2022 MID-YEAR OUTLOOK

Global Research

June 23, 2022

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Global Markets Outlook

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The first half of the year has been difficult for investors with prices declining across asset classes. While we often hear that the S&P 500 declined only modestly, the reality is that a typical cross-asset portfolio declined more than during the 2020 pandemic or any other crisis after 2008 (due to simultaneous declines in stocks and bonds). This was the result of aggressive Fed actions to address inflation, which is ironically largely outside of their control – as it is driven by food and energy inflation, COVID-19 breaking supply chains, and the war in Europe. As was pointed out in a Senate hearing yesterday, there is a prospect of not just having inflation driven by food and energy shocks but also a recession created by the Fed and other central banks (see here). The current situation leaves Economists and Strategists in a difficult position of guessing whether central banks will make another mistake and compound the damage produced by years of capital misallocation in the energy sector (see here), the impact of the COVID-19 pandemic (lockdowns and reopening), as well as the brutal war that is currently being waged in Europe.

So what is the view of J.P. Morgan research? Our Economics department does not see a recession materializing this year. While the probability of recession increased meaningfully, we do not see it as a base case over the next 12 months. In fact, we see global growth accelerating from 1.3% in the first half of this year to 3.1% in the second half. Similarly, we see inflation declining from a 9.4% annualized rate in the first half to 4.2% in the second half, which would allow central banks to pivot and avoid producing an economic downturn. We expect China growth to significantly accelerate to 7.5% in the second half, up from basically zero (0.5%) in the first half of the year. This will provide tremendous support not just to EM Asia assets such as China equities, but also for the global cycle. We believe that in the second half of the year, the realization of economic constraints and realpolitik will lead to progress towards a solution or at least a lasting ceasefire in Europe, which should ease the worst geopolitical fears. We continue to believe in the commodity supercycle, and view commodities and commodity-related assets (sectors, countries, etc.) as both a valuable source of returns and a hedge against inflation and geopolitics.

If there is no recession – which is our view – then risky asset prices are too cheap. For instance, small cap stocks in the US currently trade near the lowest valuations ever. Many equity market segments are down 60-80%. Positioning and sentiment of investors is at multi-decade lows. So it is not that we think that the world and economies are in great shape, but just that an average investor expects an economic disaster, and if that does not materialize risky asset classes could recover most of their losses from the first half. Our bullish and out-of-consensus view is hence a forecast of a lost year, i.e. a recovery of H1 losses in risky assets.

Real GDP growth (%ar)	Potential*	2H22	Change
Global	2.6	3.1	0.5
DM	1.4	2.3	0.9
US	1.5	2.0	0.5
Euro area	1.3	2.9	1.6
UK	1.0	1.3	0.3
Japan	0.8	3.0	2.2
EM	4.5	4.2	-0.3
China	5.5	7.4	1.9
Equities	**Current**	**22-Dec**	**Change (%)**
S&P 500	3,769	4,800	27%
MSCI Eurozone	223	275	24%
FTSE 100	7,105	8,150	15%
TOPIX	1,853	2,100	13%
MSCI EM ($)	1,017	1,300	28%
MSCI China	73	116	58%
Rates	**Current**	**22-Dec**	**Change**
US 10-year yields	3.14	3.50	0.36
Germany 10-year yields	1.63	1.00	-0.63
UK 10-year yields	2.45	2.25	-0.20
Japan 10-year yields	0.24	0.20	-0.04
EM Local (GBI-EM yield)	7.14	7.05	-0.09

Source: J.P. Morgan
* Refers to pre-pandemic potential

Credit (spreads)	Current	22-Dec	Change
US High Grade	163	175	12
Euro High Grade	212	225	13
US High Yield	548	525	-23
Euro High Yield	589	625	36
EM Sovereigns	496	425	-71
EM Corporates	344	375	31
Currencies	**Current**	**22-Dec**	**Change (%)**
JPM USD Index	128.2	130.8	2.0%
EUR/USD	1.06	1.01	-4.7%
USD/JPY	136	140	3.1%
GBP/USD	1.23	1.15	-6.5%
USD/CNY	6.70	6.80	1.5%
Commodities	**Current**	**22-Dec**	**Change (%)**
Brent ($/bbl, qtr end)	110	101	-8%
WTI ($/bbl, qtr end)	104	98	-6%
Gold ($/oz, qtr avg)	1,842	1,720	-7%
Copper ($/ton, qtr avg)	9,004	10,200	13%
Aluminum ($/ton, qtr avg)	2,524	2,850	13%
Iron ore (US$/dt, qtr avg)	127	125	-2%
Wheat ($/bu, qtr avg)	9.8	12.5	27%
Soybeans ($/bu, qtr avg)	16.6	16.5	-1%

Economics

Global

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The first half of this year has delivered a number of adverse shocks that dramatically raised inflation while significantly weighing on growth. This recent turbulence shines light on a healthy private sector that has cushioned these blows and allowed the global expansion to move forward. The household sector has absorbed the unprecedented purchasing power squeeze from surging inflation by rapidly reducing their saving rate. At the same time, corporates have enjoyed peak margins and lean inventories—boosting investment spending and hiring. These positive demand impulses have sustained global GDP growth at a trend-pace outside of China in 1H22. When combined with an assumed fading of shocks that reduce inflation, these strong fundamentals are anticipated to deliver above-potential growth in 2H22 (Figure 1).

Despite the encouraging private sector resilience, forces sustaining elevated consumer price inflation are challenging our views. First and foremost, an unprecedented squeeze on household purchasing power looks likely to be extended. Households maintain a still ample stock of accumulated assets to draw on, but a further saving rate slide further below pre-pandemic norms may be short-circuited as inflation concerns erode confidence. Business confidence has also deteriorated, in part as slower 1H22 growth and an acceleration in hourly labor costs are compressing corporate profit margins.

The challenges to the outlook are further intensified as higher inflation generates more restrictive central bank policy and tightening financial conditions. This year's inflation surge has already produced a hawkish pivot, but central banks outside the higher-yielding EM have thus far remain committed to sustaining the expansion. However, as the inflation surge looks likely to persist, policy guidance is starting to shift. This June FOMC meeting suggests that the Fed is now committed to push policy rates well into restrictive territory this year while also guiding to a meaningful rise in the unemployment rate. This shift is likely to resonate elsewhere and is a significant factor tightening global financial markets.

Not all the recent news is downbeat. COVID-19 drags look to be fading as anticipated. China is now rebounding from its recent lockdowns and mobility metrics have risen in Asia and in Europe. Additional fiscal stimulus outside the US is building and should limit the inflation drag on household incomes. Nevertheless, we are no longer as confident that these supports will combine with a resilient private sector to produce our above-potential 3.1%ar 2H22 global GDP forecast (Figure 1).

Figure 1: Global Outlook

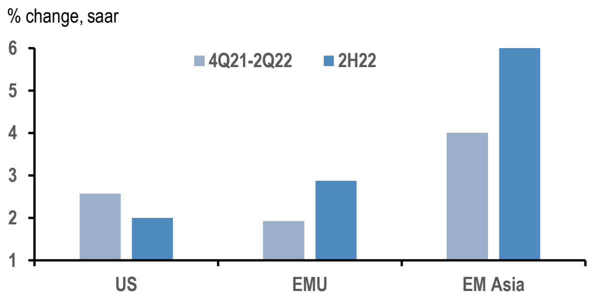
% change annualized

	--- Real GDP ---			--- Headline CPI ---		
	2022		2023	2022		2023
	1H	2H	4Q/4Q	1H	2H	4Q/4Q
Global (2.6)	1.3	3.1	2.6	9.4	4.2	2.7
DM (1.4)	1.3	2.3	1.7	8.8	4.2	2.2
US (1.5)	0.5	2.0	1.2	9.5	4.4	3.0
Euro area (1.3)	2.4	2.9	2.6	10.1	4.6	1.0
Japan (0.8)	1.7	3.0	1.0	3.1	1.6	1.3
UK (1.0)	0.5	1.3	1.1	11.5	6.2	2.6
EM (4.5)	1.3	4.2	4.1	10.2	4.1	3.6
EM ex China (3.4)	2.0	1.5	3.3	17.6	5.8	5.0
China (5.5)	0.5	7.4	5.1	3.6	2.5	2.4
India (6.0)	6.2	4.2	4.4	8.5	4.5	5.7
EMA ex Chn/Ind (3.0)	3.5	3.6	3.5	6.9	3.8	3.3
Korea (2.7)	1.8	2.7	2.0	7.7	4.4	2.0
EMEA EM (2.5)	-2.4	-1.4	3.4	40.4	9.2	7.9
CEE (3.3)	5.8	2.1	3.9	21.9	9.3	5.4
Russia (1.5)	-12.3	-6.5	2.2	24.7	6.2	5.1
Turkey (3.8)	1.8	0.6	5.6	118.4	16.2	19.7
South Africa (1.3)	3.4	1.2	1.9	6.6	7.4	4.4
Latam (1.9)	1.8	0.0	2.0	9.3	4.8	4.2
Mexico (2.2)	2.8	1.6	1.4	8.3	5.7	3.9
Brazil (1.5)	2.8	-1.8	1.9	9.4	3.9	4.5

Source: J.P. Morgan Global Economics. Pre-pandemic potential in parentheses

We still see the expansion continuing through this extended phase of negative shocks, but the risks are skewed decisively to the upside on inflation and to the downside on growth. Downward momentum looks to be concentrated in the US economy, which will likely feel the brunt of the drag from higher interest and is benefiting less from fading COVID drags (Figure 2). By contrast, the fading of the Omicron drag is expected to generate a period of Asian outperformance. In Europe, where the recovery is further behind the US, growth is also to get a boost from relatively easier monetary and fiscal policies.

Figure 2: J.P. Morgan real GDP forecast



Source: J.P. Morgan Global Economics

Our models place the risk of a US recession over the next 12 months at an uncomfortably high 35%. To avoid this scenario and track our baseline forecast for a growth rotation away from the US in which overall global performance remains solid, the following components of our baseline forecast need to fall into place:

- **Energy prices stabilize.** While we expect underlying inflation pressure to remain significant, we look for global energy prices to moderate in the coming months. If they do, it should reduce the annualized pace of 2H22 global CPI inflation rates by more than 2%-pts.
- **Corporates bend but don't break.** Our forecast that the US economy avoids recession is premised on the view that elevated profit margins and limited leverage will limit the risk of corporate retrenchment in the coming year. In this regard, we look for US job gains to moderate to about a 100k monthly pace as the year ends.
- **Households dip deeper into savings.** With saving rates now below pre-pandemic norms, households are eating into the large pool of excess saving. Our forecast assumes this slide will continue to cushion the blow of elevated inflation.
- **The Fed turns more sensitive to growth above 3%.** We expect US policy rates to rise above 3% before the end of this year as the Fed moves forcefully to contain inflation risk. But the Fed should become more sensitive to growth disappointments later this year as the turn to a restrictive stance aligns with an easing in inflation from the moderation in commodity price pressures.
- **China COVID policy evolves.** Although China's growth is strengthening into midyear, the country's limited immunity and relatively ineffective vaccination program leave it vulnerable to further outbreaks. While we do not assume the government will officially suspend the zero-tolerance policy, we expect a more efficient and flexible implementation of policies in 2H22 to allow for a sustained but partial recovery from its 2Q22 contraction.

