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The J.P. Morgan View – Global Asset Allocation

Risk assets pull back on rates surge and crypto crash appears overdone, not the end of the cycle

Cross-Asset Strategy: Friday's strong CPI print that led to a surge in yields, along with the sell-off in crypto over the weekend, are weighing on investor sentiment and driving the market lower. However, we believe rates market repricing went too far and the Fed will surprise dovishly relative to what is now priced into the curve (see here). The move in markets prices in more than enough recession risk, and we believe a near-term recession will ultimately be avoided thanks to consumer strength, COVID reopening/recovery, and policy stimulus in China. We also see strong supports from low investor positioning, depressed sentiment, and corporate buyback inflows. While we expect markets to recover YTD losses in H2 to finish roughly flat, we don't advocate indiscriminate buying of broad risk markets. We keep a large overweight in commodities both at an asset class level and in equity sectors and currencies, given our supercycle thesis and to hedge inflation and geopolitical risks. We remain underweight credit vs. equities given the greater vulnerability of the former to higher interest rates and QT. Within equities we favor segments that sold off strongly and are trading near record low relative valuations (e.g. innovation, China, small caps, biotech, etc.), while underweighting crowded/expensive segments such as defensives. Within rates, curve flatteners remain our top theme in both the US and Europe, and in FX we continue to favor the dollar given fragmentation risks in the euro area and a dormant BoJ.

JPM Clients' View: **Click here to take this week's survey**. This week we poll investors on the ECB, inflation and US-China tariffs, in addition to our running sentiment questions. Our last survey results indicated: (1) equity exposure/sentiment among respondents is ~48th percentile on average; (2) 64% plan to increase equity exposure, and 62% to increase bond duration near term; (3) 60% view the rebound in Chinese equities as a true turning point; (4) on average respondents expect US gasoline prices to peak at ~$5.75/gal this summer, and most (67%) believe it will create a moderate headwind for consumer discretionary spending in Q3; (5) 77% expect the ECB to turn more hawkish from here.

How to play the Euro vs. the US theme?: Investors can position for the theme of ECB hawkishness catching up with the Fed via: 1) UW Euro vs. US HG credit due to the bearish duration impulse from higher yields and end of ECB QE purchases; 2) UW Euro area periphery given the lack of delivery on a new 'anti-fragmentation' tool and the limited pushback on recent spread widening; 3) Convergence in the European value factor with the US value factor.

Asset Allocation

GAA Long-only portfolio allocation

Major Asset Classes	Active Weights	Prior Month	Δ	UW | OW
Equities	12%	12%		
Govt. Bonds	-12%	-12%		
Corp. Bonds	-5%	-5%		
Commodities	7%	7%		
Cash	-2%	-2%		

Source: J.P. Morgan.

Global Markets Strategy

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Cross Asset Strategy

Asset Allocation

We stay pro-risk and make no major changes to our model portfolio this month, holding OWs in equities and commodities funded by UWs in bonds and cash. Our positive view is driven the fact that the YTD move in markets prices in more than enough recession risk, while we believe a near-term recession will ultimately be avoided thanks to supports from consumer strength, COVID reopening/recovery, and policy stimulus in China. Additionally, we see strong supports from low investor positioning, depressed sentiment, and corporate buyback inflows. While we expect markets to recover YTD losses in H2 to finish roughly flat, we don't advocate indiscriminate buying of broad risk markets. We keep a large overweight in commodities not only at an asset class level but also within equity sectors and currencies given our supercycle thesis and to hedge inflation and geopolitical risks. We remain underweight credit vs. equities given the greater vulnerability of the former to higher interest rates and QT. Within equities we favor segments that sold off strongly and are trading near record low relative valuations (e.g. innovation, China, small caps, biotech, etc.), while underweighting crowded/expensive segments such as defensives. Within rates, curve flatteners remain our top theme in both the US and Europe, and in FX we continue to favor the dollar given fragmentation risks in the euro area and a dormant BoJ.

In Equities, we maintain a positive view as record dispersion provides opportunities. While some market segments are trading near all-time highs, such as Defensives, others are near all-time lows such as innovation, China ADRs, small caps, energy, biotech, etc. Some of this bearish positioning reflects recession worries, which we do not see as imminent, while at the same time, we believe assets at attractive valuations will hold up better in the event of a downturn. The Growth-Policy tradeoff is expected to improve in 2H, as we have likely passed peak Fed hawkishness and potentially passed peak inflation. We emphasize markets that have already de-rated in this year's pullback, favoring both Growth and Value, and UW Defensives (with the exception of Telecoms). On a regional basis, Eurozone and EM forward PEs de-rated meaningfully while the US has de-rated the least. We continue to favor OW in the UK and China. We expect China has room to stimulate while containing inflation and see signs of regulatory easing going forward. The likely scenario of China missing the official growth target should create urgency for additional stimulus and relaxation of policy. Positive momentum and easing in China should mitigate the tightening in the rest of the world. In SMid caps, we favor relative value positioning, which avoids the lack of visibility on Macro. We continue to favor Energy, even as Saudi and Iraq raise capacity growth on the back of strong oil demand. While OPEC+ production is growing in absolute terms, the group's ability to influence price is diminishing, while summer demand and China re-opening creates upside risks.

Bonds sold off this week amid hawkish ECB & RBA meetings, strong US CPI, and easing of China COVID restrictions. In the US, the CPI print raises risks for a more aggressive rate hike path. This, along with less demand from banks in intermediate maturities, and pension demand at the long end, points to flattening pressure. We keep 5s/20s flatteners and initiate 5Y breakeven wideners. In the Euro area, ECB surprised hawkishly by signaling a front-loading of rate hikes, and we have reflected these more aggressive plans by entering 5s/30s EUR swap curve flatteners. In the UK, we see the 75bp of hikes priced in by August as excessive and hold Jun22/Aug22 MPC OIS flatteners and receive 5Y SONIA vs. USD OIS. EM fixed income will be challenged by the tightening financial conditions to tame inflation. We remain UW local duration. In Credit, we forecast spreads for three macroeconomic scenarios for the next 12 months: inflationary, recessionary, and successfully 'threading the needle' of taming inflation without killing growth. Inflation and consumer sentiment point to a challenging environment for spreads, making for a range trade where we have seen wider wides and likely wider tights. We favor high quality paper in the belly of the curve more than the supply-starved long end. Q1 earnings were 'good enough for credit' and HG yields are at multi-year highs, although higher hedging costs point to worse foreign demand. In European credit, we expect spreads will widen in sympathy with periphery spreads. We expect BTP-Bund spreads to widen, as things must get worse before they can get better, e.g. it will take a 'mini-crisis' to compel concrete action on an anti-fragmentation tool.

In Commodities, we see another leg higher in road fuel prices due to a lack of refining capacity. While Russia has been able to sell crude at deep discounts, it has had less success with refined products. Given that China has cut export quotas and Middle East capacity is ramping up, shortages for clean products will worsen as seasonal demand increases. Energy subsidies are expected to boost demand in the face of constrained supply, pointing to $6/gallon gasoline this summer. In Agriculture, we see upside risks as Ukraine's wheat harvest starts in July and seaports remain closed. Our price forecasts are well

above futures curves and consumers well placed to take advantage of backwardation. In Currencies, we re-enter EUR/USD shorts despite ECB hawkishness, given its constraints regarding the periphery as well as regional risks related to Ukraine and energy prices. EUR weakness post ECB reflects inflation/growth/ fragmentation risks which dilute what ought to be positive pass-through from narrower EU-rate differentials.

Macroeconomic Outlook

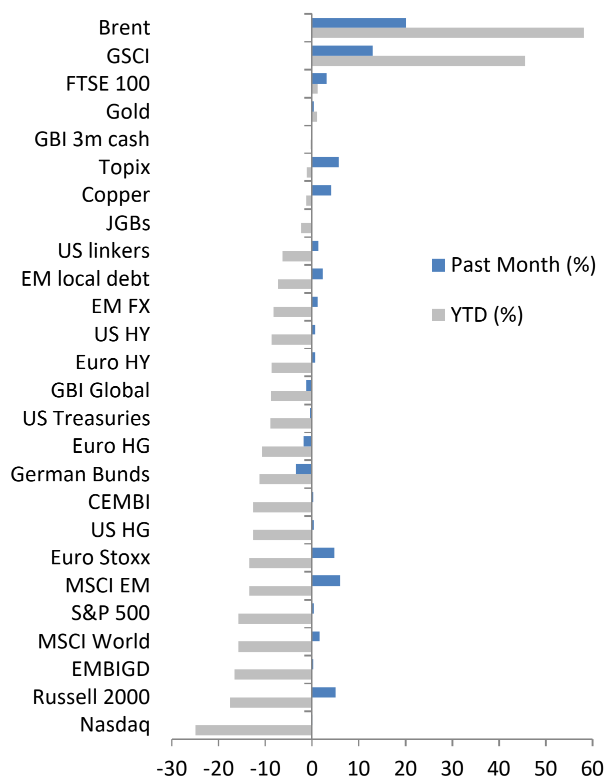
Global CPI tracking close to a 10%ar 2Q increase threatens growth as it intensifies purchasing power squeeze and accelerates rate hikes. Global May CPI (ex. Turkey) is tracking a 0.7%m/m gain, the second-highest monthly increase on record. We now anticipate the global CPI will rise at close to a 10%ar this quarter. Given the breadth of gains and the continued upward pressure on energy prices, the moderation in global inflation we still forecast for the coming quarter is now to a level that is more than twice that expected earlier this year. Through a year of consistent upside inflation surprises there have been important underlying shifts in the drivers of inflation. The initial surge in 2021 was concentrated in core goods prices, as the pandemic recovery boosted goods demand amid substantial supply chain disruptions. While core goods price inflation remains elevated, moderating demand and an easing of supply constraints has started to reduce this pressure. However, core services inflation has accelerated this year due to pressures from service-sector reopening and labor costs, alongside intense commodity price pressures that are boosting food and energy CPI. The evolution of the inflation drivers has led to a shift in central bank thinking. Last year's concentrated goods price pressures were viewed as a transitory pandemic recovery phenomenon, and policy tightening largely came from those central banks facing credibility challenges. However, a further acceleration amid broadening pressures and rapidly tightening labor markets has been a rallying cry for action as central bankers recognize that highly accommodative stances are inappropriate. The ECB shifted dramatically last week, revising its inflation projections notably higher for 2023 and 2024 despite lower projections for growth. It also emphasized the need for a speedy start to rate normalization, which we now believe will deliver 125bp of tightening before year-end. The Fed has already signaled that it will hike 50bp next week and we expect it to follow through on this guidance. Despite lowering its growth forecast it is likely to guide toward sustained moves at coming meetings, thereby pushing policy into restrictive territory with rates above 3% by early next year.

Growth to rotate away from US and toward Asia. There are thus two growth drags building. The sustained and intense squeeze on household purchasing power has already pushed global consumer confidence lower—last week's June US sentiment reading dropped to the lowest level in its 70-year history. With energy price pressures shifting away from natural gas and toward gasoline—it looks increasingly likely that the weight of these drags will fall materially on the US. This week's reports should reinforce this message as a decline in auto sales depresses May retail sales and the June NAHB survey moves lower. We expect the slowing now concentrated in housing and auto demand to broaden, pushing US growth toward 2% later this year. Until now, the Fed has not been forced to make a difficult choice as it moves toward neutral in the face of strong growth. If we are right, decisions will become more challenging as US job growth slows toward a 100k monthly pace later this year, a development that we expect to elicit a moderation from the current 50bp pace of hikes. While a sharp US slowing will dominate debate on global growth risks, two positive developments are taking hold elsewhere. COVID drags are beginning to fade as China's lockdowns lift and mobility in Asia and Europe moves higher over May-June. In addition, fiscal policy is providing substantial stimulus outside the US, largely geared toward cushioning the drag on households from higher inflation. Thus, as we build in overall downside risk to our forecast for 3.3%ar 2H22 global growth, we also expect regional performance to shift away from the US and toward Western Europe and Asia (*GDW*, Jun 12th).

Market Recap

Markets remained choppy over the past month given ongoing worries around inflation, hawkish central bank rhetoric and growth. Despite the volatility, equities and commodities both finished higher than a month ago (the latter substantially so), while bonds finished modestly lower. As a result, our model portfolio delivered positive returns over the month and outperformed its benchmark, given our OW of commodities and equities and UW of bonds.

Figure 1: Performance across asset classes
Asset class return (%), ranked by YTD return, through June 9th



Source: J.P. Morgan, Bloomberg Finance L.P.

Equities

We maintain our positive view. May is a template for the year, record dispersion provides opportunities. We remain positive on risky assets due to near record-low positioning, bearish sentiment, and our view that there will be no recession given supports from US consumers, global post-COVID reopening, and China stimulus and recovery. The war in Eastern Europe is a significant risk for the cycle but will likely converge to a settled solution in H2. We believe that markets will recover YTD losses and result in a broadly unchanged year. This is now an out of consensus "bullish" view, but this is not to say that we advocate indiscriminate buying. Currently, there is a tremendous dispersion of performance and valuation, and hence opportunities for outperformance. Some market segments (defensives, staples, etc.) are trading near all-time-high relative valuations, while other market segments (e.g., innovation, China ADRs, small caps, energy, biotech, etc.) are trading near all-time-low relative valuations. We think the most attractive investment opportunities are in these oversold sectors that provide asymmetric upside. Stocks that are trading near all-time high valuations are not a hedge for any scenario—if there is a recession, multiples will go down, and if there is no recession (which we think) there will be rotation out of these stocks into higher beta, smaller capitalization market segments in both growth and value. We think only a US recession would result in another leg lower (*MVC*, Jun 1st).

Comparison to Jan 2020 - market multiple round tripped, but internal dispersions remain meaningful. We stay OW Value vs Growth, but post significant underperformance of many Growth chunks we don't expect Growth style to be falling in absolute terms anymore, and we find both Value and Growth more interesting than Defensives for 2H. The only Defensives we prefer are Telecoms and parts of Renewables, while regionally in DM our top OW stays the UK. In the report we contrast the current state of the equity market vs January 2020, the time just ahead of the COVID dislocation, focusing on valuation multiples and on earnings. As COVID hit, initially the market de-rated sharply, but that was quickly reversed as the unleashing of dramatic liquidity support lead to a spike in P/E multiples. All this multiple expansion has been taken out by now, with every major market trading at lower forward P/E than in January 2020, and in some cases meaningfully so. Eurozone forward P/Es are 17% lower and EM 12%, while the US has seen the least relative de-rating. Most key markets are now trading at or below long term average P/Es, with the notable exception of the US and Switzerland. Long bond yields are higher by 100bp vs Jan '20, but real rates are not much different to what they were then, and both remain lower than long-term averages. At a sector level, the majority are trading at lower P/E multiples than in Jan '20, with Commodity sectors, Transport, Autos and parts of Consumer Cyclicals de-rating the most. Notably, Defensives and parts of Tech have seen the least de-rating. In terms of style grouping, both Value and Growth P/Es moved lower, but Value more than Growth, and Value is trading at 50% of Growth's P/E. Cyclicals in Europe are at 23% lower P/E relative vs Defensives, compared to pre-COVID. We continue to believe that the sector/style valuation convergence trade has legs. At a stock level, we looked at the opportunities, together with our analysts (*Equity Strategy*, June 13th).

Growth-Policy tradeoff to improve in 2H; Earnings, and Cyclicals, are seeing a turn of late. We have potentially passed peak Fed hawkishness and this is expected to be joined by a likely peak in inflation, on a yoy change basis. The investor outlook with respect to growth momentum has come down aggressively, limiting the potential for a disappointment from here. Many describe the recent market bounce as a "bear market rally", but the chances are that the stabilization becomes

more durable. This is especially given the reduced positioning and cautious consensus outlook, and we note market internals over the past month are pro-risk. Earnings revisions are back to broadly positive over the past weeks in key regions (*Equity Strategy*, Jun 6th).

An improving case for investing in China equities. Last week, MXCN rose 6% with tech (HSTECH +10%) outperforming ChiNext (4%), CSI300 (4%) and HSI (3%). Risk appetite rose as China's room to stimulate while containing inflation became more apparent and upon signs of regulatory improvement on internet & gaming. Further, on US-China trade, the US Commerce Secretary said that tariffs on certain products are in consideration for removal. We estimate that an improving US-China relationship can add 1-1.5SD (2.2-3.3x) in 12M forward P/E multiples to MXCN. Hence, we reiterate a bullish stance on China equities and China internet (*China Equity Weekly Radar*, Jun 12th).

Reiterating more supportive China risk-reward; the consumer backdrop. In terms of positioning, our core view remains to be OW Value vs. Growth from a style and sector perspective, OW EM regionally, and OW the UK within DM. Historically one didn't see China missing its growth target, and given that most expect a miss anyway, the chance of a positive surprise is now much higher. In the least, China policymakers are likely to wheel out more and more stimulus, which will act to improve China risk-reward in 2H22. Discussions over stimulus policies gained momentum onshore last week, including proposals for: 1) special central government bonds in the low trillion RMB range, 2) consumption coupons to households, and 3) rural auto subsidy plan. Thematically, the consumer is seen by most to be in the eye of the storm, hurt by the dramatic purchasing power squeeze, which is expected to lead to a retrenchment phase. However, we believe a spending downturn isn't inevitable, unless labor markets deteriorate meaningfully. Wage growth is coming through, the cushion of unused savings can be used to smooth consumption, and high-frequency card spending data is resilient so far. A key for consumer fortunes is how the wedge between CPI and wages develops, and these variables could cross in a favorable way over the next 6M. Consumer cyclical plays started the year well, only to surrender the gains; their valuations are now near record lows (*Equity Strategy*, May 23rd).

China positive momentum should drive EM stronger. China's macro outlook should positively desynchronize from the global economy into 2H22. There is also some positive de-risking optionality as (1) US President Biden commented on potential Chinese tariff reductions to help control rising US consumer prices, and (2) Peaking uncertainty from regulatory, de-listing and geopolitical risks for China Internet (*EM Lighthouse*, Jun 2nd).

We maintain a pro-risk allocation in EM. EM equities should outperform, driven by upward bias to consensus EPS and downward bias to equity risk premium. We are OW China equities. A China macro policy pivot will produce strong growth acceleration into 2H22 and should lower equity risk premium/support sentiment for China equities. We downgraded Thailand to Neutral as a growth hedge and given tourism headwinds (*Key Trades and Risks*, May 12th).

With Macro limiting visibility we stick to relative trades in SMid caps. The math continues to paint a benign outlook for SMid-Caps with fundamentals still strong, valuation still undemanding, sentiment having already started to price in some of the risk, and technicals that point to pockets of opportunity and a potential short-term rally. The problem is that the Macro continues to deliver conflicting data points and thus zero visibility. Because of all this, we stick to the cautious stance we held since March (*The SMid View* June 7th).

We continue to see SMid benefitting from a superior medium- to long-term outlook, while also being less exposed short-term to the volatility brought about by passive funds. We remain OW on Energy, Materials and Leisure (*SMid Alpha*, May 17th).

Saudi & Iraq raise capacity growth on the back of strong oil demand; stay OW Energy. At a recent conference, the oil ministers of Saudi Arabia and Iraq highlighted continued tightness in the oil market, and the importance of maintaining spare capacity in managing price spikes. Saudi and Iraq each plan to raise capacity by ~1mb/d by 2027. In contrast, outside of the GCC, supply growth continues to fall short of expectations: we estimate the total OPEC+ undershoot vs quotas reached 1.8mb/d in April, with the group's spare capacity 'buffer' declining concurrently to just 8%. In our view, this means that, while OPEC+ production is growing in absolute terms, the group's ability to influence price is diminishing. We believe this creates upside risk to current prices, particularly in the context of expected higher summer demand, China reopening, and the potential for outages during the Atlantic hurricane season (*Global Energy Strategy*, May 17th).

Bonds

Bonds sold off this week amid hawkish ECB/RBA meetings, higher US CPI and Beijing rolling back some of its COVID-19 restrictions. In the **US**, the strength in the US CPI release raises risks of a more aggressive near-term path for hikes. This, along with an absence of bank demand in intermediate maturities and strong pension fund demand at the long end, mean we see the curve under further flattening pressure and we keep 5s/20s flatteners and initiate 5Y breakeven wideners.

In the **Euro area**, the ECB delivered a hawkish surprise by signaling a front-loading of rate hikes. Our economists now expect 125bp of hikes in 2022 followed by 100bp in 2023. We entered 5s/30s EUR swap curve flatteners and Jun23/Jun24 Euribor flatteners, and hold short 10y Italy vs. Germany. In the **UK**, we see the 75bp of hikes priced in by August as excessive and hold Jun22/Aug22 MPC OIS flatteners and receive 5Y SONIA vs. USD OIS.

In **EM**, fixed income will remain challenged into the second half of the year by the ongoing tightening in global financial conditions to tame inflation. With little apparent risk premium beyond some high yielders such as Brazil and South Africa, the path of least resistance is for higher EM yields and we remain UW local duration. We are UW Malaysia, Thailand, Czech Republic, Hungary and Chile (*EMOS*, Jun 10th).

Credit

Different Spreads For Different Threads. We worked with our economists to develop three different macro scenarios for the next 12 months; essentially, contrasting a base-case scenario where global central banks successfully 'thread the needle' with inflationary and recessionary alternatives. As if to underscore today's fat-tailed world, these scenarios are seen as having broadly equal probability weights; that is, the conjoint probability of both successfully taming inflation while also avoiding a recession is only approximately one-third. Spreads are generally seen tighter in base-case Scenario I and wider in both Scenarios II and III, with inflationary Scenario II the worst in terms of outcomes. We also discuss a number of risk factors related to the global financial sector (*Credit Watch: Different Spreads For Different Threads*, June 9th).

The most recent readings on inflation and consumer sentiment pose a challenge for spreads near term. That said, our sense is that investors, on balance, have been overwhelmingly skeptical of this latest rally all throughout. As well, supply has been relatively light, especially in the long-end and fund outflows have persisted but at a moderate pace. Thus, there has been a strong incentive to maintain higher cash balances, and this leaves positioning relatively clean, which in turn means HG spreads are likely to take their cue from broader markets. Persistent upside surprises on inflation could force the FOMC to signal potential for more tightening down the road and reinforces our view that higher quality paper in the belly of the curve is more attractive from a RV perspective than the supply-starved long-end or the front-end. Looking further out, Q1 earnings were good enough for credit, and HG yields remain very close to multi-year highs which is supportive for spreads. On the other hand, ever higher hedging costs as well as a still cheap Euro HG market pose continued challenges alongside the expectation that earnings growth is decelerating sharply (*CMOS*, Jun 10th).

We would expect European credit markets to widen in sympathy with periphery spreads over the near-term. There was a major hawkish surprise from the ECB this week. The lack of detail on new anti-fragmentation tool was the most pressing concern, which caused BTP-Bund spreads to widen. We believe it will take a "mini-crisis" for the Council to be able to agree on a tool, and this crisis could come sooner rather than later. We would expect credit markets to widen in sympathy with periphery spreads, even if we ultimately expect a resolution. As a result, we continue to recommend being hedged (*European Credit Weekly*, June 10th).

In Europe, **we now recommend cutting risk**. We took profit on our OW of corporate hybrids, with the asset class no longer trading cheap. Additionally, we added an iTraxx Crossover 450-500bp August payer spread. As we discussed previously, the bull case for euro credit was that we were already pricing in peak central bank hawkishness with the economy organically slowing – but not entering recession. However, HICP data came in well above consensus and has already caused a hawkish shift in central bank rhetoric. Reopening in China could also potentially be a double-edged sword for inflation and central bank expectations (*Sell the bounce*, May 31st).

An interest rate shock awaits those needing to refinance, but this will filter through slowly at a macro level. Without meaningful progress on various macro headwinds, European leveraged finance origination should remain sporadic. Last year's record supply means the primary market slowdown shouldn't have systemic consequences. The short average maturity of the index (4.4y) means that any hiatus in supply will create a substantial refinancing backlog. However, at a

macro level the cash flow hit will filter through slowly. (*High Yield Talking Points*, May 31st).

Tightening financial conditions continue to dominate a myriad of risks facing EM credit, but a commodity price uplift continues to be the saving grace for many countries, with 60% of net commodity exporters in the EMBIGD. We have dialed back some of our oil exposures, but we continue to see commodity prices as a mitigating factor cushioning a large share of the asset class. We look for modestly tighter spreads by year-end, but still revise our target higher to 425bp from 350bp (*EM Sovereign Credit Strategy*, Jun 10th).

Our EM client survey shows investors increased cash balances to highest level since 2016. Our May 2022 EM client survey had participation from 232 investors with $1.4Tr in EM fixed income and currency AUM. Investors retraced last month's reduction in EM sovereign exposure; while cash balances jumped to the highest level since Nov'16; UW rates positioning remained unchanged and investors moved further UW FX. EM retail bond funds had $11.3bn of outflows since the last survey, surpassing the four-week outflows observed back in March. Nearly 50% of participants think EMBIGD spreads will end tighter between 400-449bps by year-end (*EM Client Survey*, May 19th).

Commodities

Underlying supply-demand pressures are pointing to another leg higher in road fuel prices. Even before the COVID pandemic, Western refiners had retrenched and the COVID demand shock led to nearly 2 mbd of worldwide refining capacity being halted in 2020. Venezuela and Russia sanctions-related feedstock mismatches have reduced effective capacity in Europe and the US even further. While Russia has been successful in marketing its deeply-discounted crude it has faced difficulties selling its refined products, and China also cut its refineries' export quotas by more than half this year. Unless China decides to lift its export caps and new Middle East capacity comes online more quickly than we expect, the shortage of clean products will only get worse. Yet, policymakers around the world are doing all they can to sustain or even stimulate demand (the IMF estimates that this year total energy subsidies are expected to increase by $305 billion to $6.8 trillion). With demand stimulated and supply constrained, fuel prices will continue rising until demand is destroyed to a level where it can meet supply. In the US, if retail gasoline prices break above $6/gallon, as our forecast calls for, US gasoline demand should decline sufficiently to balance the market (*Oil Weekly*, June 7th).

