (Geo).	Nominal Return	Risk (StDev)	Nominal Return (Geo.)		
Large/Mid Cap US	6.50%	16.00%	5.32%	6.00%	16.00%	4.81%	-0.50%		-0.51%		
Small Cap US	7.00%	19.00%	5.35%	6.75%	19.00%	5.10%	-0.25%		-0.25%		
Broad US Equity	6.50%	16.10%	5.30%	6.04%	16.04%	4.84%	-0.46%	-0.06%	-0.46%		

#### **Relationship between Valuations and Forward 10 Year Returns**



- US equity return forecasts all decreased relative to 2024.
- The decrease was mostly driven by elevated valuations, as domestic equities rallied in 2024 supported by strong consumer spending, technology (AI) developments and prospects of near-term monetary easing.
- Year-end LC US valuation, as represented by the Shiller CAPE ranked in the 98<sup>th</sup> percentile of historical values going back to 1926.
  - Thus, return assumptions remain lower than historical averages.



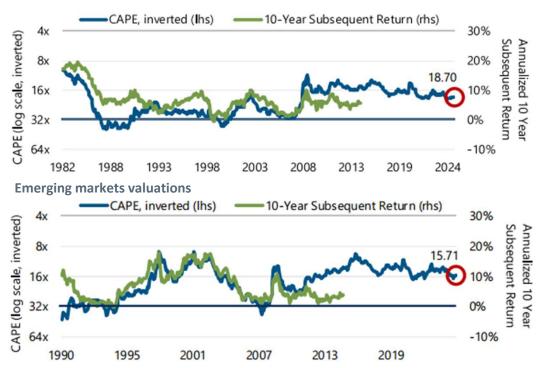
RVK Broad US Equity assumption is a combination of 95.3% Large/Mid Cap US Equity and 4.7% Small Cap US Equity. Source: RVK, based on data from FactSet (2025). December 2024 CAPE ratio uses the S&P 500 earnings estimate for the Q4 2024.

### **Public Equity – International**

	Public Equity: International										
		2024	_		2025		One	Year Adjustn	nent		
Asset Class	Nominal Return	Risk (StDev)	Nominal Return (Geo.)	Nominal Return	Risk (StDev)	Nominal Return (Geo).	Nominal Return	Risk (StDev)	Nominal Return (Geo.)		
Intl Large/Mid Equity	8.25%	17.00%	6.94%	8.25%	17.00%	6.94%					
Intl Dev'd Small Cap	9.00%	20.00%	7.21%	9.00%	20.00%	7.21%					
Emerging Markets	11.25%	25.00%	8.54%	10.75%	25.00%	8.03%	-0.50%		-0.51%		
Broad International	9.15%	18.85%	7.56%	9.07%	18.47%	7.54%	-0.08%	-0.38%	-0.02%		

#### Valuations: Cyclically-adjusted P/E

**EAFE valuations** 



- Developed international equity assumptions were unchanged due to offsetting factors of improved dividend yields as well as inflation and currency expectations paired with deteriorating real growth/earnings expectations and higher valuations.
  - The emerging markets return assumption was decreased due to lower real growth/earnings expectations, lower dividend yields and higher valuations.

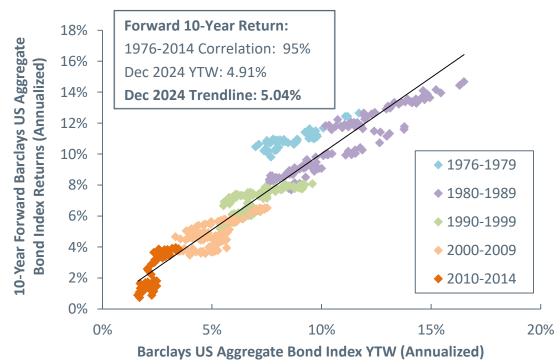
RVK Broad International Equity is a mix of 60.5% Dev'd Large/Mid Cap Int'l Equity, 9.7% Dev'd Small Cap Int'l Equity, and 29.8% Emerging Markets Equity. Source: Research Affiliates (RA); EAFE valuations represented by MSCI EAFE CAPE calculations by RA since December 1982; EM represented by MSCI EM CAPE calculations by RA since Jan 1990. Data as of December 31, 2024.



