KAsset

2025 CAPITAL MARKET ASSUMPTIONS

POWERED BY J.P.Morgan ASSET MANAGEMENT

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Foreword

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The global economy is undergoing transformative shifts, bringing both challenges and opportunities for investors. Thailand faces persistent structural headwinds such as an aging population, diminishing productivity, and elevated household debt. Nevertheless, the nation is positioned to harness advancements in technology, evolving supply chains, and its advantageous location in Southeast Asia.

The **2025 KAsset Capital Market Assumptions (KCMA)** marks the inaugural edition of a forward-looking framework developed collaboratively by Kasikorn Asset Management (KAsset) and J.P. Morgan Asset Management (JPMAM). By integrating global expertise with local insights, this publication offers comprehensive projections on economic trends, asset returns, and portfolio strategies, specifically tailored to Thailand's distinctive economic environment over the next 10–15 years.

As a pioneering initiative, this KCMA provides indispensable tools for multi-asset portfolio construction, delivering critical return and risk assumptions that serve as a foundation for Strategic Asset Allocation, including the K-WealthPLUS Fund Series. The publication is not only a vital resource for KAsset but is also designed to empower institutional investors, investment advisors, and wealth advisors in constructing diversified and resilient portfolios.

Drawing on methodologies employed by leading global asset management firms, the 2025 KCMA underscores the importance of long-term assumptions as a cornerstone for strategic decision-making. This edition emphasizes areas of resilience such as dividend-paying equities and stable fixed income while advocating for diversification through global and alternative assets.

On behalf of Kasikorn Asset Management, we are honored to present this inaugural edition of the KCMA. This publication is envisioned as a vital resource for navigating an evolving investment landscape and equipping our clients with the tools necessary to achieve sustainable, long-term success. We look forward to continuing to support informed investment decisions and strategic portfolio planning.

Win Phromphaet, CFA
Executive Chairman
Kasikorn Asset Management

2025 Long-Term Capital Market Assumptions

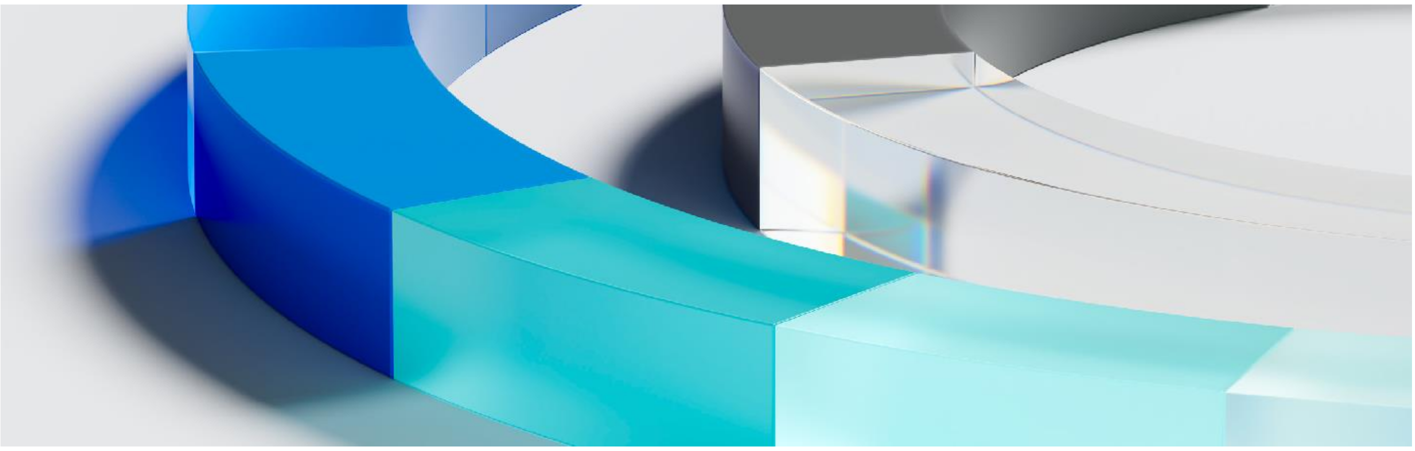
by
J.P. Morgan
Asset Management

J.P.Morgan
ASSET MANAGEMENT

29th annual edition

2025 Long-Term Capital Market Assumptions

Executive summary | Higher starting points, healthier foundations



In brief

- We publish the 29th edition of our Long-Term Capital Market Assumptions (LTCMAs) as a new economic era comes into focus. Gone is the low investment, low growth and low interest rate world of the 2010s. In its place is a healthier economy set to deliver higher growth, strong capital investment trends and higher interest rates.
- Higher policy rates reinforce strong projected bond returns, while higher growth underpins equity returns. Our return projection of 6.4% for a USD global 60/40 stock-bond portfolio dips 60 basis points (bps) from last year – a forecast that is in line with the long-run average. Alternatives are emerging from a period of asset markdowns and offer compelling returns and diversification options.
- Governments have shifted from austerity toward fiscal activism. For this shift to boost real growth without merely fueling inflation will require investments that stimulate supply rather than simply stoke demand. Avoiding risks from higher inflation may also require labor market reform and thoughtful migration policies. In any case, elevated bond market and currency volatility seem inevitable.
- An increase in tendencies toward economic nationalism – despite stopping short of deglobalization – means our estimate of inflation volatility remains elevated and underscores the utility of assets with positive gearing to inflation, such as commodities and real assets.
- In the coming decade, the benefits of artificial intelligence (AI) and automation will accrue increasingly to the wider economy and likely support corporate earnings. We now project a 20bps annual boost to developed market growth from AI – a potentially conservative estimate. Ultimately, we expect AI to improve total factor productivity, putting downside pressure on inflation.
- Investors will need to manage a range of risks, not least from the geopolitical tensions that currently dominate headlines. But overall, our 2025 LTCMAs offer an optimistic outlook. As investment levels pick up and rates normalize, a healthy – even buoyant – economy will emerge, providing a strong foundation for asset markets.

Executive summary

The publication of the 29th edition of our Long-Term Capital Market Assumptions (LTCMAs) comes at a time when some of the forces that drove volatility in recent years are abating. Both the lasting influence of those forces and their impact on the topography of the economy and asset markets are becoming clearer.

We anticipate that the next 10 to 15 years will be characterized by higher fiscal spending, high capital investment and higher neutral cash rates, but also by higher growth. Expected returns remain elevated by historical standards, and we believe that the global economy today is healthier than it was for much of the last decade. Our trend nominal growth projections for the G7 economies underscore that view: They rise for the fifth consecutive year, from a multi-year low point of 3.1% in 2020 to 3.9% in our 2025 forecasts (Exhibit 1A).

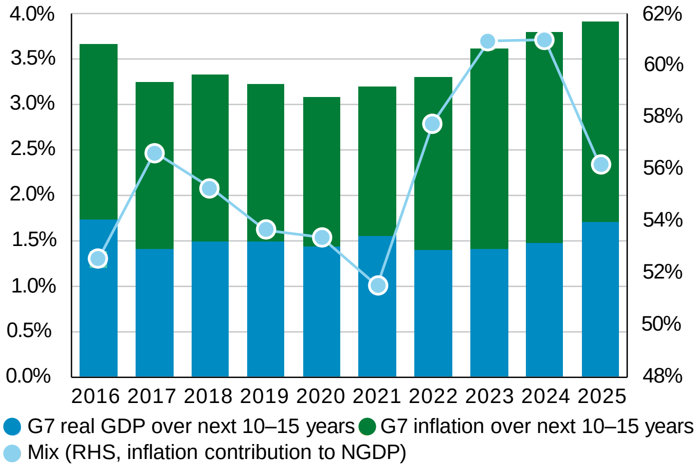
True, risks exist. Stubbornly elevated deficits, increasing geopolitical tensions, income inequality and a rising tendency to economic nationalism all pose threats to our outlook. Still, we believe that the structural investment in productive assets over our forecast horizon marks a decisive and positive shift from the low investment, low growth and low interest rate world of the 2010s.

The 17% rally in world equities in the first three quarters of 2024[1] inevitably creates a higher (and thus more challenging) starting point for the valuation of stocks and many financial alternatives. But the promise of improved productivity driven by automation and artificial intelligence (AI), as well as the tailwind from capital deepening,[2] offset that valuation pressure with a positive boost to growth.

Higher growth means higher cycle-neutral[3] cash rates, which in turn support fixed income returns. Combined with equities, this translates to a return forecast of 6.4% for a USD 60/40 global stock-bond portfolio – a dip of 60bps from last year. Given that a naive mark-to-market of last year's 60/40 return forecast would have slashed our forecast by well over 100bps[4], investors in balanced portfolios look to be well-placed to capture the rewards of the improving economic landscape (Exhibit 1B).

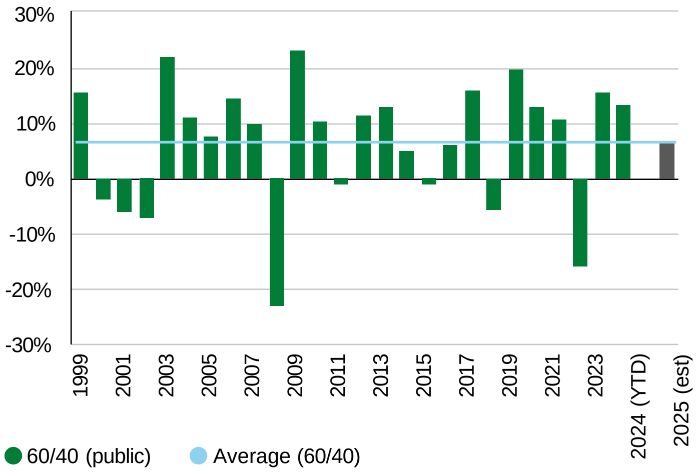
Developed market growth prospects continue to improve; returns remain reasonable even after strong gains in 2024

Exhibit 1A: LTCMA growth projections over last decade



Source: IMF World Economic Outlook, J.P. Morgan Asset Management; data as of September 2024.

Exhibit 1B: 60/40 vs. long-term history



Source: Bloomberg, J.P. Morgan Asset Management; data as of September 30, 2024.

1 This reflects the MSCI ACWI index return from December 31, 2023 to September 30, 2024.
2 Increasing the amount of capital per worker in the economy.
3 Cycle-neutral: The average level of a key parameter (yield or spread) that we assume prevails after an initial period of normalization.
4 ACWI forecasts are 70bps lower this year, comprising a 150bps hit from cyclical factors (given the equity rally), offset by an 80bps boost to cycle neutral returns from improved margin and terminal valuation estimates; U.S. aggregate bond forecasts are 50bps lower.

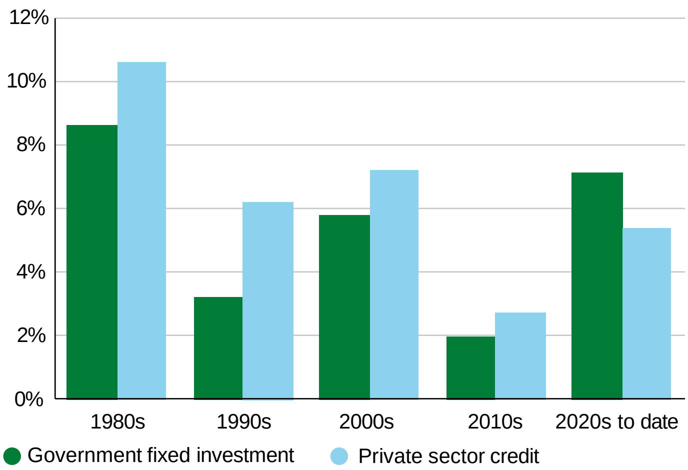
Strong capital investment supports nominal growth

The pandemic, the energy crisis and opportunities surrounding new technologies such as AI have revitalized both businesses' and governments' desire to invest.

This marks a stark turnaround from the defining feature of the pre-pandemic decade – a chronic lack of spending, particularly on public sector investment. It was a classic case of the paradox of thrift[5] (Exhibit 2).