Higher OPEC+ supply is not sufficient to make a difference for global oil balances when demand is at its seasonal peak and China is reopening. OPEC+ announced it would accelerate increases in its production quotas in July and August. But with Russia production unable to increase and only a handful of other OPEC+ participants with spare capacity, we only expect an increase in OPEC+ output of about 160 kbd in July and 170 kbd in August. In fact, the risks to our supply estimates are skewed to the downside. A maximum 1.5 mbd loss of Russian production depends on China increasing its purchases of Russian crude by 1 mbd – a task much more difficult to execute under the announced EU sanctions package. We maintain our Brent price forecast of $114/bbl for 2Q22, with a peak monthly average price of $122/bbl in June. Were China to disappoint, Brent could average $122/bbl in 2Q22, followed up by $118/bbl in 3Q22. The OPEC+ decision to increase caps is unlikely to lower fuel prices for American consumers. The size of production increases is irrelevant if there is not sufficient capacity to distill that crude oil into clean products, and the only effect would be to widen refining margins even further (*Global Commodities*, Jun 2nd).

US gasoline prices to break above $6. The national average US retail gasoline price topped $4.50 a gallon for the first time last week, up ~50c from a month ago, and a massive jump from $3.04 per gallon a year ago. With expectations of strong driving demand, US retail price could surge another 37% by August to a $6.20/gal national average. As peak US summer driving season begins, diesel is taking a back seat to gasoline. Toward the end of April, US diesel prices peaked at a $1.63/gal premium to US gasoline, the highest diesel premium ever. Over the following two weeks, US gasoline prices climbed to close that gap and today gasoline is trading at a 15 cents per gallon premium to diesel. Typically, refiners produce more gasoline ahead of the summer road-trip season, building up inventories. But this year, since mid-April, US gasoline inventories have fallen counter seasonally and today sit at the lowest seasonal levels since 2019. Gasoline balances on the East Coast have been even tighter, drawing to decade lows (*Global Commodities Oil Flash Note*, May 17th).

Base metals prices have hit a China-sized air pocket but we still see a summer rebound. We think prices will average back at these levels next year, but in the shorter term the selloff will likely reverse as an eventual rebound in Chinese demand once again stresses markets with relatively little buffer (*Metals Weekly*, May 13th).

Risks mount for agri markets. Ukraine's wheat harvest is due to commence and seaports remain closed. A warm and dry end to July is forecast across much of the central US and the Non-Commercial net long position across the US traded agri markets has fallen ~42% below mid-April levels. Energy markets continue to surge and talks on a Ukrainian food export corridor have not progressed. With our price forecasts sitting well above backwardated futures curves we stay long the complex via an index. (*Agri Markets Weekly*, June 10th).

We see agriculture prices remaining elevated through 2023 and likely beyond. Historical episodes of food price inflation have typically been driven by supply side shocks, often from adverse weather. For agri markets, this time is different, and far more complex and likely longer to overcome, despite the aggressive selloff across markets through late May. Our revised fundamental balances continue to show yoy draws in inventories through 2022/23 with the exception of soybeans (*Agricultural Markets Quarterly*, Jun 2nd).

The USDA's May WASDE detailed an outlook of persistent draws in world 2022/23 wheat, corn and cotton inventories, while soybeans are likely to build. We remain constructive on the complex and see upside for prices through 2Q22, particularly for wheat and corn (*Agricultural Markets Weekly*, May 13th).

Currencies

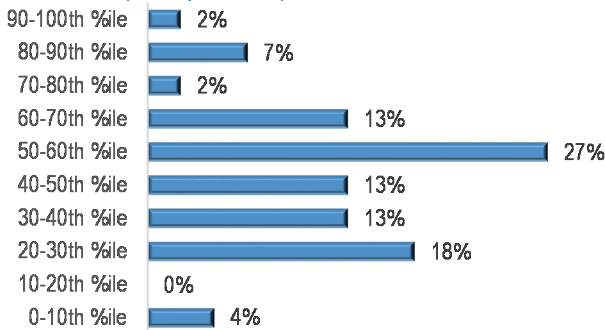
The ECB was hawkish and we now expect more hikes in 2022, but we re-enter EUR/USD shorts and maintain a bearish EUR bias. Consistent with our stagflationary framework for G10 FX, hawkish pivots are not all currency-positive; and in the case of EUR specifically, we believe it is net-negative. We have been skeptical of EUR's ability to meaningfully and sustainably rally as the ECB begins its process of policy normalization, given its unique constraints regarding the periphery as well as the outsized regional risks pertaining to Ukraine and energy prices (Extending bearish EUR/USD to parity, May 12th). The currency weakness following the meeting reaffirms that ECB faces particular trade-offs, higher inflation and growth/fragmentation risks that can dilute the typically-positive pass-through from narrower EU-US rate spreads. Now, peripheral yields are moving and pose a more serious headwind to EUR. EUR/USD has proven closely negatively correlated to peripheral spreads in recent months, and a two-factor model including EU-US yields suggests 10bps in peripheral yields is worth approximately -0.7% in EUR/USD. Wider peripheral spreads can therefore offset EU-US spread narrowing on further hawkish ECB developments, to the detriment of EUR (*G10 FX Strategy*, June 9th).

JPM Clients' View

Click here to take this week's survey

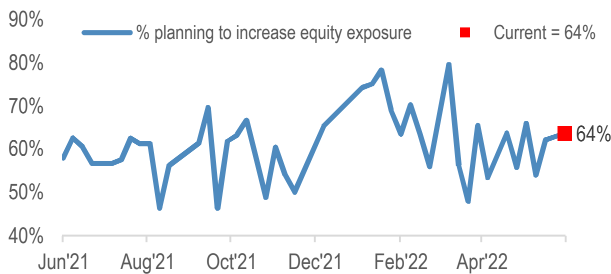
This week, we poll investors on the ECB, inflation and US-China tariffs, in addition to our running survey questions on equity positioning/sentiment, and intentions for near-term changes to equity allocation and bond duration. The results from the last survey are shown below[1].

Figure 2: What is your current equity positioning or sentiment in historical terms, expressed from most bearish (0th percentile) to most bullish (100th percentile)?



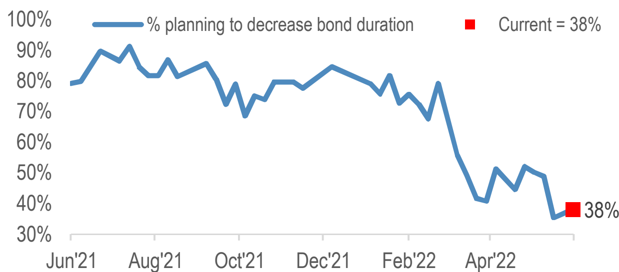
Source: J.P. Morgan.

Figure 3: Are you more likely to increase or decrease equity exposure over the coming days/weeks?



Source: J.P. Morgan.

Figure 4: Are you more likely to increase or decrease bond portfolio duration over the coming days/weeks?

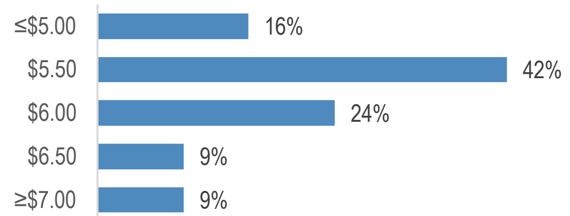


Source: J.P. Morgan.

Figure 5: Is the recent rebound in Chinese equities a bear market bounce or a turning point?

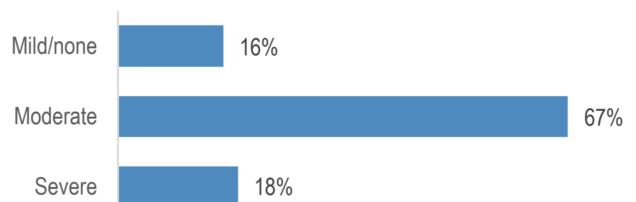
Source: J.P. Morgan.

Figure 6: What do you believe will be the peak US retail gasoline price this summer? (in $/gal, current level = $4.73)



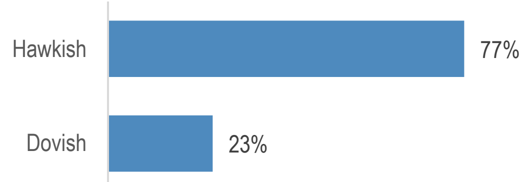
Source: J.P. Morgan.

Figure 7: How much of a headwind do you believe gasoline prices will be to consumer discretionary spending in Q3?



Source: J.P. Morgan.

Figure 8: Do you expect the ECB to turn more hawkish or dovish from here?



Source: J.P. Morgan.

[1] Results are based on 45 responses received from clients in our survey conducted June 6-13th

How to play the US vs. Euro theme?

The May US CPI report contained mixed messages. The large upward surprise in headline inflation in particular put downward pressure on equities by triggering further repricing of the Fed by rate markets. The peak in the Fed funds rate is now projected at 3.9% by May 2023 vs. a previous peak of 3.4% by August 2023. At the same time, the yoy Core US CPI rate has declined for a second month in a row, consistent with some peaking of the inflation impulse (Figure 9). We got a similar message from recent business surveys. For example in the May NFIB survey the net balance of small firms' compensation plans subsided further (Figure 10). Some survey based measures of inflation expectations are also signalling an inflation peak. After a 5%-7% range for 2022, economists in the latest (June 2022) Blue Chip Survey of Financial Forecasts project that the yoy pace of US CPI/PCE inflation will subside towards 3% in 2023 and towards 2.4% in 2024.

Inflation volatility appears to be also peaking. The 3-month changes in headline CPI shown in Figure 11 on an annualized basis are consistent with a peak in inflation volatility. And the decomposition of US CPI in Figure 12 shows that while much of the volatility in CPI in 2021 and 2022 has arisen from energy and reopening components, in 2022 to-date the reopening components appear to have stabilised with volatility largely stemming from the energy component. With a significant re-pricing in energy already having taken place, in principle this influence should begin to wane over time in the absence of further energy-related shocks.

A peak in inflation volatility is not only justifying a relative stability in bond markets' term premia and equity markets' embedded discount rates but also a short stance on rate vol. Indeed our US rate strategists expect 3Yx10Y US swap rate vol to fall to below 5bp/day, also premised on a steady maturation of the Fed hiking cycle, which in turn should narrow the range of possibilities as in the 2004 cycle (Figure 13).

For those less keen to sell rate vol outright we believe pairing a short rate vol trade with a long FX vol trade is also attractive. After several years where they exhibited little sensitivity to global risk drivers, FX vols re-priced markedly higher since the start of 2022 as inflation induced tighter monetary policy. In particular, FX vols started screening as cheap relative to underlying rates drivers (based on an analysis which models a rates spread volatility via the two swaptions and the corresponding correlation of the rates) since last summer. Despite the rise of FX vols over 2022, the dislocation remains significant (by roughly 2.5 vols, for a basket of 1y ATM USD/G10 vols, Figure 14), after the latest fall of FX vols as experienced since mid-May. The tool was one of the inputs that suggested buying FX vols as a hedge against tighter monetary policy in a cross-asset note released this March (Cross Asset Strategy - Mind the Gap in Vol, Salopek et al, 14 March). A cross-sectional analysis comparing proxy of rates spreads vol and FX vols currently finds EUR and CHF as the two cheapest FX volatilities within the G10 space based on the underlying rates drivers.

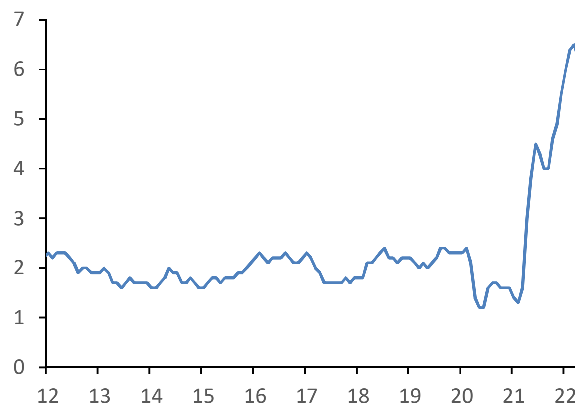
Looking at the vol of the asset classes, what stands out in our opinion is how high volatility risk premia (proxied by the 3m implied vs. 1m realized vol ratio in the last column of Figure 15) are in US credit (CDX.HY and CDX.IG) relative to either Euro credit (iTraxx Main or iTraxx CrossOver) or US equities (S&P500). In our opinion this discrepancy implies relative vol opportunities, i.e. selling 3-month straddles on CDX.HY vs. buying 3-month straddles on iTraxx CrossOver (delta hedged, vega neutral) or vs. buying 3-month straddles on S&P500 (again delta-hedged, vega neutral).

While we recommend selling rate vol in the US, we find it less attractive to do the same in other rate markets, especially those with less advanced hiking cycles. In fact the past week has seen the ongoing hawkish central bank shift gathering steam with both the ECB and RBA delivering hawkish surprises. The latter surprised markets with a 50bp hike (vs. market pricing of 32bp of hikes) combined with a hawkish post-meeting statement (*RBA: The destination not the journey*, Jun 7th). And while the ECB announcing an end to QE on Jul 1st was largely in line with expectations, it provided a hawkish surprise by signalling not only a clear intention of a July hike but also a high likelihood of a 50bp hike in September unless the inflation outlook improves by then. Following the meeting, our economists now expect a total of 125bp of hikes in 2022, followed by 100bp in 2023. That said, the ECB revealed little about a possible new anti-fragmentation tool to mitigate 'unwarranted' fragmentation, and our economists have argued that it could take a 'mini crisis' for the ECB to agree on such a tool (*ECB: A discontinuity points to faster rate hikes*, Jun 9th). This catch-up of the ECB with prior Fed hawkishness has also seen signs emerging of an inversion at the front end of the EUR OIS curve (Figure 16), similar to the USD and GBP OIS curves previously, suggesting some concerns over a policy mistake by markets are now also emerging for the ECB.

How can investors position for the theme of ECB hawkishness catching up with the Fed? One place is credit where we are UW Euro vs. US HG credit, not only due to the bearish duration impulse from higher yields but also due to the ECB's QE purchases coming to an end also ending its role as a price insensitive buyer of euro credit. Similarly, we are UW Euro area periphery given the lack of delivery on a new 'anti-fragmentation' tool and the limited pushback or even acknowledgement of the recent spread widening that effectively represents a tightening in financing conditions. This fragmentation risk does make playing the ECB hawkishness theme less straightforward in FX, as our FX colleagues' models suggest every 10bp widening in periphery spreads is worth -0.7% on the EUR/USD exchange rate. Indeed, as the fragmentation risk presents unique headwinds to the euro from ECB tightening, they turned bearish on EUR/USD. In equities, in principle ECB hawkishness could weigh on Euro area equities relative to US equities, but this is also less straightforward given the greater value tilt to Euro area equities. Instead, the fact that ECB hawkishness has seen Euro area yields catching up with YTD rises in US yields should see a convergence in the European value factor with the US value factor where the latter has recovered most of its underperformance since early 2018 while the former remains some way from that level (Figure 17).

Overall, we stay with a pro risk stance in our model portfolio as we believe that the YTD repricing in risk assets and especially in equities incorporates enough recession risk. We remain underweight credit vs. equities given the greater vulnerability of the former to higher interest rates and QT. We keep a large overweight in commodities not only at an asset class level but also within equity sectors and within currencies as hedge to inflation. Within rates, curve flatteners remain our top theme in both US and Euro rates. In EM, the backdrop remains challenging given a combination of downward revisions to growth forecasts and a more front-loaded Fed hiking cycle tightening financial conditions for EM economies. Within EM equities, we continue to favour China given valuations and given signs of easing in tech sector regulations. In FX, we continue to favor the dollar given fragmentation risks in the euro area and a dormant BoJ. As mentioned above we are reluctant to play the ECB hawkishness via buying the euro. Instead we prefer to play the ECB hawkishness via intra-EMU sovereign spread wideners, underweights in Euro vs. US credit and a "catch up" in the European equity Value factor vs. the US Value factor.

Figure 9: US CPI Less Food and Energy yoy %



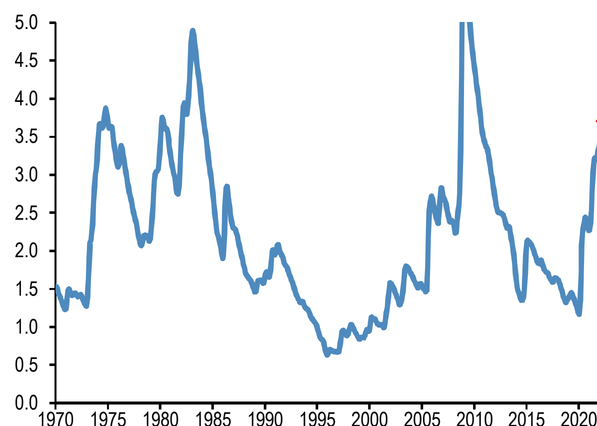
Source: J.P. Morgan, Bloomberg Finance L.P.

Figure 10: NFIB Compensation Plans Index

Source: J.P. Morgan, Bloomberg Finance L.P.

Figure 11: US CPI inflation volatility using 3-month annualized CPI change

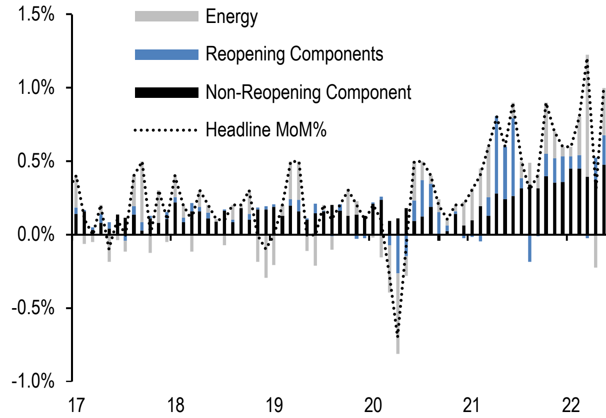
In %. Exponentially weighted moving average of annualized 3-month CPI change. Red dots based on JPM CPI forecasts



Source: J.P. Morgan

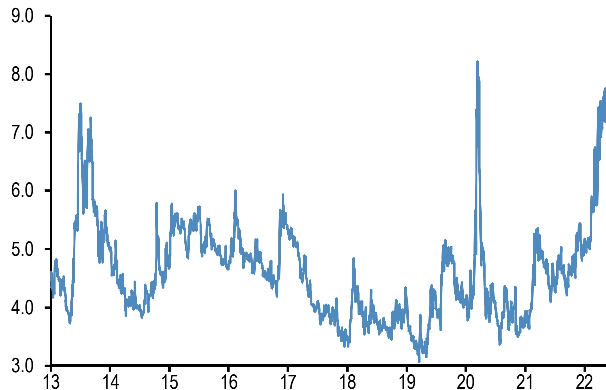
Figure 12: US CPI components

MoM % change, SA



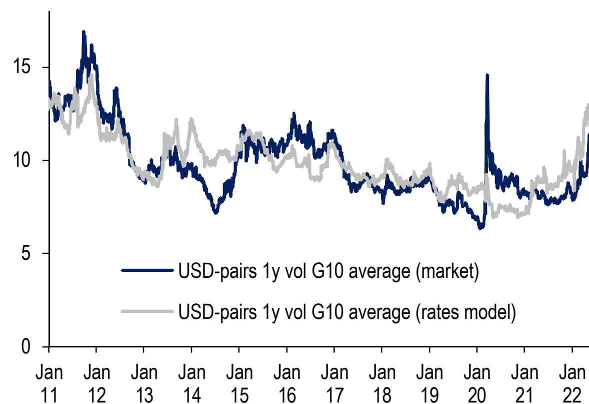
Source: J.P. Morgan.

Figure 13: 3-month implied volatility of the 10y US swap rate in bps per day



Source: J.P. Morgan.

Figure 14: FX vols remain undervalued relative to the underlying rates drivers



Source: J.P. Morgan

Figure 15: Cross-asset volatility monitor

Asset	Current	Low	Low date	High	High date		Upside	Downside	Implied/realized volatility
S&P 500	24%	13%	28-Jun-21	28%	9-May-22		4%	11%	0.8x
EuroSTOXX	23%	14%	24-Jun-21	39%	4-Mar-22		17%	9%	1.1x
Nikkei 225	19%	16%	30-Jun-21	27%	9-Mar-22		8%	3%	1.1x
Hang Seng	24%	15%	28-Jun-21	61%	14-Oct-21		38%	9%	0.8x
MSCI EM	24%	15%	13-Apr-22	41%	11-Mar-22		17%	8%	0.9x
Gold	15%	13%	11-Jun-21	27%	8-Mar-22		12%	2%	1.4x
Oil (brent)	47%	28%	25-Jun-21	73%	23-Mar-22		26%	19%	1.4x
Copper	26%	24%	10-Jun-21	34%	15-Oct-21		8%	2%	1.0x
BB commodity index	26%	15%	15-Jun-21	28%	6-Apr-22		2%	11%	1.6x
EUR/USD	8%	5%	14-Sep-21	10%	7-Mar-22		2%	3%	0.9x
USD/NOK	13%	9%	15-Jun-21	16%	12-May-22		3%	4%	1.1x
USD/JPY	12%	5%	14-Sep-21	12%	28-Apr-22		0%	6%	1.0x
GBP/USD	9%	6%	11-Jun-21	11%	9-May-22		2%	3%	1.0x
USD/CHF	9%	6%	11-Jun-21	10%	12-May-22		1%	3%	0.9x
10y US swaps	106	66	10-Jun-21	123	10-May-22		17	39	1.0x
10y Eur swaps	99	36	24-Aug-21	115	16-May-22		16	63	1.1x
CDX IG	61%	39%	25-Jun-21	76%	7-Mar-22		15%	21%	2.0x
CDX HY	58%	33%	11-Jun-21	68%	7-Mar-22		10%	24%	2.1x
iTraxx	58%	36%	8-Nov-21	86%	7-Mar-22		28%	21%	1.2x
iTraxx X/O	57%	40%	25-Jun-21	85%	7-Mar-22		28%	16%	1.3x

Source: J.P. Morgan, Bloomberg Finance L.P.

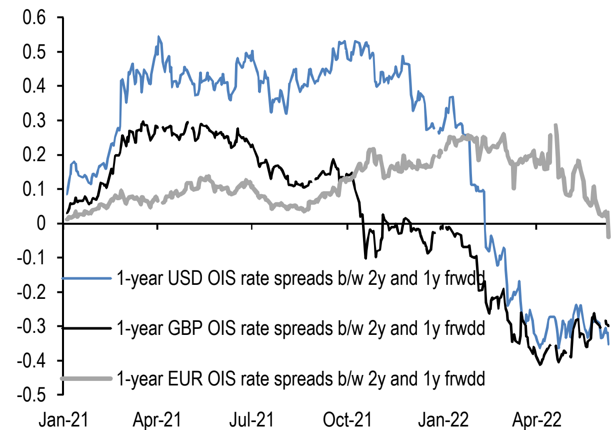
Note: Swaps volatility is 3m 10y payer ATMF implied annualized BP vol and credit volatility is 3m 5y on-the-run ATM spread volatility. MSCI EM, Gold, Oil, Copper, BB Commodity Index and Treasury futures are 3m implied vol from Bloomberg.

Definitions:

Current:	Latest available closing level (09-Jun-22)
Low:	Lowest closing level in the last 1y
Low date:	Date the lowest closing level was reached (or the first time it was reached in the case of several identical low closing levels)
High:	Highest closing level in the last 1y
High date:	Date the highest closing level was reached (or the first time it was reached in the case of several identical high closing levels)
Graph:	Shows the current level and the 25th/75th percentile relative to the 1y high/low
Upside:	Implied return/volatility percentage points from current level up to the High (note: return is calculated as simple difference for spread products)
Upside (σ):	Upside in terms of standard deviations (Upside / Current 1y realized volatility)
Downside:	Implied return/volatility percentage points from current level down to the Low (note: return calculated as simple difference for spread products)
Downside (σ):	Downside in terms of standard deviations (Downside / Current 1y realized volatility)
Implied/realized volatility:	Current 3m implied volatility / current realized 3m volatility

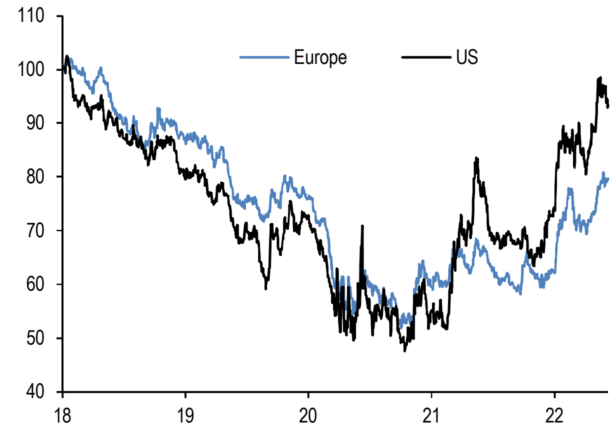
Source: J.P. Morgan.

Figure 16: 1-year USD, GBP and EUR OIS rate spreads between 2y and 1y forward



Source: J.P. Morgan.

Figure 17: Europe and US Value factor



Source: J.P. Morgan, Bloomberg Finance L.P.

Long-Only Asset Allocation

GAA Long-only portfolio allocation

Major Asset Classes			Active Weights	Prior Month	Δ	UW | OW
Equities			12%	12%		
Govt. Bonds			-12%	-12%		
Corp. Bonds			-5%	-5%		
Commodities			7%	7%		
Cash			-2%	-2%		
Major Sectors within each Asset Class			**Active Weights**	**Prior Month**	**Δ**	**UW | OW**
Equities	Countries	US	-3.0%	-3.0%		
		EMU	-3.0%	-3.0%		
		Japan	0.0%	0.0%		
		UK	1.0%	1.0%		
		EM	5.0%	5.0%		
		Other	0.0%	0.0%		
Govt. Bonds	Countries	US Nominal	-2.0%	-2.0%		
		US TIPs	0.0%	0.0%		
		Europe Core	1.0%	1.0%		
		Europe Periphery	-1.0%	-1.0%		
		Japan	2.0%	2.0%		
		UK	0.0%	0.0%		
		EM Local	0.0%	0.0%		
		Australia	0.0%	0.0%		
		Other	0.0%	0.0%		
Corp. Bonds	HG	US	0.0%	0.0%		
		Europe	-2.0%	-2.0%		
		UK	0.0%	0.0%		
	HY	US	2.0%	2.0%		
		Europe	-1.0%	-1.0%		
		US Loans	1.0%	1.0%		
	EM	Sovereigns	2.0%	2.0%		
		Corporates	-2.0%	-2.0%		
Commodities		Energy	4.0%	4.0%		
		Industrial metals	0.0%	0.0%		
		Agriculture	2.0%	2.0%		
		Precious metals	-4.0%	-4.0%		
		Livestock	-2.0%	-2.0%		

Equities vs. US Benchmark		
Note	Tracking Error (%)	2.11%

Govt. Bonds vs. Benchmark		
Note	Yield (bp)	-17.4
	Dur (months)	-3.63
	Tracking Error (%)	0.64%

Corp. Bonds vs. Benchmark		
Note	Yield (bp)	11.3
	Duration (months)	0.6
	Tracking Error (%)	1.76%

Commodities vs. Benchmark		
Note	Tracking Error (%)	3.11%

Source: J.P. Morgan.

