

San Jose Federated City Employees' Retirement System

Board of Trustees Meeting

May 21, 2026

2026 Capital Markets Expectations

Executive Summary

- Changes in our capital markets expectations (CMEs) are driven by shifts in the capital markets, including factors such as interest rates, credit spreads, cap rates, and equity prices.
 - Capital markets are dynamic, and regular updates help to ensure that assumptions accurately reflect the current market environment.
- Due primarily to higher equity valuations and modestly lower interest rates, our return assumptions decreased for ~80% of the asset classes over the 10-year horizon, and it decreased for nearly 90% of the asset classes over the 20-year horizon.
- Our 10-year CMEs continue to be lower than our 20-year CMEs for every major asset class, largely due to the market projecting a higher “risk-free” rate in the future than today.
 - Our lower return assumptions over the 10-year horizon implies that many investors might be well served by moderating their return expectations for the next ten years.
- Using our updated CMEs, the Federated Retirement Plan's 20-year expected return declined 50 basis points with this year's new capital markets expectations, from 8.6% to 8.1%. Standard deviation, as measured by Verus/Cerity, increased 50 basis points.
- We do not recommend changing asset allocation in response to the change in CMEs, especially because the return expectations remain well above the actuarial assumed return.

Expected Return and Changes for Major Asset Classes

Asset Class	2026 10-year Expected Return (%)	Δ From 2025 (%)	2026 20-year Expected Return (%)	Δ From 2025 (%)
Cash Equivalents	2.8	0.0	3.1	0.0
Investment Grade Bonds	4.2	-0.7	4.9	-0.4
Long-term Government Bonds	4.5	-0.5	5.1	-0.6
TIPS	3.8	-0.5	4.7	-0.3
High Yield Bonds	5.4	-0.9	6.6	-0.5
Bank Loans	5.6	-0.7	6.4	-0.4
Emerging Market Debt	5.7	-0.6	6.4	-0.4
Private Debt	7.8	-0.9	8.2	-0.9
US Equity	6.3	-0.1	8.0	-0.4
Developed Non-US Equity	6.2	-1.0	7.9	-0.8
Emerging Non-US Equity	6.2	-0.9	8.0	-0.7
Global Equity	6.3	-0.3	8.0	-0.5
Private Equity	9.0	-0.8	10.2	-1.0
Real Estate	7.1	+0.2	8.3	-0.2
Infrastructure	7.5	+0.3	9.0	-0.2
Commodities	5.0	-0.5	5.4	-0.5
Hedge Funds	3.8	-0.4	5.7	-0.3
Inflation	2.3	0.0	2.7	0.0

Setting Capital Market Expectations

- CMEs are the inputs needed to determine the long-term risk and returns expectations for a portfolio.
 - They serve as the starting point for determining asset allocation.
- Investors generally set them once a year.
 - Our results are published in January and based on data as of December 31 for public markets and September 30 for private markets.
- Setting CMEs involves crafting long-term forecasts for:
 - Returns
 - Standard Deviation
 - Correlations (i.e., covariance)
- We do not assume any “alpha.”
- For asset classes where there is no passive option (e.g., private markets) we include an assumption for estimated fees.
- Our process relies on both quantitative and qualitative methodologies.

Building 10-Year Forecasts

→ Our first step is to develop 10-year forecasts based on fundamental models.

- Each model is based on the most important factors that drive returns for that asset class:

Asset Class Category	Major Factors
Equities	Dividend Yield, Earnings Growth, Valuation
Bonds	Yield to Worst, Default Rate, Recovery Rate
Commodities	Collateral Yield, Roll Yield, Inflation
Infrastructure	Public IS Valuation, Income, Growth, Leverage
Natural Resources	Price per Acre, Income, Public Market Valuation
Real Estate	Cap Rate, Yield, Growth, Leverage
Private Equity	EBITDA Multiple, Leverage, Public VC Valuation
Hedge Funds and Other	Leverage, Alternative Betas

→ The common components are income, growth, and valuation.

- Leverage and currency impact are also key factors for many strategies.

10-Year Model Example: Bonds

→ The short version for investment grade bond models is:

$$E(R) = \text{Current YTW (yield to worst)}$$

→ Our models assume that there is a reversion to the mean for spreads (though not yields).

→ For TIPS, we add the real yield of the TIPS index to the breakeven inflation rate.

→ As with equities, we make currency adjustments when necessary for foreign bonds.

→ For bonds with credit risk, Meketa Investment Group estimates default rates and loss rates in order to project an expected return:

$$E(R) = YTW - (\text{Annual Default Rate} \times \text{Loss Rate})$$

10-Year Model Example: Equities

→ We use a fundamental model for equities that combines income and capital appreciation.

$$E(R) = \text{Dividend Yield} + \text{Expected Earnings Growth} + \text{Valuation Effect} + \text{Currency Effect}$$

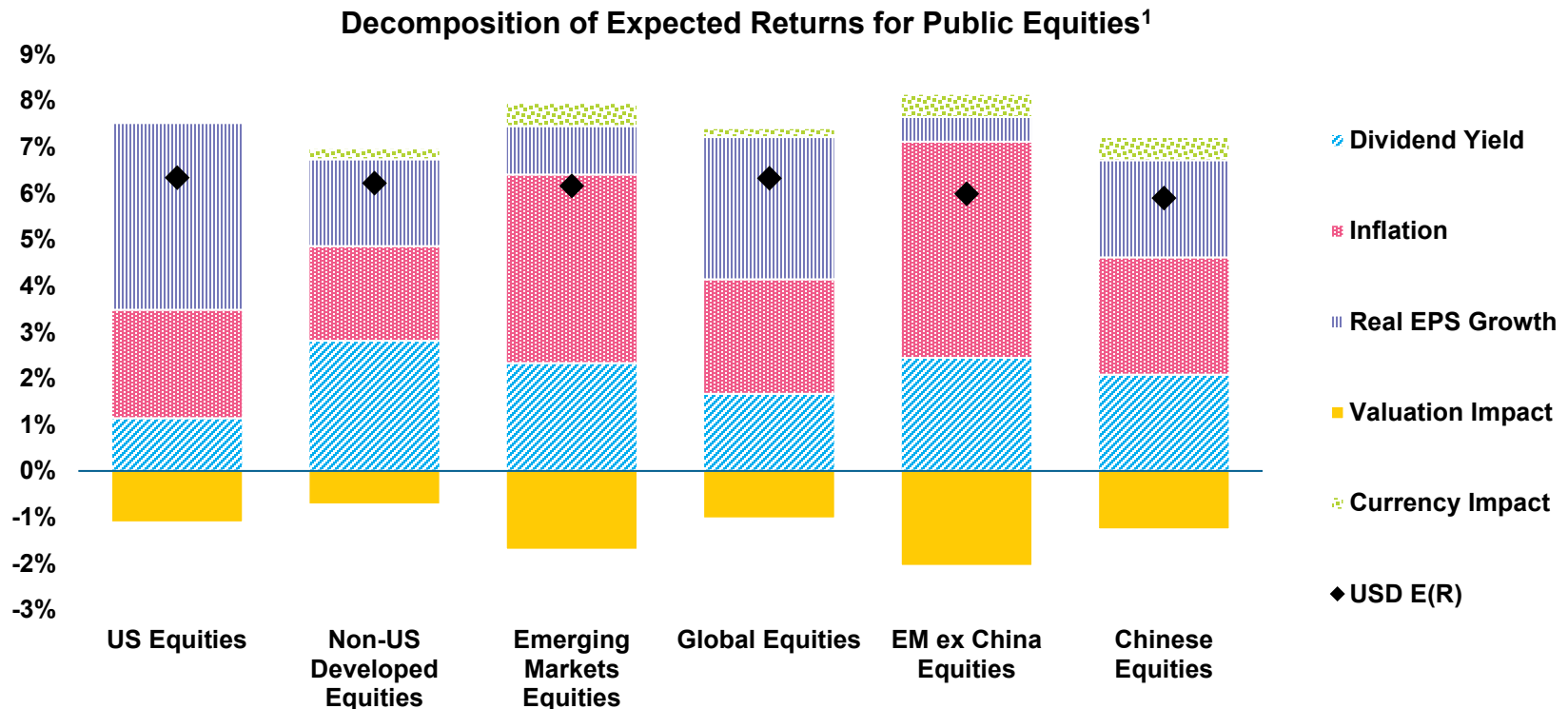
→ Meketa evaluates historical data to develop expectations for dividend yield, earnings growth, the multiple effect, and currency effect.

