

# Asset Allocation Insights

QUARTERLY REPORT | **DECEMBER 2024**

**USD EDITION**

## Rising uncertainty and divergent global macro lead to high dispersion in performance between countries, industries and asset classes

### Diverging growth: global economies are on different paths for 2025

Growth in global economies could continue to diverge further into 2025, and emerging markets are expected to outpace Developed economies with an increasing pace.

### Rising uncertainty fuels asset class disparities

Uncertainty from contrasting growth and rate paths, geopolitical tensions and fiscal challenges is deepening disparities in performance between asset classes, countries and industries.

### Corporates have stronger fundamentals on average & better balance sheets than governments

Sovereign bonds face higher term premia as public debt grows and monetary policy remains uncertain. By contrast, equities and corporate bonds, which are better supported by solid balance sheets, demonstrate resilience, despite economic challenges.

### US equities continue to lead, but non-US equities also perform

Non-US, especially emerging market and UK equities, are doing much better than in recent years. Meanwhile, US equities remain historically expensive, though it is not just about US tech.

### Emerging markets are experiencing a valuation re-rating, but selectivity remains key

EM sovereign bonds, corporate credit and equities are experiencing a broad valuation upgrade, and their market volatility is converging with that of DM. However, significant differences persist across regions and sectors, making selectivity important for navigating opportunities.

### Digital assets: evolving role in diversified portfolios

Digital assets are increasingly being integrated into portfolios, offering low correlation with sovereign bonds and exposure to equity market rallies, thus adding value despite their volatility.

### Listed alternatives: strong total returns are comparable to equities and higher income yield

Listed infrastructure had strong returns in the last 12M and the highest earnings yield among major asset classes, while listed real estate offers the highest income yield.

### CONTENTS

Financial Markets Overview	2
Macroeconomic Backdrop	3-4
Sovereign Yield Curves	5
Credit	6-7
Equity	8-9
Digital Assets	10
Commodities	11
Listed Alternatives	12
Currencies	13
Capital Flows	14
Cross Asset	15-17
Appendix 1: List of Indices	18
Appendix 2: Methodology	19

### AUTHORS

Indrani De, CFA, PRM  
Head of Global Investment Research  
FTSE Russell  
[Indrani.De@lseg.com](mailto:Indrani.De@lseg.com)

Sayad Reteos Baronyan, PhD  
Director - Global Investment Research  
[Sayadreteos.Baronyan@lseg.com](mailto:Sayadreteos.Baronyan@lseg.com)

Chart 1: Uncertainty has grown in scale and variability in recent years. Geopolitical tensions, government changes and expected policy changes in major economies are likely to keep it elevated.

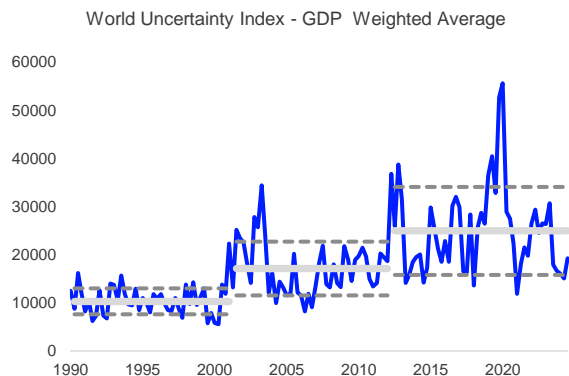
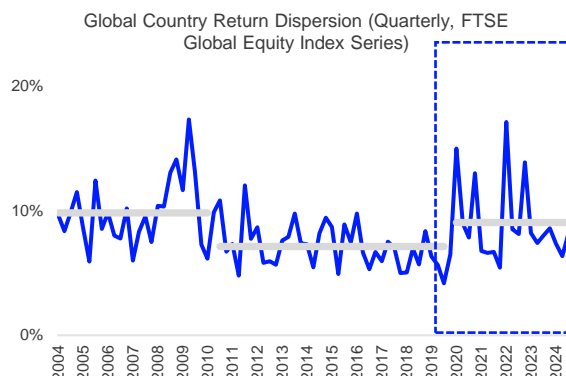


Chart 2: The dispersion in monthly returns has risen across the FTSE All-World Country indices in recent years, underscoring growing divergences at the country level.



Source: FTSE Russell/LSEG and US Federal Reserve. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

# Financial Markets Overview

**Macro backdrop: global growth is set to diverge more in 2025**, with the UK and Eurozone gaining momentum, while the US and China moderate. Emerging markets are expected to outpace developed economies, driven by structural and demographic strengths (IMF). **Inflation has eased in developed markets but remains a concern**, with short US inflation breakevens exceeding long-term levels, indicating higher near-term inflation expectations. US inflation breakeven yields are higher than in Europe.

**Uncharted waters – increased uncertainty fuels dispersion across asset classes:** Uncertainty is rising in financial markets due to contrasting economic growth paths, persistent inflationary pressures and a challenging global fiscal outlook. Together with heightened geopolitical tensions and structural economic challenges, it is leading to deepening disparities between asset classes, countries and industries. Money market fund flows remain strong in an increasingly uncertain environment.

**High global debt and fiscal pressures are concerns:** The IMF predicts China's debt-to-GDP will surpass the EU in 2024 and near US levels by 2029. **Real yields are increasing** in the US, UK, and Japan, with high longer yields reflecting investor caution. EM government bonds have outperformed, though selectivity is essential. Real interest rates increasingly affect equities, with a stronger impact seen in developed markets than in emerging markets.

**Optimism towards corporates with stronger fundamentals is reflected in equity and credit pricing:** Despite rising real yields, US equity valuations remain above their 10-year averages, and credit spreads are near decade lows, reflecting market optimism and strong demand for corporates with stronger fundamentals. Credit spreads are also narrowing across risk segments, driven by improved corporate debt management. Emerging markets and the US dominate overall credit performance.

**Sovereign bonds and credit diverge, complicating asset allocation for fixed income investors:** Rising term premia in sovereign bonds reflect mounting concerns over high public debt, weakening fiscal positions, and uncertainty around monetary policy trajectories. In contrast, robust corporate balance sheets continue to underpin tighter credit spreads, highlighting resilience in the face of macroeconomic pressures. Sovereign investment grade yields are converging with corporate investment grade peers.

**Increased dispersion in equity returns, emphasising the importance of selectivity:** US and Chinese equities led gains over 3M, while Europe lagged. Consumer disc., financials, tech and industrials outperformed, with regional differences in telecoms, utilities, and energy. DM Growth extended its lead over Value. In H2, small caps outperformed large caps, in a sharp reversal from H1. Non-US and EM equities, supported by strong 12M returns, are catching up with the US, where valuations – even ex tech – are historically high.

**Emerging markets are experiencing a re-rating, but selectivity remains key:** EM government bonds have outperformed the FTSE World Government Bond Index year to date; HY credit spreads have tightened more sharply than in the US or Europe; and equity valuations are above their 10-year averages. Equity volatility in emerging markets has converged with that of developed markets, and EM assets have become more decoupled from developed market government bond movements. Yet, significant divergences remain within the asset class, underscoring the importance of selectivity.

**Diverging central bank policies impact currencies:** The US dollar has remained strong, but range-bound, supported by higher interest rates and diverging central bank policies. Major currencies like the euro, yen, and pound have weakened, reflecting rate differentials and lacklustre economic prospects. November saw the sharpest rise in dollar volatility in two years, yet average volatility in the last 10Y is lower than previous decades. These impact strategies for portfolio hedging and currency exposure management.

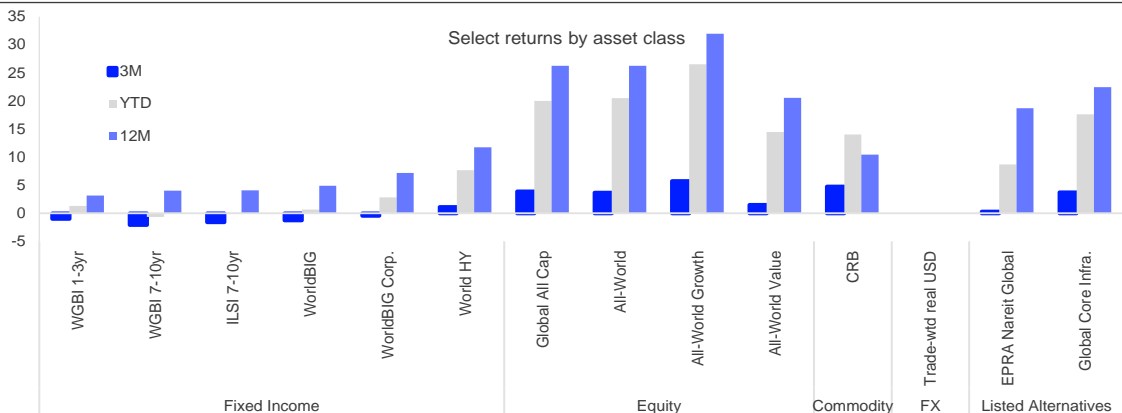
**Commodity shifts – gold shines, oil slumps:** Gold has gained on geopolitical risks and de-dollarisation, while oil prices have fallen YTD. Copper benefits from green transition, and commodity-exporters' currencies weakened more amid lower commodity costs.

**Strong total returns and income yield in listed alternatives:** Listed real estate returns remained flat over 3M, despite rising rates, with healthcare and data centres outperforming, and industrial and industrial/offices underperforming. Global infrastructure delivered robust returns over 12M, comparable to those of global equities. Real estate provided higher income yields, while infrastructure showed resilience in earnings yield.

**Growing integration and diversification potential in digital assets:** Bitcoin's high beta and risk-on nature aligns it with equities during risk appetite, but its volatility and shifting correlations add complexity. Low correlation to sovereign bonds enhances diversification and its portfolio appeal.

**Shifting correlation dynamics in portfolios:** Stock-bond correlations declined and correlations within equity regions are getting lower, enhancing diversification benefits for balanced portfolios. Commodities served as effective diversifiers to both equities and fixed income, while high yield bonds showed closer ties to equities than to other fixed income segments.

Chart 1: Most fixed income (except high yield) asset classes posted losses over 3M and underperformed other major asset classes over 12M. Over 12M, equities led performance, while Global Core Infrastructure and Listed Real Estate had comparable returns to global equities. (USD returns.)



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

# Macroeconomic Backdrop

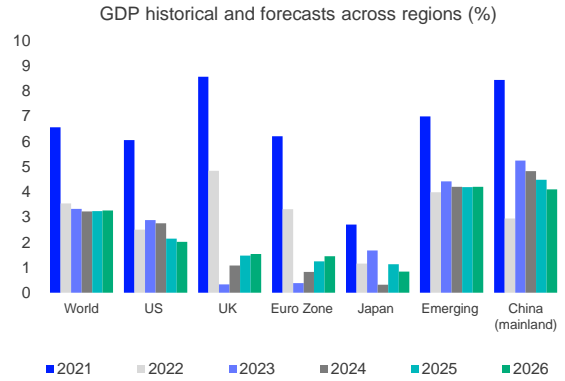
## Global growth is set to diverge further in 2025, with fiscal pressures and inflation challenges persisting globally.

Global growth held steady in 2024, but 2025 reveals divergent regional trajectories. Growth in the UK and Eurozone is expected to strengthen, while momentum in the US and China is likely to moderate (Chart 1). US PMIs already signal a mixed growth outlook (Chart 2). The IMF projects a widening growth gap between emerging and developed markets, with emerging economies set to increasingly outpace developed ones, driven by structural and demographic advantages (Chart 5).

Public spending is expected to support global growth, but fiscal pressures weigh heavily on the outlook. Public debt levels as a share of GDP are high and rising across major economies. The IMF forecasts China's debt-to-GDP ratio to exceed the EU this year and near US levels by 2029 (Chart 3).

Inflation has eased across developed markets year-to-date, yet challenges persist. For most central banks, inflation remains a concern. In the US, short-term inflation breakevens (1-3 years) now exceed longer-term breakevens (7-10 years), signaling high near-term inflation expectations. US long-term breakevens remain higher than in Europe (Chart 4).

Chart 1: Global growth was stable in 2024. Expectations for 2025 shows regional variations: Growth is expected to pick up in the UK and Eurozone in 2025 and moderate in the US and China.



Source: IMF

Chart 2: Manufacturing PMI remains in contraction, despite recent improvement. By contrast, services PMI continued to expand, despite a recent decline. New orders PMI increased over 3M.

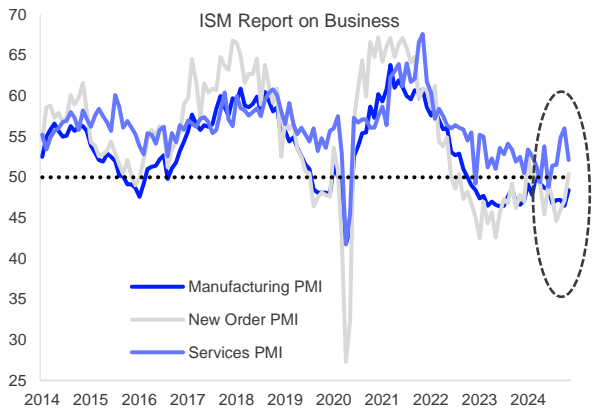


Chart 4: US short-term inflation breakevens (1-3 years) have recently surpassed long-term breakevens (7-10 years), while US long-term breakevens remain higher than in Europe.

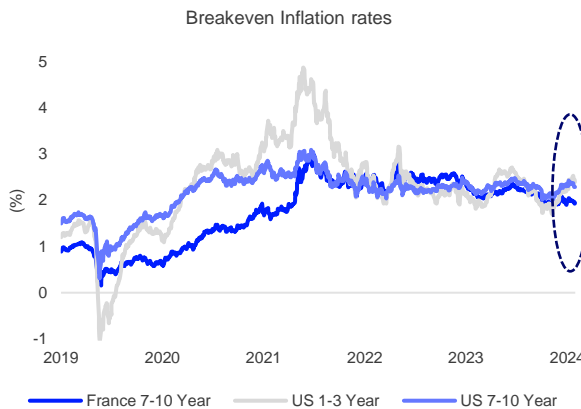


Chart 3: Government debt as a % of GDP has been rising across major economies. The IMF forecasts China's debt-to-GDP ratio to surpass the EU this year and reach levels close to those projected for the US in 2029.