Long-Only Portfolio Performance

Performance for May 2022 GAA Long-only portfolio

In bps.

GAA Long-only portfolio performance

		Benchmark (bps)			GMOS portfolio			Active (bps)		
		1D	WTD	MTD	1D	WTD	MTD	1D	WTD	MTD
Asset returns	**EQ**	-202	-173	243	-164	-120	254	38	54	11
	Govt Bonds	-27	-82	-31	-23	-73	-36	4	8	-5
	Corp Bonds	-66	-138	-39	-46	-108	-20	20	30	19
	CO	4	248	944	9	242	960	4	-6	16
	FX				0	0	0	0	0	0
(1)	**Portfolio**	-109	-112	139	-99	-59	253	9	53	115
(2)	**Cross asset class allocation**	-123	-95	232				-15	17	93
(3)	**Within asset class allocation**	-84	-76	160				24	36	22

Note: **(1)** the leftmost columns are the absolute returns of the benchmark portfolio. The center columns are the absolute returns of the GMOS portfolio. The rightmost columns are the relative performance of the GMOS portfolio versus the benchmark. If these are positive then the GMOS portfolio outperformed the benchmark. **(2)** The leftmost columns are the absolute returns of the benchmark asset classes with active asset allocation weights. The rightmost columns are the relative performance of the active asset allocation versus the benchmark. If these are positive then active allocation outperformed the passive index. **(3)** The leftmost columns are the absolute returns of the active asset classes with benchmark asset weights. The rightmost columns are the relative performance of this portfolio versus the benchmark. If these are positive then active asset classes with benchmark weights outperformed the passive index.

Source: J.P. Morgan.

Trade Recommendations

Cross Asset	Trade Inception Date
Stay long Global equities vs. govt bonds	Jan'22
Equities	
Long US Cyclicals Basket (JPAMCYCL <Index>) vs. Short US Defensives Basket (JPAMDEFN <Index>)	Jun'22
Japan share buybacks trading strategies	Jun'22
Long CSI 1000 1Y TRS	Jun'22
EM Equities – Turbulent environment but resilient earnings and margins	May'22
Macro option trades (EM, Energy and Biotech)	Apr'22
Our preferred EMEA trades in Equity Derivatives entering 2Q22	Dec'21
OW GARP vs GAAP – Buy SMID 'Growth Havens' vs SMID 'Growth Shorts'	Feb'22
Long KOSPI 200 – S&P500 Synchronous Variance Spread	Dec'21
LONG: US Tariff Reduction Beneficiaries Basket (JPAMUSIM <Index>) vs. SPX	Dec'21
Long UK (UKX Index)	Dec'21
Long Oil Outperformers Basket (JPAMOILO <Index>) vs. SPX	Oct'21
Short Oil Underperformers Basket (JPAMOILU <Index>) vs. SPX	Oct'21
Long Brazil, Short Mexico	Oct'21
COVID-19 Recovery Domestic (JPAMCRDB <Index>) vs. SPX	Sep'21
Position for Re-opening in Asia	Sep'21
Long China Policy Beneficiaries	Sep'21
Sell S&P 500 Skew and Convexity	Aug'21
Long Mining (SXPP Index)	Aug'21
Long EM (MXEF Index)	Aug'21
Long COVID-19 Recovery International Basket (JPAMCRIB <Index>) vs. SPX	May'21
Long Banks vs Asia ex Japan	Mar'21
Russell 2000 up-var vs. S&P 500 variance spread	Dec'20
Long Banks (SX7P Index)	Nov'20
Buy the Russell 2000 Value vs the Russell 2000 Growth	Oct'20
Long S&P 500 dividend futures	Jun'20
Long in Euro STOXX 50 dividend futures	Apr'20
Long "5G Thematic" vs. SPX	Dec'19
Fixed Income	
Add 5s/30s EUR swap curve flatteners	Jun'22
Long 10y CAD and AUD swaps vs. GBP and USD swaps	Jun'22
5s/20s UST curve flatteners	May'22
Short 10y Italy vs. Germany	Mar'22
Credit	
Be underweight agency MBS	May'22
OW EM Sovereign Credit vs DM corporate Credit	Feb'22
Long US vs. EUR IG credit	Dec'21
FX	
Buy CAD vs basket of USD & EUR	Jun'22
Bullish CHF. EUR/CHF short in cash	Jun'22
Scandi longs vs EUR via ratio spreads	Jun'22
Bearish GBP, Stay short cable and hold 3m GBP/CHF 20d put	May'22
Bearish NZD; stay short vs AUD and vs a basket of reserves	May'22
Hold EUR/USD Shorts	Mar'22
Commodities	
Stay long Agriculture commodity complex	Oct'17

Source: J.P. Morgan

Cross-Asset Trading Themes

Stay long Global equities vs. govt bonds

Bond yields have continued to rise amid the ongoing hawkish shift from central banks, with the ECB and RBA now also joining the list of central banks delivering hawkish surprises. Together with lingering economic and geopolitical risks this has also weighed on risky assets. Given we continue to see the economy passing the test of near-term headwinds, and equities incorporate significant recession risks already, this keeps us OW equities vs. government bonds.

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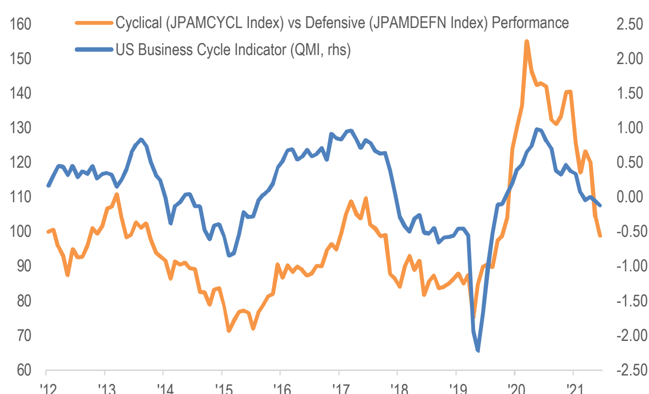
Equities Trading Themes

Long US Cyclicals Basket (JPAMCYCL <Index>) vs. Short US Defensives Basket (JPAMDEFN <Index>)

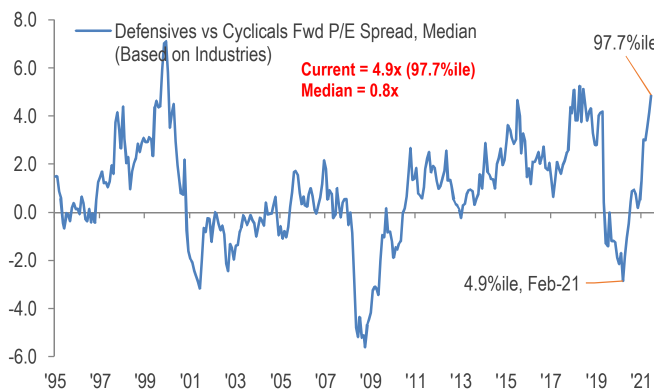
Defensive stocks are trading at almost record premium over Cyclicals (98%ile now vs. 5%ile in Feb 21). At the current juncture Defensive stocks possess valuation risk while flushed out Cyclicals / Growth / Small-caps are presenting an increasingly attractive risk/reward. Investors are likely to rotate out of Defensive stocks if this sell-off proves to be another mid-cycle scare. Alternatively, if the economy actually falls into a recession, defensive stocks ("last one standing") are likely to rollover as investors use it for source of funding. See How Attractive Is Equity Valuation? For exhaustive *list of US Thematic Trade Ideas, Please see 'Thematic Trade Opportunities'*.

J.P. Morgan US Cyclicals Basket (JPAMCYCL<Index>) vs J.P. Morgan US Defensives Basket (JPAMDEFN<Index>)



Source: J.P. Morgan

Defensives at Near Record Premium



Source: J.P. Morgan

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Japan share buybacks trading strategies

Year-to-date cumulative notional share buybacks announced by Japan companies has beaten a record set in 2019 by a substantial margin. The record-setting buyback announcements reflect a desire among corporates to take advantage of low equity valuations and make better use of excess cash toward shareholder rewards. With July-October being a low season for new buyback announcements, we believe investor attention will shift towards the execution of announced programs. Our view remains that execution will be front-loaded relative to the time period guided by the buyback announcements, driven by a relatively low valuation in Japan equity markets versus history. Since end-April 2022, our strategy of buying the top 25 stocks by announced buyback notional or buyback ratio has been delivering meaningful outperformance versus the TOPIX. Investors can considering buying swaps or call spreads on our baskets Japan top 25 by buyback notional Jun22 (JPHJPBNJ <index>) and Japan top 25 by buyback ratio Jun22 (JPHJPBRJ <index>) for long exposure. See Asia Pacific Equity Derivatives Highlights: Buy Nikkei 2023/2024 dividends, Japan share buybacks trading strategies update for details. Increased corporate buying can help to stabilize the Japanese equity market at a time when VNKY continues to signal a high volatility environment ahead. For investors agreeing with the view, we recommend buying Nikkei double no-touch options to sell volatility with defined loss. Current volatility surface also makes it cost efficient to express a medium-term bullish view beyond a potential range trading period in the near term. To express this view, investors can considering buying call spread collar or window knock-out call options on Nikkei (See Asia Pacific Equity Derivatives Highlights: Japan's coming wave of share buybacks and trading strategies).

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Long CSI 1000 1Y TRS

The outperformance opportunities arising from long TRS is the highest in CSI 1000 among major China A-share indices. In recent years, following the institutionalization of A-shares investors, we observe rising influence of quant strategies in driving the moves in implied funding rates. Mirroring rising investment interest in the mid- to small-cap segments of China A-shares, the AUM of CSI 1000-linked funds have been growing rapidly. This year, the market environment has turned out to be quite challenging for quant strategies to beat the underlying benchmark. Nevertheless, CSI 1000-linked index enhancement funds continue to deliver the highest excess return versus peers, suggesting a relative abundance of alpha generating opportunities in the index. With our China

equity strategists re-affirming their positive views on China small-caps, we recommend investors going long CSI 1000 1Y TRS to implement the view. The discounted pricing of swap funding cost is a benefit for long investors especially in times of elevated market volatilities. (See Asia Pacific Equity Derivatives Highlights: Reiterate bullish views on China SMID-caps, CSI 1000-linked products flow dynamics).

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EM Equities – Turbulent environment but resilient earnings and margins

EM equities should outperform DM Equities in 2H22. Risky assets faced a tough 1H22 driven by rising interest rates, commodity-price inflation, weakening global GDP growth and COVID-19 induced supply chain disruptions in China. Our 2022 YE MSCI EM base case target is 1,300, implying a ~22% increase from current levels. **We maintain a pro-risk allocation with a cyclical / value title, in our EM equities model portfolio** and expect EM equities to outperform driven by upward bias to EPS consensus estimates and downward bias to equity risk premium. We are OW: (1) Brazil, Saudi Arabia, China and Indonesia; and (2) Energy, Materials, Financials and Cons. Discretionary.

We expect EM outperformance driven by: (1) **A positive de-synchronization.** EM relative growth premium to accelerate into 2H22 and into 2023. (2) **Healthy EPS outlook.** Our top-down model points to 2022 EPS growing 8ppt points above consensus for MSCI EM, mostly driven by high commodity prices. (3) **Risk appears priced in.** EM forward P/E trading at a 32% discount to DM (compared to a 23% historical average discount). (4) **Low investor positioning.** Global investors are 6.2% allocated to EM equities vs 20 year average allocation to EM of 8.9%.

We are confident that the China macro policy pivot will produce strong GDP quarterly growth acceleration: 7.5%/7.3% for 3Q22/4Q22 saar. We assume China leaders aim to deliver growth within a reasonable range after a difficult two months coping with the Omicron lockdown in Shanghai. This should help ease concerns over earnings risks, partially lower equity risk premium concerns and support market sentiment for China equities, where we see meaningful equity risk premium priced in. We isolated periods where China PMI was above / below median levels and momentum (advancing / declining) and compare performance of EM markets/sectors against these four quadrants – see report. The scenario of China's low growth and negative momentum has been in transition to low growth but positive momentum. Historically this led to: (1) the strong absolute performance of EM equities, with marginal outperformance to US; and (2) Brazil, China, Colombia, Greece and Taiwan have outperformed EM by more than 0.5% with a frequency over 50%.

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Macro option trades (EM, Energy and Biotech)

As we discussed in *Market and Volatility Commentary*, 1-Jun-2022, we believe the strong dispersion of performance and valuation create opportunities for outperformance. Some market segments (defensives, staples, etc.) are trading near all-time-high relative valuations, while other market segments (e.g., innovation, China ADRs, small caps, energy, biotech, etc.) are trading near all-time-low relative valuations. For this reason, we think the most attractive investment opportunities are in these oversold sectors that provide asymmetric upside. In particular, we recommend:

- *Position for the outperformance of EM equities* via 6M ATM call switches (long EEM calls vs short SPX calls). EM remains our top equity regional OW on expectations for easing policy and COVID reopening in China, cheap valuations, and low positioning. Since initiating our trade, EEM has outperformed the S&P 500 by ~1.5% but both are down, leaving our trade with a flat P/L.

- *Upside in Energy Stocks* via call spreads on XLE. We believe we've entered a new commodity super-cycle, with structurally higher energy prices. Our Equity Strategists recently reiterated their high conviction OW on the Energy sector with a strengthening case for rapid earnings growth and multiple re-rating. Our trade expired at a cumulative profit of +16.5% given the strong performance of the Energy sector, including a 5.5% gain since we took partial profits and rolled up our trade in March.

- *Trade a recovery in Biotech* via XBI Jun call spreads. Biotech has significantly underperformed both the S&P 500 and the rest of Health Care, driven by the market's revaluation of high-growth/high-multiple industries, and overhangs from the regulatory environment, clinical setbacks, and weak investor sentiment. However, fundamentals remain intact and valuations are becoming increasingly attractive; we believe this group, which is down over 50% from its peak last year, has been oversold and should rebound. However, since inception of our

trade, the segment has come under continued pressure, trading down ~19%; our trade is faring better due to its asymmetric payoff profile, but still has a negative P/L of -1.4%. We leave our structure to expire at the end of this week, expecting to lose the up-front premium.

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OW GARP (Growth at Reasonable Price) vs GAAP (Growth at Any Price) – Buy SMID 'Growth Havens' vs SMID 'Growth Shorts'

Our proposed SMid trade looks to profit from the fact that the recent cycle has witnessed GARP seemingly having turned into GAAP, with investors paying too much for what also happens to be very demanding growth expectations – a combination that has, over the last 20+ years (i.e., since 1998), destroyed alpha significantly and consistently in every single region of the world, even during times of sustained low economic growth (i.e., Japan). Instead, based on empirical evidence, we advise investors to focus on actual growth rather than expectations (i.e., trailing growth vs Yr+1 cons estimates). Our 'Growth Havens' screen is made up of those SMid-Caps that offer quality and actual growth, trading today below their industry average valuations while screening in the top 2 quintiles of ROE and trailing EPS Growth. We combine this long screen with our short 'Growth Shorts' screen, which is made up of SMid-Caps making up the priciest part of the market – trading at rich multiples (top quintile of P/E 21E) on aggressive growth expectations (top quintile of Est EPS Growth 22E). This pair trade has delivered a return of -35 bps since we launched it on Feb 14th, 2022 (*see our June 2022 SMid View report*).

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Long KOSPI 200 – S&P500 Synchronous Variance Spread

The volatility of KOSPI2 normalized from its recent high level. However, the potential foreign and retail investor selloff, along with the political and monetary uncertainties should provide support to the volatility level. With current attractive entry level and the potential future outperformances, we maintain our preference towards the KOSPI2 – SPX synchronous variance spread (see Asia Pacific Equity Derivatives Highlights: Add KOSPI2 volatility longs in spread format, KOSPI2-SPX and KOSPI2-NKY most attractive for more details).

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Long US Tariff Reduction Beneficiaries Basket (JPAMUSIM <Index>) vs. SPX

The basket contains the largest publicly traded U.S. Importers by reported container shipping volume. These companies were adversely affected by the US/China trade restrictions in the past and could benefit from a positive policy shift. *For exhaustive list of US Thematic Trade Ideas, Please see 'Thematic Trade Opportunities'.*

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Long UK (UKX Index)

In November we upgraded the UK to OW, for the first time in six years, taking advantage of its six years of underperformance. The UK is trading at a record discount vs other regions, even when Value sectors are taken out. UK equity performance with respect to a number of macro variables appears to be changing, with the correlation to bond yields direction turning positive. BoE hiking is unlikely to be a problem for the UK market. The UK offers the highest dividend yield globally, which is, in our view, well covered this time around. Within UK, we have in November reversed our longstanding pair trade of OW FTSE250 vs FTSE100, and are now OW FTSE100 vs FTSE250.

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Long Oil Outperformers Basket (JPAMOILO <Index>) vs. SPX

This basket contains high conviction long ideas if oil goes to and stays at $100/bbl. The basket includes names with market cap >$1bn. Lastly, we applied a $10mm liquidity criteria, excluded names that are M&A targets and are difficult to short. This basket was compiled with input from JPM Stock Analysts. See Reiterate OW on Energy. *For exhaustive list of US Thematic Trade Ideas, Please see 'Thematic Trade Opportunities'.*

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Short Oil Underperformers Basket (JPAMOILU <Index>) vs. SPX

This basket contains high conviction names that would be negatively impacted by oil reaching and maintaining $100/bbl. This could be from margin impact, rising input costs or demand hit to consumer wallet. The basket includes names with market cap >$1bn. Lastly, we applied a $10mm liquidity criteria, excluded names that are M&A targets and are difficult to short. This basket was compiled with input from JPM Stock Analysts. See Reiterate OW on Energy. *For exhaustive list of US Thematic Trade Ideas, Please see 'Thematic Trade Opportunities'.*

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Preferred EMEA trades in Equity Derivatives: hybrid options if inflation continues to surprise on the upside

Ahead of the ECB June meeting, we recommended here to consider the possibility that inflation will continue to surprise on the upside and that the view that we had reached peak-hawkishness already may turn out to be wrong. In this scenario, we expected rates to go up, while the curve is flattening and equities to go down. We thought and maintain that the most efficient way to play this dual-view is via hybrid options, including, indicatively, Dec-22 Dual-Digital SX5E <92% and EUSA10 > fwd+20bps at 12%, to pay out 100% if both conditions are met at maturity, or SX5E Jul-22 97-92% Put Spread, conditional on EUSA10 > fwd +10bps at 0.68%, indicatively, approximately half of the premium of the equivalent vanilla put-spread. We also noted that J.P. Morgan FX strategists view on EURUSD aligned with our view, in that the expected lift-off in Eurozone rates would ultimately see EURUSD go down and approach parity by year end. Consequently, we also recommended the following Equity-FX Dual Digital, Dec-22 SX5E < 95% and EURUSD < 97.5% at ~11.5%. From a spot perspective, the recommendation was a lot easier to make at the time of publication, but if inflation continues to surprise on the upside, directionally we may well continue on the same path, with the market pricing in an even faster rate hiking cycle and the outlook on growth being increasingly questioned. Note, that the pricing on these hybrids is very indicative only due to the large moves we are experiencing at the moment. We also recommended to hedge the low-risk but high-impact scenario of Russia halting or reducing gas imports to Germany in response to the sixth EU sanction package against Russia. The Aug-22 90-85% put-spread can almost entirely be funded by shorting the equivalent 110% Call on DAX (or alternatively on MDAX). We said at the time, 'the risk-reward strikes us as particularly good given the backdrop of rising rates, slowing growth and an ongoing Ukrainian conflict'. European gas prices have edged lower even if Russian gas imports to both Denmark and the Netherlands (in addition to Poland and Bulgaria) have now indeed been heavily compromised. Nevertheless, we maintain the view that this hedge makes sense, even if one has to be tactical about the timing as to when to put this hedge on from a spot perspective. On the sector side we maintain our bullish stance on SXEP, the Oil&Gas sector, and expressed that view here to Buy SXEP Sep-22 Call-Ladders ahead of EU sanction package against Russia (106-110-113%), which can be bought indicatively for around 0.25%. Even if we are bullish on the sector and there is a risk of the underlying commodity spiking substantially in the aforementioned scenario of a gas crisis in Europe, we believe selling extreme upside is a cost effective way to gain upside exposure in an otherwise highly uncertain market environment. In Banks we express our bullish view via a low premium, high leverage call-fly, commensurate with our somewhat moderated conviction levels. Investors can consider, for instance, the Jun-22 €90-€95-€100 call fly is worth €0.4, indicatively, ref €81, for a max payout €5 should the index close at expiry at €95. However, we also highlighted and continue to like the risk-reward of the Jul-22 €77-€72 1x2 put ratio on SX7E at a small premium of €0.39, selling rich vol and downside skew, even if this trade looks from today's perspective more interesting directionally than purely from a skew perspective. The resulting breakeven at expiry is at a very conservative €67 in our view, while providing downside exposure at expiry from €77 down to €72, with a maximum payout of €5 should the index close at €72. The structure expires worthless should the index rally. This said, the structure will not show a positive mark to market should we see a sudden drop in the level of the index – and as such one needs to be mindful how it is employed in the context of a portfolio. Our views have not changed with regard to hedging. We recommend SX5E Jun-22 95% Put with knock-out at 80% (continuously monitored), which is indicatively offered at a ~65% discount to the equivalent 95% put. In vanillas, we recommend to sell upside and in the context of a long equity portfolio cap upside in order to fund a put-spreads, equivalent to the proposed structure on DAX or MDAX. The short vega profile is an appropriate and cost effective way to hedge in a high vol environment, in our view.

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Long Brazil, Short Mexico

Long Brazil: We have been arguing for some time that a great deal of the Brazil story lies on the global narrative. In the 1Q, Brazil became the best performing equity market in the world with the realization of high commodity prices. Despite the Fed re-pricing alongside the China lockdowns, we think that the story remains well supported. Additionally, JPM maintains a pro-risk view, in which EM should outpace DM in 2H.

Arguments are the following: 1) The global story seems to be less nebulous after China started easing lockdown restrictions, with the country reopening, stimulating the economy and putting some end to regulatory woes; 2) we think the Fed re-pricing is well advanced at this point and risks of a US recession in the short-term are reduced; 3) Valuations are practically at an all-time low, trading at more than 2SD below the 10y average at the same time that earnings are being revised higher (now close to 20% for 22YE); 4) Growth is being revised higher, albeit it remains lackluster – YTD, J.P. Morgan already revised 2022 GDP higher by 170bp to 1.2%; 5) Brazil currently has the highest carry in the world, while the rate cycle should come to an end in June; 6) Despite the recent turbulence, the BRL should be well supported by high terms of trade and the highest real interest rate in the world. We continue to recommend exposure to Brazil through commodities (materials rather than energy) and financials. **Short Mexico:** Despite the continued upward trend on earnings revisions and the proven resilient economic activity vis a vis rising inflation, we see limited upside for growth in the country. GDP forecast was revised down and it's not expected to be back to pre-pandemic levels until mid-2023 while rate hikes will go on until YE. In addition, in terms of valuation, MX is trading expensive vs. peers which could be a weakness going forward. Given the balance of risks, we remain N on Mexico but acknowledge possible upside risks given the global story.

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COVID-19 Recovery Domestic (JPAMCRDB <Index>) vs. SPX

This basket is designed to benefit as the economy reopens and there is progress in containment of the virus. Our screening methodology for COVID-19 Recovery Domestic stocks is based on S&P 500 companies that became considerably cheaper during the pandemic compared to the pre-COVID-19 period (Q2'20 vs Q4'19) based on our Value composite score (sector-neutral equal weight combination of price-to-forward-earnings, price-to-book-value and price-to-sales). The list is then filtered to select only Domestic candidates based on their Revenue exposure. The list was reviewed and further revised to incorporate fundamental stock analysts' feedback. See State of the Business, Inventory and Capex Cycles. *For exhaustive list of US Thematic Trade Ideas, Please see 'Thematic Trade Opportunities'.*

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Position for Re-opening in Asia

With the spread of the highly contagious Omicron variant in 2022, major countries in Asia (barring China) have shifted towards a "living with COVID" approach. China is also planning a medium term exit to the zero COVID strategy, with positive newsflow (production of mRNA vaccines and approval of the Pfizer anti-viral pill) on this front. The recent China wave has also peaked, which would lead to some re-opening impetus. Elsewhere, ASEAN is a key beneficiary as a region geared to tourism. We highlight a group of laggards aligned with the re-opening theme in our Quantamental Dashboard (15 Aug 2021) in sectors like leisure, tourism and offline consumption.

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Long China Policy Beneficiaries

The regulatory tightening in China in 2021 was a combination of catching up on a relatively lax regulatory environment earlier and a renewed focus on common prosperity. The primary beneficiaries of loose regulations and companies with dominant market positions (such as large cap Internet companies) remain vulnerable. However, areas that are strategically important for China's long-term growth and progress on innovation are likely to enjoy regulatory tailwinds. We highlight a group of stocks aligned with policy initiatives in our Quantamental Dashboard (1 Aug 2021) in sectors such as semiconductors or stocks, which are aligned to themes like localization and de-carbonization.