The post-global financial crisis deleveraging is behind us

Exhibit 2: Average annual growth in private sector credit and government fixed investment

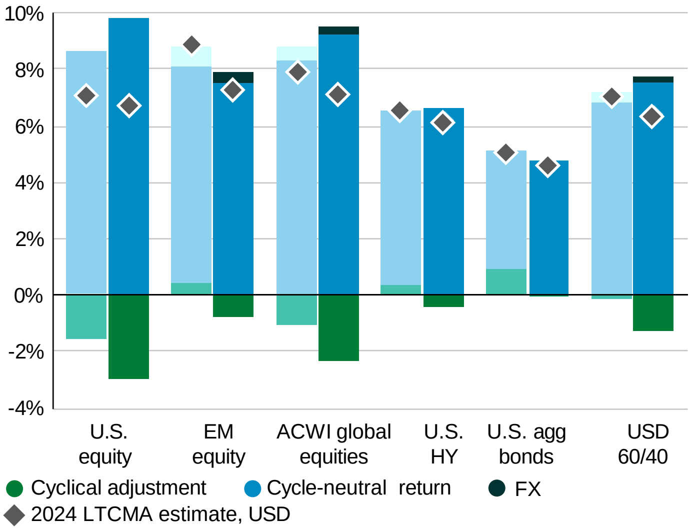


Source: Federal Reserve, LSEG Datastream, J.P. Morgan Asset Management; data as of September 26, 2024.

We believe that the outlook for more normal, positive levels of fiscal spending, together with strong private capital investment, set the tone for a more optimistic asset return environment (Exhibit 3).

Return drivers for key assets reveal some cyclical headwinds

Exhibit 3: Cyclical and cycle-neutral return drivers for USD asset forecasts from 2024 to 2025



Source: J.P. Morgan Asset Management Multi-Asset Solutions; data as of September 2024.

* Faded columns = 2024 estimates; bold columns = 2025 estimates. USD 60/40 refers to a portfolio of MSCI ACWI Equity and Bloomberg US Aggregate.

During the 2010s, central banks' monetary activism (aggressive monetary policy) tried to stimulate spending, but policymakers struggled to overcome the powerful forces driving a desire to save. Ever-expanding unconventional monetary policies and a large rise in the monetary base failed to deliver the inflation many market participants had feared, appearing instead to fuel certain asset prices. This widened inequality, contributing to a more febrile political environment.

The pandemic forced governments to take a new route. The Covid crisis demanded massive levels of spending, initially to support short-term household and business incomes, then, increasingly, to address national vulnerabilities that were exposed by the dependence on global supply chains and exacerbated by Russia's invasion of Ukraine and the global energy crisis.

During the pandemic, self-interest made governments increasingly willing to invest. Even prior to the pandemic, populations across developed nations had clearly grown weary of fiscal austerity and the low real wage growth associated with a lack of investment.

The implications of this shift could be significant. Investment in supply chains, resulting from national self-interest, risks some form of dead-weight loss. In theory, at least, moving away from Ricardian[6] efficiency is suboptimal for economic growth over the longer term, as trade tends to increase competition and productivity. In practice, however, frictions in the supply chain in response to shocks and geopolitics may make decisions over "near-sourcing" or latency in the supply chain more rational. Still, the line between supply chain safeguards and economic protectionism remains narrow.

[5] The paradox of thrift describes a situation in which individuals acting individually to repair their own balance sheets fail to see improvements because other individuals act similarly, and the result is weaker growth and lower aggregate demand.

[6] Ricardian efficiency: From 18th-century economist David Ricardo, who proposed that countries focus their productive capacity on goods where they have a competitive advantage.

Investments in domestic infrastructure, security, energy and the supply chain are responses to past weaknesses. Investments in new technology – notably AI, automation, robotics and therapeutics for chronic health conditions – are responses to current opportunities. Whether these investments increase labor productivity, lower manufacturing unit costs or enhance human capital, they offer the potential to strengthen the economy.

Of these investments, AI is both the most far-reaching and the most accessible over our 10- to 15-year forecast horizon. We add a further 10bps boost to our growth forecasts this year to account for the impact of AI, bringing our estimate of the annual GDP impact of AI[7] over our forecast horizon to +20bps for developed markets and +10bps for emerging markets. To be clear, this number may significantly underestimate the true impact of this technology as it becomes fully embedded in the wider economy.

Simply put, investment is happening across the economy and is driving up nominal growth. Investors will see this manifest first in monetary policy: Rates that initially went up due to inflation are likely to stay higher due to growth.

Fiscal activism – increased government investment as austerity is off the agenda

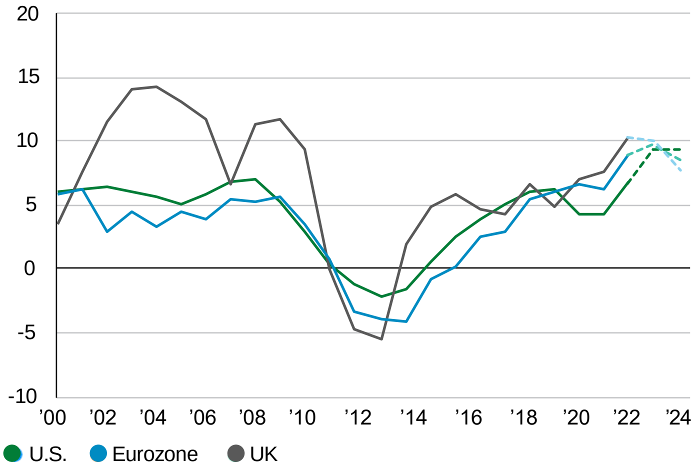
Our expectation of ongoing fiscal activism may seem at odds with government debt levels that are even higher than they were post financial crisis. However, in our view, a return to austerity seems politically unfeasible.

Governments are seeing greater demands for both capital spending (Exhibit 4) and the day-to-day spending needs that are associated with an aging population.
How governments prioritize spending requests will be critical; focusing resources on building productive capital will be key. Higher investment, particularly higher fiscal spending, carries the risk of capital misallocation. That is, demand increases without creating productive assets, thus generating topside risk to inflation in the short run and boosting inflation volatility over the medium term.

Spending on supply chain resilience, local sourcing and national defense requires a fine line between judicious investment and excesses that embed inflation. By contrast, investments in electrification, sustainable energy grids and incorporating AI into the economy can potentially boost productive capacity in the long run.

Government investment is expected to stay at elevated levels, a stark contrast to the pre-global financial crisis period

Exhibit 4: % change year-on-year, 3-year moving average



Source: Deutsche Bundesbank, INE, INSEE, ISTAT, LSEG Datastream, OECD, J.P. Morgan Asset Management; data as of June 27, 2024. Chart shows a smoothed measure of government gross fixed capital formation. Forecast is OECD. Eurozone is GDP-weighted average of France, Germany, Italy and Spain.

Improving real growth – not merely fueling higher inflation – will require investments that stimulate supply rather than purely boost demand. Investments targeted to also improve labor productivity over the long run, especially in combination with necessary labor market reform and pragmatic migration policy, can mean that spending drives up real growth instead of merely raising long-run inflation risks.

In any case, fiscal investment must be understood and palatable to international investors to ensure they are willing to buy government bonds and ultimately fund the investment at sensible interest rates. Only time will tell whether governments will be able to withstand political pressure and focus spending on long-term growth enhancements rather than short-term handouts that curry more favor with the electorate.

It is sometimes argued that public investment crowds out private investment. However, we find little evidence of this in the data and would argue that greater willingness of governments to invest is a necessary precondition for a positive momentum in private sector investment.

[7] In last year's LTCMAs, we added a +10bps boost to our developed market (DM) growth forecast attributable to AI. This year, we add a further +10bps boost to DM growth (bringing the total to +20bps) and also add +10bps to the emerging market (EM) growth forecast attributable to AI.

All else equal, the effect of capital deepening adds around 10bps to annual GDP estimates for developed markets. Further out on our 10- to 15-year horizon, some of these investment dollars may boost total factor productivity (TFP), particularly those directed toward AI. We include a modest boost to TFP in developed nations, although this will likely accrue in later years.

Higher nominal growth calls for higher neutral cash rates[8] over our forecast horizon. As fiscal authorities have taken their feet off the economic brakes, monetary authorities do not have to pump the accelerator.

A more balanced monetary and fiscal policy mix will be reflective of, and contribute to, higher nominal growth. Against that backdrop, higher interest rates, which investors have feared for much of the last few years, will be accepted as a positive symptom of stronger, healthier economic momentum.

Our estimate of USD cash returns is 20bps higher this year, pushing the whole asset stack, especially bonds, higher (Exhibit 5). Fixed income will once again bolster portfolio returns with more sizable and steady income (Exhibit 6).

We note the risk of greater volatility in government bond prices. Higher fiscal spending and a lower need, or willingness, for central banks to engage in quantitative easing (QE) mean the bond market has more capacity to punish fiscal profligacy. In other words, bonds may reclaim their roles as the global economic police force. As Liz Truss, the briefly tenured UK prime minister (September 6 to October 25, 2022) discovered to her cost and UK mortgage holders found to their dismay, the judgment of the bond market can be swift and brutal. If bond markets once again serve as a barometer for fiscal fortitude, this may come at the price of higher volatility.

Although higher interest rates raise the cost of capital, we believe that higher capex firms with a competitive advantage could be rewarded on a secular basis. As we emerge from a period of restrained investment toward, potentially, a capex boom, investing from a position of strength is a net positive – both at a single firm and at an economy-wide level.

Elevated cash assumptions support return forecasts throughout fixed income

Exhibit 5: Key fixed income returns table (G4 and EMD)

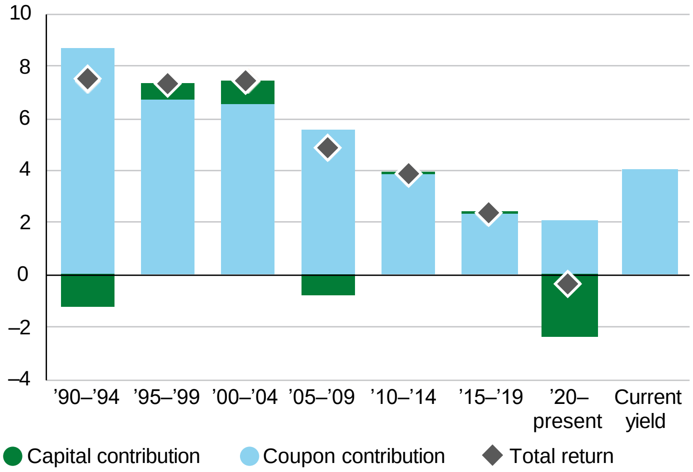
	USD		GBP		EUR		JPY	
	Cycle-neutral rate	2025 Expected return	Cycle-neutral rate	2025 Expected return	Cycle-neutral rate	2025 Expected return	Cycle-neutral rate	2025 Expected return
Inflation	2.4%		2.2%		2.0%		1.5%	
Cash	2.8%	3.1%	2.5%	2.9%	2.2%	2.4%	1.4%	1.1%
10-year bond	3.9%	4.2%	3.4%	4.2%	3.1%	3.3%	2.1%	1.4%
Long Bond Index*	4.2%	4.3%	3.5%	5.0%	3.3%	3.3%	2.1%	1.4%
Investment grade credit	5.3%	5.0%	5.0%	5.2%	4.3%	3.8%	2.6%	1.9%
High yield	8.2%	6.1%			6.7%	5.3%		
Emerging market debt**	7.3%	5.8%						

Source: J.P. Morgan Asset Management; estimates as of September 30, 2024.
* EUR: 15y+ index; JPY: JGB Bond Index; GBP: 15y+ index; USD: 20y+ index. ** EMD hard currency debt.

[8] R* is the neutral rate of interest that equilibrates the economy in the long run. It is the real interest rate that is neither expansionary nor contractionary when the economy is at full employment. The terminal rate is the final benchmark interest rate at the conclusion of a cycle of rate hikes or cuts by a central bank. During hiking and cutting cycles, market participants often try to gauge the terminal rate and pay close attention to that rate as projected by policymakers. The cycle neutral rate is the average level of a key parameter (yields or spreads) that we assume prevails after an initial period of normalization.

Periods with higher cash rates coincide with higher bond coupons, which are, on average, superior to price return

Exhibit 6: Average contribution to U.S. Treasury returns



Source: Bloomberg, J.P.Morgan Asset Management; data as of September 2024.

A tendency toward economic nationalism

While acknowledging the human toll of the pandemic and the invasion of Ukraine, we take a relatively positive view of the economic contours that have emerged in their wake. Our tempered optimism may seem incongruous against some of the negative commentary surrounding the idea of deglobalization.