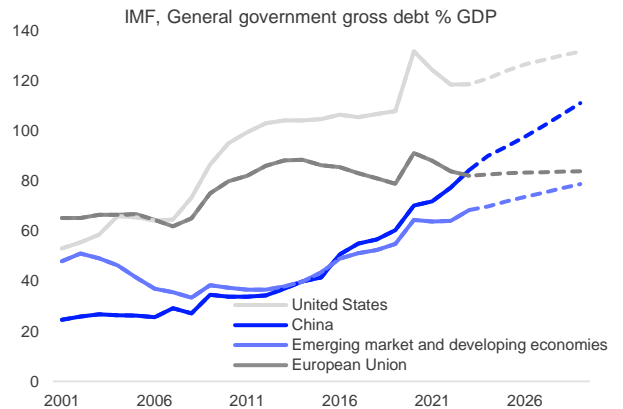
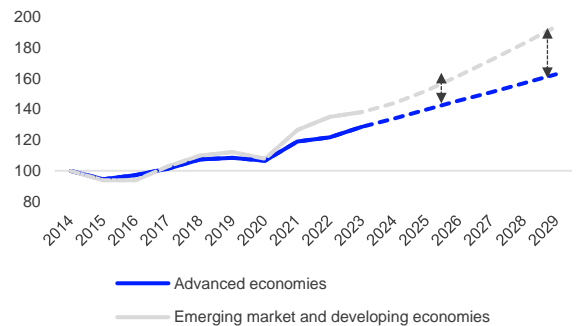


Chart 5: The IMF predicts a widening growth gap between EM and DM, with emerging markets outpacing developed economies by a greater margin in the coming years.

IMF - EM vs DM growth trajectories (nominal GDP rebased=100, 2014)



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

# Macroeconomic Backdrop (Continued)

**Growth proxies signal softer global growth, while, despite rising real yields, narrow credit spreads and high equity valuations, reflect market optimism amid risks.**

Growth proxies (oil and copper-gold ratio) have retreated from peaks, signaling softer global growth. While longer term yields have risen over three months, they have aligned with subdued growth expectations over the past year (Chart 1).

US ISM Manufacturing PMI and high yield (HY) credit spreads, typically inversely correlated, have diverged over the last two years (Chart 2). HY spreads remain near decade lows, reflecting strong demand and corporate balance sheets, even as government real yields rise on debt sustainability concerns. This disconnect has grown in recent months (Chart 3).

Globally, equity risk premia (ERP) are at historic lows since the pandemic, indicating equities are expensive relative to risk-free assets (Chart 4). In the US, forward equity valuations and real 7-10 year yields, usually inversely correlated, have diverged since late 2022. US valuations now exceed 10-year averages despite higher real yields, highlighting market optimism (Chart 5).

Chart 1: Growth proxies (oil & the copper-gold ratio) retreated, hinting at softer global growth. While longer term yields have risen over 3M, they have aligned with subdued growth expectations over the past year.

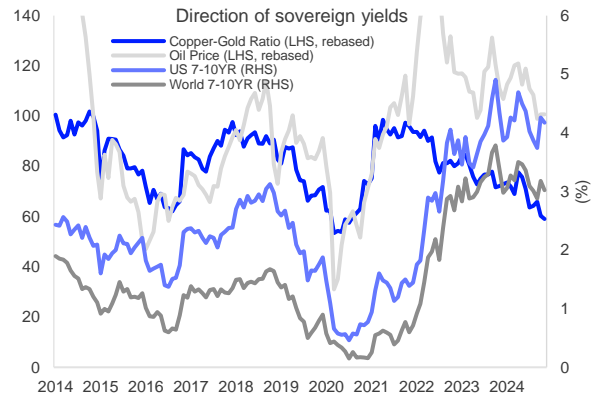


Chart 2: US ISM Manufacturing PMI and US high yield spreads, typically inversely correlated, have diverged in the last two years, with US high yield spreads close to their 10-year minimum.

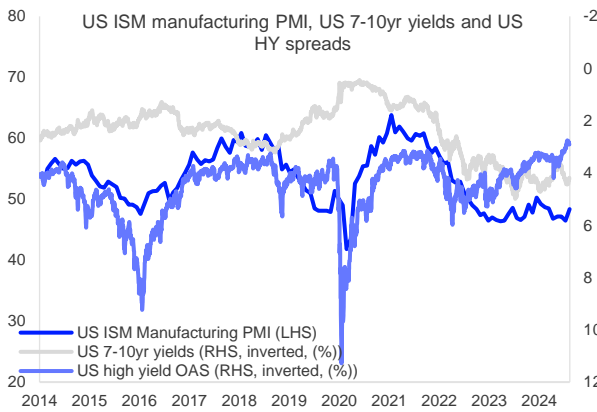


Chart 3: Corporate credit spreads are near 10Y lows, while government real yields continue to rise on the back of the deteriorating sovereign debt outlook (Page 3, Chart 3). This trend has intensified over 3M.

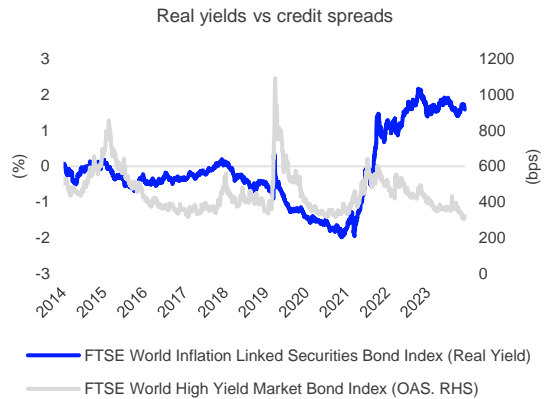


Chart 4: The equity risk premia (ERP) has declined globally to historic lows since Covid. This indicates equities are relatively expensive, while ERP has turned negative in the US. ERP is relative to US 7-10Y rates.

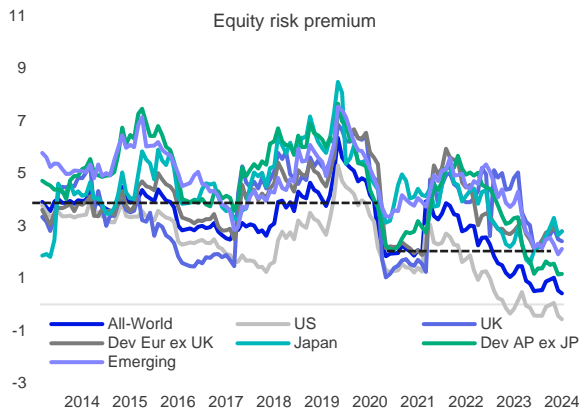
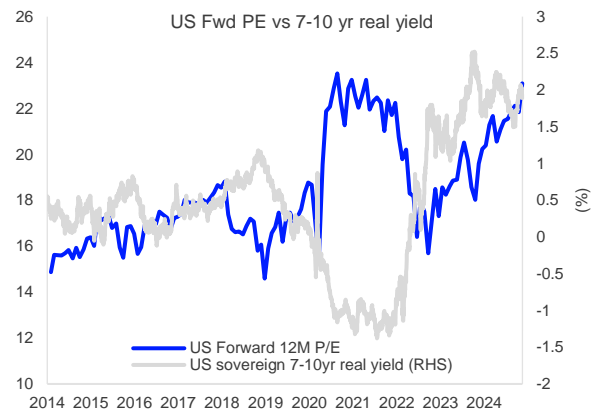


Chart 5: Forward valuations and real long yields, typically inversely correlated, have diverged in the US since late 2022, with valuations rising above their 10-year range, despite higher real yields.



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

# Sovereign Yield Curves

**Longer-term bond yields are rising, driven by real yield demand, inflation, a deteriorating fiscal picture and monetary policy uncertainty. Some emerging market sovereign bonds outperform.**

The risk premium for holding longer bonds has risen in recent months (Chart 1). Investor appetite for real yields has grown, with notable increases in the UK, US, and Japan (all facing substantial and growing debt levels) over the past three months. Conversely, real yields have softened in Germany and Canada. Higher breakevens have contributed to the upward movement in longer yields in the US and the UK (Chart 2).

The persistent nature of US inflation has prompted the FOMC to adopt a more cautious approach, and YTD, the median long-term neutral rate forecast has increased from 2.5% to 2.9% (Chart 4). Notably, 10-year yields remain high, even months into the easing cycle, defying historical norms (Chart 5).

Year-to-date, the Emerging Markets Government Bond Index (EMGBI) has outperformed the World Government Bond Index (WGBI). Selectivity within emerging markets has gained increased significance. India and China GBIs have delivered better performance, while Indonesia, Chile, Mexico, and Brazil GBIs have generally lagged.

Chart 1: Short and long-term premia (3Y, 10Y) have risen recently, with the 10Y ACM term premium turning positive to levels last seen in late 2023.

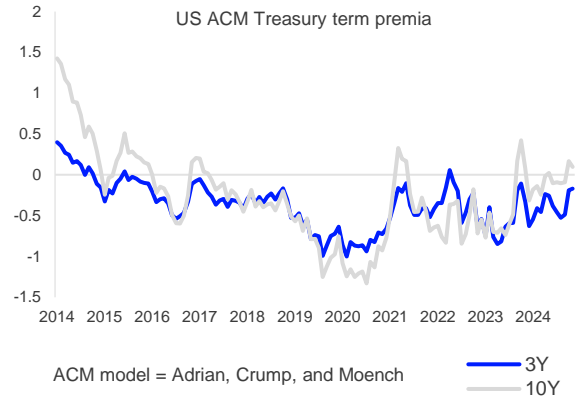


Chart 2: Investors have raised demand for real yields from the UK, US, and Japan, where debt levels are high and rising. Breakeven inflation rates have climbed across the board, except Japan.

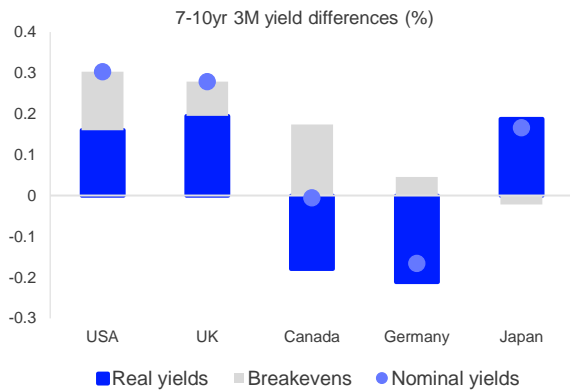


Chart 3: The median of FOMC participants longer-run expectation for the federal funds rate has increased from 2.5% at the start of the year to 2.9% recently.

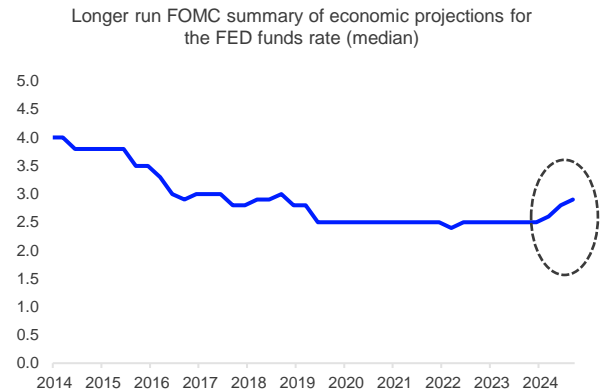


Chart 4: YTD, EM govts (EMGBI) have outperformed global govts (WGBI). India and China have outperformed, whereas Indonesia, Chile, Mexico and Brazil have underperformed. India is not part of EMGBI.

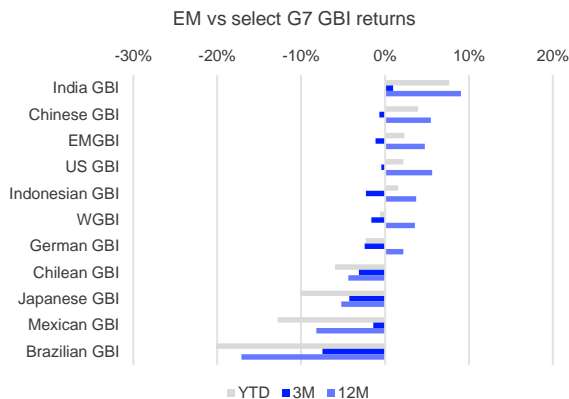
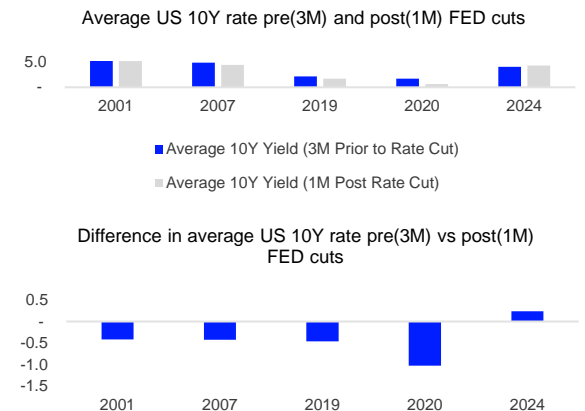


Chart 5: Unlike the last four Fed rate-cut cycles, US 10-year yields have remained high one month after the current easing start date. This reflects rising uncertainty and term premia.



Source: FTSE Russell/LSEG. All data as of November 30, 2024, except FOMC as of September 18, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.



# Credit

**Credit spreads are narrowing, and the gap between credit risk segments is converging, reflecting both stronger risk appetite and improved corporate debt management. EM IG and HY corporates perform better than peers over 12M.**

YTD & over 3M, the B vs CCC spread has narrowed significantly, signaling reduced default risk & effective refinancing efforts. BBB vs BB (lowest investment grade vs highest non-investment grade) spread is narrower (Chart 1) and the share of Fallen Angels in the US high yield market has dropped to a 25-year low. This likely reflects tighter financial discipline, stronger balance sheets and improved debt metrics across corporates on average particularly in large caps.

Emerging markets and the US dominate performance in both investment grade and high yield segments. EM high yield credit has been the standout performer year-to-date and over 12 months. In contrast, Europe has underperformed, posting negative returns in both investment grade and high yield segments over the last three months (Chart 2 & 3).