If the global expansion remains intact as we turn toward 2023, it is likely to benefit from receding inflation pressures. However, we expect labor markets to remain tight and the salience of inflation over 2021-22 to pass through to wage and price setting. This suggests that inflation will remain uncomfortably high for central banks and further tightening should be expected with other low-yielding central banks likely to follow the Fed's lead. At the same time, labor costs are likely to increase at a pace that begins to threaten corporate profit margins as pricing power moderates to meet central bank objectives. This mix of margin compression and policy restraint could ultimately lead to a relatively early end of the current economic expansion.

US

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Inflation has been strong throughout the year so far and the Fed is now working to rein it in. Through much of 2021, the FOMC believed that strong inflation was transitory and kept policy very accommodative. But the Committee started changing its tone late last year and since then has been more active in trying to bring inflation down. Despite these efforts, inflation generally has been surprising to the upside lately and inflation expectations have moved higher. What began with a change in rhetoric continued with the start of a hiking cycle in March and then the start of the drawdown of the balance sheet at the beginning of June. The FOMC has now hiked its target range 150bp over the course of just three meetings through June—including most recently a 75bp hike. The FOMC has signaled that it will continue to hike over time, raising rates another 175bp by the end of this year and then another 25-50bp next year (according to the latest median SEP forecast). We look for somewhat less tightening, with the top of the target range peaking at 3.5% by 1Q23; we forecast for 50bp hikes in July and September followed by a 25bp cadence until that range is reached.

The hawkish shift from the Fed since late last year has contributed to a significant tightening in financial conditions, including dollar appreciation, a jump in mortgage rates, and a drop in equity prices. It looks like the housing market has reacted quickly to the increase in rates and real residential investment appears to have fallen noticeably in the first half of the year. There are some other signs of slowing as well, but overall the economy appears to have maintained decent momentum despite the tightening in financial conditions. This is not too surprising, as Fed hikes often take time to impact the real economy and we expect additional moderation in growth over time. This should translate into some softening in the labor market as well as some easing in inflation pressures.

Our forecast expects the Fed to be largely successful in engineering a soft landing, at least through the end of next year. We anticipate that GDP growth moderates to a below-potential pace by the end of 2023 and that job growth slows enough so that the unemployment rate steadies out and then drifts gradually higher late in 2023. Inflation is expected to moderate noticeably, in part because some of the transitory factors that have been boosting inflation should ease and also because the expected softening in the economy reduces some of the more fundamental pressures. That said, we think inflation will remain strong in the coming months and will stay above target on a year-ago basis through the end of next year. We look for core PCE price inflation of 2.9% ar in 2H22 and 2.6% (q4/q4) in 2023. Nevertheless, this should be enough softening to allow the Fed to eventually pause the hiking cycle, albeit with rates in modestly restrictive territory.

Of course this desired soft landing is not guaranteed, and Fed chair Powell himself has noted that achieving this goal may not be entirely straightforward. And with a tight labor market and the economy dealing with the shocks of tighter financial conditions and higher food and energy prices, recession risks are notable as we think about the next few years. Our models point to 63% chance of recession over the next two years and 81% odds that a recession starts over the next three.

The headwinds are here. Our past research has highlighted the main ways we expect the recent tightening in financial conditions to weigh on the economy. The real trade-weighted dollar has appreciated by about 10% over the past year, which likely will generate a similarly-sized increase in imports and similarly-sized decrease in exports. Meanwhile, households have lost about $5-8tr of wealth this year, with consumer spending likely coming down about 2-3 cents for every dollar lost in wealth. Furthermore, mortgage rates have jumped about 280bp so far this year, an event that could reduce real residential investment by about 17% over the course of a year.

Adding to these drags that were likely anticipated (and desired) to at least some degree by the Fed, gasoline prices have surged in recent months, in part because of events associated with Russian's invasion of Ukraine. Gasoline currently costs US consumers about $5/gallon, a sharp move up from the $3.40 or so price from the end of last year. This is a considerable burden for the consumer given that we have recently estimated that, all else equal, discretionary ex.-gas consumption falls $1.60 for each $1 of gasoline spending due to higher prices.

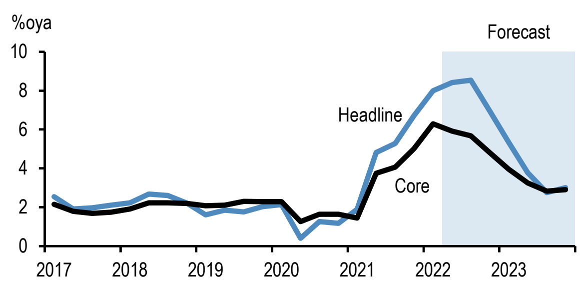
The drags from these factors should be real and significant, but they are hitting an economy that had a lot going for it before they arrived. And while we see a clear downshift in momentum taking place, we think the economy will continue to expand on net this year, keeping the economy out of recession and allowing the labor market to remain tight. On the consumer side, a still-strong labor market is supporting wage income and households have only just recently begun to eat through the large cushion of "excess saving" that had been amassed over much of the pandemic. Low housing vacancy rates should keep homebuilders busy even with cooling in demand for housing. And low levels of business inventories should also help sustain factory output growth. The US and global economies also continue to benefit from a relaxing of pandemic-related concerns. On the whole, we forecast that real GDP will step down sharply from the 2021's 5.5% pace of growth to a more modest 1.2% rate of expansion this year, including our recent lowering of projections for the middle quarters of this year.

Vexation to moderation for inflation. We anticipate that very strong inflation in recent quarters will materially decelerate later this year as near-term, summer-amplified energy price pressures resolve and easing supply-chain distortions in some sectors contribute to outright price declines, perhaps most notably for autos. The strength of the dollar has led to a recent moderation in import prices, which should also relieve some of the upward pressure on goods prices. While we think food price inflation will remain elevated by pre-pandemic standards, we see scope for modest deceleration in the latter half of this year.

On net, we expect that headline CPI will step down from a blistering pace of 9.5% ar in 1H22 to an elevated 7.2% in 3Q22 and a subdued 1.7% in 4Q22. We anticipate a similar profile for core CPI inflation, moderating from an annualized 6.3% in 1H22 to 3.3% in 2H22. Thus, the disinflationary impulse expected in the latter half of the year does not simply reflect quarterly swings in the highly volatile food and energy components of CPI. Rather, we expect normalizing consumer demand imbalances associated with earlier stages of the pandemic and easing in supply-chain pressures will contribute noticeably to this late-year deceleration. Nevertheless, the recent rotation in inflation toward more inertial categories, sustained food inflationary pressure further out on the horizon, and real-time signals that rental inflation will stay strong over the next six to nine months suggest that the sharp deceleration in inflation in 4Q22 will be met by an acceleration in prices early next year as such forces reassert themselves and still-tight labor markets keep upward pressure on labor costs.

In the first half next year we expect both core and headline CPI inflation to be above 3% on an annualized basis and both headline and core PCE inflation around 2.9%—a material slowdown in inflation even if still above the Fed's longer-run objective of 2%. By 2Q23 we think that tighter financial conditions will have pushed GDP growth below its longer-run potential and, consequently, anticipate that inflation will continue to decelerate as the unemployment rate begins to edge higher. Overall in 2023 we expect core CPI inflation to be 2.9% and core PCE inflation to come in at 2.6% (with headline figures for both CPI and PCE a tick higher, Figure 3).

Figure 3: CPI inflation



Source: BLS, J.P. Morgan forecast

More FOMC tightening ahead. The June Fed meeting provided a second-half road map for monetary policy. The median participant on the FOMC expects an additional 175bp of tightening spread over the remaining four meetings, beginning with the July meeting that Chair Powell indicated would likely result in either a 50 or 75bp hike. Our outlook is for 150bp of hikes in the second half.

We see marginally less in hikes than the FOMC median not because we doubt the Fed's commitment to taming inflation and (re-)anchoring inflation expectations, but because we think the signs of slowing growth will lead the Committee to become more comfortable that forecasted inflation will step down. At this point July is a toss-up, and will depend on payrolls, CPI...and what is signaled through the media.

One aspect of Fed policy that is easy to forecast is the reduction of the balance sheet. Quantitative tightening (QT) began at the end of the first half, and Chair Powell indicated that they are comfortable with their strategy and have no near-term plans to revisit it. As we get closer to year-end there will doubtless be chatter as to whether to sell mortgages; we remain skeptical the Fed will pursue this option.

European Economies

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At the start of this year, the Euro area economy looked set for a strong growth spurt, driven by the lifting of COVID-19 restrictions, a gradual easing in supply bottlenecks in manufacturing, and solid private sector fundamentals. This looked set to push Euro area unemployment to new record lows, setting the scene for a pickup in wage growth and lasting reflation. In turn, this implied that the ECB would have to normalize its policy stance. But, we still felt that the ECB could afford to embark on this journey slowly.

This outlook has been hugely impacted by shocks. The outbreak of war in Ukraine has amplified an inflation shock that was already larger than anticipated. And, while consumers have large excess savings to help them smooth through this, the sharp fall in consumer confidence provides a challenge. Older supply bottlenecks (e.g., semiconductors) proved longer-lasting, leading to a slower recovery in manufacturing, with China's zero-COVID policy posing a new risk. And, the threat of a gas embargo remains significant. Finally, there is a risk that the surge in inflation leads to second-round effects via wages and/or inflation expectations, which would call for a more aggressive ECB response. Nevertheless, despite large downward revisions, we still expect relatively solid growth.

The ECB has already responded to the inflation pressures by announcing a faster normalization of its policy stance, with net APP purchases ending on July 1, and the deposit rate lifting off with a 25bp hike in July and likely a 50bp hike in September. Overall, we now expect 125bp of hikes this year and another 100bp in 2023. This would take the deposit rate very close to our estimate of the neutral nominal rate, but there is a risk that the ECB may have to move faster and go into restrictive territory. At the same time, the ECB is now also acting to prevent any "unwarranted" fragmentation in bond markets. The main forecasts are summarized in Figure 4.

Figure 4: Euro area forecasts

%oya, except where stated, year-end for deposit and U-rate

	1Q22	2Q22	3Q22	4Q22	2021	2022	2023
GDP (%q/q ar)	2.5	1.5	2.8	2.8	5.3	3.3	2.3
Germany	0.9	2.5	4	4	2.9	2.6	2.9
France	-0.8	1	2	2	6.8	2.5	1.9
Italy	0.5	2	2	1.5	6.6	3.3	1.7
Spain	1.3	1.5	3	2.5	5.1	4.4	2.7
U-rate (%)	6.9	6.8	6.7	6.6	7.1	6.6	6.2
Inflation							
Headline	6.1	8	8.5	7.4	2.6	7.5	2.4
Core	2.7	3.7	3.6	3.6	1.5	3.4	2.4
ECB depo. Rate	-0.5	-0.5	0.25	0.75	-0.5	0.75	1.75

Source: Eurostat, J.P. Morgan, EM Economies

EM growth has held up in the face of large shocks. 1H22 has produced a confluence of outsized shocks that would normally deliver a sizeable blow to EM growth, including surging food and energy prices amid supply disruptions from war in Ukraine, sharp contractions in two of the largest EM economies—China and Russia—and tightening in global financial conditions. EM has weathered these shocks well so far. Although overall EM growth is tracking a sub-par 1.5% in 1H22, growth outside of China and Russia is holding above its potential pace at 3.6%ar (Figure 5). This speaks to the resilience of the private sector which has drawn on savings built during the pandemic. The rise in commodity prices has also increased policy flexibility for EM's commodity exporters. Despite its proximity to the war in Ukraine and high exposure to soaring natural gas prices, the greatest upside growth surprises have been in CEE helped in part by a rebound in investment (EU funds) and strong labor markets. EM Asia also has seen limited spillovers from China's lockdown, supported by strong DM import demand and a powerful re-opening bounce.