- Earnings growth is a function of real GDP growth, inflation, and exposure to foreign revenue sources.
- We assume that long-term earnings growth is linked to economic growth.
- However, many factors can cause differences between economic growth and EPS growth.

→ Our models assume that there is a reversion toward mean pricing over this time frame.

Building Blocks Example: Equities

- Earnings growth (composed of real EPS growth and inflation) is typically the main driver of expected return.
- Valuations can serve as a headwind or tailwind, depending on current market conditions.
- Currency movements can also be additive or detractive to expected returns for non-US equities.



¹ Source: Meketa analysis of MSCI and Bloomberg data.

Moving from 10-Year to 20-Year Forecasts

- Our next step is to combine our 10-year forecasts with projections for years 11-20 for each asset class.
- We use a risk premium approach to forecast 10-year returns in ten years (i.e., years 11-20).
 - We start with an assumption (market informed, specifically the projected 10-year forward rate) for what the risk-free rate will be in ten years.
 - We then add a risk premium for each asset class.
 - We use historical risk premia as a guide, but many asset classes will differ from this, especially if they have a shorter history.
 - We seek consistency with finance theory (i.e., riskier assets will have a higher risk premia assumption).
- Essentially, we assume mean-reversion over the first ten years (where appropriate), and consistency with CAPM thereafter.
- The final step is to make any qualitative adjustments.
 - The Investment Policy Committee reviews the output and may make adjustments.

The Other Inputs: Standard Deviation and Correlation

Standard Deviation:

- We review the trailing twenty-year standard deviation, as well as skewness.
- Historical standard deviation serves as the base for our assumptions.
- If there is a negative skew, we increased the volatility assumption based on the size of the historical skewness.
- We also adjust for private market asset classes with “smoothed” return streams.

Correlation:

- We use trailing twenty-year correlations as our guide.
- Again, we make adjustments for “smoothed” return streams.
- Most of our adjustments are conservative in nature (i.e., they increase the standard deviation and correlation).
 - Bitcoin is the current exception, where we have decreased volatility relative to its full history.
- Note that we also offer CMEs that do not de-smooth private market return streams.

¹ Note that we round our standard deviation assumptions to whole numbers.

What is Driving the Changes from Last Year?

- Interest rates declined, decreasing yields and hence expected returns for higher quality bonds.
- Credit spreads tightened slightly, further lowering yields for riskier fixed income assets.
- Lower yields benefitted several asset classes that rely on leverage, particularly real estate and infrastructure.
- Equity market valuations moved higher, especially outside the US, thus reducing their forward-looking returns.
- Relative valuations for private equity, which are quite lagged, are acting as a headwind in that asset class.
- Lower anticipated long-term interest rates serve to decrease our 20-year projections.
 - The bridge from 10 to 20 years is made via a risk premium being added to a (lower) future risk-free rate.
 - The market projection for the 10-year risk-free rate declined from 5.42% to 5.30%.