EM IG and HY spreads have fallen close to their historical lows. EM HY (351bps) is below European high yield spreads (368bps). US high-yield spreads remain the narrowest globally (Chart 4 & 5).

Chart 1: B vs CCC (high vs very high credit risk) and BBB vs BB (lowest investment grade vs highest non-investment grade) spreads narrowed, reflecting improved debt metrics on average, particularly in large caps.

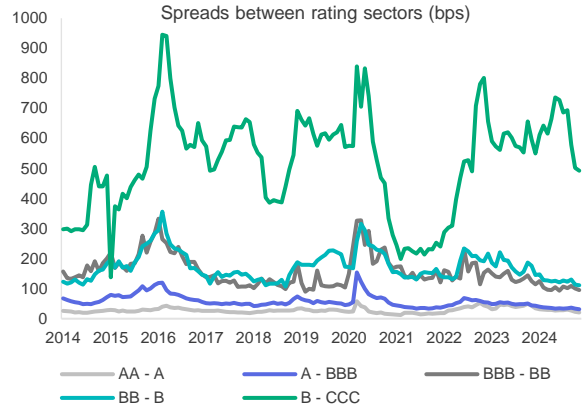


Chart 2: Credit spreads narrowed across different segments, with EM HY and US HY leading the spread compression over 3M.

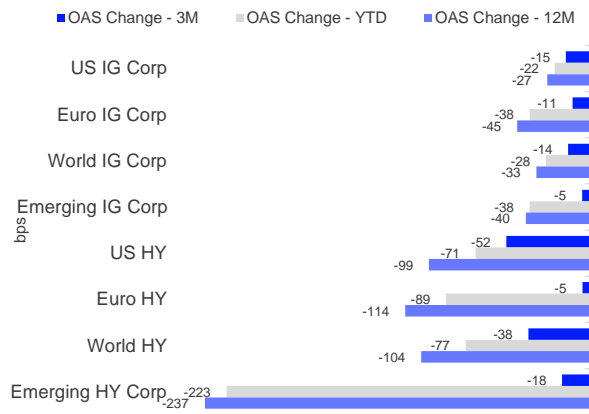


Chart 3: EM HY leads credit gains over 12M, where Euro IG and Euro HY had negative returns over 3M.

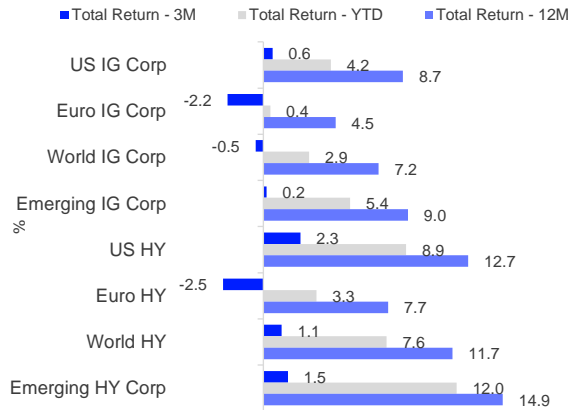


Chart 4: EM IG Credit spreads are close to their lowest in over a decade (111bps), just 25bps above World IG. US IG continues to have narrower spreads compared to Euro IG.

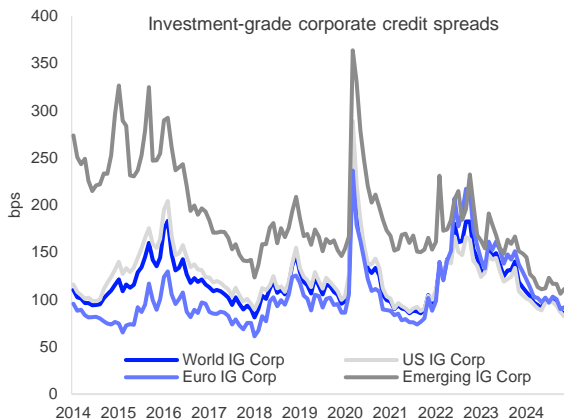
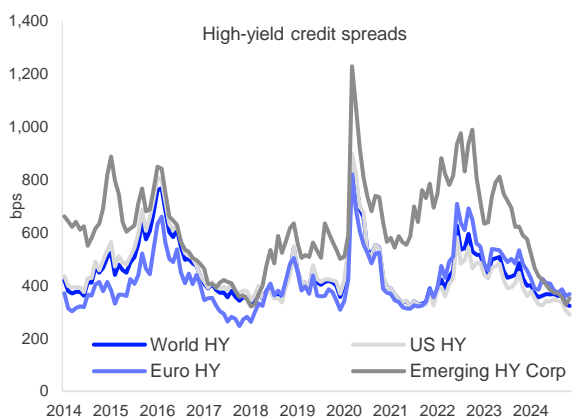


Chart 5: EM HY spreads are close to their lowest point over a decade (351bps vs 319bps) and their spreads are now narrower than Euro HY (368bps). US HY spreads are the narrowest.



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

## Credit (Continued)

**Muted post US election fixed income (FI) returns highlight resilience in EM bonds. Euro corporate bonds spreads are higher than US and EM peers compared to their history, driven by diverging spread movements across industries.**

Fixed income returns have been muted compared to the 2016 US election, with small positive gains across most indices in the first month, post-election. EM (EMGBI) and Chinese government bonds experienced only slight negative returns, reflecting relative resilience. (Chart 1)

Return per unit of duration risk remains highest in emerging markets, both for investment grade (IG) and high yield (HY) bonds, while Europe and the US show similar risk-return profiles. Notably, this risk-return ratio has stayed stable for all corporate segments over the past 3M (Chart 2). Historical valuations in euro corporate bonds, across IG and HY, are more attractive than their US and EM counterparts, compared to their 10-year averages. (Chart 3) Part of the valuation gap between Europe and US spreads might be linked to diverging spread movements and weights in consumer, telecom, and most importantly, manufacturing industries (Chart 4).

In the US, lending conditions have eased in Q4 2024, with high yield spreads tightening below 300 basis points, surpassing levels suggested by liquidity conditions alone (Chart 5).

Chart 1: FI returns have been muted in this US election vs 2016, in the 1M following the elections. EMGBI and Chinese GBI have seen much smaller negative returns, and other FI indices had small positive returns.

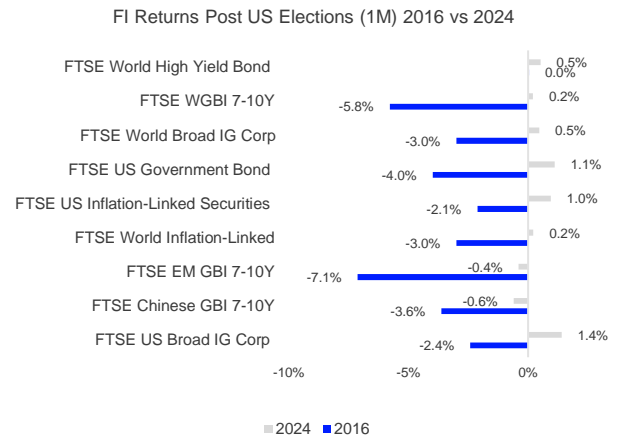


Chart 3: Euro corporate bonds have more attractive valuations than peers in both IG and HY compared to their 10-year history. US and EM corporates are most richly priced.

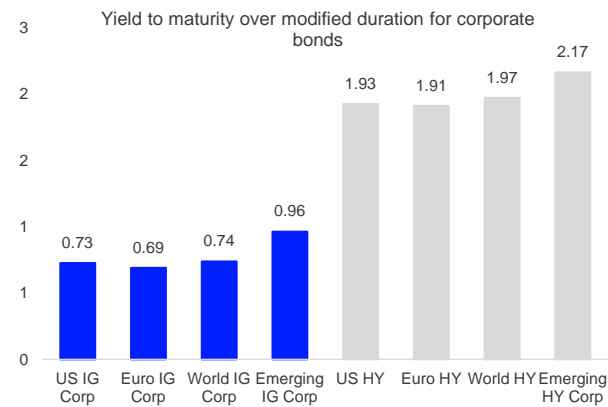


Chart 4: YTD, European Consumer and Telecom spreads widened, while European Manufacturing spreads narrowed less than their US counterparts, partially explaining cheaper Euro HY valuations.

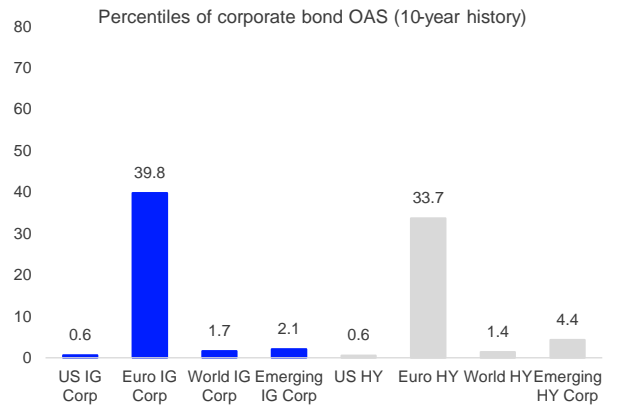
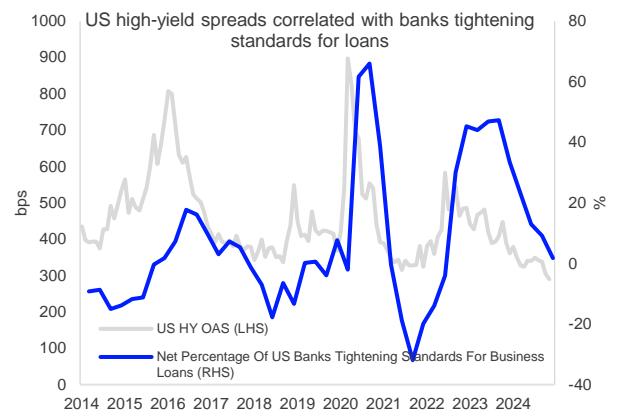
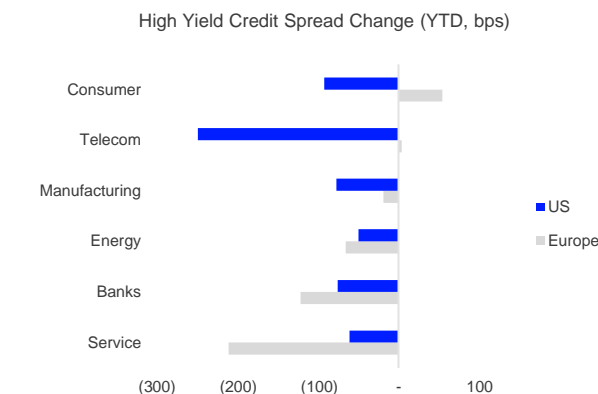


Chart 5: US lending conditions have continued to ease in Q4 2024, with high yield spreads tightening to below 300 basis points - exceeding levels implied by liquidity conditions alone.



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

# Equities

## China and US led gains over 3M; Europe lagged. EM volatility aligned with DM, while India gained weight amid EM performance divergences.

Over 3M, US and Chinese equities have led global markets, while European equities lagged. Over 12M, US equities have maintained their leadership, with the UK, Japan, China, and EM also delivering double-digit returns (Chart 1). Overall DM volatility has increased since 2021, and the volatility of FTSE Emerging equities has converged with FTSE Developed (Chart 2). Post US elections, regional equity returns have broadly mirrored those seen in 2016, with the main deviations being negative performances in Developed Europe ex UK and China (Chart 5).

Within EM, it has become more important to spot differences in performance trends. Since late 2020, India's weight in the FTSE Emerging Markets Index has risen by over 10%, driven by the relative outperformance of Indian equities. This shift coincided with a comparable decline in China's weight, as Chinese equities underperformed (Chart 3).

Growth in DM has outpaced Value more significantly than large caps outperforming small caps over 10 years, a trend that persists in 2024 (Chart 4). In H2, in a significant reversal, small caps have outperformed large caps.

Chart 2: Overall DM volatility has increased since 2021. The volatility of FTSE Emerging has started to converge with FTSE Developed after 2021.

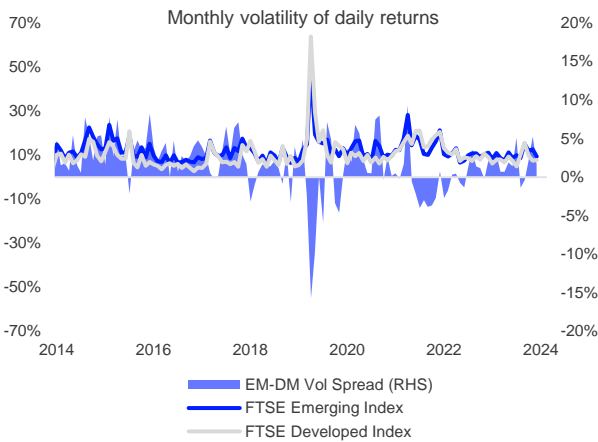


Chart 4: Developed Growth stocks have outperformed Value stocks more than large caps have outperformed small caps over 10Y, a trend continuing into 2024. In H2, small caps took the lead over large caps.

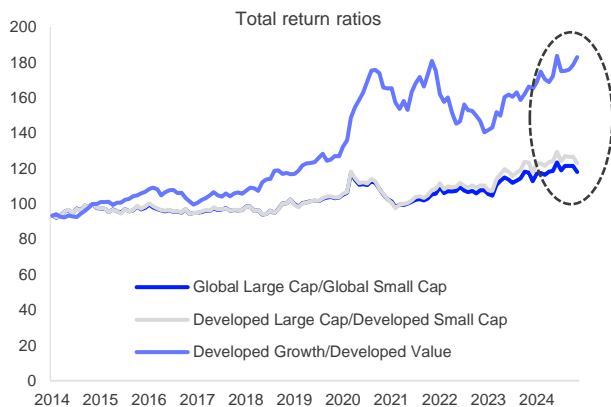


Chart 1: Over 3M, Chinese and US equities have outperformed, while Europe lagged. Over 12M, US equities have led, with the UK, Japan, China, and emerging markets also posting double-digit returns in USD.

