Asset Allocation Insights

QUARTERLY REPORT: **SEPTEMBER 2023** FOR PROFESSIONAL INVESTORS ONLY

Goldilocks-like business cycle with downside risks, alongside structural changes in major economies, creates potential for choppy markets.

Diverging disinflation and monetary policies (US & Europe fighting inflation and China fighting deflation risks), structural changes in major economies (fiscal-led investments in the US, healthier capital markets in Japan, change in growth policies in China) are changing risks & return in the market and increasing dispersion.

Highlights

A mixed picture creates the potential for choppy markets

Slower but resilient growth, closer to normalized yet above target inflation, pause or potential end of rate hikes and a pre-GFC 3-6% range for bond yields are pointing to a Goldilocks scenario. Financial markets may be pricing in long term structural tailwinds (potential US fiscal-led manufacturing and reshoring boom, AI-led productivity growth, possibly better capital allocations from end of zero rates), but downside risks remain high for high yield and equities (particularly in the US). Fund flows show investors remain cautious, choosing the money market and bonds over equities, and rates over credit.

Fixed income (investment-grade & Euro bonds) gain appeal

Slowing growth and tightening liquidity are causing a credit risk build up in high yields (HY), while HY spreads remain tighter than at the end of 2022. With yields north of 5% and volatility less than half that of equities, investment grade (IG) has an attractive risk-adjusted profile. IG generally has more attractive valuations than HY. European bonds have performed the best in both IG and HY in the last 3M, and still have a more attractive valuation and yield/duration compared to US & EM. Reinvestment risk argues for locking into current long term yields.

All equity markets are not the same

A potential pause in rate hikes combined with still resilient growth led to a strong YTD equity rally. Structural changes further boosted US & Japanese equities (resurgence of manufacturing investment and capital market reforms respectively). Earnings growth forecasts, revisions, and market breadth have improved in the last 3M. However, valuation re-rating might have jumped ahead of any improvement in equity fundamentals, particularly in the US. Japan & the UK remain cheap. Japan and Europe are diversified across industries, while US remains heavily concentrated in Technology. Dividend yields north of 3% in Developed Europe & EM would hold appeal to income investors. Access to credit implies outperformance of large caps could continue.

Real estate may have bottomed out from post-Covid lows

Listed real estate did very well in Developed Europe ex UK and stayed resilient in US and EM in the last 3M. The performance of real estate sectors in the last 3M vs 12M indicates improving breadth.

Diversification remains key

Stock/bond correlations have continued decreasing as inflation slows. Commodities could continue to do well. Listed real estate, infrastructure and fixed income are providing healthy income yields north of ~3.5%. Falling correlations between EM & DM equities, and low equity-commodity correlation could help with diversification.

Chart 1: Economy level data shows US corporate profits have clearly rolled over, pointing to downside risks to the 2023 rally.

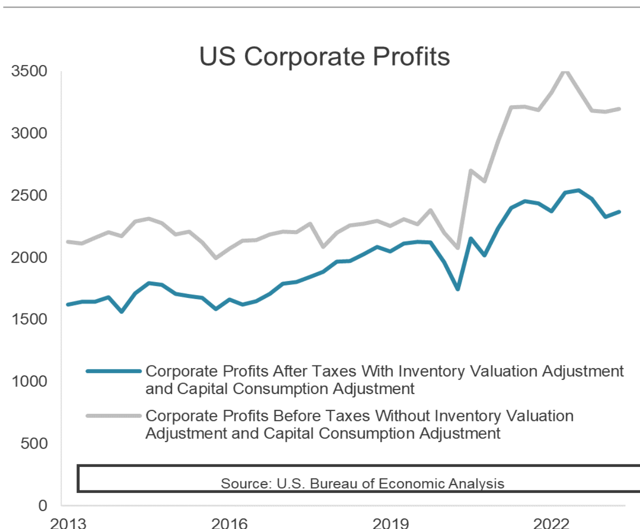
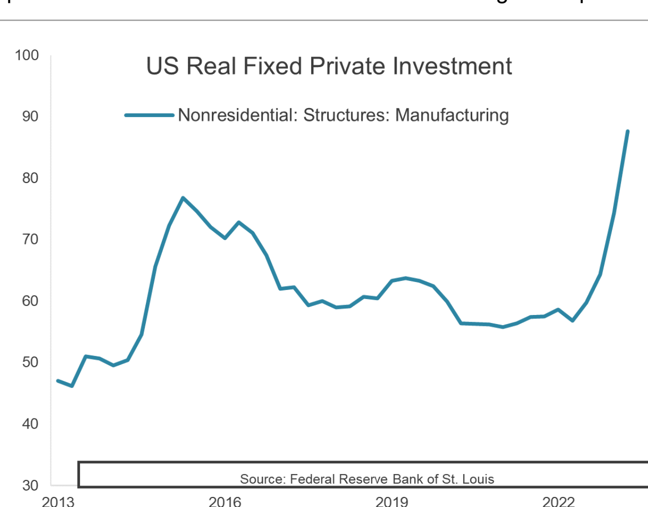


Chart 2: Steep increase in US manufacturing construction points to the a structural economic boost with long term upside.



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Financial Markets Overview

Slower but positive growth, closer to normalized inflation, and an end of rate hikes, and a pre-GFC 3-6% range for bond yields point to a Goldilocks scenario. While a **soft landing is more likely, downside risks and economic uncertainty remain high.**

Broadly resilient economic data is leading to 'higher for longer' expectations in most developed markets. This, alongside stable term premium, indicate long rates may be close to a peak, particularly in the US & Canada, where higher nominal rates have been driven by rising real yields. Inverted yield curves are leading investors to stay at the short end, but **reinvestment risk argues locking into long rates.**

Macro conditions (PMI, prices of different commodities) and historical cross-asset trends (stock-bond relative valuations, risk premium in equity versus credit) indicate (i) rates have room to fall (ii) credit spreads could increase (iii) bond yields have room to fall (iv) downside risk in equities, notably in the US. Equities are priced in for more benign conditions than credit is. **Financial markets could be pricing in long term structural tailwinds** (a potential US fiscal-led manufacturing boom & AI-led productivity growth, more productive capital allocation with the end of zero or low rates), but **downside risks remain high for risk assets like high yield and equities. Fund flows show investors remain cautious**, choosing money market and bonds over equities, and rates over credit. Bonds flows were broadly positive, while equity flows were strong only in Japan and EM.

Credit spread tightening YTD has reversed the impact of rate rises, leading to positive bond returns in the last 3M, with Europe performing the best in both investment grade (IG) and high yield (HY) bond markets. **Euro bonds have more attractive valuations and risk-adjusted return metrics** (compared to US & EM), while IG has a better valuations than HY credit in Europe & US (spread percentiles over time). Credit risk is building up more in HY than in IG (changes in rating composition of the HY & IG indices), while HY spreads remain tighter than their historical relationship to liquidity conditions might warrant. Are credit markets too calm in the face of deteriorating credit quality? Would this **argue for moving up the credit spectrum into investment grade?**

Disinflation and a potential pause, or end, to the rate rises led to a strong YTD rally in global equities, and Growth outperforming Value (in turn supporting the Technology & Growth heavy US equities). Structural changes boosted US and Japanese equities (significant manufacturing investment and capital market reforms respectively). Earnings growth forecasts and revisions have improved, particularly in developed markets, and market breadth improved in the last 3M. However, **valuation re-rating might have moved ahead of any improvement in equity fundamentals.** Valuations indicate that the **US is the most expensive market,** while Japan & the UK remain cheap. **Japan & Europe are diversified** across industries, while the US remains heavily concentrated in Technology.

Rising copper and oil prices, currency movements of commodity exporters vs importers, and relative commodity-equity performance in the last 3M reflect **market expectations that commodities should continue to do well**, as economic growth remains broadly resilient. **The US dollar remains stronger than cyclical and structural trends might indicate** (tightening yield differentials and the declining share of central bank reserves). The yen is exceptionally weak due to extreme rate differentials with most DMs. The US dollar and commodities both remaining strong is an historical anomaly, pointing to post-Covid structural changes. Performance in the last 3M and improving sector breadth indicate that **real estate might have turned the corner from post-Covid lows**; this is yet another sign that markets have priced in rate increases and bond yields are now more likely to fall than rise.

The relative **attractiveness of asset class depends on investor goals**. Equities might appeal to total-return investors. Developed Europe and EM equities (high dividend yield) would hold appeal for income-oriented equity investors. Local bond vs equity metrics make Japanese equities attractive with local investors. Listed real estate, infrastructure and fixed income provide healthy income yields north of ~3.5% or more.

Still high stock-bond correlations could continue to fall as rate hikes pause. The **importance of diversification continues as the risks & returns of asset classes vary over time.** For risk-adjusted return; in the last year, Developed Europe ex UK and Japanese equities, and World High Yield did the best, while US inflation linked bonds did poorly. Over the last three years, crude oil and large cap equities (Russell 1000 & FTSE 100) did best, while sovereign long bonds performed the worst. **Some data points on sourcing diversification**: (i) Emerging markets may be underperforming developed markets but their falling correlations point to diversification benefits; (ii) Consistently high correlations between equities and high yield credit show that stock/bond diversification benefits come primarily from investment grade bonds; (iii) Commodities provide significant diversification benefits to equities; (iv) Listed real assets have a high beta relative to listed equities, but listed infrastructure provides more diversification to equities than listed real estate.

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Macroeconomic Backdrop

Slower growth, closer to normalized inflation and rates in the pre-GFC range – are we entering a Goldilocks scenario?

Coordinated central bank tightening in the last 18 months is having an impact – inflation expectations are declining globally (Chart 3). Normalized supply chains (Chart 5) and lower commodity prices helped disinflation, while falling producer prices and deflation risks in China are expected to contribute to further decreases in inflation. Inflation is expected to normalize to pre-Covid levels and close to central bank's target levels by 2025.

US manufacturing PMI and new orders have contracted (Chart 1), a trend also seen in many large economies. However, manufacturing PMI and new orders being off their lows, and higher expansionary services PMI support the slow, but non-recessionary, 2024 growth estimates (Chart 2). Fairly easy financial conditions, despite sharp central bank rate hikes in the past 18 months is supporting financial markets (Chart 4).

Chart 1: Forward-looking indicators show new manufacturing orders are off their lows, while services continue to expand.

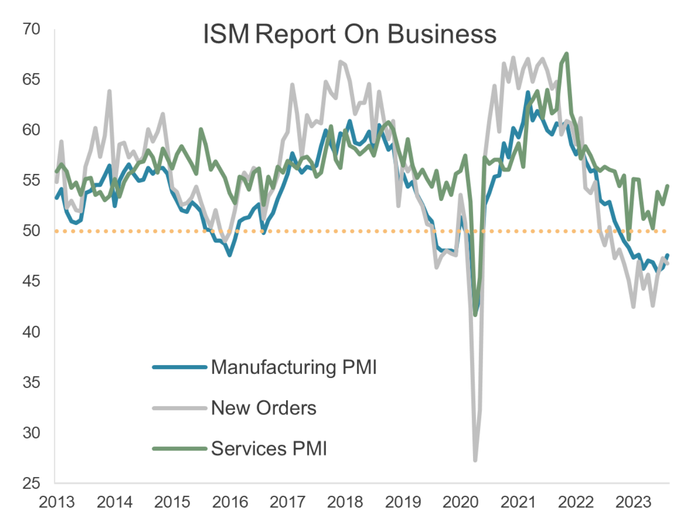


Chart 2: Recent IMF 2024 growth estimates indicate growth in key markets has slowed but forecasts no recessions.

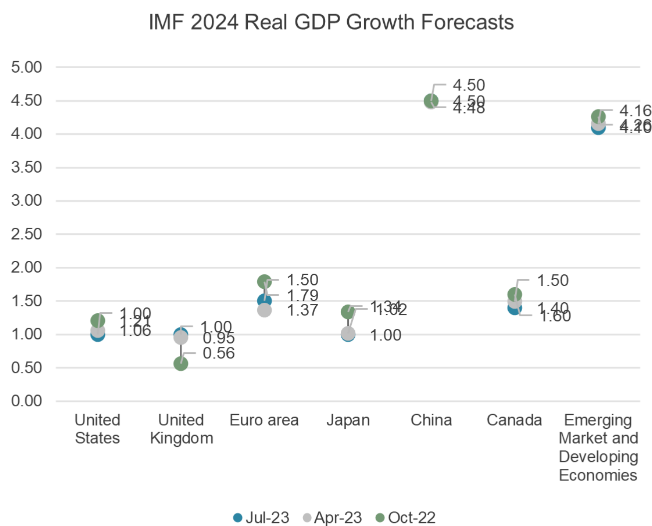


Chart 3: Global inflation is expected to drop sharply to pre-Covid levels and close to central bank 2% targets by 2025.

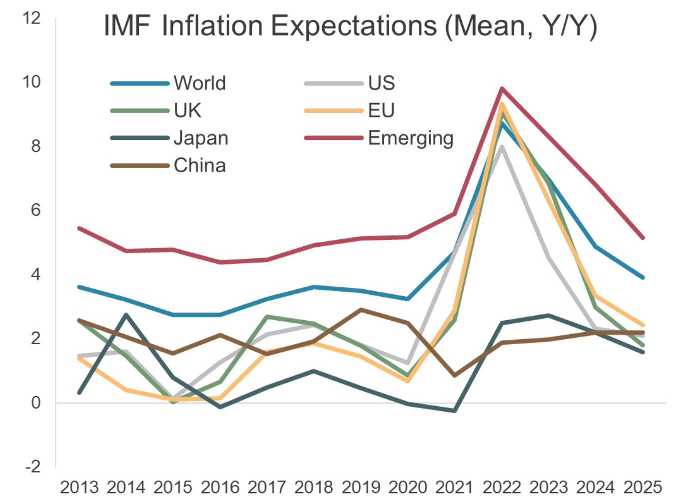


Chart 4: US financial conditions are broadly at pre-Covid levels, despite the Fed rate hikes of >500bps in the last 18 months.