Lower Yields

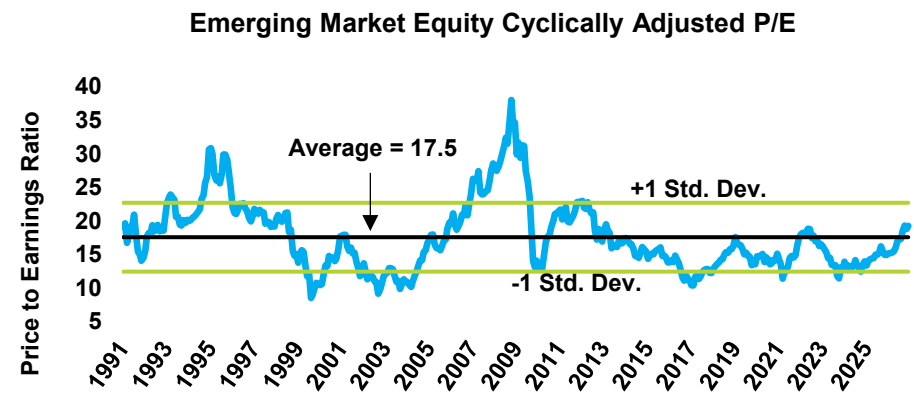
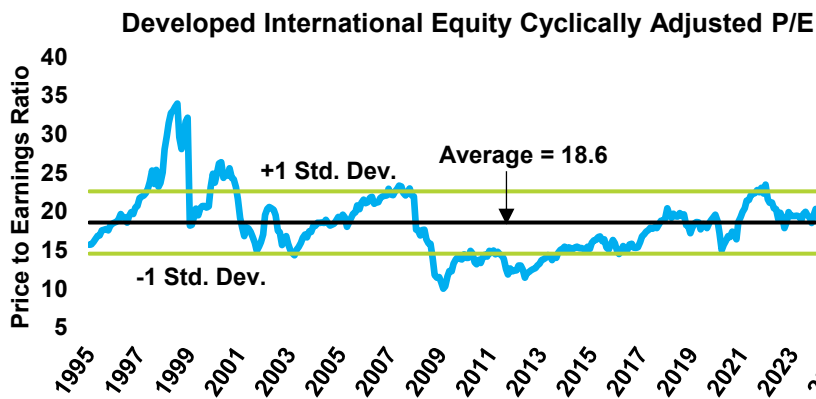
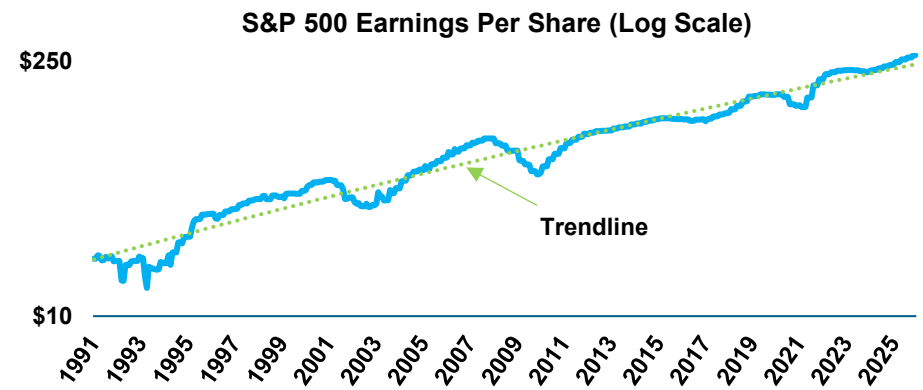
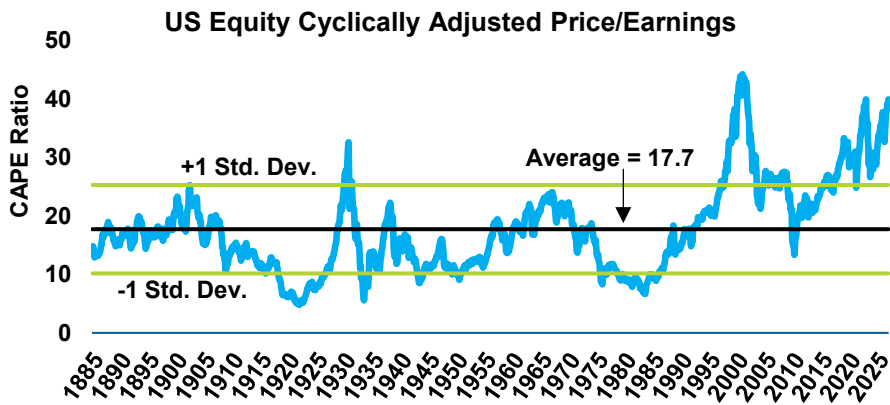
- Short-term interest rates declined as the Fed cut its target rate, and the yield on the 10-year Treasury decreased.
- Tighter credit spreads amplified the yield reduction in credit markets.

Index	Yield to Worst 12/31/25 (%)	Yield to Worst 12/31/24 (%)
Fed Funds Effective Rate	3.50 – 3.75	4.25 – 4.50
10-year Treasury	4.18	4.58
Bloomberg Aggregate	4.32	4.91
Bloomberg Corporate	4.81	5.33
Bloomberg Securitized	4.61	5.25
Bloomberg Global Aggregate	3.52	3.68
Bloomberg US Corporate High Yield	6.53	7.49

Source: Bloomberg. Data is as of December 31, 2024 and December 31, 2025.

Higher Equity Valuations

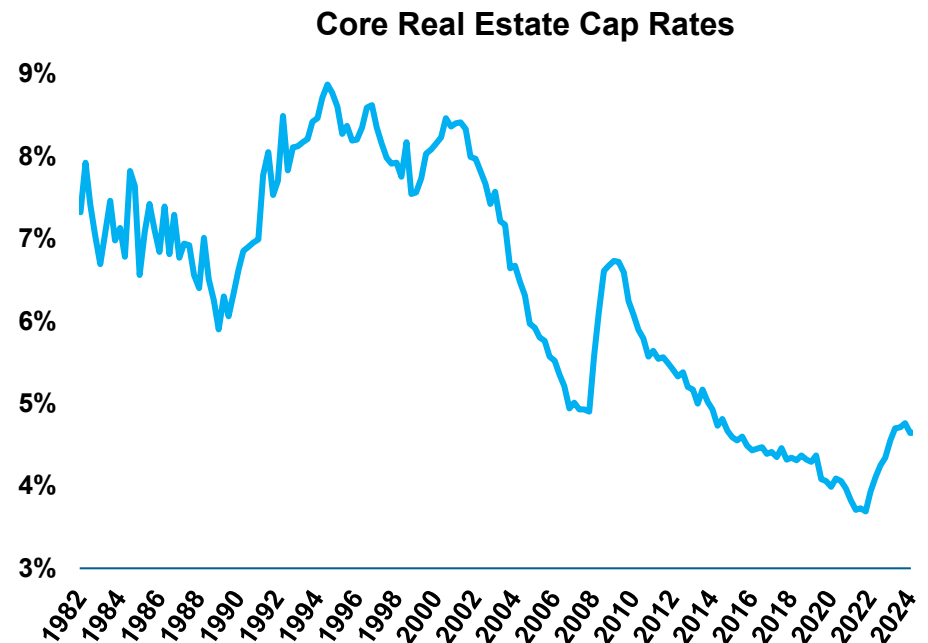
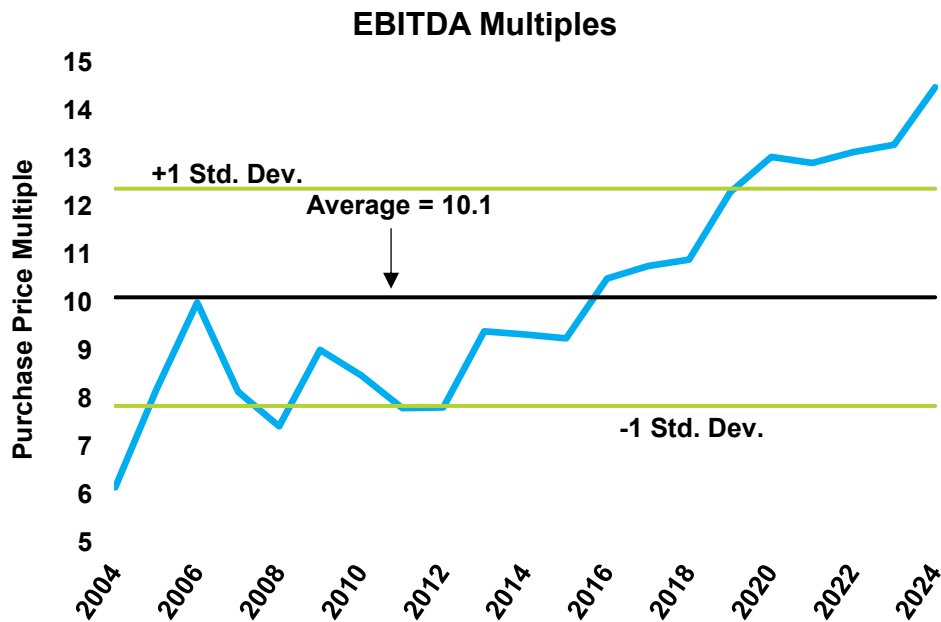
- Large gains for US, developed non-US, and emerging market stocks led to higher valuations.
 - As a result, EAFE and EM equity valuations have moved above their long-term average.
 - The gains in US equities continue to be supported by strong earnings growth.