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Stay short S&P 500 Skew and Convexity

We continue to favor short skew and short convexity structures to monetize these rich risk premia, via knock-in (KI) risk reversals (long 1Y 107% calls vs. short 90% puts that KI at 61%) and ratio variance vs. volatility swap spreads (short 1x Jun'22 variance swap vs. long 0.8x vol swaps) on the S&P 500. We maintain these trades given their attractive risk profiles, the still distressed convexity risk premium (see here), and our positive market outlook. Our KI risk reversal trade is flat over the past month and has flat P/L since inception. Meanwhile, with just around a week remaining until expiry, the S&P 500 is realizing 19% volatility since inception of our convexity trade, which is well within the positive P/L range of our var-vol swap spread trade of 7.5% to 33% and very close to the level where the strategy delivers its maximum return (20%). We maintain our trades until they expire later this month.

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Long Mining (SXPP Index)

We are OW Mining, upgraded in Q4, on a likely improvement in China activity. European Miners have outperformed strongly this year, as high inflation and geopolitical developments drove investors towards the sector. We believe that the sector can continue to do well. China growth momentum appears to be bottoming out, and policy is likely to get simulative. Further, the sector offers strong balance sheets and very high and well covered dividend yields.

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Long EM (MXEF Index)

In Q2&Q3 of last year we have been highlighting tactical headwinds to EM, ranging from China credit impulse weakening, and appreciating USD, but also the continued regulatory uncertainty in China. Consequently, EM equities performed poorly last year, down 21% vs DM. We entered this year looking for convergence between EM and DM, as various headwinds are likely to become less problematic, in our view. Within this, we believed that a better way to position for the bottoming out in China activity and credit impulse, along with a more favourable policy stance, is through indirect exposure, through other parts of EM such as Brazil, UK in DM, commodities, etc., rather than direct, but we have recently advised to add to China, as well.

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Long Banks vs Asia ex Japan

The impact of hawkish central banks (led by the Fed), still above-trend growth, higher inflation, and a likely asset class rotation support a further increase in bond yields in 2022. This should be overall positive for a macro-exposed sector like Banks and aligns well with our call for continued Value outperformance this year. The fundamental outlook for banks looks attractive on all fronts—with NIMs improving, NPLs falling, and credit growth recovering. Also, Banks have underperformed the benchmark significantly in the last decade. The MXASJBK index is outperforming the regional benchmark so far (+10.7% YTD).

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Long Banks (SX7P Index)

While we acknowledge that Banks are not likely to perform as long as geopolitics is dominating, we believe that Banks remain a fundamental OW. Banks are the key play on rising yields, both short and long end, this year, and are likely to close the substantial gap they opened up with yields of late. They still look very cheap, on 0.7x P/B, their balance sheets are resilient this time around, with no need for dilution, and dividends are returning to the sector with a healthy, and well covered, 6.1% yield. Russia exposure appears limited in terms of its impact on Banks' capital base.

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Keep Long Positions in Euro STOXX 50 2023 Dividend Futures

Euro STOXX 50 2023 dividend futures are up ~4.5% since our last update, despite last week's weakness. The theoretical upside from our latest bottom-up estimates remains attractive at 14.5%, even after adjusting down the headline figure for slower economic growth and higher energy prices (see our latest stress test analysis). We continue to recommend holding long positions in DEDZ3 contracts, although the risk-reward is good rather than great as it was in Q1. We recommended rolling 2022, which were up ~65% since our initial recommendation in April 2020, into 2023 contracts in June 2021. As of today the DEDZ3 trade is up 5.0% since inception.

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Stay Long Russell 2000 Up-Var vs. Short S&P 500 Variance

We stay long Russell 2000 Dec'23 50% up-var vs. short S&P 500 Dec'23 vanilla variance, initiated in Dec'20 to generate strong carry and exploit the term structure dislocation between these indices, structured product supply/demand dynamics, and expensive downside wings/convexity. The Russell 2000 less S&P 500 volatility spread was also one of the few popular volatility spread trades that performed well during the pandemic, as the Russell reasserted itself as a higher beta index and its volatility is supported by style and cyclical rotation trades. Carry on the trade improved over the past month, with the Russell recording just a ~4 point realized volatility premium. Since our trade inception, the Russell 2000 realized ~7 points higher volatility than the S&P 500 (vs. the implied/strike entry level of -0.75v), and continues to trade well above the up-var strike, delivering significant gains to our trade. We maintain the trade to continue collecting carry, and given still rich convexity levels.

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Stay Long S&P 500 Dividend Futures

We maintain a positive outlook for dividends given: 1) positive fundamentals (companies have been announcing better than expected dividend increases, corporate balance sheets are healthy, and the high oil prices are driving upside in Energy company dividends), and 2) with the dividend curve inverted for the next few years, it is effectively pricing in a near-term recession (since a typical recession results in a couple of years of near-zero dividend growth), which we believe is unlikely to materialize at this stage. We recommend staying long 2022 and 2023 S&P 500 dividend futures. Performance was positive over the past month, with S&P 500 2022 contracts up 1% and 2023 dividend futures +0.5%, giving our trade a cumulative positive mark-to-market gain of +25% on the 2022s, and +4% on the 2023 contracts (in addition to capturing +8% profit on the 2020 contracts when we rolled them to 2022 last October and +27% P/L on the 2021s when we rolled them to 2023 in January). See *S&P 500 Dividend Weekly* for discussion on the latest dividend developments.

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Long COVID-19 International Basket (JPAMCRIB <Index>) vs. SPX

This basket is designed to benefit as the economy reopens and there is progress in containment of the virus. Our screening methodology for COVID-19 Recovery International stocks is based on S&P 500 companies that became considerably cheaper during the pandemic compared to the pre-COVID-19 period (Q2'20 vs Q4'19) based on our Value composite score (sector-neutral equal weight combination of price-to-forward-earnings, price-to-book-value and price-to-sales). The list is then filtered to select only International candidates based on their Revenue exposure. The list is reviewed and further revised to incorporate fundamental stock analysts' feedback. See Market Update, Conditions Increasingly Favor COVID-19 Recovery Candidates, US Equity Outlook and State of the Business, Inventory and Capex Cycles. *For exhaustive list of US Thematic Trade Ideas, Please see 'Thematic Trade Opportunities'.*

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Stay Long 5G Thematic (JPAMFIVG <Index>) vs. SPX

The 5G Thematic basket is composed of stocks that are most closely tied to the ongoing 5G rollout. Using textual analysis of corporate earnings, conferences, and other call transcripts, we identified the top 30 names in the S&P 1500 most strongly associated with the 5G theme based on level and type of discussion. JPM analyst feedback was also incorporated to further refine the list of stocks. *For exhaustive list of US Thematic Trade Ideas, Please see 'Thematic Trade Opportunities'.*

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Buy the Russell 2000 Value vs the Russell 2000 Growth

Historical evidence suggests that, within SMid-Caps, value tends to outperform growth significantly and consistently. The two SMid indices with the longest history are the Russell 2000 value and growth indices, which go back to Dec 1978. Since then, the value index has outperformed the growth index by a sizeable 5,589% (total return), with only two periods of sustained underperformance that were the Tech bubble and the most recent equity market cycle (i.e., since 2007). In fact, one can say that the growth index has NEVER outperformed the value index as strongly as it has done since 2007. With this in mind, we feel compelled to turn OW on value for the following reasons: 1) valuation dispersion is near record highs, at levels not seen since the tech bubble, which ended with the growth index underperforming the value index by 100% in the following 2 years; 2) the most expensive quintile of the US SMid universe at this juncture is sporting P/E multiples that discount close to a decade of growth before such multiples will fall below the historical average valuation of US SMid-Caps (with the Russell 2000 Growth sporting very similar premiums); 3) the stocks commanding such multiples are those with the highest consensus expectations of EPS growth… one of the most consistent contrarian indicators of 12-mth forward performance we can find; and 4) because the common belief that growth is worth buying at almost any price when faced with a low economic growth environment is simply not true… empirical evidence shows a perfect inverse relationship between consensus estimated EPS growth and 12-mth forward returns among Japanese SMid-Caps during the last 20+ years (i.e., since 1998), with the highest decile of FCF Yield, Div Yield, and the lowest decile of P/E, P/B, or EV/EBITDA having delivered close to 1000 bps of yearly alpha vs the top decile of consensus 12-mth fwd EPS growth estimates. As a result, we stick to our pair trade recommendation (OW the Russell 2000 Value vs the Russell

2000 Growth). This pair trade has delivered a total return of 5011 bps since we launched it on Oct 8th, 2020.

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Credit Trading Themes

Be modestly underweight agency MBS

Fed MBS runoff begins June 14 and we believe that, in combination with organic net supply, it should pressure mortgage spreads modestly wider from here. Money managers have started to cover their underweight, as being short mortgages left them exposed to declining vol over the past month, but we think the cleaner expression of this may be to remain underweight and sell gamma in derivatives space. Banks, meanwhile, appear to be on the sidelines as duration extension and a preference for loans have kept them from adding to their MBS holdings. At this point, we don't anticipate that the Fed will outright sell mortgages unless inflation comes in substantially higher than expected.

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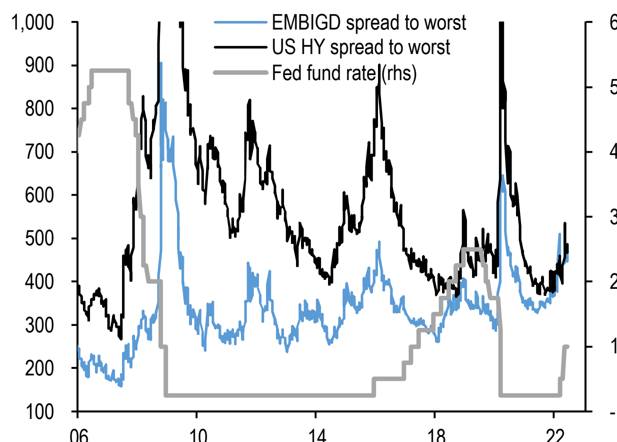
OW EM Sovereign Credit vs DM corporate Credit

Since our last GAA in May, Credit spreads have widened amid some weakness in risk markets. Spreads on EMBIGD (+23bp) have been somewhat more resilient than US HY (+31bp).

This still leaves the relative valuation gap between EM sovereigns and US HY attractive. Relative to US HY, EMBIGD spreads are close to the widest level of the post GFC era. The differential between the Credit spread on both indices at -15bp corresponds to a 85 percentile reading in the 2003-2022 sample and has fell already substantially from March highs (around +60bp). Notably, the spread between EM Sovs and US HY is trading above 4Q18 levels (i.e. at the end of last Fed hiking cycle) and even above 1Q16 levels i.e. at the worst of global EM-led manufacturing slowdown of 2015/2016. In absolute terms and since 2005, EMBIGD spreads have been higher only at the zenith of the GFC and COVID-19 recessions. If our call for a peak in inflation and 2H22 re-acceleration in global growth is right, this macro RV trade should mean revert more meaningfully. Commodities could also be a tailwind with 60% of net commodity exporters in the EMBIGD.

US HY and EMBIGD spread to worst and Fed Fund rate



Source: J.P. Morgan

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Long US vs. EUR IG credit

With the ECB delivering a hawkish surprise by signalling more front-loaded hikes and confirming that QE would end on Jul 1st. For credit markets, the most pressing concern was the lack of detail on a new anti-fragmentation tool, and our economists see that it could take a "mini-crisis" for the ECB to be able to agree on such a tool. Such a shock to periphery spreads would likely see credit markets widen in sympathy. Moreover, the greater proximity to the Russia-Ukraine crisis and greater reliance on energy imports remain risk factors for EUR credit. At the same time, US credit HG credit should be supported by relatively high cash balances in bond funds. We stay OW USD vs. EUR IG credit.

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Close long HY vs. HG in the US

As noted in the overview section above, we retain an overall pro risk stance and see that YTD repricing has already seen a substantial amount of recession risk embedded in the price, and we remain optimistic about the growth outlook in 2H22. However, we acknowledge that the high yield credit market in particular has priced in relatively less recession risk than high grade credit, when measured by typical trough to peak moves in spreads around US recessions historically, suggesting that high yield has somewhat less upside if

recession risks are averted and may be more vulnerable if a negative scenario plays out. Given this, we turn neutral on HY vs. HG for now.

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Fixed Income Trading Themes

Add 5s/30s EUR swap curve flatteners

The ongoing hawkish shift in ECB rhetoric continued at the June meeting. The announcement that QE would end on July 1st and that there was a clear intention to start the hiking cycle with a 25bp hike at the July meeting was widely anticipated. But it indicated that there is a high likelihood of a 50bp hike in September, suggesting a more front-loaded hiking cycle. Our economists now expect 125bp of hikes in 2022 (vs. 75bp previously), followed by 100bp in 2023.

The front end of the curve has seen a greater amount of front-loading of hikes, but also a higher terminal rate. While some question marks remain over how much hiking will eventually be delivered, until there is evidence of inflation pressures peaking front-end rates could struggle to find support. At the same time, the very long end of the curve is likely to see continued support from receiving flows given more attractive yields and potentially locking of policy funding ratios by Dutch pension funds.

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Keep 5s/20s UST curve flatteners

The Fed remains under pressure to withdraw monetary accommodation by tight labor markets and inflation pressures. Indeed, the May CPI data have if anything increased the risk that the Fed needs to move policy rates even more restrictive to dampen inflation. Our economists now expect the median dots for the Fed funds rate to increase to 2.625% in end-2022 and 3.125% in end-23, with the more aggressive path for policy rates likely also implying lower growth and higher unemployment rate projections. That said, with the FOMC having telegraphed a 50bp hike for the June meeting, it seems unlikely that the Fed would deliver an outsized 75bp hike. This, along with 10y yields now trading cheap to fair value and a somewhat weaker economic data flow should leave some room for yields to stabilise in the near term.

However, over the medium term a greater risk of restrictive policy rates also pose risks to the growth outlook and should keep the curve under flattening pressure. The demand backdrop also looks supportive for further flattening given weaker bank demand in intermediate maturities on slower deposit growth while strength in pension fund demand should support the long end. Moreover, despite the sharp flattening in recent weeks, the curve looks steep to fair value. We hold 5s/20s flatteners.

P&L: +10bp since inception in May22 GAA.

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Stay short 10y Italy vs. Germany

As noted above, the ongoing hawkish shift in ECB rhetoric continued at the June meeting. Moreover, the greater sense of urgency on rate hikes contrasted with a distinct lack of urgency about the potential for the ECB implementing an anti-fragmentation tool. Indeed, there was limited push-back or even acknowledgement of the recent spread widening and tightening of financing conditions it represents.

This suggests the ECB is not yet feeling pressure to even deploy the first line of defence, i.e. verbal push back or talk of using PEPP reinvestments flexibly. And our economists suggested it could take a 'mini crisis' for the ECB to agree on an anti-fragmentation tool. This means we continue to see periphery spreads under pressure and stay short 10y Italy vs. Germany.

P&L: +14bp since May22 GAA, + 56bp since inception in Mar22 GAA.

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Cross-market rule-based signals: long 10y CAD and AUD swaps vs. GBP and USD swaps

We update our regular suite of rule-based signals for outright and cross-market fixed income trading in the Appendix.

The sell-off in bonds moderated in May relative to April amid growth concerns building. This month, a relative underperformance of SEK and AUD swaps saw them replace NZD and CAD swaps, respectively, among the top two markets by risk adjusted carry and real yield, respectively.

Given the BoJ's ongoing 10y yield target, we continue to exercise discretion by excluding JPY swaps from the short leg of our signals. This month, this means replacing JPY

swaps with NOK, USD and GBP swaps for the carry, carry to risk and real yield signals respectively. Overall, this leaves our signals long CAD and AUD swaps vs. GBP and USD swaps.

P&L: +0.6% since May21 GAA; cumulative return since Feb 18: +5.7%.

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FX Trading Themes

Throughout a two week period loaded with important US data and key G10 central bank meetings, we stick with net USD length, long CHF, long AUD/NZD, and short GBP positions. We reintroduced CAD length following the BoC given CAD's resilience to global stagflation. The renewed concern around peripheral spreads reaffirms our bearish EUR bias and we have reinitiated EUR/USD shorts as stagflationary concerns plague the euro. Stay long Scandis vs EUR, short EUR/CHF, short cable, short GBP/CHF and short NZD vs a basket.

Re-sell EUR/USD

Consistent with our stagflationary framework for G10 FX, hawkish pivots are not all currency-positive; and in the case of EUR specifically, we believe it is net-negative. We have been skeptical of EUR's ability to meaningfully and sustainably rally as the ECB begins its process of policy normalization, given its unique constraints regarding the periphery as well as the outsized regional risks pertaining to Ukraine and energy prices (2H'22 target 1.00, see P. Meggyesi, *Extending bearish EUR/USD to parity*, 12 May). Today's currency weakness following the meeting reaffirms that ECB faces particular trade-offs – in this case, higher inflation and growth/fragmentation risks - which can dilute the typically-positive pass-through from narrower EU-US rate spreads, consistent with our stagflationary FX framework. Indeed, EUR/USD has dislocated from nominal policy expectations in recent months, despite serving as a strong anchor throughout much of 2021.

Now, peripheral yields are moving and pose a more serious headwind to EUR. As our economists note, new information around deploying new and existing anti-fragmentation tools was limited, which underscores our rates colleagues' willingness to hold shorts in 10Y Italy vs. Germany in intra-EMU (see F. Bassi et al, *The hiking journey is set*). EUR/USD has proven closely negatively-correlated to peripheral spreads in recent months, and a two-factor model including EU-US yields suggests 10bps in peripheral yields is worth approximately -0.7% in EUR/USD. Wider peripheral spreads can therefore offset EU-US spread narrowing on further hawkish ECB developments, to the detriment of EUR.

We therefore reinitiate EUR/USD shorts in the wake of today's ECB meeting. As discussed last week, we had been inclined to sell EUR/USD in the wake of today's outcome. While the currency's reaction to the peripheral spreads has been pronounced, we nevertheless follow through on our commitment with increased confidence that the ECB hiking cycle will present unique headwinds for the currency in coming months, and therefore layer in outright EUR/USD shorts in cash to complement our existing EUR shorts vs CHF, Scandis and CAD. This also adds tactical USD upside around the US CPI print and upcoming FOMC meeting, which will feature dots and refreshed Fed economic forecasts.

— **Stay short EUR/USD in cash. Marked at +0.98%.**

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Buy CAD vs basket of USD & EUR

We have held CAD length in various performs on crosses throughout most of 2Q, including against JPY and more recently NZD (stopped out at a profit on the latter two weeks ago). We maintain that the near-term outlook for CAD is relatively constructive; local data remains resilient for the most part in the face of an early and aggressive rate hiking cycle, while oil has resumed its uptrend. We are cognizant of medium-term risks, including that the economy's resilience to higher rates could dwindle quickly (not our base case), or that the drag from slower US growth could also tarnish CAD's reputation. But for the time being, the positives on a short-term horizon outweigh the risks in our view (especially with oil in play) and so we institute a tactical long vs a mixed basket of USD & EUR.

— **Buy CAD vs basket of USD & EUR. Marked at -0.43%.**

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Bearish NZD; stay short vs AUD and vs a basket of reserves

We maintain that for now, the hiking cycle is relatively more constructive for AUD than the RBNZ's is for NZD, due in part to strong ToT in Australia cushioning the hiking cycle. We stay long AUD/NZD. We otherwise hold a short-NZD position in cash against a basket of USD, CHF & NZD. We

had been running a core short position in NZD/USD since the RBNZ meeting in mid-April began the stagflationary downdraft in the pair two months ago. We rotated this from outright shorts into a basket position last week as global markets had started signaling heightened neurosis around recession – but this was beset this week as stagflation moved back to the fore and yen sold off on the back of higher global yields. The recession-vs-stagflation mood in markets will continue to be a determinant of that particular leg, but NZD/USD should perform so long as we are not in a mid-smile, global risk-on backdrop while CHF has local factors (including the SNB meeting) that should prove generally supportive in the near-term. We therefore stick with the trade and the short-NZD bias.

— **Stay long AUD/NZD in cash. Marked at +0.96%**

— **Stay short NZD vs JPY, USD & CHF. Marked at -0.43%.**

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Bullish CHF. Hold EUR/CHF short in cash

Swiss inflation printed exceptionally high two weeks ago at 0.7%m/m, well in excess of all economists polled (consensus 0.3%). This matches February for the highest print in a decade, and takes the overall yoy level to 2.9%. The timing is conspicuous for the SNB - after having shown some signs of tapering its FX intervention through 2H'21, SNB leadership has begun more clearly signaling the potential to begin raising rates from its current -0.75% policy rate. We have argued for some time that Swiss inflation would represent an important regime shift for the currency, in that the SNB would have to relax and ultimately abandon its efforts to depress CHF below market-clearing levels from intervention; using rates as well to combat elevated prices should compound that appreciative pressure on the currency. This keeps the upcoming meeting on 16 June a high-profile event for the currency, which in OIS markets, appears to have been pricing in around 10bps of tightening as of yesterday's close and before today's inflation data. Around 80bps appear priced through year-end. CHF is thus one of the main beneficiaries of higher global inflation given the unique role of its currency in monetary policy settings – even more so when considering that Swiss inflation is still a fair ways below most G10 peers, meaning that real yields have continued to improve as well. We therefore stay long CHF vs EUR in cash, against GBP in options and against NZD in a basket.

— **Stay short EUR/CHF in cash. Marked at -1.05 %.**

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Bearish GBP. Stay short cable and GBP/CHF.

Real yields have managed to compress vs USD which has provided some relief to cable since touching the mid-May lows of 1.22, but looking ahead to the BoE meeting keeps us bearish. Sterling's response to the last BoE meeting a month ago was distinctly negative given the Board's wide-ranging opinions on policy (25bp increase, but dissents for both hikes and no guidance), while the opposing inflation and growth revisions painted a downbeat cyclical outlook into 2023. It's unlikely that the BoE is able to change its tune on that outlook even despite some reprieve from fiscal transfers, and we therefore stick with GBP as a core short even despite positioning remaining resolutely crowded.

— **Stay short GBP/USD. Marked at +2.00%.**

— **Hold a 3m GBP/CHF 20d put. Cost 55bps. Spot ref 1.2195, K=1.1645. Marked at 29bps.**

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Hold Scandi longs vs EUR via ratio spreads

We maintain cautiously-optimistic views of the Scandis vs EUR based on the two central banks' ability to outpace ECB policy normalization. That will be tested this week with the ECB meeting, but our economists' recent revision to the Riksbank call (now 50bps - *Riksbank hiking 50bp in June*)

underpins our view. Yet we do not expect aggressive outperformance per se, which is also contingent on global factors, and therefore hold these positions in conservative 1x2 ratio put spreads; for now spot in both cases is hovering near the low strike and helping to keep the trades supported. Outside of Swedish GDP last week (slight disappointment, though wages moved higher), more actionable news was tied to NOK between the combination of volatile oil prices partly reflecting news around OPEC+, as well as a surprise announcement on Norges Bank FX purchases. On the latter, FX purchases were reduced from NOK2bn to 1.5bn, arguably a downside surprise. And while oil prices dipped this week on the back of potential scenarios for increased OPEC supply to compensate for a shortfall in Russian production, Brent ultimately rallied $10 in the latter half of the week to an elevated $120 level. If global growth momentum can stabilize, this can be a relatively constructive backdrop for NOK (which generally faces a more benign growth-inflation mix than SEK).

- **Hold a 2m EUR/NOK 10.10 / 9.70 1*2 put ratio spread. Cost 62bps. Spot ref 10.2876. Marked at 67bps.**
- **Hold a 2m EUR/SEK 10.40 / 10.10 1*2 put ratio spread. Cost 53bps. Spot ref 10.4990. Marked at 30bps.**

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Commodities Trading Themes

Stay long the agri commodity complex

(First published in *Trade Ideas for Long Term Investors*, Panigirtzoglou et al, 18 October 2017).

The J.P. Morgan JPMCCI Ex-Front Month Agriculture Excess Return Index has increased by 4% MOM, but is tracking 3% below the near-term peak attained in mid-May. Though, the index is still tracking an eight-year seasonal high and a 25% YTD gain after ending 2021 at a 30% YOY gain. Unlike previous episodes, the food price shock of 2021/22 has been driven by a confluence of supply, demand, and structural factors including a multi-year La Niña impacting rainfall patterns across the Pacific. All of which have been exacerbated by the indefinite close of Ukrainian seaports amid Russian conflict and disruptions to global fertilizer supply chains. Unlike prior food price inflationary episodes, high price alone will in not be sufficient to solve the inventory crunch on this occasion, which is likely to be lasting in our view. **For agri markets, this time is different, and far more complex to overcome-despite the aggressive selloff across markets through late May** (see *Agricultural Markets Quarterly: Higher for longer – redistributing the heat in agri prices over the medium term*, Allen & Aggarwal, June 2).

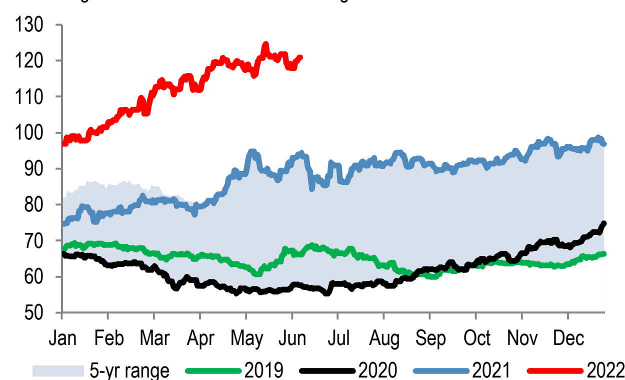
We continue to hold a fundamentally constructive price outlook across agri markets, and flag room for the current price rally to extend gains, notably across MDEB Palm Oil, CBOT Wheat and Corn. Stymied investor risk appetite amid discussions of a humanitarian export corridor for Ukrainian food exports, downside global growth risks and hand to mouth consumer buying, has driven a downward revision in our price forecasts through 2022. Though with inventory crunch durably extending into 2023 and likely beyond, we have revised up our 2023 average price forecasts. We now project average 2023 prices at 1,150 USc/bu (+11% QOQ) for CBOT Wheat, 770 USc/bu for CBOT Corn (+15% QOQ), 1,545 USc/bu for CBOT Soybeans (+4% QOQ), ~21 USc/lb for ICE #11 Sugar (-1% QOQ), 133 USc/lb for ICE #2 Cotton (+6% QOQ) and 7,600 MYR/tonne for MDEB Palm Oil (+3% QOQ).