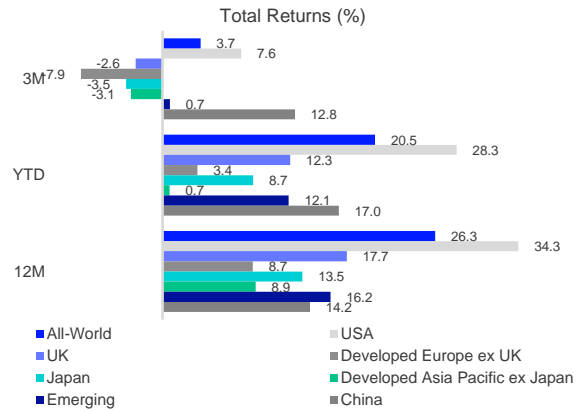


Chart 3: Since Q4 2020, India's weight in the FTSE Emerging Markets index has risen over 10%, driven by the relative outperformance of Indian equities. This coincided with a similar decline in China's weight.

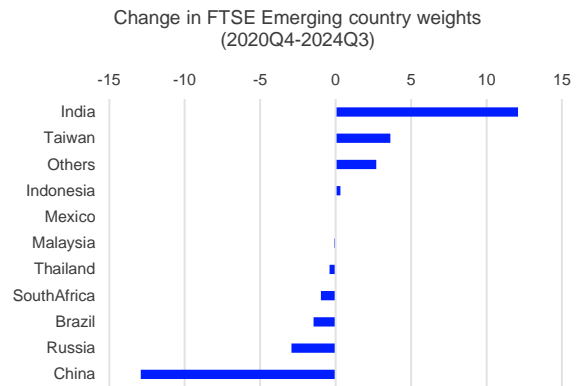
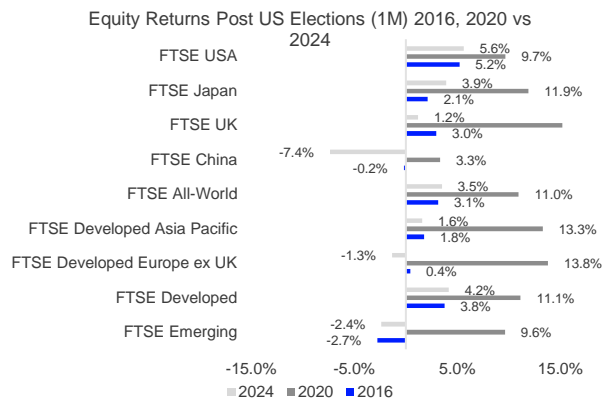


Chart 5: Post US election, regional equity returns have followed a similar trajectory to 2016. Developed Europe and China's negative performances were the only notable differences.



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.



# Equities (continued)

**Cyclicals have led FTSE All-World gains over 3M, with higher return dispersion across industries and regions. US valuations are near record highs; EM has better valuations compared to its own history and sustains stronger earnings growth expectations.**

Over the past 3M, cyclical industries have led performance within the FTSE All-World, and within industries. The return differences were wider compared to previous months' readings. Industry-level returns showed significant regional disparities between the US vs the rest of the World (Chart 1).

Technology continues to command higher valuations across most regions, while energy and financials remain at the lower end of the valuation spectrum (Chart 2). In the US, valuations have increased across most sectors over 3M, except for healthcare. Forward valuations in the US remain near 10-year highs, even when excluding technology (Chart 5). EM is the only other region with above-average valuations.

Earnings growth forecasts for the next two years have softened in the US and broader developed markets YTD, aligning with weaker macroeconomic conditions. Emerging markets, however, remain an exception, sustaining more robust growth expectations.

Chart 2: Technology have higher valuations across most regions, while energy and financials ranked lower. In the US, valuations have improved for most of industries over 3M, except healthcare.

	All-World	US	UK	Dev Eur ex UK	Japan	Dev AP ex JP	Emerging
Basic Materials	18.4	23.1	12.9	14.0	13.3	12.8	12.5
Consumer Disc.	21.8	30.1	19.4	14.4	11.9	10.2	14.3
Consumer Staples	17.6	18.0	17.6	16.1	19.0	13.6	18.5
Energy	12.3	15.1	8.7	8.7	8.2	11.2	9.2
Financials	12.5	17.8	8.7	8.9	11.6	12.5	8.6
Health Care	18.3	18.4	13.0	17.3	24.8	31.6	24.9
Industrials	20.2	24.2	19.4	17.7	14.7	13.9	14.8
Real Estate	19.3	39.2	17.3	13.4	5.2	15.6	10.3
Technology	25.6	27.9	28.3	25.0	18.9	8.9	16.5
Telecoms	14.1	13.8	9.4	15.9	17.1	10.4	18.6
Utilities	15.9	19.5	12.8	12.4	7.0	13.2	12.4

Chart 4: The US trades at forward valuations close to 10-year highs. Except US, EM is now the only region with above average valuation. The All-World ex US is valued close to its 10-year average.

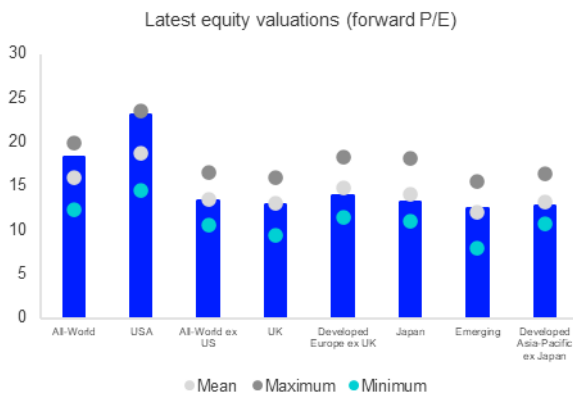


Chart 1: Over 3M, consumer disc, financials & tech have led in the FTSE All-World. Industry-level disparities between the US & other regions were pronounced in telecoms, utilities, consumer disc., energy, and industrials.

	All-World	US	UK	Dev Eur ex UK	Japan	Dev AP ex JP	Emerging
Index Return	3.7	7.6	-2.6	-7.9	-3.5	-3.1	0.7
Basic Materials	-3.6	-0.5	-2.2	-10.7	-8.1	-1.2	-3.1
Consumer Disc.	10.5	17.9	5.1	-12.0	-3.6	-2.1	5.0
Consumer Staples	-2.7	0.4	-1.8	-13.7	-1.4	-6.7	-3.3
Energy	-0.3	5.0	-9.0	-8.1	-6.6	-8.7	-10.5
Financials	7.3	12.7	4.6	-2.9	8.2	6.5	0.4
Health Care	-8.6	-6.5	-20.2	-13.9	-10.9	-7.9	-0.5
Industrials	5.0	10.6	2.9	-2.9	-3.4	-3.8	-0.5
Real Estate	1.9	4.3	-7.0	-5.0	-11.0	0.8	4.8
Technology	5.8	7.0	12.6	-9.4	-8.4	-4.9	4.8
Telecoms	3.0	14.4	-0.2	2.1	-0.9	-26.1	3.4
Utilities	2.7	9.2	-2.8	-5.4	-11.0	-0.4	-9.2
Range	19.1	24.4	37.8	16.0	19.3	32.8	10.8

Chart 3: (IBES) 2Y earnings growth forecasts (%) declined YTD in the US and the broader Developed markets. Emerging markets remained an exception. Slower earnings growth in DM is in line with softer macro growth.

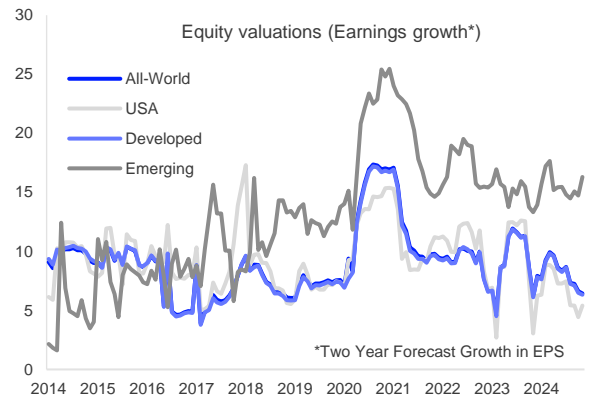
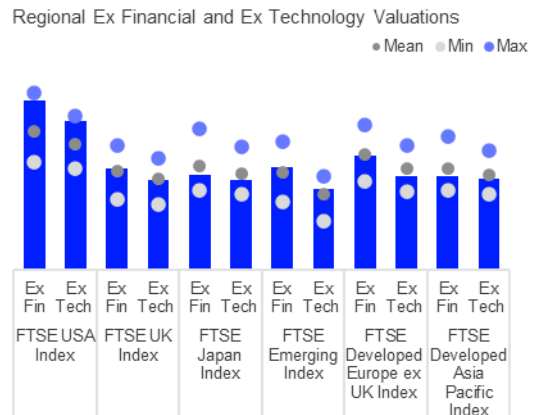


Chart 5: US is at historically high valuations even ex-tech (highest valued), Developed Europe ex UK, ex-Financials (lowest valued) nears average 10Y valuation - highlighting divergence between US vs Europe.



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

# Digital Assets

Digital assets (DA) are evolving from niche investments to feature more in multi-asset portfolios and may be more so with the expected policy shifts in the US. Their relationships with traditional financial assets – equities, sovereign bonds, credit, commodities and currencies – highlight their complex role in the broader financial ecosystem. Longer time series data is mainly confined to Bitcoin, which has shown periods of stronger correlation with equities, particularly during heightened risk appetite. Its performance often mirrors growth-heavy indices like the Russell 1000, driven by similar macroeconomic fundamentals, such as Federal Reserve policy shifts and liquidity conditions, but with a higher beta. Bitcoin’s volatility far exceeds that of equities, significantly affecting its risk/return profile, especially for risk-averse investors. Bitcoin’s risk-on status is also confirmed by its low correlation to US Treasury returns. Overall, the role of Digital Assets continues to evolve, with correlations between different DAs and Bitcoin varying significantly, according to their functionality and role on the blockchain.

Chart 1: FTSE Bitcoin and Russell 1000 prices have started to move more in tandem since March 2020. Digital assets and equities were both negatively affected by the inflation shock of 2022 but have since recovered.

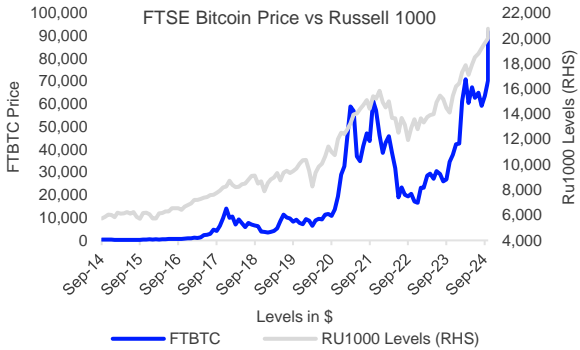


Chart 2: Bitcoin prices fell sharply from March 2022 to July 2023, during the bout of higher inflation and Fed monetary tightening. As inflation fell, and the Fed pivoted to ease policy, Bitcoin returns increased sharply.

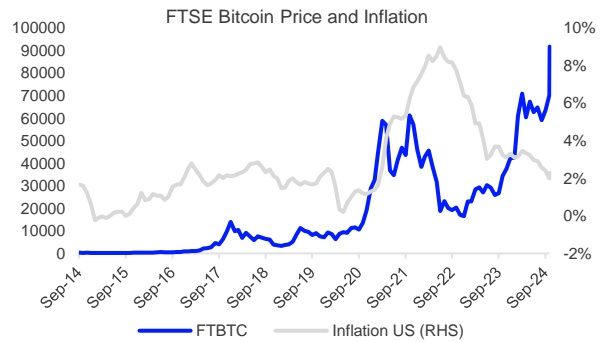


Chart 3: Bitcoin & Gold have moved in line over 10Y. Both assets are difficult to value but share a common theme of limited supply, resulting in a high correlation of 0.6 during Covid, though the correlation has since decreased.

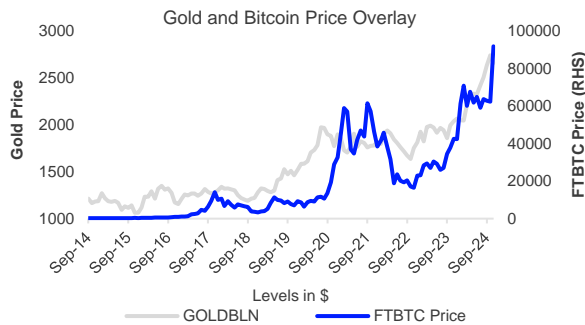


Chart 4: Rolling correlations between FTBTC and equity returns remain high, at 0.6. However, DA's correlation with Treasuries is weak at 0.2. This tends to confirm Bitcoin as a risk-on asset.

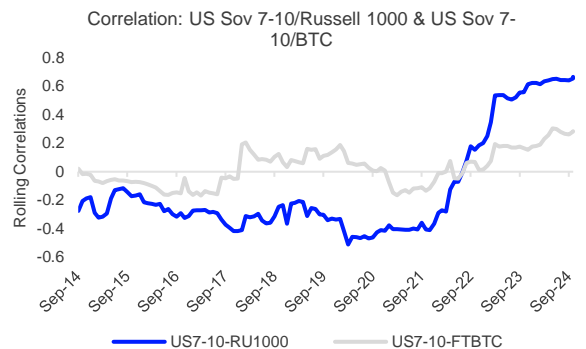
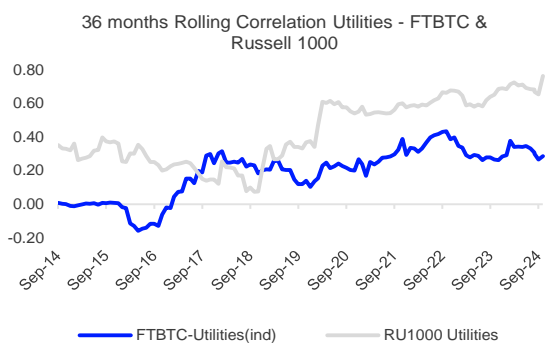
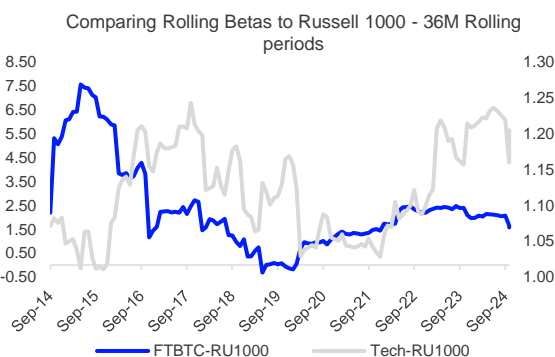


Chart 5: The rolling beta for bitcoin relative to equities has fallen since the very volatile early period in 2014-15. In recent years, the beta appears to have stabilised around 1.5, and is still higher than the beta of tech stocks.