Sources: Robert Shiller, Yale University, Bloomberg, and Meketa Investment Group for the S&P 500 Index; MSCI and Bloomberg for MSCI indices. Earnings figures for cyclically adjusted P/E represent the average of monthly "as reported" earnings over the previous ten years. EPS figures for S&P 500 earnings represents trailing 12-month "as reported" earnings per share. Data is as of December 31, 2025.

Private Equity and Real Estate Prices Rebounding

- EBITDA multiples for buyouts have risen substantially over the past ten years.
 - Preliminary data for 2025 show a slight downtick in multiples, but that is based on a very small fraction of the anticipated number of deals (~15% of the number of deals from 2024).
- Cap rates for core real estate appeared to level off in 2025.
 - Still, cap rates remain below the trough experienced during the Global Financial Crisis (GFC).

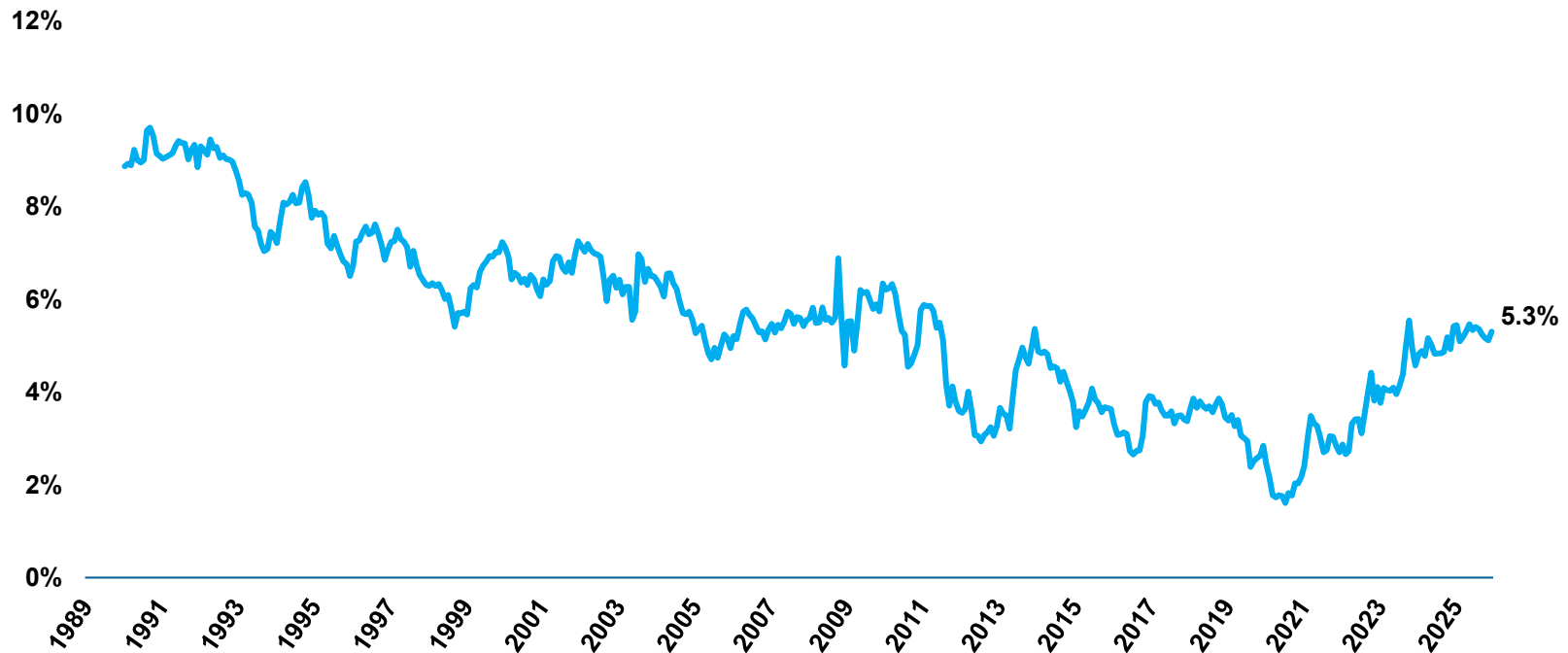


Sources: Preqin Median EBITDA Multiples Paid in All LBOs, data pulled as of 1/8/2025; NCREIF NPI value-weighted cap rates, as of September 30, 2025.

Slightly Lower Projected Rates in the Future

- As interest rates have declined, so have the market's predictions for future interest rates.
 - The market is forecasting that the 10-year Treasury yield in ten years will be 5.30%, versus a prediction of 5.42% twelve months ago.
- Lower future interest rates for “risk-free” assets implies lower expected returns for any forecasting model that includes a risk premium approach.

Market Projection for the 10-Year Treasury Yield in Ten Years



Source: FRED. Represents the Fitted Instantaneous Forward Rate 10 Years Hence, as of December 31, 2025.