### **Fixed Income**

	Fixed Income										
		2024			2025		One	Year Adjustr	nent		
Asset Class	Nominal Return	Risk (StDev)	Nominal Return (Geo.)	Nominal Return	Risk (StDev)	Nominal Return (Geo).	Nominal Return	Risk (StDev)	Nominal Return (Geo.)		
US Aggregate	4.00%	5.00%	3.88%	4.50%	5.00%	4.38%	+0.50%		+0.50%		
Non-US Dev. Sovereign	2.50%	8.50%	2.15%	2.50%	8.50%	2.15%					
Low Duration	3.25%	2.50%	3.22%	3.50%	2.50%	3.47%	+0.25%		+0.25%		
Long Duration	5.00%	10.00%	4.53%	5.50%	10.00%	5.03%	+0.50%		+0.50%		
TIPS	4.00%	5.50%	3.85%	4.00%	5.50%	3.85%					

#### **Relationship between YTW and Forward 10 Year Returns**



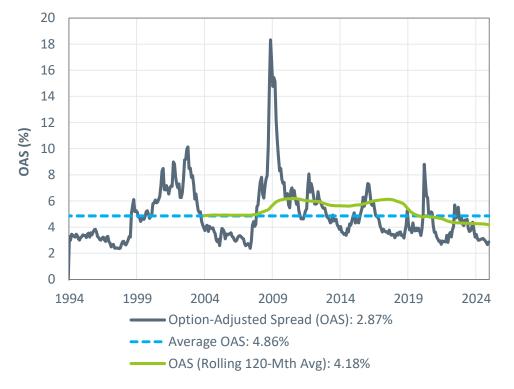
- The starting bond yield has historically been a reasonable starting point when forecasting future bond returns.
- Domestic fixed income return assumptions were increased, reflecting increased yields and somewhat offsetting spread changes, as well as the expectation that the inverted yield curve will normalize over time but remain "higher for longer" overall.
- Duration changes were generally nominal and thus did not have material impacts on return forecasts.



### **Fixed Income – Spread Assets**

Fixed Income: Spread Sectors										
		2024			2025		One Year Adjustment			
Asset Class	Nominal Return	Risk (StDev)	Nominal Return (Geo.)	Nominal Return	Risk (StDev)	Nominal Return (Geo).	Nominal Return	Risk (StDev)	Nominal Return (Geo.)	
High Yield	7.00%	10.50%	6.49%	7.00%	10.50%	6.49%				
Emerging Markets Debt (HC)	7.00%	10.00%	6.54%	7.00%	10.00%	6.54%				
Emerging Markets Debt (LC)	6.00%	11.50%	5.38%	6.25%	11.50%	5.63%	+0.25%		+0.25%	
Bank Loans	6.50%	9.00%	6.12%	6.50%	9.00%	6.12%				

#### BB US Corporate High Yield Index Option-Adjusted Spread (OAS)



- Bank loans return assumption was kept constant as tightening spreads were offset by starting yields remaining elevated relative to long-term averages.
- Increased starting yields and currency valuation for emerging markets debt (LC) led to an increase in the return assumption.
- High yield and emerging markets debt (HC) were left unchanged.



Source: FactSet (2025). Data as of 12/31/2024.

#### **SBCERS 2025 Custom Real Return Structure**

Weighti	ng	Asset Class	Index	Expected Arithmetic Return	Expected Risk	Expected Geometric Return
Private	48%	Private Core Infrastructure	S&P Global Infrastructure	7.25%	15.00%	6.22%
Assets (75%)	27%	Private Natural Resources	45% Alerian MLP/ 39% NCREIF Farmland/ 16% S&P Global NR	7.30%	13.71%	6.43%
Public Assets (25%)	25%	Diversified Inflation Strategies	33.3% Bloomberg US TIPS/33.3% Bloomberg Commodity/33% MSCI Global Real Estate (Gross)	5.90%	11.85%	5.24%
Total				6.93%	9.65%	6.49%

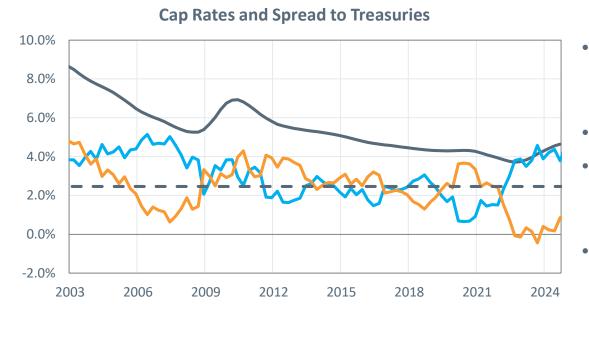
• A Real Return Structure Study was conducted in 2024, and the structural changes to the Real Return assumption was to adjust the 60%/40% private and public assets target split to 75%/25%, and removal of the TIPS allocation.