Hand to mouth consumption and forward sales from producers is keeping many agricultural futures markets in a backwardated curve structure. Investor positioning remains light across the US traded agri markets, with the F&O open interest tracking ~10% below the seasonal five-year average levels (see *Agri CFTC*, Allen, June 3). At ~437,089 contracts, discretionary investors' net length is ~59% below the historical peak of early 2021 and down 38% YTD. This continues to flag scope for an expansion of net length across systematic investors, and further extension of agri commodity price gains in a sustained environment of critically low inventories.

- **Went long the agri commodity complex via a proxy index, J.P. Morgan JPMCCI Agriculture Ex-Front Month Excess Return Index at 75.45 points on 18 October 2017. Trade is marked to market at a profit of +45.5 points or +60.3% on June 9.**

The J.P. Morgan JPMCCI Ex-Front Month Agriculture Excess Return Index has increased by 4% MOM, but is tracking 3% below the near-term peak attained in mid-May

J.P. Morgan JPMCCI Ex-Front Month Agriculture Excess Return Index



Source: Bloomberg Finance L.P., J.P. Morgan Commodities Research, as of 9 June

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Global Research Digest

Macro & Cross-Asset Views

J.P. Morgan Perspectives: China's Financial Markets: Long-term opportunities meet near-term challenges, Joyce Chang and Haibin Zhu

In this report, along with ~20 research analysts, we survey the macro and investment factors impacting China's financial markets addressing ten key questions from a long-term perspective. We highlight long-term risks and opportunities given the growth potential for domestic and foreign investment as well as the recent challenges from regulatory changes, slower growth, rising rates and intensifying geopolitical risks. We see opportunities and challenges for China's financial markets to co-exist as rebalancing of China's economy represents a regime change and a shift in long-term strategy to achieve Common Prosperity. Despite the challenging macro backdrop, China is still likely to match the size of the US economy by 2030.

Global Factor Performance Summary: May 2022 - Value & Quality Continue to Dominate, Dubravko Lakos-Bujas

Investors may be pricing in recessionary fears driven by higher inflation / commodity prices and higher rates, which are favorable for Value. Usually recession fears benefit Quality until the market is close to the bottom, at which point Value takes the lead. The macro backdrop has left the other styles lagging, i.e., Growth, Size, and Beta, which are likely to benefit when this dislocation reverses. On the contrary, if Value and Quality continue to outperform, the Energy sector will remain a key beneficiary in this environment, given its still-attractive valuations and improvement in Quality rankings.

Flows & Liquidity: An update of our fair value models, Nikolaos Panigirtzoglou

There are some tentative signs that inflation volatility could be peaking, which would imply only a modestly higher fair value for real yields from current levels over the coming year in our longer-term fair value framework. Thus far, markets appear to largely be looking through this rise in volatility. In the risk scenario where inflation volatility remains sticky and settles around the 2% level, the more modest decline in inflation vol would only partially offset the increase in real policy rates and push up the fair value for the 10y real yield to around 1.2%. For equities, looking through the spike in inflation vol implies a current fair value of 4400 for the S&P500.

Global Economics and the Recovery from COVID-19

FOMC preview, Michael Feroli

We expect the Committee will raise the target range for the funds rate by 50bp to 1.25-1.5%, and we expect the '22 year-end funds rate will be revised up to 2.625%, the median '23 dot to be revised up from 2.75% to 3.125%, with a similar revision for '24. In the revisions to the economic forecasts for this year we look for less GDP growth, more headline inflation, and little change to the core inflation or unemployment rate projections. We expect Powell will reiterate the high likelihood of another 50bp move in July and downplay the likelihood of a pause in September.

US: May CPI data are strong and above expectations, Daniel Silver

Headline CPI jumped 1.0% during the month, bringing its year-ago inflation rate up from 8.3% to 8.6% (its highest value since 1981). The strength in the CPI was pretty broad-based and some of this is expected to be transitory, but we don't see rent measures cooling any time soon. We don't think the May CPI data will cause the FOMC to deviate from a 50bp rate hike, but persistent upside surprises on inflation could force them to do more tightening down the road.

UK: Preview of next week's BoE meeting, Allan Monks

We continue to think the MPC will stick to frequent steps of 25bp as it remains concerned about recession as well as inflation risks and is trying to find a narrow path to tread which is mindful of both. This is also not a forecast round, and there is less pressure for the BoE to hike 50bps given that it has already hiked 90bps since December. Nevertheless, we expect the three votes for 50bps at the last meeting to be maintained, with a chance of some dovish dissent in a three way split.

Global Market Implications

Credit Watch: Different Spreads For Different Threads - Presenting a scenario analysis for spreads across the global credit complex for the next 12-18 months, Stephen Dulake and Global Spread Products Research Team

We worked with J.P. Morgan's Chief Economist, Bruce Kasman, to develop three very different macroeconomic scenarios for the next 12 months, contrasting a base-case scenario where global central banks successfully 'thread the needle' with inflationary and recessionary alternatives. Spreads are generally seen tighter in base-case Scenario I and wider in both Scenarios II and III, with inflationary Scenario II worse than recessionary Scenario III in terms of outcomes. The conjoint probability of both

successfully taming inflation while also avoiding a recession is only approximately one-third, despite policymaker's best efforts.

Global Commodities – US Natural Gas: Near-term asymmetric upside price risk could be met with cracks in demand while summer 2023 price appears too rich, Shikha Chaturvedi

While the US natural gas market is clearly in a new price regime, set by increasing cost inflation, producer discipline, infrastructure constraints, and a tight coal market, we believe that there is precedent that summer 2023 price could fall below $4/MMBtu. With the new pricing environment there is also susceptibility in demand at current price points with certain industrial demand, namely in the petrochemical industry. However, it is unclear if this demand destruction is transitory or structural in nature, and we believe it is far too early to even determine its impact on the supply and demand balance.

Emerging Markets Outlook and Strategy: Ongoing tightening in global financial conditions will remain a challenge for EM fixed income in 2H22, Luis Oganes & Jonny Goulden

EM fixed income will remain challenged into H2 by the tightening in global financial conditions in order to tame inflation. Given the already-advanced tightening cycles, many EM central banks are showing "hiking fatigue" even as inflation has yet to stabilize. China's lockdowns and Russia's recession are weighing heavily on EM growth in 2Q22, but the rest of EM has held up in the face of large shocks. We stay UW EM local bonds and EM FX, and MW EM sovereigns and corporates where we revise spread forecasts higher.

The hiking journey is set: slow lift off with Sep acceleration: M3/M4 Euribor and 5s/30s swap flattener; short 10Y BTP vs. Bund, Fabio Bassi, Aditya Chordia & Khagendra Gupta

After the June 9 ECB meeting, our economists revised their ECB call with expectation of more front loading of hikes in 2022. We now expect a 25bp hike in July, 50bp in September and 25bp in October and December this year, taking policy rate to 0.75% by year end. We expect additional quarterly hikes in 2023, with reduced sense of urgency resulting in a more gradual pace of tightening every two meetings. The meeting today and the press conference indicated a sense of urgency, despite the lift off is taking place with "incremental, sizeable and not excessive" rate hike in July.

G10 FX Strategy: Re-selling EUR/USD post-ECB, Patrick Locke & Meera Chandan

Consistent with our stagflationary framework for G10 FX, hawkish pivots are not all currency-positive; and in the case of EUR specifically, we believe it is net-negative. We re-enter EUR/USD shorts and maintain a bearish EUR bias. We have been skeptical of EUR's ability to meaningfully and sustainably rally as the ECB begins its process of policy normalization, given its unique constraints regarding the periphery as well as the outsized regional risks pertaining to Ukraine and energy prices.

Sector Level Views

Retail vs. AMZN 10th Annual Deep Dive: What the New Normal Looks Like, Christopher Horvers, CFA

US e-commerce gains moderated in 2021, but we expect 40%+ L-T e-commerce penetration. We continue to project re-acceleration in 2H22 on more favorable comps & as AMZN & other retailers gain share in underpenetrated categories. We project e-commerce will reach 30%+ adjusted penetration in 2026 (~200 bps of expansion per year) and 40%+ over time.

Novo Nordisk: Upgrade to Overweight: Sizing up the obesity market at $34bn, we see room at the table for two, Richard Vosser

We forecast the obesity market for GLP-1 products (and derivatives) ramping to $34bn by 2031, and therefore reaching a similar size to the diabetes GLP-1 market (JPMe: $32bn), which we see as sufficient to accommodate both Novo's CagriSema and Eli Lilly's tirzepatide. We upgrade Novo Nordisk to Overweight and place the shares on positive Catalyst Watch.

Top 10 Picks in Asia: Tech Identifying long-term winners, Gokul Hariharan

The Asian Tech Research Team presented top 10 long-term picks from among the 140+ stocks that we cover in the Asian Technology space. These are all franchises with strong moats, which we see growing strongly in the long term (at least 10% EPS CAGR in most cases), with enough resilience to weather any near-term downturn, and are reasonably valued.

APPENDIX: Forecasts & Strategy

Rates	Current	Jun-22	Sep-22	Dec-22	Mar-23
US (SOFR)	0.75	1.20	1.85	2.45	2.95
10-year yields	3.25	3.20	3.15	3.20	3.25
Euro area (depo)	-0.50	-0.50	0.00	0.50	1.00
10-year yields	1.59	1.41	1.20	1.00	1.00
Italy-Germany 10Y (bp)	232	190	180	200	210
Spain-Germany 10Y (bp)	133	105	95	100	100
United Kingdom (repo)	1.00	1.00	1.75	2.00	2.25
10-year yields	2.49	2.28	2.15	2.25	2.25
Japan (call rate)	-0.10	-0.10	-0.10	-0.10	-0.10
10-year yields	0.26	0.25	0.20	0.20	0.25
EM Local (GBI-EM yield)	6.95			7.05	
Currencies	**Current**	**Jun-22**	**Sep-22**	**Dec-22**	**Mar-22**
JPM USD Index	128	130	132	132	132
EUR/USD	1.05	1.02	1.00	1.01	1.02
USD/JPY	135	130	131	132	133
GBP/USD	1.22	1.18	1.14	1.15	1.16
AUD/USD	0.70	0.69	0.71	0.73	0.75
USD/CNY	6.74	6.85	6.90	6.95	6.95
USD/KRW	1284	1270	1290	1310	1330
USD/MXN	20.36	20.90	21.20	21.40	21.60
USD/BRL	4.99	5.00	5.20	5.30	5.30
USD/TRY	17.26	16.50	17.50	18.50	19.50
USD/ZAR	16.07	16.00	16.25	16.50	16.75
Commodities	**Current**	**Jun-22**	**Sep-22**	**Dec-22**	**Mar-23**
Brent ($/bbl, qtr end)	121	104	104	101	95
WTI ($/bbl, qtr end)	119	101	101	98	91
Gold ($/oz, qtr avg)	1,854	1,850	1,800	1,720	1,670
Copper ($/ton, qtr avg)	9,448	10,650	10,000	9,750	9,400
Aluminum ($/ton, qtr avg)	2,661	3,550	3,300	2,900	2,850
Iron ore (US$/dt, qtr avg)	141	150	140	125	
Wheat ($/bu, qtr avg)	10.8	11.5	12.5	12.5	12.0
Soybeans ($/bu, qtr avg)	17.3	17.5	17.0	16.5	16.3

Source: J.P. Morgan flagship weekly/monthly strategy publications.

Credit		Current	Dec-22
US High Grade (bp over UST)	JPM JULI	156	125
Euro High Grade (bp over Bunds)	iBoxx HG	186	175
US High Yield (bp vs. UST)	JPM HY	488	350
US Lev Loans (bp vs. 3Y Index	JPM Lev Loans	553	380
Euro High Yield (bp over Bunds)	iBoxx HY	516	525
EM Sovereigns (bp vs. UST)	JPM EMBIGD	467	425
EM Corporates (bp vs. UST)	JPM CEMBI	315	260
Equities		**Current**	**Dec-22**
S&P 500		3,901	4,900
MSCI Eurozone		230	275
FTSE 100		7,189	8,150
TOPIX		1,901	2,200
MSCI EM ($)		1,055	1,300
MSCI China		74	116
MSCI Korea		783	1,060
MSCI Taiwan		622	780
MSCI India		1,876	2,000
Brazil (Ibovespa)		105,481	133,000
Mexico (MEXBOL)		48,471.5	59,000
MSCI South Africa (USD)		432.9	521

Equity sector recommendations & year-to-date returns

	US		Europe		Japan		EM	
Energy	61%	OW	34%	OW	51%	N	-19%	OW
Materials	-10%	N	-5%	OW	1%	N	-10%	OW
Industrials	-15%	N	-19%	OW	-2%	OW	-8%	N
Discretionary	-31%	N	-21%	N	-4%	OW	-13%	OW
Staples	-6%	UW	-10%	UW	-6%	N	-13%	UW
Healthcare	-11%	OW	-4%	UW	-5%	UW	-24%	UW
Financials	-17%	OW	-9%	OW	11%	OW	-6%	OW
Technology	-26%	N	-28%	N	-15%	N	-22%	N
Comm Service	-29%	N	1%	OW	12%	UW	-14%	N
Utilities	0%	UW	-5%	N	30%	UW	-3%	UW
Real Estate	-20%	UW	-22%	UW	8%	N	-10%	N
Overall	**-18.7%**		**-10.4%**		**-1.7%**		**-13.6%**	

Source: Bloomberg Finance L.P., Datastream, J. P. Morgan

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Global Economic Outlook Summary

	Real GDP			Real GDP						Consumer prices			
	%over a year ago			%over previous period, saar						%over a year ago			
	2021	2022	2023	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	4Q21	2Q22	4Q22	2Q23
United States	5.7	2.7 ↓	1.8 ↓	6.9	-1.5 ↓	3.3	2.8 ↓	2.0 ↓	1.8 ↓	6.7	8.2 ↑	6.8 ↑	3.6 ↑
Canada	4.5 ↓	3.8 ↓	2.4 ↓	6.6 ↓	3.1 ↓	4.5 ↑	2.6 ↓	2.3 ↓	2.3 ↓	4.7	7.0 ↑	6.1 ↑	2.5 ↑
Latin America	6.6	2.1 ↑	1.3 ↓	3.5 ↓	3.2 ↑	0.5 ↑	-0.1 ↓	0.2 ↓	1.5 ↓	8.3	10.0 ↑	8.2 ↑	5.0 ↑
Argentina	10.3	2.8 ↓	1.8	6.3	3.8 ↓	-4.0 ↑	-1.5 ↑	0.5 ↓	3.0	51.4	59.5 ↑	68.9 ↑	60.1 ↑
Brazil	4.6	1.2 ↑	0.6	2.7 ↑	4.0 ↑	1.5 ↑	-2.0 ↓	-1.6 ↓	1.2	10.5	12.0 ↑	8.9 ↑	5.7 ↑
Chile	11.7	1.6 ↓	0.6 ↓	7.0 ↓	-3.0 ↑	-5.0 ↓	-3.0 ↓	0.0 ↓	2.0 ↑	6.6	11.5 ↑	10.2 ↑	5.6 ↑
Colombia	10.7 ↑	6.5	2.5 ↓	10.5 ↓	4.0 ↑	3.0 ↑	1.5 ↓	2.0 ↓	2.5 ↓	5.2	9.3 ↑	8.7 ↑	5.4 ↑
Ecuador	4.2	3.1	2.5	2.9	3.5	2.5	2.0	3.0	2.7	1.8	3.4 ↑	4.2 ↑	3.0 ↑
Mexico	4.8	1.8 ↓	1.5 ↓	1.0 ↑	4.1 ↑	1.6	1.9 ↓	1.4 ↓	1.0 ↓	7.0	7.6 ↓	7.0	4.0 ↓
Peru	13.5 ↑	2.6 ↑	2.5 ↑	3.1 ↑	-1.7 ↓	-1.0 ↑	6.0 ↑	2.0 ↓	1.0 ↓	6.0	8.0 ↑	5.8 ↑	3.9 ↑
Uruguay	4.4	4.4	4.4	8.3	1.0	1.5	1.0	3.0	2.5	7.9	9.1 ↓	8.3	6.1 ↑
Asia/Pacific	6.3 ↑	3.7 ↓	4.1 ↓	7.7	4.8 ↑	-0.9 ↓	5.6 ↑	5.3 ↓	4.1 ↓	2.1	3.2 ↑	3.6 ↑	2.6 ↓
Japan	1.7	1.7 ↑	1.8	4.0 ↓	-0.5 ↑	4.0	3.5	2.5	1.0	0.5	2.1 ↑	2.2 ↑	1.7 ↑
Australia	4.8 ↑	3.6 ↑	2.5 ↓	15.3 ↑	3.1 ↑	2.1 ↓	1.9 ↓	2.8 ↓	2.4	3.5	5.2	4.6	2.8
New Zealand	5.6	2.3 ↓	2.4 ↓	12.6	2.1 ↓	1.2 ↓	3.3 ↓	2.2 ↓	2.2 ↓	5.9	6.9	4.4	2.3
EM Asia	7.4 ↑	4.1 ↓	4.8 ↓	8.0 ↑	6.1 ↑	-2.2 ↓	6.3 ↑	6.0 ↓	4.9 ↓	2.4	3.3 ↑	3.8 ↑	2.8 ↓
China	8.1	3.7 ↓	5.3 ↑	7.5	6.8	-5.4 ↓	7.5 ↑	7.3	5.5	1.8	2.3 ↑	3.0 ↑	2.4 ↓
India	8.7	6.6 ↓	4.3 ↓	8.2 ↑	7.9 ↑	4.5 ↓	4.5 ↓	4.0 ↓	4.0 ↓	5.0	7.0 ↑	6.6 ↑	5.3 ↓
Ex China/India	4.5	3.9 ↓	3.6 ↓	9.4 ↑	3.5 ↓	3.6 ↓	3.6 ↓	3.5 ↓	3.5	2.9	4.4 ↑	4.7 ↑	2.7 ↑
Hong Kong	6.3	0.4 ↑	4.1 ↑	0.0	-11.1	13.0 ↑	6.5 ↓	6.0 ↓	2.4	2.0	1.4 ↓	1.6 ↓	1.6 ↑
Indonesia	3.7	4.9	4.9	14.0 ↑	3.5 ↓	5.2	4.9	4.8	5.0	1.8	3.7 ↑	4.7 ↓	3.1 ↓
Korea	4.2 ↑	2.7 ↓	2.2 ↓	5.5 ↑	2.6 ↓	1.0 ↓	3.0 ↓	2.5 ↓	2.0	3.5	5.3 ↑	5.8 ↑	3.3 ↑
Malaysia	3.1	7.2 ↓	5.1 ↓	19.7 ↓	16.4 ↑	4.0 ↓	3.0 ↓	3.0 ↓	6.5 ↑	3.2	2.9	3.3	2.3
Philippines	5.7 ↑	8.5 ↓	6.3 ↓	14.7 ↑	7.6 ↑	7.0 ↓	6.0 ↓	6.0 ↓	6.0 ↑	3.6 ↓	5.2	5.0	2.7 ↑
Singapore	7.6	4.3 ↓	2.8 ↓	9.5	2.8 ↓	7.5 ↑	-0.8 ↓	1.3 ↓	3.5 ↓	3.7	6.5	6.2	2.6
Taiwan	6.6 ↑	3.5 ↓	2.7 ↓	10.1 ↑	4.3 ↓	0.3 ↓	2.7 ↓	2.9 ↓	2.9 ↓	2.7	3.2	2.9	2.0
Thailand	1.5 ↓	3.0	3.3	7.4 ↓	4.7 ↑	1.2 ↓	3.9 ↓	3.2 ↓	3.3 ↑	2.4	6.1 ↓	5.8 ↑	2.3 ↑
Western Europe	5.6 ↓	3.5 ↑	2.5	1.9 ↓	2.3 ↑	2.0 ↓	2.6	2.4 ↑	2.7 ↓	4.6	8.0 ↑	7.4 ↑	2.9 ↑
Euro area	5.3 ↓	3.5 ↑	2.8	1.0 ↓	2.5 ↑	2.3	3.0	2.8	3.0	4.6	7.9 ↑	7.2 ↑	2.5 ↑
Germany	2.9	3.0	3.5	-1.4	0.9 ↑	5.0	4.5	3.0	3.5	5.4	8.4 ↑	7.2 ↑	1.9 ↑
France	6.8 ↓	2.5 ↓	2.8	1.8 ↓	-0.8 ↓	1.0	2.0	2.5	3.5	3.3	5.8 ↑	5.7 ↑	2.4 ↑
Italy	6.6	3.4 ↑	2.4 ↑	2.8 ↑	0.5 ↑	2.0 ↑	2.0	2.5	2.5	3.7	7.2 ↓	7.2 ↑	2.9 ↑
Spain	5.1	4.4	3.2	9.2	1.3	1.0	3.0	3.5	3.5	5.8	8.5 ↓	7.0 ↓	2.5 ↓
Norway	4.2	3.8 ↓	2.7	5.6 ↓	-2.4 ↓	5.5	4.0	3.0	2.3	3.4	5.5 ↑	3.7 ↑	1.8
Sweden	4.9 ↑	1.9 ↓	1.6	4.7 ↑	-3.2 ↓	1.8	2.0	1.8	1.5	3.3	6.6 ↑	6.7 ↑	3.2
United Kingdom	7.4	3.8 ↓	1.2 ↑	5.2	3.0 ↓	0.5 ↓	0.9 ↑	0.8 ↑	1.8 ↓	4.9	9.0 ↑	8.8 ↑	4.6 ↑
EMEA EM	6.4	1.2 ↑	1.6 ↓	6.2 ↓	4.1 ↑	-7.4 ↑	-3.5 ↓	1.4 ↓	3.4 ↓	10.3	23.5 ↓	21.0 ↓	8.5 ↑
Czech Republic	3.3	3.2 ↑	2.4 ↓	3.2	3.7 ↑	0.5 ↓	1.8 ↓	2.3 ↓	2.5 ↓	6.1	15.2 ↑	14.3 ↑	5.8 ↑
Hungary	7.1	5.8 ↑	2.7 ↓	9.1 ↑	8.7 ↑	3.0 ↑	1.0 ↓	2.0 ↓	3.0 ↓	7.1	9.7 ↑	10.8 ↑	6.9 ↑
Israel	7.9	5.5 ↓	4.0 ↑	15.6 ↓	-1.6 ↓	3.6 ↑	3.4 ↑	3.4 ↓	4.1 ↓	2.5	4.3 ↑	4.9 ↑	3.2 ↑
Poland	5.9	6.1 ↑	2.8 ↓	7.4 ↑	10.0 ↑	0.0	1.5 ↓	2.5 ↓	3.3	7.7	13.8 ↑	13.4 ↑	10.3 ↑
Romania	6.0	6.0 ↑	5.0 ↓	4.1 ↑	22.5 ↑	2.4 ↓	3.0 ↓	2.4 ↓	6.6 ↑	8.0	14.4 ↑	14.3 ↑	9.6 ↑
Russia	4.7	-5.0 ↑	-1.5 ↓	3.9 ↓	-1.4 ↑	-22.0 ↑	-13.0 ↓	0.5 ↓	3.0 ↓	8.3	17.2 ↓	15.2 ↓	5.5 ↓
South Africa	4.9	2.5 ↑	1.5 ↓	5.6 ↑	8.0 ↑	-1.0 ↓	1.5 ↓	1.0 ↓	1.5 ↓	5.4	6.3 ↑	6.7 ↑	5.2 ↓
Turkey	11.0	3.7 ↑	3.6 ↓	6.2	4.9 ↑	-1.2 ↓	0.4 ↓	0.8 ↓	4.1	25.8	72.3	61.5	18.4
Global	6.0 ↑	3.1 ↓	2.8 ↓	5.9 ↓	2.4 ↑	0.7 ↓	3.3 ↑	3.2 ↓	2.9 ↓	4.7	7.1 ↑	6.5 ↑	3.4 ↑
Developed markets	5.2	2.9	2.1 ↓	5.0 ↓	0.3 ↑	2.9	2.8 ↓	2.2 ↓	2.1 ↓	5.1	7.3 ↑	6.4 ↑	3.1 ↑
Emerging markets	7.1	3.5 ↓	3.9 ↓	7.2 ↓	5.5 ↑	-2.5 ↓	4.1 ↑	4.7 ↓	4.2 ↓	4.1	6.9 ↑	6.7 ↑	3.8 ↓

