2025 Invesco Capital Market Assumptions

Invesco Solutions | Pound Sterling (GBP) | Q1 Update

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Executive Summary

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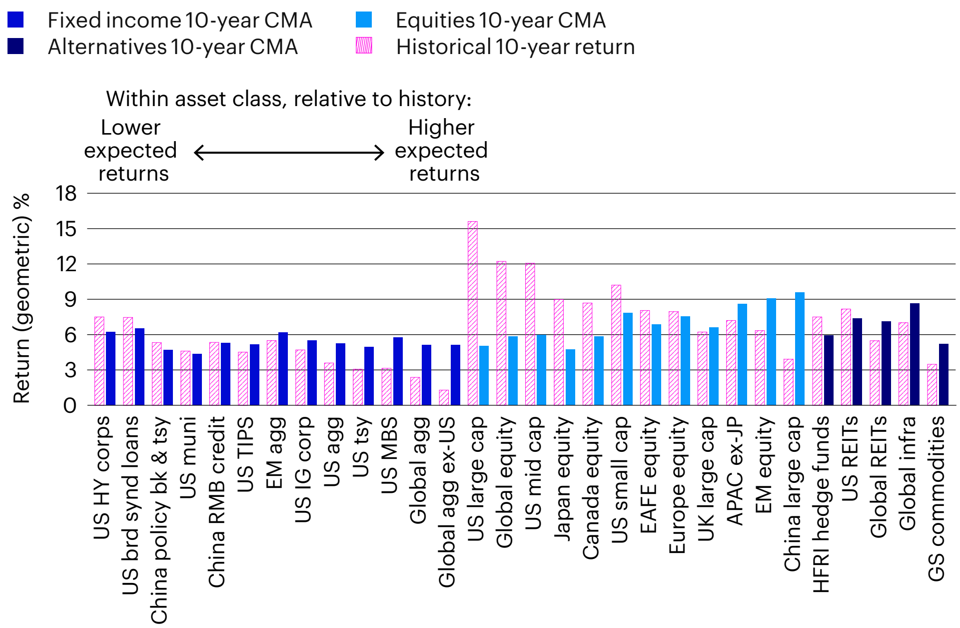
Thought Leadership

- We have witnessed a dramatic repricing of risk in the first few months of 2025. Following the "Liberation Day" tariffs, US equity markets have posted their 16th worst two-day period since 1928.
- The once unstoppable US large cap equity market has underperformed its global counterparts since Trump's election on November 4th, 2024, with a rotation into non-US equities and "risk-off" assets underway.
- Being both defensive and flexible is key for investors during these moments as trade policies could be reversed just as quickly as they have been imposed. We have written extensively about the risks looming over US equity markets for quite some time, with elevated valuations and market concentration being key themes of our capital market assumption (CMA) publications.

Figure 1: Expectations relative to historical average (GBP)



Source: Invesco, estimates as of December 31, 2024. 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

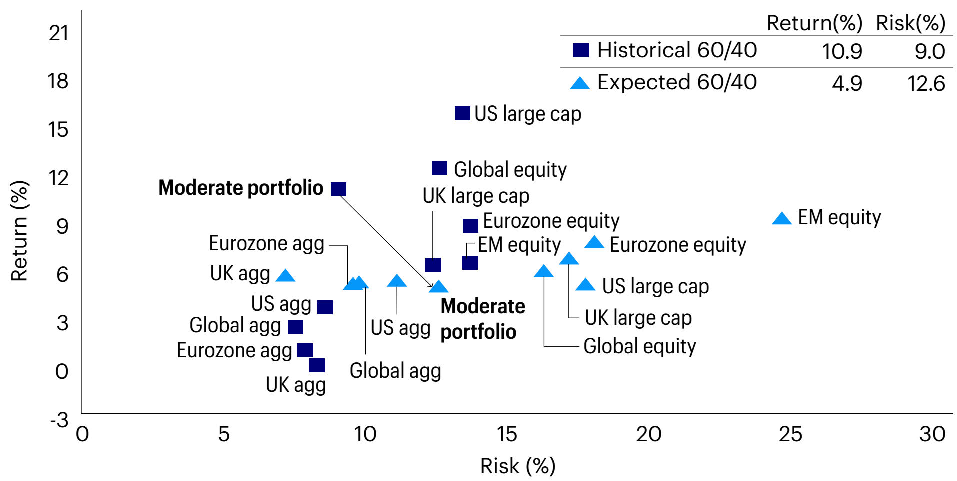
We have witnessed a dramatic repricing of risk in the first few months of 2025. Equity markets in the US started their fall with a 7.7% correction from their peak mid-February up to the Trump administration's April 2nd tariff announcement, referred to as "Liberation Day", and continued to fall an additional 10.5% in the two trading days following the event[1], amongst the worst two-day period for the US equity market in history[2]. What started with targeted tariffs on specific goods or countries with rough conditions for trade normalization[3] has fully evolved into a wholesale tax on all imports into the US, with the Trump administration now imposing the highest weighted effective tariff in a century at around 22%[4] with the potential to increase to 27% once factoring in sector specific tariffs. This current rate is higher than the Smoot-Hawley levels from the 1930's at around 20% which deepened the economic damage of The Great Depression. Tariffs, while a complex subject, are often considered taxes that are both inflationary and a negative growth shock with the potential to significantly lower corporate earnings. Clearly the current trade environment is volatile and may potentially be offset by unilateral negotiations or could develop into a full-fledged trade war should countries retaliate, as we have seen with China implementing a reciprocal 34% tariff on all US imports.