Expected Return and Risk Data

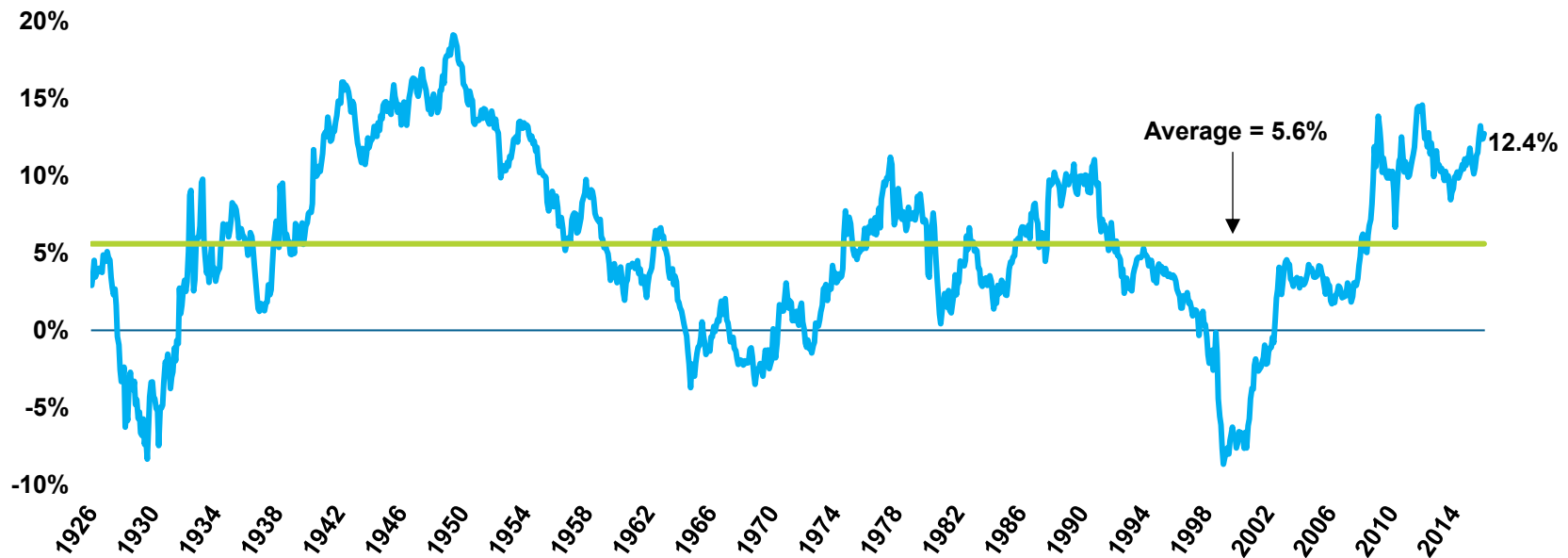
Asset Class	10-year Expected Return (%)	20-year Expected Return (%)	Standard Deviation (%)	Years 11-20 Risk Premium ¹ (%)
Cash Equivalents	2.8	3.1	1.0	-2.0
Investment Grade Bonds	4.2	4.9	4.0	0.4
Long-term Government Bonds	4.5	5.1	12.0	0.5
TIPS	3.8	4.7	7.0	0.4
High Yield Bonds	5.4	6.6	11.0	2.5
Bank Loans	5.6	6.4	10.0	2.0
Emerging Market Debt	5.7	6.4	11.0	1.8
Private Debt	7.8	8.2	15.0	3.3
US Equity	6.3	8.0	17.0	4.5
Developed Non-US Equity	6.2	7.9	18.0	4.4
Emerging Non-US Equity	6.2	8.0	21.0	4.5
Global Equity	6.3	8.0	17.0	4.5
Private Equity	9.0	10.2	26.0	6.3
Real Estate	7.1	8.3	16.0	4.3
Infrastructure	7.5	9.0	19.0	5.2
Commodities	5.0	5.4	17.0	0.5
Hedge Funds	3.8	5.7	7.0	2.3
Inflation	2.3	2.7	NA	NA

¹ Risk premia are calculated relative to the market's projection for the yield on the 10-year Treasury in ten years.

What is the Equity Risk Premium Implied by the CMEs?

- We assume a long-term risk premium of 4.5% for US equities over 10-year Treasuries in our model.
 - However, our 10-year assumptions imply an equity risk premium of ~2.1%.
 - This averages out to a 20-year implied equity risk premium of ~3.3%.
- Historically, the risk premium for the S&P 500 over the yield for the 10-year Treasury has averaged 5.6%, though the range has varied considerably.

US Equity Risk Premium over 10-year Treasury¹



¹ Represents the ten-year risk premium for the S&P 500 index over the 10-year Treasury yield at the start of the period. Data is through December 31, 2025.

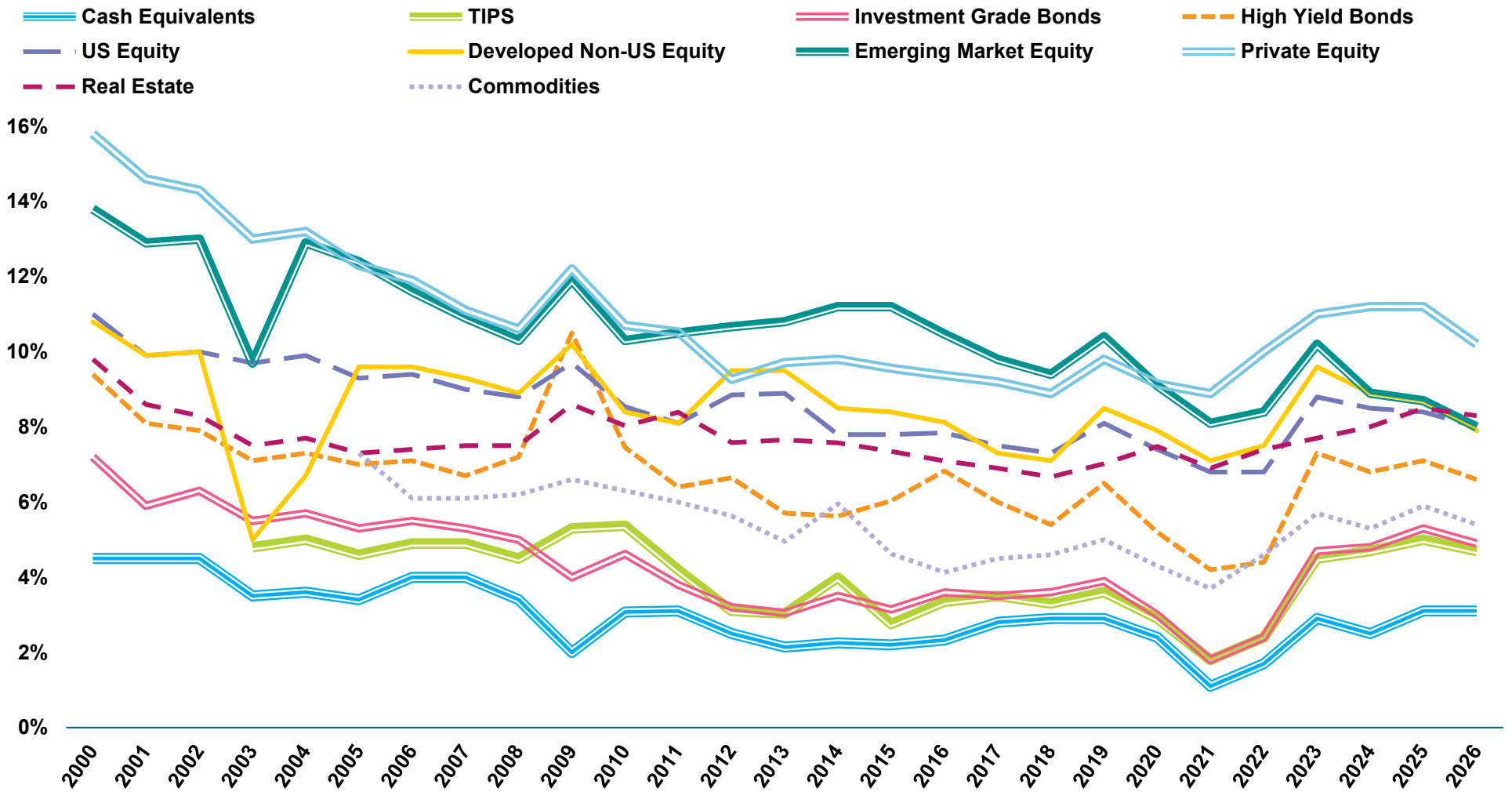
How do These CMEs Compare to Prior Years' Assumptions?