Source: J.P. Morgan

Central Bank Policy Rate Watch

	Official rate	Current rate (%pa)	4-qrtr change (bp)		Last change	Next meeting	Forecast next change	Forecast (%pa)				
			Last	Next				Jun 22	Sep 22	Dec 22	Mar 23	Jun 23
Global		2.01	69	111				2.17	2.58	2.83	3.09	3.12
excluding US		2.39	78	68				2.43	2.71	2.87	3.03	3.07
Developed		0.46	33	161				0.71	1.28	1.62	1.96	2.07
Emerging		4.39	124	35				4.43	4.58	4.71	4.82	4.74
Latin America		9.50	646	30				10.13	10.65	10.84	10.58	9.80
EMEA EM		8.38	293	29				8.09	8.12	8.25	8.85	8.67
EM Asia		2.89	16	37				2.91	3.03	3.15	3.23	3.26
The Americas		2.10	150	197				2.59	3.31	3.75	4.16	4.07
United States	Fed funds	1.00	75	225	4 May 22 (+50bp)	15 Jun 22	Jun 22 (+50bp)	1.50	2.25	2.75	3.25	3.25
Canada	O/N rate	1.50	125	175	1 Jun 22 (+50bp)	13 Jul 22	13 Jul 22 (+50bp)	1.50	2.25	2.50	3.00	3.25
Brazil	SELIC O/N	**12.75**	925	-150	4 May 22 (+100bp)	15 Jun 22	**Jun 22 (+50bp)**	13.25	13.25	13.25	12.75	11.25
Mexico	Repo rate	**7.00**	311	225	12 May 22 (+50bp)	23 Jun 22	**23 Jun 22 (+75bp)**	**7.75**	**8.75**	**9.25**	**9.25**	**9.25**
Chile	Disc rate	**9.00**	850	-25	7 Jun 22 (+75bp)	14 Jul 22	**13 Jul 22 (+75bp)**	9.00	**10.00**	**10.25**	**9.75**	**8.75**
Colombia	Repo rate	6.00	425	250	29 Apr 22 (+100bp)	30 Jun 22	**30 Jun 22 (+150bp)**	**7.50**	**8.50**	**8.50**	**8.50**	**8.50**
Peru	Reference	**5.00**	475	50	12 May 22 (+50bp)	9 Jun 22	**9 Jun 22 (+50bp)**	5.50	**6.00**	**6.00**	**6.00**	**5.50**
Europe/Africa		1.52	73	109				1.51	1.91	2.13	2.45	2.61
Euro area	Depo rate	-0.50	0	125	12 Sep 19 (-10bp)	21 Jul 22	Jul 22 (+25bp)	-0.50	0.00	0.25	0.50	0.75
United Kingdom	Bank rate	1.00	90	150	17 Mar 22 (+25bp)	16 Jun 22	Jun 22 (+25bp)	1.25	**1.75**	**2.00**	**2.25**	**2.50**
Norway	Dep rate	0.75	75	125	5 May 22 (+25bp)	23 Jun 22	23 Jun 22 (+25bp)	1.00	1.25	1.50	1.75	2.00
Sweden	Repo rate	0.25	25	125	28 Apr 19 (+25bp)	29 Jun 22	**30 Jun 22 (+50bp)**	**0.75**	**1.00**	**1.25**	**1.50**	**1.50**
Czech Republic	2-wk repo	5.75	550	25	5 May 22 (+75bp)	22 Jun 22	**Jun 22 (+75bp)**	**6.50**	**7.00**	**7.00**	**6.50**	**6.00**
Hungary	3-m dep	**5.90**	530	160	31 May 22 (+50bp)	28 Jun 22	**Jun 22 (+50bp)**	**6.40**	**7.90**	**8.50**	**8.50**	**7.50**
Israel	Base rate	**0.75**	65	125	23 May 22 (+40bp)	4 Jul 22	**4 Jul 22 (+25bp)**	**0.75**	**1.25**	**1.50**	**1.75**	**2.00**
Poland	7-day interv	**6.00**	590	50	8 Jun 22 (+75bp)	7 Jul 22	**June 22 (+75bp)**	6.00	6.50	6.50	6.50	6.50
Romania	Base rate	**3.75**	250	425	10 May (+75bp)	6 Jul 22	**6 Jul 22 (+100bp)**	3.75	**5.75**	**6.75**	**7.75**	**8.00**
Russia	Repo rate	11.00	600	-300	26 May 22 (-300bp)	10 Jun 22	Jun 22 (-100bp)	**10.00**	**9.00**	**9.00**	**8.50**	**8.00**
South Africa	Repo rate	**4.75**	125	175	19 May 22 (+25bp)	21 Jul 22	**July 22 (+50bp)**	4.75	**5.50**	**5.75**	**6.25**	**6.50**
Turkey	1-wk repo	14.00	-1900	400	16 Dec 21 (-100bp)	23 Jun 22	1Q 23 (+400bp)	14.00	14.00	14.00	18.00	18.00
Asia/Pacific		2.27	16	36				2.28	2.42	2.52	2.59	2.63
Australia	Cash rate	**0.85**	75	150	7 Jun 22 (+50bp)	5 Jul 22	**Jul 22 (+50bp)**	**0.85**	**1.60**	**1.85**	**2.10**	**2.35**
New Zealand	Cash rate	**2.00**	175	75	25 May 22 (+50bp)	13 Jul 22	**Jul 22 (+50bp)**	**2.00**	**2.75**	**2.75**	**2.75**	**2.75**
Japan	O/N call rate	-0.10	-8	0	28 Jan 16 (-20bp)	17 Jun 22	On hold	-0.10	-0.10	-0.10	-0.10	-0.10
Hong Kong	Disc. wndw	1.25	-50	225	3 Mar 20 (-50bp)	-	Jun 22 (+50bp)	1.75	2.50	3.00	3.50	3.50
China	1-yr MLF	2.85	-10	0	17 Jan 22 (-10bp)	-	**On hold**	**2.85**	**2.85**	**2.85**	**2.85**	**2.85**
Korea	Base rate	**1.75**	125	100	26 May 22 (+25bp)	13 Jul 22	**July 22 (+25bp)**	1.75	2.25	2.50	2.75	2.75
Indonesia	BI RRR	3.50	0	75	18 Feb 21 (-25bp)	23 Jun 22	21 Jul 22 (+25bp)	3.50	4.00	4.25	4.25	4.25
India	Rev repo	**4.90**	90	125	8 Jun 22 (+50bp)	4 Aug 22	Jun 22 (+50bp)	4.90	5.15	5.65	5.90	6.15
Malaysia	O/N rate	**2.00**	-175	100	11 May 22 (+25bp)	6 Jul 22	3Q 22 (+25bp)	**2.00**	**2.25**	**2.50**	**3.00**	**3.00**
Philippines	Rev repo	**2.25**	25	175	19 May (+25bp)	23 Jun 22	**Jun 22 (+25bp)**	**2.50**	**2.75**	**3.00**	**3.50**	**4.00**
Thailand	1-day repo	0.50	0	75	20 May 20 (-25bp)	10 Aug 22	**3Q 22 (+25bp)**	0.50	**0.75**	**1.25**	**1.25**	**1.25**
Taiwan	Official disc.	1.38	25	63	17 Mar 22 (+25bp)	16 Jun 22	2Q 22 (+25bp)	1.63	1.75	1.88	2.00	2.00

Source: J.P. Morgan. [1]BoJ targets ¥80tn/year expansion in monetary base and sets the IOER (O/N) as policy guidance.

Bold denotes move since last GDW and forecast changes. Underline denotes policy meeting during upcoming week.

Aggregates are GDP-weighted averages. [2]The BI rate for Indonesia reflects announced recalibration effective August 19, 2016.

[3]The Philippines introduced a recalibrated reverse repo rate effective June 3 at a level of 3.00%.

Rather than the refi rate, we now display the 1-wk dep rate, which better represents CBR policy stance and is closer to interbank market rates.

Global Rates Forecast

		10-Jun	Sep-22	Dec-22	Mar-23	Jun-23	YTD chg. (bp)
US	Fed funds	0.75-1.00	2-2.25	2.5-2.75	3-3.25	3-3.25	-
	SOFR	0.00	1.85	2.45	2.95	3.05	-
	2Y bmk yield	2.85	3.00	3.15	3.20	3.00	212
	5Y bmk yield	3.07	3.15	3.25	3.30	3.15	182
	10Y bmk yield	3.04	3.15	3.20	3.25	3.15	154
	30Y bmk yield	3.16	3.15	3.20	3.20	3.15	127
	2s/10s bmk curve	19	15	5	5	15	-58
	10s/30s bmk curve	12	0	0	-5	0	-27
	2s/30s bmk curve	31	15	5	0	15	-85
Euro area	Refi rate	0.00	0.25	0.75	1.25	1.50	-
	Depo rate	-0.50	0.00	0.50	1.00	1.25	-
	3M Euribor	-0.30	0.00	0.75	1.25	1.50	28
	2Y bmk yield	0.89	0.85	0.80	0.80	0.75	152
	5Y bmk yield	1.22	1.10	1.00	1.00	0.90	168
	10Y bmk yield	1.41	1.20	1.00	1.00	0.95	159
	30Y bmk yield	1.57	1.30	1.05	1.05	1.00	138
	2s/10s bmk curve	51	35	20	20	20	6
	10s/30s bmk curve	16	10	5	5	5	-20
	2s/30s bmk curve	67	45	25	25	25	-14
	2Y swap spread	62	58	56	54	52	29
	5Y swap spread	66	62	60	58	56	20
	10Y swap spread	69	64	62	60	58	22
	30Y swap spread	34	32	30	28	26	6
10Y spread to Germany (curve adj.)	Austria	55	40	40	40	35	27
	Belgium	58	50	45	45	40	23
	Finland	54	40	40	40	35	28
	France	50	45	45	45	40	14
	Greece	252	210	200	200	170	103
	Ireland	56	50	45	45	40	14
	Italy	190	180	200	210	170	52
	Netherlands	27	20	20	20	15	12
	Portugal	108	90	100	100	85	44
	Spain	105	95	100	100	85	31
	Wtd. peri. spread	156	144	152	158	134	44

		10-Jun	Sep-22	Dec-22	Mar-23	Jun-23	YTD chg. (bp)
UK	Base rate	1.00	1.75	2.00	2.25	2.50	-
	2Y bmk yield	1.79	1.75	1.85	1.80	1.65	130
	5Y bmk yield	1.93	1.80	1.90	1.90	1.80	120
	10Y bmk yield	2.28	2.15	2.25	2.25	2.10	131
	30Y bmk yield	2.44	2.25	2.35	2.35	2.25	132
	2s/10s bmk curve	49	40	40	45	45	1
	10s/30s bmk curve	16	10	10	10	15	1
	2s/30s bmk curve	65	50	50	55	60	2
	2Y swap spread	67	65	65	60	50	24
	5Y swap spread	69	55	55	50	45	36
	10Y swap spread	10	5	5	0	-5	12
	30Y swap spread	-30	-35	-35	-40	-45	-2
Japan	Policy rate	-0.10	-0.10	-0.10	-0.10	-0.10	-
	10Y yield target	0.00	0.00	0.00	0.00	-	-
	2Y bmk yield	-0.08	-0.05	-0.05	0.00	-	1
	5Y bmk yield	-0.01	0.05	0.05	0.10	-	7
	10Y bmk yield	0.25	0.20	0.20	0.25	-	18
	20Y bmk yield	0.50	0.75	0.85	1.00	-	3
	30Y bmk yield	1.08	0.90	1.00	1.15	-	39
	2s/10s bmk curve	33	25	25	25	-	17
	10s/30s bmk curve	83	70	80	90	-	21
	2s/30s bmk curve	116	95	105	115	-	38
Australia	Cash rate	0.85	1.60	1.85	2.10	2.35	-
	3Y bmk yield	2.75	3.00	3.00	3.00	-	178
	10Y bmk yield	3.18	3.30	3.20	3.20	-	152
New Zealand	Cash rate	2.00	2.75	2.75	2.75	2.75	25
	2Y bmk yield	3.28	3.50	3.20	3.20	-	150
	10Y bmk yield	3.49	3.80	3.50	3.50	-	115
Sweden	Repo rate	0.25	1.00	1.25	1.50	1.50	-
	2-year govt	1.42	1.25	1.35	1.50	1.50	176
	10-year govt	1.78	1.75	1.85	1.90	1.90	160
Norway	Depo rate	0.75	1.25	1.50	1.75	2.00	25
	2-year govt	2.07	2.20	2.35	2.40	2.40	69
	10-year govt	3.00	2.80	2.80	2.80	2.80	133

Source: J.P. Morgan

Marko Kolanovic, PhD; Nikolaos Panigirzoglou; Bram Kaplan, CFA; Thomas Salopek; Federico Manicardi; Mika Inkinen; Amy Ho

FX Forecasts vs. Forwards & Consensus

Exchange rates vs. U.S dollar		Current									JPM forecast gain/loss vs March 23*			Actual change in local FX vs USD			
Majors		10-Jun	Jun 22		Sep 22		Dec 22		Mar 23		Spot	Forwards	Consensus**	Past 1mo	Past 3mo	YTD	Past 12mos
	EUR	1.05	1.02		1.00		1.01		1.02		-3.0%	-4.8%	-5.6%	0.0%	-3.6%	-7.5%	-13.6%
	JPY	134	130		131		132		133		1.0%	-1.4%	-3.8%	-3.2%	-12.7%	-14.3%	-18.6%
	GBP	1.23	1.18		1.14		1.15		1.16		-5.8%	-6.1%	-8.7%	0.5%	-5.6%	-9.0%	-13.2%
	AUD	0.71	0.69		0.71		0.73		0.75		6.3%	3.6%	0.0%	1.7%	-3.3%	-2.9%	-9.0%
	CAD	1.28	1.30		1.30		1.30		1.30		-1.8%	-1.7%	-3.1%	1.8%	-0.2%	-1.0%	-5.2%
	NZD	0.64	0.62		0.63		0.64		0.66		3.7%	1.1%	-4.5%	1.0%	-6.6%	-6.8%	-11.7%
JPM USD index		127.8	129.9	↑	131.3	↑	131.7	↑	131.8	↑	3.1%	2.5%	4.3%	0.0%	3.2%	5.0%	9.0%
DXY		104.2	106.5	↑	108.3	↑	107.5	↑	106.8	↑	2.5%	3.9%	5.2%	0.4%	5.1%	8.9%	15.7%
Europe, Middle East & Africa																	
	CHF	0.99	1.00		1.00		1.00		1.00		-1.1%	-3.3%	-2.8%	0.6%	-5.5%	-7.7%	-9.5%
	ILS	3.40	3.40		3.45		3.45		3.50		-3.0%	-4.6%	-5.7%	1.6%	-3.9%	-8.6%	-4.5%
	SEK	10.03	10.20		10.20		10.00		9.80		2.3%	1.0%	-2.7%	0.5%	-2.7%	-9.7%	-17.7%
	NOK	9.69	9.71		9.80		9.60		9.46		2.4%	1.7%	-5.1%	0.6%	-7.0%	-9.0%	-14.6%
	CZK	23.49	24.5		25.5		25.2		25.5		-7.9%	-4.9%	-10.6%	3.0%	-2.0%	-6.8%	-11.3%
	PLN	4.39	4.61		4.75		4.75		4.75		-7.7%	-4.2%	-10.4%	1.3%	-0.1%	-8.1%	-16.4%
	HUF	378.0	377		390		391		392		-3.6%	0.3%	-12.6%	-4.4%	-7.3%	-14.2%	-24.9%
	RUB	118.69	90.0		90.0		90.0		90.0		31.9%	-7.6%	-17.8%	0.0%	0.0%	-37.1%	-39.5%
	TRY	17.13	16.50		17.50		18.50		19.50		-12.2%	25.3%	-10.5%	-10.6%	-13.8%	-22.3%	-50.8%
	ZAR	15.87	16.00		16.25		16.50		16.75		-5.2%	-2.3%	-4.7%	1.4%	-5.2%	0.4%	-14.3%
Americas	ARS	121.8	126.0		140.0		153.0		166.0		-26.6%	11.6%	-7.8%	-3.9%	-10.6%	-15.6%	-21.9%
	BRL	4.98	5.00		5.20		5.30		5.30		-6.1%	1.1%	-1.9%	3.3%	2.0%	12.1%	1.6%
	CLP	845	820		830		840		840		0.6%	5.8%	0.3%	2.0%	-3.1%	0.8%	-14.7%
	COP	3941	4050		4075		4075		4075		-3.3%	1.7%	-2.5%	3.7%	-3.1%	3.5%	-8.9%
	MXN	19.97	20.90		21.20		21.40		21.60		-7.5%	-2.1%	-5.3%	1.7%	4.7%	2.8%	-1.4%
	PEN	3.77	3.75		3.80		3.85		3.85		-2.2%	0.6%	-0.3%	0.6%	-1.6%	6.2%	3.4%
LACI		42.4	41.6		40.4		39.6		39.1		-7.7%	1.6%	-3.3%	1.8%	0.2%	3.7%	-4.6%
Asia	CNY	6.71	6.85		6.90		6.95		6.95		-3.5%	-3.0%	-3.6%	0.2%	-5.5%	-5.3%	-4.7%
	HKD	7.85	7.85		7.85		7.85		7.85		0.0%	-0.4%	0.0%	0.0%	-0.3%	-0.7%	-1.1%
	IDR	14550	14650		14700		14750		14800		-1.7%	0.3%	-2.0%	0.1%	-1.7%	-2.0%	-2.1%
	INR	77.84	78.00		78.50		79.00		79.00		-1.5%	1.7%	-2.2%	-0.8%	-1.6%	-4.5%	-6.2%
	KRW	1269	1270		1290		1310		1330		-4.6%	-4.3%	-7.5%	0.5%	-2.9%	-6.3%	-12.1%
	MYR	4.40	4.40		4.42		4.44		4.44		-0.9%	-4.0%	-3.2%	-0.6%	-4.7%	-5.4%	-6.4%
	PHP	52.99	52.50		53.00		53.25		53.25		-0.5%	2.5%	-1.1%	-1.3%	-1.3%	-3.8%	-9.9%
	SGD	1.39	1.39		1.39		1.39		1.38		0.9%	0.5%	-0.4%	0.2%	-1.7%	-2.7%	-4.5%
	TWD	29.58	29.30		29.30		29.50		29.50		0.3%	-2.1%	0.0%	0.4%	-4.0%	-6.4%	-6.4%
	THB	34.76	34.75		35.00		35.25		35.00		-0.7%	-1.7%	-4.3%	-0.4%	-4.2%	-3.9%	-10.3%
ADXY		103.0	102.1	↓	101.5	↓	100.8	↓	100.7	↓	-2.2%	-1.9%	-2.9%	0.1%	0.2%	-4.7%	-6.0%
EMCI		52.65	50.04		49.16		48.59		48.29		-8.3%	1.7%	-5.3%	1.9%	3.5%	0.0%	-9.7%
Exchange rates vs Euro														Actual change in local FX vs EUR			
	JPY	141.3	133		131		133		136		4.1%	3.6%	1.9%	-3.3%	-9.4%	-7.3%	-5.8%
	GBP	0.85	0.864		0.877		0.878		0.879		-2.8%	-1.3%	-3.3%	0.5%	-2.0%	-1.5%	0.5%
	CHF	1.04	1.02		1.00		1.01		1.02		1.9%	1.6%	2.9%	0.5%	-2.0%	-0.2%	4.7%
	SEK	10.54	10.40		10.20		10.10		10.00		5.4%	5.1%	2.0%	0.4%	1.0%	-2.4%	-4.7%
	NOK	10.19	9.90		9.80		9.70		9.65		5.6%	6.4%	0.0%	0.6%	-3.6%	-1.6%	-1.2%
	CZK	24.70	25.00		25.50		25.50		26.00		-5.0%	-0.1%	-5.4%	2.9%	1.6%	0.7%	2.6%
	PLN	4.62	4.70		4.75		4.80		4.85		-4.8%	0.7%	-5.2%	1.3%	3.6%	-0.7%	-3.2%
	HUF	398	385		390		395		400		-0.6%	5.4%	-7.5%	-4.5%	-3.9%	-7.1%	-13.0%
	RON	4.94	5.05		5.10		5.15		5.20		-4.9%	1.8%	-2.9%	0.1%	0.1%	0.1%	-0.4%
	TRY	18.03	16.83		17.50		18.69		19.89		-9.4%	31.7%	-5.2%	-10.4%	-10.4%	-16.4%	-43.0%
	RUB	60.27	91.80		90.00		90.90		91.80		-34.3%	-2.9%	-12.9%	16.3%	139.6%	41.8%	45.5%
	BRL	5.23	5.10		5.20		5.35		5.41		-3.2%	6.3%	3.9%	3.2%	5.8%	21.1%	17.7%
	MXN	21.00	21.32		21.20		21.61		22.03		-4.7%	2.8%	0.2%	1.7%	8.7%	11.1%	14.2%

↑ indicates a revision resulting in a stronger currency forecast, ↓ indicates a revision resulting in a weaker currency forecast. Source: J.P.Morgan

* Positive indicates JPM more bullish on local currency than spot, consensus or forward rates. ** Bloomberg *FX Consensus Forecasts*. + *SIMADI*

Source: J.P. Morgan

Global Commodities Price Forecasts

Quarterly and annual aver

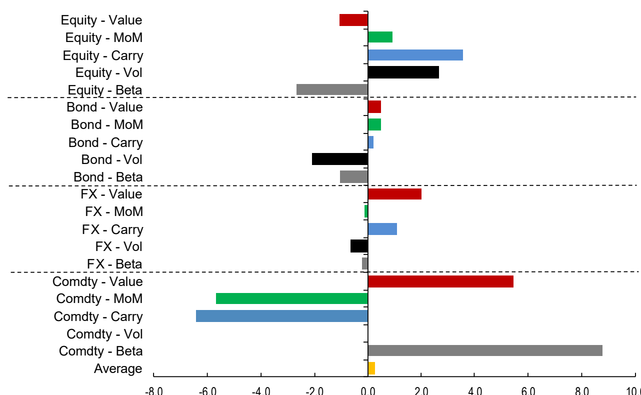
		4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	2022	2023
Energy												
WTI Crude	US$/bbl	77.10	95	111	99	98	92	94	93	95	101	94
Brent Crude	US$/bbl	79.66	98	114	102	101	96	98	97	99	104	98
US Natural Ga	US$/MMBtu	5.26	4.19	6.25	7.75	6.00	5.00	4.00	3.75	4.25	6.05	4.25
European Nat	Eur/MWh	75.63	100.00	120.00	105.00	120.00	90.00	75.00	85.00	110.00	111.25	90.00
Base Metals												
Aluminum	US$/mt	2,754	3,262	3,550	3,300	2,900	2,850	2,780	2,720	2,650	3,253	2,750
Copper	US$/mt	9,704	9,997	10,650	10,000	9,750	9,400	9,100	8,800	8,700	10,099	9,000
Nickel	US$/mt	19,773	26,388	26,500	24,000	21,000	20,000	19,000	19,000	18,000	24,472	19,000
Zinc	US$/mt	3,356	3,738	4,500	4,100	3,800	3,650	3,400	3,100	2,800	4,035	3,238
Precious Metals												
Gold	US$/t oz.	1,796	1,879	1,850	1,800	1,720	1,670	1,550	1,530	1,450	1,812	1,550
Silver	US$/t oz.	23.36	24.13	24.30	22.20	20.70	19.93	18.50	18.26	17.30	22.83	18.50
Platinum	US$/t oz.	998	1,030	1,030	1,080	1,150	1,250	1,300	1,350	1,400	1,073	1,325
Palladium	US$/t oz.	1,943	2,322	2,200	2,100	1,900	1,800	1,700	1,600	1,500	2,131	1,650
Agriculture												
Wheat	USc/bu	780	913	1,150	1,250	1,250	1,200	1,150	1,150	1,100	1,141	1,150
Corn	USc/bu	567	673	800	900	850	800	750	780	750	806	770
Soybeans	USc/bu	1,253	1,562	1,750	1,700	1,650	1,630	1,600	1,500	1,450	1,665	1,545
Sugar (ICE #1	Usc/lb	19.5	18.6	20.0	21.0	22.0	21.0	21.0	21.0	22.0	20.4	21.3
Cotton (ICE #	Usc/lb	112.06	123	145	145	140	135	135	130	130	138	133
MDE-Bursa P	MYR/tonne	5,196	6,183	7,100	7,300	7,800	7,800	7,300	7,500	7,800	7,096	7,600

Source: J.P. Morgan

Cross-Asset Risk Premia

Table A1: Performance

Risk Premia	One Day			Month To Date Performance			Year To Date Performance		
	Long	Short	Total	Long	Short	Total	Long	Short	Total
Equity - Value	0.09	-0.17	-0.09	-2.5	1.5	-1.0	-4.5	5.7	1.3
Equity - MoM	-0.56	-0.09	-0.64	-1.6	2.5	0.9	-5.2	4.5	-0.8
Equity - Carry	0.40	0.32	0.71	-1.0	4.6	3.5	-1.0	4.6	3.5
Equity - Vol			0.00			2.7			3.1
Equity - Beta			-0.07			-2.6			-7.4
Bond - Value	0.63	-0.36	0.26	-0.9	1.3	0.5	-2.4	2.3	-0.2
Bond - MoM	0.43	-0.42	0.01	-0.8	1.3	0.5	-1.7	3.2	1.5
Bond - Carry	0.59	-0.38	0.21	-1.0	1.2	0.2	-2.2	2.1	-0.1
Bond - Vol			-1.33			-2.1			-2.1
Bond - Beta			0.58			-1.0			-2.5
FX - Value	0.48	0.02	0.50	2.0	0.0	2.0	0.1	0.8	0.9
FX - MoM	0.22	-0.02	0.19	0.4	-0.5	-0.1	-0.3	0.9	0.6
FX - Carry	0.26	-0.02	0.25	1.3	-0.2	1.1	-0.4	1.1	0.8
FX - Vol			-0.44			-0.6			-2.1
FX - Beta			-0.10			-0.2			-1.1
Comdty - Value	3.01	-2.10	0.92	10.4	-4.9	5.4	25.8	-7.7	18.1
Comdty - MoM	2.12	-3.86	-1.75	6.1	-11.7	-5.7	30.8	-12.7	18.1
Comdty - Carry	1.90	-3.86	-1.97	5.3	-11.7	-6.4	26.7	-15.5	11.2
Comdty - Vol			0.00			0.0			0.0
Comdty - Beta			3.13			8.7			21.4
Average	0.80	-0.91	0.02	1.5	-1.4	0.3	5.5	-0.9	3.2



Source: J.P. Morgan Quantitative and Derivatives Strategy

Risk Premia Definitions[2]

Equity - Value: Excess return of monthly rolling a long position in top-three equity benchmark indices with lowest aggregate price-to-book ratios and a short position in the bottom-three. Universe includes Canada, France, Germany, Hong Kong, Japan, Netherlands, Spain, Switzerland, United Kingdom and United States.

Bond - Value: Excess return of monthly rolling a long position in top-three 10-year government bonds with most increase in 10-year yields during the past three years and a short position in the bottom-three 10-year government bonds with least increase (or most decrease) in 10-year yields during the past three years. Our universe was comprised of government bonds from Australia, Canada, Denmark, Europe, Japan, New Zealand, Sweden, UK and the US.

FX - Value: Currency value factor is a long/short G10 currency portfolio based on 5-year change of purchasing power parity. The universe covers spot exchange rates of the following G10 currencies: Australia, Canada, Europe, Denmark, Japan, New Zealand, Norway, Sweden, Switzerland, UK and US.

Commodity - Value: Excess return of monthly rolling a long position in top-four commodity futures with lowest valuation and a short position in the bottom-four commodity futures with highest valuation, where the valuation metric is defined as the ratio of current price relative to the average price over the past five years. Commodity futures universe includes Heating oil, Crude Oil, Natural gas, Gold, Silver, Aluminium, Copper, Nickel, Wheat, Corn and Soybeans.

