Invesco

2025 Invesco Capital Market Assumptions

Invesco Solutions | Japanese yen (JPY) | Q3 Update

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Executive Summary

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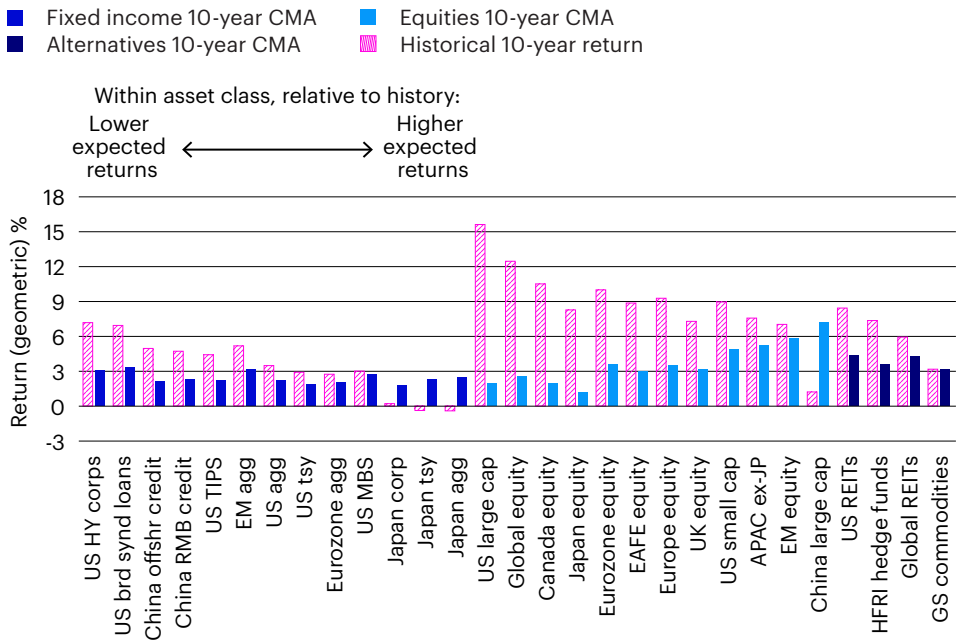
- 2025 is unfolding against a backdrop of pronounced volatility (to the downside and upside) across global financial markets, much of it catalyzed by tariff announcements provoking uncertainty around the outlook for growth and inflation.
- Policy developments introduced a layer of risk that has weighed on investor sentiment through the first half of the year. Yet, despite approaching the brink of a bear market in April, equity indices ultimately recovered and moved on to set fresh all-time highs, demonstrating a remarkable capacity for resilience.
- The rebound in equity markets occurred even as evidence mounted of moderating demand, a gradual softening in the US labor market, and a marked decline in consumer confidence, underscoring the complex interplay between economic fundamentals and market positioning.

Figure 1: Expectations relative to historical average (JPY)



Source: Invesco, estimates as of June 30, 2025. Proxies listed in **Figure 7**. These estimates are forward-looking, are not guarantees, and they involve risks, uncertainties, and assumptions. Please see page 11 for information about our CMA methodology. These estimates reflect the views of Invesco Solutions; the views of other investment teams at Invesco may differ from those presented here.

Invesco Solutions provides forecasts for 170+ assets in over 20 currencies, including 10 private assets. For additional CMA data, views, or analysis, please reach out to your Invesco representative.

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Asset Allocation Insights

For further details on our process for defining scenarios and adjustments, please refer to our CMA Methodology paper.

Strategic perspective

Looking forward, many forecasters expect upward pressure on US inflation into year-end, driven largely by the second-round effects of tariffs. Still, the prevailing assessment amongst market participants is that these measures are likely to represent a one-off shock rather than the beginning of a persistent inflationary cycle as inflation expectations remain anchored. Note, our inflation building block in the CMA model is premised on long-term inflation expectations, as opposed to the backwards-looking CPI or short-term fluctuations. The drag on economic activity is already visible in the second-quarter US GDP release, which showed clear signs of slowing momentum, though attention is increasingly focused on labor-market dynamics as the critical determinant of monetary policy decisions in the coming FOMC meetings. The Federal Reserve faces the difficult task of calibrating its policy decisions to support the economy without destabilizing inflation expectations. Markets are likely to remain highly sensitive to marginal shifts in language from policymakers.