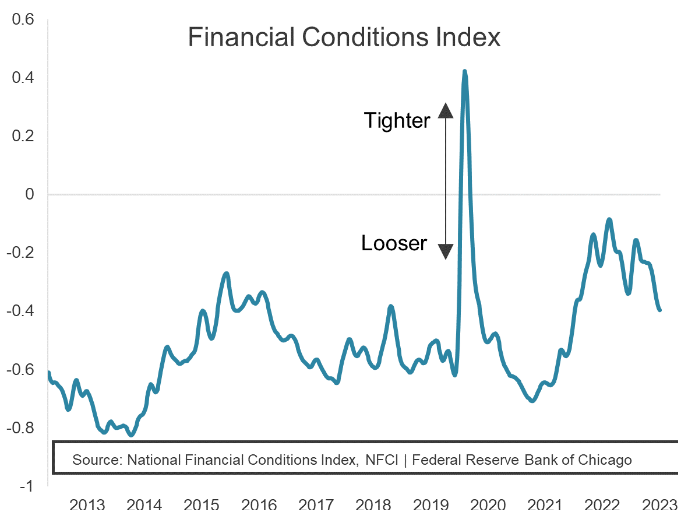
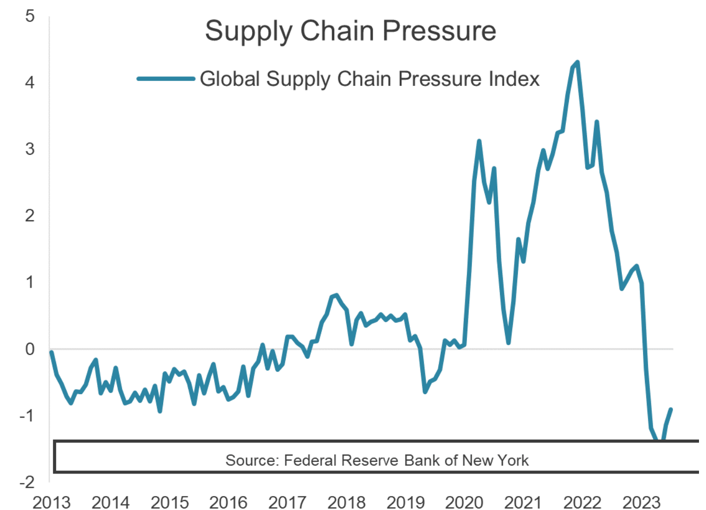


Chart 5: Global supply chain pressure (a key driver of inflation spike in 2022) has fully normalized and is at a 10-year low.



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Macroeconomic Backdrop (Continued)

Macro conditions indicate that rates have room to fall and credit spreads could increase. Equities are priced for more benign conditions than credit. Equites (long duration) could be pricing in long term structural tailwinds from a potential US manufacturing boom & AI-led new productivity growth. However, short term correction remain possible for risk assets like high yield credit and equities.

Copper/Gold ratio and oil prices usually have a positive correlation with sovereign bond yields but Charts 2 & 3 show the recent disconnect, with rates running higher than growth prospects would imply. Credit spreads are much tighter than economic conditions might warrant (Chart 5). The long-run relationship between economic growth and equities (Chart 1), and the typically strong correlation between small cap equity volatility and US high yield credit spreads (Chart 4), both indicate downside risk in equities. Together, they indicate risks in high yield and equities in the current cycle, even though a new structural uplift to growth from AI and a manufacturing boom (due to the Infrastructure Bill, CHIPS & Science Act & Inflation Reduction Act) could support higher growth and risk-asset returns over a longer horizon.

Chart 1: The historic relationship between PMI and equity returns points toward potential correction risk in equities.

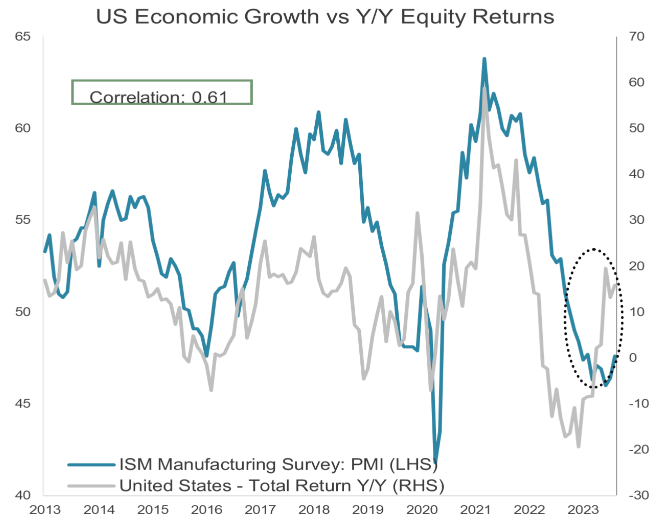


Chart 2: The disconnect between Gold/Copper ratio and sovereign yields indicate sovereign yields have room to fall.

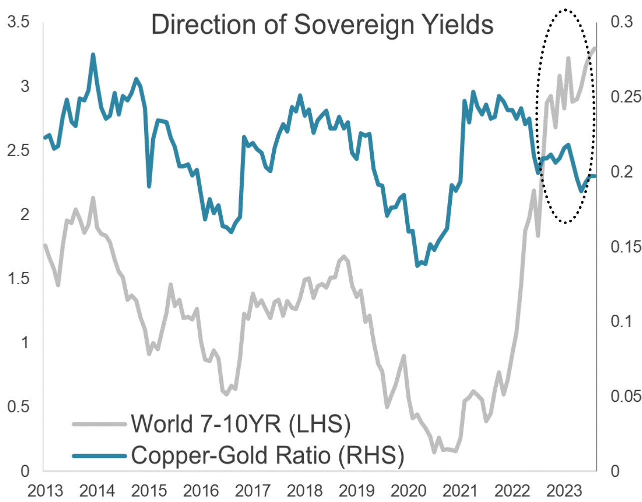


Chart 3: The run-up in US govt yields may have moved ahead of the recent increase in oil prices. Yields have room to fall.

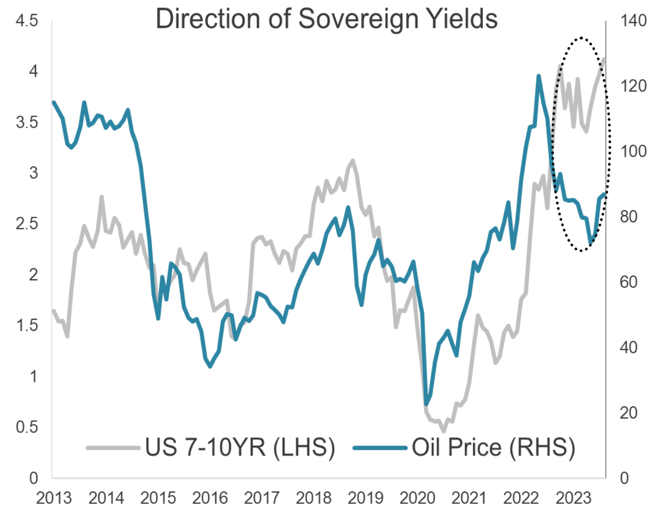


Chart 4: Equity risk (volatility) has fallen more than HY risk (spreads). Equities pricing in more stable conditions?

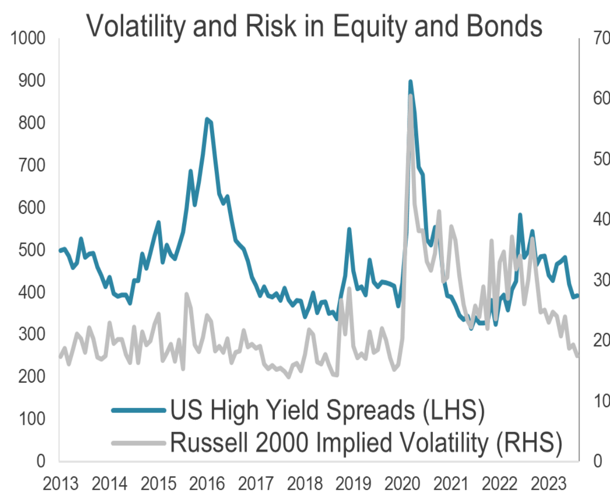
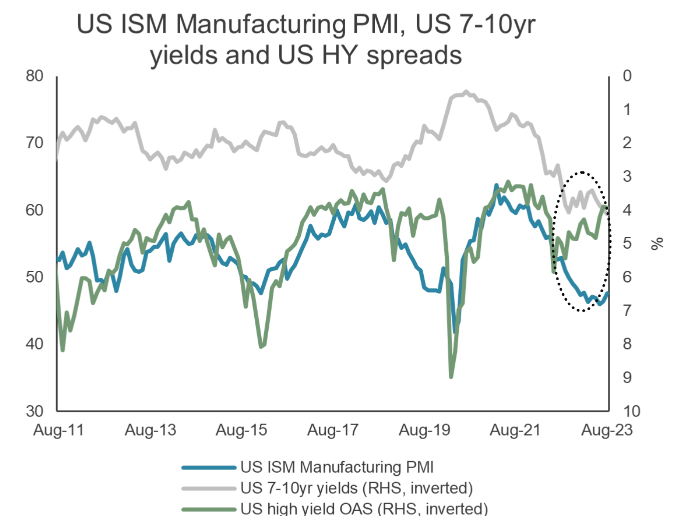


Chart 5: US economic growth expectations argue for significantly higher HY credit spreads, and slightly lower rates.



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Sovereign Yield Curves

Broadly resilient economic data is leading to 'higher (even if close to current level) for longer' policy rate signal from developed markets' central banks, despite recent disinflation. Close to peak policy rates and stable term premium indicate long rates may be close to a peak, particularly in the US and Canada, where rising nominal yields have been driven by rising real yields. Inverted yield curves are leading to investors staying at the short end, though reinvestment risk argues for long-term horizon investors to lock into long rates.

Most countries have experienced similar rising long nominal yields, driven by higher real rates in the Americas and the Eurozone, and rising inflation expectations in the UK & Japan (Chart 3). The yield curve inversions have decreased slightly in key markets (Chart 1).

The Fed recently paused, though leaving the option for more rate hikes. Futures market-implied expectations show the current 5.5% interest rate is expected to peak and the term premium has plateaued. This suggests the 10-year US Treasury yield (and many key sovereign long yields) may have peaked, and the worst of duration risk may be over. An inverted curve calls for staying at the short end, and short yields fell a little in August as investors switched to shorter durations in the face of negative carry. Reinvestment risk argues for locking into longer rates for long term investors. A 'higher for longer' regime may hurt risk assets in the short term, but could potentially lead to a more efficient capital allocation and productivity growth in the long run.

Chart 1: Key yield curves remain inverted, signaling slowing growth/recession; recent steepening seen at the long end.

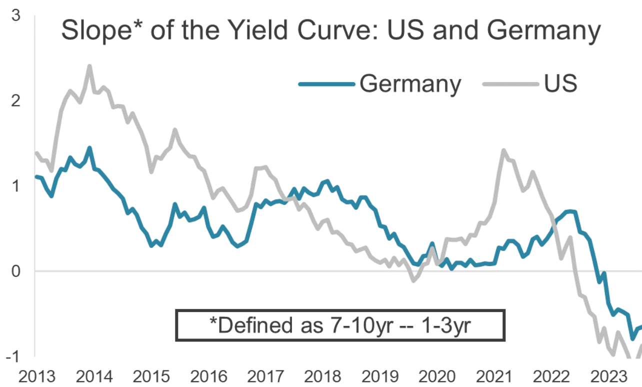


Chart 2: US rates increased across the curve in the last 3M, mainly due to falling inflation expectations and rising real rates.

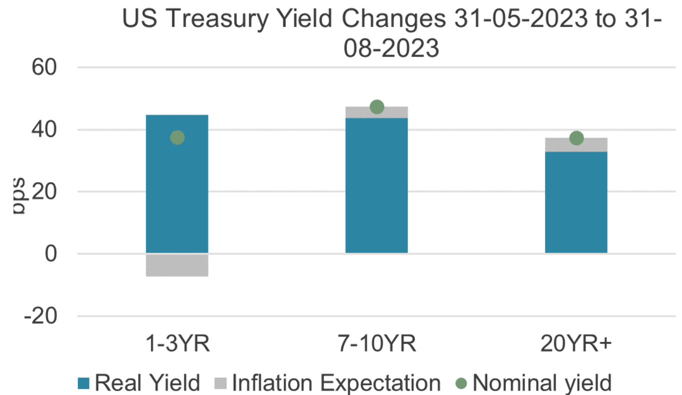


Chart 3: Long rates have increased in the last 3M, but the key driver (real yields or inflation expectations) differ across nations.

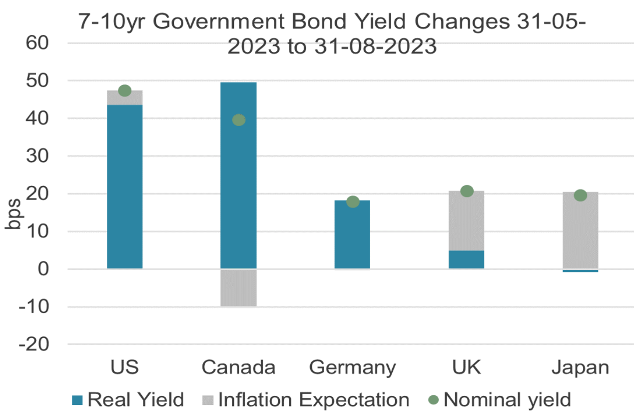


Chart 4: The Fed Dot Plot (as of September 2023) indicates policy rates are expected to peak in late 2023.

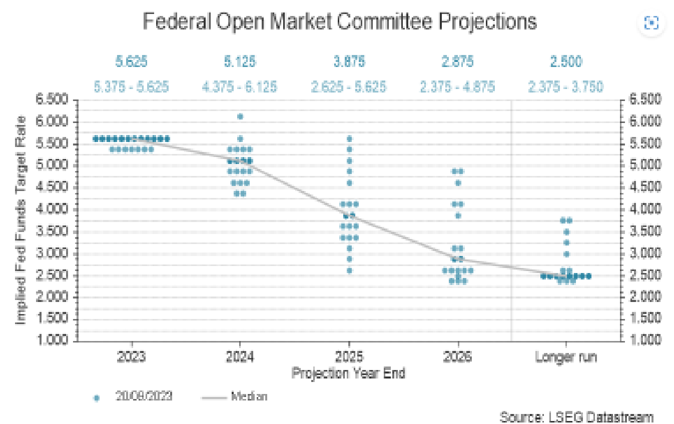


Chart 5: The US 10-year term premium has plateaued, a key sign that long rates may be at/near a peak at current ~4.3%.

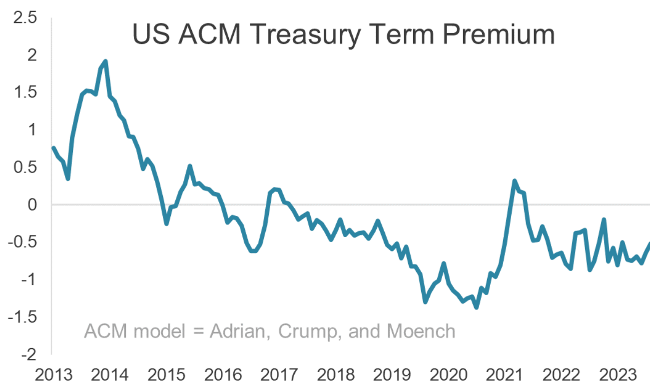
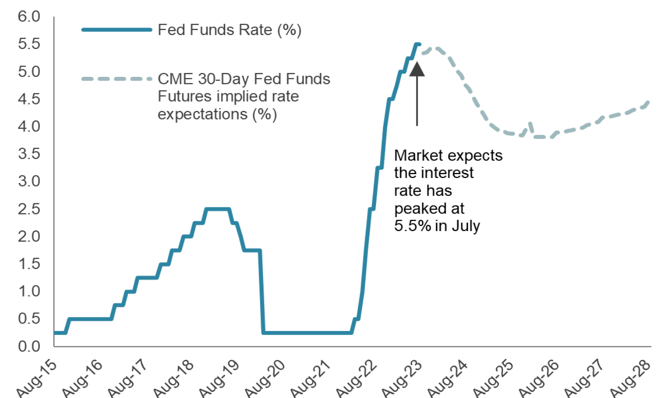


Chart 6: CME futures indicate expectations that US policy rates may have peaked at 5.5% in mid 2023, with easing in 2024.