- To help evaluate this, we created a weighted average of expected returns for the asset classes that comprise a typical institutional portfolio.¹
- The value of the expected return for the portfolio is not a precise expected return (i.e., it has not been run via MPT), but the magnitude of the change is what is relevant.
- In short, the 20-year expected return for a typical portfolio is ~50 basis points lower than last January.

Year	Weighted Average Expected Return (%)	Change from Prior Year (%)
2026	7.6	-0.5
2025	8.1	+0.1
2024	8.0	-0.2
2023	8.2	+1.7
2022	6.5	+0.4
2021	6.1	-0.7
2020	6.8	-0.6
2019	7.4	+0.7

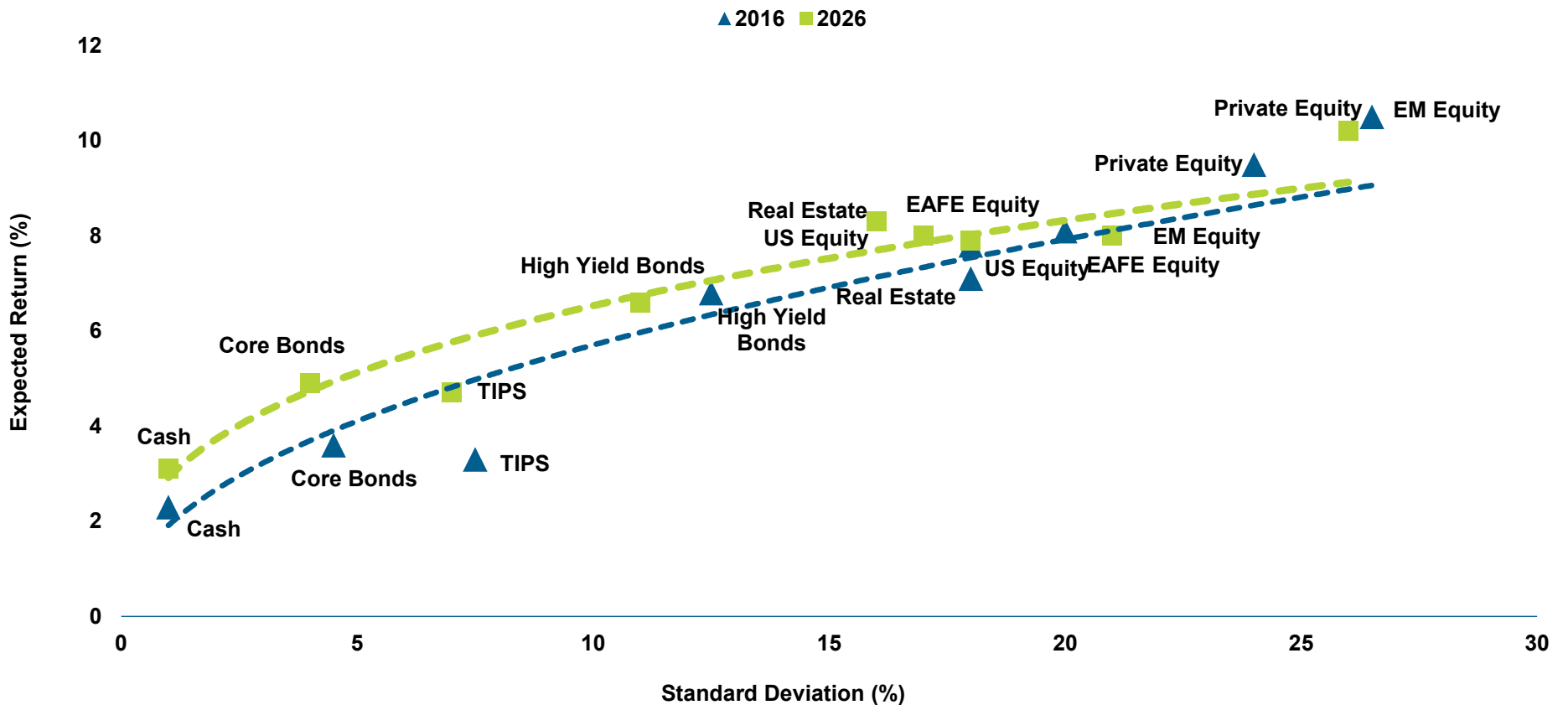
¹ The weights are as follows: 10% investment grade bonds, 3% LT government bonds, 4% TIPS, 3% high yield, 2% bank loans, 3% EM debt, 3% private debt, 25% US equity, 12% EAFE equity, 8% EM equity, 10% private equity, 10% real estate, 2% natural resources, 3% infrastructure, 2% hedge funds.

Our 20-Year CMEs Since 2000



The Big Picture: Higher Return for Similar Risk¹

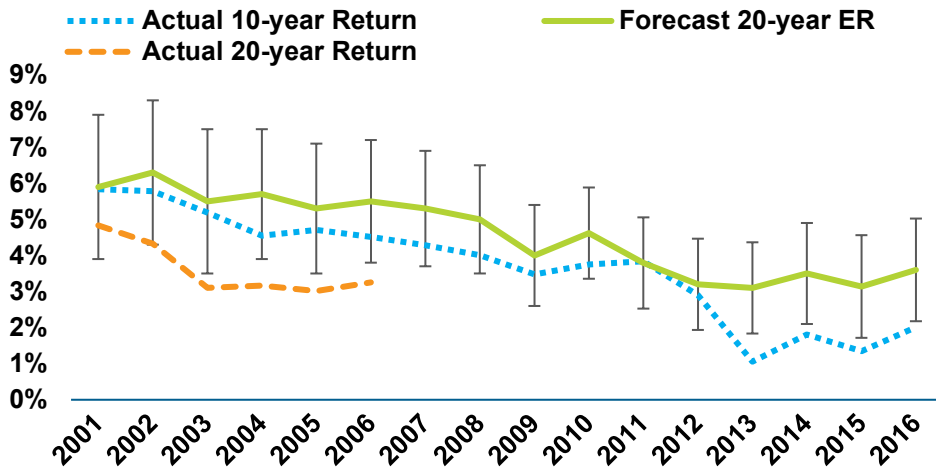
- The relationship between long-term return expectations and the level of risk accepted is not static.
- The higher interest rates compared to a decade ago mean that many investors have greater flexibility in how they structure a portfolio to achieve their target returns.