Much of the H2 outlook hinges on the tug-of-war between still high private sector savings and high inflation. While the private sector in EM heads into H2 with much of its stock of excess savings still intact, high inflation will continue to squeeze households and compel them to continue to draw on these savings. Along with fiscal interventions to cushion part of the inflation shock, this should help to protect growth and limit the amount of domestic demand destruction and also offset weaker DM demand. At the same time, sustained strong growth puts EM central banks in a difficult position of having to tighten monetary conditions even more to engineer a growth slowdown that would be necessary to bring inflation back to more tolerable levels. Our forecasts assume some moderation in growth based on these headwinds, but the private sector can still lessen the blow of a formidable set of circumstances (Figure 6).

Figure 5: J.P. Morgan GDP forecast

%y/y for annual, %q/q, saar for quarterly and %pt for differentials

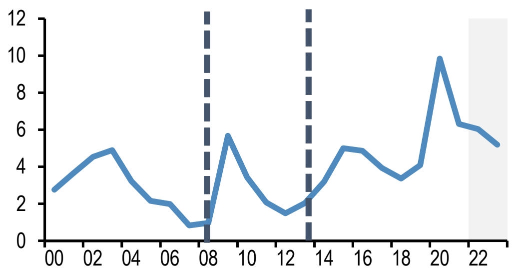
			Quarterly profile (%q/q, saar)				
	2021	2022	1Q22	2Q22	3Q22	4Q22	1Q23
DM	**5.2**	**2.8**	**0.3**	**2.4**	**2.8**	**2.2**	**2.0**
EM	**7.1**	**3.5**	**5.5**	**-2.6**	**4.1**	**4.7**	**4.2**
EMX	6.2	3.2	4.3	0.1	1.0	2.3	3.1
EMX ex. Russia	6.4	4.1	4.9	2.3	2.5	2.5	3.1
EM Asia	7.4	4.1	6.1	-2.2	6.3	6.0	4.9
EMAX	4.7	4.0	3.5	3.6	3.6	3.5	3.5
China	6.6	3.7	6.8	-5.4	7.5	7.3	5.5
India	6.5	6.6	7.9	4.5	4.5	4.0	4.0
EMEA EM	6.4	1.2	4.1	-7.4	-3.5	1.4	3.4
ex. Rus	7.3	4.6	7.1	0.5	1.6	1.9	3.6
CEE	5.6	5.5	11.1	1.0	1.8	2.4	3.7
Russia	4.7	-5.0	-1.4	-22.0	-13.0	0.5	3.0
Latam	6.6	2.1	3.2	0.4	0.1	0.3	1.5
Brazil	4.6	1.2	4.0	1.5	-2.0	-1.6	1.2
Growth differentials (%pt)							
EM-DM diff.	2.0	0.7	5.2	-4.9	1.4	2.5	2.2
EMX-DM diff.	1.0	0.4	4.0	-2.3	-1.8	0.1	1.0
EMXR-DM diff	1.2	1.2	4.6	0.0	-0.3	0.2	1.0

Source: J.P. Morgan. EMX excludes China. EMAX is EM Asia ex. China and India.

China's reopening bounce should return EM growth to an above-trend pace of 4.4%ar in H2. Normalization of China's activity in May/June should pave the way for a strong recovery in overall EM growth to 4.4%ar. The rebound in China and easing of Russia's recession masks stable trend-like growth of around 2.4%ar in the rest of EM with some of the 1H growth leaders in EMEA (CEE) and Latam (Brazil) turning to under-performers amid the ongoing inflation squeeze and tightening financial conditions. Latin America will also be weighed down by political uncertainty and is seen slowing to a stall. Likewise, growth in EMEA ex. Russia is expected to slow to below 2%ar. EM Asia ex. China should see solid growth as China-related supply chain drags fade and reopening boosts services activity. A weakening in global goods demand remains a risk for North Asia and other EM manufacturing exporters.

Uncertainty over China's 2H recovery remains high amid the zero-COVID policy. Early indicators suggest the worst of the current Omicron is likely behind us, with economic activity rebounding strongly in May after a weak March-April. Our baseline forecasts look for 7.4%ar growth in 2H22 following a contraction of 5.4%ar in Q2, with full-year 2022 growth at 3.7%y/y. The H2 recovery assumes normalization of production lines, with impact of recent policy support measures gradually feeding through the economy—especially for infrastructure investment—along with bottoming out and modest recovery in the housing market. At the same time, continuation of the zero-COVID policy and renewed lockdowns are likely to restrain the pace of recovery in domestic consumption and services and pose downside risks to our forecast. This also points to a modest and incomplete recovery with the level of GDP unlikely to return to the pre-pandemic path in the rest of the year.

Figure 6: EMX private sector savings still intact
% of GDP, private sector savings minus investment*

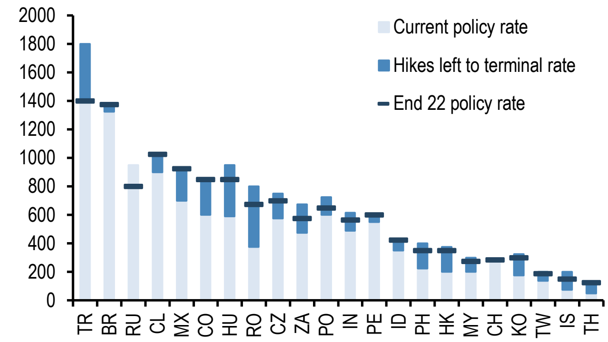


Source: J.P. Morgan. *Proxied by current account minus fiscal balance

EM inflation is expected to peak in 3Q22, yet risks remain to the upside. We expect commodity prices to ease in H2 from their Q2 peaks, which would kick-start EM headline disinflation from Q4. However, near-term risks to both food and energy commodity prices are still to the upside as the increases so far also have yet to fully percolate through to consumer inflation data (e.g., the CPI pass-through from the surge in European natural gas prices remains far from complete). Core inflation also remains elevated near multi-decade highs in many countries. Adding to the EM inflation woes is the projected renewed rise in wheat and corn prices in 3Q22 from already elevated levels on the back of prolonged grain and fertilizer supply shortages. With both food and energy prices expected to remain higher for longer the risk is also that transmission to consumer price inflation will rise in the absence of greater demand destruction.

EM monetary policy tightening: well advanced, but still more to go. Having delivered steep policy rate hikes for several quarters, several EM central banks are showing signs of hiking "fatigue", signaling less aggressive tightening paces and more concern with slowing growth and macro stability. Led by hikes in CEE and Latam, EM policy rates (outside of China) are already 100bp above their pre-pandemic levels, while much of EM Asia central banks are still early in their more gradual hiking cycles. However, with inflation yet to stabilize and DM central banks stepping up their tightening pace, we expect EM central banks to remain under pressure to hike further in 2H22. A stabilization of inflation along with the expected downshift in the pace of DM hikes from 4Q22 should allow EM central banks that have already hiked aggressively to move to the sidelines by year-end. Indeed, we project that half of the EM central banks will reach their terminal rates by end-2022 (Figure 7). However, EM will remain sensitive to tightening in US financial conditions which could magnify their responses to further upside surprises in inflation.

Figure 7: Half of EM CBs to reach terminal rate by year-end
Policy rate, bp



Source: J.P. Morgan

The risk of a late-cycle BOP crisis appears unlikely for large EM countries as long as excess savings remain intact. Past EM crises have typically combined fiscal expansions and credit-fueled booms that widen twin deficits and create a challenging mix when financial conditions tighten. The starting conditions for EM external accounts are somewhat different this time. While fiscal deficits remain above their pre-pandemic levels, private sector savings are higher as well and credit growth remains anemic in many countries. Additionally, fiscal consolidation is being slowed but not derailed. Only a few large EMs are on track to significantly widen their fiscal deficits this year, including Poland, Brazil and Russia. Elsewhere, increased support to consumers is being more than offset by the inflation boost to tax revenues, and pandemic-related spending is rolling off. Countries with greatest vulnerabilities are those with large preexisting twin deficits and low stocks of private savings; among the core EMs these include Turkey, Thailand and perhaps India. In turn, more vulnerable frontier EM economies have seen a large debt build-up and remain more at risk. Signs of distress have already led commodity importer Sri Lanka to default, while Egypt and Pakistan have been forced into crisis management measures, with many others unable to access markets on favorable terms.

Global Equity Strategy

US Overview

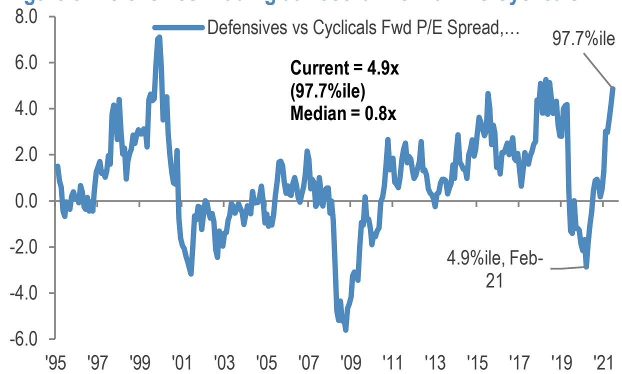
Equity sentiment, investor positioning and market internals have been bearish resulting in **the worst annual start for equities with the exception of the Great Depression. Portfolios are already defensively positioned for a recessionary outcome (Defensives trade at ~98%ile vs Cyclicals and market).** While growth is moderating on tighter policy and Goods spending is facing tougher comps (vs. prior 1-2 years), we expect Services spending to remain robust. As was the case in 1Q, corporate fundamentals should remain resilient though some softness in corporate guidance and negative revisions should be expected. Overall, we believe the risk-reward for equities will be improving as we enter 2H, with Growth-Policy tradeoff likely to turn from both sides and much more attractive valuation. We expect S&P 500 EPS to soften slightly for 2022 (JPM $225 vs. consensus IBES $229.54) with 2022 year-end price target of 4,800, and 2023 (JPM $240 vs. consensus IBES $251.96) on margin compression and USD headwind, but in absolute terms EPS growth should remain positive. This sell-off has driven a sharp de-rating across the market (S&P 500 multiple from 22x to 15x, S&P 600 from 21x to 12x over the past year) given prices are down more than 25% from the peak while consensus EPS has been revised higher ~3%. At this valuation, equities are already pricing an aggressive Fed and softer corporate guidance / earnings. While the geopolitical tensions in Europe represent a significant risk to the cycle, we believe that a diplomatic solution in 2H22 is likely (here) and should improve the inflation backdrop. JPM Economics is also forecasting inflation to moderate substantially later this year—in effect, reducing the probability of US recession and earnings contraction. **This backdrop combined with near record low investor positioning offers an increasingly attractive risk/reward going into 2H, in our view.**