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Credit

Credit spreads have tightened to levels lower than in Q4 2022. This led to positive bond returns in the last 3M, with Europe performing best in both IG and HY. Are HY markets too calm in the face of deteriorating credit quality?

The credit spread widening post the US banking crisis in March was most pronounced in the riskiest markets, i.e., EM HY. However, spreads have reversed since and are lower than at the end of 2022. Within IG corporates, EM credit spreads finished August only around 15bps higher than Euro spreads.

Credit spread tightening in the last 3M was stronger than the rate increase, leading to positive returns in most credit markets. European bonds outperformed their US and EM counterparts in both IG and HY. Credit quality in HY indices have deteriorated (Chart 1), but the credit composition (share of highest rated BB) in Europe remains better than in the US. The credit quality of the US IG index has improved YTD (38.7% in A & 52.6% in BBB rating in August vs 37.0% & 54.2% respectively end-2022).

NY Fed's Corporate Bond Market Distress (CBMD) remains in the lowest quartile. Distress is lower for HY than IG. This seems odd given the deteriorating credit quality of the US HY index.

Chart 1: The credit profile of High Yield Indices has deteriorated in the last few years, both in the US and Europe.

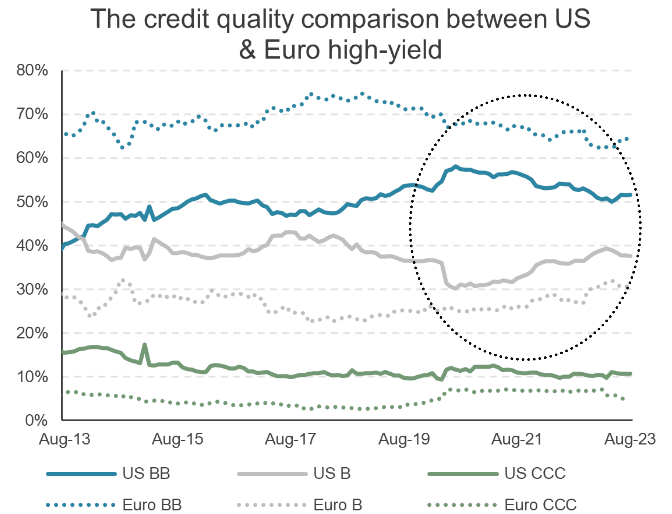


Chart 2: IG and HY spreads have narrowed in the last 3M, significantly so in HY, and particularly in EM HY.

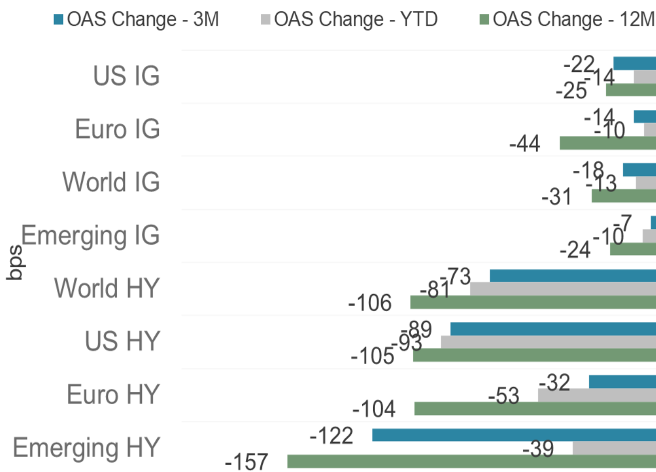


Chart 3: Bond returns were mostly positive in the last 3M & YTD (spread compression negated rate rise impact). Europe did best.

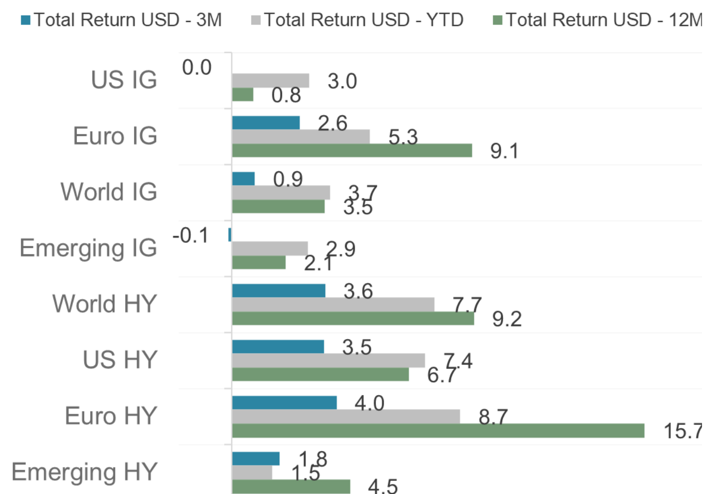


Chart 4: IG corporate spreads widened slightly during the banking crisis, but have tightened since and remain lower than in Q4.

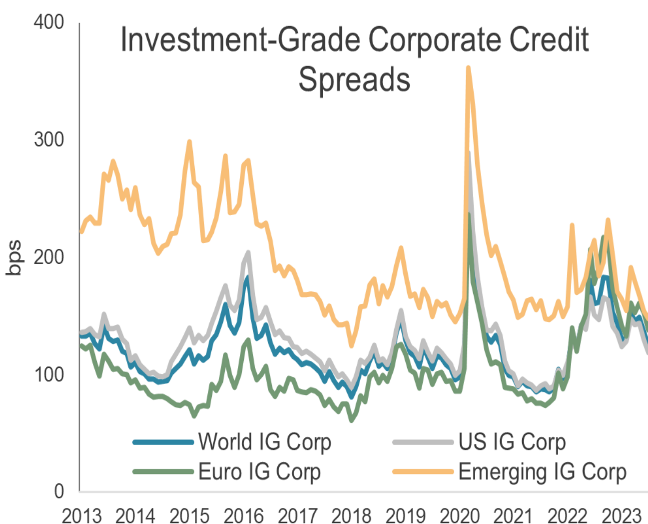
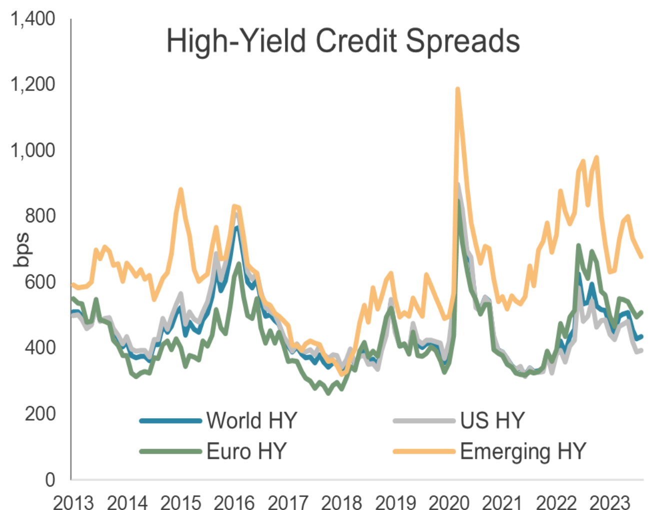


Chart 5: After a spike following the banking crisis, HY spreads have tightened significantly and remain lower than in end-2022.



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Credit (Continued)

Euro bonds have a more attractive valuation & risk-adjusted return versus US and EM. IG generally has better valuations than HY. Credit risk is building up in HY, while HY credit spreads remain tighter than conditions might warrant.

Valuation spread percentiles indicate Euro bonds have the lowest valuation in both IG & HY, and IG has a lower valuation than HY in the US and Europe. EM IG bonds are particularly expensive (Chart 2). Historically cheaper valuations lead to better returns (Chart 1). These could imply more opportunities in European bonds, and a reason for their recent outperformance (Page 6, Chart 3). Duration risk-adjusted yields are higher for Euro and EM bonds than for US bonds (Chart 3), and including credit risk, Euro bonds currently offer highest risk-adjusted returns.

The upgrade-downgrade ratio deteriorated in the last two months (Chart 4). Together with the deteriorating quality in HY indices (Page 6, Chart 1), this points to credit risk building up in the speculative grade, while HY spreads remain tighter than what liquidity conditions proxied by bank lending standards would imply (Chart 5). 6-12 month default risk (CDS implied probability) remains low with still ample cash on balance sheets and a maturity wall more than a year away.

Chart 1: US HY 1Y forward return by spread quintiles (since 2001). Higher spreads (lower valuation) led to better returns.

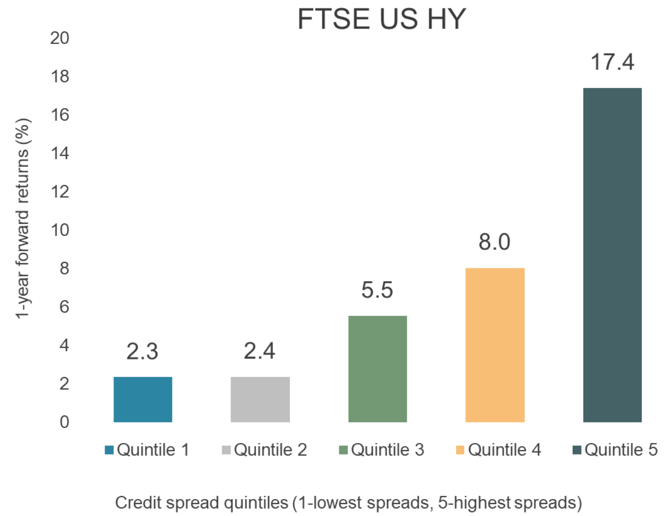


Chart 2: Euro bonds have the most attractive valuation in both IG & HY. IG (vs history) has a lower valuation vs HY in US & Europe.

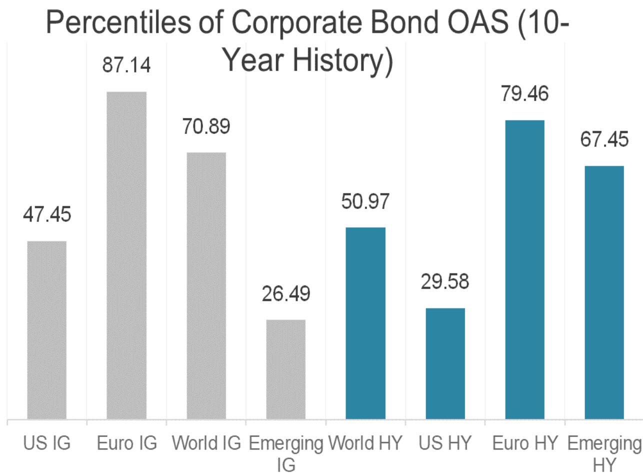


Chart 3: Return per unit of duration risk is highest in emerging markets (for both IG & HY) and higher in Europe than the US.

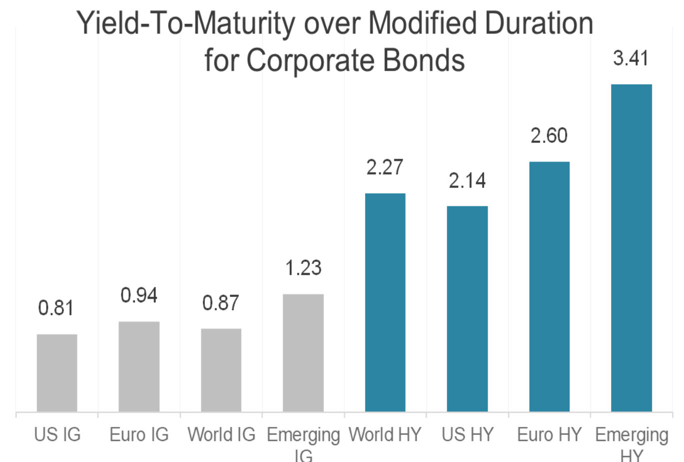


Chart 4: Upgrade-downgrade ratio has deteriorated significantly in the last 2M.

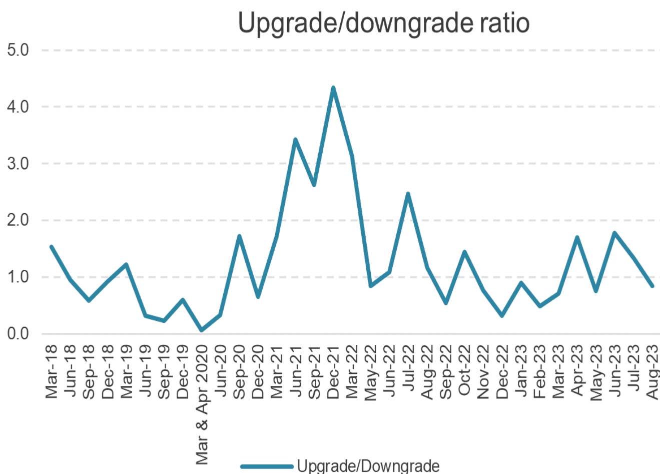
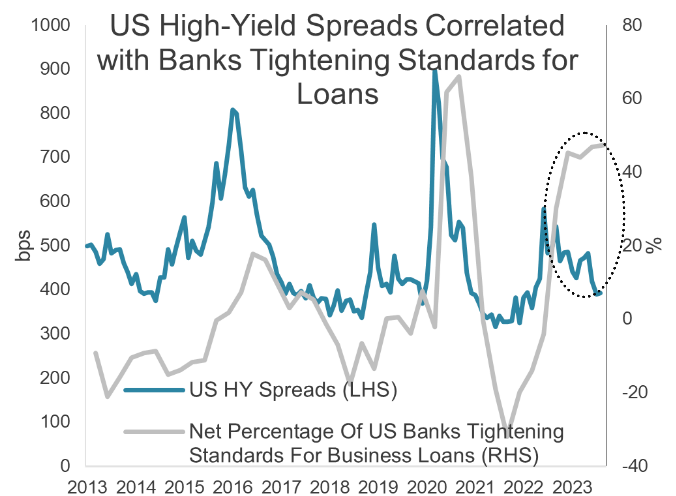


Chart 5: US HY credit spreads are far lower than the tighter lending standards would argue for.



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Equities

Disinflation and signs of being close to the end of the hiking cycle led to a strong YTD rally in global equities, and Growth outperforming Value. Structural drivers provided boost to US and Japanese equities.