We acknowledge that the trend toward greater economic nationalism has resulted in the emergence of a multi-polar world[9] with more fragmented trading blocs, but we reject the notion of deglobalization often cited in financial media. Even with a desire to shore up supply chain frailties post pandemic, certain economic realities overwhelm the deglobalization political narrative. Countries cannot simply reverse much of the trade they do. The U.S. still buys lots of semiconductor chips from Asia, Nordic countries still get most of their bananas from sunnier climes, and the Democratic Republic of the Congo remains the world's principal supplier of cobalt.

Fierce proponents of economic nationalism often fail to grasp the paradox that achieving it fully would require a huge and immediate jump in demand for skills and materials to build local capacity, necessitating a sharp near-term rise in migration and trade.

Much of the recent trend toward economic nationalism is of a less sinister variety, focusing on strategic planning and national resilience. However, there is a risk that economic nationalism morphs into overt protectionism, which is more acutely inflationary and can disrupt asset markets through trade wars and tariffs.

We capture the impact of economic nationalism on inflation by maintaining an expectation for elevated inflation volatility over our forecast horizon. High inflation volatility highlights the importance of holding assets with positive gearing to inflation as part of a balanced portfolio. Increased demand for commodities from rising capex already supports returns, and we expect the broad commodities index to outperform inflation by 140bps, on average, over our forecast horizon. Real asset returns reflect impairments with an attractive entry yield, and their resilience to inflation further enhances their appeal, in our view (Exhibit 7).

[9] David Kelly, Stephanie Aliaga, Kerry Craig, et al., "Globalization will evolve - but not unravel," *2023 Long-Term Capital Market Assumptions*, J.P. Morgan Asset Management, November 30, 2022.

Real assets are a useful tool to manage inflation risks

Exhibit 7: 2025 LTCMA real asset assumptions (Levered*, net of fees,%)

Real assets	2025	2024
Private real estate equity		
U.S. core	8.1	7.5
U.S. value-added	10.1	9.7
European core	7.6	7.3
European value-added	9.7	9.2
Asia-Pacific core	8.1	8.7
REITs (local currency)		
U.S. REITs	8.0	8.2
European REITs	8.7	9.7
Asis-Pacific REITs	7.8	8.7
Global REITs**	8.0	8.5
Commercial mortgage loans (local currency)		
U.S.	6.4	6.3
Global core infrastructure (USD)		
Core	6.3	6.8
Global transport (USD)		
Core	7.8	7.7
Global timber (USD)		
Global timber	5.3	6.2
Commodities (USD)		
Commodities	3.8	3.8
Gold	4.0	4.1

Source: J.P. Morgan Asset Management; estimates as of September 30, 2023 and September 30, 2024.

* All return assumptions incorporate leverage, except for commodities, where it does not apply.

** The global composite is built assuming the following weights: roughly 70% U.S., 10% Europe and 20% Asia-Pacific.

As with higher fiscal spending, the impact of economic nationalism depends on both the nature and the speed of change. Where economic nationalism addresses strategic gaps and bolsters resilience, it may boost productive capacity over the cycle. However, if it builds duplication or stymies trade, any near-term "sugar rush" to the economy risks eventually crowding out more productive capital and sparking more frequent bouts of inflation volatility.

The promise of AI and automation

A tangible consequence of economic nationalism is a focus on national security interests. Given the growing dominance of the information economy and persistent threats of cyberattacks, businesses and governments increasingly view data and technology as strategic assets. This has allowed some "big tech"[10] firms to operate almost as tolerated monopolies – a situation that, despite growing scrutiny from legislators, may persist for some time yet. It may partially explain the high weight of technology in some country equity indices and in turn the concentration of U.S. equities in global indices (Exhibit 8). Still, we believe that the widespread potential of AI reinforces the tech sector's dominance.

The tech boom is still in its early stages, in our view. Over our forecast horizon, we will see the benefits of AI and automation accrue increasingly to the wider economy, not just the tech sector.[11] As we have noted, we see an average 20bps annual boost[12] to developed market growth, and that may be a conservative estimate.

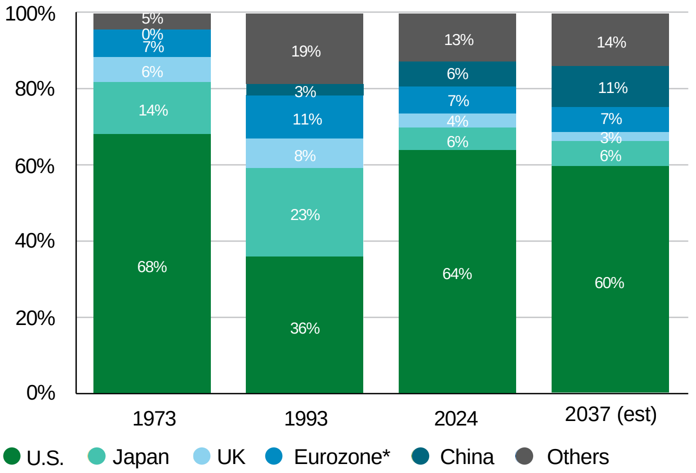
Today, the growth impact of AI comes from capital deepening, but we expect it eventually to improve total factor productivity, putting downside pressure on inflation.

Maintaining a technological advantage is a national strategic imperative. We see a risk of an accelerating technology arms race that could further polarize trading blocs. The U.S. and China are rivals, but Europe's position remains unclear; politically, Europe is more aligned with the U.S., but it maintains important trading relationships with China. India, too, is set to become an important player over our forecast horizon, as its high projected growth rate causes the country to rise in the rankings from the fifth- to the third-biggest economy globally.

10 Big tech refers to the largest seven publicly traded technology firms in the U.S.
11 Stephanie Aliaga and Michael Albrecht, "The transformative power of generative AI," J.P. Morgan Asset Management, September 20, 2023.
12 See footnote 7.

U.S. dominance of global equity market capitalization is high but not unprecedented

Exhibit 8: Global listed equity country weights at specific historical and forecast points



Source: SEC, Credit Suisse, McKinsey, MSCI, Bloomberg, Haver Analytics, J.P. Morgan Asset Management Multi-Asset Solutions; data as of February 2024. Past performance is not a reliable indicator of current and future results.
* Eurozone historical data estimated from summing member states or applying prevailing ratio of reported states to estimate eurozone total where data are incomplete.

The strategic importance of technology, as much as its economic importance, suggests that national champions in the sector will have a moat around them for some time. As a result, we believe tech margins are defendable for years to come, particularly given the sector's relentless focus on innovation, research and development.[13]

As the benefits of technology accrue to the wider economy, we believe the concentration of large tech names in indices will naturally moderate. This is similar to the dilution of index concentration that happened in the 1950s and late '70s when important technologies ultimately boosted earnings across many industries, allowing other sectors to catch up to the trailblazers. Given the diverse activities of big tech firms and their profitability, we do not believe their dominance needs to moderate by them catching down to the wider index, as happened to dot-com firms in 2001 and to the banks in 2008.

The growing benefits of AI and other technologies, including process automation, robotics and miniaturization, will likely support earnings over our forecast horizon. While current broad index-level margins may be moderately higher than sustainable in the long run, we do not see a simple reversion to long-term average margins. The business mix and capital efficiency of firms have changed markedly in the past 25 years.
For technology-heavy indices, such as those in the U.S., this offsets elevated valuations and leaves our estimate of U.S. large cap equity returns at 6.7%, only 30bps lower than last year, despite the ongoing equity bull market.

We see equity returns generally lower due to higher starting index levels (Exhibits 9A and 9B). Returns in developed markets beyond the U.S. are supported by lower relative valuations and, for USD-based investors, by currency (Exhibit 10). However, given that the boost from AI appears set to disproportionately benefit developed economies, the return premium for emerging markets over developed markets all but vanishes this year, falling 100bps to just 10bps in USD terms. This in turn implies that emerging market investors are incentivized to focus on capturing alpha opportunities instead of merely relying on beta.

[13] Our Equities Research team expects **hyperscalers** to spend cumulatively in excess of USD 1 trillion of capex over the next five years.

Higher starting points, healthier foundations

Equity forecasts dip as valuations present a headwind despite a solid earnings outlook

Exhibit 9A: LTCMA forecasts, 2025 vs. 2024, USD terms

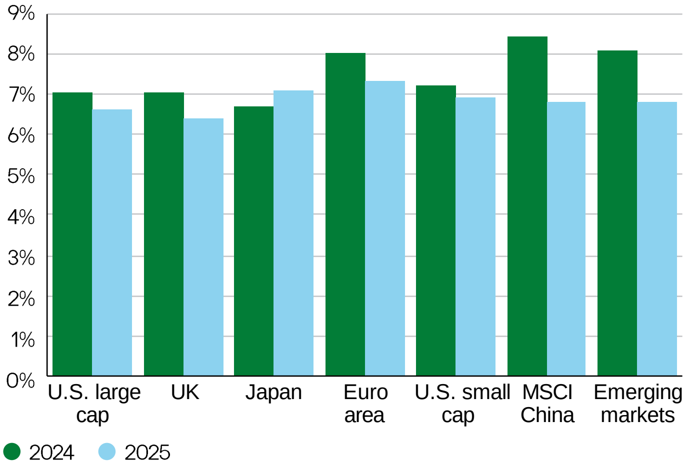
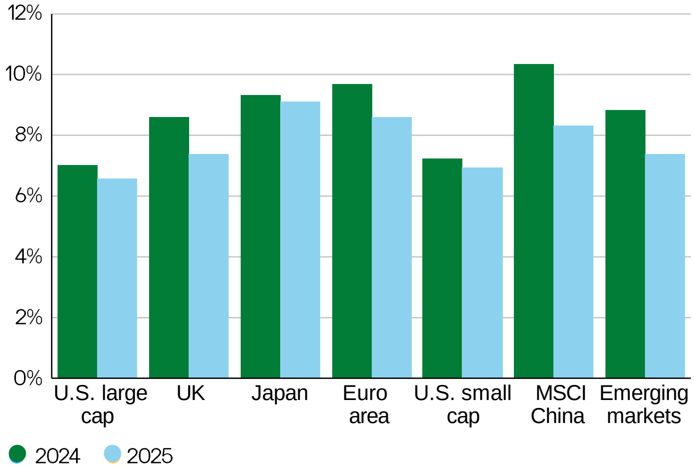


Exhibit 9B: LTCMA forecasts, 2025 vs. 2024, local terms



Source: Bloomberg, FactSet, J.P. Morgan Asset Management; data as of September 2024.

USD remains overvalued against most other currencies

Exhibit 10: Key 2025 LTCMA currency assumptions

		Terminal spot forecast (10–15 years out)			
	Current spot	2025	2024	Change	Change %
AUD	1.45	1.41	1.34	0.07	5.4%
BRL	5.42	6.66	6.88	-0.22	-3.1%
CAD	1.35	1.18	1.15	0.03	2.2%
CHF	1.18	1.31	1.29	0.02	1.8%
CNY	7.02	6.05	5.77	0.28	4.8%
EUR	1.11	1.29	1.31	-0.01	-1.0%
GBP	1.34	1.48	1.49	-0.01	-0.7%
JPY	145.64	113.52	108.37	5.15	4.8%
MXN	19.63	28.00	27.49	0.5	1.8%
SEK	10.27	8.41	8.21	0.2	2.5%

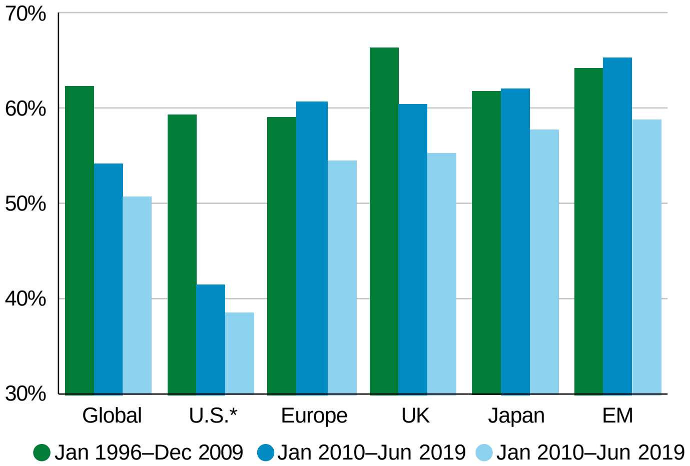
Source: J.P. Morgan Asset Management; estimates as of September 30, 2023 and August 2024.

The combination of strong investment, higher interest rates and major technological advancement is a boon for the economy in aggregate. But winners and losers will emerge among companies and sectors. This creates an environment with greater potential for investors to capture active alpha. Of course, not every manager will capture additional returns, but for skilled managers we believe there is more to play for.