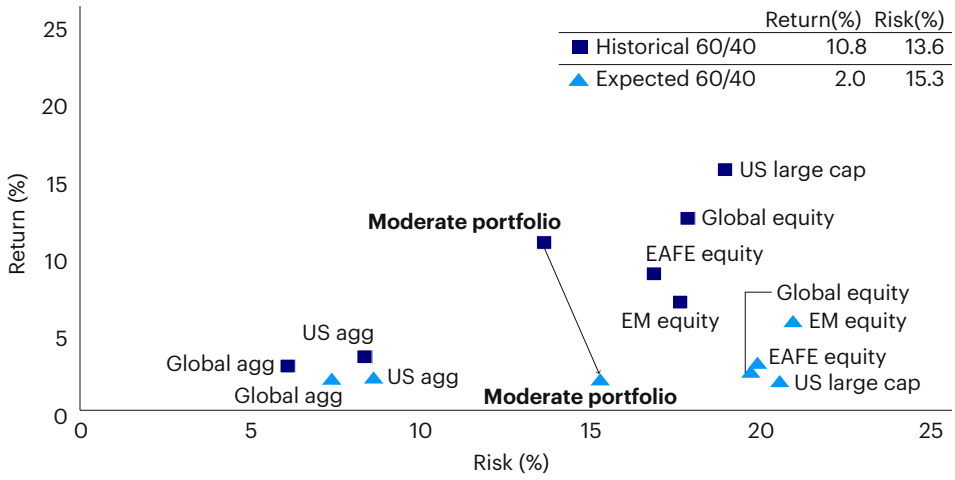
Despite the backdrop of policy uncertainty and the impact on macroeconomic factors, equities staged a broad recovery in the second quarter; global equities rebounded by 11.5% in Q2 25, inclusive of the Liberation Day drawdown, while global fixed income improved 1.2%[1]. This renewed strength has been driven in large part by sustained enthusiasm around artificial intelligence, which investors perceive as a structural driver of earnings growth. In Q2 the Magnificent Seven narrowed its performance gap with the S&P 500 Index, reflecting renewed demand for large-scale technology platforms as tech stocks delivered the greatest upside surprises in the Q2 earnings reports[2]. US stocks have therefore outperformed other markets due to their relative bias towards tech stocks[3]. The positivity of the most recent earnings reports has seen an uplift in Q3 earnings expectations, with valuations remaining elevated compared to historical standards. From the perspective of the CMAs, higher valuations do provide a headwind to expected returns over the longer term as the assumption is they will mean revert over the business cycle.

In fixed income markets, concerns about the long-term sustainability of US debt levels have resurfaced, though have not yet triggered a material repricing of Treasuries. 10-year yields have gravitated toward the four percent level, reflecting a combination of expectations for a softer labor market and the potential for inflation to prove transitory. This environment has created a more constructive backdrop for duration, particularly for investors seeking defensive positioning. Credit markets have stabilized, with investment-grade spreads tightening back to the levels observed at the beginning of the year. High-yield spreads have also returned to levels at the start of the year, tightening over 150 basis points[4] from their near-term peak with the Liberation Day announcement.

The volatility observed this year ultimately reinforces the case for a disciplined, defensive, and adaptable approach to portfolio construction. Elevated equity valuations leave less room for error, while signals from the bond market point toward the likelihood of multiple rate cuts from the Federal Reserve. The divergence between equity optimism and bond caution presents a challenge for allocators, underscoring the need for vigilance in navigating cross-asset signals. For long-term investors, the imperative remains to build portfolios that can withstand turbulence across cycles, the intention behind the CMAs is to provide a framework upon which they can do so. Diversification across asset classes and geographies is not expected to guarantee outperformance in every period, but it continues to serve as the most reliable tool for preserving capital and managing risk in an uncertain market environment.

1. Source: Bloomberg L.P. as at Sep.10, 2025. Global equities represented by the MSCI ACWI index and global fixed income represented by the Bloomberg global aggregate bond index. Both indices measure total returns in USD.
2. Tech stocks in the SPX index delivered EPS growth of 25% where the SPX as a whole saw EPS growth of 12%. Source: Bloomberg L.P. as at Sep. 10, 2025.
3. The tech sector carries a 34.1% weight in the S&P 500 Index whereas the weight in the MSCI ACWI Index is 26.6%. Source: Bloomberg as at Sep. 10, 2025.
4. High-yield spreads represented by the ICE BofA High Yield Index. Source: Bloomberg L.P, as at Sep. 10, 2025.

Figure 2: Comparing historical and expected risk and return for a moderate 60/40 portfolio (JPY)



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3Q25 CMA Observations (10Y, USD)

Equities: US large cap equities are estimated to deliver a 4.7% nominal expected return, a drop (-1.1%) from last quarter, with the change centered on a projected fall in valuations (-1.0%). The dominance of US equities is causing similar changes to our return estimate for global equities; expectations for global equities are higher than US large cap at 5.3%, but this is 0.8% lower quarter-over-quarter. The fall in global equity returns is, again, driven by lower contribution from valuations (0.8% quarter-over-quarter), as today's relatively high valuations cause a headwind to expected returns. Within US markets, small caps have an expected return of 7.7% (-0.6% QoQ) and mid caps 6.3% (-1.1% QoQ). Across the US equity market capitalization spectrum, as valuations were further stretched in the quarter, our model shows a negative valuation change in anticipation of mean reversion over the forecast period. Developed ex-US equities are expected to outperform US equities at 6.5% with Europe at 6.3%, on par with the previous quarter. Japan at 3.9% has a lower expected return than last quarter (-0.7% QoQ), primarily driven by a worsening in valuations (-0.6% QoQ) but expected returns here continue to be supported by currency, contributing 2.8% to the overall expected return. Emerging markets continue to be the standout with an expected return of 8.6% although -0.3% QoQ, with inflation and valuations eroding potential returns.

Fixed income: Investment grade aggregate bonds expected returns (4.9%) remain ahead of the broad US equity market (4.0%), as do US treasuries (4.6%, unchanged on the quarter). The US treasury curve has fallen since the start of the year, though the yield on the 10Y has kept above 4.2% in recent months as the 2Y has averaged 3.9% from the start of Q2. The bond market continued to grapple with the impact of tariff policy on the US economy, at the same time US credit spreads have stabilized and returned to pre-April (tariff announcement) levels. Broadly syndicated loans in the US are modelled at 6.1% (-0.3% QoQ) as current (starting). yields have fallen QoQ. Some non-US fixed income continues to benefit from a positive currency adjustment, particularly long-dated gilts this quarter (4.8%, +0.5% QoQ).