Chart 6: Bitcoin correlations with utilities turned positive in 2017 & have since hovered ~0.25 (slightly higher during energy shock). Cheaper energy boosts mining profits and DA supply, coinciding with higher Bitcoin demand.



Source: FTSE Russell and LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered 'research' for the purposes of MIFID II. Please see the end of the report for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix for list of indices used for each market.

# Commodities

**WTI declines in current prices and forwards reflect slower growth expectations. Gold leads with 30.3% 12M gains, driven by EM central bank demand. Commodities lag equities, and exporter currencies have weakened more.**

The WTI forward curve has shifted downwards in 2024 (Chart 1). In an environment of increased geopolitical uncertainty, this downward shift reflects slower growth expectations. YTD, the Commodity Index has gained 14.0%, with copper up 4.2% and crude oil down 5.8%. Copper continues to benefit from the structural green transition, while oil remains tied to cyclical demand (Chart 2). The standout performer is gold, up 30.3% over 12M. Gold's surge has been driven by a sharp increase in central bank purchases (Chart 3), particularly in EM, as geopolitical stresses, de-dollarisation, and economic fragmentation bolster its appeal. Despite this, commodities have underperformed equities since late 2022, with the gap widening significantly since Q4 2023, although the commodities-to-equities return ratio remains above its Covid-era lows (Chart 4). Currencies of commodity-exporting countries have underperformed their importing peers relative to the US dollar over 3M, reversing a trend seen throughout most of 2023 & early 2024. This underperformance has persisted YTD, underscoring changes in commodity markets.

Chart 1: WTI forward curve has moved down YTD & oil price is expected to stabilise to low ~USD 60's by end-2026 plus (lower than previous readings). Lower oil price expectations indicate expected slower growth.

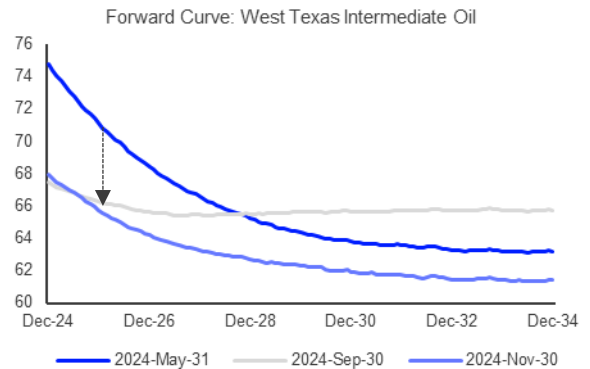


Chart 2: Commodity CRB is up 14.0%, copper 4.2% & crude -5.8% YTD. Copper benefits from structural trend of green transition, while oil is a cyclical story. The real winner is Gold, up 30.3% over 12M.

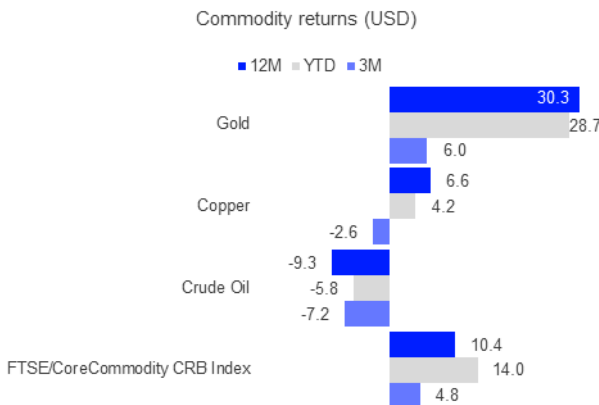


Chart 3: The sharp increase in gold purchases by many central banks, notably in EM, has underpinned the gold price increases, reflecting geopolitical stresses, de-dollarisation and economic fragmentation.

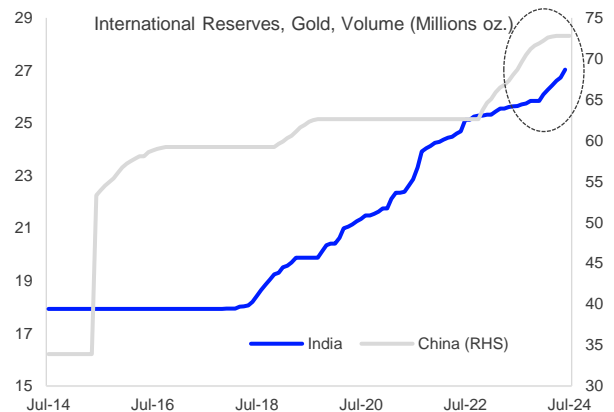


Chart 4: The commodities vs equities returns are higher than the Covid lows (reversing a long-term trough). But they have underperformed equities since end 2022, and sharply so since Q4 2023.

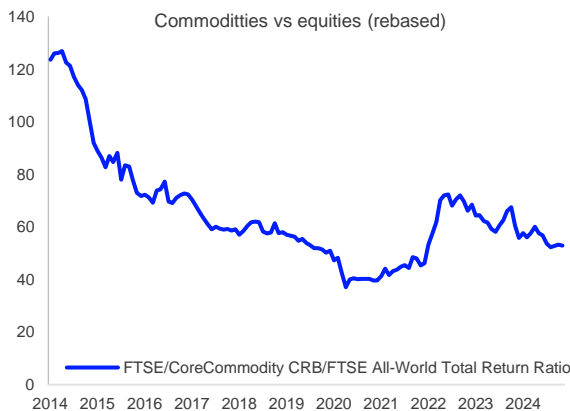
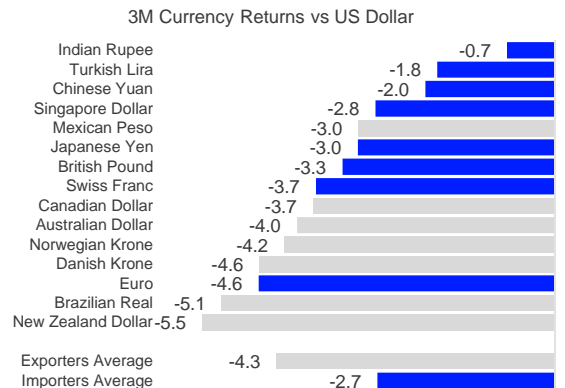


Chart 5: Currencies of commodity exporters have underperformed importers (relative to US dollar) in the last 3M. YTD saw a similar trend. This was a reversal of the trend in most of 2023 and earlier in 2024.



Source: FTSE Russell/LSEG. All data as of November 30, 2024 (Gold purchase data as of July 2024). Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

## Listed Alternatives

**Listed real estate (LRE) stayed flat in last 3M even as rates increased. US outperformed peers. Infrastructure gained strongly over 12M, but EM lagged DM in recent months.**

Listed developed real estate remained largely flat over 3M, posting a modest 0.4% gain, despite rising rates (Chart 1). Data centres & healthcare LREs were notable outperformers, while industrials and industrial/office underperformed. Over 3M, US-listed real estate outperformed its peers in Europe ex UK, Japan, and the UK, a trend that was also true over the last 12M (Chart 2).

However, LRE has generally underperformed broader equities across most major markets over both three and 12 months, except for selected areas in Asia and continental Europe, where LRE has been a better way to invest relative to equities (Chart 3).

Infrastructure posted strong gains over 12M. Over 3M, EM infrastructure has lagged behind Developed market (DM) infrastructure. This underperformance of EM infrastructure contrasts with equities, where EM performance has aligned more closely with that of Developed markets (Chart 5).

Chart 1: Listed DM Real Estate stayed flat (0.4%) despite rising rates over 3M. Data centres and healthcare LREs have outperformed, while industrial and industrial/office underperformed.

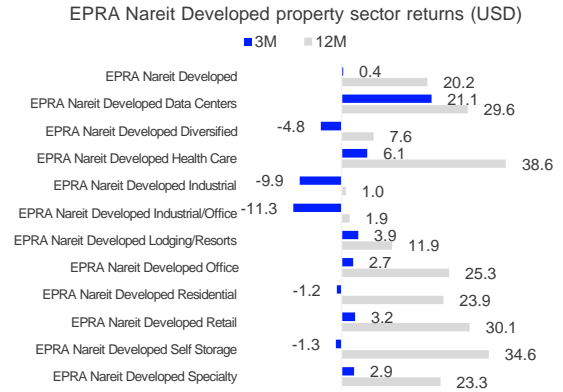


Chart 2: Within Listed real estate, US continued its lead over 3M. US outperformed vs Europe ex UK, Japan and the UK over 12M also.

FTSE EPRA Nareit Global Real Estate returns (USD)

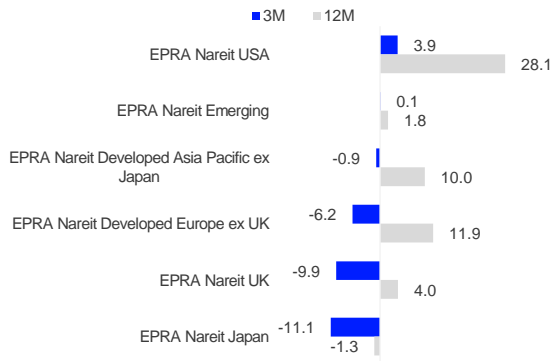


Chart 4: Infrastructure posted gains in the last 12M. EM Infrastructure have posted negative returns over 3M, falling behind DM returns.

FTSE Core Infrastructure returns (USD)

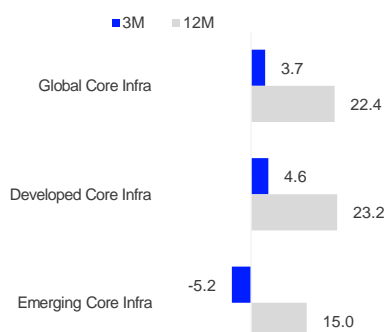


Chart 3: Listed real estate have underperformed equity over 3M and 12M in most major markets, except Asia ex Japan & continental Europe.

FTSE EPRA Nareit Global Real Estate returns relative to equity (USD)

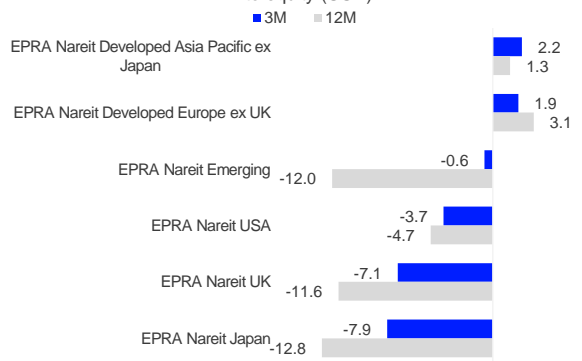
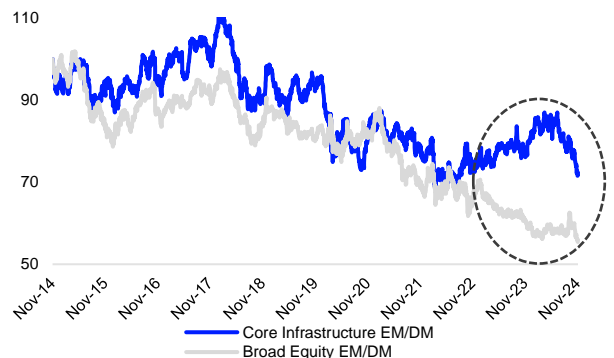


Chart 5: EM infrastructure has underperformed DM in the last few months, whereas EM equities were more in line with DM.

EM/DM infrastructure vs EM/DM broad equity



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

# Currencies

## USD strengthened over 3M vs EUR, JPY, and GBP, driven mainly by shifting rate differentials and divergence in central bank policies.

The trade-weighted USD strengthened over 3 months, buoyed by higher US rates, and is now above its two- and five-year averages, although it is trading within a narrow range (Chart 1). Although November has seen the highest US dollar volatility in the last two years, average volatility over 10 years is lower compared to earlier decades (Chart 2).

The euro depreciated by over 4.5% over 3M, driven by widening Germany-US rate differentials, which are now near their two-year low and in line with the euro's weaker valuation against the US dollar (Chart 3). Meanwhile, the yen fell by 3.1% over 3M, expanding its year-to-date loss to 6.5%, even though Japan-US rate differentials narrowed to -3.7% amid expectations of additional BoJ hikes and potential Fed cuts (Chart 4).

The pound also weakened, down 3.3% against the dollar, as UK-US rate differentials turned negative. However, the differential remains notably above its longer-term average (Chart 5).

Chart 1: The trade-weighted USD strengthened over 3M, with higher US rates. It is now valued higher than both its 2- and 5-year averages.

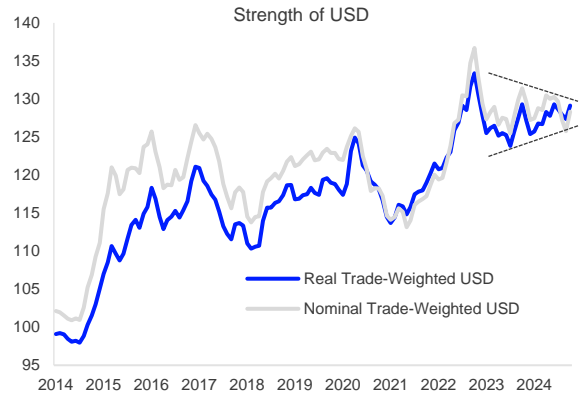


Chart 3: The euro depreciated by over 4.5% in three months, driven by widening Germany-US rate differentials. The differential is now near its two-year low, aligning with the euro's valuation against the US dollar.