The ability of active managers to take advantage of these opportunities is enhanced by the retreat of unconventional monetary policy. Central bank interventions such as QE had to adhere to the principle of market neutrality. Without the expertise or mandate to pick winners and losers, central banks had to buy indiscriminately. In our view, this weighed upon the relative performance of active managers. Following a “don’t fight the Fed” mantra made it more difficult for them to discriminate among assets. In short, unconventional monetary policy burdened the effective allocation of global capital (Exhibit 11).

The involvement of central banks coincided with a difficult period for active managers

Exhibit 11: % of managers outperforming respective ETF, 1-year basis using monthly data



Source: eVestment, J.P. Morgan Asset Management; data as of 2019.
* All cap core strategies.

Our private equity (PE) forecasts improve modestly this year, despite lower public equity forecasts, given a positive adjustment to our methodology to better incorporate the impact of leverage on returns. We also alpha assumptions. This supports median manager returns and reflects the increased focus from sponsors on the operating improvement, and a likely moderate rise in exit multiples. The drag from PE asset markdowns that we had imposed in recent years has faded, but the offsetting pickup in financing costs continues to moderate returns (Exhibit 12). In sum, private equity returns increase slightly, and we believe a thawing of the IPO market after two very subdued years will be an important catalyst for future returns.

We also believe that the environment for manager differentiation and alpha continues to improve, giving further upside potential for skilled manager selectors. Hedge fund median manager forecasts this year are generally slightly higher; furthermore, higher cash rates have a meaningful and positive correlation with hedge fund excess returns, which implies a good environment for manager alpha (Exhibit 13).

Median manager forecasts for many financial alternatives improve modestly

Exhibit 12: 2025 LTCMA financial alternative assumptions (Levered*, net of fees, %)

Financial alternatives	2025	2024
Private equity (USD)**		
Cap-weighted composite	9.9	9.7
Private equity - small cap	10.1	9.7
Private equity - mid cap	9.8	9.5
Private equity - large/mega cap	9.8	9.7
Private debt (USD)		
Direct lending	8.2	8.5
Venture capital (USD)		
Venture capital	8.8	9.2
Hedge funds (USD)		
Equity long bias	5.0	4.7
Event-driven	4.9	5.0
Relative value	5.0	4.9
Macro	3.8	3.6
Diversified†	4.9	5.0
Conservative††	3.4	3.7

Source: J.P. Morgan Asset Management; estimates as of September 30, 2023 and September 30, 2024.

* All return assumptions incorporate leverage, except for commodities, where it does not apply.

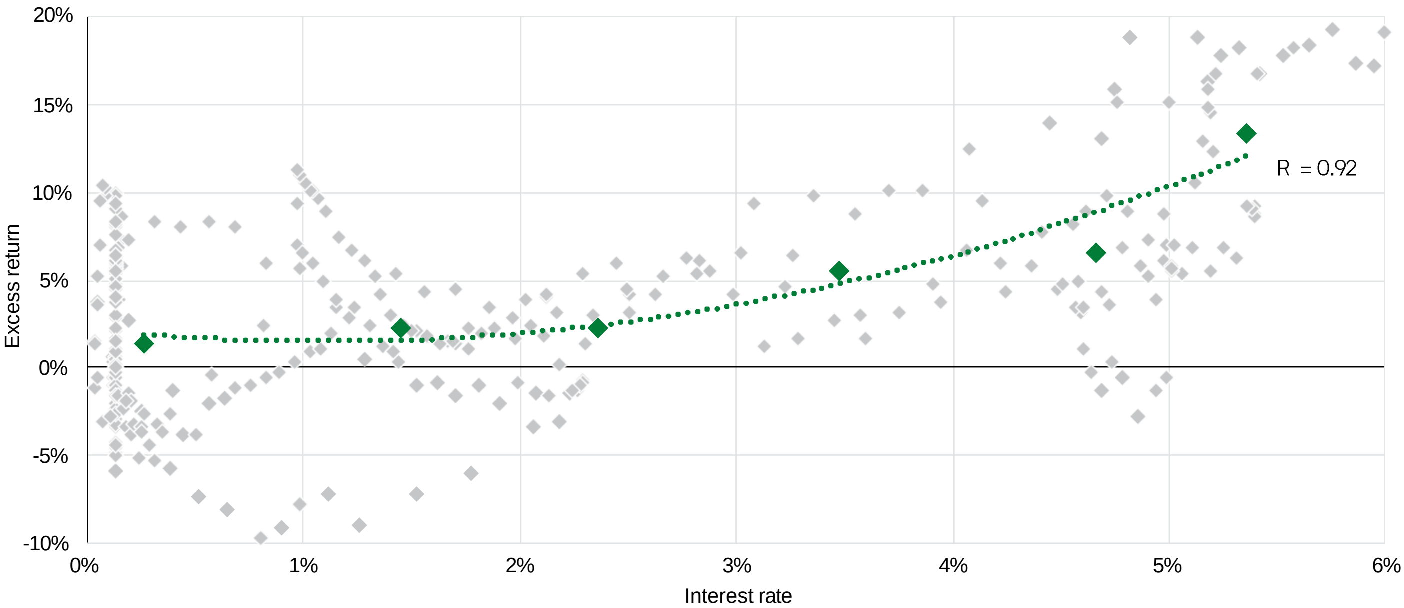
** The private equity composite is AUM-weighted: 65% large cap and mega cap, 25% mid cap and 10% small cap. Capitalization size categories refer to the size of the asset pool, which has a direct correlation to the size of companies acquired, except in the case of mega cap.

† The Diversified assumption represents the projected return for multi-strategy hedge funds.

†† The Conservative assumption represents the projected return for multi-strategy hedge funds that seek to achieve consistent returns and low overall portfolio volatility by primarily investing in lower volatility strategies such as equity market neutral and fixed income arbitrage. The 2024 Conservative assumption uses a 0.70 beta to Diversified.

Higher rates are correlated to higher hedge fund excess returns

Exhibit 13: Hedge fund excess return (over equity beta) in different rate regimes



Source: J.P. Morgan Asset Management (Oscar Montes & Rachel Eisman), Bloomberg, Data as of August 2024.
Note: excess return of hedge funds in the JPMAAM complex after removing the return attributed to equity beta. We grouped the 12-month rolling returns into interest rate intervals (0-6% in 1% increments) and calculated the average hedge fund excess return for each interval.

Portfolios for a new economic era

As we look across economies and asset markets, we are optimistic about the decade ahead. We are projecting higher growth in the G7 economies for the fifth year running, led by capex and investment, with higher cycle-neutral policy rates pushing up returns across the asset stack. Higher policy rates are reinforcing strong bond market returns, and higher growth is supporting corporate earnings and equity returns.

The LTCMA forecasts are, by design, for an index return in public asset markets and a median manager return in alternatives. While we do not forecast active alpha, we believe today's economic environment supports it. As winners and losers emerge in technology adoption and capex creates more competition for capital, we expect more idiosyncratic returns – and greater scope to extract active alpha.

There are risks to our constructive view. As spending rises, the possibility of capital misallocation inevitably increases and with it the risks of unsustainable deficits. No doubt, deficits will be higher. But we believe that the potential for technology and investment to fuel an increase in productivity over our forecast horizon could make deficits more manageable as higher economic growth swells tax income.

If today's mostly pragmatic economic nationalism morphs into overt protectionism, that would present another significant risk – particularly if climate change further accelerates migration patterns. A technological arms race would be a sinister end to the AI boom, but we note, equally, that tackling cybercrime could foster greater global cooperation.

Asset returns in both raw return and risk-adjusted forms remain healthy (Exhibits 14 and 15), with bonds supported by higher neutral cash rates and equities modestly lower and reflecting a maturing mid-cycle global economy. Alternative assets are now emerging from a period of meaningful asset markdowns.

Investors will want to ensure they are protected from some of the more adverse scenarios and the emergence of new risks associated with inflation and fiscal profligacy (Exhibit 16). Some alternative assets, like timber, core infrastructure, macro hedge fund strategies and transport, have shown themselves to provide meaningful portfolio protection from the sort of risks that tend to see both stock and bond prices falling, as we experienced in 2022.

Return uplifts for alternative assets improve meaningfully this year, while Sharpe ratio changes vary across public and private markets

Exhibit 14A: Sharpe ratios

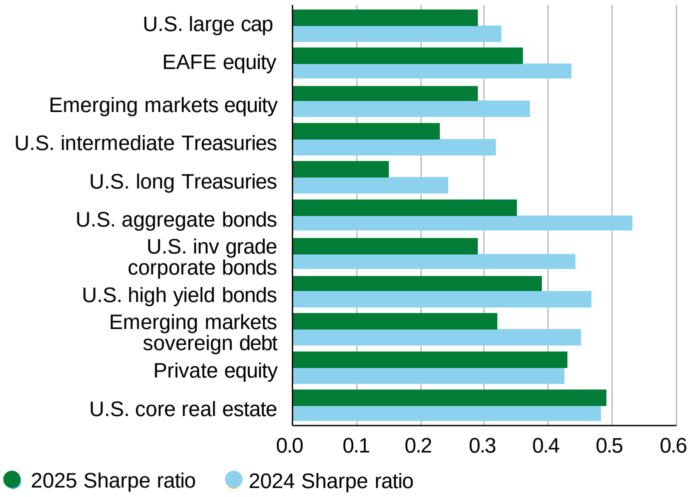
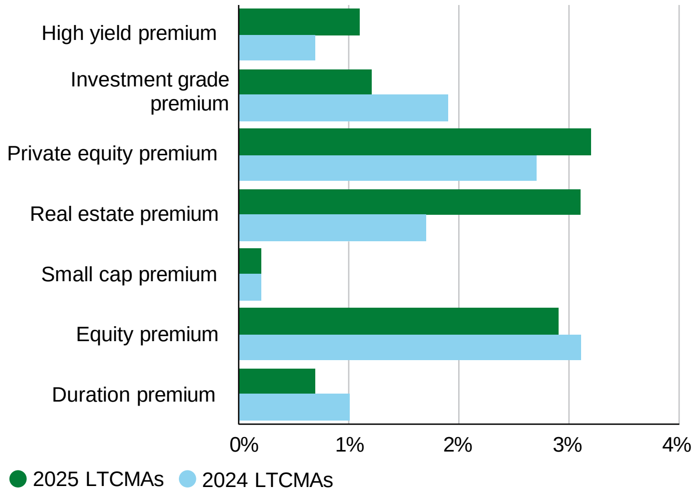


Exhibit 14B: Return uplift (premia)



Source: J.P. Morgan Asset Management; data as of September 30, 2024.

In short, both financial alternatives and real assets are set to benefit not only from higher median return estimates, but also from an improving environment for alpha generation.

We characterize the economic and asset market outlook as having a higher starting point and healthier foundations – true, valuations are higher, but so, too, is growth, and the increasing propensity to invest, we believe, is long overdue. We are clearly now in a new economic era even as we feel a few lingering effects of the sometimes rocky transition behind us. Nevertheless, we believe that as investment levels pick up and rates normalize to an appropriate level, a healthy – even buoyant – economy will emerge, vibrant and self-sustaining.