There are many considerations for investors beyond CMAs when it comes to asset allocation decisions. To learn more about our investment process or discuss your own portfolio needs, please reach out to your Invesco Solutions representative.

To aid investors in identifying the relative risks between our near-term tactical asset allocation and our longer-term CMAs, **Figure 3** plots the positioning of the two distinct time horizons for common asset class pairs. These relative CMA signals are calculated by taking the Z-score of the return spread between the CMA pairs, showcasing the relative attractiveness of the signal compared to history and are aimed to be used as a guide for making relative asset class level decisions for a portfolio over a year time horizon. We utilize a separate methodology for tactical asset allocation, driven by our macro process, which makes allocation decisions over a time horizon between six months and three years, on average.[1] Our tactical asset allocation positioning is updated monthly, while our CMA signals are updated quarterly.[2]

1. To learn more about our tactical asset allocation process, please refer to our series of white papers, "Dynamic Asset Allocation through the Business Cycle" (de Longis, 2019) and "Market Sentiment and the Business Cycle" (de Longis and Ellis, 2019).
2. For the most recent TAA positioning, please refer to our monthly tactical asset allocation blog.

Alternatives: With ongoing market volatility, we maintain our observations on alternatives, namely that Global REITS, hedge funds, and commodities are all attractive relative to traditional assets. Our 10Y return estimates show all these alternative asset classes having improved QoQ as well as outperforming broad US equities. From a risk return measure perspective, hedge funds continue to be the most efficient allocation of capital (1.7), as REITs are also showing more favorable risk-adjusted returns (0.46 US and 0.47 global) than US equities. Commodities have a higher risk profile but are demonstrating the largest positive gap between our current expectations and historical 10-year average.

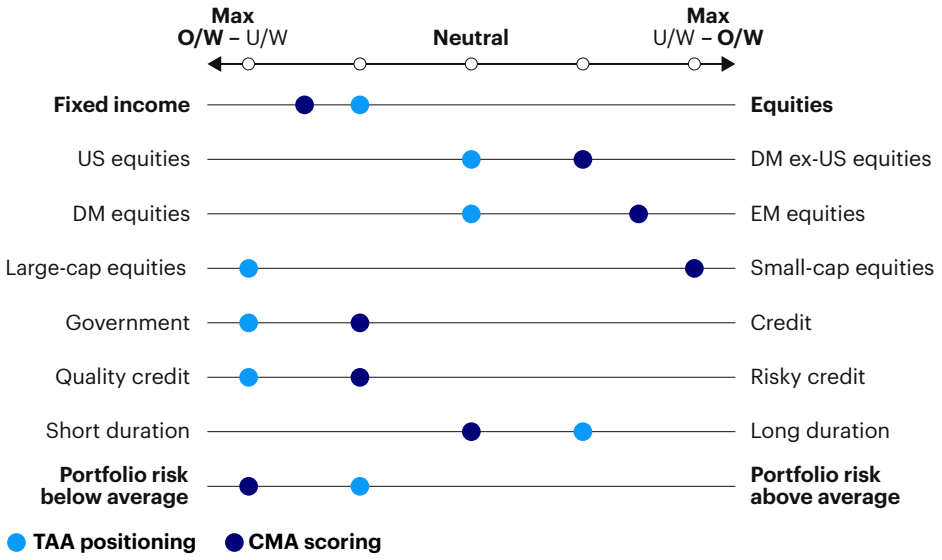
CMA signals relative to tactical asset allocation (TAA) positioning

In the case of the CMAs and TAA positioning, they each reflect a defensive stance although the CMAs are slightly more cautionary than our current TAA positioning. The CMA points to a maximum underweight portfolio risk compared to average, given higher absolute long-term expectations for fixed income relative to equities, whereas the TAA has a slightly underweight position during a contractionary regime. Both the CMAs and TAA model source that risk from fixed income in preference over equity, and this is supported by the expected relative returns outlined above.

A key difference between the two time horizons is evident with TAA's exposure to defensive, high-quality equities, while the CMAs are expressing a maximum overweight to small-caps, which have a more favorable valuation factor. The CMA's perspective is over the longer term and anticipates a valuations-driven mean reversion over that time, whereas the TAA model is regime based and focuses on risk premia within those regimes.

Regionally within equities, the CMAs are overweight developed ex-US equities and emerging markets, while the TAA has a neutral stance, reflecting the TAA preference for defensive, high-quality stocks above concerns about valuations. Both the TAA and CMAs anticipate a large depreciation in the US dollar. Concerns about the economic outlook are also reflected in the TAA's slight overweight to long duration government bonds, which should offer enhanced downside protection in the event of a cyclical slowdown, with the CMAs remaining neutral between short and long interest rate risk.

Figure 3: Relative tactical asset allocation (TAA) positioning (Sep. 2025) and CMA scoring (3Q25)



Source: Invesco Solutions, September 1, 2025. DM = developed markets. EM = emerging markets. For illustrative purposes only. Portfolios mentioned are hypothetical models. Benchmark is a global, moderate-risk portfolio consisting of 60% global equities (MSCI ACWI) and 40% global bonds (BBG global agg).