The once unstoppable US large cap equity market has underperformed its global counterparts since President Trump's election on November 4th, 2024, as many of the market leaders, such as the tech-heavy Mag-7, rely significantly on global revenues outside of the US, exposing them to weakness from potential trade slowdowns. As an additional signal of the reduction in US risk sentiment, more cyclically oriented small caps have underperformed large caps and defensive assets, such as long duration investment grade fixed income and gold, have rallied through the economic uncertainty. Recessionary warnings such as high yield credit spreads and jobless claims are beginning to rise, leading many economists and market participants to increase their probability of a US recession in the near term[5]. The dollar, usually a safe haven during a selloff, has begun to weaken, signaling a lack of appetite for US denominated assets and may be the start of a rotation out of the US for investors. Options markets are beginning to price in lower base rates with the potential for three slowdown-induced cuts this year, however a Fed put is no guarantee as the Federal Reserve is tasked with combatting sticky inflation that may accelerate depending on the implementation and duration of tariffs.

Being both defensive and flexible is key for investors during these moments as trade policies could be reversed just as quickly as they have been imposed. We have written extensively about the risks looming over US equity markets for quite some time, with elevated valuations and market concentration being key themes of our capital market assumption (CMA) publications. While CMAs cannot forecast trade policy or identify the next trigger for valuation reversals, they can underscore potential risks and the likelihood of a future that diverges significantly from the past, with market leadership transitioning from equities to fixed income and from the US to other global regions. Following this significant downward revision of growth expectations, a once promising soft landing is less likely given a looming trade war. As long-term investors we continue to emphasize the value of diversification, which statistically will prevent a portfolio from being the top performer in any given period, yet it will likely reduce the overall volatility of an asset allocation during moments like these.

1. Bloomberg as of April 4, 2025.
2. 16th worst since 1928 for the S&P 500. The worst was Black Monday on October 19, 1987 at -24.6%.
3. Such as the limitation of fentanyl crossing into the US from Canada or Mexico.
4. Estimate from the Yale Budget lab, as of April 4, 2025.
5. 1 year probability of a US recession currently at 60% from Polymarket as of April 4, 2025, up from 21% on February 20th. This forecast matches JP Morgan's recent increase of their 2025 recession probability.

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



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1Q25 CMA Observations (10Y, USD)

Equities: US large cap equites are hovering around a 5% nominal expected return, a slight improvement (+0.3%) from last quarter, mostly driven by higher inflation expectations (+0.2%). Our return estimate for global equities is slightly higher at 5.8% (+0.4% quarter-over-quarter), however we would like to highlight that the US equity market is roughly 65% of the global equity market, making it highly dependent on the path of the US. Assuming tariffs hold, we would expect lower growth rates, higher inflation, and improved levels of valuations. Within the US, small caps are expected to fare better at 7.8% (+0.1% QoQ), given faster expected growth rates and significantly better valuations, however our model expresses that these levels of valuations are still negative given today's interest rate and inflation environment. Outside of the US, developed equities (6.7%) are likely to outperform the US, with Europe the standout at 7.5% (+1.2% QoQ from improved valuations and a weaker expected dollar) compared to Japan at 4.7% (+0.1%) due to slower earnings growth and deflation. Emerging markets are a standout (9.1%, +0.6% QoQ) due to positive expected valuations, a rarity in today's equity markets, and faster expected growth rates than developed markets.