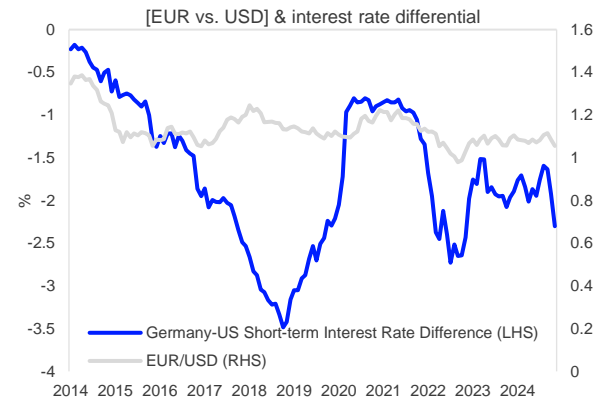


Chart 5: GBP was down 3.3% vs USD over 3M, as the UK-US rate differentials went into negative territory. The rate differential is still notably higher than its longer term mean.

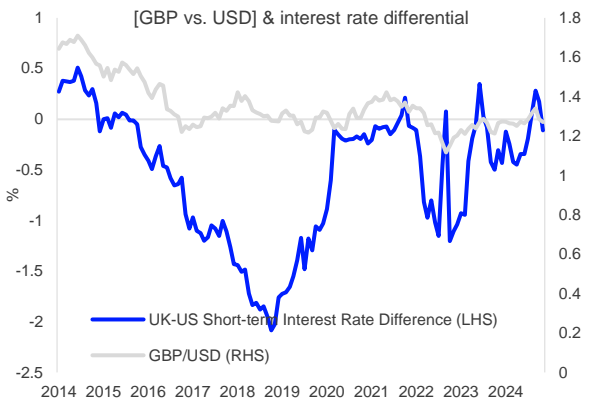


Chart 2: The intramonth historical volatility of the US dollar has been lower in the last decade compared to previous decades on average.

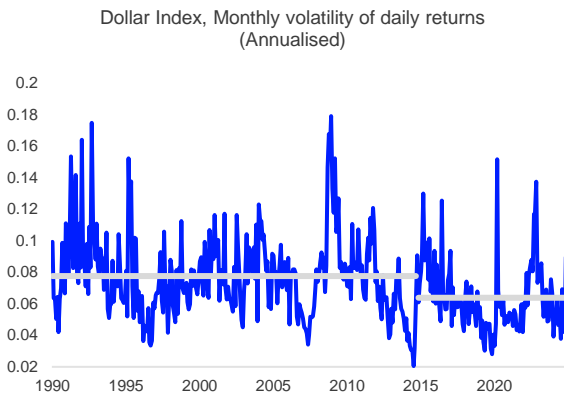
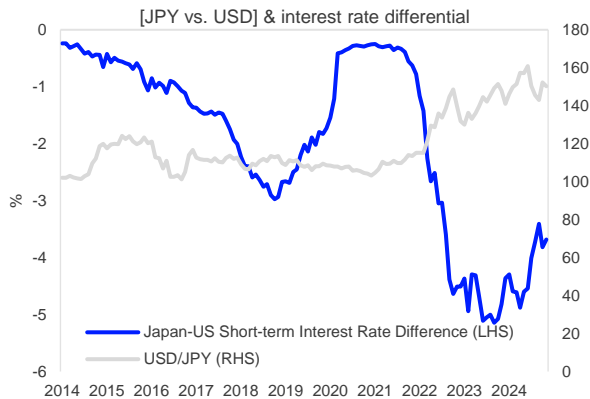


Chart 4: The yen lost value over 3M, down by 3.1%, expanding its YTD loss to -6.5%, even though Japan-US rate differentials narrowed to -3.7%, with expectations of hikes by the BoJ and cuts by the Fed.



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

# Capital Flows

**Uncertainty and central banks' cautious stance made money market funds an attractive choice. Over 3M, bond flows have weakened, while equity industry flow changed.**

Money market funds continue to attract significant inflows, bolstered by high short-term yields and central banks' cautious approach to rate cuts. The last 3M have been particularly strong, reflecting heightened uncertainty. 3M bond flows have been below the 12M average, while equity fund flows have shown resilience since late April. Equities lag both bonds and money market funds in nominal and flow (% of AuM) terms (Chart 1).

North America has led bond & equity flows over 12M, whereas in EM, bond and equity inflows have slowed recently. Europe mandated equity funds have seen outflows over 12M, and nominal US dollar flows into Europe mandated bond funds were weaker than EM and US (Chart 2 and Chart 3).

In the US, equity inflows were led by technology over 12M. However, the last 3M have seen notable increases in inflows to financials, industrials, and real estate funds, while healthcare funds experienced outflows (Chart 4). USD government bond fund flows have been flat (over~3M) since the Fed started easing, a potential signal of investor concern. (Chart 5)

Chart 1: Over the last year, all asset classes have received positive inflows. Increased uncertainty and central banks' cautious stance continue to make money market funds an attractive choice for yield-seeking investors.

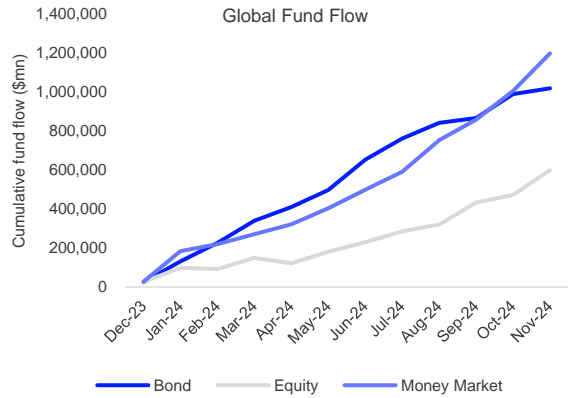


Chart 2: Positive 12M bond flows in all regions, with a sharp pick-up in flows into North America over last 12M. EM bond flows slowed over 3M.

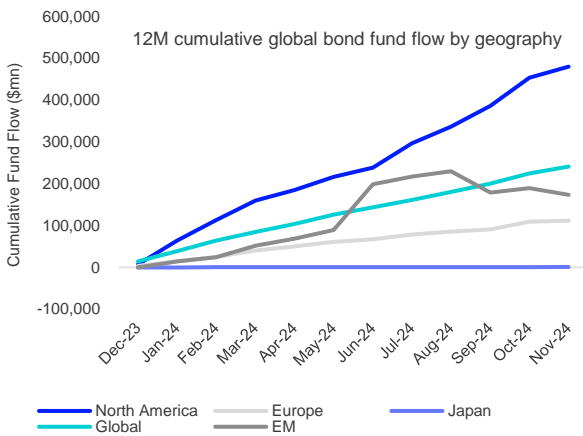


Chart 3: The last 12M equity flows reflect higher investor interest in EM and strong inflows into US, notably in the last 3M.

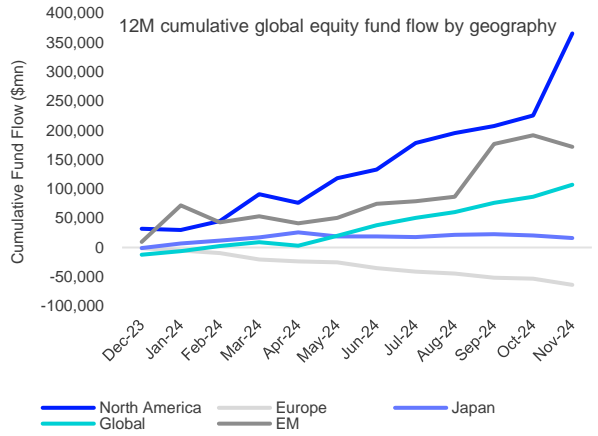


Chart 4: Over 12M, US equity flows have been strongest in technology, financials and industrials, while healthcare have seen outflows.

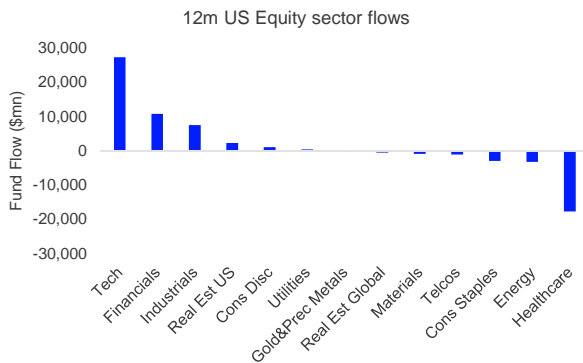
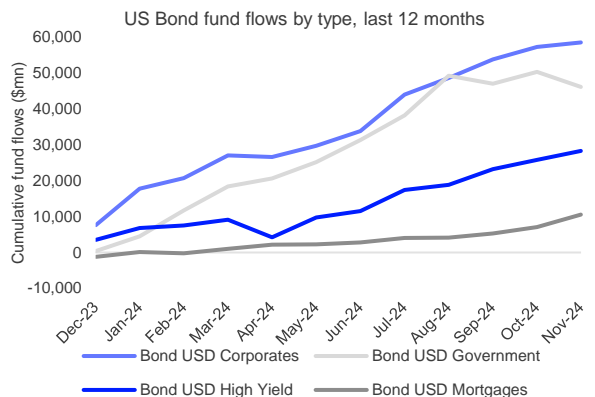


Chart 5: Flows into USD government bond funds has stalled recently, while high yield, mortgage and corporate bond funds continued to attract interest.



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.



# Cross-Asset: Equities and Fixed Income

**Stock-bond correlation falls, while equity risk premia (ERP) and HY spreads approach decade lows. US equity valuations are at historically high levels.**

Market capitalisation relative to the real economy continues its ascent globally, with the US nearing an historic peak of about 2. This surge reflects robust equity outperformance and highlights the dominance of US markets (Chart 1). However, the disconnect between market strength and economic signals persists, as the ISM PMI remains below 50. Rising stock-to-bond valuations, driven by equity gains, emphasise this divergence, which has been a hallmark since 2022 (Chart 2).

The 12M rolling stock-bond correlation has fallen to 0.72 from a high of 0.86. Stock-bond correlations tend to run high during inflationary regimes and are likely to remain elevated under such conditions (Chart 3).

The US ERP has declined over 3M, while HY credit spreads have tightened further. Both metrics are near 10Y lows, signalling that rewards for risk assets remain low, and is worse for equities compared to HY (Chart 4). Meanwhile, US HY spreads remain below their historical average, but small-cap implied volatility has recently ticked up, moving closer to its 10-year norm, which historically signals correction risks (Chart 5).

Chart 1: Equity market capitalisation relative to the real economy is increasing across the globe, with the US showing a higher rise, consistent with its equity outperformance both YTD and over 12M.

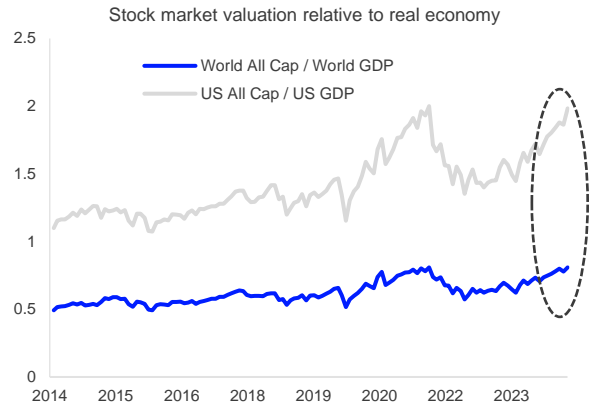


Chart 2: The ISM PMI remained below 50, while US stock-to-bond valuations rose with equity market gains. This divergence highlights a persistent disconnect between these indicators since 2022.

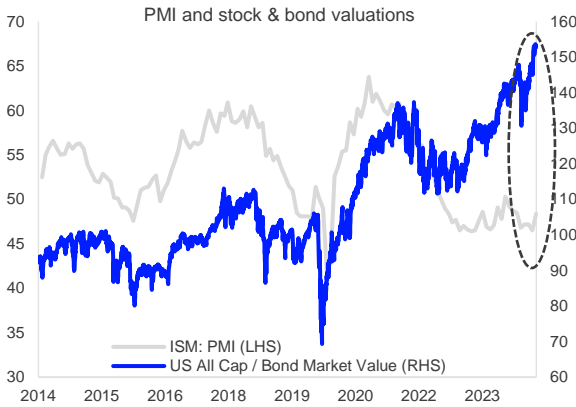


Chart 3: 12M stock-bond correlation is down to 0.72, the lowest since August 2022 but still stays above 10Y average (-0.4). Stock-bond correlations are high in inflationary regimes and can hence remain elevated.

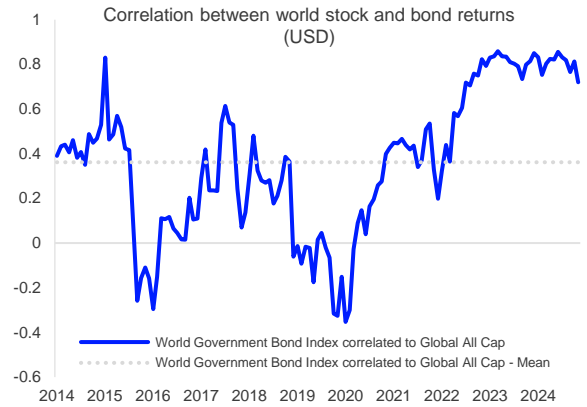


Chart 4: The US equity risk premium is lower over 3M, while HY credit spreads have tightened. Rewards for investing in US equities and HY credit are near 10Y lows, with equities offering less risk premium than HY.

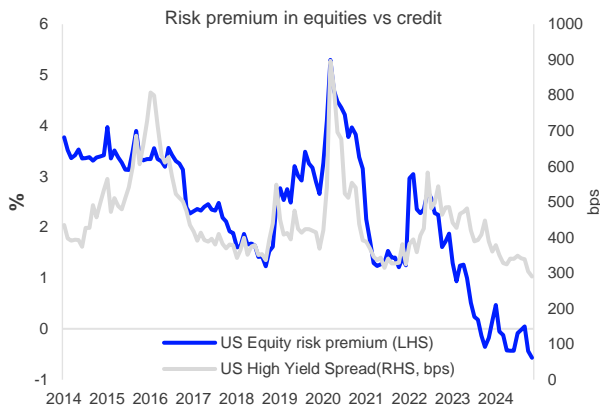
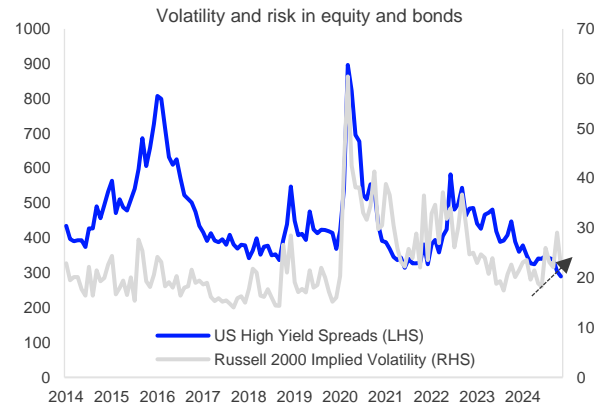


Chart 5: US HY spreads remain below their 10Y average. Small-cap implied volatility has risen since end-2023, nearing its 10-year norm. Equity implied volatility rise is historically a signal of correction risk.