Even with stock-bond frontiers edging lower, return potential looks attractive and differentiation across assets provides a richer hunting ground for active investors

Exhibit 15A: USD stock-bond frontiers and 60/40 portfolios based on 2025 vs. 2024 LTCMAs for risk and return (%)

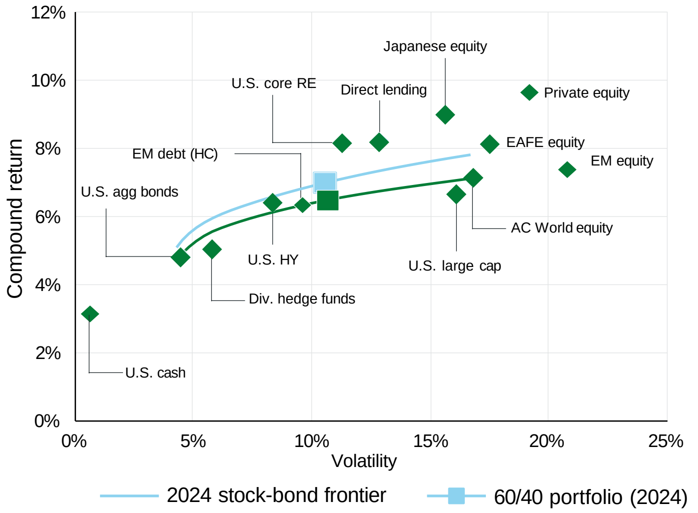
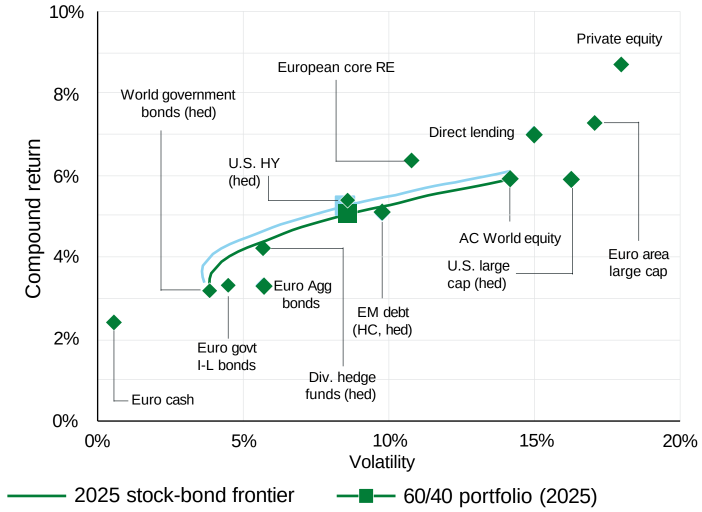


Exhibit 15B: EUR stock-bond frontiers and 60/40 portfolios based on 2025 vs. 2024 LTCMAs for risk and return (%)



Source: J.P. Morgan Asset Management; data as of September 30, 2024.

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III

KAsset Capital Market Assumptions (KCMA)

by
Kasikorn Asset Management

In Brief

- Thailand's GDP growth is impeded by structural barriers, which are expected to reduce potential growth rates over the next 10 to 15 years to 2.4%. The aging population poses significant challenges to this outlook.
- Capital investment is forecast to grow below the average of the past 15 years; however, it will still experience positive growth, driven by government initiatives aimed at enhancing infrastructure and stimulating the economy. Nevertheless, fiscal constraints, high household debt, and a shrinking workforce may constrain growth prospects.
- Thailand's productivity growth is declining, with TFP levels trailing the average of other Asian economies by 0.3%. In the absence of substantial investments in human capital and infrastructure, productivity challenges are likely to persist.
- Inflation is expected to remain low, around 1.3%, due to domestic factors such as high household debt and an aging population, coupled with external pressures from cheaper imports. However, risks associated with de-globalization and climate disruptions continue to pose uncertainties.

GDP: Structural barriers to growth

From the 1980s to the early 2000s, Thailand experienced remarkable growth driven by labor, capital, and productivity, establishing an increasingly significant role in global trade. Between 1999 and 2008, the economy benefited from robust Total Factor Productivity (TFP) growth, which compensate for a decline in capital accumulation. However, TFP growth has considerably slowed over the past decade.

Thailand now faces several structural challenges, including a shrinking labor force, low productivity, and stagnating investment, all of which are expected to undermine long-term growth. Our GDP growth projection of 2.4% reflects these challenges, underscoring the urgency of addressing these issues to ensure future economic stability.

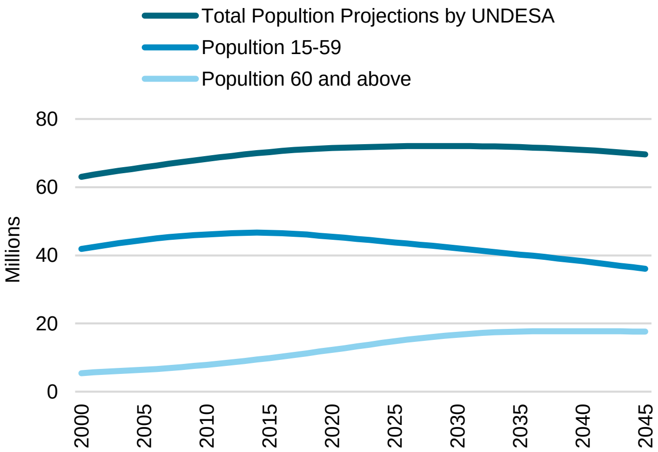
Labor Supply: Shrinking workforce

The slow growth of working-age populations is one of the primary constraints facing Thailand's economy. Thailand is among the fastest-aging countries in the world, with its demographic structure undergoing significant changes since the early 1990s, primarily driven by declining in the fertility rate. As of 2023, around 20% of Thailand's population is aged 60 or older, officially classifying the country as an aged society. According to the United Nations, the total population is expected to peak in 2029 before beginning to decline.(Exhibit 1)

A shrinking labor force may hinder economic growth, as a smaller workforce reduces the country’s capacity to produce goods and services. This will place considerable strain labor-intensive industry. Moreover, the expanding elderly population will present challenges in healthcare and pensions, thereby limiting the government's ability to allocate funds to other critical areas such as infrastructure and innovation.

One potential solution to the aging population is to extend the working lives of older individuals. The Labor Ministry intends to raise the retirement age for employees in both the private and public sectors to 65 years, though the policy is still under review. We believe this is a viable option. Another source of labor force growth is the increased participation of women. With better education and fewer children to care for due to the low fertility rate, more women are likely to enter or re-enter the labor market. Furthermore, migrant workers are expected to help fill the labor gap. While Thailand's labor force is shrinking, the continued influx of migrant workers could partially mitigate the impacts of demographic decline.

Exhibit 1: Thailand's population history and forecast



Source: United Nations, KAsset; data as of 2024

Overall, we estimate that Thailand's labor supply will grow at an annual rate of 0.6% over the next 10 to 15 years, primarily driven by an increase in average hours worked per person, as individuals take on more work to compensate for the declining number of active workers. While this growth helps to mitigate the effects of a shrinking workforce, the gradual improvement in labor quality is expected to occur at a slower pace than in the past.

Capital: Propelled by Government Initiatives Despite Fiscal Constraints

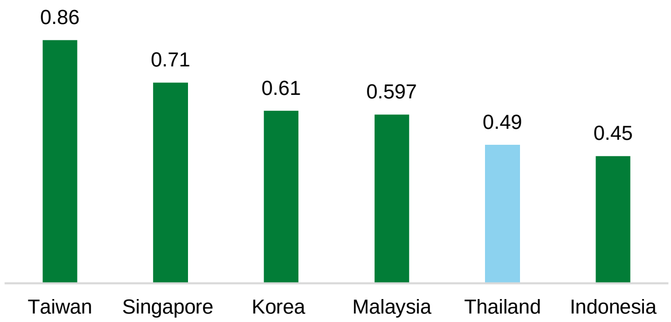
Since 1987, Thailand has made significant progress in industrial development, infrastructure, and attracting foreign direct investment (FDI). However, several factors now pose risks to its investment potential. Over the next 10-15 years, capital services are projected to grow at an annual rate of 2.5%, below the 15-year average but still positive, primarily driven by government initiatives to improve infrastructure and stimulate the economy. These initiatives include plans to enhance freight transport, integrate transportation systems across key economic zones, and strengthen Thailand's position as a trade hub, as well as efforts to boost human resources and establish the country as a major airline hub.

Nevertheless, the growth of capital expenditure is constrained by limited fiscal space and increasing expenditures on public sector wages, subsidies, and transfers. With public debt expected to approach 70% of GDP within the next five years, the government's capacity for spending is limited, making it more challenging to finance large-scale projects.

Total Factor Productivity: Gradual Improvements Amidst Low Productivity Levels

Productivity growth in Thailand has been steadily declining, with total factor productivity (TFP) levels lower than many other Asian economies (Exhibit 2). Our 1.0% TFP growth projection is slightly below the average growth rate of 1.3% observed over the past 15 years.

Exhibit 2: TFP level at current PPPs (USA=1) by country



Source: Penn World Table; data as of 2019

This decline is driven by several factors. First, the growing share of low value-added service activities, especially in the agricultural sector, hampers overall productivity. Second, challenges in labor quality stem from limited access to high-quality education, as well as a mismatch between the skills of the workforce and sectoral market demands.

Furthermore, the government has efforts to promote automation, digitalization, and innovation have not kept pace with technological adoption in neighboring countries like Singapore and South Korea. Without substantial investments in human capital and infrastructure, Thailand's productivity challenges will likely persist.

Inflation: near the lower bound of the target band

We expect the Bank of Thailand (BoT) to keep inflation within the 1-3% target range over the next 10 years, balancing growth and managing external economic risks. However, inflation is projected to remain low in the short to medium term, with a forecast of 1.3% over the next 10-15 years, slightly below the 1.6% average inflation rate of the past 15 years.

This is primarily due to several domestic and external factors. First, the ongoing transition to a super-aged society, coupled with high household debt levels, is expected to dampen consumer spending and suppress inflationary pressures while the government's limited fiscal space has also constrained its ability to stimulate domestic demand. Moreover, migrant workers supply to fill in the labor demand gap, limiting wage increases. Additionally, inflation is influenced by the government's subsidy measures and digitalization.

Externally, Thailand could face the risk of China flooding the market with cheaper goods because of the US-China trade war, China's overcapacity and its weak domestic demand. In 2023, Thailand's consumer goods imports from China, such as electrical appliances, fresh fruits, apparels, furniture, and kitchenware, accounted for 41% of total consumer goods imports, up from 20% in 2009. This trend is expected to persist over the next five years due to China's high inventory in sectors like electrical appliances, machinery, automobiles and apparel.

The upside risks to our assumptions include some upward pressures from factors such as de-globalization, which may lead to higher production and service costs, and climate-related supply disruptions. Overall, downward pressures are expected to outweigh upward ones, meaning inflation is likely to remain low over the medium term and stay within the target range.

In Brief

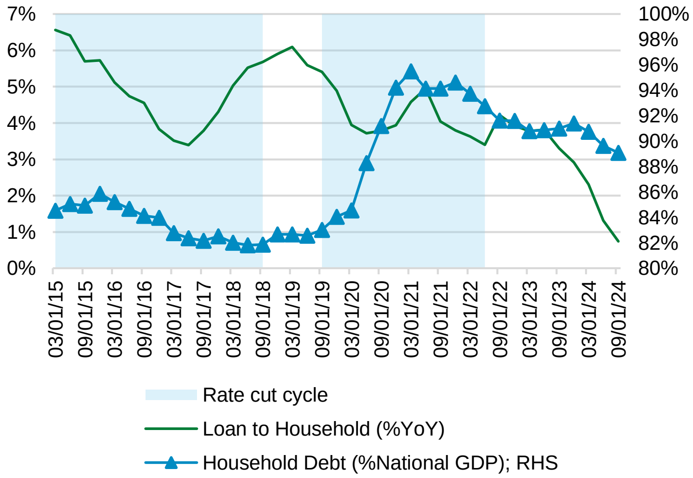
- Our fixed income assumptions are primarily based on macroeconomic projections, including expectations of lower potential growth and inflation.
- Our cycle-neutral cash rate assumption is influenced by the Bank of Thailand's higher policy interest rate, which aims to address household debt, as well as the more subdued inflation outlook.
- The 10-year cycle-neutral assumptions are further shaped by the rising levels of public debt. Despite a lower potential growth trajectory, the 10-year yield is expected to remain in line with historical levels, around 2.9%.
- We anticipate that the creditworthiness of corporate issuers will remain strong, particularly among for investment-grade issuers. As a result, corporate bonds are expected to continue delivering solid risk-adjusted returns.

Elevated Household debt constraining BOT from lowering the policy interest to the historical level

Thailand has relatively high household debt, which has risen above 90% since the Covid-19 outbreak. This trend is unlikely to reverse as households may rely more on credit to maintain their standard of living, amid a potential GDP growth of just 2.4%. (Exhibit 3)

Non-productive loans, such as credit card debt, have also shown strong growth, raising concerns about financial stability. Consequently, the Bank of Thailand (BOT) has maintained the policy rate above historical levels in effort to mitigate household debt.