Fixed income: Investment grade aggregate bonds (5.25%) have surpassed US equity markets in terms of expected returns, with US treasuries fast approaching equity returns as well (4.9%, +0.7% QoQ). Yields on most fixed income assets increased towards year end as real yields priced in faster growth rates and the reduction of expected interest rate cuts. The increase in forward pricing improved the outlook of floating rate, broadly syndicated loans (6.5%, + 0.8% QoQ). While yield curves have fallen post tariff announcements, with the 10Y now below 4%, this is not currently reflected in our CMA data and will likely result in lower fixed income expected returns. Non-dollar, unhedged, fixed income such as EM local debt (7.7%, +1% QoQ) has a significant positive currency adjustment from a weakening US dollar.

Alternatives: We reiterate our comments on alternatives, especially during volatile periods for markets. Global REITS, hedge funds, and commodities are all attractive relative to traditional assets as they are all expected to outperform US equities on a forward basis. Real assets have sold off significantly over the past year leading to attractive valuations relative to public equities. Equity REITs have outperformed US large cap equities during the current drawdown by 10.5%[6] as they are often viewed as a defensive bond proxy. From a risk adjusted perspective, all major alternative assets that we cover have expected return-to-risk ratios near double that of US equities with hedge funds (0.8) standing out.

6. Bloomberg from the period of February 19, 2025 to April 4, 2025.

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, we have added a new **Figure 3**, which 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]

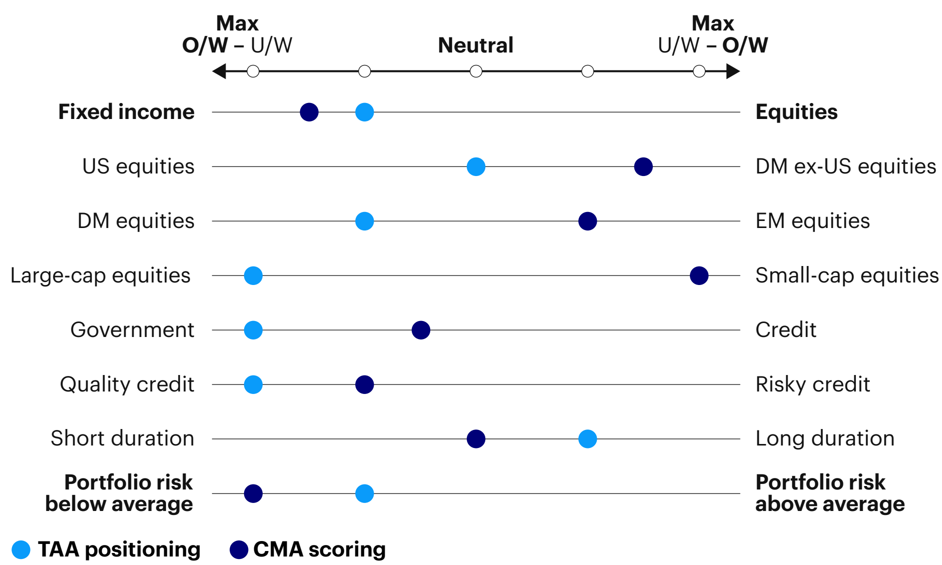
CMA signals relative to tactical asset allocation (TAA) positioning

Our CMA scoring aligns closely with our latest tactical positioning in a contraction regime, both at the portfolio risk level and when comparing equities to fixed income. Both time horizons recommend taking below-average levels of risk, with a preference for sourcing that risk from fixed income rather than equities. This is intuitive, as the relative expected return of fixed income compared to equities is elevated. Further, the possibility of downside risks to the economy and markets is heightened in a contraction regime.

The first major divergence between the two time horizons appears when comparing US equities to developed markets outside the US. US equities, despite their high valuations—which pose a longer-term headwind for CMAs—benefit from a large concentration of defensive, high-quality companies. These companies tend to perform well during a tactical contraction as they are less tied to the business cycle. From a tactical perspective, we have begun to rotate into non-US equities and currently remain neutral given relative earnings within developed ex-US equities have improved versus the US. Tactically, our view on the dollar remains neutral; while long-term currency valuations suggest a meaningful period of dollar depreciation, tighter monetary policy and high yields are offset by positive growth surprises in the rest of the world. Tariffs may be the catalyst for a change in the model for the greenback.

This logic extends to comparisons between developed market (DM) and emerging market (EM) equities, as well as large-cap versus small-cap equities. Long-duration government bonds offer the greatest potential downside protection in a tactical contraction due to their defensive properties and inverse correlation to equities as long interest rates fall, leading to a tactical maximum overweight position.

Figure 3: Relative tactical asset allocation (TAA) positioning (Apr. 2025) and CMA scoring (1Q25)



Source: Invesco Solutions, April 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).

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.