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2025 Capital Market Assumptions

Figure 4: 10-year asset class expectations (JPY)

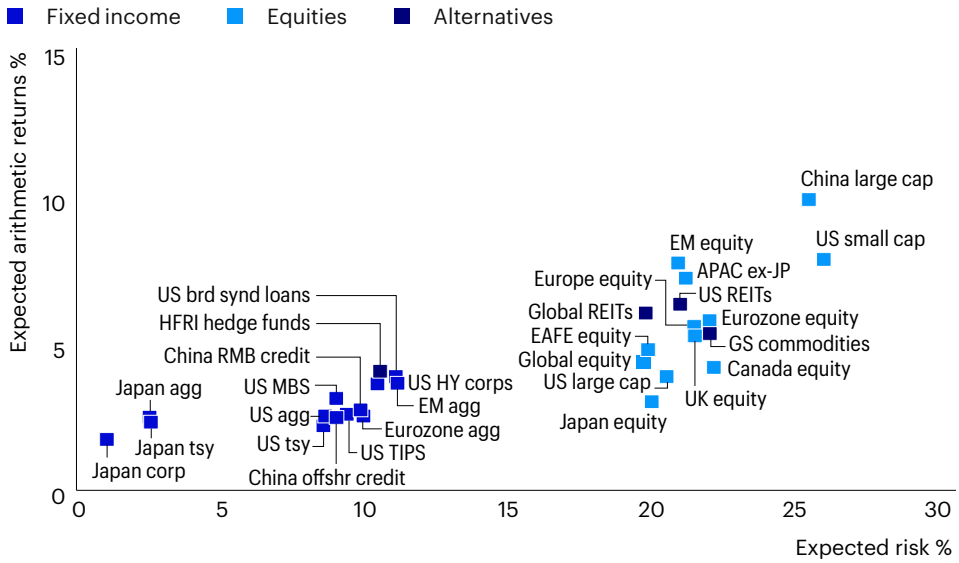

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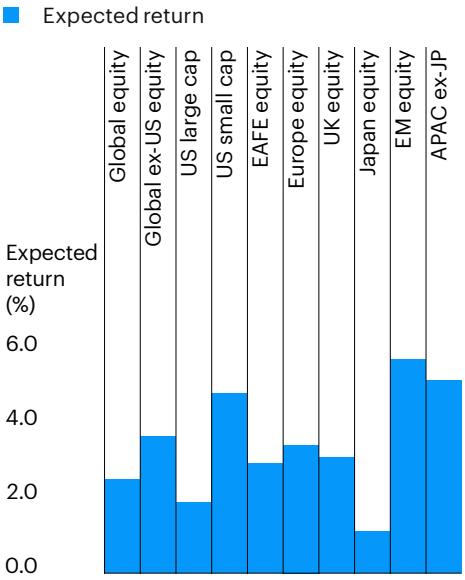
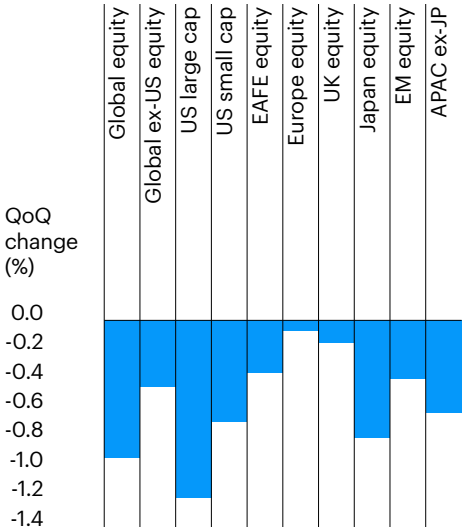
Figure5a: Equity CMA building block contribution (JPY) (%)



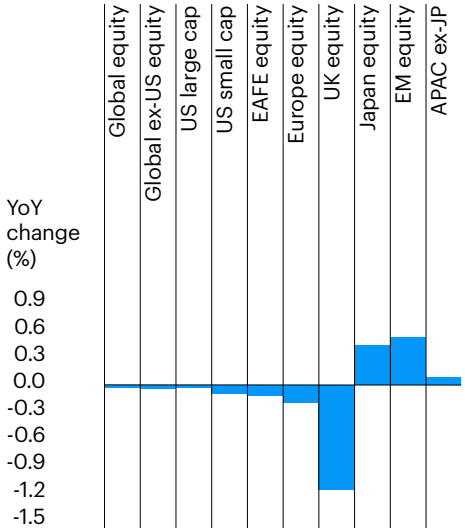
	Dividend yield	Buyback yield	LT earnings growth	Expected inflation	Valuation change	Currency Adj. (IRP)
Global equity	1.79	0.68	2.10	2.04	-1.73	-2.39
Global ex-US equity	2.85	0.00	2.09	1.51	-1.13	-1.66
US large cap	1.21	1.05	2.11	2.34	-2.06	-2.79
US small cap	1.45	1.00	3.32	2.34	-0.53	-2.79
EAFE equity	3.00	0.00	1.44	1.26	-1.44	-1.32
Europe equity	3.15	0.00	1.52	1.92	-1.58	-1.57
UK equity	3.60	0.00	1.70	2.01	-1.17	-3.05
Japan equity	2.28	0.00	0.88	-1.19	-0.84	0.00
EM equity	2.62	0.00	3.55	1.89	-0.03	-2.33
APAC ex-JP	2.28	0.00	3.13	1.94	0.14	-2.34

Figure 5b: Equity CMA building block quarter-over-quarter change and contribution (JPY) (%)