Figure 8: Worst Start after Great Depression in ~100 Years

#	Year	Events	YTD	6/17 to YE
1	1932	Great Depression	-40.5%	43.3%
2	2022	*Current*	-22.9%	?
3	1962	Kennedy Slide	-21.9%	12.9%
4	1940	World War II	-19.9%	6.0%
5	1970	Vietnam War/Tightening	-17.4%	21.3%
6	1939	World War II	-14.2%	10.5%
7	1982	Oil Crisis	-12.2%	30.7%
8	1931	Great Depression	-11.9%	-39.9%
9	1973	Oil Shock	-11.0%	-7.2%
10	1937	Fiscal & Monetary Contraction	-10.4%	-31.4%

Source: J.P. Morgan Equity Macro Research

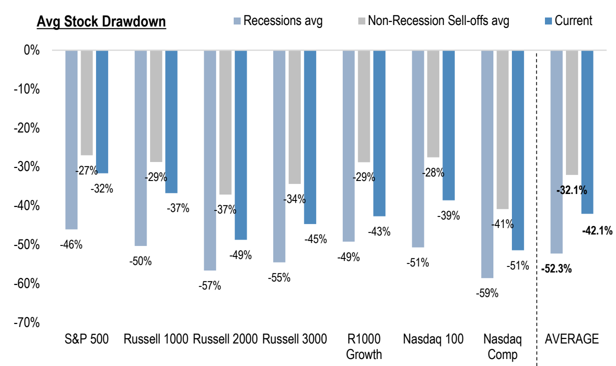
Figure 9: Defensives Trading at Record Premium vs Cyclicals



Source: J.P. Morgan Equity Macro Research

Equity markets typically have large drawdowns during a hiking cycle with an average sell-off of -16% in the 13 cycles since 1954. The -25% drawdown so far in this cycle is comparable to 1986-89 cycle (-32.6%, Black Monday, recession came after three and a half years from the start of the cycle), 1961-66 (-26.9%, no recession), 1972-74 (-24.8%, oil shock, stagflation, recession started one year, 10 months later) and 2015-2018 (-19.4%, in absence of Covid pandemic, arguably a soft landing not recession seemed more likely). Anything short of a recession will likely catch most investors completely wrong-footed, especially after broad correction that resulted in the **average stock drawdown ~80% of the way to prior recession bottoms**.

Figure 10: Drawdowns Worse than Euro Debt Crisis and Trade War



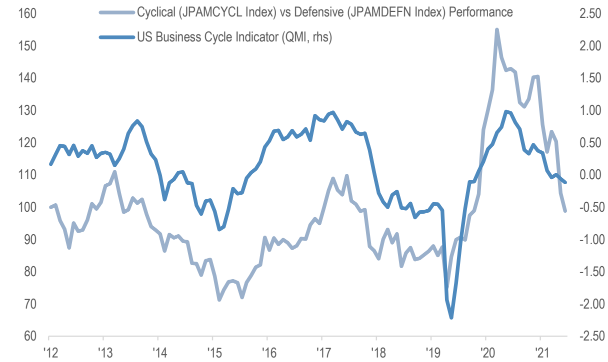
Source: J.P. Morgan Equity Macro Research

At the current juncture Defensive stocks possess valuation risk while flushed out Cyclicals / Growth / Small-caps are presenting an increasingly attractive risk/reward. **Our highest conviction sector call remains Energy** (strong fundamentals, still attractive valuation, rising shareholder return and geopolitical/inflation hedge). **In fact, in our view, Oilfield Services is the best positioned industry going into 2022 midterm elections after which we will likely see substantial O&G capex and investment outlays.** Healthcare remains attractive given its earnings stability, capital return, still favorable valuation and potential gridlock midterm election outcome. We expect China has room to stimulate and for potential regulatory easing going forward producing strong growth acceleration into 2H22 while containing inflation. As for Defensives (e.g. Staples, Utilities), these sectors remain crowded with record relative valuation which we see as vulnerable to rotation under both a scenario of a return to mid-cycle recovery and growth (cyclicals outperform) and recession (drawdowns for "last one standing").

Business Cycle

JPM's global Quant Macro Indicators (QMIs), which tend to lead the business cycle, began heading lower mid-2021 as the global economy moved past the peak of large COVID-related fiscal and monetary stimulus. We view the deceleration of activity as an intra-cycle reset as growth transitions from large but lapsing stimulus to a more sustained trend rate. Growth component of QMI (based on PMIs, leading labor market indicators, etc.) is above average and moving sideways suggesting that jobs expansion, consumer spending, corporate fundamentals and overall growth remain resilient. The US QMI downshift primarily comes from weaker Sentiment (13%ile as of end-May'22 vs 40-year history) and Liquidity (12%ile) as businesses, households and policy readjust to tighter financial conditions. To a large extent, this reflects the first-order and second-order changes in indicators like credit spread, and money growth from very expansionary to typical mid-cycle levels. There are some indicators like consumer sentiment that warrant more careful monitoring but these are likely to turn positive if inflation, particularly commodities, starts to stabilize. We expect the QMIs to reach an intra-cycle trough as the services sector opens up further, labor supply and logistics normalize, inflation eases and household spending continues to shift away from excessive focus on goods (a striking pandemic feature) to services. Though mindful of the fact that it is difficult to "forecast" the direction of leading indicators, at this stage it appears that we are in the midst of an intra-cycle slowdown. We acknowledge that the recent higher than expected inflation prints and a more aggressive Fed have increased the risk of a recession next year.

Figure 11: US Business Cycle likely to reach Intra-cycle Trough

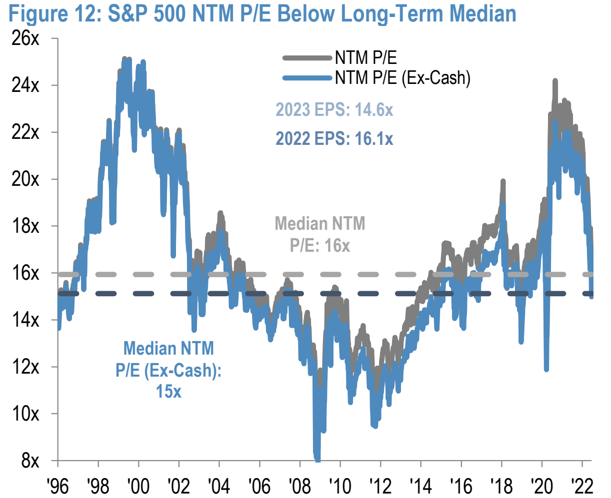


Source: J.P. Morgan Equity Macro Research

Fundamentals

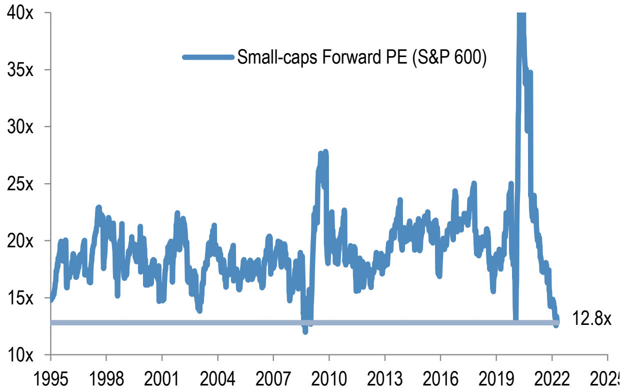
The resiliency of US corporate fundamentals (HSD EPS growth YTD) **is impressive** amidst macro and geopolitical headwinds, higher rates, ongoing supply shocks, stronger dollar, and negative fiscal stimulus comps. While S&P 500 is down ~25% from Jan peak, 2022 and 2023 EPS have been revised higher by ~3% over the same period. However, strengthening in the trade-weighted USD is ~1% EPS drag for every 2% rise in the currency (lower currency translation for multinationals and earnings for domestic producers). Rising input costs should begin to manifest in lower net income margins for 2022 of ~13% (a decline from 13.6% in 2021 though well above pre-Covid 11.6%). While we still expect buyback executions of >$1T this year, margin compression and rising debt cost should weigh on buyback growth rate next year.

Figure 12: S&P 500 NTM P/E Below Long-Term Median



Source: J.P. Morgan Equity Macro Research, Factset, I/B/E/S

Figure 13: S&P 600 NTM P/E at GFC Lows



Source: J.P. Morgan Equity Macro Research, Bloomberg Finance L.P.

Valuation

Multiples have sharply compressed with P/E NTM of ~15x compared to 22x at start of the year and just below the long-term median. Based on consensus 2023 EPS, S&P 500 traded as low as ~14x. Corporates remain flushed with excess liquidity with S&P 500 companies (ex-Financial) holding $1.9T in cash. Adjusted for this excess cash, S&P 500 P/E declines by 0.6x to 15.0x.

Positioning

Investor positioning has undergone significant de-leveraging despite ongoing support from corporates/corporate insiders:

- **Systematic strategies and macro investors** have low equity exposure levels and de-levered further over the past quarter. CTAs appear to be modestly short equities. Volatility Targeting funds' equity leverage decreased the past quarter to ~5th %ile. Global Hedge Funds continued to de-lever and their beta to equities is now significantly below average levels (~10-15th %ile) and lower than last quarter.

- **Hedge fund net leverage** for L/S is down at the lowest level since the economy recovered in early 2021 based on JPM Prime. For all strategies, net leverage recently declined to 0th %ile on 12-month basis.

- **Buyback execution activity** has been elevated through 1Q22 (>$285B) and elevated activity in recent weeks (3-4x above trend); buyback activity is poised to reach an unprecedented ~$600B in 1H22. This corporate buying has masked the de-risking that has taken place, with light vol targeters' and CTAs' positioning, which should lead to some re-risking as volatility comes down and we cross technical levels.

- **Corporate insiders** have been fading poor investor sentiment. In fact, insider buying activity is at +1STDev above trend for S&P 500 based on the breadth of net insider buying. This above-trend net insider buying activity is seen across Industrials, Discretionary, Healthcare, Technology, Communications and Real Estate.

Since Small-caps / unprofitable companies are less active with buybacks, this partially explains why median stock drawdowns are far worse than Index drawdowns.

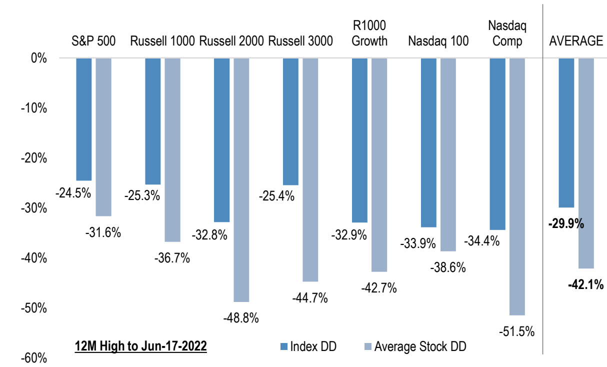
Key Sector Calls

- We continue to favor the **Energy** sector due to steadily improving fundamentals stronger growth prospect, improving quality, attractive valuation, and rising shareholder return (see Report).

- **Healthcare** offers earnings stability and capital return at a still favorable valuation. We expect the market to reward the sector for its defensive / secular growth at reasonable valuation (i.e. GARP), with potential upside from more favorable drug price reform (vs. current expectations) and a setup for legislative gridlock post US Midterm Elections (see Report).

- We remain cautious on **Defensives (e.g. Staples, Utilities)** given crowded positioning. Specifically, defensive stocks trade near record valuation premium relative to cyclicals (98%ile vs. 5%ile in Feb '21). Cyclicals (JPAMCYCL) have underperformed defensives (JPAMDEFN) by 23% since November (see Report).