Arithmetic Return Assumption:**6.93%**Geometric Return Assumption:**6.49%**Standard Deviation Assumption:**9.65%** 



#### **Real Estate**

Real Estate										
Asset Class	2024				2025		One Year Adjustment			
	Nominal Return	Risk (StDev)	Nominal Return (Geo.)	Nominal Return	Risk (StDev)	Nominal Return (Geo).	Nominal Return	Risk (StDev)	Nominal Return (Geo.)	
Core Real Estate	5.75%	12.50%	5.02%	6.25%	12.50%	5.52%	+0.50%		+0.50%	
Non-Core Real Estate	8.00%	20.00%	6.19%	8.25%	20.00%	6.45%	+0.25%		+0.25%	
Global REITs	7.75%	21.00%	5.76%	7.75%	21.00%	5.76%				

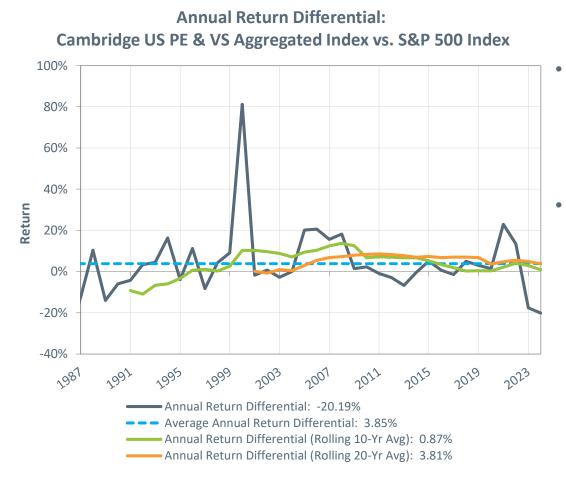


- The core real estate return assumption was increased, due to improved valuations and increased income yields.
- Cap rates increased modestly in 2024.
- However, on a relative basis spreads over Treasuries remained well below long-term averages.
- The global REITs assumption remained unchanged as yields and valuations did not significantly change.



## **Private Equity**

Private Equity									
	2024			2025			One Year Adjustment		
Asset Class	Nominal Return	Risk (StDev)	Nominal Return (Geo.)	Nominal Return	Risk (StDev)	Nominal Return (Geo).	Nominal Return	Risk (StDev)	Nominal Return (Geo.)
Private Equity	9.75%	22.00%	7.61%	9.75%	22.00%	7.61%			



- The Private Equity return assumption was unchanged relative to 2024 due to offsetting factors – a decreased return assumption for US Large/Mid Cap and an increased premium assumption.
- Our illiquidity premium assumption increased to 275 basis points (geometric) above Large/Mid Cap US Equities, due to a variety of factors including the changing characteristics of the public market reference index.



### **Custom Assumption Definitions**

Custom No	Custom Non-Core Fixed Income							
<b>SBCERS</b> Ta	rget Structure	RVK Assumption Index						
45.0%	Private Credit (Senior Secured Direct Lending)	Cambridge Private Credit Index						
25.0%	EMD Blend	50% JPM GBI EM Global Div./50% JPM EMBI Global Div.						
30.0%	Bank Loans	S&P USB Leveraged Loan						
100.0%								

Custom Real Return							
<b>SBCERS</b> Tai	rget Structure	RVK Assumption Index					
25.0%	Diversified Inflation Strategies	33.3% Bloomberg US TIPS/33.3% Bloomberg Cmdty/33.3% MSCI Gbl Real Estate (Gross)					
48.0%	Private Infrastructure	S&P Global Infrastructure					
27.0%	Private Natural Resources	45% Alerian MLP/39% NCREIF Farmland/16% S&P Global NR					
100.0%							

Custom Real Estate					
<b>SBCERS</b> Tai	rget Structure	RVK Assumption Index			
51.0%	Core Real Estate	NCREIF ODCE (Gross) (AWA)			
49.0%	Non-Core Real Estate	Preqin Non-Core Real Estate			
100.0%					

- Custom Non-Core Fixed Income: Targets are based on the current approved structure for Non-Core Fixed Income.
- Custom Real Return: Targets to public assets (25%) and private assets (75%) are based on the current approved structure for Real Return. The targets to Private Infrastructure and Private Natural Resources are based on the current Hamilton Lane allocation to these respective asset classes.
- Custom Real Estate: Targets are based on the current Hamilton Lane allocations to these respective asset classes.