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

## Cross Asset: Return and Risk (continued)

Over 1Y, the macro backdrop has supported a risk-on rally but with notable shifts; gold doing exceptionally well, small caps outperforming large caps, non-US markets doing much better vs their 3Y and 5Y annualised returns.

Over 1Y, risk appetite surged, buoyed by resilient economic growth & central banks' cautious policy pivots. As a result, risk assets have delivered strong returns over 12M, led by US small-cap stocks (Russell 2000: 36.4%), US large-cap stocks (Russell 1000: 34.4%) and gold (30.3%), Core infrastructure (22.4%), real estate (18.7%) and the FTSE 250 (18.1%). When assessing return per unit of risk, US large caps (3.6), US high yield bonds (3.2), and gold (2.7) emerged as leaders over 12M.

The divergence between 1Y and 3Y performance underscores the evolving market dynamics. One notable trend over 12M was the performance of non-US markets, as All-World ex US performance (13.7%) was significantly higher than both its 3Y (3.6%) and 5Y (6.1%) annualised returns. This was particularly driven by EM where 1Y performance (16.2%) was above 3Y (1.1%) and 5Y (4.7%) averages. Within US, small caps did better over 1Y compared to 3Y averages (Russell 2000: 5.0%).

Over the three-year horizon, gold has been the standout performer, with an annualised return of 14.3%, benefitting from its dual role as a safe-haven asset and a beneficiary of structural trends (greater central bank buying). US large-cap equities followed with a 10.9% annualised return, while the FTSE UK posted 9.0%, outperforming the global equity benchmark (All-World: 8.2%) and reversing its post Brexit underperformance. Core Infrastructure (6.4%) outperformed Real Estate (-1.1%).

The three-year picture reflects the lingering effects of the pandemic, geopolitical uncertainty, and shifting monetary policy, which dampened risk-adjusted returns across most asset classes. Over this period, return-to-risk ratios were lower, and gold was the only major asset to achieve a ratio above 1 (1.08). US large caps (0.62) and the FTSE UK (0.56) followed.

Chart 1: One-Year Risk-Return – Over 12M, the best performing asset classes were US small cap Russell 2000 (36.4%), US large cap Russell 1000 (34.4%) and gold (30.3%). Infrastructure (22.4%), real estate (18.7%), and FTSE 250 (18.1%) also did well. For return per unit of risk, the leaders were US large cap Russell 1000 (3.6), US High Yield (3.2) and gold (2.7). US small caps outperforming in H2 is a sharp reversal from recent trends.

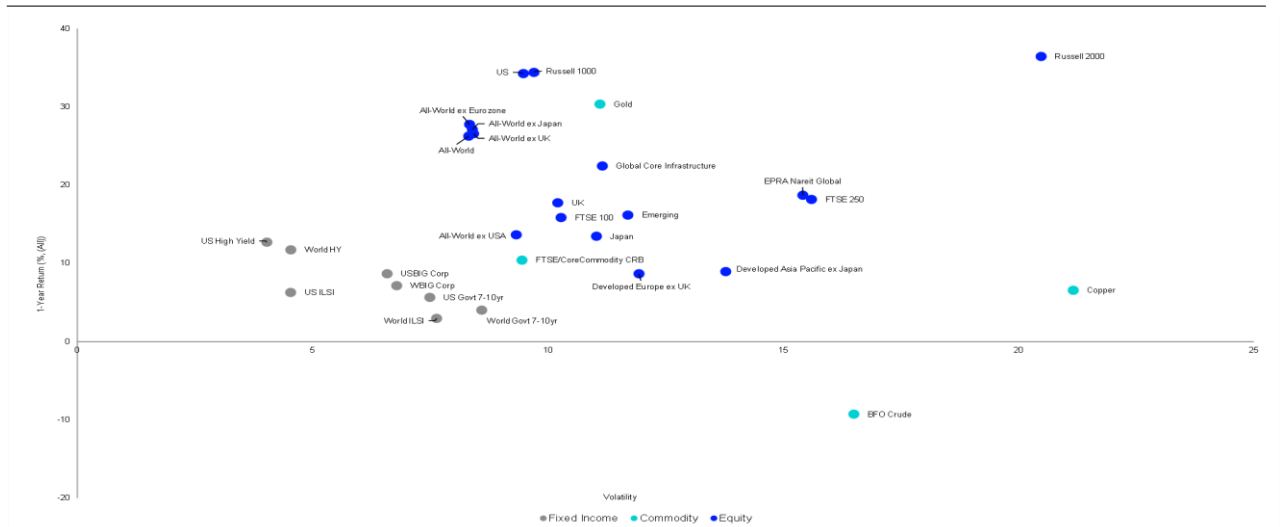
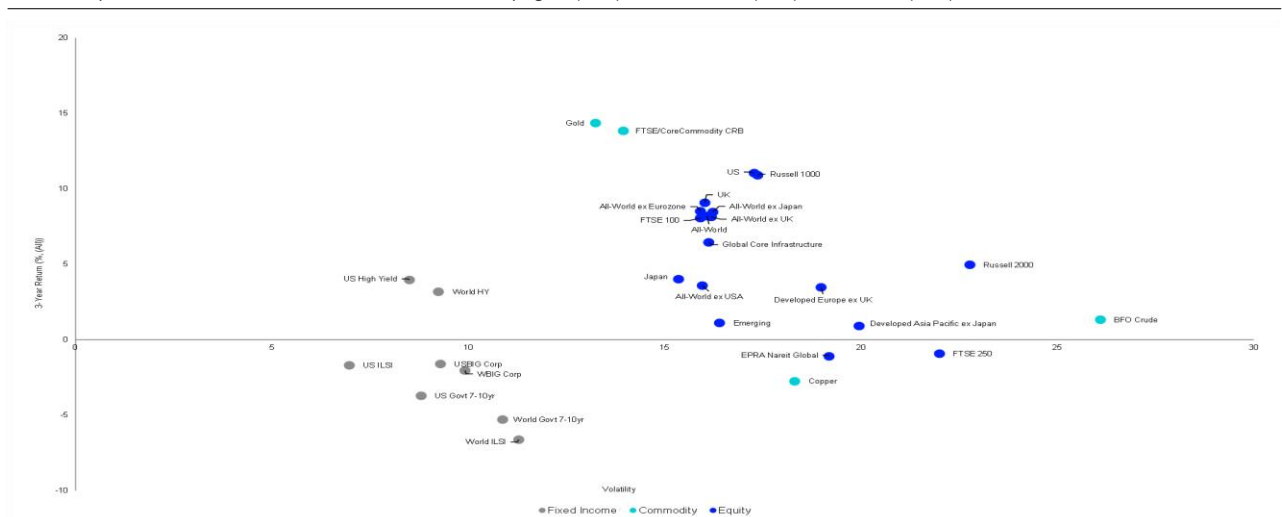


Chart 2: Three-Year Risk-Return – Over 3Y, gold had the highest return (14.3%) followed by US Large Cap Russell 1000 (10.9%). FTSE UK (9.0%) was ahead of the All-World equity (8.2%), a reversion of its post-Brexit underperformance. On return/risk, high inflation led uncertainty & volatility in the last 3Y kept return/risk below 1 for most asset classes, except gold (1.08). Russell 1000 (0.62) & FTSE UK (0.56) followed Gold in terms of return/risk.



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

# Cross Asset: Return and Risk & Correlations

Over the last three years, inflation has strongly impacted equities and gold. Fixed income and listed alternatives are heterogenous in their diversification benefit to equities, underscoring the need for a more nuanced and granular approach to portfolio analysis.

Over the past three years, inflationary pressures have played a central role in global portfolios. Real rates have more impact on equities, than nominal, with the effect more pronounced in developed markets than in emerging market ones. Gold had the highest correlation (0.54) with the FTSE World Inflation-Linked Securities Index. US equity markets have been influenced more by global interest rate movements than by domestic rates alone (0.73 vs 0.66). Meanwhile, emerging market equities show a stronger correlation with global investment grade bonds than with global high yield bonds. Listed real assets, both real estate & infrastructure, remain highly correlated to equities (0.89 and 0.85). Commodities have proven effective as diversifiers across both equity and fixed-income portfolios. High yield bonds, however, exhibit a closer correlation to equities than to other fixed income assets.

Beyond their correlation dynamics, asset classes diverge markedly in total return, risk-adjusted performance, income, and earnings yield. These differences underscore the need for tailored asset allocation strategies aligned with specific investor objectives. Over the past year, equities and infrastructure delivered the highest total returns and return-to-risk ratios, while real estate excelled in income yield, topping both one and three-year periods. Commodities led on three-year performance, offering the best returns and risk-adjusted metrics (Chart 2). Year-to-date, earnings yields (E/P) have declined sharply in listed real estate and moderately in equities, while listed infrastructure has seen an increase, reflecting its resilience. Infrastructure now boasts the highest earnings yield at 5.4%, outperforming equities (4.6%) and fixed income (3.7%), underscoring its appeal in income-focused portfolios (Chart 3).

Chart 1: 3-Year Correlation – Emerging markets were less correlated with DM nominal and real rates compared to other equity regions. Commodities, both the risk-on crude oil and risk-off gold, provided diversification to both equities and fixed income. Listed real assets, both real estate & infrastructure, remain highly correlated to equities, though infrastructure is less so than equities.

	Russell 1000	Russell 2000	All-World	All-World ex USA	UK	Dev Europe ex UK	Japan	Dev Asia Pac ex Japan	Emerg	US Govt 7-10yr	US ILSI	US High Yield	USBIG Corp	World Govt 7-10yr	World ILSI	World HY	WBIG Corp	Global Core Infrastructure	EPRA Nareit Global	Gold	BFO Crude
Russell 1000	1.00	0.87	0.98	0.83	0.73	0.83	0.84	0.79	0.58	0.66	0.80	0.89	0.77	0.73	0.83	0.88	0.78	0.80	0.84	0.24	-0.01
Russell 2000	0.87	1.00	0.84	0.72	0.68	0.70	0.75	0.72	0.46	0.58	0.70	0.81	0.68	0.63	0.72	0.77	0.67	0.72	0.80	0.13	-0.02
All-World	0.98	0.84	1.00	0.93	0.83	0.91	0.90	0.88	0.71	0.73	0.84	0.90	0.84	0.81	0.89	0.92	0.86	0.85	0.89	0.34	-0.02
All-World ex USA	0.83	0.72	0.93	1.00	0.91	0.95	0.91	0.95	0.86	0.75	0.80	0.83	0.86	0.85	0.89	0.90	0.90	0.84	0.90	0.47	-0.03
UK	0.73	0.68	0.83	0.91	1.00	0.91	0.78	0.83	0.67	0.64	0.73	0.78	0.73	0.75	0.79	0.83	0.79	0.81	0.85	0.36	0.16
Dev Europe ex UK	0.83	0.70	0.91	0.95	0.91	1.00	0.86	0.86	0.69	0.71	0.77	0.84	0.82	0.81	0.86	0.90	0.87	0.81	0.87	0.40	-0.03
Japan	0.84	0.75	0.90	0.91	0.78	0.86	1.00	0.84	0.71	0.78	0.82	0.83	0.88	0.84	0.86	0.87	0.89	0.78	0.80	0.39	-0.05
Dev Asia Pacific ex Japan	0.79	0.72	0.88	0.95	0.83	0.86	0.84	1.00	0.84	0.69	0.77	0.78	0.80	0.78	0.84	0.83	0.82	0.83	0.90	0.47	-0.02
Emerging	0.58	0.46	0.71	0.86	0.67	0.69	0.71	0.84	1.00	0.62	0.60	0.56	0.73	0.71	0.71	0.65	0.75	0.64	0.70	0.51	-0.11
US Govt 7-10yr	0.66	0.58	0.73	0.75	0.64	0.71	0.78	0.69	0.62	1.00	0.86	0.72	0.95	0.95	0.87	0.74	0.92	0.64	0.74	0.46	-0.23
US ILSI	0.80	0.70	0.84	0.80	0.73	0.77	0.82	0.77	0.60	0.86	1.00	0.86	0.86	0.87	0.94	0.86	0.87	0.77	0.81	0.46	-0.08
US High Yield	0.89	0.81	0.90	0.83	0.78	0.84	0.83	0.78	0.56	0.72	0.86	1.00	0.82	0.79	0.85	0.98	0.84	0.74	0.85	0.28	0.01
USBIG Corp	0.77	0.68	0.84	0.86	0.73	0.82	0.88	0.80	0.73	0.95	0.86	0.82	1.00	0.96	0.91	0.86	0.99	0.73	0.83	0.45	-0.24
World Govt 7-10yr	0.73	0.63	0.81	0.85	0.75	0.81	0.84	0.78	0.71	0.95	0.87	0.79	0.96	1.00	0.94	0.84	0.98	0.73	0.80	0.53	-0.17
World ILSI	0.83	0.72	0.89	0.89	0.79	0.86	0.86	0.84	0.71	0.87	0.94	0.85	0.91	0.94	1.00	0.89	0.94	0.80	0.87	0.54	-0.14
World HY	0.88	0.77	0.92	0.90	0.83	0.90	0.87	0.83	0.65	0.74	0.86	0.98	0.86	0.84	0.89	1.00	0.90	0.77	0.87	0.36	-0.03
WBIG Corp	0.78	0.67	0.86	0.90	0.79	0.87	0.89	0.82	0.75	0.92	0.87	0.84	0.99	0.98	0.94	0.90	1.00	0.77	0.85	0.50	-0.19
Global Core Infrastructure	0.80	0.72	0.85	0.84	0.81	0.81	0.78	0.83	0.64	0.64	0.77	0.74	0.73	0.73	0.80	0.77	0.77	1.00	0.88	0.45	-0.02
EPRA Nareit Global	0.84	0.80	0.89	0.90	0.85	0.87	0.80	0.90	0.70	0.74	0.81	0.85	0.83	0.80	0.87	0.87	0.85	0.88	1.00	0.40	-0.05
Gold	0.24	0.13	0.34	0.47	0.36	0.40	0.39	0.47	0.51	0.46	0.46	0.28	0.45	0.53	0.54	0.36	0.50	0.45	0.40	1.00	-0.17
BFO Crude	-0.01	-0.02	-0.02	-0.03	0.16	-0.03	-0.05	-0.02	-0.11	-0.23	-0.08	0.01	-0.24	-0.17	-0.14	-0.03	-0.19	-0.02	-0.05	-0.17	1.00

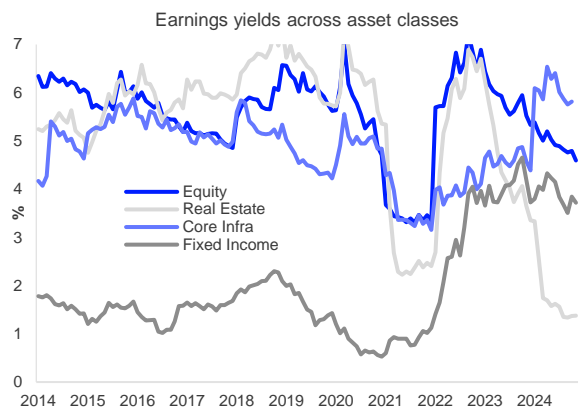
Chart 2: In the last 1Y, equities & infrastructure had the highest total return & return/risk. Real Estate had the highest income yield over both 1Y & 3Y. Commodities had the highest return and return/risk over 3Y.