Signs that long yields have peaked, and the promise of AI led to a strong growth rally YTD (Chart 3) and supported tech-heavy US equity. Increased corporate investments post the Infrastructure Act, Inflation Reduction Act and the CHIPS Act also helped US equities. Japanese equities made a strong comeback after decades of stagnation, with structural reforms in the last decade finally paying off (Chart 1). Japan also had the lowest volatility (among the seven major markets), indicating the most attractive return/risk.

Emerging markets (EM) significantly lagged the All-World and developed markets (DM), driven mainly by poor performance in China, but had (surprisingly) low volatility.

In other notable shifts, large caps reclaimed the edge over small caps, particularly in DM (Chart 5), as the fallout from the banking crisis showed the importance of resilient balance sheets and cash positions. Dynamic (cyclical) industries have been doing better than defensives YTD (Chart 3), though more modestly than the outperformance of Growth over Value.

Chart 1: In the last 3M & YTD, US equities have performed the best, followed by Dev Europe ex UK (2022's best performers).

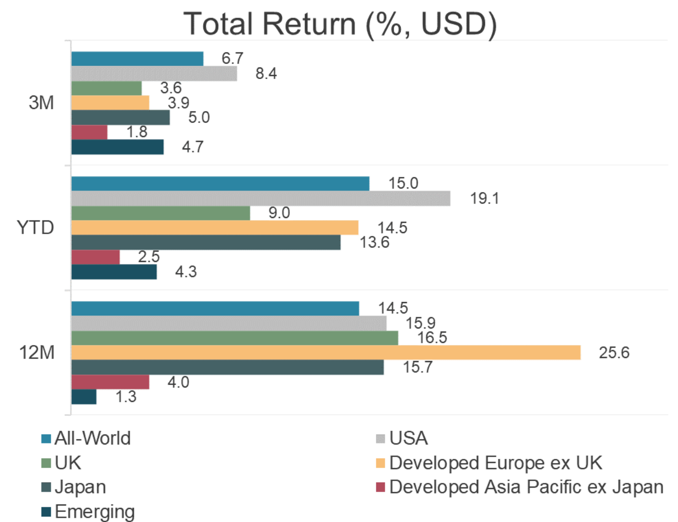


Chart 2:Volatility is highest in Developed APAC ex Japan and Developed Europe ex UK, lowest in Japan, followed by EM.

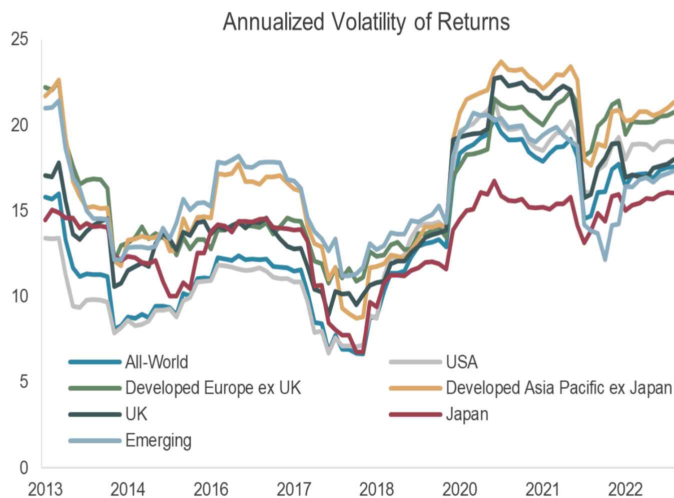


Chart 3: YTD, Growth has clearly outperformed Value, while Cyclical industries have outperformed Defensives marginally.

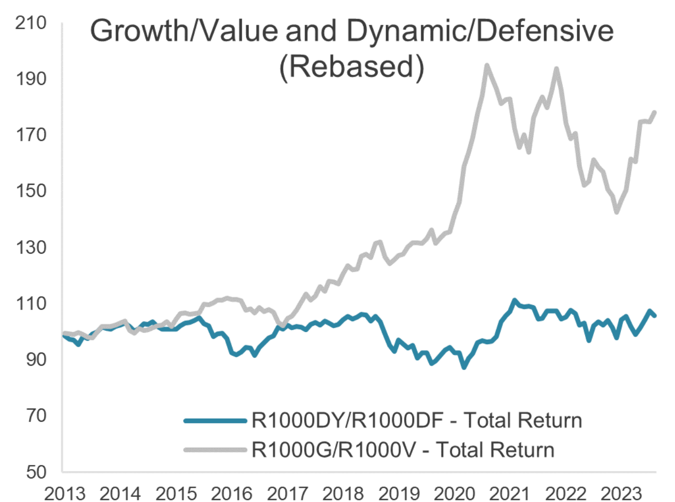


Chart 4: Developed markets continue their long term trend of outperforming emerging markets.

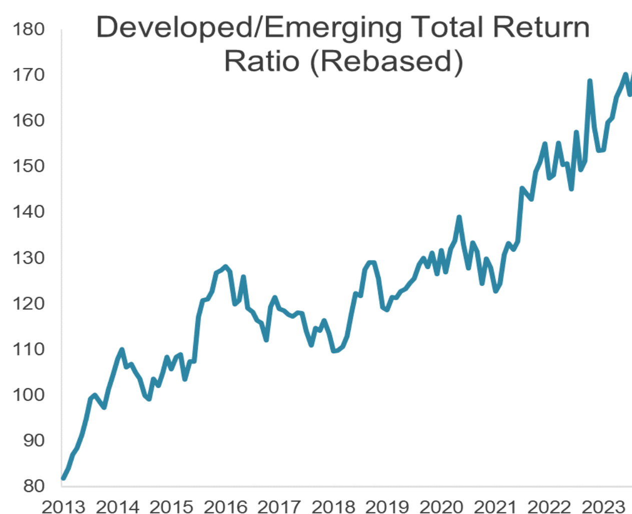
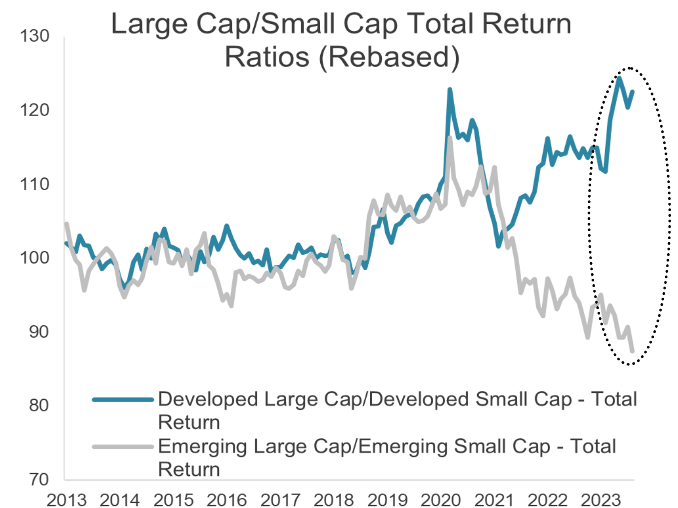


Chart 5: The rotation into large caps, especially after the US banking crisis in March happened only in developed markets.



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Equities (continued)

Earnings growth forecasts and revisions have improved, notably in developed markets, and market breadth improved in the last 3M. Valuation metrics indicate that the US is the most expensive, while Japan and UK continue to remain cheap. Japan and Europe remained diversified across industries, while US remains heavily concentrated in Technology.

The equity market rally broadened in the last three months, and the dispersion in industry returns narrowed. (The spreads between the three month return of the best and worst-performing industries was 13.4% end-August vs almost 30% end-May for the All-World index.) The dispersion in industry returns was highest in Japan and lowest in EM (Chart 1). Developed Europe and Japan remain more diversified across industries, while the US remains highly concentrated in Technology (Chart 2).

The upgraded GDP forecasts for many countries led to improving earnings growth and forecast revisions, particularly in the DMs, where inflation finally started coming off extreme highs (Chart 3 & 4). Valuations expanded in 2023, notably in the US, where they breached long-term mean levels. Other markets remain cheap relative to the US and are still at a discount to 10-year averages, especially in Japan and the UK (Charts 5 & 6).

Chart 1: Energy had the highest return in most markets in the last 3M. Dispersion in industry returns was highest in Japan.

3M Regional Industry Returns (TR, USD)

	All-World	US	UK	Dev Eur ex UK	Japan	Dev AP ex JP	Emerging
Index Return	6.7	8.4	3.6	3.9	5.0	1.8	4.7
Basic Materials	6.4	11.4	5.1	5.9	7.2	6.3	1.0
Consumer Disc.	8.8	11.0	1.7	2.5	6.2	2.1	10.7
Consumer Staples	1.5	1.2	3.6	0.8	3.5	-1.2	2.4
Energy	13.1	15.0	11.9	9.0	22.1	6.9	10.9
Financials	7.7	9.5	0.3	11.9	11.7	5.0	3.8
Health Care	3.8	5.1	-1.9	4.6	-3.8	-7.8	1.2
Industrials	7.8	11.3	10.1	1.1	5.0	3.2	4.2
Real Estate	3.8	3.7	0.7	17.3	3.2	-0.7	5.5
Technology	7.4	8.6	8.8	-1.1	1.4	1.1	4.1
Telecoms	3.0	9.7	-4.0	-2.5	4.6	-6.3	0.6
Utilities	-0.3	-1.9	-2.8	1.6	12.7	0.9	3.2

Chart 2: Industry weights lead to different macro sensitivities. The US is concentrated, Europe & Japan are more diversified.

Regional Industry Exposures (%)

	All-World	US	UK	Dev Eur ex UK	Japan	Dev AP ex JP	Emerging
Basic Materials	3.7	1.8	7.8	4.5	5.1	13.3	6.9
Consumer Disc.	14.2	14.5	11.0	13.6	22.7	8.8	13.3
Consumer Staples	6.1	5.2	17.1	9.0	6.4	3.7	6.4
Energy	5.0	4.5	12.8	4.2	0.8	3.6	6.5
Financials	13.8	9.9	17.7	17.1	11.1	26.9	22.2
Health Care	11.5	12.7	12.9	16.8	8.4	6.0	3.7
Industrials	12.9	11.8	13.4	17.3	26.0	10.2	8.2
Real Estate	2.4	2.5	1.4	1.0	3.5	7.0	2.4
Technology	24.3	32.4	0.8	9.3	10.7	6.3	22.9
Telecoms	3.1	2.4	1.3	3.0	4.0	11.3	4.1
Utilities	2.9	2.6	3.9	4.1	1.5	2.9	3.3

Chart 3: Earnings growth forecasts (%) have improved across major DMs, but remain almost flat in EM.

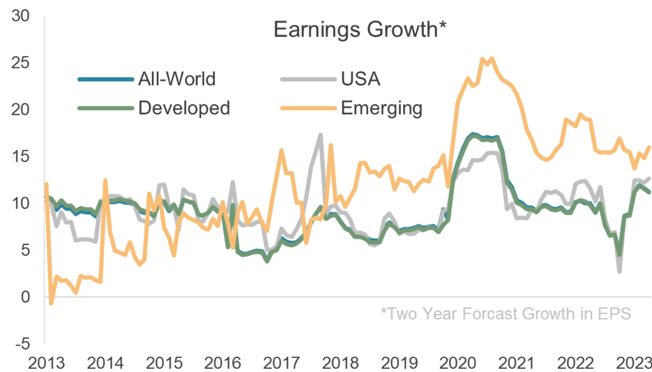


Chart 4: US earnings revisions (12M forward EPS estimates) have jumped back to neutral on improved earnings estimates.

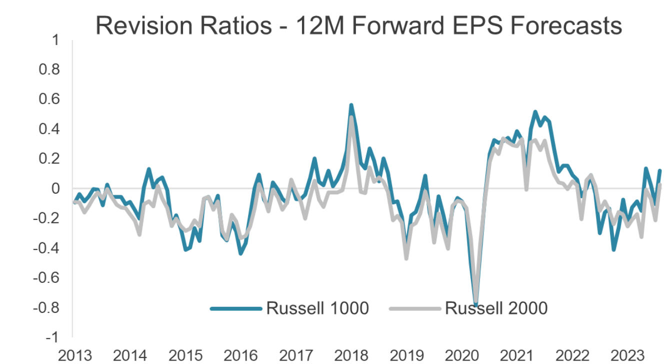


Chart 5: US valuations have rebounded much more than developed peers. EM valuation gap to DM has increased.

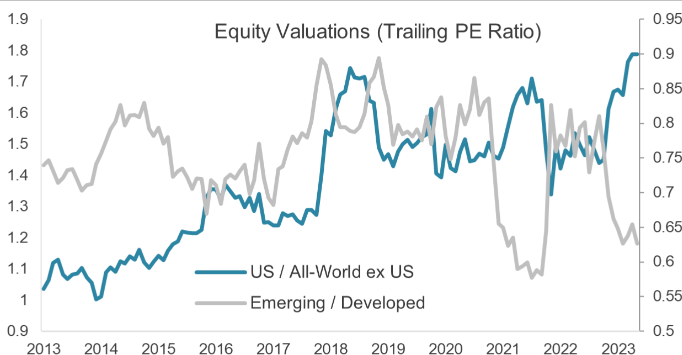
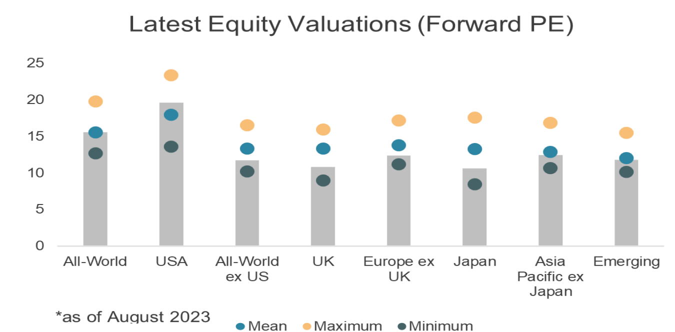


Chart 6: US valuations are the highest & above LT mean. Other regions trade at a discount to LT mean (notably Japan & the UK).



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Commodities

Rising copper prices, outperformance of commodity exporters currencies relative to importers, an upward shift in the oil futures curve in the last 3M, all reflect investors' expectations of commodities continuing to do well.

Commodity prices with a positive beta to global growth (oil, and copper) have increased with stronger than expected economic growth. In the last 3M, currencies of commodity exporters (grey bars) had an average return of 2.2% vs USD, much higher than commodity importers' -2.7% (blue bars), indicating that currency markets expect commodity prices to remain high (Chart 5). Within commodity exporters, Australia & New Zealand had the weakest currencies, given their large reliance on China.

The oil futures curve has shifted up, now expecting oil to be ~$75/barrel in late 2025 & higher than the pre-Covid ~$60/ barrel. Post Covid, commodities have outperformed equities, and trends in commodity vs equities has historically continued for up to 10 years (Chart 4). The historically negative correlation between commodity prices and the US dollar has broken down since 2021 (Chart 3), which could reflect that a larger share of commodities is being traded in currencies other than the dollar.

Chart 1:Oil futures curve has moved up over 3M, but remains in backwardation to be in 2025 ~15/barrel more than pre-Covid.