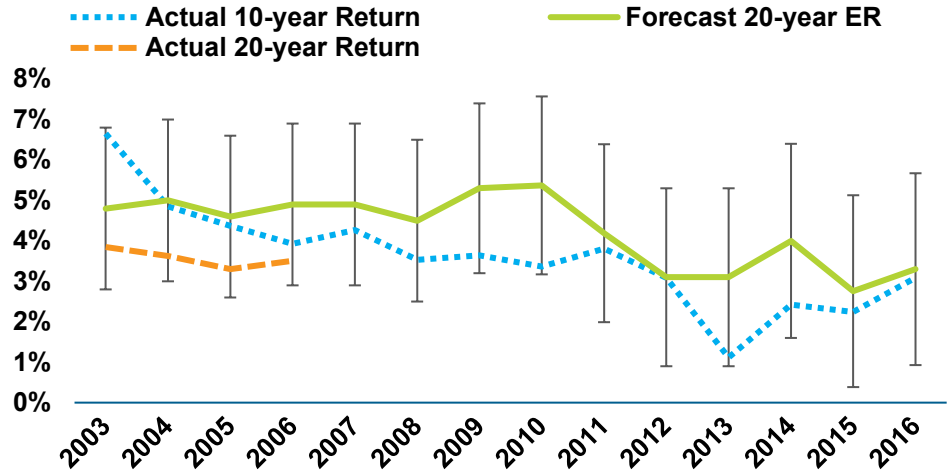
¹ Expected return and standard deviation are based upon Meketa Investment Group's 2016 and 2026 20-year capital market expectations.

Our Track Record

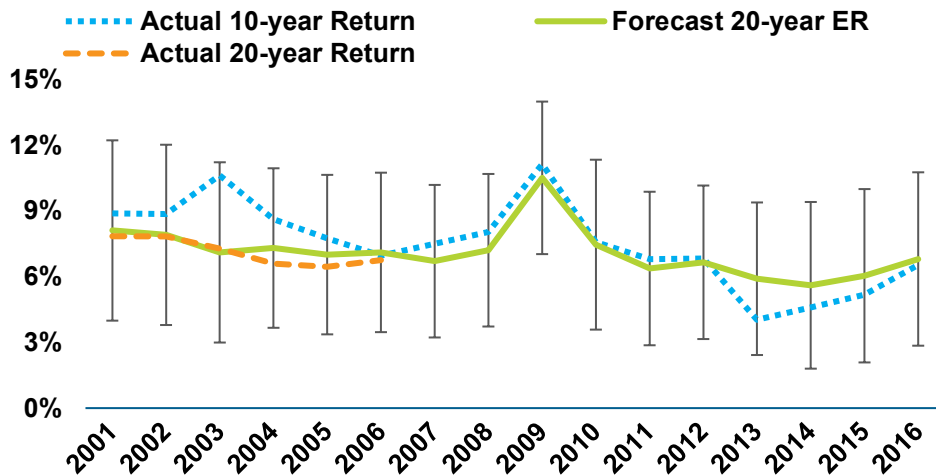
Investment Grade Bonds



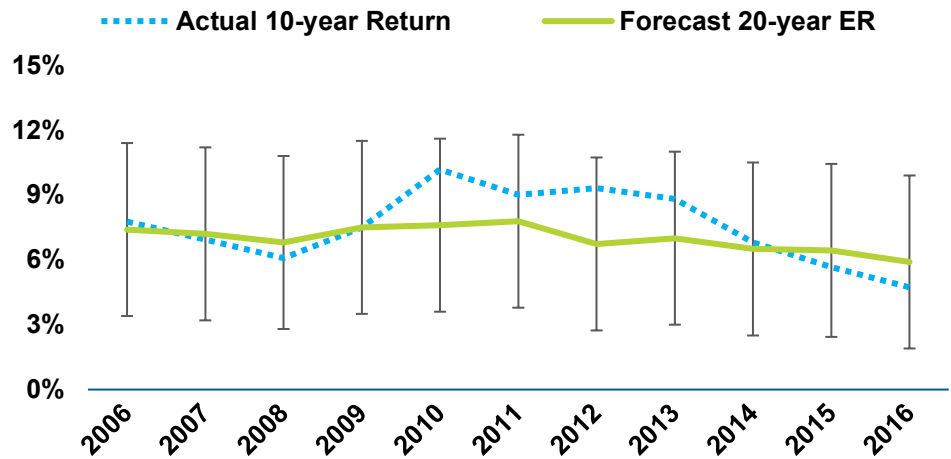
TIPS



High Yield Bonds

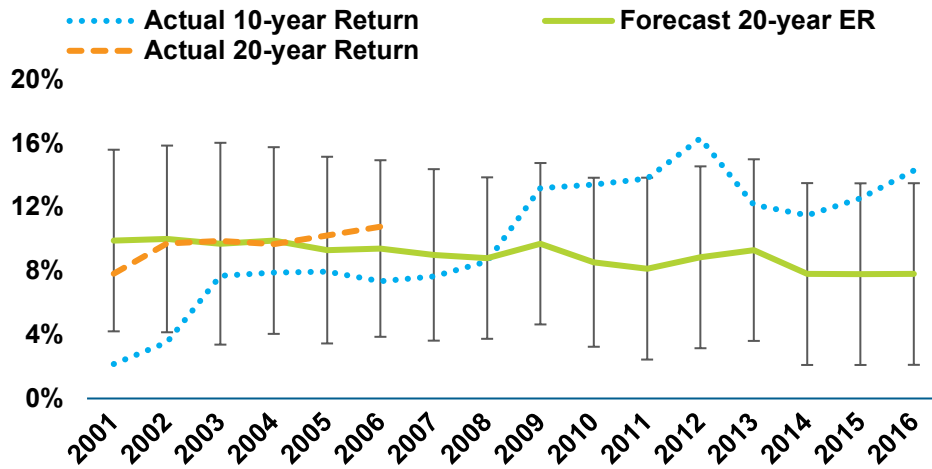


Core Real Estate

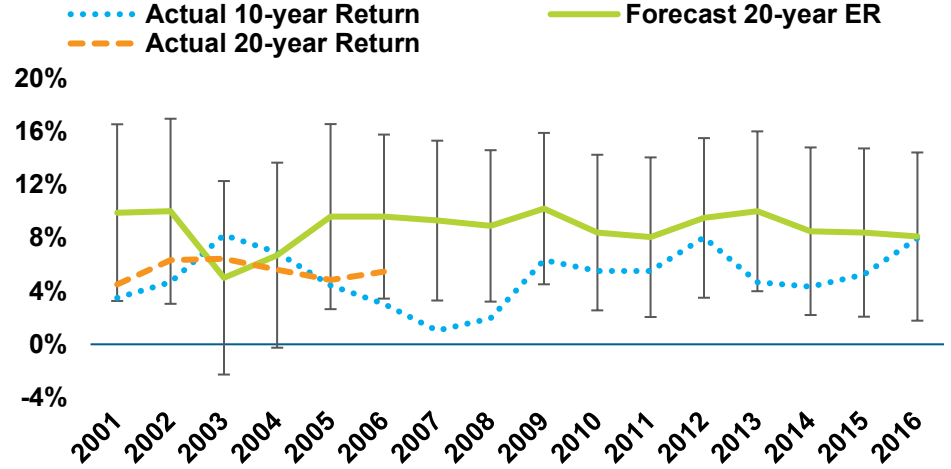


Our Track Record (continued)