	Dividend yield	Buyback yield	LT earnings growth	Expected inflation	Valuation change	Currency Adj. (IRP)
Global equity	-0.09	-0.07	0.04	0.00	-0.75	-0.07
Global ex-US equity	-0.06	0.00	0.02	-0.05	-0.33	-0.03
US large cap	-0.12	-0.10	0.05	0.04	-0.98	-0.09
US small cap	-0.06	-0.10	0.05	0.04	-0.52	-0.09
EAFE equity	-0.06	0.00	0.03	-0.01	-0.35	0.04
Europe equity	-0.01	0.00	0.03	0.03	-0.17	0.05
UK equity	-0.05	0.00	0.05	-0.11	-0.13	0.10
Japan equity	-0.11	0.00	0.02	-0.12	-0.59	0.00
EM equity	-0.02	0.00	-0.02	-0.16	-0.11	-0.09
APAC ex-JP	-0.11	0.00	-0.11	-0.13	-0.20	-0.07

Figure 5c: Equity CMA building block year-over-year change and contribution (JPY) (%)



	Dividend yield	Buyback yield	LT earnings growth	Expected inflation	Valuation change	Currency Adj. (IRP)
Global equity	-0.06	0.02	0.10	-0.07	-0.49	0.47
Global ex-US equity	-0.01	0.00	0.08	-0.14	-0.35	0.38
US large cap	-0.09	0.03	0.12	-0.03	-0.58	0.52
US small cap	-0.03	0.08	-0.05	-0.03	-0.58	0.52
EAFE equity	0.01	0.00	0.04	-0.12	-0.25	0.20
Europe equity	-0.02	0.00	0.01	-0.07	-0.32	0.21
UK equity	-0.29	0.00	-0.08	-0.19	-0.62	0.03
Japan equity	0.31	0.00	0.08	-0.32	0.38	0.00
EM equity	0.04	0.00	0.14	-0.24	-0.15	0.74
APAC ex-JP	-0.12	0.00	-0.03	0.14	-0.25	0.34

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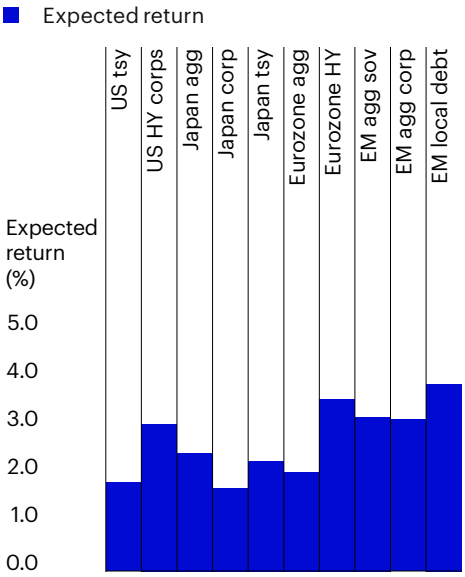
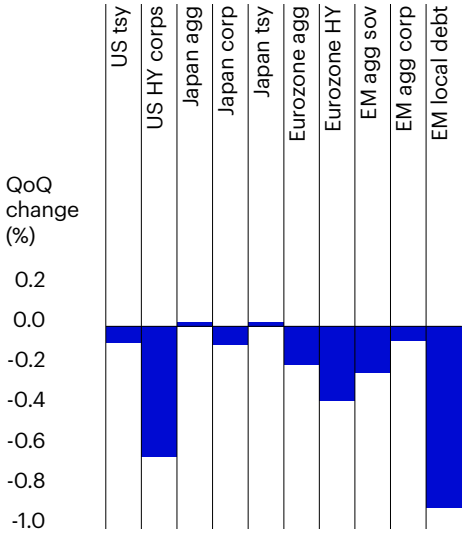
Figure 6a: Fixed CMA building block contribution (JPY) (%)



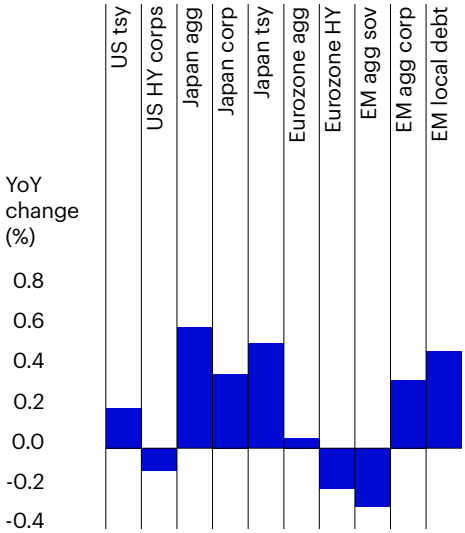
	Average yield	Roll return	Valuation change (yield curve)	Valuation change (OAS)	Credit loss	Currency Adj. (IRP)
US tsy	4.05	0.60	-0.02	0.00	0.00	-2.79
US HY corps	7.99	0.11	0.02	-0.59	-1.68	-2.79
Japan agg	1.79	1.41	-0.73	-0.02	0.00	0.00
Japan corp	1.60	0.44	-0.13	0.01	-0.19	0.00
Japan tsy	1.73	1.14	-0.60	0.00	0.00	0.00
Eurozone agg	2.81	0.60	0.21	-0.21	-0.21	-1.16
Eurozone HY	6.34	0.13	0.05	-0.52	-1.30	-1.16
EM agg sov	7.06	0.78	-0.03	-0.68	-1.15	-2.79
EM agg corp	7.15	0.47	0.00	-0.75	-0.95	-2.79
EM local debt	5.63	0.52	0.37	0.00	0.00	-2.65