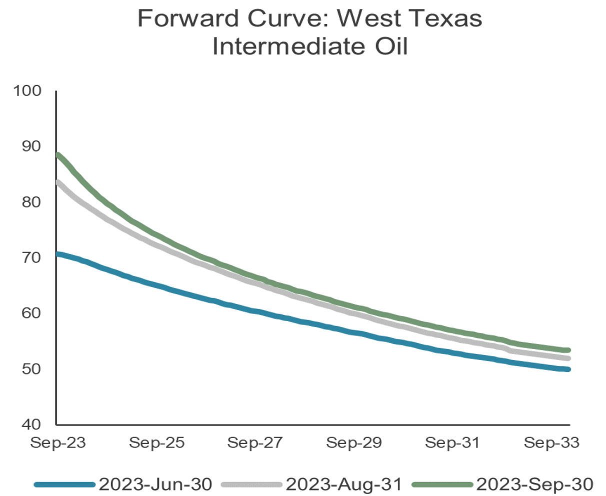


Chart 2: Commodity prices have increased in the last 3M, led by oil due to supply reduction. Copper (a growth indicator) rose.

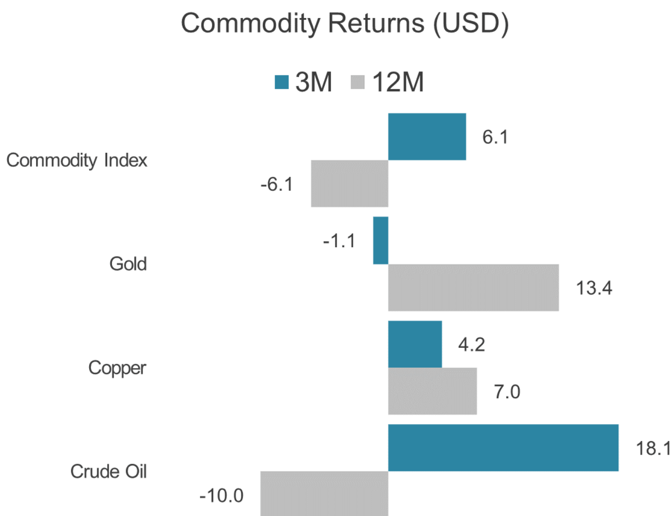


Chart 3: The typical negative correlation between commodities and the dollar has broken down since the Russian/Ukraine war.

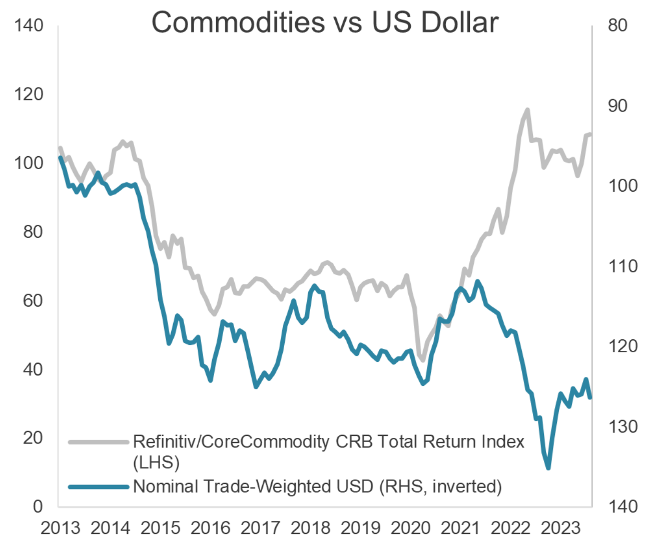


Chart 4: Commodities' returns vs equities have recovered from the long term trough in 2020. New cycle for commodities?

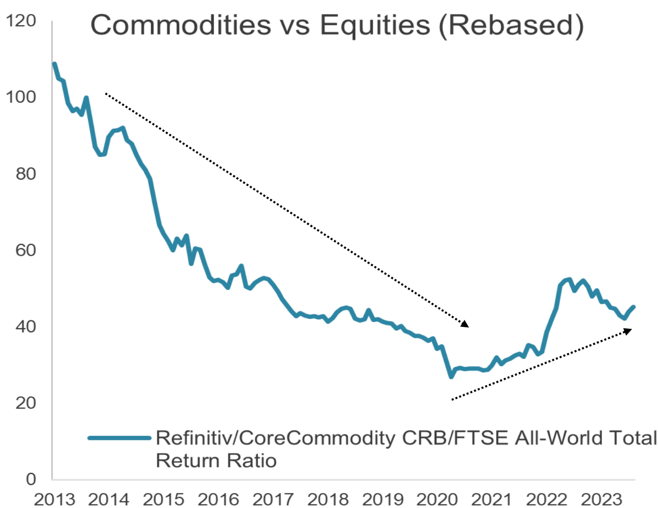
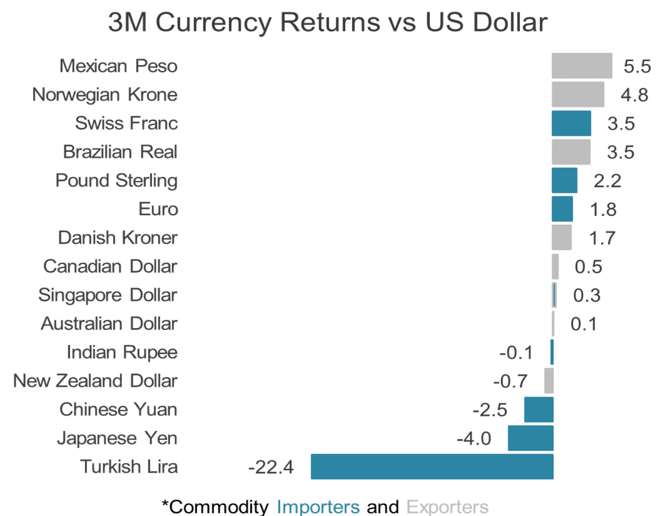


Chart 5: Currencies of commodity exporters outperformed vs importers in last 3M: investor believe in rising commodity prices.



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Real Assets: Listed Real Estate and Infrastructure

Performance in the last 3M and sector breadth indicate that real estate might have turned the corner from its post-Covid weakness. Infrastructure did best in fast growing EM.

Real estate did well in Developed Europe ex UK, even outperforming equities (Chart 2 & 4), and had positive returns in the US and EM in the last 3M, showing a sharp turnaround compared to the 12M performance. 10 of the 12 sectors in real estate had positive returns in the last 3M, while only two did so in the last 12M, indicating that the improvement in listed real estate is broad based.

Infrastructure continues to do best in emerging markets, reflecting the faster economic growth in EM relative to that in DMs.

Chart 1: The performance of real estate sectors in 3M vs 12M indicates improving breadth. Has real estate turned the corner?

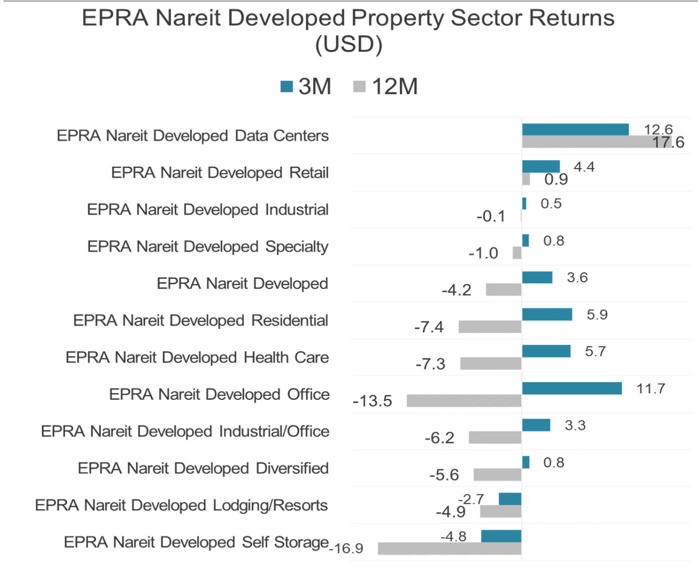


Chart 2: Listed real estate did very well in Developed Europe ex UK, and stayed resilient in the US and EM in the last 3M.

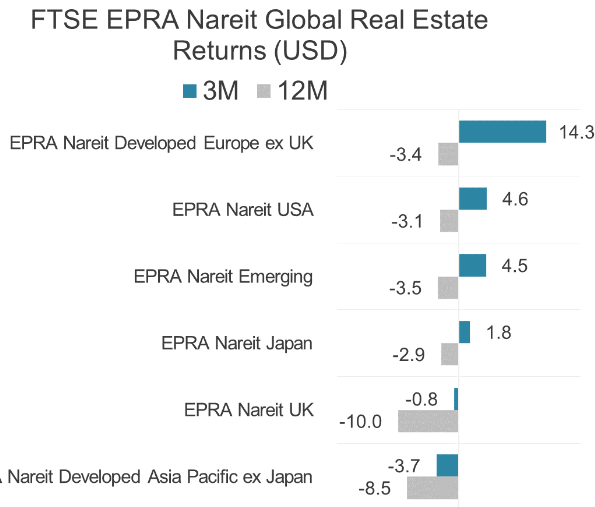


Chart 3: Core Infrastructure posted gains in EM, and remained flat in DM over the last 3M, while most risk assets rallied.

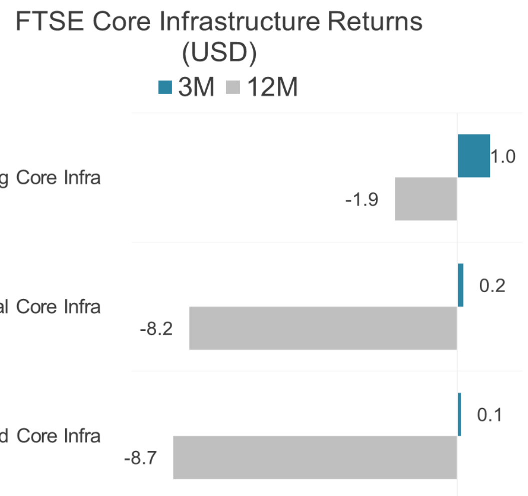


Chart 4: Listed real estate outperformed equity only in Developed Europe ex UK in the last 3M.

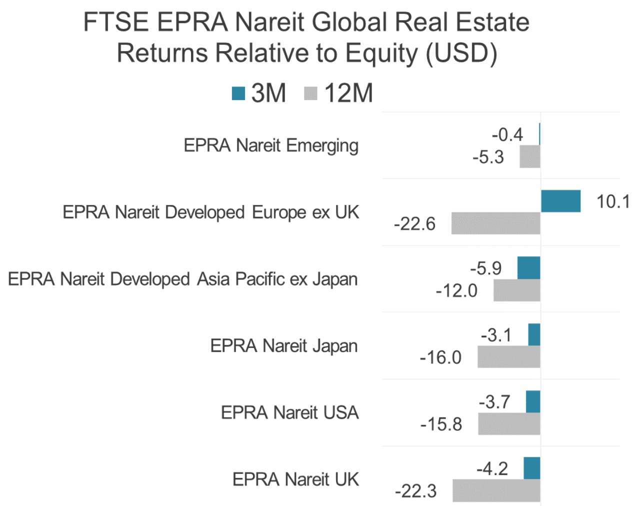
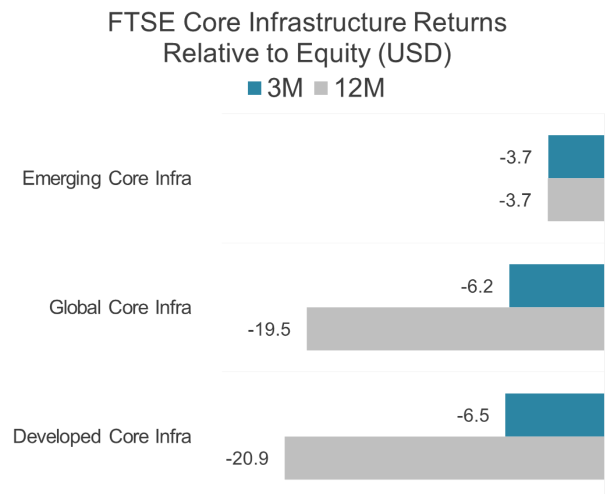


Chart 5: Core Infrastructure underperformed equities in the risk rally in the last 12M. Infrastructure did best in EM.



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Currencies

The dollar remains stronger against many major currencies than tightening yield differentials and long term declining share of central bank reserves might point. The yen is exceptionally weak on the back of extreme rate differentials with most DMs.

With its steep rise over the last decade (Chart 2), the trade-weighted US dollar reached extreme over-valuation in Q4 22 (> two standard deviations from its 10-year mean). The dollar rally has lost steam since October 2022 as the risk-on rally began, though there are significant month-on-month gyrations. Long term trends would indicate the US dollar has further room to fall, particularly as its share of global reserves remains on a downward trend (Chart 1).

Short-term interest rate differentials are a key determinant of currency values (Chart 3-6). The Euro and GBP have strengthened versus the USD YTD but are still below their long term averages, and where tighter yield differentials would imply. The yen remains very weak, given extreme rate differential with the US, while the CAD has remained flat YTD despite narrowing rate differentials.

The US dollar tends to strengthen in periods of market stress (safe haven demand drives capital flows into the reserve currency). A weaker dollar is positive for the global economy, eases financial conditions and supports US large cap equities with their international exposure.

Chart 1: The decreasing share of the USD in central bank reserves shows a gradual trend of 'de-dollarization'.

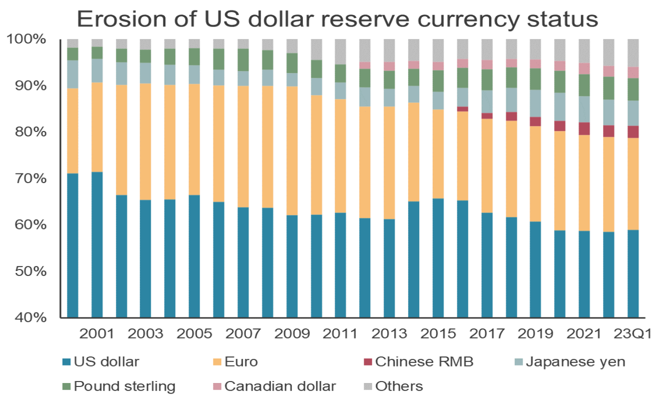


Chart 2: The trade-weighted US dollar peaked in Oct 22. LT patterns suggest it may fall further, despite monthly gyrations.

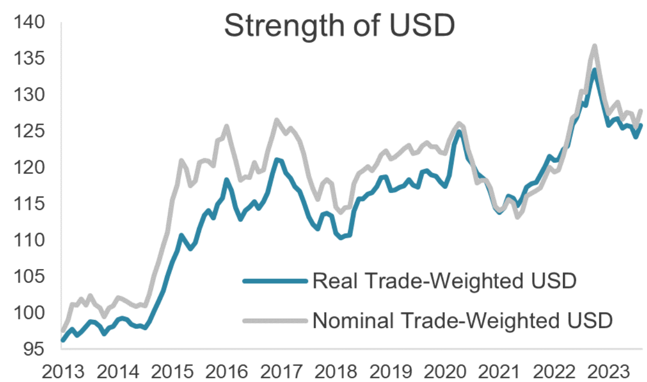


Chart 3: The Euro bottomed vs USD at the end of 2022, as rate differentials narrowed, but is still 7% below its10-year average.