Figure 14: Avg Stock Drawdown far worse than Index Drawdown



Source: J.P. Morgan Equity Macro Research

Thematic Recommendations

- **Long Oil Outperformers (JPAMOILO <Index>)** which contains high conviction long ideas if oil stays at $100/bbl.

- **Long Cyclical (JPAMCYCL <Index> over Defensives (JPAMDEFN <Index>)** on increasingly attractive risk/reward given still intact business cycle, resilient fundamentals and rich Defensive valuations vs. Cyclicals.

Risks

Higher rates and tightening financial conditions remain a key risk along with geopolitical tensions, a strong US dollar and rising input costs including commodity prices. In our view, these risks have been frontloaded in 1H with potential for normalization in 2H. We expect improvement in global growth and supply chain inflation as China re-opens.

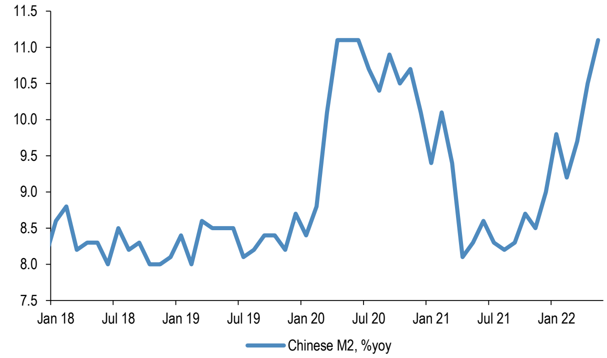
As for oil prices, the US Consumer should remain resilient up to $140-150 for oil. We acknowledge that higher oil prices are a form of regressive tax and the burden of rising cost of energy will be uneven across households. Nonetheless, we believe households are better prepared to handle the current energy shock given strong labor market trends, higher savings and lower revolving debt, work from home flexibility, higher MPG, and much lower Energy spend as % of disposable income versus prior peaks.

Europe/Regional Allocation

We believe the fundamental risk-reward for equities will be improving as we enter 2H, with Growth-Policy tradeoff likely to turn, from both sides. Fed is unlikely to keep shocking markets with further hawkish tilts, and the growth outlook could start to stabilize, given current downbeat consensus projections. Our key trade entering the year was to be long Value vs Growth, which we keep, but do not see Growth side falling from here in absolute terms. Regionally, we didn't favour direct exposure to China, but post the ytd underperformance, we decided to upgrade in May. In DM, our top pick stays the UK. In terms of supports:

- Activity momentum not to fall into a wholesale recession, as labour markets are resilient, as well as strong corporate cash flows and Banks' balance sheets. Chinese policy support is likely to increase, and headline inflation should be peaking in 2H.
- The hawkish repricing of Fed funds is already extreme, and is unlikely to get much worse from here.
- We continue to see gains for earnings, and EPS revisions are holding up well.
- Equity valuations have derated by 30% since peaking in Q1 '21 and are now for most markets below long term, with the exception of the US.
- Sentiment and positioning are clearly cautious, which are typically good contrarian indicators.

Figure 15: China M2

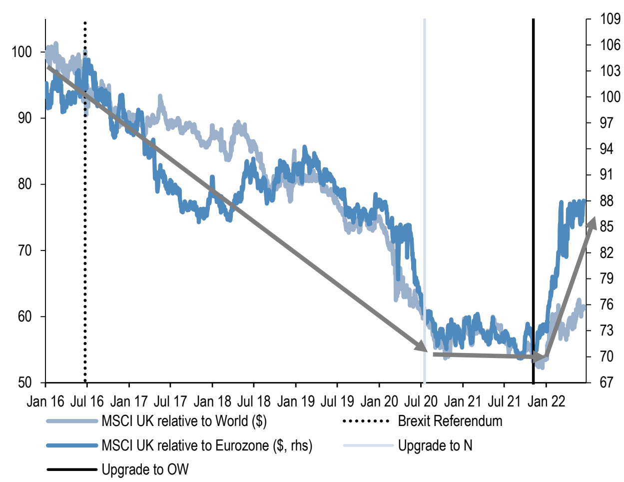


Source: Bloomberg Finance L.P.

Regional Allocation

We OW EM vs DM, including China. We entered this year looking for convergence between EM and DM, as various EM headwinds are likely to become less problematic. Up until a month ago, we believed that a better way to position for a recovery in China activity and credit impulse was 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 directly, as well.

Figure 16: MSCI UK relative to MSCI Eurozone and MSCI World



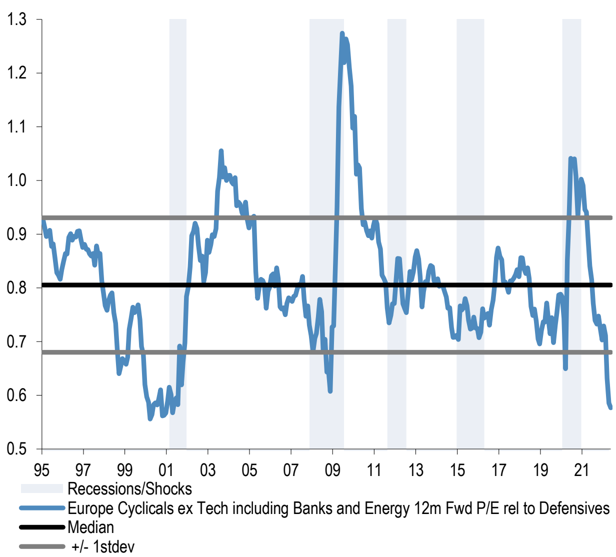
Source: Datastream

We OW UK. 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. 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 for this year OW FTSE100 vs FTSE250.

Our key calls across sectors are:

- **OW Mining:** We upgraded Mining in Q4, on a likely improvement in China activity. European Miners have further upside in our view, as China growth momentum appears to be bottoming out, and policy is likely to get more stimulative. Further, Miners offer continued earnings upside, strong balance sheets and very high and well covered dividend yields.
- **OW Banks:** We believe that Banks remain a fundamental OW. Banks are the key play on rising yields, both short and long end, 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 little 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.
- **UW traditional Defensives – Real Estate, Staples and Healthcare:** Geopolitical dislocations have helped some of the Defensive sectors trade better. However, we do not see these gains as sustainable. They face mixed earnings delivery and unexciting valuations.

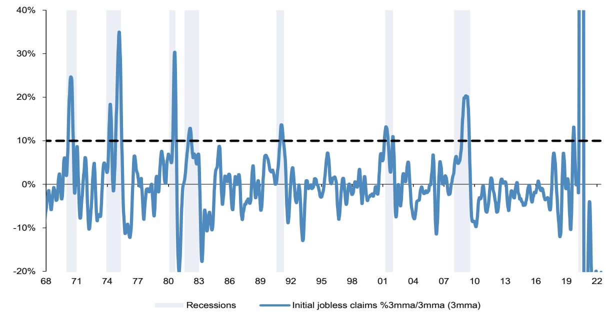
Figure 17: European Cyclicals/Value vs Defensives 12m Fwd. P/E



Source: IBES

In terms of key themes, we still OW Value vs Growth, but prefer both vs Defensives. We keep a preference for Value over Growth, despite an already strong run so far ytd, of 25%. Value style continues to look attractive on most metrics, but we think Growth is unlikely to keep falling in absolute terms. Defensives are the part of the market which is now trading very unattractively.

Figure 18: US jobless claims and recessions



Source: Bloomberg Finance L.P.

Key downside risks: Outright recession is one of key risks, and the labour market needs to be monitored. Another risk is that DMs are sitting on peak earnings, which could roll over in case of contraction in activity. During past recessions, MSCI US 12m Fwd. EPS fell by nearly 30%, on average.

Figure 19: US earnings during past recessions

Recession year	MSCI US 12m Fwd. EPS Peak Date	Trough Date	Peak to Trough Move
1990	Feb-91	May-91	-21%
2001	Mar-00	Sep-01	-31%
2008	Nov-07	Mar-09	-40%
2020	Feb-20	May-20	-23%
Average			**-29%**
Median			**-27%**
Current	**At Peak**		

Source: IBES

JPM index targets, and consensus EPS estimates. We look for a year-end price target of 275 for MSCI Eurozone, and 8150 for FTSE100. 2022 EPS estimates have been upgraded by 7% in Eurozone, and 19% in the UK. Consensus continues to look for growth in earnings this year, which we believe can be achieved, barring a recession.

Figure 20: Year-end Index Targets

	Dec '22 Target	% upside*
MSCI Eurozone	**275**	23%
FTSE 100	**8,150**	13%

Source: J.P. Morgan; *upside as of COB 13th June

Figure 21: YTD change in consensus EPS estimates for this and next year

	YTD Change in EPS Integer (lc) '22e	'23e
MSCI Eurozone	7.3%	5.1%
FTSE 100	18.9%	15.6%

Source: IBES

Figure 22: Consensus EPS growth estimates

	EPS Growth	
	'22e	'23e
MSCI Eurozone	11.5%	6.2%
FTSE 100	17.3%	0.3%

Source: IBES

Japan

Our end-2022 price targets are 2,100 for TOPIX and 29,500 for Nikkei 225 (Figure 23). Reopening, yen depreciation, reopening of the Chinese economy, and potential BOJ policy changes should support Japanese Equities amid high volatility. We expect Japanese stocks to rebound on a recovery in economic growth after the effects of the Omicron variant, delayed BOJ tightening relative to the Fed's and the ECB's moves, and yen depreciation. By style, Value stocks and overseas demand-driven Cyclicals are likely to do well in 2H 2022. Reopening of the economy after the pandemic's effects should lift stocks driven by domestic and inbound demand. As China's economy reopens in 2H 2022, overseas demand-driven stocks and cyclicals are likely to outperform, in our view.

Figure 23: Japan Equity Outlook – J.P. Morgan targets

	2022					High	Low
	Mar-22	May-22	Jun-22	Sep-22	Dec-22		
TOPIX	1,946pt	1,912pt	2,000pt	2,050pt	2,100pt	2,100pt	1,900pt
Nikkei	￥27,821	￥27,279	￥28,000	￥28,500	￥29,500	￥29,500	￥27,000

Note: JPM estimates after June-2022.
Source: DataStream, J.P. Morgan estimates

On EPS forecasts we are slightly more bullish than Consensus. We estimate corporate earnings will grow 8% YoY in FY2022, slightly higher than the consensus estimate (6%, based on I/B/E/S data, Figure 24). By sector, we see upside potential to consensus estimates across sectors including Energy, Autos, Machinery, Electronic Appliance, Transportation, and Financials. We have Overweight stances on the Energy, Materials, and Utilities, due to the sharp rise in resource prices and expected restart of nuclear power plants, and the Financial sector, due to expectations that BOJ policy changes are forthcoming amid global inflation trend. We have Underweight stances on Healthcare, Staples, and Communication services.