Exhibit 3: Household loan growth and Household Debt (% of National GDP), 2015-3Q24

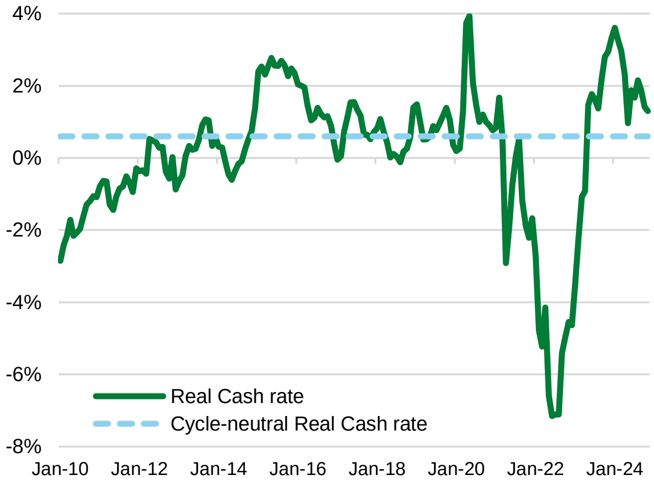


Source: BOT, KAsset

Higher policy rate to raise the cash rate, offset by lower inflation

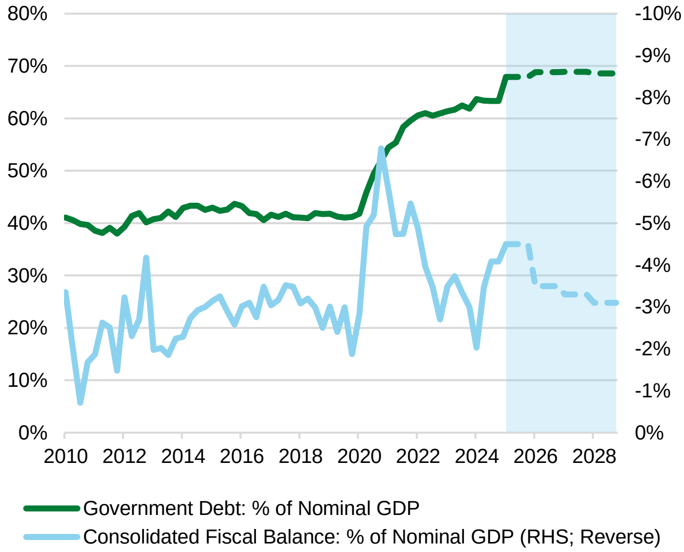
Our estimate for cycle-neutral cash rate is likely to stay at the historical upper bound of 1.9%, supported by the higher real rate of 0.6% due to BOT's deleveraging intention. Conversely, the cash rate is expected to be limited by our forecast of lower inflation of 1.3%, given Thailand's transition into an aging society and the pressure on goods prices from China's excess capacity exports to Thailand. (Exhibit 4)

Exhibit 4: Historical Real Cash rate and Cycle-neutral Real Cash rate, from 2010 to November, 2024



Source: BOT, KAsset

Exhibit 5: Fiscal Balance and Public debt, 2010-2028F



Source: PDMO, KAsset

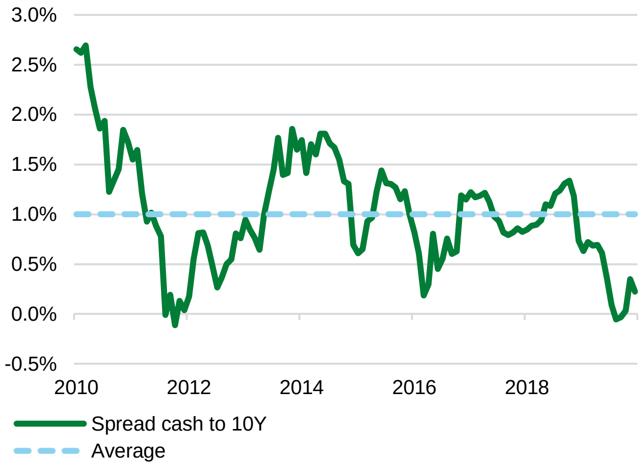
Escalating public debt expected to worsen the fiscal balance

Thailand will increasingly need to finance social programs, primarily through the issuance of public debt, to cope with the upcoming aging population and diminishing labor force, compounded by high household debt. Meanwhile, unfavorable demographics are likely to lead to a decline in tax revenue. As a result, Thailand is expected to face a growing debt burden and worsening fiscal deficit, which frequently leads to higher borrowing costs. (Exhibit 5)

10-Year Thai government bond yield to stay around 2.9% in the neutral cycle

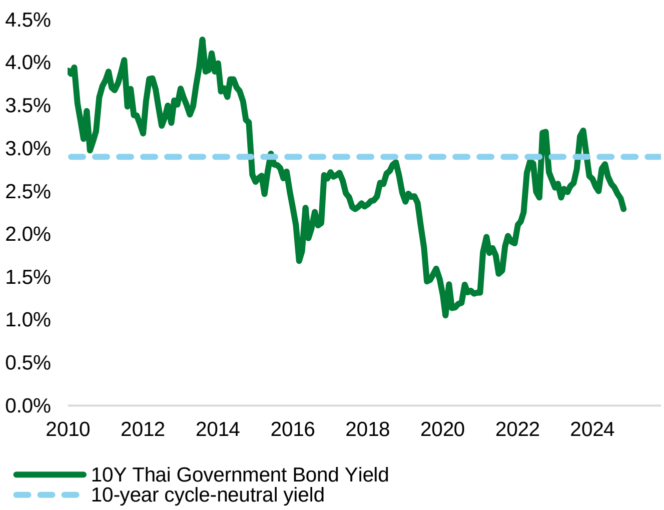
Thailand's decelerating potential growth rate is likely to put downward pressure on the government bond term premium (the spread between the cash rate and the 10-year yield has been narrowing , as shown in Exhibit 6), reflecting investors' reduced expectations for future short-term rates. On the other hand, the term premium is expected to increase, as investors demand higher returns due to the growing public debt. The interplay between decelerating growth and rising public debt is expected to keep the term premium around its historical level of 1%. With a nominal cash rate of 1.9%, the 10-year Thai government bond yield should remain near the historical level of 2.9% in the neutral cycle. (Exhibit 7)

Exhibit 6: Cash to 10-year Thai Government Bond Spread Between 2010 and 2019



Source: ThaiBMA, KAsset

Exhibit 7: 10-year Thai Government Bond Yield, from 2010 to November, 2024

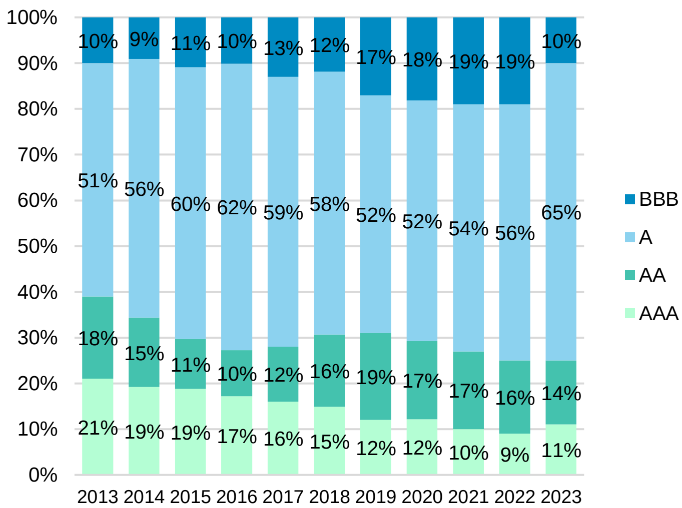


Source: ThaiBMA, KAsset

Thai Corporate Bond spread to maintain at historical level at 0.85%

Despite lower potential growth, the creditworthiness of Thai corporate bond issuers is likely to remain robust, as evidenced by the stable distribution of credit ratings (Exhibit 8). Specifically, the majority of investment-grade issuers have demonstrated strong balance sheets, which should provide a solid buffer against lower growth. Furthermore, we believe the Thai corporate bond market has reached a mature stage, with most medium-to-large domestic issuers already actively participating in debt issuance. As a result, the stable creditworthiness of issuers, combined with the market's maturity, should enable the neutral-cycle credit spread to remain consistent with historical levels (Exhibit 9)

Exhibit 8: Thai Corporate allocation by credit buckets, maturity and average credit spread



Source: ThaiBMA, KAsset

Exhibit 9 Thai Corporate allocation by credit bucket, maturity and average credit spread

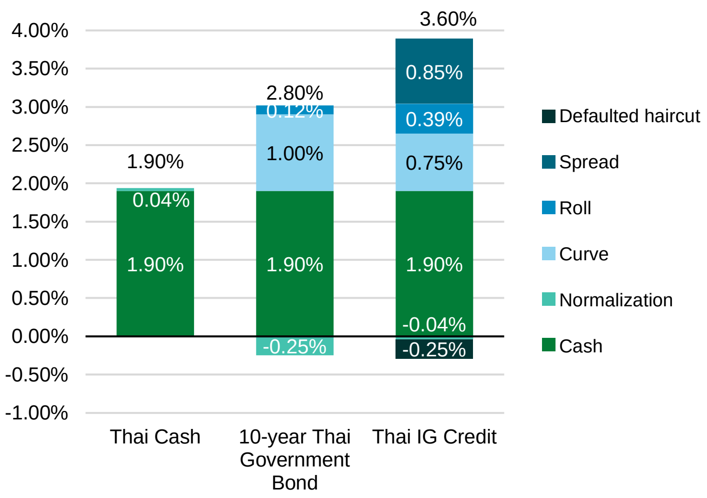
Credit Rating	Current weight	Current Average spread (bps)
AAA	11.16%	**39.44**
AA	14.74%	**63.77**
A	60.30%	**73.38**
BBB	13.80%	**192.44**
Equilibrium Spread		**84.60**

Source: ThaiBMA, KAsset (as of Sep 2024)

Thai Fixed income to deliver investors a return between 1.9-3.6% in a neutral cycle

We anticipate that the return from Thai fixed income will primarily be driven by the higher-than-historical policy interest rate and steady term premiums, reflecting challenges in both the public and household sectors. (Exhibit 10)

Exhibit 10: Neutral-cycle return breakdown



Source: KAsset (as of Sep 2024)

USD/THB Outlook: Anchored in PPP Analysis with Growth and Inflation Dynamics Driving a Long-Term 1.17% Baht Appreciation

Our USD/THB forecast, based on purchasing power parity (PPP) framework, projects a 1.17% annual Baht appreciation, driven mainly by Thailand's 1% higher GDP growth and 1.1% lower inflation relative to the US.

In Brief

- Thai corporates continue to face challenges from stalling macroeconomics, unfavorable demographics, and increased competition from international companies. This has led to a weak profit environment for corporates to navigate.
- The Thai equity market is dominated by “old economy” industries which may continue to weigh on index performance. However, we expect the “new economy” sectors –although they make up a small portion of the market– to gain traction and benefit from global and local trends, offering better return prospects.
- While outlook for earnings growth remains soft, structural and political challenges may also warrant a higher risk premium, limiting the price performance of Thai Equity market. However, we see a silver lining in the form of improving dividend yields, which may provide investors with consistent returns.

Thai Equity: A Dividend Haven

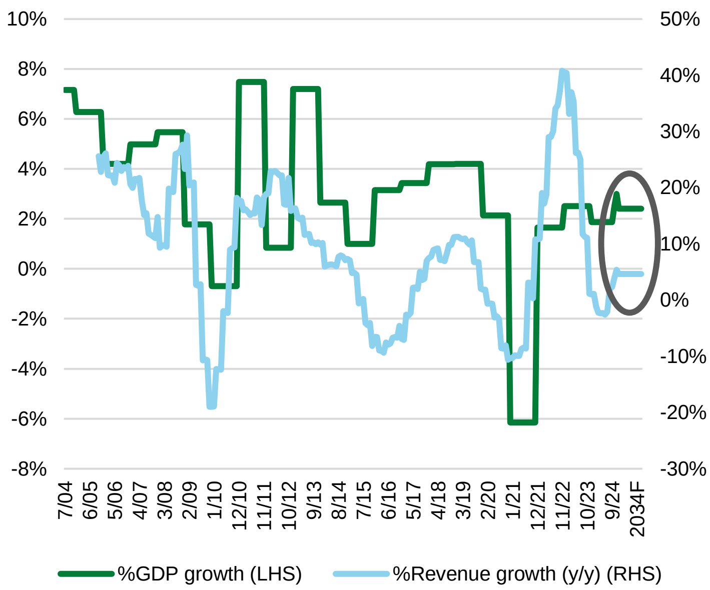
Amid the sluggish macro backdrop, unfavorable demographics, and concerns over vulnerable household debt, Thai corporates have inevitably experienced stalling growth, with new growth drivers remaining absent.