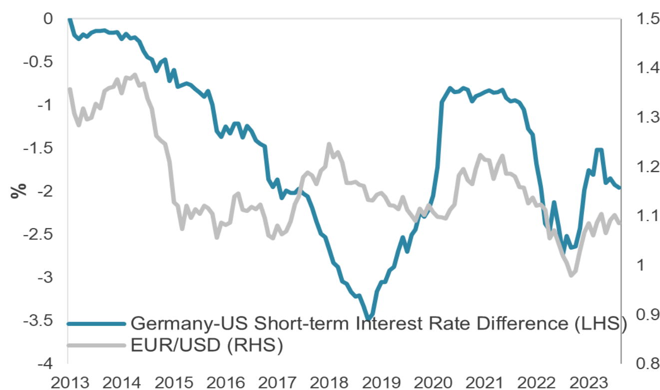


Chart 4: GBP bottomed versus USD at the end of 2022, as rate differentials narrowed, but still seems below fair value.

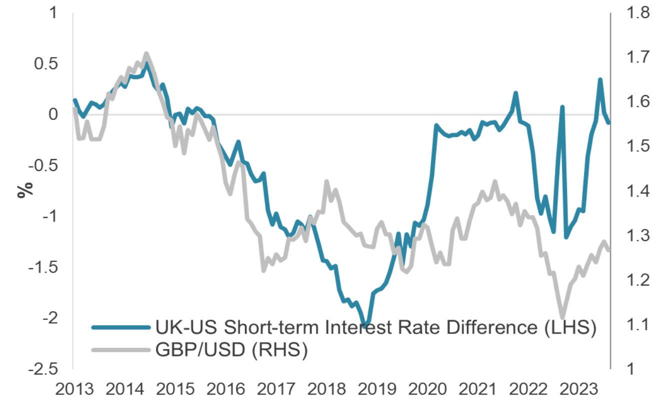


Chart 5: US-Japan rate differentials are at all-time highs, underpinning the recent extreme yen weakness.

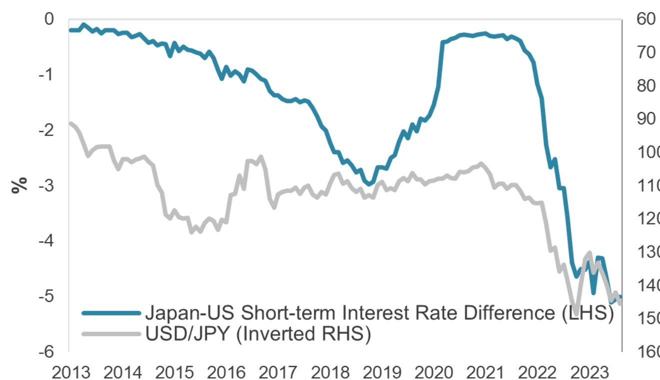
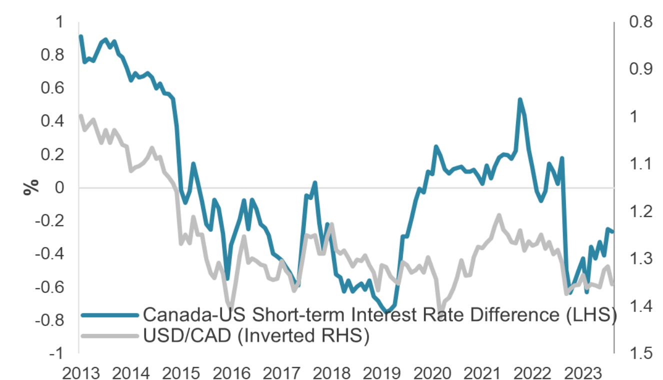


Chart 6: Canadian yields have moved closer to the US YTD, but CAD is still cheaper than LT average or rate differential implies.



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Capital Flows

Fund flows indicate investors remain cautious, choosing money market funds and bonds, and rates over credit. Bonds flows were broadly positive, while equity flows were strong only in Japan and EM. YTD, Technology saw strong inflows.

Global fund flows indicate a 'wait and see' approach by investors, with money market flows remaining strong, as their high yields pay investors to be cautious, while waiting for rates to peak. Bond funds continue to see inflows YTD, while equity funds see outflows, despite the strong YTD equity market performance, though the degree of bond inflows and equity outflows has fallen in the last 3M.

Bond fund flows have been positive in all geographic areas, particularly YTD, with only EM having negative cumulative fund flows over 12M. Equity funds flows have been weak, particularly in the US, and to a lesser extent in Europe. Only Japan and EM have seen positive cumulative fund flows over the last 12M.

YTD, US investors added funds to Technology, Telecoms, Industrials and Consumer Discretionary, while taking much larger sums out of Real Estate and Healthcare. Flows into Technology have particularly improved in the last 3M, potentially reacting to the strong sector performance and excitement about AI. YTD, US investors have been choosing rates over credit, with USD government bonds seeing the strongest inflow, followed by USD corporates. US high yield had outflows YTD.

Chart 1: Money market flows remain strong indicating a 'wait and see' approach by investors.

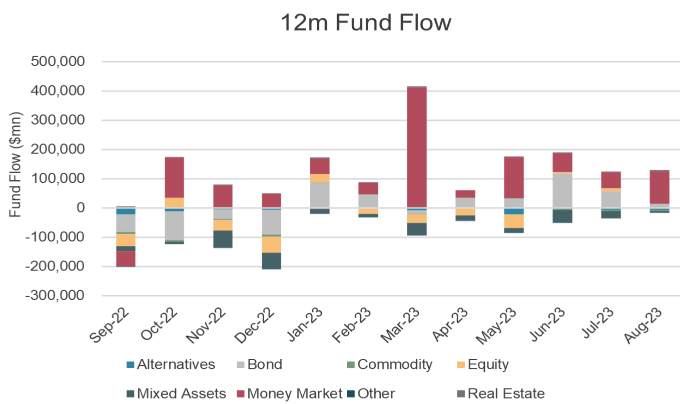


Chart 2: YTD, US equity flows have been strongest in Technology, maybe reacting to sector performance & AI hopes.

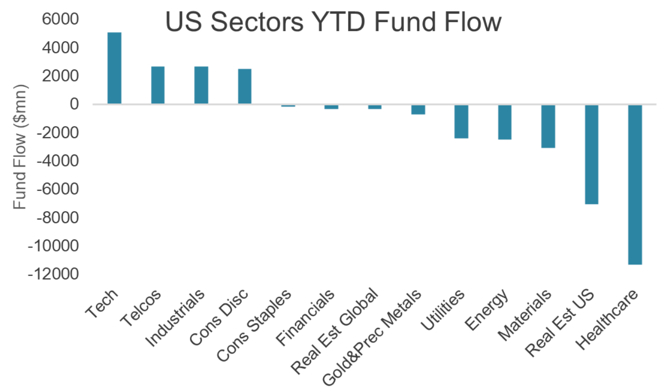


Chart 3: Positive YTD bond flows in all regions, strongest into Japan. Only EM had negative cumulative bond flows over 12M.

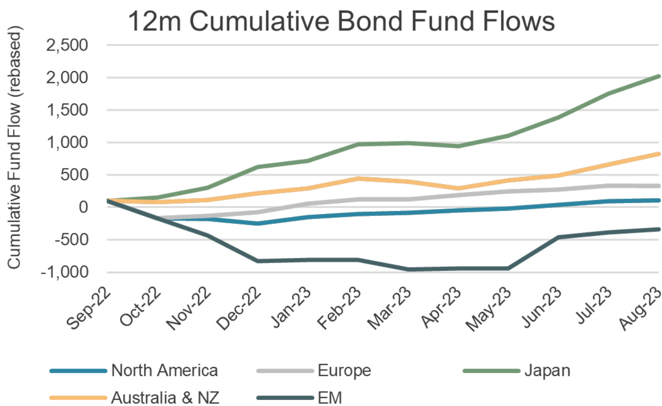


Chart 4: Equity flows reflect increased investor confidence in Japan & EM. North America has continued to register outflows.

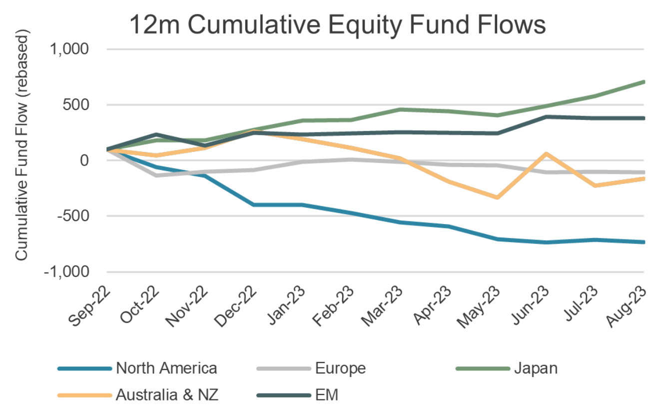


Chart 5: Cautious positioning – outflows from equities despite good performance YTD. Flows into money market and bonds.

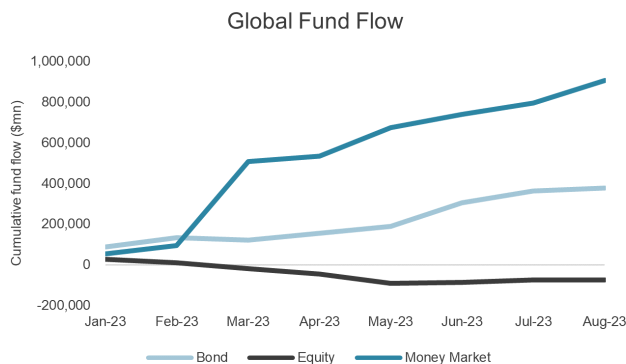
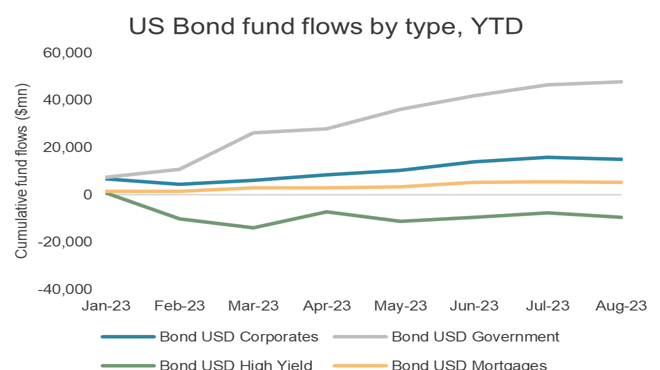


Chart 6: Cautious positioning – YTD, US investors are choosing rates over credit. Outflows from high yield bonds.



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Cross-Asset: Equities and Fixed Income

Historical trends indicate downside risk in equities, notably in the US, and bond yields have room to fall. Still high stock -bond correlations could continue to decrease with rate-hike pauses, offering hope for the 60/40 portfolio.

The stock/bond ratio (Chart 2) went to an all-time high of 1.52x in March 2022 and started falling when rate hikes began. At 1.47x currently, it remains above the long-term average of 1.2x. Total stock market capitalization/GDP ratio, has always been higher for the US than the All-World (Chart 1). Equity valuations peaked at the end-2021 but remains above the LT average, with a greater overvaluation in the US than globally (~20% & ~10% respectively). The equity risk premium is currently much lower than that of HY (Chart 4). Charts 1, 2 & 4 indicate that equities remain overvalued, particularly in the US, implying equities could fall or bond prices could increase (yields could fall).

Stock-bond correlations spiked when rate hikes drove both asset classes lower, reaching an all-time high of 85% in early 2023 (Chart 3). The recent decrease to under 80% can be expected to continue with the pause in rate hikes, and bring back diversification benefits.

Chart 1: Market cap relative to the real economy is 12% higher than its 10yr average globally, and almost 20% higher in the US.

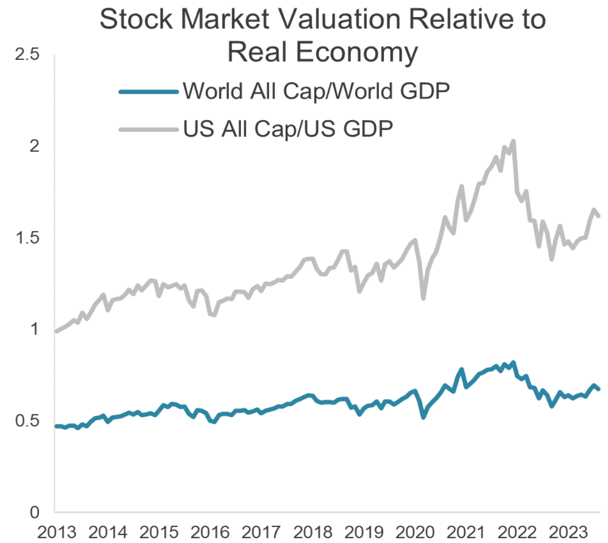

Chart 2: While lower than the peak in March 22 (start of rate hikes), relative stock/bond valuations remain very high.

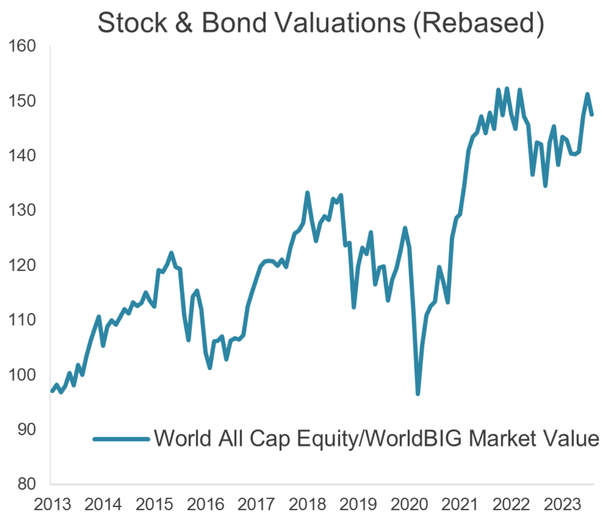

Chart 3: YTD stock/bond correlations have rolled over from its all time high. Rate hike pause could lead to further decreases.