Figure 24: EPS Forecasts for TOPIX

Base scenario	FY19	FY20	FY21	FY22E	FY23E
(JPM Estimate)	2020/03/31	2021/03/31	2022/03/31	2023/03/31	2024/03/31
EPS （JPY）	82.8	95.5	152.1	165.2	174.5
yoy %	-28.0%	15.4%	59.2%	8.6%	5.6%
USDJPY (Term average)	108.7	106.0	112.4	131.2	133.0
yoy %	-1.9%	-2.5%	6.0%	16.7%	1.4%
Japan real GDP	-0.5%	-4.7%	2.3%	2.1%	1.5%
Global real GDP	1.6%	-2.1%	6.3%	2.8%	2.7%

(Reference) Bottom-up consensus	FY19	FY20	FY21	FY22E	FY23E
	2020/03/31	2021/03/31	2022/03/31	2023/03/31	2024/03/31
EPS （JPY）	86.5	95.5	152.1	161.2	169.8
yoy %	-24.8%	10.4%	59.2%	6.0%	5.4%

Notes: Bottom-up consensus is I/B/E/S estimate.
Source: DataStream, J.P. Morgan estimates

The biggest upside catalyst is an increase in companies' pricing power. Downside risks include slow Chinese economic reopening, growing concerns of a US recession, and a lack of sustained wage increases in Japan. The biggest upside catalyst would be an increase in companies' pricing power as a result of global inflation. The Japanese companies' output prices and DIs for sales prices have reached 30-year highs, indicating that companies may be better able than before to pass through cost increases. The April YoY % for the core CPI exceeded the BOJ's 2% target for the first time since 2015, which could lead to a change in the BOJ's policy. If companies raise wages, the deflationary economic vicious cycle could turn into a virtuous cycle. Other upside catalysts include increase in flow by individuals and the 10 trillion yen University Fund supported by the Kishida administration. The downside risks include growing concerns of a US recession, slow economic reopening in China, and a lack of sustained wage increases and Japanese yields left at the lowest level in the world for a long time.

EM

We forecast EM equities to 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. EPS growth range estimates for EM are USD 0% to +10% for 2022 (impacted by Russia exclusion from MSCI EM) and USD+9% to +10% for 2023, based on a bottom-up aggregation of MSCI EM index constituents and top-down metrics. In 2H22, we expect EM outperformance driven by:

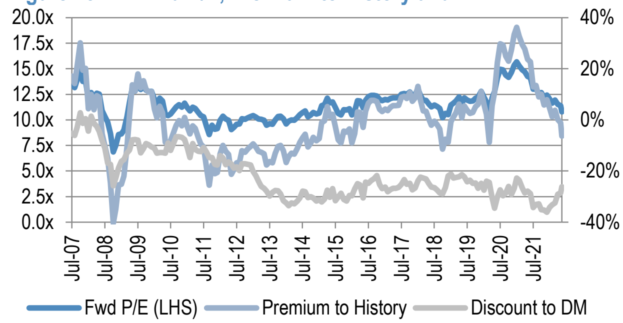
- **A positive de-synchronization.** DM monetary policy to tighten and growth to slow, while China is easing and accelerating growth. EM relative growth premium to accelerate into 2H22 and into 2023.

- **Healthy EPS outlook.** Our top-down model points to 2022 EPS growing 8ppt points above consensus for MSCI EM, mostly driven by commodities.
- **Risk appears priced in.** EM forward P/E trading at a 26% discount to DM (compared to a 22% historical average discount).
- **Low investor positioning.** Global investors are 6.2% allocated to EM equities: a reversion to 20-year avg. allocation of 8.9% would represent inflow of funds of ~US$745 billion, or about 43% of current EM AUM.
- **High commodity prices serve as a tailwind** for EM exporters through stronger growth and improvements in fiscal and current account balances.

We maintain a value tilt 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; (2) Energy, Materials, Financials and Cons. Discretionary.

- **We believe 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. We see meaningful equity risk premium priced in.
- **We reiterate our OW Energy and Materials call.** China macro policies should promote high growth into 2H22, which would be positive for China partners and suppliers as well: (1) **OW Energy** on oil price optionality. We are OW MENA and Brazil to leverage on higher oil prices; and (2) **OW Materials.** Ongoing Russia-Ukraine war has stabilized the commodity prices at elevated levels, favoring the commodity exporters, of which we are **OW Brazil** and **Indonesia**.
- **OW Consumer Discretionary.** Reopening at low valuation and secular growth stories that significantly underperformed on rising yields and policy risks.
- **UW India Equities, as a hedge.** (1) Hedge for earnings growth disappointment driven by weakening growth on weaker FX, higher commodity prices and inflation; and (2) increasing risk of valuation de-rating that could be exacerbated by the domestic monetary tightening cycle and index composition.

Figure 25: EM Fwd P/E, Premium to History and DM

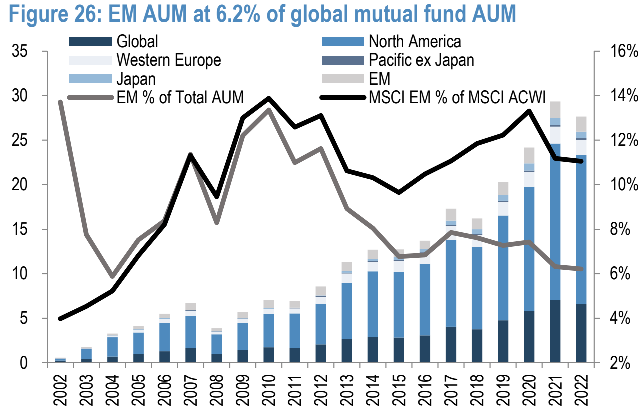


Source: Bloomberg Finance L.P., MSCI, and J.P. Morgan.

Risks to keep in mind... The structural bear case for EM equities considers peaking demographic dividends and globalization, mounting fiscal costs amid rising inflation and the risk of populism. Simply put, EM equities' Sharpe ratio is not compelling looking backwards. EM equities have behaved as an asset class requiring market timing skills—more tactical than strategic allocation.

Cyclical headwinds to our constructive call on EM equities include: (1) A delayed GDP growth rebound in China, given the importance of China's demand and production engines to regional and global growth; (2) Sustained high inflation: global inflation to exert margin pressure on companies, weaken consumer demand and increase recession risk in the US; and (3) Higher USD.

Figure 26: EM AUM at 6.2% of global mutual fund AUM



Source: EPFR Global, MSCI, Datastream, J.P. Morgan. Note: Left axis: AUM in US$tn; Right axis: EM share of total AUM/MSCI AC World. Data as of April 2022

China

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Heading into 2H22, the case for China equities becomes more compelling in the EM Asia context. MXCN is trading at an undemanding 11.2x forward 12-month P/E and 13% forward 12-month EPS y-y. Even if 2022 EPS growth is halved, implied valuation would still be at average P/E of 12x since 2016, while just slightly above the average P/E of 11.2x since 2010.

We are keeping our base/bull/bear-case MXCN targets unchanged at 116/123/98 for end-2022, with 61%/71%/36% upside vs 15 Jun close of 72, and 39%/48%/18% vs end-2021 close. We forecast 2022/23 EPS at Rmb5.95/Rmb6.84 and EPS growth of 11%/15% y-y, in line with IBES consensus estimates.

- **Our bear case at 14.8x FTM P/E reflects China's relative resilience in the context of EM Asia** thanks to earlier policy normalization, stimulus underway allowing 2Q to be the trough quarter for GDP growth in 2022, normalizing regulations over internet platforms, and the ultimate re-open after the 20th party congress in Nov 2022 or after the Chinese New Year in 2023.
- **Our base case at 17.5x FTM P/E reflects the bear case assumptions** plus a more substantial improvement in US-China relationship in terms of certain agreements over tariff reductions, capital markets (HFCAA's audit cooperation requirement) and a rebalance in terms of market access.
- **Our bull case at 18.5x FTM P/E would reflect an optionality** where inflation comes under control better than expected in the US and the USD weakens in favor of EM risk assets.

Upside catalysts

Possibly Rmb1trn in special central government bonds and expert proposals for direct fiscal stimulus to households. JPM's Haibin Zhu notes that there is decent probability that the upcoming June NPC SC meeting may approve additional fiscal stimulus, in the form of special government bonds or supplementary fiscal deficit, likely on the order of Rmb1trn. Separately, China's think-tank experts have proposed consumer stipend for residents in Covid-affected cities and nation-wide issuance of consumption coupon. Multiple cities have used DCEP to issue local consumption coupons as news reported (Rmb160mn in Chengdu, Rmb50mn in Xiong'an, RMB30mn in Shenzhen, and Rmb10mn in Guangzhou), and it is possible that more cities may follow.

Faster than expected consumption recovery. The market has been concerned about weak consumption recovery and risk of consensus earnings downgrade. Recent macro data, company feedback, and JPM's recent Asia Equity Macro Roundtable highlight that Tier 3-5 city and rural residents have been faring better than Tier 1 city residents and have been more willing to shop and upgrade.

A potential reform with low visibility on timing but high certainty in terms of impact would be some sort of **monetization of rural assets** such as the rural residential land. Assuming proper execution, this would go a long way toward implementing common prosperity in rural China and unlocking what is a massive asset class currently in sleep mode. We note that following the Asia Financial Crisis, China introduced the urban residential reform, i.e. the monetization of China's urban housing asset class.

Downside risks

July 2022: the peak month for onshore and offshore HY and IG property bonds maturity (US$8.2bn for HY and US$3bn for IG, vs average of US$4.3bn for HY and US$1.8bn for IG over Jun-Dec 2022). In 2021, default of China property bonds totaled US$45bn. JPM Asia Credit Research team forecasts US$32bn in similar defaults in 2022.

New Omicron waves, although a case similar to that of the Shanghai lockdown is highly unlikely in our view. That said, the varying quality of local government execution has been a source of surprises since the pandemic.

Asia central banks catching up to rising inflation and rising yields globally may create uncertainty via the FX and/or the export channel, although China's steady current account should lend support for relative exchange rate stability. The other potential channel is HK, which is poised to see higher benchmark interest rate (100bps hike from 1.75% to 2.75% by June 2023 per JPM estimate) while the city has been experiencing significant departures vs history.

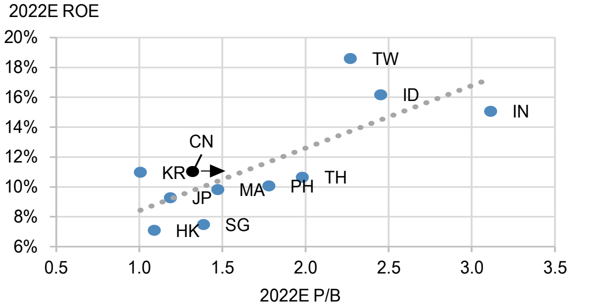
Sector recommendation

OW Energy (JPM Global Energy team's view on upside risk for oil and coal prices) and believe that China's coal names should benefit along with crude and refining. **Industrials** (prefer the decarbonization supply chain in capital goods over transports), **Communications Services** (online gaming's regulatory scrutiny likely passed its peak, overseas growth offers great opportunity, and the platforms' critical mass may lead to new businesses), and **Consumer Discretionary** (stimulus on auto purchases and ecommerce platforms' normalizing regulation and assertive efforts at cost optimization).

UW Financials (the big four SOE banks may see more national service and continued regulatory constraints over growth and margins), **Consumer Staples** (while we are structurally positive on consumption upgrades and favor names with pricing power such as high end liquid, risk-reward is less attractive with elevated multiples and margin pressure), and **Real Estate** (national level policy relaxation unlikely, risk of credit events in 2H22, but sector consolidators should outperform).