Historically, Thai corporations have demonstrated a strong positive multiplier of 1.7x between their revenue generation capacity and the country’s GDP growth. However, we have observed a weakening of this relationship in recent years. In our view, this multiplier is likely to continue diminishing over the next decade, potentially reaching 1.3x, primarily for the following reasons:

First, listed retail companies and manufacturers have been facing increased competition, particularly from low-cost Chinese producers, who have introduced relatively cheaper goods into the Thai market through e-commerce platforms. This influx of low-cost Chinese competitors has exerted additional pressure on the pricing environment for local players and is likely to negatively impact profit margins. While consumers may benefit from intensified competition in the short term, this could ultimately result in a significant loss of topline revenues and profits for Thai corporations in the long run.

Second, the composition of the Thai equity market itself presents a headwind. At the industry level, over 80% of the market capitalization of the Stock Exchange of Thailand (SET), along with the majority of blue-chip companies, is concentrated in the "old economy" sectors, particularly energy and banking. These industries are characterized by maturity and face challenges associated with a slowing domestic economy. The revenue contributions from these mature companies are expected to dampen the overall revenue growth of the Thai market. (Exhibit 11)

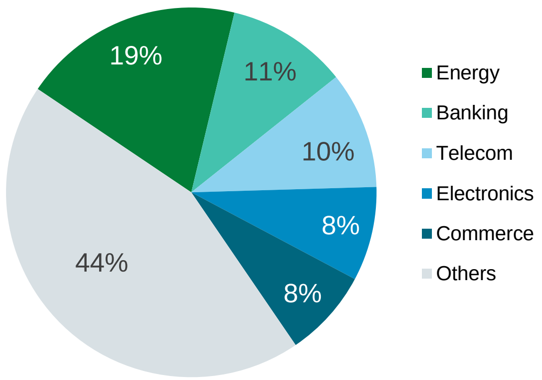
Exhibit 11: Thai corporate revenue growth has shown a strong correlation with GDP growth



Source: KAsset, FactSet (as of Sep 2024)

On the other hand, the technology sector, which shows promise of innovation and has an upbeat outlook, makes up only around 10% of the SET Index. (Exhibit 12) This essentially means that the secular global theme of technological advancements, which supports the tech complex, might not be enough to offset the drag from the old economy companies.

Exhibit 12: Tech sector makes up roughly 10% of Thai market cap



Source: SET, as of Sep 2024

As we integrate these themes into our forecasting framework, we expect profit margins to expand only modestly from current levels over our 12-year forecast horizon. We anticipate a clear divergence between the sectoral profit margins of old and new economy companies.

To be more precise, we see better margin prospects for companies in sectors positioned to benefit from secular structural shifts, global transformations, and key local themes. Specifically, we expect the electronics sector to gain from the global adoption of artificial intelligence, the telecom sector to capitalize on the advantages of a mobile duopoly, and the healthcare sector to thrive due to the aging demographics. Additionally, companies tied to tourism, Thailand's backbone industry, are likely to enjoy higher profit margins driven by increased travel and leisure demand.

On balance, a weak revenue growth outlook and flat margin assumptions indicate a soft earnings growth outlook. The net share dilution rate is also expected to slow down from 3% historically to 2.5%. This is due to mature sectors being mostly cash-rich and likely to have limited capital expenditure (capex) plans. Thus, there is little to no incentive for companies to raise equity, unlike in the past 20 years.

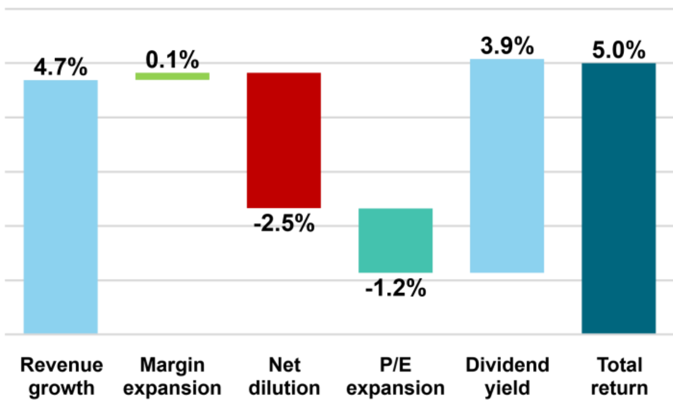
Combining softer earnings growth outlook with moderate dilution, EPS growth for the period is expected to be at 2.3%, lower than historical average.

The Thai equity market has been challenged by multiple structural and political concerns in recent years, resulting in a higher risk-reward premium. These factors, along with a stale fundamental outlook, keep us cautious on valuation, and we expect Thai equity target valuations to remain subdued. We anticipate that the trailing price-to-earnings multiple will decline well below past averages and current valuations, reaching a level of 14.5x. Overall, the muted growth outlook and de-rating pressures do not bode well for capital appreciation expectations for Thai equities.

Despite the absence of notable growth drivers, there is a silver lining to investing in Thai equities: dividend yield. Thai corporates are likely to continue increasing their dividend payout ratio over our forecast horizon to 63%, up from 60% today. The rise in payouts will be driven mainly by banks, energy, and telecom companies, which have a limited number of capex-heavy projects. This aligns with the reasonably sound financial positions of Thai market giants, as well as ample cash on hand, which supports our view of a rise in payouts.

From a total return perspective, investors in Thai equities are poised to benefit mostly from higher dividend yield instead of the capital appreciation. (Exhibit 13) On the bright side, Thai stock market could function defensively as a safe haven for investors seeking high dividend yield and consistent payment, during times of turmoil.

Exhibit 13: Return components of Thai Equity in THB term



Source: KAsset (as of Sep 2024)

In Brief

- In 2025, KCMA will primarily focus on inflation risks, which will significantly impact the entire landscape.
- Both global and domestic bonds remain key portfolio diversifiers, with even minimal positive correlation enhancing diversification. Portfolios should also incorporate strategies to address potential inflation shocks.
- For domestic assets, we have made an upward adjustment to the forecasted volatility for corporate bonds due to their illiquidity and shorter duration compared to government bonds. Equity risk forecasts remain unchanged despite the current market environment.
- Based on the efficient frontier, as risk aversion increases, local investors can achieve higher returns by allocating more to domestic corporate bonds. Conversely, investors with lower risk aversion should allocate a larger portion to global equities, which already account for currency conversion, while still maintaining exposure to domestic equities for diversification.

Overview

The KCMA for 2025 predicts sustained higher long-term nominal growth rates and nominal interest rates, aligning with JPMorgan Asset Management's Long-Term Capital Market Assumptions (LTCMAs). This environment generally supports a stable and positive outlook for most categories of risky assets. Nevertheless, higher inflation volatility presents a significant concern, particularly impacting forward-looking risk assumptions related to cash and rates markets.

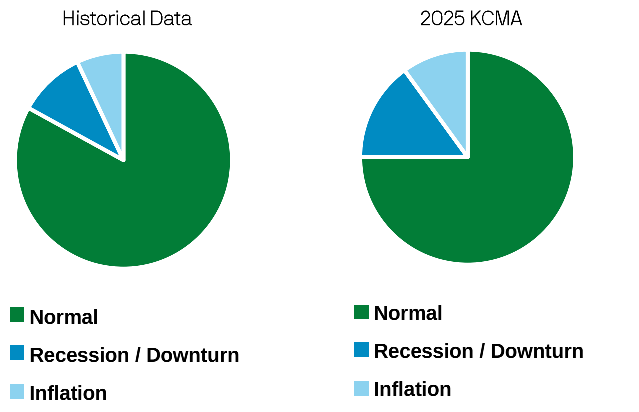
In this chapter, we present our projections for volatility and correlations over a 10- to 15-year investment horizon along with a discussion of their implications for portfolio construction.

Inflation Volatility

The upward adjustment to inflation volatility in this year's outlook highlights the complexity of the internal dynamics scenarios. Consequently, our economic scenario weights have been recalibrated relative to historical trends (Exhibit 14). The 2025 KCMA risk forecasts now show a 15% probability of recession, above the historical 10% average since 2006. Similarly, our forecast assigns a 10% probability of a higher inflation scenario, compared to a 7% implied chance derived from historical data. We applied consistent weights across regions and assets for the same period. While some may argue that Thailand has its own unique idiosyncratic risks, we believe that the broader economic theme still holds. Furthermore, employing the same recessionary or inflationary periods across global assets better provide a more standardized approach to the investment universe.

These changes are anticipated to raise both the expected volatility and the cross-correlation among major asset classes, leading to reduced portfolios stability in the future.

Exhibit 14: Economic Scenario Weights between Historical data and KCMA



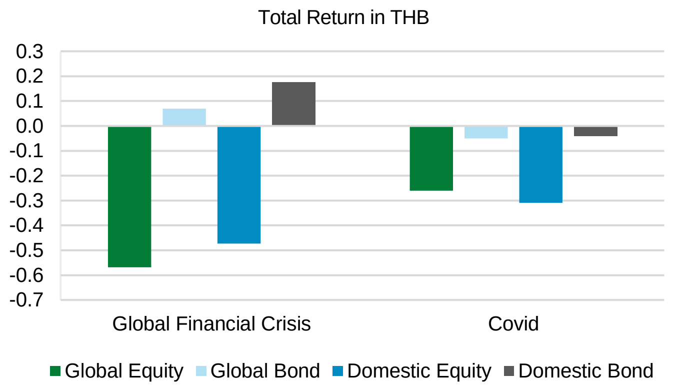
Source: KAsset; Historical Data: Recession 10%, Inflation 7%, Normal 83%; KCMA: Recession 15%, Inflation 10%, Normal 75%. Data is based on historical economic scenarios and KCMA projections. Past results and projections are not reliable indicators of current or future outcomes.

Fixed income is the main diversifier

The most significant adjustments to our risk and correlation assumptions this year pertain to fixed income. In the short term, we anticipate increased volatility across bond markets, particularly in short-term rates, as central banks recalibrate policy rates to balance growth, employment, and inflation. The broad upward shift in interest rates that followed the recent inflation spike will allow bonds to retain their role as portfolio diversifiers, even if correlations become less stable going forward.

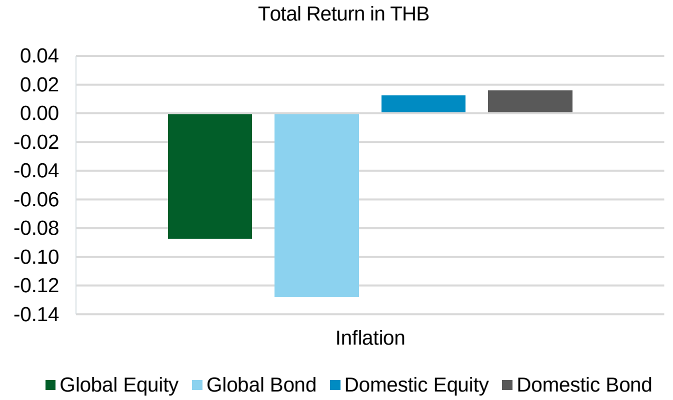
This highlights the importance of portfolio diversification: both global and domestic bonds can provide diversification during growth shocks, while domestic equity and bonds can enhance portfolio performance during inflation shocks. Investing across different regions amplifies the benefits of diversification, as regional markets are not perfectly correlated (Exhibits 15A and 15B).

Exhibit 15A: Global and Domestic Bonds act as diversifiers during growth shocks



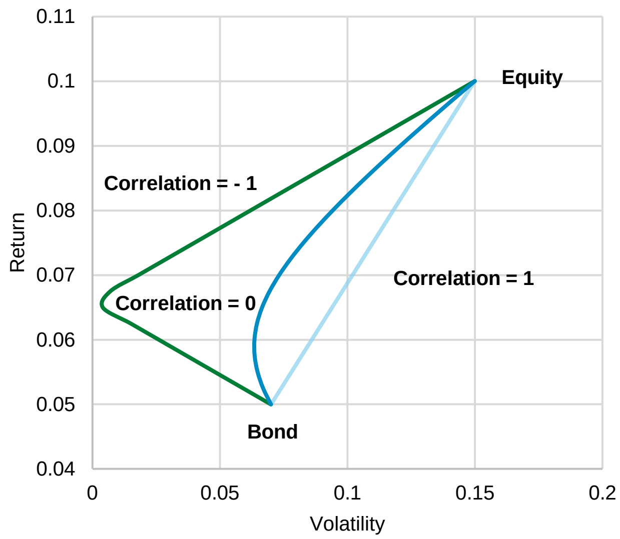
Source: KAsset; Global equities: MSCI World Index; Global bonds: Bloomberg Global Aggregate Index; Domestic equities: SET Index; Domestic bonds: Thai BMA Government Bond 7-10 Years Index. Returns are shown over the period; global financial crisis: July 13, 2007 to March 9, 2009; Covid-19: February 19, 2020 to March 23, 2020. Past performance is not a reliable indicator of current and future results.