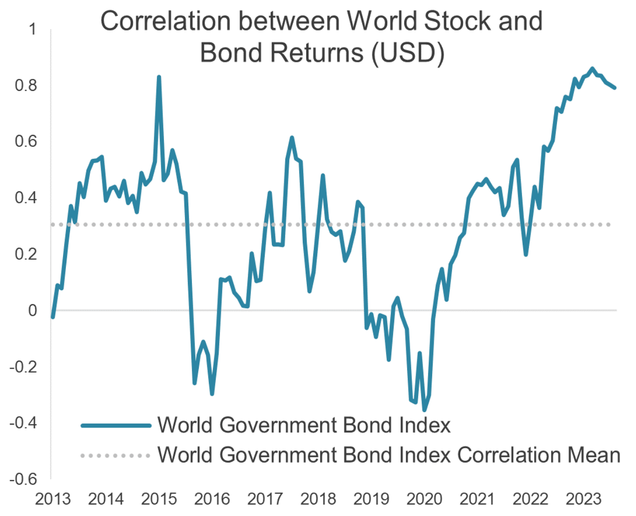

Chart 4: The US equity risk premium is unusually low relative to US HY credit spreads, suggesting downside risk for equities.

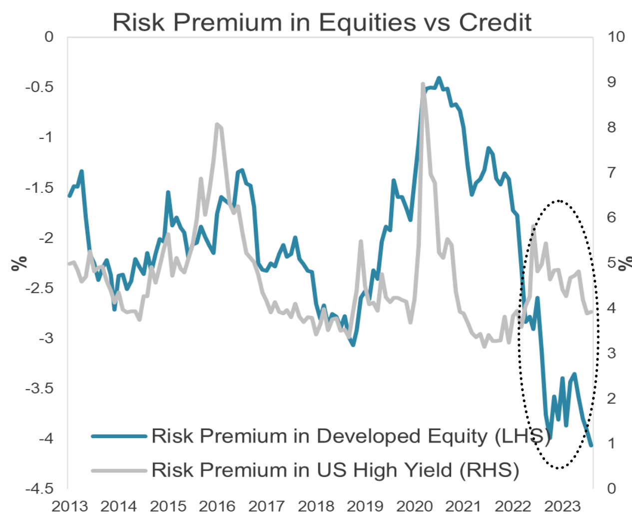

Chart 5: Credit spreads, particularly in HY, remain lower than in 4Q 22. Pricing benign conditions?

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Cross Asset: Return and Risk

The best asset class: depends on investor goals? Equities have reason to appeal to total return investors. Developed Europe and EM equities (high dividend yield) would hold appeal for income-oriented equity investors. Local FI versus Equity dynamics make Japanese equities attractive with local investors. Listed real estate, infrastructure and fixed income provide healthy income yields north of ~3.5%.

Based on the broadest FTSE Russell indices in equities, fixed income, commodities, real estate & infrastructure; equities and commodities had the highest total return in last one and five years respectively, with equities outperforming commodities by a wide margin in last year (Chart 1). Fixed income was consistently a volatility dampener, and its income yield rose significantly in the last year (Charts1 & 3). Listed real estate & infrastructure consistently had high income return and was more attractive for income investors than equities.

The income or dividend yield (DY) in equities varies significantly among regions. DY in Developed Europe and EM equities almost matched that of infrastructure and are more than double the DY of US equities (Chart 2). DY is higher than local sovereign rates only in Japan, and marginally so in Developed APAC (Chart 4). Given home bias in investing, this implies that only in Japan are equities more attractive than fixed income for local income investors.

The spike in interest rates over the last year has made fixed income a competitive asset class, with earnings yields now roughly in line with those of infrastructure. The equity earnings yield differential with fixed income has narrowed sharply over the last 18 months.

Chart 1: Equities for total return, real estate & infrastructure for income, fixed income for low volatility? Every asset has a role!

1 Year	USD Total Return %	Income Yield %	Risk	Return/Risk
Equity	14.5	2.3	17.5	0.8
Fixed Income	0.2	3.9	9.4	0.0
Commodities	1.7	--	13.3	0.1
Real Estate	-4.2	4.4	19.7	-0.2
Infrastructure	-8.2	3.4	17.9	-0.5

5Y Annualized	USD Total Return %	Income Yield %	Risk	Return/Risk
Equity	8.0	2.2	17.8	0.4
Fixed Income	-1.4	1.9	6.9	-0.2
Commodities	9.8	--	20.2	0.5
Real Estate	-0.1	4.0	19.3	0.0
Infrastructure	5.2	3.2	15.6	0.3

Chart 2: Dividend yields are lowest in the US, highest in EM & Developed Europe (dividend yields more 2x that of the US).

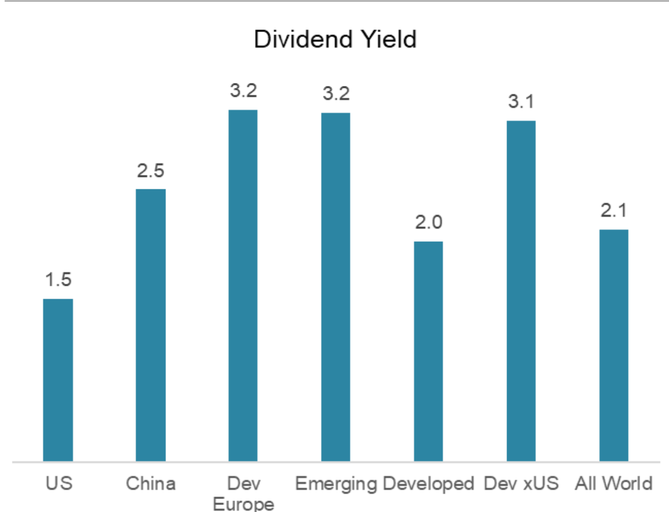


Chart 3: Earnings yield (EY=E/P) is sharply down in real estate & (less so) in equities. EY is higher in infrastructure than in FI.

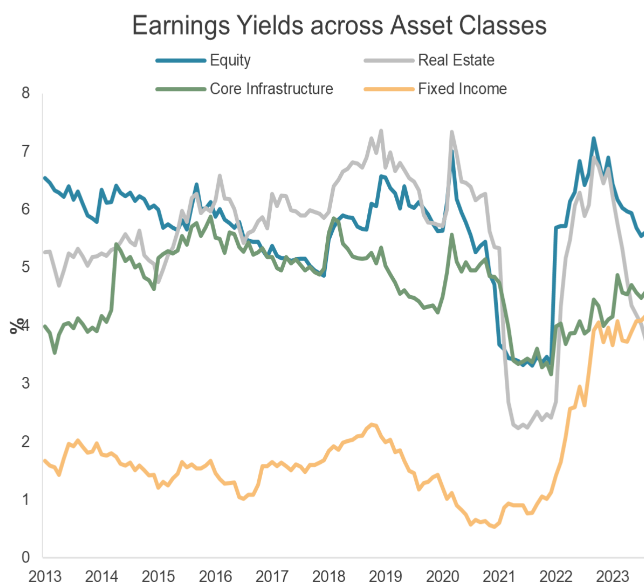


Chart 4: Dividend yield is higher than sovereign yields in Japan (marginally so in Developed APAC).

Equity Index	Dividend Yield
All-World	2.13
USA	1.48
UK	3.94
Developed Europe ex UK	3.00
Japan	2.25
Developed Asia Pacific ex Japan	3.80
Emerging	3.20

Fixed Income Index	Yield-To-Maturity
World 7-10 Yr Government	3.30
United States 7-10 Yr Government	4.12
UK 7-10 Yr Government	4.31
EMU 7-10 Yr Government	3.06
Japan 7-10 Yr Government	0.53
Asia Pacific 7-10 Yr Government	3.55
Emerging Markets 7-10 Yr Government	4.80

Source: FTSE Russell/Refinitiv. All data as of August 31, 2023. 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

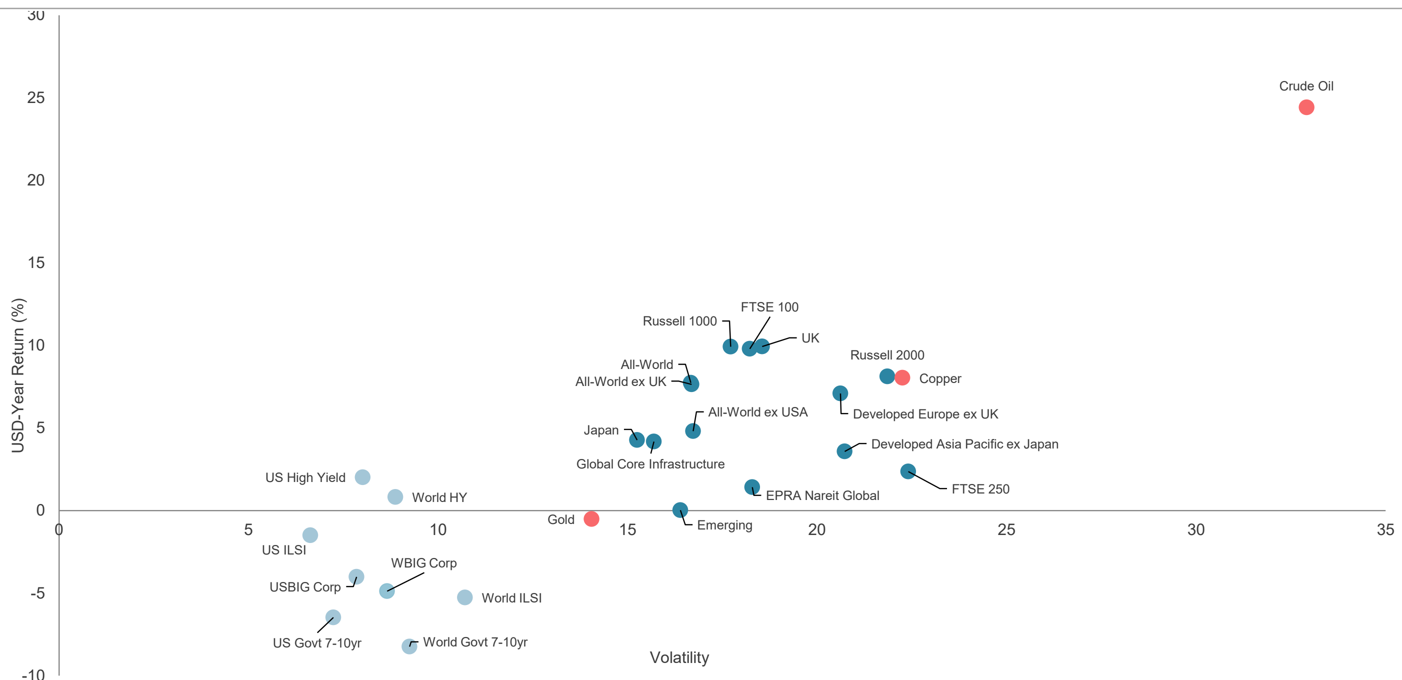
Diversification pays as the risks and returns of asset classes vary over time. For risk-adjusted return; in the last year, Developed Europe ex UK & Japan equities, and World High Yield did the best, while US inflation-linked bonds did poorly Over the last 3 years, crude oil & large cap equities (Russell 1000 & FTSE 100) did best and sovereign long bonds the worst.

Asset class leadership has fluctuated significantly in recent years. Developed Europe ex UK equities in the last year and crude oil in the last three years respectively had the best returns. Risk-adjusted return (a better investment metric) show that; in the last year, Developed Europe ex UK equities remained the star, followed by World High Yield & Japanese equities, while US inflation-linked bonds had low risk-adjusted returns as inflation trended down. On a risk-adjusted basis, in the last three years, oil remained the star, followed by large cap equities in the US & UK (Russell 1000 & FTSE 100), while world government bonds did the worst. Performance within credit has been consistent; high yield had higher return & risk-adjusted return than investment grade in the past 1 & 3 years.

In the last three years, equities had volatility in the 15-23% range, while bond market volatility has been around 7%, half or less than that of equities. Commodities had high volatility (33% for oil & 22% for copper). Over the last year, both equities (particularly EM) and bonds became more volatile in a rising rate environment, while commodities became less volatile as supply chain bottlenecks eased.

Chart 1: One-Year Risk-Return of Different Asset Classes – Developed Europe ex UK equities had the highest return in the last 12M. On risk-adjusted returns, the best performers were Developed Europe ex UK and Japanese equities along with World High Yield.

Chart 2: Three-Year Risk-Return of Different Asset Classes – Crude oil had the highest return, by a large margin, in the last three years. On a risk-adjusted basis, large cap equities like Russell 1000 and FTSE 100 did the best.



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Cross Asset: Correlations

Correlations between stocks and rates (especially real rates) increased sharply in the last few years but has peaked.

The correlation between the Russell 1000 and the US 7-10 year Treasury yield rose from 51% over the last three-year to 65% over the past year (the one year correlation, three months back, was 71%), indicating that the sharp increase in the impact of rates on equities has peaked with signs of disinflation. Global rates have consistently been a bigger influence than US rates on US stock behavior (Russell 1000 has a higher correlation with global than US 7-10 year bonds), which is not surprising given the significant international revenue and earnings exposure of US large cap equities, and open US financial markets. US equities, in the last year, have been much more driven by real rates than nominal rates (84% correlation with US TIPS and 65% with US 7-10 years).

Chart 1: 1-Year Correlation – Equities have been driven mainly by real yields in the last year. Stock-bond diversification comes from investment grade, while high yield is very correlated to equities. Commodities like gold & oil have provided diversification to equities.