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2025 Capital Market Assumptions

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

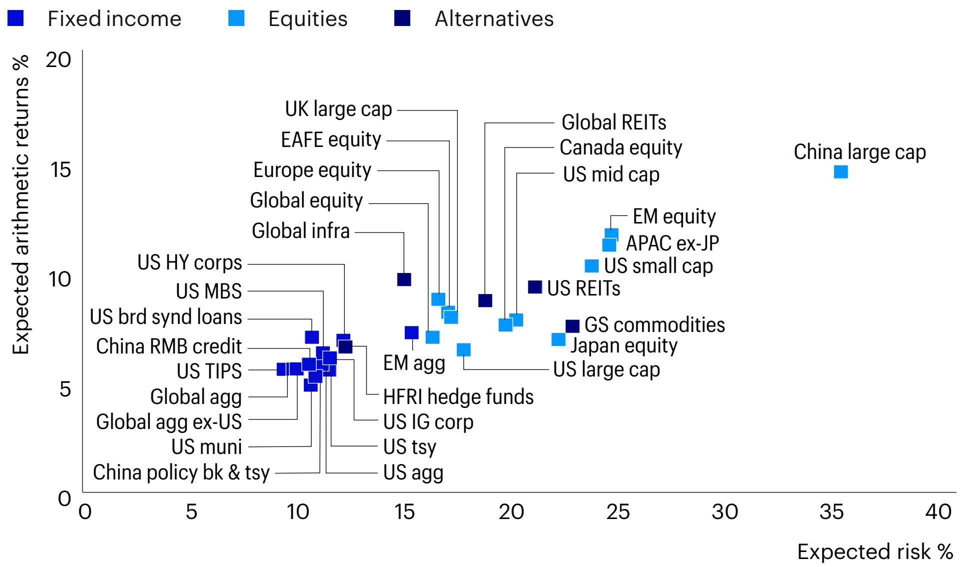

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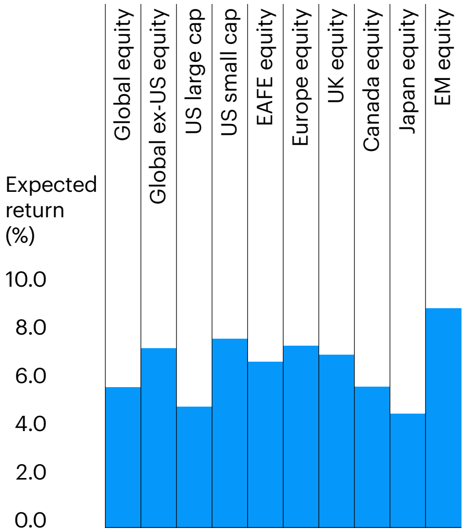
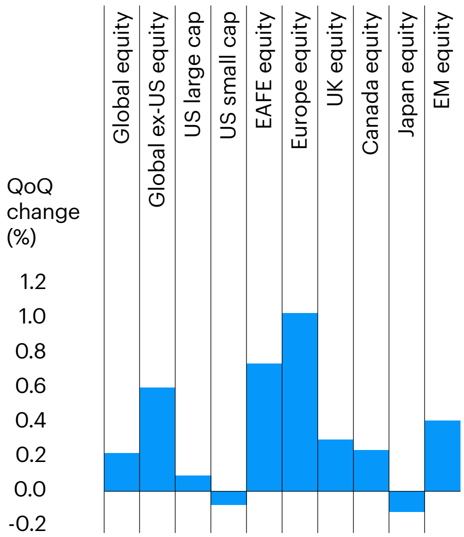
Figure 5a: Equity CMA building block contribution (GBP) (%)



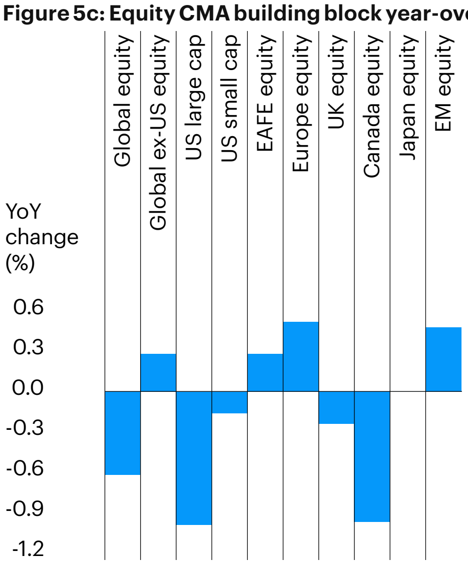
	Dividend yield	Buyback yield	LT earnings growth	Expected inflation	Valuation change	Currency Adj. (IRP)
Global equity	1.80	0.71	2.21	2.04	-1.48	0.51
Global ex-US equity	2.94	0.00	2.17	1.48	-0.72	1.55
US large cap	1.24	1.06	2.24	2.32	-1.87	-0.01
US small cap	1.36	0.96	3.54	2.32	-0.42	-0.01
EAFE equity	3.11	0.00	1.46	1.26	-0.96	1.98
Europe equity	3.32	0.00	1.55	1.92	-0.98	1.70
UK equity	3.84	0.00	1.74	2.11	-0.55	0.00
Canada equity	2.72	0.00	1.75	1.98	-1.98	1.34
Japan equity	2.19	0.00	0.89	-1.03	-0.80	3.47
EM equity	2.63	0.00	3.75	1.80	0.14	0.70