Exhibit 15B: Domestic Bonds and Domestic Equity act as diversifiers during inflation shocks



Source: KAsset; Global equities: MSCI World Index; Global bonds: Bloomberg Global Aggregate Index; Domestic equities: SET Index; Domestic bonds: Thai BMA Government Bond 7-10 years Index. Returns are shown over the high inflation period: January 2022 to March 2023. Past performance is not a reliable indicator of current and future results.

Exhibit 16: Correlation's impact on portfolio returns and volatility – a simple 2-asset (Equity – Bond) portfolio illustration

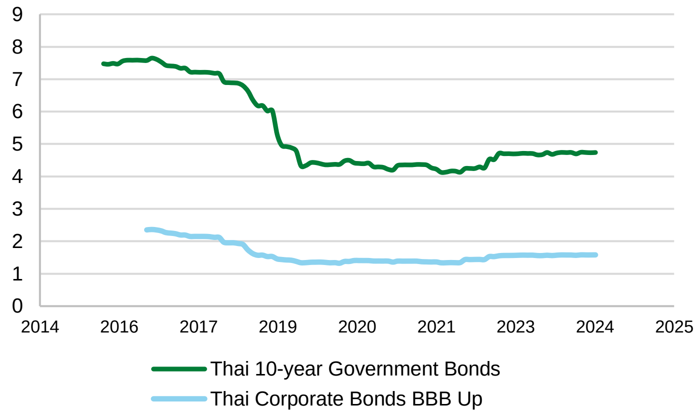


Source: KAsset. The simple two-asset portfolio frontier is a 60%/40% blend of a 7% annualized vol asset and a 15% annualized vol asset, while varying the correlation assumption from +1 to -1.

Exhibit 16 uses a hypothetical two-asset portfolio to illustrate the efficient frontier in the return-volatility landscape. It shows that a higher negative correlation between the two assets reduces portfolio volatility compared to either asset individually, while maintaining the same expected portfolio return. This insight underscores the significance of correlation's direction over magnitude, which may provide reassurance to investors. Our analysis indicates a correlation of 0.03 between domestic stocks and bonds, suggesting that stock-bond combinations can effectively diversify a portfolio.

In the process of volatility adjustment for domestic bonds, we observed that corporate bond volatility appears low due to its illiquidity and short duration which might not reflect its true volatility of underlying fundamental. As a result, upward adjustments were made to Thai Corporate Bonds rated BBB and above, while Thai 10-year Government Bonds remains unchanged (Exhibit 17).

Exhibit 17: 10-year rolling volatility in Thai 10-year Government Bonds and Thai Corporate Bonds with credit rating BBB Up



Source: ThaiBMA; Thai 10-year government bonds 10-year rolling volatility since January 31, 2016; Thai Corporate Bonds BBB Up 10-year rolling volatility since October 31, 2016.

No additional adjustments for equity market

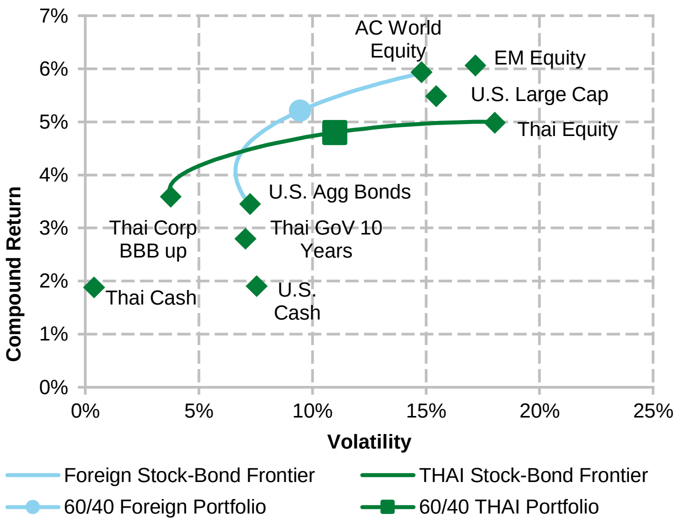
The projections for broad equity market risk have minor changes but require careful monitoring. Therefore, we have decided not to make any additional adjustments to our benchmark-level equity risk forecasts despite the current market environment.

Portfolio Implications

We now shift our attention to the portfolio implications of our 2025 forecast assumptions. Our objective is to analyze the outputs of the KCMA process and identify notable changes in asset class characteristics that should guide both strategic and tactical capital allocation decisions.

According to the modern portfolio theory (MPT), the efficient frontier represents optimal portfolio allocation for a given level of risk. Exhibit 18 demonstrates the efficient frontier of 60/40 stock/bond for the Thai and global portfolio.

Exhibit 18: Stock-bond frontier, Global and Thai assets in THB



If allocate more to equity: The Domestic stock-bonds portfolio is less efficient as it lies below the Global frontier.

If allocate more to bond: The Domestic stock-bonds frontier is more efficient as it lies above the Global frontier.

Source: KAsset (as of Sep 2024)

Robust portfolio, dynamic market regimes

Constructing a robust strategic portfolio while maintaining flexibility to adapt to evolving market conditions is complex. The current healthier macroeconomic environment presents potentially significant impacts on our portfolio that investors should consider.

A healthier economy supports higher returns from cash and bonds, providing a foundation for balanced portfolios, as illustrated in Exhibit 18. The potential for active global or widely diversified international equity strategies to generate alpha is notable, particularly in emerging markets and U.S. large-cap equities.

Currently, the domestic stock-bond frontier is positioned lower than the global stock-bond frontier when more investment is allocated to equity. However, when more allocation is directed to bonds, the domestic stock-bond frontier outperforms the global stock-bond frontier. Additionally, the 60/40 portfolio analysis shows that a Global portfolio generally outperforms, offering higher returns and lower volatility compared to a domestically focused one.

As the portfolio frontier—both global and domestic—will shift with changing market regimes, regular analysis of the portfolio frontier is essential to constructing a robust portfolio that can withstand diverse market conditions.

Recommendations for Thai Investors

Embrace Global Diversification: Given the higher return potential and lower volatility observed in the global portfolio, Thai investors are encouraged to allocate a portion of their portfolios to global markets, particularly to Global Equity. This strategy enables exposure to a diverse mix of developed and emerging markets, providing a balanced growth opportunity.

IV

Long-Term Capital Market Assumptions: Methodology Handbook

by
J.P. Morgan
Asset Management

Introduction

J.P. Morgan Asset Management's proprietary Long-Term Capital Market Assumptions (LTCMAs) offer our forward- looking asset class returns, volatility and correlation estimates for more than 200 asset and strategy classes in 19 base currencies. We call them time-tested projections to build stronger portfolios and believe they are unique in their scope, breadth and transparency.

The Long-Term Capital Market Assumptions are developed each year by the LTCMA leadership team, made up of senior investors from across J.P. Morgan Asset and Wealth Management. The team relies on the input and expertise of numerous portfolio managers, research analysts and product specialists – a working group of about 50 contributors worldwide – who ensure that the analysis is consistent across asset classes.

These people represent individual asset classes (global equities, global fixed income, currencies, alternatives, commodities) and are multi-asset investors, quantitative analysts, strategists and members of sustainable investment teams, among others. The long-term assumptions, and their underlying rationales, are also reviewed by senior J.P. Morgan Asset and Wealth Management leaders.

Over the 29 years we have published the LTCMAs, the breadth of assets the series covers has widened alongside our investors' opportunity set. The methodologies employed in the LTCMAs' construction have evolved, too, as we have sought to add robustness to the forecasts while remaining true to the basic principles of our approach to developing the numbers.

To achieve these goals, we use a transparent building block approach, based on both financial theory and market observations. At the base of the return assumptions sit our core views on trend real GDP and inflation (Exhibit 1A). GDP is forecasted through a production function that accounts for potential labor input growth, capital growth and productivity.

Our inflation forecast accounts for central bank policy targets and structural forces within an economy.

Building on that foundation, all the LTCMA inputs flow through into the entire set of long-term assumptions (Exhibit 1B).

A comprehensive guide to our annual asset class projections

The trend real GDP and inflation building blocks provide base-level inputs

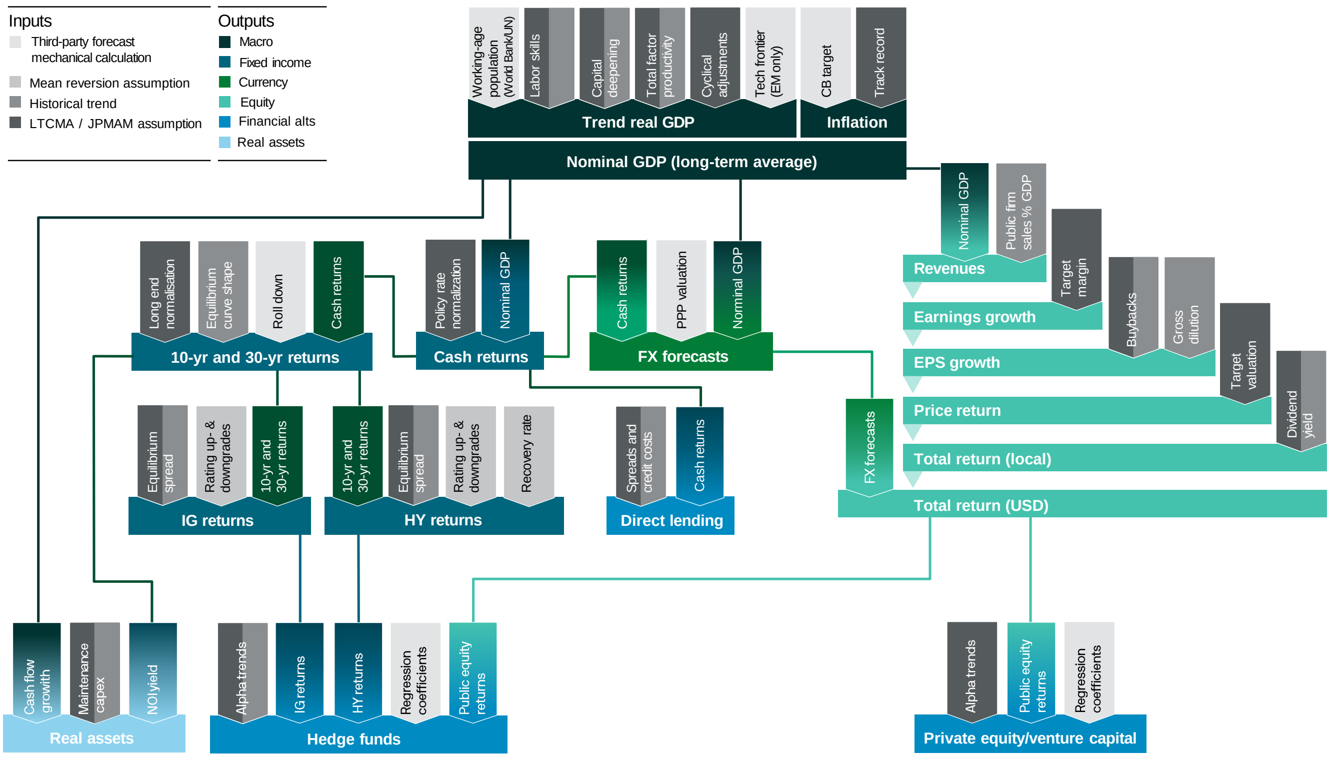
Exhibit 1A: LTCMA building blocks

- **Nominal GDP growth** = Labor input growth + Capital growth + Productivity growth + Inflation — Population growth
- **Inflation** = Central bank policy + Structural forces
- **Public equity** = Revenue growth + Change in margins + Share count change + Change in valuations + Dividends — ROE; Payout ratio
- **Fixed income** = Coupon income + Duration impact + Curve roll-down + Default and loss — Equilibrium yields; Normalization period
- **Financial alternatives** = Core beta + Alpha + Adjustments
- **Real assets** = Net operating yield + Maintenance capex + Net cash flow + Exit yield adjustment + Leverage

Source: J.P. Morgan Asset Management; as of September 30, 2024.

Detailed schematic of LTCMA inputs and their flow through the entire assumptions set

Exhibit 1B: The building blocks flow through all of the LTCMAs



Source: J.P. Morgan Asset Management; as of September 30, 2024.

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