Equity - Momentum: Excess return of monthly rolling a long position in three equity indices with highest past 12 month returns and a short position in the three equities indices with lowest past 12 month returns; Our index universe consisted of country equity benchmarks for Canada, France, Germany, Hong Kong, Japan, Netherlands, Spain, Switzerland, United Kingdom and United States.

Bond - Momentum: Excess return of monthly rolling a long position in three 10-year government bonds with highest past 12 month returns and a short position in the three 10-year government bonds with lowest past 12 month returns. Our universe includes government bonds from Australia, Canada, Denmark, Europe, Japan, New Zealand, Sweden, UK and the US.

FX - Momentum: Excess return of monthly rolling a long position in three G10 currencies with highest past 12 month returns and a short position in the three G10 currencies with lowest past 12 month returns.

Commodity - Momentum: Excess return of monthly rolling a long position in four commodity futures with highest past 12 month returns and a short position in the four commodity futures with lowest past 12 month returns. The commodity futures universe was: Heating oil, Crude Oil, Natural gas, Gold, Silver, Aluminium, Copper, Nickel, Wheat, Corn and Soybeans.

Equity - Carry: Excess return of monthly rolling a long position in three equity indices with highest dividend yield and a short position in the three equities indices with lowest dividend yield. Our index universe consisted of country equity benchmarks for Canada, France, Germany, Hong Kong, Japan, Netherlands, Spain, Switzerland, United Kingdom and United States.

Bond - Carry: Excess return of monthly rolling a long position in three 10-year government bonds with the steepest yield curves and a short position in the three 10-year government bonds with flattest yield curve. Our universe was comprised of government bonds from Australia, Canada, Denmark, Europe, Japan, New Zealand, Sweden, UK and the US.

FX - Carry: Excess return of monthly rolling a long position in top-three yielding currencies and a short position in the bottom-three yielding currencies. For currencies, we use G10 FX and for yields domestic interest rate data.

Commodity - Carry: Excess return of monthly rolling a long position in top-four backwardated commodity futures and a short position in the bottom-four backwardated (steepest contango) commodity futures. The commodity futures universe was: Heating oil, Crude Oil, Natural gas, Gold, Silver, Aluminium, Copper, Nickel, Wheat, Corn and Soybeans.

Equity - Volatility: Equal weighted delta-neutral S&P 500 Buy-write (BXM) and Put-write (PUT) Index.

Bond - Volatility: Excess return of monthly rolling a short position on 3-month At-the-Money Straddle (ATM Call plus ATM Put) on near-month US 10-year Treasury Futures.

FX - Volatility: Excess return of monthly rolling an equal weighted position of volatility swaps on USDJPY, USDAUD and USDCHF (receiving implied vol swap) with unit vega notional.

Commodity - Volatility: Return from short volatility position across WTI, Brent, Heating Oil, Gold, Corn, Soybeans, Wheat, Cocoa, Coffee, Sugar and Live Cattle.

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[2] See Systematic Strategies across Asset Classes, Kolanovic, December 2013.

Global Equity Style View

Style Recommendation

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Table 1: Global Equity Style Recommendation

Region	QMI Cycle	Value	Momentum	Growth	Quality	Low Volatility
US	Contraction	OW	N	N	UW	UW
Europe	Contraction	N	OW	N	OW	OW
EM Asia	Contraction	OW	UW	N	OW	UW

Source: J.P. Morgan Quantitative and Derivatives Strategy

Table B2: View Rationale and Implementation[3]

Region	Equity Style	View	Possible Implementation	View Rationale	Style Definition
US	Value	OW	JPRPULVA, FTUSFLUT, FTUSPLUT, FTUSWLUT	Value has dominated all other styles given the rising inflation and rates, both YTD and in May. We continue to favor Value over long duration Growth stocks despite weakness in our business cycle indicator QMI. Valuation spread between cheap and expensive stocks is less extreme now (9%ile vs 0%ile Dec'21).	B/P 1Y Fwd. Earnings Yield Sales Yield
	Momentum	N	JPRPULMO, FTUSMLUT, FTUSXLUT, FTUSNLUT	Momentum's weak performance (down in May & YTD) reflects incomplete rotation from underperforming Growth and Low Vol into outperforming Value and lately Quality. This mixed composition of Momentum is not ideal for gaining exposure to any particular theme. Momentum is less crowded now given this rotation.	12M Price Mom
	Growth	N	JPAMSMSG	Growth stocks are now very cheap versus the market (0%ile) after the fast sell-off. Rising rates are a huge risk to long duration Growth stocks. We recommend cheaper sustainable growth stocks (GARP) for Growth mandate PMs. Value exposure is a hedge against yield as it normalizes.	Sales Growth (1Y, 3Y) FCF Growth (1Y, 3Y)
	Quality	UW	JPRPULQU, FTUSELUT, FTUSILUT, FTUSALUT	Quality stocks outperformed due to rising concerns of slowdown and investors flight to safety. Rising risk aversion may continue to support Quality. The recent outperformance is supported by relatively stronger earnings vs market, resulting in multiple spread shrinking (from 99%ile to 18%ile YTD). Any cyclical recovery possess a risk to Quality Stocks.	ROE ROA EPS Quality (Piotroski)
	Low Volatility	UW	JPRPULBE, FTUSVLUT	Low Vol stock valuations are significantly less extreme compared to 4Q'21as expensive Low Vol stocks have been flushed out of the top portfolio. The Style remains exposed to pick-up in inflation expectations and yields. Geopolitical risk and recession fears may temporarily give Low Vol a boost.	12-month stock Volatility
Europe	Value	N	JPQTVLEL (L), JPQTVLE1(L/S)	The European QMI, our macro navigational tool continues to suggest the 'Contraction' phase of the cycle. Value stocks perform better than Growth stocks during this phase, but both will underperform Quality. Today, Value stocks appear cheap, but their EPS revisions are starting to mean revert from high levels. We remain nervous of Value stocks that are highly variable EPS & DPS forecasts. Watch Energy stocks and the Oil price for a significant change in Value's performance.	Earnings Yield Dividend Yield FCF Yield
	Momentum	OW	JPQTMOEL (L), JPQTMOE1(L/S)	Momentum stocks are now more closely correlated to Value than Quality. However, the correlation has hit a high and is now mean reverting. This move is typical when the QMI slows. Momentum stock may struggle in the ST, as the correlation moves from Value towards Quality. However, Momentum stocks should continue to work well over the medium to longer term.	Price Mom Seasonality
	Growth	N		Growth stocks have clearly peaked from their extreme price levels. Usually, there is greater upside if economic growth becomes scarce (as we expect) over the coming months, but this may be offset with high valuations, and weaker profits growth expectations. The dramatic rise in bond yields has accelerated the decline in long duration assets. Moreover, there is still a concern around high market concentration, which as it unwinds hurts growth stocks further.	Earnings Mom PEG Ratio
	Quality	OW	JPQTQUEL (L), JPQTQUE1(L/S)	Quality has been lagging Value YTD. There seems to be upside potential to Quality stocks as the QMI enters the 'Contraction' phase. High Quality stocks are less expensive on Valuations, and L/S is now much cheaper. Cheaper Quality stocks may start to perform much better than before. Overall, as both the economic & profit cycle slows - Quality is our preferred exposure.	ROE Net Income Margin Equity Debt Ratio
	Low Volatility	OW	JPQTLVEL (L), JPQTLVE1(L/S)	Recently, low Volatility stocks have started to perform differently to Quality stocks. Low Vols recent gains vs Quality seems to be because they offer much better value. Additionally, it now seems like an opportunity to move OW given the fall in the QMI & consensus EPS revisions. Low Volatility should perform well if equity market volatility starts to rise faster than bond market volatility. Q2 should support low Vol. vs high Vol. stocks.	Low Size Low Beta Low Vol
EM Asia	Value	OW	JPHASST2 (L), QTJPXEYS (L/S)	Value remains the best performing style in 2022 by some margin. However, only parts of Value (like Commodities) likely to do well going ahead as growth slows down	Fwd Earnings Yield Sales Yield B/P
	Momentum	UW	JPHASSTY (L), QTJPXPMS (L/S)	Momentum performance has faltered steadily YTD as cycle concerns rise and retail support fades. Valuations at historical lows	6M, 12M Price Mom 3M EPS Revision
	Growth	N	JPHASSTY (L)	Growth stocks with low profitability have underperformed massively but might bounce back if yields consolidate or market sentiment improves. Valuations still quite high	EPS Growth Sales Growth Forecast certainty
	Quality	OW	QTJPXRES (L/S)	The lacklustre performance from last year has carried over into 2022. Slight uptick in performance recently	ROE Forecast Certainty
	Low Volatility	UW	QTJPXLVS (L/S)	Bouts of outperformance in the second half of 2021due to China regulations, cycle worries and Omicron. Macro uncertainties (Hawkish Fed, inflation, Ukraine conflict) have lent fresh support to Low Vol performance this year	Low 240D Vol

Source: J.P. Morgan Quantitative and Derivatives Strategy. Highlighted are thematic J.P. Morgan Indices, which are one of the many possible implementations of an equity style view. Other implementations include quantitative ETFs, direct trading of long/short stock portfolios, equity risk factor benchmarks designed by other institutions, etc.

[3] See Framework for Style Investing, Lakos-Bujas et al., May 2015.
See Global Equity Style Investing, Chaudhry et al., Nov 2017.

Rule-based fixed income signals

Table D1: Rules: Current duration and cross-country signals

Duration signal positions by country, by signal, and weighted average across signals

Positive numbers signal a duration long, negative numbers a duration short and 0 neutral.

Duration — Current signal by country

	Weight	Euro area	Japan	UK	US	Australia	Canada	Sweden	Switzerland	New Zealand	Norway	Combined
PMI momentum	15%	1	1	1	1	1	1	1	1	1	1	1.0
Revision ratio momentum	15%	0	1	1	0	0	1	0	0	1	0	0.4
Bond price momentum	20%	-1	0	-1	-1	-1	-1	-1	-1	-1	0	-0.8
Equity price momentum	15%	1	-1	-1	1	1	1	1	1	1	-1	0.4
Carry to Risk	35%	0.1	0.9	-0.8	-0.9	1.4	-0.2	-0.5	0.7	0.8	2.0	0.3
Combined		0.2	0.5	-0.3	-0.2	0.6	0.2	-0.1	0.3	0.5	0.7	0.2
Previous month		*0.3*	*0.4*	*-0.4*	*-0.1*	*0.4*	*0.0*	*0.2*	*0.6*	*0.7*	*0.5*	*0.3*

NB: Positive numbers signal a duration long, negative numbers a duration short, and 0 neutral. Combined signal can be thought of as a scalar relative to a risk budget, e.g. a coefficient of -0.2 would signal a short of 20% of risk limit.
Source: J.P. Morgan, Bloomberg Finance L.P.

Positions of cross-country signals

Each measure ranks countries from highest to lowest; the highest two per signal indicate long positions in 10Y swaps and lowest to indicate short positions in 10Y swaps.

Cross-market — Current basket

	First pair		Second pair	
	Long	Short	Long	Short
Carry	AUD	JPY	CAD	GBP
Carry to Risk	AUD	GBP	SEK	JPY
Change in slope	CHF	AUD	EUR	USD
Real yield	NZD	JPY	AUD	EUR

Returns on duration signals

%

	Returns*, %								IR since 1998
	1M	3M	6M	YTD	12M	5Y	10Y	Since 1998	
PMI momentum	-0.7	-5.8	-5.9	-6.6	-9.8	0.8	1.2	2.2	0.57
Revision ratio momentum	0.1	-6.8	-5.7	-4.3	-7.9	-1.1	0.1	2.3	0.53
Bond price momentum	0.7	6.8	9.1	9.6	10.8	4.0	2.4	2.7	0.61
Equity price momentum	-0.1	-1.1	0.8	-0.1	-0.3	0.3	0.2	2.8	0.57
Carry to Risk	-0.1	-2.7	-2.3	-3.3	-0.7	-3.3	-0.8	1.0	0.26
Combined	0.0	-1.4	-0.6	-0.9	-1.0	-0.4	0.2	1.5	0.87

* Holding period returns for 1M - 6M; annualized for 12M and longer.
Source: J.P. Morgan, Bloomberg Finance L.P.

Manufacturing PMI momentum: Short duration in each country if both local country and global manufacturing PMI increased over past two months, long duration if both fell, and neutral otherwise.

Earnings revision ratio momentum: Short duration in each country if the local and global IBES equity earnings revision ratio increased over the past three months, long duration if both fell, and neutral otherwise.

Bond price momentum: Long duration if our bond total return swap indices are above both 1-month and 12-month average, short if below both 1-month and 12-month average, neutral otherwise.

Equity price momentum: Long duration in each country if local equity market is below its 6-month average, and short if it is above 6-month average (net of cash).

Carry-to-risk: Long duration if carry-to-risk (10Y – 3M slope) is above its 10Y average, short duration if below its 10Y average, with position size proportional to how far carry to risk is above or below average.

Returns on cross-market signals

%

	Returns*, %								IR since 1996**
	1M	3M	6M	YTD	12M	5Y	10Y	Since 1996**	
Carry	-0.7	-5.1	-4.4	-5.9	-0.7	-2.0	-1.0	2.0	0.45
Carry to Risk	-0.2	-4.7	-4.2	-6.0	0.6	-0.3	-0.5	1.8	0.44
Change in slope	-0.3	-1.2	-0.5	-1.1	2.8	1.1	-0.9	1.6	0.41
Real yield	1.1	1.2	2.7	1.0	6.3	1.4	1.1	1.5	0.43

* Holding period returns for 1M - 6M; annualized for 12M and longer.
** Except for the real yield signal, which starts in 2004.
Source: J.P. Morgan, Bloomberg Finance L.P.

Carry and carry-to-risk: Overweight countries with high carry (10Y swap rate – 1M Libor rate), and overweight countries where carry is high relative to volatility[4].

Reversal (change in curve slope): Overweight countries where curve (10Y – 1Y slope) has steepened most, relative to average over past 6M[5].

Real yield: Overweight markets with high real yields, measured as 10Y swap rate less consensus forecasts of inflation over the next 10Y[6].

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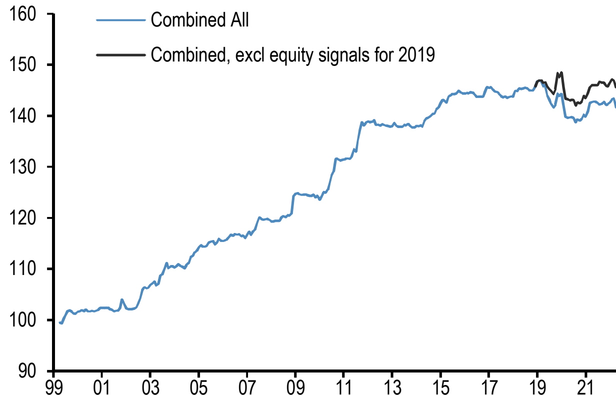
[4] See *A cross-market bond carry strategy*, N. Panigirtzoglou, March 2006.
[5] See *Exploiting reversals in cross-market yield spreads*, S. Mac Gorain, March 2012.
[6] See *Rule-based Fixed Income Monthly*, S. Mac Gorain, November 2012.

Combined duration signal performance

Index, Jan 1999 = 100



* Black line shows returns excluding the revision ratio and equity price momentum signals and using only the PMI momentum, bond price momentum and carry-to-risk signals.
Source: J.P. Morgan

Combined duration signal performance

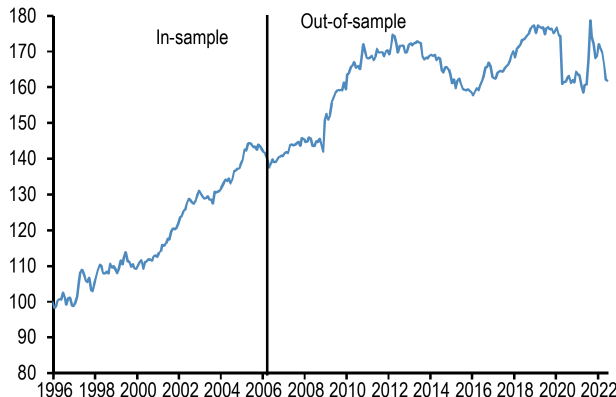
Since 1998; % and IR

	Return	Vol	IR	Max drawdown	Success ratio
PMI momentum	2.2%	4.0%	0.57	-10%	55%
Revision ratio momentum	2.3%	4.5%	0.53	-11%	58%
Bond price momentum	2.7%	4.5%	0.61	-9.7%	53%
Equity price momentum	2.8%	5.1%	0.57	-11%	53%
Carry to Risk	1.0%	4.8%	0.26	-21%	54%
Combined	1.5%	1.7%	0.87	-5.5%	60%

Source: J.P. Morgan

Cross-market carry-to-risk signal performance

Index, Jan 1996 = 100



Source: J.P. Morgan

Cross-market signal performance

Since 1996 (except real yield signal since 2004); % and IR

	Return	Vol	IR	Max drawdown	Success ratio
Carry	2.0%	4.4%	0.45	-14%	57%
Carry-to-risk	1.8%	4.1%	0.44	-12%	57%
Change in slope	1.6%	4.0%	0.41	-19%	54%
Real yield	1.5%	3.5%	0.43	-6.3%	54%

Source: J.P. Morgan

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Cross-Asset Monitor

	Asset	Spot	1W Return (%)	1M Return (%)	YTD Return (%)	1Y Low	1Y High	1Y Percentile	Current Percentile Relative to 1Y Low/High and 20th-80th Percentile Range	Z-Score
Equity	MSCI AC World (USD)	615.14	-5.65	-2.01	-17.63	615.3	758.9	1.1%		-2.65
Equity	MSCI AC World (lcy)	743.29	-4.24	-1.35	-14.83	737.9	886.1	1.5%		-2.59
Equity	MSCI World (USD)	2,627.33	-5.80	-2.54	-17.82	2639.8	3248.1	0.3%		-2.73
Equity	MSCI World (lcy)	2,063.79	-4.70	-2.02	-14.96	2061.6	2477.0	0.7%		-2.62
Equity	S&P 500	3,900.86	-5.33	-2.91	-17.60	3900.8	4796.6	0.3%		-2.64
Equity	Russel 2000	1,800.28	-4.72	0.53	-19.41	1718.1	2442.7	4.6%		-2.06
Equity	Nasdaq	11,340.02	-5.97	-3.85	-27.25	11264.5	16057.4	0.3%		-2.50
Equity	Euro Stoxx	3,544.74	-7.65	-3.78	-15.29	3505.3	4401.5	1.9%		-2.20
Equity	FTSE 100	7,247.38	-4.71	-1.92	-0.03	6844.4	7672.4	56.1%		0.11
Equity	Topix	1,901.06	-1.96	1.98	-3.39	1758.9	2118.9	48.0%		-0.13
Equity	MSCI EM (USD)	1,023.14	-4.46	2.24	-16.10	987.8	1383.2	8.0%		-1.67
Equity	MSCI EM (lcy)	62,171.74	-0.65	4.43	-11.24	58578.1	76921.0	9.6%		-1.57
Bonds	GBI Global (hedged USD	400.21	-1.19	-1.78	-9.17	400.2	447.5	0.0%		-2.45
Bonds	GBI Global (lcy)	543.17	-1.23	-1.84	-9.42	543.2	609.6	0.0%		-2.45
Bonds	EM local debt (USD)	340.94	-1.56	1.57	-7.97	334.4	384.6	3.8%		-2.14
Bonds	US Treasuries	601.78	-1.19	-0.97	-9.49	601.8	674.3	0.0%		-2.25
Bonds	German Bunds	474.89	-1.41	-3.72	-11.55	474.9	548.8	0.0%		-2.80
Bonds	JGBs	287.42	-0.36	-0.13	-2.43	287.2	296.7	0.3%		-1.88
Bonds	US linkers	335.61	-1.00	0.94	-6.71	332.5	361.4	2.3%		-2.03
Bonds	Euro linkers	250.56	-1.57	-2.68	-5.11	250.6	277.5	0.0%		-2.28
Credit	US HG	336.25	-1.63	-0.97	-10.67	336.1	394.5	0.3%		-2.07
Credit	US HY	670.59	-2.12	-0.12	-7.37	664.2	740.7	3.4%		-2.45
Credit	Euro HG	214.41	-1.63	-2.60	-9.90	214.4	246.4	0.0%		-2.56
Credit	Euro HY	331.04	-1.46	-0.78	-8.07	330.9	367.7	0.3%		-2.42
Credit	EMBIGD	807.96	-2.38	-0.78	-15.00	808.0	1005.4	0.0%		-2.08
Credit	CEMBI	326.48	-0.62	-0.24	-11.16	325.8	384.3	1.5%		-1.86
FX	USD TWI	127.83	1.63	-0.16	5.01	117.6	128.6	97.6%		2.45
FX	EUR/USD	1.05	-1.99	0.68	-7.80	1.0	1.2	2.6%		-1.97
FX	GBP/USD	1.23	-2.20	-0.05	-9.43	1.2	1.4	1.1%		-2.44
FX	USD/JPY	134.71	-2.10	-4.08	-14.57	109.0	134.4	100.0%		2.72
FX	EM FX	344.53	-1.44	0.56	-8.92	341.4	393.7	3.4%		-2.15
Comdy	GSCI	804.80	-1.43	5.94	43.41	494.4	822.3	97.6%		1.95
Comdy	Brent	119.97	0.38	7.55	54.24	65.2	128.0	98.0%		2.07
Comdy	Gold	1,862.80	1.28	3.02	1.87	1721.5	2043.3	78.8%		0.63
Comdy	Copper	9,448.00	-0.59	2.26	-3.07	8892.0	11299.5	30.7%		-0.64
Ca	GBI 3m cash (lcy)	325.76	-0.007	-0.05	-0.30	325.7	327.7	0.7%		-1.75

	Asset	Rate (%)	1W Chg (spread)	1M Chg (spread)	YTD Chg (spread)	1Y Low	1Y High	1Y Percentile	Current Percentile Relative to 1Y Low/High and 20th-80th Percentile Range	Z-Score
Rates	US 10yr	3.22	0.18	0.30	1.71	1.2	3.2	100.0%		2.33
Rates	EU 10yr	1.53	0.21	0.58	1.71	-0.5	1.5	100.0%		2.84
Rates	UK 10yr	2.46	0.21	0.72	1.49	0.5	2.4	100.0%		2.67
Rates	Japan 10yr	0.26	0.01	0.01	0.19	0.0	0.3	99.6%		1.57
Rates	GBI-Agg Yield	2.85	0.16	0.25	1.26	1.3	2.9	100.0%		2.47
Rates	GBI-DM Yield	2.37	0.17	0.28	1.36	0.7	2.4	100.0%		2.52
Rates	GBI-EM Yield	6.95	0.20	-0.11	1.24	4.9	7.5	96.1%		1.82
Rates	US 10yr Breakeven	2.79	0.00	0.04	0.19	2.2	3.0	82.3%		1.14

	Asset	Spread (bps)	1W Chg (spread)	1M Chg (spread)	YTD Chg (spread)	1Y Low	1Y High	1Y Percentile	Current Percentile Relative to 1Y Low/High and 20th-80th Percentile Range	Z-Score
Credit Spread	US HG	156.30	4.15	-5.99	27.49	0.6	1.8	35.3%		-0.11
Credit Spread	US HY	487.54	21.26	-9.50	74.52	368.2	536.9	94.6%		2.12
Credit Spread	Euro HG	125.29	7.52	2.89	37.28	54.0	132.0	96.9%		1.91
Credit Spread	Euro HY	515.96	16.20	-22.84	130.27	297.0	553.8	92.6%		1.80
Credit Spread	EMBIGD	466.97	20.58	-3.38	85.73	327.9	525.8	90.0%		1.72
Credit Spread	CEMBI	314.75	-8.12	-22.49	24.15	243.8	446.0	78.0%		0.41
CDS Spread	CDX IG 5yr	91.68	10.67	6.27	42.19	45.9	92.7	99.6%		2.56
CDS Spread	CDX HY 5yr	531.34	58.77	49.19	238.45	269.2	534.7	100.0%		2.94
CDS Spread	iTraxx Main 5yr	102.32	14.29	9.80	54.43	44.5	99.8	98.8%		2.26
CDS Spread	iTraxx x-Over 5yr	514.69	74.68	68.00	272.29	224.5	491.2	100.0%		2.55