	Russell 1000	Russell 2000	All-World	All-World ex USA	UK	Dev Europe ex UK	Japan	Dev Asia Pac ex Japan	Emerg-ing	US Govt 7-10yr	US ILSI	US High Yield	USBIG Corp	World Govt 7-10yr	World ILSI	World HY	WBIG Corp	Global Core Infra-structure	EPRA Nareit Global	Gold	Crude Oil
Russell 1000		0.88	0.97	0.83	0.80	0.84	0.84	0.79	0.63	0.65	0.84	0.93	0.71	0.73	0.85	0.89	0.74	0.83	0.84	0.41	0.41
Russell 2000	0.88		0.83	0.70	0.71	0.71	0.63	0.68	0.51	0.32	0.57	0.82	0.45	0.43	0.59	0.76	0.49	0.65	0.78	0.12	0.53
All-World	0.97	0.83		0.94	0.88	0.92	0.92	0.91	0.78	0.75	0.88	0.93	0.83	0.83	0.92	0.94	0.86	0.92	0.93	0.57	0.35
All-World ex USA	0.83	0.70	0.94		0.92	0.95	0.95	0.98	0.91	0.80	0.83	0.83	0.91	0.88	0.91	0.92	0.93	0.94	0.96	0.72	0.22
UK	0.80	0.71	0.88	0.92		0.97	0.80	0.86	0.71	0.67	0.76	0.83	0.77	0.77	0.83	0.91	0.84	0.88	0.94	0.54	0.38
Dev Europe ex UK	0.84	0.71	0.92	0.95	0.97		0.86	0.88	0.73	0.76	0.83	0.88	0.84	0.86	0.91	0.94	0.90	0.89	0.93	0.64	0.34
Japan	0.84	0.63	0.92	0.95	0.80	0.86		0.95	0.89	0.83	0.89	0.82	0.92	0.89	0.93	0.89	0.93	0.91	0.88	0.74	0.17
Dev Asia Pac ex Japan	0.79	0.68	0.91	0.98	0.86	0.88	0.95		0.94	0.77	0.80	0.79	0.90	0.84	0.86	0.88	0.90	0.91	0.93	0.72	0.16
Emerging	0.63	0.51	0.78	0.91	0.71	0.73	0.89	0.94		0.72	0.67	0.59	0.86	0.77	0.77	0.71	0.84	0.84	0.81	0.73	0.00
US Govt 7-10yr	0.65	0.32	0.75	0.80	0.67	0.76	0.83	0.77	0.72		0.86	0.72	0.96	0.97	0.90	0.79	0.94	0.72	0.73	0.90	0.04
US ILSI	0.84	0.57	0.88	0.83	0.76	0.83	0.89	0.80	0.67	0.86		0.88	0.87	0.89	0.94	0.90	0.87	0.84	0.79	0.68	0.31
US High Yield	0.93	0.82	0.93	0.83	0.83	0.88	0.82	0.79	0.59	0.72	0.88		0.77	0.80	0.87	0.97	0.81	0.80	0.89	0.51	0.55
USBIG Corp	0.71	0.45	0.83	0.91	0.77	0.84	0.92	0.90	0.86	0.96	0.87	0.77		0.97	0.93	0.86	0.99	0.82	0.85	0.88	0.08
World Govt 7-10yr	0.73	0.43	0.83	0.88	0.77	0.86	0.89	0.84	0.77	0.97	0.89	0.80	0.97		0.96	0.88	0.98	0.81	0.81	0.90	0.19
World ILSI	0.85	0.59	0.92	0.91	0.83	0.91	0.93	0.86	0.77	0.90	0.94	0.87	0.93	0.96		0.93	0.95	0.88	0.85	0.77	0.29
World HY	0.89	0.76	0.94	0.92	0.91	0.94	0.89	0.88	0.71	0.79	0.90	0.97	0.86	0.88	0.93		0.91	0.87	0.95	0.63	0.46
WBIG Corp	0.74	0.49	0.86	0.93	0.84	0.90	0.93	0.90	0.84	0.94	0.87	0.81	0.99	0.98	0.95	0.91		0.86	0.88	0.87	0.19
Global Core Infrastructure	0.83	0.65	0.92	0.94	0.88	0.89	0.91	0.91	0.84	0.72	0.84	0.80	0.82	0.81	0.88	0.87	0.86		0.86	0.63	0.24
EPRA Nareit Global	0.84	0.78	0.93	0.96	0.94	0.93	0.88	0.93	0.81	0.73	0.79	0.89	0.85	0.81	0.85	0.95	0.88	0.86		0.59	0.40
Gold	0.41	0.12	0.57	0.72	0.54	0.64	0.74	0.72	0.73	0.90	0.68	0.51	0.88	0.90	0.77	0.63	0.87	0.63	0.59		-0.04
Crude Oil	0.41	0.53	0.35	0.22	0.38	0.34	0.17	0.16	0.00	0.04	0.31	0.55	0.08	0.19	0.29	0.46	0.19	0.24	0.40	-0.04	

Chart 2: 3-Year Correlation – US equities are more correlated to US high yield than to EM equities, indicating risk drivers matter more than asset class classification. Listed real assets have a high beta to equities, even more so for real estate than infrastructure.

	Russell 1000	Russell 2000	All-World	All-World ex USA	UK	Dev Europe ex UK	Japan	Dev Asia Pac ex Japan	Emerg-ing	US Govt 7-10yr	US ILSI	US High Yield	USBIG Corp	World Govt 7-10yr	World ILSI	World HY	WBIG Corp	Global Core Infrastruc-ture	EPRA Nareit Global	Gold	Crude Oil
Russell 1000		0.87	0.98	0.86	0.80	0.88	0.77	0.81	0.59	0.51	0.74	0.85	0.67	0.65	0.77	0.86	0.73	0.81	0.89	0.18	0.34
Russell 2000	0.87		0.87	0.81	0.75	0.77	0.74	0.82	0.61	0.30	0.55	0.81	0.53	0.50	0.58	0.81	0.59	0.63	0.80	0.01	0.45
All-World	0.98	0.87		0.94	0.88	0.94	0.85	0.90	0.72	0.54	0.74	0.86	0.73	0.72	0.79	0.90	0.80	0.83	0.93	0.26	0.37
All-World ex USA	0.86	0.81	0.94		0.93	0.95	0.89	0.96	0.85	0.55	0.66	0.80	0.75	0.75	0.76	0.88	0.83	0.80	0.90	0.36	0.39
UK	0.80	0.75	0.88	0.93		0.95	0.75	0.87	0.69	0.43	0.59	0.74	0.60	0.64	0.67	0.82	0.72	0.76	0.88	0.30	0.55
Dev Europe ex UK	0.88	0.77	0.94	0.95	0.95		0.80	0.87	0.68	0.54	0.67	0.80	0.71	0.72	0.76	0.87	0.80	0.79	0.91	0.32	0.39
Japan	0.77	0.74	0.85	0.89	0.75	0.80		0.85	0.74	0.56	0.65	0.79	0.73	0.74	0.68	0.85	0.79	0.65	0.73	0.24	0.26
Dev Asia Pac ex Japan	0.81	0.82	0.90	0.96	0.87	0.87	0.85		0.84	0.48	0.64	0.76	0.69	0.68	0.71	0.83	0.77	0.80	0.88	0.40	0.38
Emerging	0.59	0.61	0.72	0.85	0.69	0.68	0.74	0.84		0.49	0.48	0.55	0.67	0.66	0.60	0.65	0.73	0.61	0.68	0.40	0.22
US Govt 7-10yr	0.51	0.30	0.54	0.55	0.43	0.54	0.56	0.48	0.49		0.81	0.58	0.91	0.91	0.80	0.60	0.86	0.45	0.50	0.49	-0.07
US ILSI	0.74	0.55	0.74	0.66	0.59	0.67	0.65	0.64	0.48	0.81		0.77	0.80	0.83	0.92	0.76	0.80	0.67	0.70	0.45	0.10
US High Yield	0.85	0.81	0.86	0.80	0.74	0.80	0.79	0.76	0.55	0.58	0.77		0.75	0.72	0.75	0.98	0.79	0.66	0.79	0.18	0.31
USBIG Corp	0.67	0.53	0.73	0.75	0.60	0.71	0.73	0.69	0.67	0.91	0.80	0.75		0.93	0.84	0.79	0.97	0.60	0.69	0.40	0.05
World Govt 7-10yr	0.65	0.50	0.72	0.75	0.64	0.72	0.74	0.68	0.66	0.91	0.83	0.72	0.93		0.90	0.79	0.96	0.58	0.64	0.57	0.08
World ILSI	0.77	0.58	0.79	0.76	0.67	0.76	0.68	0.71	0.60	0.80	0.92	0.75	0.84	0.90		0.79	0.88	0.71	0.76	0.57	0.10
World HY	0.86	0.81	0.90	0.88	0.82	0.87	0.85	0.83	0.65	0.60	0.76	0.98	0.79	0.79	0.79		0.86	0.69	0.83	0.28	0.32
WBIG Corp	0.73	0.59	0.80	0.83	0.72	0.80	0.79	0.77	0.73	0.86	0.80	0.79	0.97	0.96	0.88	0.86		0.65	0.75	0.48	0.14
Global Core Infrastructure	0.81	0.63	0.83	0.80	0.76	0.79	0.65	0.80	0.61	0.45	0.67	0.66	0.60	0.58	0.71	0.69	0.65		0.84	0.33	0.27
EPRA Nareit Global	0.89	0.80	0.93	0.90	0.88	0.91	0.73	0.88	0.68	0.50	0.70	0.79	0.69	0.64	0.76	0.83	0.75	0.84		0.28	0.40
Gold	0.18	0.01	0.26	0.36	0.30	0.32	0.24	0.40	0.40	0.49	0.45	0.18	0.40	0.57	0.57	0.28	0.48	0.33	0.28		-0.11
Crude Oil	0.34	0.45	0.37	0.39	0.55	0.39	0.26	0.38	0.22	-0.07	0.10	0.31	0.05	0.08	0.10	0.32	0.14	0.27	0.40	-0.11	

Source: FTSE Russell/Refinitiv. All data as of August 31, 2023. 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: Correlations (continued)

Consistently high correlations between equities and high yield credit show that stock/bond diversification benefits come primarily from investment grade bonds.

As the riskiest part of fixed income, high yield corporates have typically been highly correlated with equities (ranging from 85% to 93%). Investment grade is typically far less correlated to equities than to HY. The diversification benefits implied in the 60/40 portfolio are driven mainly by sovereign bonds and investment-grade corporates.

Falling correlations between developed and emerging markets provide diversification benefits.

Within equities, US markets are most correlated to Developed Europe ex UK, while correlations with most other developed markets are stable at high levels of 80% or more. The correlation between US and EM equities, and those between DM and EM equities fell to ~60% recently, a trend in line with the diverging economic paths of the US and China, move towards reshoring and the world becoming increasingly economically multi-polar.

Commodities are a diverse asset class, and provide significant diversification benefits to equities.

Commodities can be volatile, with long periods of underperformance vs equities. Less appreciated are the diversification benefits in portfolio construction, and the large variation among different commodities. Growth commodities (like oil) and defensive commodities (like gold), both have far lower correlation to equities than different equity markets have among themselves. Whether oil or gold provides more diversification to equities, again varies for different equity markets and over different time periods.

Listed real assets have a high beta to listed equities.

Listed real estate and infrastructure are driven by forces specifically related to these real assets. However, being listed, they also have a high beta to listed equities. The correlation of listed real estate and infrastructure to US large-cap equities has remained north of 80% over the last three years. The correlation of equities is higher with listed real estate than with listed infrastructure.

Chart 1: Equity Market Correlations – US equities have the highest correlation with Developed Europe ex UK and lowest with EM.

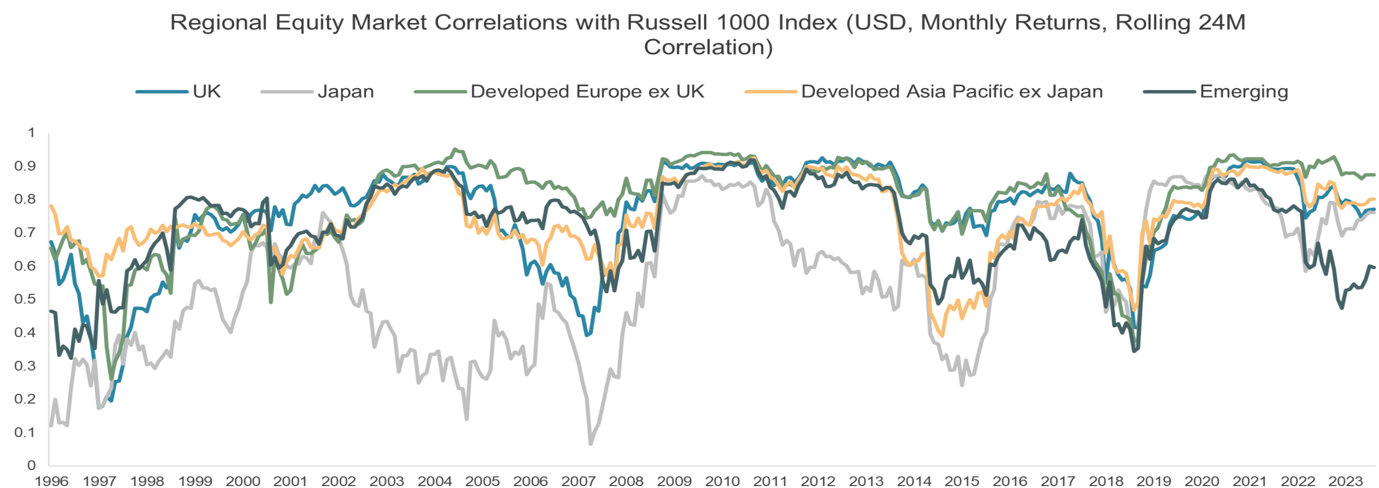
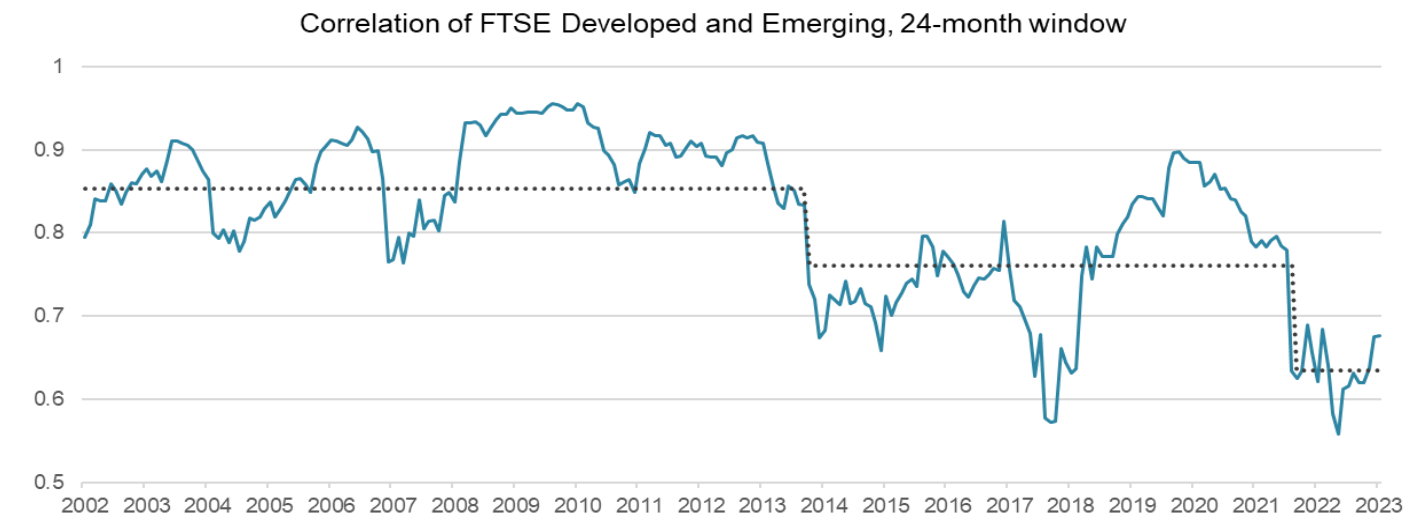


Chart 2: The correlation between DM and EM equities has been dropping steadily over last 20 years, and fell again in recent years.



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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 Corporate Capped Extended Broad Bond Index – Investment-Grade	EMBBICCE_IG
US High-Yield Market Index	HY_MKT_US
European High-Yield Market Index	EUROPE_HYM
Emerging Markets Corporate Capped Extended Broad Bond Index – High-Yield	EMBBICCE_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

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 August 31, 2023 with the exception of the most recent Fed Dot Plot that got released September 20, 2023

Source: FTSE Russell/Refinitv. Please see the end for important legal disclosures.

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