Figure 6b: Fixed CMA building block quarter-over-quarter change and contribution (JPY) (%)



	Average yield	Roll return	Valuation change (yield curve)	Valuation change (OAS)	Credit loss	Currency Adj. (IRP)
US tsy	-0.04	0.10	-0.04	0.00	0.00	-0.09
US HY corps	-0.30	-0.02	-0.05	-0.17	0.00	-0.09
Japan agg	0.00	0.06	-0.05	0.00	0.00	0.00
Japan corp	-0.04	-0.02	-0.04	0.01	-0.01	0.00
Japan tsy	0.03	0.04	-0.05	0.00	0.00	0.00
Eurozone agg	-0.29	-0.09	0.16	-0.02	0.02	0.02
Eurozone HY	-0.33	-0.05	0.04	-0.05	0.00	0.02
EM agg sov	-0.14	0.16	-0.01	-0.16	0.02	-0.09
EM agg corp	0.00	0.07	-0.06	0.05	-0.03	-0.09
EM local debt	-0.34	-0.02	0.05	0.00	0.00	-0.59

Figure 6c: Fixed CMA building block year-over-year change and contribution (JPY) (%)



	Average yield	Roll return	Valuation change (yield curve)	Valuation change (OAS)	Credit loss	Currency Adj. (IRP)
US tsy	-0.35	0.26	-0.23	0.00	0.00	0.52
US HY corps	-0.53	0.17	-0.23	-0.04	0.00	0.52
Japan agg	0.41	0.15	0.03	0.00	0.00	0.00
Japan corp	0.40	0.00	-0.02	-0.01	0.01	0.00
Japan tsy	0.46	0.08	-0.01	0.00	0.00	0.00
Eurozone agg	-0.31	0.33	-0.19	-0.13	0.09	0.25
Eurozone HY	-0.33	0.25	-0.27	-0.10	0.00	0.25
EM agg sov	-0.53	0.35	-0.19	-0.44	0.00	0.52
EM agg corp	-0.21	0.20	-0.24	0.18	-0.11	0.52
EM local debt	-0.93	0.03	0.34	0.00	0.00	1.04

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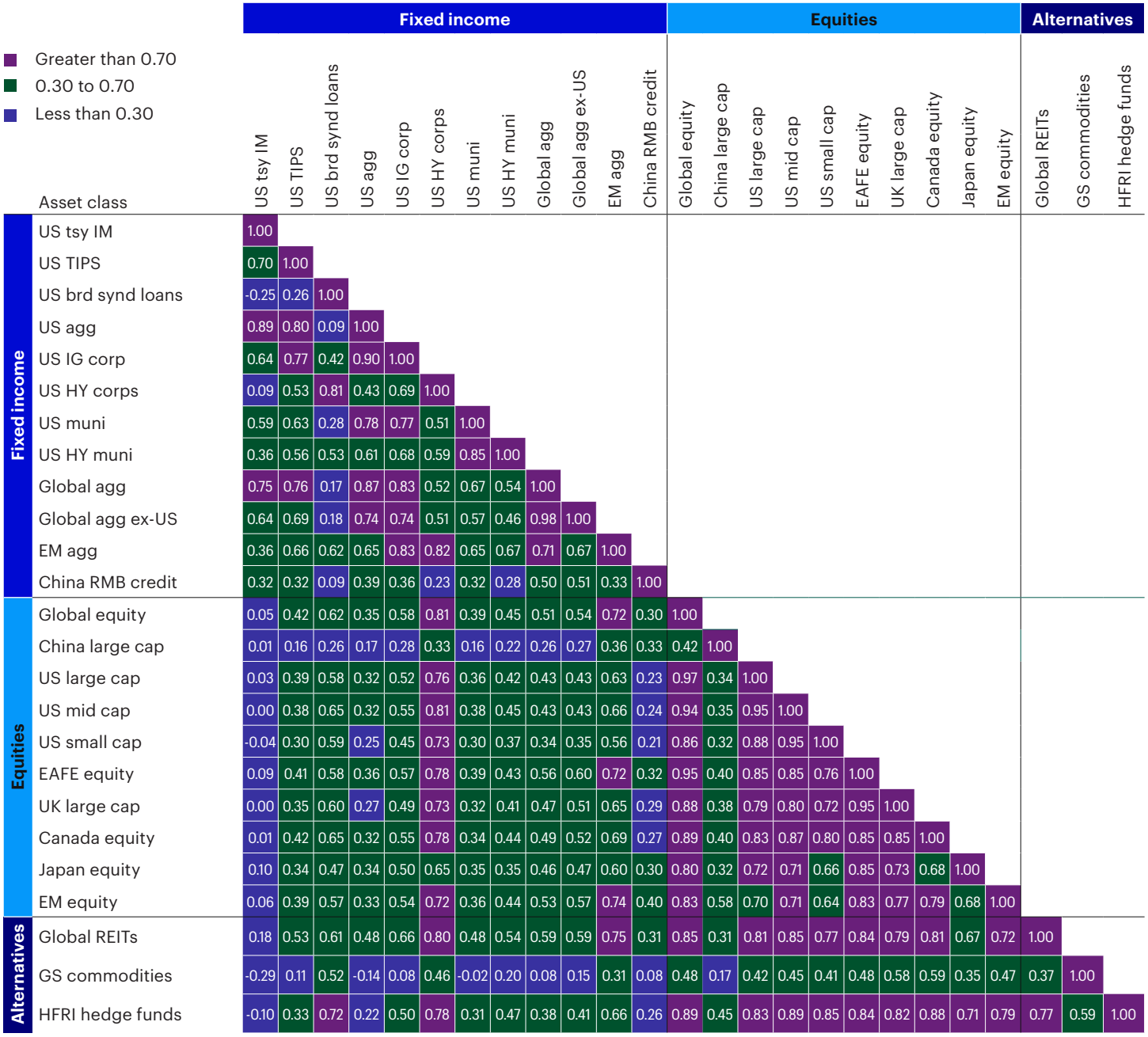
Figure 7: 10-year asset class expected returns, risk, and return risk (JPY)