	1Y Annual	Income Yield %	Return/Risk	Risk	Total Return %
Equity		1.9	3.2	8.3	26.3
Fixed Income		3.9	0.7	7.3	4.9
Commodities		--	1.1	9.4	10.4
Real Estate		4.1	1.2	15.4	18.7
Infrastructure		3.5	2.0	11.2	22.4

	3Y Annualised	Income Yield %	Return/Risk	Risk	Total Return %
Equity		2.1	0.5	16.1	8.2
Fixed Income		3.5	-0.4	9.3	-4.0
Commodities		--	1.0	13.9	13.8
Real Estate		4.1	-0.1	19.2	-1.1
Infrastructure		3.4	0.4	16.1	6.4

Chart 3: YTD, earnings yield (=E/P) is sharply down in listed real estate & (less so) in equities, while it increased only in listed infrastructure. EY is highest in infrastructure (5.4), higher than both equities (4.6) and FI (3.7).



Source: FTSE Russell/LSEG. All data as of November 30, 2024. Past performance is no guarantee of future results. This report should not be considered "research" for the purposes of MIFID II. Please see the end for important legal disclosures. Results in this report are for research / illustrative purposes and do not represent the official performance of the indices.

## Appendix 1: List of indices used in report

Name	Mnemonic/Code
World Government Bond Index 1-3yr	WGBI_1-3
World Government Bond Index 7-10yr	WGBI_7-10
World Inflation-Linked Securities Index 7-10yr	ILSI_7-10
US Treasury 1-3yr	US_TSY1-3
US Treasury 7-10yr	US_TSY7-10
Germany 1-3yr	DE_TSY1-3
Germany 7-10yr	DE_TSY7-10
World Broad Investment-Grade Bond Index Corporate	WBIG_CORP
US Broad Investment-Grade Bond Index Corporate	BIG_CORP
Euro Broad Investment-Grade Bond Index Corporate	EBIG_CORP
Emerging Markets US Dollar Broad Bond Index Corporate – Investment-Grade	EMBBI_CORP_IG
US High-Yield Market Index	HY_MKT_US
Pan-European High-Yield Bond Index - EUR	EUROPE_HYM_EUR
Emerging Markets US Dollar Broad Bond Index Corporate – High-Yield	EMBBI_CORP_HY
US Inflation-Linked Securities Index 10 yr+	ILSI_US_10+
FTSE World Broad Investment-Grade Bond Index (WorldBIG®)	WBIG
FTSE US Broad Investment-Grade Bond Index (USBIG®)	BIG
FTSE Euro Broad Investment-Grade Bond Index (EuroBIG®)	EBIG
FTSE World High-Yield Bond Index	WHYM
Russell 1000 Index	R1000
Russell 2000 Index	R2000
FTSE Global All Cap Index	GEISLMS
FTSE All-World Growth Index	AWORLDSG
FTSE All-World Value Index	AWORLDSV
Russell 1000 Growth Index	R1000G
Russell 1000 Value Index	R1000V
FTSE USA Index	WIUSA
FTSE UK Index	WIGBR
FTSE Developed Europe ex UK Index	AWDEXUKS
FTSE Japan Index	WIJPN
FTSE Developed Asia Pacific ex Japan Index	AWDPACXJ
FTSE China Index	WICHN
FTSE Emerging Index	AWALLE
FTSE All-World Index	AWORLDS
FTSE Global Core Infrastructure Index	FGCII
FTSE EPRA Nareit Global Index	ENHG
FTSE Europe ex UK Index	AWEXUKS
FTSE Asia Pacific ex Japan Index	AWPACXJA
FTSE USA All Cap Index	LMSUSA
FTSE Developed Index	AWD
FTSE All-World ex US Index	AWXUSAS
FTSE Global Large Cap Index	GEISLC
FTSE Global Small Cap Index	GEISSC
FTSE Developed Large Cap Index	LCD
FTSE Developed Small Cap Index	SCD
FTSE Developed Growth Index	DGWLD
FTSE Developed Value Index	DVWLD
Refinitiv Commodity Index	RTCI
Refinitiv Core/Commodity CRB® Index Total Return	TRCCRBTR
Russell 2000 Implied Volatility Index	RVX
Brazilian GBI	BR_TSY
Mexican GBI	MX_TSY
Chilean GBI	CL_TSY
Indonesian GBI	ID_TSY
India GBI	IN_TSY
Chinese GBI	CN_TSY
EMGBI	EMGBI
US GBI	US_TSY
German GBI	DE_TSY
Japanese GBI	JP_TSY
FTSE World Government Bond Index	WGBI
World Uncertainty GDP Weighted Average	WDEPUUNGR
World Inflation-Linked Securities Index	ILSI
FTSE Bitcoin Index	FTBTC

---

## Appendix 2: Methodology Reference Guide

### Report calculations

- Unless noted otherwise, all performance calculations are in US dollar.
- Methodology for calculation of Upgrade-Downgrade ratio in credit markets: Fallen angels, corporate bonds downgraded from IG – a minimum rating of BBB- with S&P, Moody's or Fitch - to a HY credit rating of BB+ or below, are not included in the calculation of downgrade ratio, as they were not included in the high yield index.
- All credit spreads are with reference to the US 7-10 year Treasury bond index.
- Risk premium in equity is calculated as the earnings yield (E/P) of the All-World Developed index minus the yield of US Treasury 7-10 years. Risk premiums in high yield are their credit spreads relative to yield of US Treasury 7-10 years.
- Equity volatility is measured as rolling 24-month annualized volatility using monthly observations.
- Correlation matrix among asset classes is calculated using monthly returns over the time frame of analysis mentioned in the chart heading.
- Earnings yield is calculated as the inverse of PE ratios for the indices in these four asset classes - equity, fixed income, listed real estate, listed infrastructure.
- In currencies, Euro and GBP are quoted as number of US dollars per unit of foreign currency. Yen and CAD are quoted as number of units of foreign currency per unit of US dollar.
- Currency exporters and importers classification is based on the commodity exposure in the macroeconomy of the country.
- Fund flow to geographic markets based on domicile of fund as defined by Lipper. Rebased cumulative fund flow commencing at the beginning of the 12 month period (sign inverted in rebasing if initial month flow is negative). Rebasing figure is sensitive to the first month's flow. Figures subject to revision.
- Page 15 uses the Refinitiv/CC CRB Total Return index (US \$). Page 9 used the RFV Commodities Price index. The return for commodities is very dependent on the index used, given the huge return dispersion among different commodities and their differing weights in the indices
- For sustainable investment flows, the data used is the same as the Responsible Investment definition used by Lipper, a tighter definition than just the Ethical restriction.
- For US bond type flow data, the data used are the monthly bond fund flows in US domiciled USD bond funds, as defined by Lipper Global Fund Classification.
- In comparing equity dividend yields with sovereign 7-10 year yields, we are using the closest approximation. For Developed Europe ex UK that includes FTSE EMU Government Bond Index with 9 countries (DMs within Euro Area, namely Austria, Belgium, Finland, France, Germany, Ireland, Italy, Netherlands and Spain) and Developed APAC ex Japan is proxied by FTSE Asia Pacific Government Bond Index which apart from the 5 developed markets (Australia, NZ, Hong Kong, Korea and Singapore) also includes 5 EMs (China, Indonesia, Malaysia, Philippines, and Thailand).
- All data is as of October 31, 2024, with the exception of the most recent FOMC projections that was released September 18, 2024.



## ABOUT FTSE RUSSELL

FTSE Russell is a leading global provider of index and benchmark solutions, spanning diverse asset classes and investment objectives. As a trusted investment partner we help investors make better-informed investment decisions, manage risk, and seize opportunities.

Market participants look to us for our expertise in developing and managing global index solutions across asset classes. Asset owners, asset managers, ETF providers and investment banks choose FTSE Russell solutions to benchmark their investment performance and create investment funds, ETFs, structured products, and index-based derivatives. Our clients use our solutions for asset allocation, investment strategy analysis and risk management, and value us for our robust governance process and operational integrity.

For over 35 years we have been at the forefront of driving change for the investor, always innovating to shape the next generation of benchmarks and investment solutions that open up new opportunities for the global investment community.

## CONTACT US

To learn more, visit [lseg.com/en/ftse-russell](http://lseg.com/en/ftse-russell); email [info@ftserussell.com](mailto:info@ftserussell.com); or call your regional Client Service team office:

**EMEA** +44 (0) 20 7866 1810  
**North America** +1 877 503 6437

**Asia-Pacific**  
**Hong Kong** +852 2164 3333  
**Tokyo** +81 3 6441 1430  
**Sydney** +61 (0) 2 7228 5659

© 2024 London Stock Exchange Group plc and its applicable group undertakings (the "LSE Group"). The LSE Group includes (1) FTSE International Limited ("FTSE"), (2) Frank Russell Company ("Russell"), (3) FTSE Global Debt Capital Markets Inc. and FTSE Global Debt Capital Markets Limited (together, "FTSE Canada"), (4) FTSE Fixed Income Europe Limited ("FTSE FI Europe"), (5) FTSE Fixed Income LLC ("FTSE FI"), (6) The Yield Book Inc ("YB") and (7) Beyond Ratings S.A.S. ("BR"). All rights re-served.

FTSE Russell® is a trading name of FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB and BR. "FTSE®", "Russell®", "FTSE Russell®", "FTSE4Good®", "ICB®", "The Yield Book®", "Beyond Ratings®" and all other trademarks and service marks used herein (whether registered or unregistered) are trademarks and/or service marks owned or licensed by the applicable member of the LSE Group or their respective licensors and are owned, or used under licence, by FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB or BR. FTSE International Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator. Cboe® is a registered trademark of Chicago Board Options Exchange, Incorporated (Cboe). RVX is a service mark of Cboe. This data is believed to be correct but Cboe does not guarantee the accuracy of the data and will not be held liable for consequences of its use.

All information is provided for information purposes only. All information and data contained in this publication is obtained by the LSE Group, from sources believed by it to be accurate and reliable. Because of the possibility of human and mechanical error as well as other factors, however, such information and data is provided "as is" without warranty of any kind. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the accuracy, timeliness, completeness, merchantability of any information or of results to be obtained from the use of FTSE Russell products, including but not limited to indexes, data and analytics, or the fitness or suitability of the FTSE Russell products for any particular purpose to which they might be put. Any representation of historical data accessible through FTSE Russell products is provided for information purposes only and is not a reliable indicator of future performance.

No responsibility or liability can be accepted by any member of the LSE Group nor their respective directors, officers, employees, partners or licensors for (a) any loss or damage in whole or in part caused by, resulting from, or relating to any error (negligent or otherwise) or other circumstance involved in procuring, collecting, compiling, interpreting, analysing, editing, transcribing, transmitting, communicating or delivering any such information or data or from use of this document or links to this document or (b) any direct, indirect, special, consequential or incidental damages whatsoever, even if any member of the LSE Group is advised in advance of the possibility of such damages, resulting from the use of, or inability to use, such information.

No member of the LSE Group nor their respective directors, officers, employees, partners or licensors provide investment advice and nothing in this document should be taken as constituting financial or investment advice. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any representation regarding the advisability of investing in any asset or whether such investment creates any legal or compliance risks for the investor. A decision to invest in any such asset should not be made in reliance on any information herein. Indexes cannot be invested in directly. Inclusion of an asset in an index is not a recommendation to buy, sell or hold that asset nor confirmation that any particular investor may lawfully buy, sell or hold the asset or an index containing the asset. The general information contained in this publication should not be acted upon without obtaining specific legal, tax, and investment advice from a licensed professional.

The information contained in this report should not be considered "research" as defined in recital 28 of the Commission Delegated Directive (EU) 2017/593 of 7 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council ("MiFID II") and is provided for no fee.

Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes only. Index returns shown may not represent the results of the actual trading of investable assets. Certain returns shown may reflect back-tested performance. All performance presented prior to the index inception date is back-tested performance. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. However, back-tested data may reflect the application of the index methodology with the benefit of hindsight, and the historic calculations of an index may change from month to month based on revisions to the underlying economic data used in the calculation of the index.

This document may contain forward-looking assessments. These are based upon a number of assumptions concerning future conditions that ultimately may prove to be inaccurate. Such forward-looking assessments are subject to risks and uncertainties and may be affected by various factors that may cause actual results to differ materially. No member of the LSE Group nor their licensors assume any duty to and do not undertake to update forward-looking assessments.

No part of this information may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the applicable member of the LSE Group. Use and distribution of the LSE Group data requires a licence from FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB, BR and/or their respective licensors.