Neutral: IT (hardware and semiconductor face sector down cycles, though cushioned by rising localization; software trades at elevated valuation while topline has yet to take off), **Healthcare** (OW healthcare equipment for its secular growth, but UW pharmaceuticals, biotech on domestic regulatory headwind on innovative drugs and US regulatory risk on CROs), **Materials** (limited regulatory relaxation on property will hurt construction-related materials, offsetting the upside from decarbonization material names), and **Utilities** (gas distributors may see continued margin pressure, though wind, solar and hydro power get policy support).

Figure 27: MXCN's attractive risk-reward vs rest of Asia



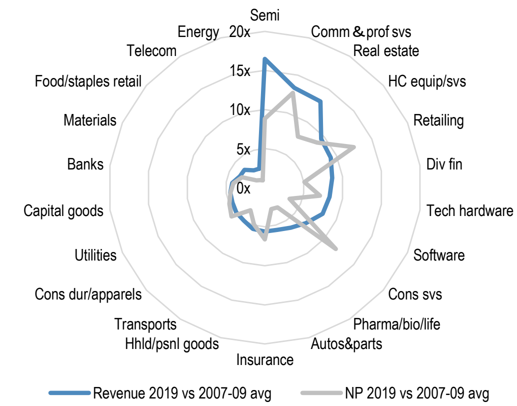
Source: MSCI, Refinitiv Eikon, J.P. Morgan. Note: consensus estimates on 2022 P/B and ROE are used in the chart

Figure 28: JPM China Equity sector allocation

Sector	Index weight	JPM weight	OW/UW
Cons discre	28.4%	28.9%	0.5%
Comm svs	19.4%	20.4%	1.0%
Financials	16.2%	13.2%	-3.0%
IT	5.9%	5.9%	0.0%
Industrials	5.8%	6.8%	1.0%
Cons staples	5.7%	5.2%	-0.5%
Health care	5.4%	5.4%	0.0%
Real estate	4.1%	3.6%	-0.5%
Materials	3.7%	3.7%	0.0%
Utilities	2.8%	2.8%	0.0%
Energy	2.6%	3.6%	1.0%
Cash		0.5%	0.5%
SUM	**100.0%**	**100.0%**	**0.0%**

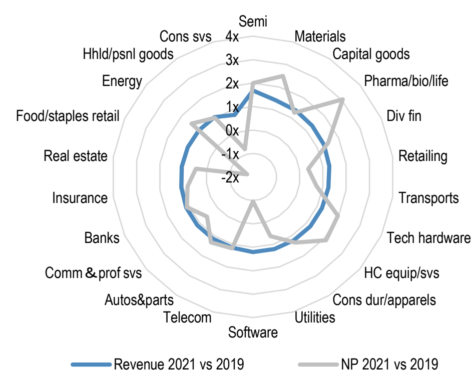
Source: J.P. Morgan estimates.

Figure 29: All China listcos' revenue and EPS in 2019 compared with the average over 2007-09 by industry group



Source: Wind, Refinitiv Eikon, J.P. Morgan.

Figure 30: All China listcos' revenue and EPS in 2021 compared with 2019 by industry group



Source: Wind, Refinitiv Eikon, J.P. Morgan.

EM Asia

We are cautiously optimistic that a combination of positive China policy developments and an improvement in US-China relations can help re-rate the market, taking the MSCI Asia ex-Japan **(MXASJ) index to 790 by the end of the year (up 21% from current levels** and flat over the full year). Consensus EPS estimates are at $53 for 2022 (1% growth) and $59 for 2023 (11% growth). JPM bottom-up estimates are 1-2% above consensus.

OW/UW: Markets, sectors and styles

- OW China, Singapore, Indonesia and Vietnam. UW Malaysia, Philippines and India.
- OW Energy, Industrials (green ecosystem) and Discretionary (Internet platforms and EV). UW Utilities, Staples, and Real Estate.
- OW Quality, Growth and parts of Value. UW Momentum and Low Vol.

Three AEJ themes for 2H22

Countercyclical policies in China: China policy will continue to be the big local driver. After consistently being a drag through 2021 (when global assets did well), this is now turning into a counter-cyclical support: **broadly improving on three fronts** (credit impulse is rising, regulatory policy is easing, and US-China frictions are incrementally easing), stable on one (housing), and yet to be clarified on two (when to move on from dynamic zero on COVID and when the political landscape may settle as related to the 20th Party Congress in Oct/Nov). China equities are thus set up to be a strong outperformer over 2H22, helped additionally by a current account surplus and under-control inflation.

Structural growth in bankable green capex. Another trend that may see some convergence is in the Energy space. Coal and Oil & Gas stocks have done well over the past 3- and 12-months. Energy (like elsewhere in the world) has been the best performing sector in AEJ YTD (20% ahead of #2). But as various markets start to limit cost pass through and potentially impose excess profit taxes (as being discussed in Thailand), higher oil prices may not benefit Energy equities as much as they have YTD. On the other hand, renewable/de-carbonization stocks have lagged, at least partly on the Growth-to-Value rotation. The **North Asia Green Infrastructure is emerging as the primary capex growth engine of the region**, helped by rising EV demand as well as energy security and de-carbonization imperatives. Tariff relief is potentially another upside risk. Supply chain participants in EVs, battery, charging, renewables in the region, and particularly in China and Korea stand to benefit.

Resilience favored at market, sector and stock level. The global moves in commodity prices, inflation, policy rates and bond yields (all higher) will be felt more acutely over 2H. Even if DM inflation is peaking now, our economists' forecasts suggest it is unlikely to fall quickly, and global financial conditions may remain tight. Meanwhile, Asian inflation has been picking up with a lag across food and energy prices, prices of intermediate products, and wages. Compared to DMs, central banks in Asia (ex-China) may need to play catch up in the policy normalization process in 2H22. We believe that resilience will command a premium, at the country level and at the stock level. In terms of style, this argues for a bias towards Quality—in balance sheets, margins and cash flows.

Upside catalysts

FDI, Supply chain relocation & China's re-opening: Longer-term, ASEAN (Indonesia, Vietnam and Thailand) and India remain preferred destinations for global supply chain relocations, supporting inbound FDI, and ultimately export capabilities. China's ultimate re-open will also help accelerate supply chain relocations.

Corporate cash balance: Asia's top 150 net cash companies hold a total of **~$750bn in net cash**. Putting this cash to use for capex, M&A, buybacks or dividends could be an important sentiment boost in weak markets.

Light positioning helps: Systematic and fast-money positioning is light and building in Asia. While **foreign flows in Asian equities** have been net negative since 2017, selling since Jan 2021 now totals $97bn, compared to $99bn of outflow over the GFC. Our aggregate measures of positioning similarly suggest very light positioning overall.

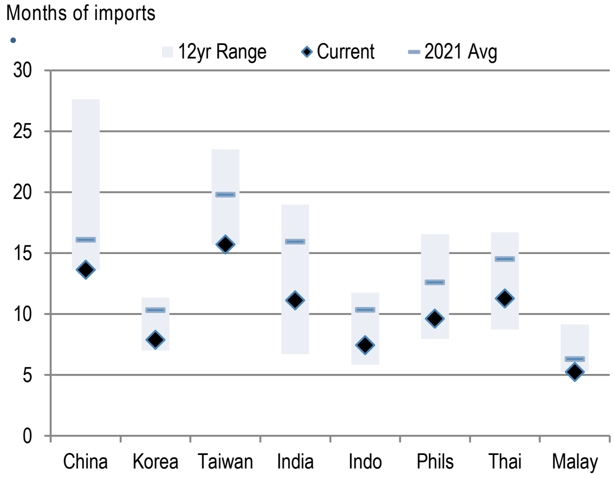
Downside catalysts

The Yen weakness: While to some extent BOJ policy has contributed to **yen weakness** and Asia FX weakness by extension, a potential step away from BOJ YCC comes with upside for regional FX volatility and global bond yields. And if not, persistent FX weakness can cause its own downward spiral for Asian capital flows.

Twin deficits: FX reserve levels have significantly declined in AEJ, and twin-deficit economies (India, Philippines) are likely to face pressure through slower growth, higher bond yields, weaker FX and portfolio outflows.

Figure 31: FX Reserves are at lows across the board

Months of imports



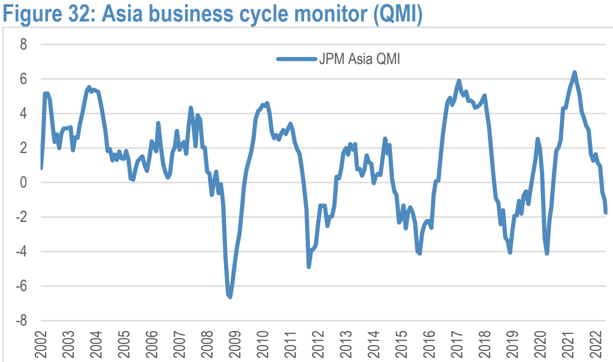
Source: Bloomberg Finance L.P., J.P. Morgan Asia Equity Macro Research

Retail investors: Retail support has softened from the highs of 2021, but further retrenchment here could complicate the flow picture. Higher inflation (and particularly in food prices) could also weigh on household cash deployment.

Where are we in the cycle?

Asia ex-Japan forward EPS has been downgraded by ~6% so far vs an average -14% in post-GFC downgrade cycles and -46% during the GFC. That said, markets have historically tended to bottom within the first third to half of the downgrade cycle. On **valuation**, MXASJ is currently trading at 11.3x on trend fwd EPS. This is -0.7SD lower than the post GFC average but almost 60% higher than the GFC trough. Our Asia **business cycle monitor** (QMI) has now dropped well into negative territory, though not quite at trough levels yet.

Figure 32: Asia business cycle monitor (QMI)



Source: Bloomberg Finance L.P., J.P. Morgan Asia Equity Macro Research

CEEMEA

The headwinds facing global equities—inflationary energy prices and the strong dollar—are key tailwinds for MENA markets. And since MENA is >60% of CEEMEA, we are happy to stay bullish on CEEMEA as a region overall within the EM context.

- **Our key country calls** for 2H are: **OW Saudi and GCC**; N Central Europe and Turkey; UW South Africa.
- **Our key sector calls** for 2H are: OW **Materials**, **Energy** and **Financials**; N **Tech** (focused on SA), **Staples** (focused on CE3 and Turkey); UW: Growth and Defensives. We think sector calls in CEEMEA are likely to be secondary to the country calls.
- **We lower our end-22 target for MSCI EMEA from 360 to 260, implying 30% upside to the year-end.** We simply remove Russia (27% of MSCI EMEA at 1 Dec) from the target and leave everything else unchanged. The consensus earnings growth of -35% in '22 is skewed by the March removal of Russia from the index earnings base with a 9% rise in '23. We think '22 underlying will post ≈20% earnings growth led by Saudi.