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



	Dividend yield	Buyback yield	LT earnings growth	Expected inflation	Valuation change	Currency Adj. (IRP)
Global equity	-0.02	0.07	0.06	0.13	0.04	-0.07
Global ex-US equity	0.10	0.00	0.08	-0.05	0.18	0.29
US large cap	-0.01	0.06	0.05	0.20	0.01	-0.22
US small cap	0.00	0.03	0.07	0.20	-0.16	-0.22
EAFE equity	0.09	0.00	0.03	0.08	0.26	0.27
Europe equity	0.12	0.00	0.04	0.18	0.43	0.25
UK equity	0.01	0.00	0.05	0.18	0.04	0.00
Canada equity	-0.04	0.00	0.04	0.18	-0.24	0.30
Japan equity	0.02	0.00	0.02	-0.07	-0.45	0.34
EM equity	0.16	0.00	0.19	-0.39	0.14	0.33

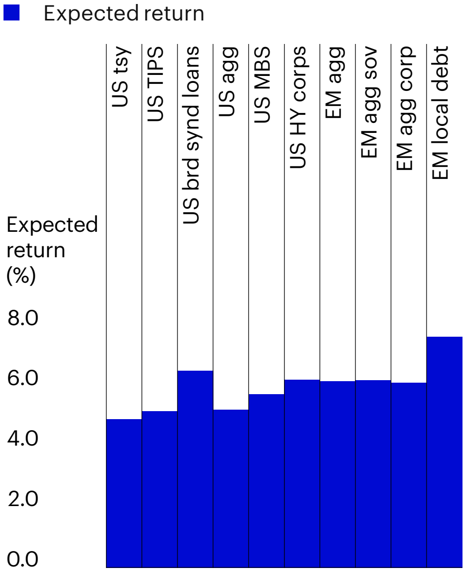
Figure 5c: Equity CMA building block year-over-year change and contribution (GBP) (%)



	Dividend yield	Buyback yield	LT earnings growth	Expected inflation	Valuation change	Currency Adj. (IRP)
Global equity	-0.20	-0.03	0.26	0.00	-1.06	0.42
Global ex-US equity	-0.07	0.00	0.17	-0.18	-0.37	0.72
US large cap	-0.17	-0.12	0.31	0.04	-1.40	0.34
US small cap	-0.11	0.18	0.16	0.04	-0.77	0.34
EAFE equity	0.00	0.00	0.04	-0.07	-0.26	0.57
Europe equity	0.09	0.00	0.04	0.03	-0.15	0.51
UK equity	-0.02	0.00	0.03	-0.03	-0.22	0.00
Canada equity	-0.41	0.00	0.00	0.03	-1.50	0.90
Japan equity	-0.04	0.00	0.10	-0.24	-0.37	0.55
EM equity	-0.09	0.00	0.36	-0.52	-0.36	1.10

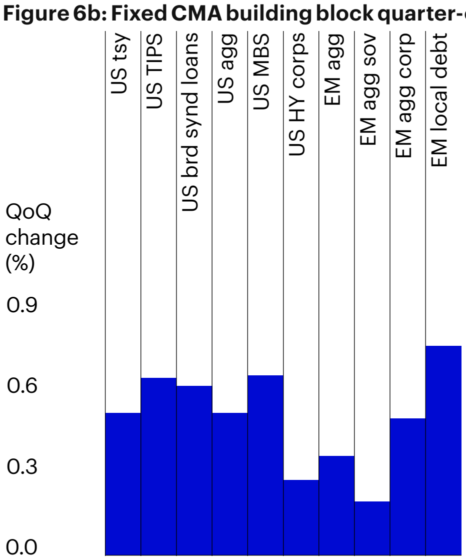
Source: Invesco, estimates as of December 31, 2024. Proxies listed in **Figure 7**. These estimates are forward-looking, are not guarantees, and they involve risks, uncertainties, and assumptions. Please see page 11 for information about our CMA methodology. These estimates reflect the views of Invesco Solutions; the views of other investment teams at Invesco may differ from those presented here. **Past performance is not a guarantee of future results.**