### **RVK 2025 Assumptions vs 2024**

			2024			2025		Change		
Asset Class	Benchmark	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)
Large/Mid Cap US Equity	S&P 500 (Cap Weighted)	6.50%	16.00%	5.32%	6.00%	16.00%	4.81%	-0.50%	0.00%	-0.51%
Small Cap US Equity	Russell 2000	7.00%	19.00%	5.35%	6.75%	19.00%	5.10%	-0.25%	0.00%	-0.25%
Broad US Equity	Russell 3000	6.50%	16.10%	5.30%	6.04%	16.04%	4.84%	-0.46%	-0.06%	-0.46%
Dev'd Large/Mid Cap Int'l Equity	MSCI EAFE (Gross)	8.25%	17.00%	6.94%	8.25%	17.00%	6.94%	0.00%	0.00%	0.00%
Dev'd Small Cap Int'l Equity	MSCI EAFE Small Cap (Gross)	9.00%	20.00%	7.21%	9.00%	20.00%	7.21%	0.00%	0.00%	0.00%
Emerging Markets Equity	MSCI Emerging Markets (Gross)	11.25%	25.00%	8.54%	10.75%	25.00%	8.03%	-0.50%	0.00%	-0.51%
Broad International Equity	MSCI ACW Ex US IMI (Gross)	9.15%	18.85%	7.56%	9.07%	18.47%	7.54%	-0.08%	-0.38%	-0.02%
Global Equity	MSCI ACW IMI (Gross)	7.55%	16.60%	6.29%	7.09%	16.34%	5.86%	-0.46%	-0.26%	-0.43%
US Aggregate Fixed Income	Bloomberg US Aggregate Bond	4.00%	5.00%	3.88%	4.50%	5.00%	4.38%	0.50%	0.00%	0.50%
Non-US Dev'd Sov'n Fixed Income UH	Citi Non-US World Gov't Bond	2.50%	8.50%	2.15%	2.50%	8.50%	2.15%	0.00%	0.00%	0.00%
Emerging Markets Debt Hard Currency	JPM EMBI Global Diversified	7.00%	10.00%	6.54%	7.00%	10.00%	6.54%	0.00%	0.00%	0.00%
Emerging Markets Debt Local Currency	JPM GBI EM Global Diversified	6.00%	11.50%	5.38%	6.25%	11.50%	5.63%	0.25%	0.00%	0.25%
TIPS	Bloomberg US Treasury: US TIPS	4.00%	5.50%	3.85%	4.00%	5.50%	3.85%	0.00%	0.00%	0.00%
Low Duration Fixed Income	Bloomberg US Gov't/Cred: 1-3 Year	3.25%	2.50%	3.22%	3.50%	2.50%	3.47%	0.25%	0.00%	0.25%
Long Duration Fixed Income	Bloomberg US Gov't/Cred: LT Bond	5.00%	10.00%	4.53%	5.50%	10.00%	5.03%	0.50%	0.00%	0.50%
High Yield	Bloomberg US Corp: High Yield	7.00%	10.50%	6.49%	7.00%	10.50%	6.49%	0.00%	0.00%	0.00%
Bank Loans	CS Leveraged Loan	6.50%	9.00%	6.12%	6.50%	9.00%	6.12%	0.00%	0.00%	0.00%
Core Real Estate	NCREIF ODCE (Gross) (AWA)	5.75%	12.50%	5.02%	6.25%	12.50%	5.52%	0.50%	0.00%	0.50%
Global REITs	MSCI World Real Estate (Gross)	7.75%	21.00%	5.76%	7.75%	21.00%	5.76%	0.00%	0.00%	0.00%
MLPs	Alerian MLP	8.25%	23.00%	5.89%	8.00%	23.00%	5.63%	-0.25%	0.00%	-0.26%
Funds of Hedge Funds	HFRI Fund of Funds Composite	5.00%	9.50%	4.57%	5.00%	9.50%	4.57%	0.00%	0.00%	0.00%
Multi-Strategy Hedge Funds	HFRI RV Multi-Strat	5.75%	8.50%	5.41%	5.75%	8.50%	5.41%	0.00%	0.00%	0.00%
GTAA	Custom GTAA Index	5.75%	9.00%	5.37%	5.75%	9.00%	5.37%	0.00%	0.00%	0.00%
Private Credit	Cambridge Private Credit Index	8.00%	13.00%	7.23%	8.00%	13.00%	7.23%	0.00%	0.00%	0.00%
Senior Secured Direct Lending		7.00%	9.50%	6.58%	7.00%	9.50%	6.58%	0.00%	0.00%	0.00%
Private Equity	Cambridge US Private Equity	9.75%	22.00%	7.61%	9.75%	22.00%	7.61%	0.00%	0.00%	0.00%
Commodities	Bloomberg Commodity	6.25%	17.50%	4.84%	6.00%	17.50%	4.58%	-0.25%	0.00%	-0.25%
Diversified Inflation Strategies	Custom DIS Index	6.00%	11.85%	5.34%	5.90%	11.85%	5.24%	-0.10%	0.00%	-0.10%
US Inflation	Consumer Price Index	2.50%	2.50%	2.47%	2.50%	2.50%	2.47%	0.00%	0.00%	0.00%
Cash Equivalents	BofA ML 3 Mo US T-Bill	2.75%	2.00%	2.73%	2.75%	2.00%	2.73%	0.00%	0.00%	0.00%



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