	Asset class	Index	Expected geometric return %	Expected arithmetic return %	Total yield %	Expected risk %	Arithmetic return to risk ratio
Fixed income	US tsy short	BBG US tsy short	0.7	1.2	1.5	9.8	0.12
	US tsy IM	BBG US tsy IM	1.4	1.8	1.0	8.7	0.20
	US tsy long	BBG US tsy long	2.6	3.2	2.0	11.7	0.28
	US TIPS	BBG US TIPS	2.2	2.6	1.4	9.4	0.28
	US brd synd loans	CSFB leverage loan	3.3	3.9	4.9	11.1	0.35
	US agg	BBG US agg	2.2	2.5	1.7	8.6	0.29
	US IG corp	BBG US IG	2.5	2.9	2.2	9.0	0.32
	US MBS	BBG US MBS	2.7	3.1	2.1	9.0	0.35
	US preferred stocks	BOA ML fixed rate pref securities	2.7	3.3	3.9	11.5	0.29
	US HY corps	BBG US HY	3.1	3.6	4.3	11.1	0.33
	UK linker	BofA ML UK inflation-linked gilt	2.9	3.9	1.5	14.8	0.26
	UK gilts	BBG sterling agg gilts	2.3	3.0	1.4	11.7	0.25
	UK corp	BBG sterling agg non-gilts corp	2.2	2.9	2.2	12.0	0.24
	Global agg	BBG global agg	2.1	2.3	1.5	7.4	0.32
	Global agg ex-US	BBG global agg ex-US	2.0	2.3	1.4	7.3	0.31
	Global tsy	BBG global tsy	2.1	2.3	1.3	6.7	0.34
	Global sov	BBG global sov	2.3	2.7	2.0	9.9	0.28
	Global corp	BBG global corp	2.3	2.6	2.1	8.5	0.31
	Global IG	BBG global corp IG	2.4	3.3	2.2	13.8	0.24
	Eurozone corp	BBG euro agg credit corp	2.1	2.6	1.9	10.0	0.26
	Eurozone tsy	BBG euro agg gov tsy	2.2	2.7	1.6	10.1	0.27
	Asian dollar IG	BOA ML AC IG	2.3	2.7	2.2	9.1	0.30
	EM agg	BBG EM agg	3.1	3.6	3.5	10.4	0.35
	EM agg sov	BBG EM sov	3.2	3.8	3.8	11.0	0.34
	China policy bk & tsy	BBG China PB tsy TR	1.6	2.0	1.4	9.7	0.21
	China RMB credit	BBG China corporate	2.3	2.7	2.0	9.8	0.28
Equities	Global equity	MSCI ACWI	2.5	4.4	0.1	19.7	0.22
	Global ex-US equity	MSCI ACWI ex-US	3.7	5.5	1.2	19.6	0.28
	US broad market	Russell 3000	1.2	3.3	-0.5	20.8	0.16
	US large cap	S&P 500	1.9	3.9	-0.5	20.5	0.19
	US mid cap	Russell midcap	2.7	5.0	0.0	22.0	0.23
	US small cap	Russell 2000	4.9	7.9	-0.3	26.0	0.30
	EAFE equity	MSCI EAFE	3.0	4.8	1.7	19.9	0.24
	Europe equity	MSCI Europe	3.5	5.6	1.6	21.5	0.26
	Eurozone equity	MSCI euro ex-UK	3.6	5.8	1.9	22.0	0.26
	UK large cap	FTSE 100	2.4	4.5	0.5	21.5	0.21
	UK small cap	FTSE small cap UK	5.2	7.7	1.3	23.7	0.32
	Canada equity	S&P TSX	1.9	4.2	0.8	22.2	0.19
	Japan equity	MSCI JP	1.1	3.0	2.3	20.0	0.15
	EM equity	MSCI EM	5.8	7.7	0.3	20.9	0.37
	China small cap	CSI 500	7.1	10.9	1.5	29.8	0.37
	pacific ex-JP equity	MSCI pacific ex-JP	3.6	5.7	1.1	21.3	0.27
Alternatives	US REITs	FTSE NAREIT equity	4.3	6.3	1.0	21.0	0.30
	Global REITs	FTSE EPRA/NAREIT developed	4.2	6.0	1.6	19.8	0.31
	HFRI hedge funds	HFRI HF	3.5	4.1	-	10.5	0.39
	GS commodities	S&P GSCI	3.1	5.3	-	22.0	0.24
	Agriculture	S&P GSCI agriculture	2.3	4.2	-	20.2	0.21
	Energy	S&P GSCI energy	5.6	10.7	-	34.9	0.31
	Industrial metals	S&P GSCI industrial metals	1.3	3.7	-	22.4	0.16
	Precious metals	S&P GSCI precious metals	-7.5	-6.2	-	16.2	-0.38

Source: Invesco, estimates as of June 30, 2025. These estimates are forward-looking, are not guarantees, and they involve risks, uncertainties, and assumptions. Please see page 11 for information about our CMA methodology. These estimates reflect the views of Invesco Solutions; the views of other investment teams at Invesco may differ from those presented here. Agg = Aggregate, Infra = Infrastructure, Corp = Corporate, DJ = Dow Jones, HY = High Yield, Muni = Municipals, Tsy = Treasury, IM = Intermediate, ML = Merrill Lynch, Sov = Sovereign, EM = Emerging Markets, IG = Investment Grade, APAC = Asia Pacific, Gov = Government, MBS = Mortgage-Backed Securities, TIPS = Treasury Inflation-Protected Securities.