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



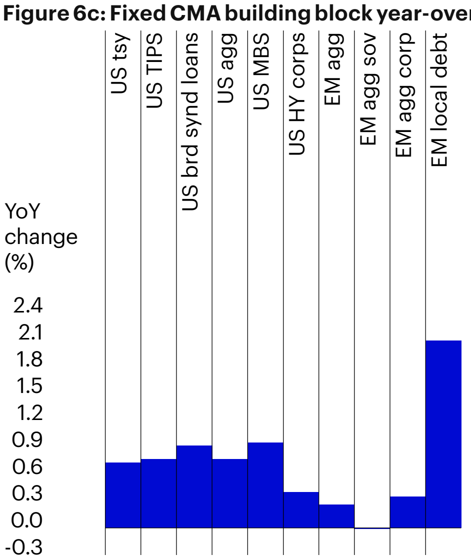
	Average yield	Roll return	Valuation change (yield curve)	Valuation change (OAS)	Credit loss	Currency Adj. (IRP)
US tsy	4.20	0.45	0.29	0.00	0.00	-0.01
US TIPS	4.28	0.51	0.40	0.00	0.00	-0.01
US brd synd loans	7.80	0.00	0.00	-0.35	-0.92	-0.01
US agg	4.78	0.45	0.29	-0.13	-0.14	-0.01
US MBS	5.02	0.45	0.29	0.01	0.00	-0.01
US HY corps	8.15	0.17	0.21	-0.61	-1.68	-0.01
EM agg	7.09	0.45	0.29	-0.76	-0.88	-0.01
EM agg sov	7.22	0.55	0.28	-0.67	-1.16	-0.01
EM agg corp	7.19	0.39	0.29	-0.88	-0.85	-0.01
EM local debt	5.93	0.49	0.46	0.00	0.00	0.78

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



	Average yield	Roll return	Valuation change (yield curve)	Valuation change (OAS)	Credit loss	Currency Adj. (IRP)
US tsy	0.28	-0.03	0.49	0.00	0.00	-0.22
US TIPS	0.38	0.02	0.47	0.00	0.00	-0.22
US brd synd loans	0.95	0.00	0.00	-0.10	0.00	-0.22
US agg	0.28	-0.03	0.49	-0.01	0.01	-0.22
US MBS	0.37	0.09	0.42	0.00	0.00	-0.22
US HY corps	0.17	0.12	0.21	0.00	0.00	-0.22
EM agg	0.14	-0.03	0.49	-0.13	0.11	-0.22
EM agg sov	0.11	-0.16	0.67	-0.20	-0.01	-0.22
EM agg corp	0.23	0.04	0.41	0.03	0.02	-0.22
EM local debt	-0.09	0.01	0.36	0.00	0.00	0.49

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



	Average yield	Roll return	Valuation change (yield curve)	Valuation change (OAS)	Credit loss	Currency Adj. (IRP)
US tsy	0.22	0.00	0.17	0.00	0.00	0.34
US TIPS	0.09	0.18	0.16	0.00	0.00	0.34
US brd synd loans	0.87	0.00	0.00	-0.29	0.00	0.34
US agg	0.27	0.00	0.17	-0.04	0.03	0.34
US MBS	0.47	0.00	0.17	-0.03	0.00	0.34
US HY corps	-0.10	0.20	0.03	-0.07	0.01	0.34
EM agg	-0.12	0.00	0.17	-0.43	0.31	0.34
EM agg sov	-0.12	0.13	0.24	-0.60	-0.01	0.34
EM agg corp	-0.21	0.11	0.14	-0.31	0.29	0.34
EM local debt	-0.44	-0.07	0.64	0.00	0.00	1.97