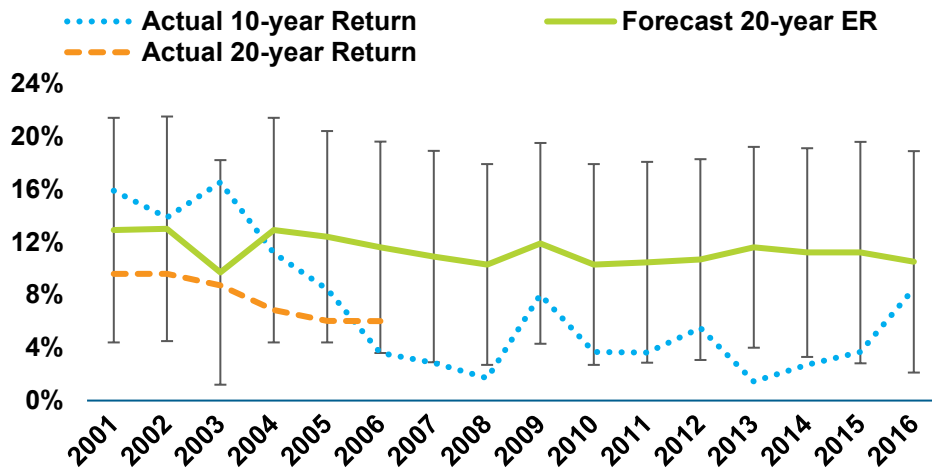
US Equity



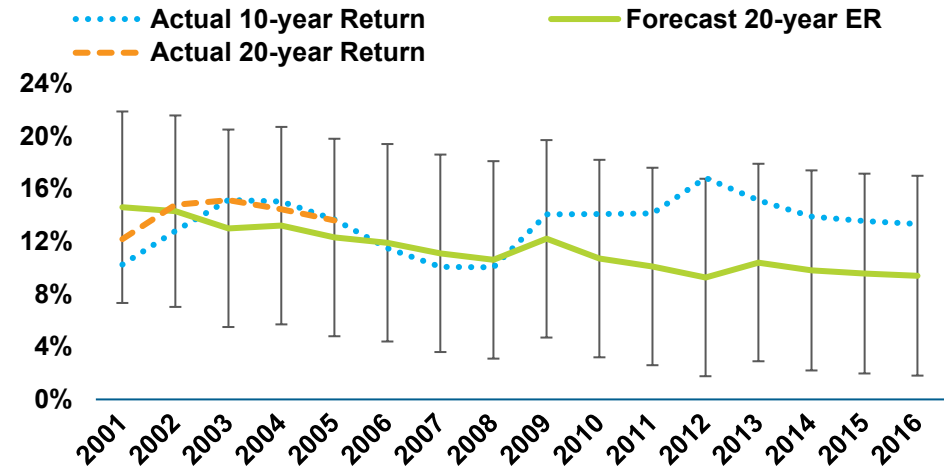
EAFE Equity



Emerging Markets Equity



Private Equity



How do Meketa's CMEs Compare to Peers?

- Our CMEs are typically in the same ballpark as our peers.
- While we expect to be above or below the median for various asset classes, we tend not to be systematically above or below for the entire group.
- We generally cite the survey conducted each year by Horizon Actuarial Services for making peer comparisons, as it is the most comprehensive survey of CMEs of which we are aware.
 - However, this survey is usually not published until July or August.
- It is important to distinguish between intermediate-term assumptions (e.g., 7-10 years) and long-term assumptions (e.g., 20-30 years) when making these comparisons.
 - The average long-term return assumptions tend to be higher than the intermediate-term assumptions across the peer group, typically by 10 to 50 basis points.
 - In 2025, the difference tended to be larger for riskier asset classes.

2025 Peer Survey

- Annually, Horizon Actuarial Services, LLC publishes a survey of capital market assumptions that they collect from various investment advisors.¹
- The Horizon survey is a useful tool to determine whether a consultant's expectations for returns (and risk) are reasonable.

Asset Class	Horizon 10-Year		Horizon 20-Year	
	Average (%)	Meketa 10-Year (%)	Average (%)	Meketa 20-Year (%)
Cash Equivalents	3.6	2.8	3.6	3.1
TIPS	4.4	4.3	4.4	5.0
US Core Bonds	5.0	4.9	5.1	5.3
US High Yield Bonds	6.0	6.3	6.3	7.1
Emerging Market Debt	6.0	6.3	6.3	6.8
Private Debt	7.9	8.7	8.1	9.1
US Equity (large cap)	6.4	6.4	7.0	8.4
Developed Non-US Equity	7.0	7.2	7.4	8.7
Emerging Non-US Equity	7.4	7.1	7.9	8.7
Private Equity	9.1	9.8	9.6	11.2
Real Estate	6.2	6.9	6.4	8.5
Infrastructure	7.2	7.2	7.5	9.2
Commodities	4.7	5.5	4.8	5.9
Hedge Funds	5.9	4.2	6.2	6.0
Inflation	2.4	2.3	2.4	2.7

¹ The 10-year horizon included all 41 respondents to the survey, and the 20-year horizon included 27 respondents. Figures are based on Meketa's 2025 CMEs. The survey is typically published in August.

Portfolio Implications

Asset Group	SJ Fed Policy (%)
Growth	81.0
US Equity	25.0
Developed Market Equity (non-US)	12.0
Emerging Market Equity	12.0
Buyouts	8.0
Venture Capital	4.0
Private Real Estate	3.0
Private Infrastructure	1.0
Private Natural Resources	2.0
Private Debt	3.0
Multi-Sector Bonds	11.0
Low Beta	8.0
Cash Equivalents	5.0
Hedge Funds	3.0
Other	11.0
Long-term Government Bonds	4.0
TIPS	2.0
Core Private Real Estate	5.0

2025 CMEs	(%)
Expected Return (20 years)	8.6
Standard Deviation (Verus/Cerity)	11.4
Probability of Achieving 6.62% over 20 Years	74.9

2026 CMEs	(%)
Expected Return (20 years)	8.1
Standard Deviation (Verus/Cerity)	11.9
Probability of Achieving 6.62% over 20 Years	68.7

→ Multi-Sector Bonds is a new aggregate bond target that contains underlying allocations to high yield, emerging market bonds, and investment grade bonds.

- The Federated Retirement System's 20-year expected return declined 50 basis points with this year's new capital markets expectations.
- Standard deviation increased 50 basis points.

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