Figure 8: 10-year correlations (JPY)

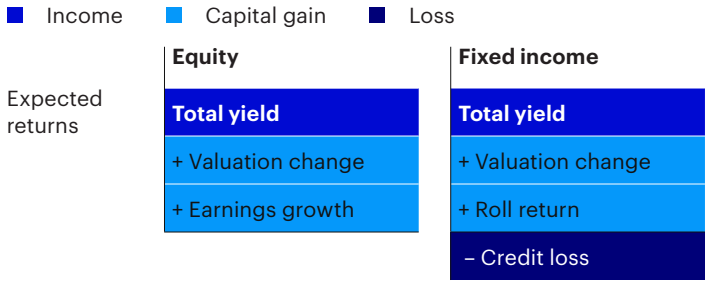


Source: Invesco, estimates as of June 30, 2025. Proxies listed in **Figure 7.** These estimates are forward-looking, are not guarantees, and they involve risks, uncertainties, and assumptions. Please see page 11 for information about our CMA methodology. These estimates reflect the views of Invesco Solutions; the views of other investment teams at Invesco may differ from those presented here.

About our capital market assumptions methodology

We employ a fundamentally based "building block" approach to estimating asset class returns. Estimates for income and capital gain components of returns for each asset class are informed by fundamental and historical data. Components are then combined to establish estimated returns (Figure 9). Here, we provide a summary of key elements of the methodology used to produce our long-term (10-year) estimates. Five-year assumptions are also available upon request. Please see Invesco's Capital Market Assumptions: Methodology update whitepaper for more details.

Figure 9: Our building block approach to estimating returns



For illustrative purposes only.

Fixed income returns are composed of:

- **Average yield:** The average of the starting (initial) yield and the expected yield for bonds.
- **Valuation change (yield curve):** Estimated changes in valuation given changes in the Treasury yield curve.
- **Roll return:** Reflects the impact on the price of bonds that are held over time. Given a positively sloped yield curve, a bond's price will be positively impacted as interest payments remain fixed, but time to maturity decreases.
- **Credit adjustment:** Estimated potential impact on returns from credit rating downgrades and defaults.

Equity returns are composed of:

- **Dividend yield:** Dividend per share divided by price per share.
- **Buyback yield:** Percentage change in shares outstanding resulting from companies buying back or issuing shares.
- **Valuation change:** The expected change in value given the current price/earnings (P/E) ratio and the assumption of reversion to the long-term average P/E ratio.
- **Long-term (LT) earnings growth:** The estimated rate of the growth of earnings based on the long-term average real GDP per capita and inflation.

Currency adjustments are based on the theory of interest rate parity (IRP), which suggests a strong relationship between interest rates and the spot and forward exchange rates between two given currencies. Interest rate parity theory assumes that no arbitrage opportunities exist in foreign exchange markets. It is based on the notion that, over the long term, investors will be indifferent between varying rates of returns on deposits in different currencies because any excess return on deposits will be offset by changes in the relative value of currencies.

For volatility estimates for the different asset classes, we use rolling historical quarterly returns of various market benchmarks. Given that benchmarks have differing histories within and across asset classes, we normalize the volatility estimates of shorter-lived benchmarks to ensure that all series are measured over similar time periods.

Correlation estimates are calculated using trailing 20 years of monthly returns. Given that recent asset class correlations could have a more meaningful effect on future observations, we place greater weight on more recent observations by applying a 10-year half-life to the time series in our calculation.

Arithmetic versus geometric returns. Our building block methodology produces estimates of geometric (compound) asset class returns. However, standard mean-variance portfolio optimization requires return inputs to be provided in arithmetic rather than in geometric terms. This is because the arithmetic mean of a weighted sum (e.g., a portfolio) is the weighted sum of the arithmetic means (of portfolio constituents). This does not hold for geometric returns. Accordingly, we translate geometric estimates into arithmetic terms. We provide both arithmetic returns and geometric returns, given that the former informs the optimization process regarding expected outcomes, while the latter informs the investor about the rate at which asset classes might be expected to grow wealth over the long run.

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The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations), and investors may not get back the full amount invested.

Invesco Solutions develops CMAs that provide long-term estimates for the behavior of major asset classes globally. The team is dedicated to designing outcome-oriented, multi-asset portfolios that meet the specific goals of investors. The assumptions, which are based on 5- and 10-year investment time horizons, are intended to guide these strategic asset class allocations. For each selected asset class, we develop assumptions for estimated return, estimated standard deviation of return (volatility), and estimated correlation with other asset classes. This information is not intended as a recommendation to invest in a specific asset class or strategy, or as a promise of future performance. Estimated returns are subject to uncertainty and error, and can be conditional on economic scenarios. In the event a particular scenario comes to pass, actual returns could be significantly higher or lower than these estimates.

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