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

	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	3.4	3.9	4.3	10.0	0.39
	US tsy IM	BBG US tsy IM	4.6	5.2	4.4	10.8	0.48
	US tsy long	BBG US tsy long	5.3	6.5	4.9	15.7	0.41
	US TIPS	BBG US TIPS	5.2	5.6	4.6	9.3	0.60
	US brd synd loans	CSFB leverage loan	6.5	7.0	8.2	10.6	0.66
	US agg	BBG US agg	5.2	5.8	4.9	11.1	0.52
	US IG corp	BBG US IG	5.5	6.1	5.3	11.5	0.53
	US MBS	BBG US MBS	5.8	6.3	5.3	11.1	0.57
	US preferred stocks	BOA ML fixed rate pref securities	5.4	6.3	6.6	14.0	0.45
	US HY corps	BBG US HY	6.2	6.9	7.5	12.1	0.57
	US muni	BOA ML US muni	4.3	4.9	3.7	10.6	0.46
	US muni (taxable)	ICE BOA US taxable muni securities plus	5.7	6.3	5.3	11.8	0.54
	Global agg	BBG global agg	5.1	5.6	4.7	9.7	0.57
	Global agg ex-US	BBG global agg ex-US	5.1	5.6	4.7	9.9	0.56
	Global tsy	BBG global tsy	5.2	5.7	4.5	10.9	0.52
	Global sov	BBG global sov	5.3	5.7	5.2	9.5	0.60
	Global corp	BBG global corp	5.4	5.8	5.4	8.6	0.67
	Global IG	BBG global corp IG	5.5	5.8	5.4	8.6	0.68
	Eurozone corp	BBG euro agg credit corp	5.2	5.6	5.4	9.0	0.62
	Eurozone tsy	BBG euro agg gov tsy	5.5	6.0	4.9	10.5	0.57
	Asian dollar IG	BOA ML AC IG	5.3	6.1	5.3	12.8	0.48
	Asian dollar HY	BOA ML AC HY	7.0	8.5	8.0	17.9	0.47
	EM agg	BBG EM agg	6.2	7.3	6.7	15.3	0.47
	EM agg IG	BBG EM USD agg IG	5.6	6.3	5.6	12.7	0.50
	China policy bk & tsy	BBG China PB tsy TR	4.7	5.3	4.4	10.8	0.49
	China RMB credit	BBG China corporate	5.3	5.8	5.1	10.5	0.55
Equities	Global equity	MSCI ACWI	5.8	7.0	3.0	16.3	0.43
	Global ex-US equity	MSCI ACWI ex-US	7.4	8.8	4.5	17.1	0.51
	US broad market	Russell 3000	4.4	6.0	2.4	18.4	0.32
	US large cap	S&P 500	5.0	6.5	2.3	17.7	0.36
	US mid cap	Russell midcap	6.0	7.8	2.8	20.2	0.39
	US small cap	Russell 2000	7.8	10.3	2.3	23.7	0.43
	EAFE equity	MSCI EAFE	6.9	8.2	5.1	17.0	0.48
	Europe equity	MSCI Europe	7.5	8.8	5.0	16.6	0.53
	Eurozone equity	MSCI euro ex-UK	7.6	9.1	5.4	18.1	0.50
	UK large cap	FTSE 100	6.6	7.9	3.8	17.2	0.46
	UK small cap	FTSE small cap UK	8.2	10.4	4.6	22.4	0.46
	Canada equity	S&P TSX	5.8	7.6	4.1	19.7	0.39
	Japan equity	MSCI JP	4.7	6.9	5.7	22.2	0.31
	EM equity	MSCI EM	9.1	11.7	3.3	24.7	0.47
	APAC ex-JP	MSCI APXJ	8.6	11.2	3.1	24.6	0.46
	China large cap	CSI 300	9.6	14.7	5.5	35.4	0.42
Alternatives	US REITs	FTSE NAREIT equity	7.4	9.3	3.8	21.1	0.44
	Global REITs	FTSE EPRA/NAREIT developed	7.1	8.7	4.3	18.8	0.46
	HFRI hedge funds	HFRI HF	5.9	6.6	-	12.2	0.54
	GS commodities	S&P GSCI	5.2	7.5	-	22.8	0.33
	Agriculture	S&P GSCI agriculture	3.9	6.1	-	21.7	0.28
	Energy	S&P GSCI energy	7.1	12.5	-	36.0	0.35
	Industrial metals	S&P GSCI industrial metals	4.3	6.5	-	21.6	0.30
	Precious metals	S&P GSCI precious metals	-3.2	-1.5	-	18.4	-0.08

Source: Invesco, estimates as of December 31, 2024. 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 (GBP)