Source: J.P. Morgan Quantitative and Derivatives Strategy

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Cross-Asset Correlation

		Equity												Bonds								Credit						FX					Commodity				Cash
	Asset	MSCI AC World (USD)	MSCI AC World (lcy)	MSCI World (USD)	MSCI World (lcy)	S&P 500	Russel 2000	Nasdaq	Euro Stoxx	FTSE 100	Topix	MSCI EM (USD)	MSCI EM (lcy)	GBI Global (hedged USD)	GBI Global (lcy)	EM local debt (USD)	US Treasuries	German Bunds	JGBs	US linkers	Euro linkers	US HG	US HY	Euro HG	Euro HY	EMBIGD	CEMBI	USD TWI	EUR/ USD	GBP/U SD	USD/ JPY	EM FX	GSCI	Brent	Gold	Copper	GBI 3m cash (lcy)
Equity	MSCI AC World (USD)		99%	99%	99%	96%	85%	94%	75%	70%	66%	69%	66%	-13%	-12%	50%	-12%	-20%	-14%	4%	0%	19%	64%	14%	56%	54%	35%	-57%	49%	61%	17%	50%	17%	19%	-2%	36%	-2%
	MSCI AC World (lcy)	99%		99%	99%	97%	85%	95%	74%	69%	66%	66%	65%	-14%	-14%	43%	-15%	-20%	-15%	4%	1%	16%	63%	13%	55%	51%	34%	-49%	41%	56%	23%	46%	18%	19%	-6%	33%	-2%
	MSCI World (USD)	99%	99%		100%	98%	85%	95%	75%	69%	64%	60%	58%	-11%	-11%	45%	-11%	-19%	-13%	6%	0%	19%	64%	14%	54%	53%	32%	-53%	48%	59%	17%	48%	16%	18%	-3%	34%	-1%
	MSCI World (lcy)	99%	99%	100%		98%	85%	95%	74%	68%	64%	58%	56%	-13%	-13%	40%	-13%	-19%	-14%	6%	1%	16%	62%	13%	53%	51%	31%	-46%	41%	54%	22%	44%	16%	17%	-7%	31%	0%
	S&P 500	96%	97%	98%	98%		83%	96%	64%	58%	55%	51%	49%	-7%	-7%	33%	-8%	-13%	-11%	10%	6%	20%	64%	16%	49%	46%	28%	-41%	39%	51%	18%	39%	19%	20%	-6%	30%	-1%
	Russel 2000	85%	85%	85%	85%	83%		85%	61%	57%	52%	53%	52%	-17%	-16%	35%	-17%	-21%	-10%	13%	6%	6%	56%	6%	39%	32%	10%	-43%	37%	46%	22%	38%	30%	32%	4%	35%	-6%
	Nasdaq	94%	95%	95%	95%	96%	85%		61%	53%	56%	55%	54%	-3%	-3%	32%	-2%	-10%	-8%	13%	7%	25%	64%	16%	49%	45%	29%	-38%	35%	45%	17%	36%	15%	17%	-9%	27%	-3%
	Euro Stoxx	75%	74%	75%	74%	64%	61%	61%		84%	55%	48%	44%	-23%	-23%	49%	-23%	-32%	-19%	-11%	-24%	1%	36%	6%	55%	61%	35%	-46%	37%	45%	22%	50%	-12%	-4%	-17%	15%	8%
	FTSE 100	70%	69%	69%	68%	58%	57%	53%	84%		50%	55%	52%	-34%	-34%	50%	-36%	-36%	-19%	-22%	-19%	-11%	32%	-1%	46%	44%	22%	-50%	34%	45%	27%	45%	3%	8%	-9%	24%	0%
	Topix	66%	66%	64%	64%	55%	52%	56%	55%	50%		61%	60%	-27%	-27%	32%	-27%	-32%	-27%	-15%	-17%	0%	33%	-5%	40%	36%	30%	-39%	34%	39%	34%	42%	12%	15%	-12%	32%	-5%
	MSCI EM (USD)	69%	66%	60%	58%	51%	53%	55%	48%	55%	61%		99%	-18%	-18%	61%	-17%	-20%	-12%	-9%	0%	11%	46%	9%	49%	42%	42%	-61%	37%	53%	11%	47%	24%	25%	12%	37%	-11%
	MSCI EM (lcy)	66%	65%	58%	56%	49%	52%	54%	44%	52%	60%	99%		-19%	-19%	51%	-19%	-18%	-12%	-10%	2%	8%	42%	8%	46%	35%	39%	-52%	29%	47%	16%	40%	27%	27%	8%	35%	-14%
Bonds	GBI Global (hedged USD)	-13%	-14%	-11%	-13%	-7%	-17%	-3%	-23%	-34%	-27%	-18%	-19%		100%	-8%	95%	90%	64%	64%	55%	84%	31%	77%	21%	19%	13%	5%	-5%	-9%	-68%	-16%	-5%	-7%	9%	-1%	0%
	GBI Global (lcy)	-12%	-14%	-11%	-13%	-7%	-16%	-3%	-23%	-34%	-27%	-18%	-19%	100%		-7%	95%	91%	64%	64%	55%	84%	32%	77%	21%	20%	13%	4%	-5%	-9%	-68%	-16%	-5%	-7%	9%	-1%	0%
	EM local debt (USD)	50%	43%	45%	40%	33%	35%	32%	49%	50%	32%	61%	51%	-8%	-7%		1%	-23%	-5%	-8%	-17%	18%	36%	8%	40%	67%	52%	-86%	71%	66%	-19%	68%	-8%	-4%	32%	30%	6%
	US Treasuries	-12%	-15%	-11%	-13%	-8%	-17%	-2%	-23%	-36%	-27%	-17%	-19%	95%	95%	1%		76%	54%	64%	41%	88%	32%	63%	14%	26%	18%	-2%	8%	-4%	-70%	-8%	-11%	-13%	11%	-5%	1%
	German Bunds	-20%	-20%	-19%	-19%	-13%	-21%	-10%	-32%	-36%	-32%	-20%	-18%	90%	91%	-23%	76%		61%	55%	65%	64%	18%	82%	17%	-2%	1%	18%	-28%	-15%	-61%	-29%	8%	3%	9%	3%	-2%
	JGBs	-14%	-15%	-13%	-14%	-11%	-10%	-8%	-19%	-19%	-27%	-12%	-12%	64%	64%	-5%	54%	61%		39%	43%	48%	28%	56%	15%	4%	0%	4%	-13%	-7%	-41%	-31%	12%	7%	15%	5%	-11%
	US linkers	4%	4%	6%	6%	10%	13%	13%	-11%	-22%	-15%	-9%	-10%	64%	64%	-8%	64%	55%	39%		68%	54%	36%	44%	14%	2%	-9%	-3%	-6%	-1%	-34%	-1%	27%	24%	36%	14%	10%
	Euro linkers	0%	1%	0%	1%	6%	6%	7%	-24%	-19%	-17%	0%	2%	55%	55%	-17%	41%	65%	43%	68%		32%	26%	58%	20%	-22%	-22%	4%	-30%	-2%	-25%	-20%	47%	36%	37%	17%	-12%
Credit	US HG	19%	16%	19%	16%	20%	6%	25%	1%	-11%	0%	11%	8%	84%	84%	18%	88%	64%	48%	54%	32%		60%	69%	41%	50%	40%	-19%	20%	10%	-56%	5%	-6%	-4%	3%	7%	-1%
	US HY	64%	63%	64%	62%	64%	56%	64%	36%	32%	33%	46%	42%	31%	32%	36%	32%	18%	28%	36%	26%	60%		46%	57%	52%	34%	-42%	32%	34%	-17%	24%	24%	27%	11%	25%	-1%
	Euro HG	14%	13%	14%	13%	16%	6%	16%	6%	-1%	-5%	9%	8%	77%	77%	8%	63%	82%	56%	44%	58%	69%	46%		63%	34%	27%	-8%	-13%	7%	-48%	-8%	7%	4%	3%	10%	-1%
	Euro HY	56%	55%	54%	53%	49%	39%	49%	55%	46%	40%	49%	46%	21%	21%	40%	14%	17%	15%	14%	20%	41%	57%	63%		61%	50%	-37%	14%	37%	-7%	24%	-2%	0%	-12%	16%	6%
	EMBIGD	54%	51%	53%	51%	46%	32%	45%	61%	44%	36%	42%	35%	19%	20%	67%	26%	-2%	4%	2%	-22%	50%	52%	34%	61%		75%	-49%	48%	36%	-17%	51%	-31%	-24%	-10%	6%	8%
	CEMBI	35%	34%	32%	31%	28%	10%	29%	35%	22%	30%	42%	39%	13%	13%	52%	18%	1%	0%	-9%	-22%	40%	34%	27%	50%	75%		-27%	28%	29%	-9%	47%	-17%	-10%	-8%	2%	16%
FX	USD TWI	-57%	-49%	-53%	-46%	-41%	-43%	-38%	-46%	-50%	-39%	-61%	-52%	5%	4%	-86%	-2%	18%	4%	-3%	4%	-19%	-42%	-8%	-37%	-49%	-27%		-81%	-74%	23%	-67%	-5%	-7%	-38%	-41%	0%
	EUR/USD	49%	41%	48%	41%	39%	37%	35%	37%	34%	34%	37%	29%	-5%	-5%	71%	8%	-28%	-13%	-6%	-30%	20%	32%	-13%	14%	48%	28%	-81%		68%	-25%	63%	-14%	-10%	18%	28%	3%
	GBP/USD	61%	56%	59%	54%	51%	46%	45%	45%	45%	39%	53%	47%	-9%	-9%	66%	-4%	-15%	-7%	-1%	-2%	10%	34%	7%	37%	36%	29%	-74%	68%		-14%	53%	19%	21%	23%	44%	5%
	USD/JPY	17%	23%	17%	22%	18%	22%	17%	22%	27%	34%	11%	16%	-68%	-68%	-19%	-70%	-61%	-41%	-34%	-25%	-56%	-17%	-48%	-7%	-17%	-9%	23%	-25%	-14%		-3%	12%	10%	-21%	14%	1%
	EM FX	50%	46%	48%	44%	39%	38%	36%	50%	45%	42%	47%	40%	-16%	-16%	68%	-8%	-29%	-31%	-1%	-20%	5%	24%	-8%	24%	51%	47%	-67%	63%	53%	-3%		7%	14%	20%	22%	17%
Comdty	GSCI	17%	18%	16%	16%	19%	30%	15%	-12%	3%	12%	24%	27%	-5%	-5%	-8%	-11%	8%	12%	27%	47%	-6%	24%	7%	-2%	-31%	-17%	-5%	-14%	19%	12%	7%		95%	37%	44%	-6%
	Brent	19%	19%	18%	17%	20%	32%	17%	-4%	8%	15%	25%	27%	-7%	-7%	-4%	-13%	3%	7%	24%	36%	-4%	27%	4%	0%	-24%	-10%	-7%	-10%	21%	10%	14%	95%		31%	37%	9%
	Gold	-2%	-6%	-3%	-7%	-6%	4%	-9%	-17%	-9%	-12%	12%	8%	9%	9%	32%	11%	9%	15%	36%	37%	3%	11%	3%	-12%	-10%	-8%	-38%	18%	23%	-21%	20%	37%	31%		26%	-4%
	Copper	36%	33%	34%	31%	30%	35%	27%	15%	24%	32%	37%	35%	-1%	-1%	30%	-5%	3%	5%	14%	17%	7%	25%	10%	16%	6%	2%	-41%	28%	44%	14%	22%	44%	37%	26%		2%
Cas	GBI 3m cash (lcy)	-2%	-2%	-1%	0%	-1%	-6%	-3%	8%	0%	-5%	-11%	-14%	0%	0%	6%	1%	-2%	-11%	10%	-12%	-1%	-1%	-1%	6%	8%	16%	0%	3%	5%	1%	17%	-6%	9%	-4%	2%	

Source: J.P. Morgan Quantitative and Derivatives Strategy

Marko Kolanovic, PhD; Nikolaos Panigirzoglou; Bram Kaplan, CFA; Thomas Salopek; Federico Manicardi; Mika Inkinen; Amy Ho

Cross-Asset Volatility

	Asset	3M ATM IV	1W Chg (vol pt)	1M Chg (vol pt)	YTD Chg (vol pt)	1Y Low	1Y High	1Y Percentile	Current Percentile Relative to 1Y Low/High and 20th-80th Percentile Range	Z-Score	Implied-Realized	1W Chg (vol pt)
Equity	MSCI World (USD)	25.7%	3.63	1.41	9.99	12.1%	28.3%	97.6%		2.02	3.85%	3.25
	S&P 500	25.6%	2.27	0.34	9.84	13.0%	27.9%	93.1%		1.72	-0.33%	2.02
	Russel 2000	29.8%	2.53	-0.10	8.26	19.5%	32.6%	88.8%		1.52	0.71%	2.70
	Euro Stoxx	25.2%	4.80	1.24	8.49	14.2%	34.5%	91.9%		1.33	3.60%	5.89
	FTSE 100	20.2%	4.58	1.73	6.57	12.3%	28.1%	93.6%		1.53	5.10%	4.13
	Topix	20.4%	3.34	-0.97	3.12	14.4%	25.8%	81.6%		0.90	4.18%	5.40
	MSCI EM (USD)	21.3%	0.14	-3.35	2.38	16.3%	32.5%	56.9%		0.08	1.38%	3.98
Credit	CDX IG 5yr	63.5%	5.67	-2.26	19.31	39.4%	75.8%	85.0%		1.31	16.49%	5.85
	CDX HY 5yr	60.2%	4.71	-3.10	15.47	33.2%	67.8%	91.9%		1.47	21.79%	4.24
	iTraxx Main 5yr	61.7%	5.97	-1.66	17.38	36.3%	86.2%	80.8%		1.01	17.42%	7.18
	iTraxx x-Over 5yr	60.6%	5.30	-5.36	11.43	40.5%	84.7%	71.2%		0.70	18.93%	7.39
FX	EUR/USD	8.6%	0.78	-0.56	3.22	4.9%	10.2%	90.0%		1.57	-0.33%	0.81
	GBP/USD	9.6%	0.53	-0.91	3.02	6.2%	11.2%	91.5%		1.84	-0.78%	0.33
	USD/JPY	11.6%	2.01	0.42	5.67	5.2%	11.8%	98.0%		2.53	1.25%	1.90
	EM FX	12.6%	0.64	-0.25	1.25	8.4%	13.4%	93.4%		1.68	-1.21%	0.72
Comdty	Brent	45.6%	-1.60	-7.30	8.20	27.6%	72.6%	67.4%		0.42	-5.43%	1.84
	Gold	15.1%	0.31	-2.92	1.22	12.8%	26.3%	65.5%		0.11	0.94%	0.80
	Copper	26.1%	-0.34	-2.76	-1.15	24.5%	32.3%	11.1%		1.14	6.57%	-0.34

	Asset	3M ATM IV (bp vol)	1W Chg (vol pt)	1M Chg (vol pt)	YTD Chg (vol pt)	1Y Low	1Y High	1Y Percentile	Current Percentile Relative to 1Y Low/High and 20th-80th Percentile Range	Z-Score
Rates	US 10yr	113.6	2.13	-3.07	-14.66	66.2	122.9	90.8%		1.75
	EU 10yr	99.8	-4.07	-21.83	-761.34	36.3	115.0	91.5%		1.64
	UK 10yr	111.6	-2.72	-11.07	-27.23	54.3	114.5	98.4%		1.57
	Japan 10yr	31.0	2.31	12.02	-106.86	14.5	41.6	90.4%		1.69

Source: J.P. Morgan Quantitative and Derivatives Strategy

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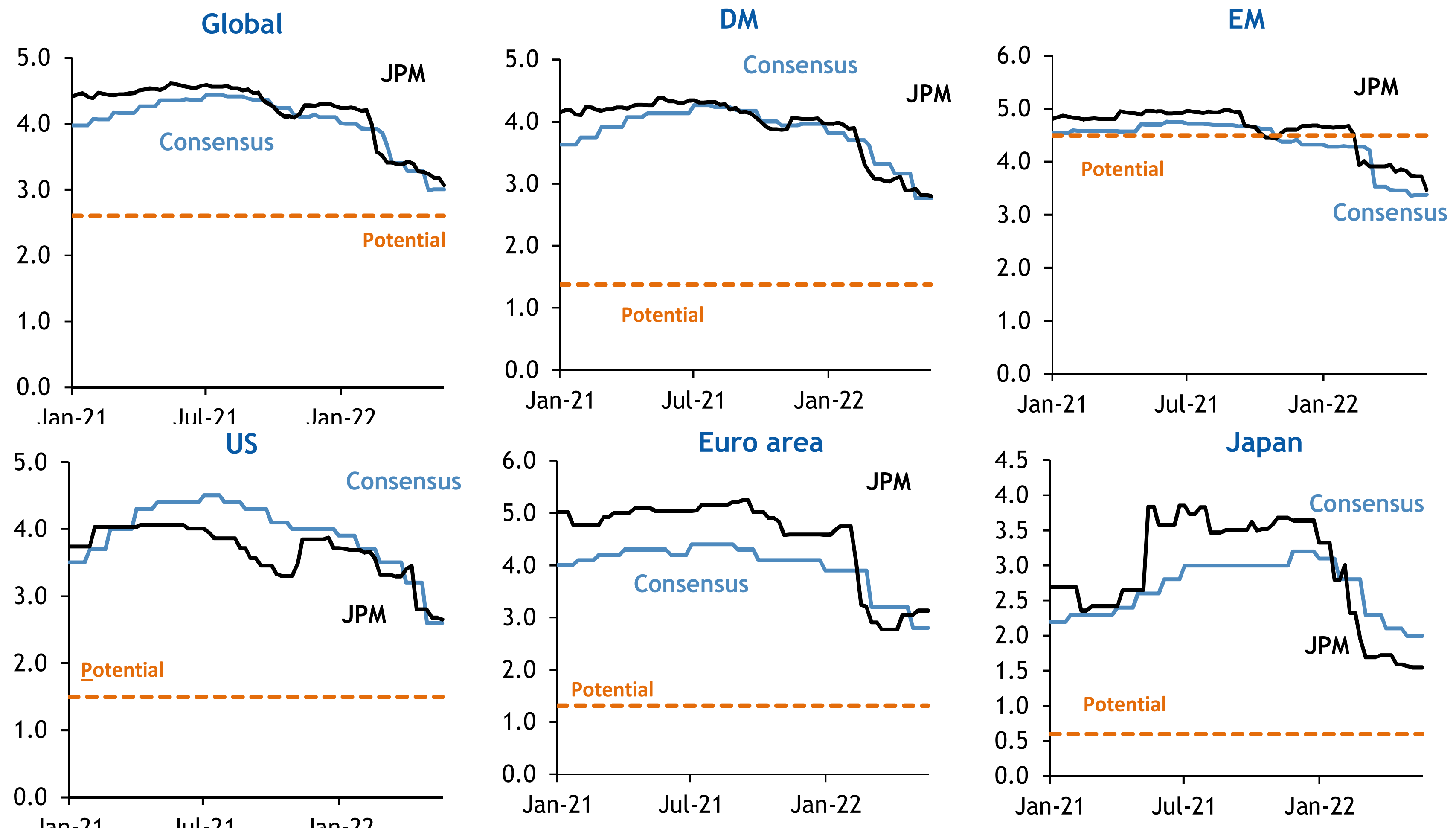
Macro Momentum

2022 GDP Expectations

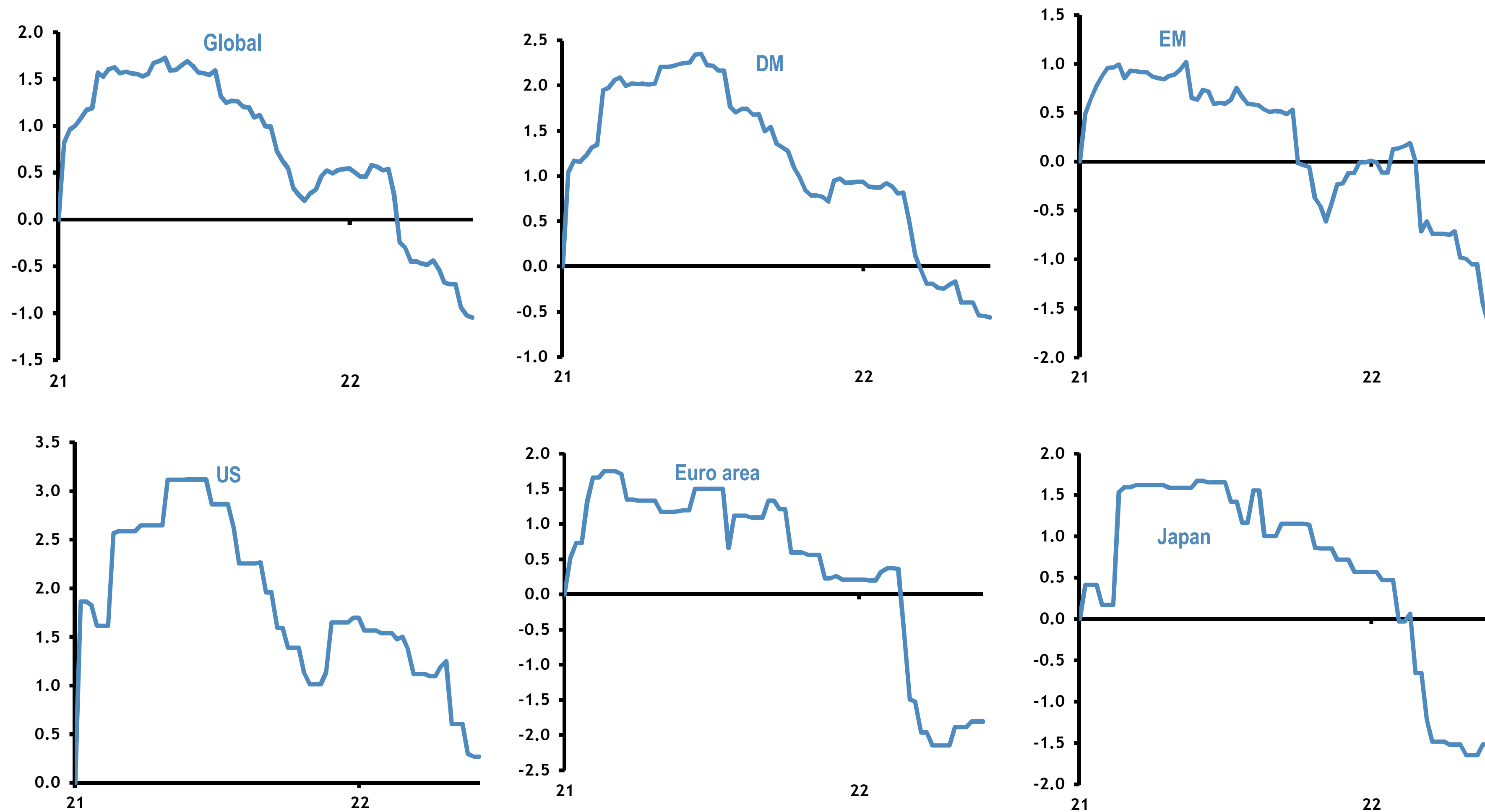
In %, GDP estimates of J.P. Morgan and consensus with current J.P. Morgan estimates of potential growth. Consensus Economics forecasts for global growth are done using the same 5-year rolling USD GDP country/region weights that we use for our own global growth forecast.



Source: J.P. Morgan.

Forecast Revision indices since 2021

In %, the FRI is cumulative weekly changes in GDP forecasts for the current Quarter (Q), Q-1, Q+1 and Q+2 made by J.P. Morgan economists. The beginning of every series is normalized to begin at zero.



Source: J.P. Morgan.

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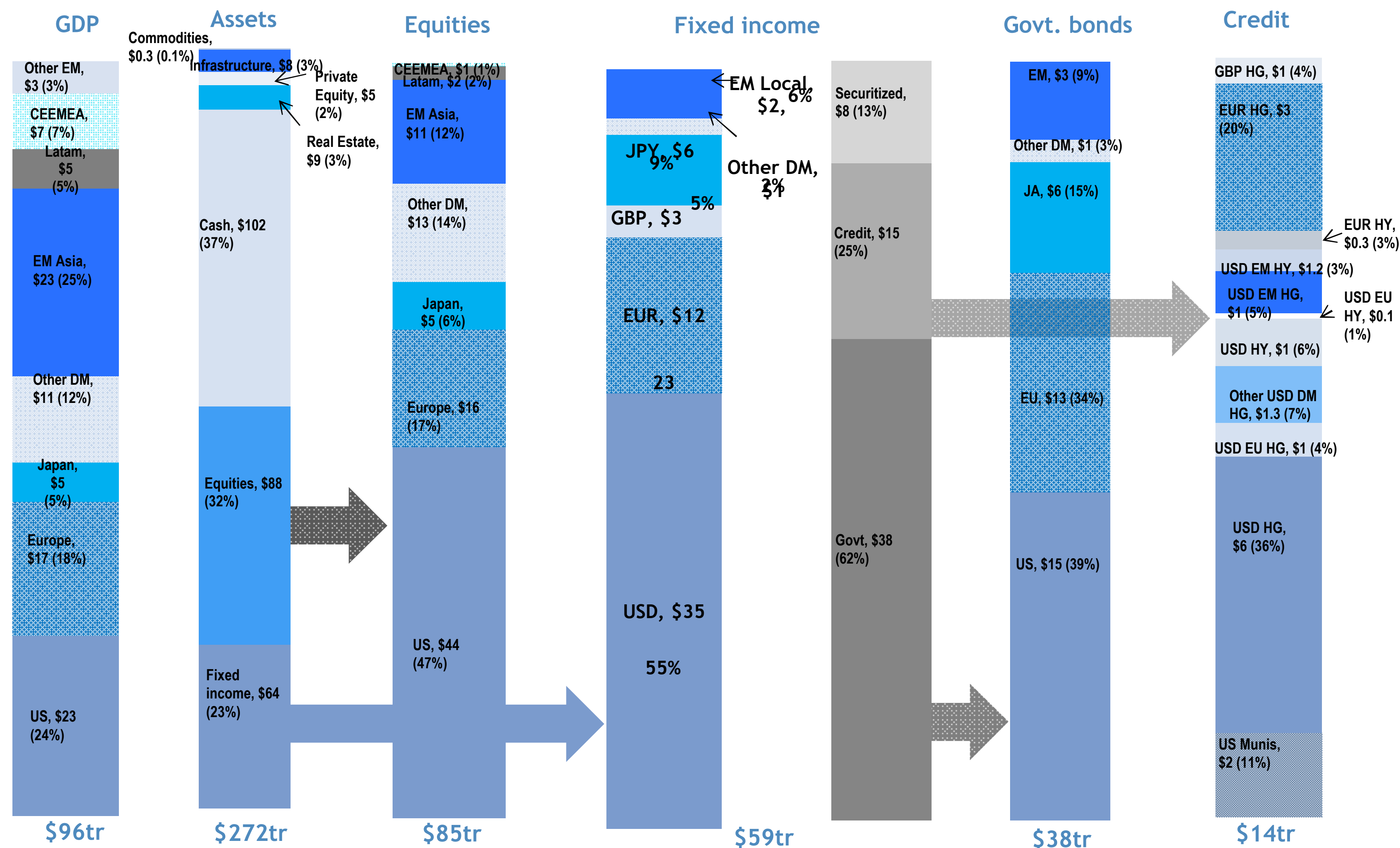
Market Panorama



Source: J.P. Morgan, BIS, MSCI, Datastream, Bloomberg Finance L.P. Market size estimates for sub asset class as of Nov'20. GDP estimates are as of end 2019. Global Fixed income is proxied by the sum of the global domestic debt securities reported by BIS and J.P. Morgan's EMBIG index for external debt. For equities, we used the Datastream world equity index. Global cash is an aggregated M2 (or close proxy of M2) of developed and developing countries.
Note: There is some difference between breakup of FI total in column 2 and 4. That is because in column 2 we take the total market size from BIS and adjust it for central bank holdings and in column 4 we take the breakup of sub-asset class of FI from J.P. Morgan indices, which are easy to track and trade.