- Greater than 0.70
- 0.30 to 0.70
- Less than 0.30

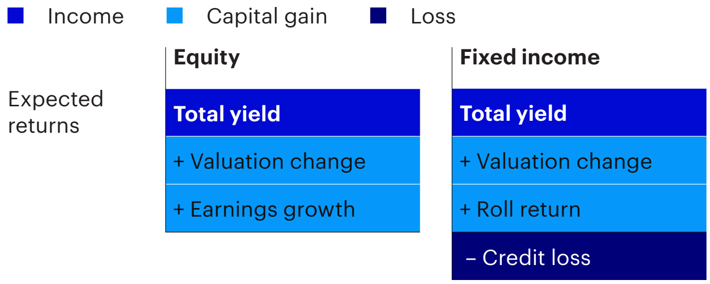
		Fixed income												Equities										Alternatives			
	Asset class	US tsy IM	US TIPS	US brd synd loans	US agg	US IG corp	US HY corps	US muni	US HY muni	Global agg	Global agg ex-US	EM agg	China RMB credit	Global equity	China large cap	US large cap	US mid cap	US small cap	EAFE equity	UK large cap	Canada equity	Japan equity	EM equity	Global REITs	Global infra	GS commodities	HFRI hedge funds
Fixed income	US tsy IM	1.00																									
	US TIPS	0.70	1.00																								
	US brd synd loans	-0.25	0.27	1.00																							
	US agg	0.89	0.80	0.10	1.00																						
	US IG corp	0.64	0.77	0.42	0.90	1.00																					
	US HY corps	0.09	0.53	0.81	0.43	0.69	1.00																				
	US muni	0.60	0.64	0.28	0.79	0.78	0.51	1.00																			
	US HY muni	0.38	0.57	0.53	0.62	0.68	0.59	0.85	1.00																		
	Global agg	0.74	0.77	0.18	0.87	0.84	0.53	0.69	0.56	1.00																	
	Global agg ex-US	0.63	0.70	0.19	0.75	0.75	0.52	0.60	0.49	0.98	1.00																
	EM agg	0.36	0.66	0.61	0.65	0.83	0.82	0.66	0.67	0.72	0.68	1.00															
	China RMB credit	0.33	0.33	0.08	0.40	0.37	0.22	0.33	0.28	0.51	0.52	0.33	1.00														
Equities	Global equity	0.05	0.43	0.62	0.36	0.58	0.81	0.39	0.46	0.53	0.55	0.72	0.29	1.00													
	China large cap	0.02	0.16	0.26	0.17	0.28	0.33	0.15	0.21	0.27	0.29	0.36	0.32	0.42	1.00												
	US large cap	0.04	0.41	0.58	0.34	0.53	0.76	0.36	0.42	0.45	0.46	0.63	0.22	0.97	0.34	1.00											
	US mid cap	0.01	0.40	0.65	0.34	0.56	0.81	0.38	0.45	0.44	0.45	0.67	0.23	0.94	0.35	0.95	1.00										
	US small cap	-0.03	0.31	0.59	0.27	0.46	0.73	0.29	0.37	0.36	0.37	0.57	0.20	0.86	0.32	0.87	0.95	1.00									
	EAFE equity	0.08	0.41	0.59	0.37	0.57	0.78	0.40	0.44	0.56	0.60	0.73	0.32	0.95	0.41	0.86	0.86	0.77	1.00								
	UK large cap	-0.01	0.34	0.60	0.27	0.49	0.74	0.32	0.42	0.47	0.52	0.65	0.29	0.89	0.39	0.80	0.81	0.73	0.95	1.00							
	Canada equity	0.01	0.42	0.65	0.32	0.55	0.78	0.34	0.45	0.49	0.52	0.68	0.26	0.89	0.40	0.84	0.87	0.80	0.85	0.85	1.00						
	Japan equity	0.10	0.35	0.48	0.35	0.51	0.66	0.36	0.37	0.46	0.47	0.61	0.30	0.80	0.32	0.73	0.72	0.67	0.85	0.73	0.67	1.00					
	EM equity	0.05	0.39	0.57	0.33	0.53	0.72	0.36	0.44	0.53	0.57	0.74	0.40	0.84	0.58	0.71	0.72	0.64	0.83	0.77	0.79	0.68	1.00				
Alternatives	Global REITs	0.18	0.53	0.61	0.49	0.66	0.80	0.48	0.55	0.60	0.60	0.75	0.31	0.86	0.31	0.81	0.85	0.78	0.84	0.80	0.80	0.68	0.72	1.00			
	Global infra	0.20	0.53	0.55	0.48	0.64	0.75	0.49	0.53	0.60	0.60	0.71	0.28	0.83	0.32	0.79	0.80	0.70	0.82	0.80	0.83	0.64	0.70	0.85	1.00		
	GS commodities	-0.30	0.11	0.52	-0.14	0.07	0.45	-0.02	0.19	0.08	0.17	0.31	0.08	0.49	0.16	0.42	0.45	0.41	0.50	0.58	0.60	0.36	0.47	0.37	0.44	1.00	
	HFRI hedge funds	-0.10	0.34	0.72	0.23	0.50	0.78	0.31	0.47	0.39	0.42	0.66	0.25	0.89	0.45	0.83	0.89	0.85	0.85	0.82	0.88	0.71	0.80	0.77	0.73	0.59	1.00

Source: Invesco, estimates as of December 31, 2024. 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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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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