Why are we OW Saudi? What's the upside? High oil prices and strong USD. While we are in the middle of a global equity correction on inflation/margin squeeze fears and growth downgrades, Saudi is seeing earnings *upgrades* in the last six weeks vs downgrades in EM and is a massive winner from higher oil prices. Moreover, Saudi's relative performance vs EM is more dependent on rising USD than rising oil. Our EM FICC strategy team UW EM FX call strengthens our OW Saudi equity call. And consensus GDP upgrades on Saudi / downgrades on EM continue. Moreover, the positioning gap remains wide with 57% of EM funds owning zero in Saudi (4.4% of the bench), about the same number as Peru (0.3%)

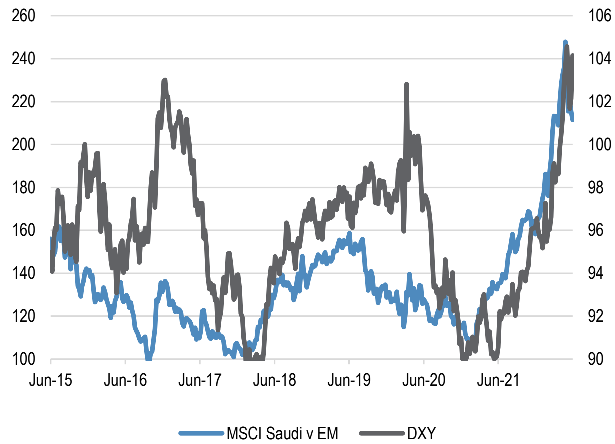
Within Saudi, we would position in **Financials**, admittedly a consensus OW, but with upside as Fed hikes should push NIMs higher, as well as **consumer** sectors, a consensus UW, as we expect the government to push through new spending plans before the year-end. The recent correction in Saudi fixes the key pushback (from 1Q) from most investors: that valuations are too high. MSCI Saudi is -14% since 8 May but the 12m fwd EPS integer is actually +3%—a 16% de-rating of the market, from 19.2 to 16.1, in just over a month. Moreover, on our oil-earnings model, Tadawul earnings are only pricing in $99 Brent—we think the Saudi upgrade cycle has another 18% to run, which would put the market on 14.4x 12m fwd P/E.

Why are we UW South Africa? Its winter of discontent—load-shedding, domestic political issues, slowing GDP growth—means more weakness in domestic assets. While 1Q22 GDP showed a strong gain, we expect growth to dip below 2% from 2Q through the end of '23 (the end of our explicit forecasts)—that implies per capita incomes are falling. Meanwhile, we expect SARB to hike rates by another 200 bps to 6.75% by end-23; the risk is that the hiking pace of SARB falls behind the Fed and leaves ZAR with downside risks. Moreover, the changes to Reg 28 (pension fund regulation) imply we could see significant foreign outflows from domestic pension funds, a key owner of local shares over the course of this year.

Within South Africa, we favor off-shore earnings, particularly through tech (i.e. Naspers/Prosus) as well as miners. If we see the kind of 2H growth recovery that we are forecasting in China (>7% saar), then both Tencent and the miners should benefit. We are happy to UW domestic earnings, but would still OW the banks.

Near-term we see more risks than opportunities in N-weighted Central Europe and Turkey. Greece offers valuation support and possibly some upgrades. Central Europe is suffering worse than Western Europe from rising inflation with CPI at 13.9% oya in Poland. And 10-year Polish bond yields which were <2% a year ago are >7.5% now. Given the steep rise in yields, we are surprised equities have not de-rated more. **Turkey** has seen an ongoing slide in TRY where our EM FICC team remains UW while CPI is now 70% oya. Valuations remain the lowest in CEEMEA, but we are happy to run a N weight and hold no Turkish stocks in our Top 10. **Greece** offers a strong post-COVID recovery path on the back of EU funding and the banks are likely to surprise most investors by posting 10% ROEs as soon as 4Q22.

Figure 33: Saudi outperforms EM when the dollar strengthens



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

LatAm

Click here for the full Outlook

LatAm to lag EM in 2H… At the end of 1Q, MSCI LatAm was up by 26%. It is arriving in 2H with half of the upside already verified, but still, the only positive region in terms of performance YTD. For 2H, EM should do better than LatAm, mostly on the back of China. The end of the lockdowns, along with macro stimulus and a great appeasement on the regulatory front should allow for a strong rebound of that market, and, with it, EM (see impact of the Chinese cycle on EM country and sector performance in a report from EM Strategist Pedro Martins).

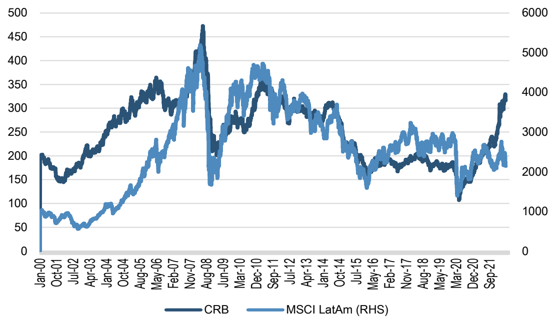
…but should return to 1Q highs: Chinese reopening, advanced Fed repricing, persistent supply issues, and no short-term global recession should keep commodity prices elevated. High commodity prices have a very positive trickle-down impact on growth through capex, at the same time that MSCI LatAm and its markets (ex-Mexico) are the ones with the most exposure to commodities vis-à-vis other EMs. Thus, although the global story was a headwind in 2Q, LatAm should revisit its highs observed in 1Q and even go a bit further. Still, we have slightly reduced our targets for MSCI LatAm and all local markets, with the exception of Chile. The higher than expected increase in rates has led to a higher cost of equity than we had previously expected, albeit earnings have been revised higher across the board.

Valuation is incredibly attractive: At 7.0x 12-month fwd. P/E, LatAm is trading at a discount to EM (10.7x). The region is trading at over 3 SD below the 10-yr average, with all countries below average. The price dislocation highlight is with Chile (-3.5 SD from average, on a 12 mo. fwd. P/E of 8.3x vs average of 15.1x). Brazil is trading at one its lowest valuations on record: at only 7.0x, it is the cheapest of the major EMs (excluding Turkey). It is important to highlight that cheap valuations are taking place in a context where consensus earnings are positive (+23%) and moving higher (+10% over the past month, + 30% YTD). We understand that LatAm's limited GDP growth capacity warrants a discount to other regions, but that appears excessive at this point.

Key country calls: OW Brazil – One of the main beneficiaries of policy counter-cyclicality provided by China. Likely to end of the hiking cycle ahead of others, support for growth coming from commodities and reopening. Terms of trade and high real rates to support the BRL. Moderate political outcome on the October elections. **OW Chile** – Benefits from higher commodities, very attractive valuations amid higher earnings revisions. Optionality that policies going forward are going to be more market friendly, especially if the September new constitutional referendum is rejected. **N Mexico** – Rate cycle to last longer than other LatAm peers and Banxico follows the Fed; growth remains subdued, but consumption is supported by remittances from the US. Company earnings resilient despite higher inflation. Most expensive market in LatAm but cheap relative to its own history. **N Colombia** – Should have less upside in 2H, as it re-rated in 1H. June Election outcome to define fiscal and energy issues, which are key drivers going forward. **UW Peru** – The high level of political uncertainty leads us to keep on the sideline as we find that there are equally interesting options of financials and materials in the rest of the region.

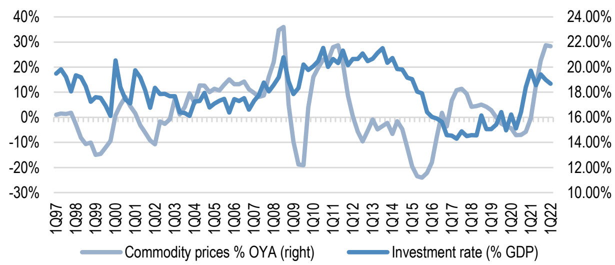
Risks to our allocations: From a global standpoint, anything that impairs China's 2H expected recovery or brings strong signs of US recession in the short term are key risks for LatAm equities. For the region as a whole, a key concern is inflation and the interest rate hiking cycle. Since the end of 1Q, both inflation and rates continue to be revised higher. It is difficult for equities in the region to perform well without rate stabilization. Government intervention to try to bring prices lower (particularly food and fuel) could constitute a greater concern if inflation proves sticky, giving way to more populist measures and putting strains on fiscal accounts. Popular unrest cannot be completely ruled out.

Figure 34: Commodity Future Prices vs. MSCI LatAm



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

Figure 35: Brazil Export Prices vs. Investment Rate



Source: Economy Ministry, IBGE, J.P. Morgan.

Figure 36: Price targets for major LatAm markets

	Brazil	Chile	Colombia	Mexico	Peru	LatAm
Start of 2022	104,822	4,308	1,411	53,175	21,157	2,129
Current price	102,063	5,121	1,501	48,164	19,563	2,137
Old target	133,000	5,200	1,900	59,000	22,000	2,600
New target	125,000	6,100	1,700	54,300	20,600	2,550
New/old	-6.0%	17.3%	-10.5%	-8.0%	-6.4%	-1.9%
New/current	22.5%	19.1%	13.2%	12.7%	5.3%	19.3%
2022 FY upside	19.2%	41.6%	20.5%	2.1%	-2.6%	19.8%
New/ max 2022	2.8%	13.2%	3.9%	-4.1%	-18.7%	-7.7%

Source: J.P. Morgan

Australia

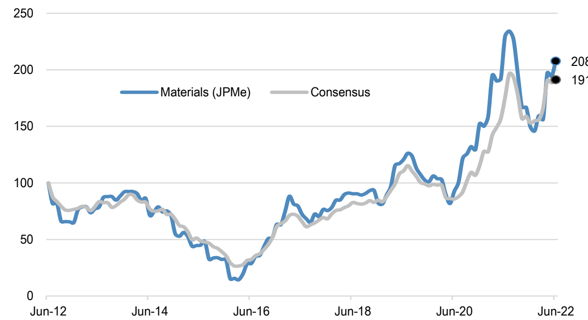
Australia has outperformed the MSCI World (ACWI) by 919bp in the YTD. This outperformance has been driven by the market's two largest sectors, Financials (+320bp) and Materials (+1440bp), which account for over 50% of the benchmark index (ASX 200). From a macro perspective, Australia remains well positioned, with a less intense inflation impulse than most developed markets. This is a key factor underpinning our projection for the RBA cash rate to peak at 2.6%; well below our US team's Fed projection of 3.25%.

Price target and EPS

Our Dec-22 target for the ASX 200 is 7,800, implying 18% potential upside. We use a combination of top-down and bottom-up approaches to formulate our target. From a bottom-up perspective, we see c.37% upside to Materials and c.27% for Financials.

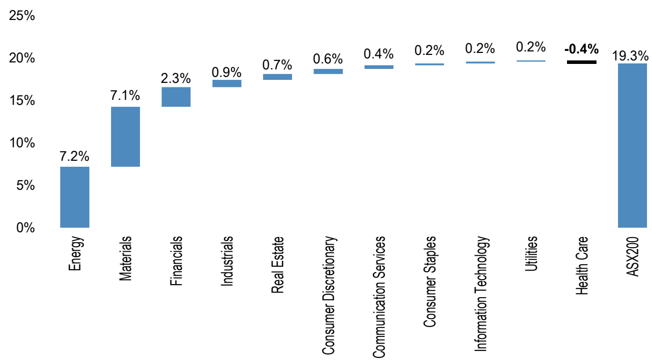
A marked uplift in our earnings projections for Mining in the YTD is the principal driver of our increased CY22 EPS projection of 520 (+20% higher in the YTD). At the outset of the year, our Mining team envisaged lower earnings from the sector across the calendar year, but sharp gains in commodity prices, as well as in our forecasts, see the team's EPS projection implying c.16% growth this year. Our estimate for the sector now stands above consensus (Figure 37).

Figure 37: AU Materials: JPMe vs. Consensus (rebased to 100, 2012)



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

Figure 38: CY22 EPS Bridge (JPMe)



Source: J.P. Morgan.

Looking to 2023, we expect earnings growth to turn negative, declining by c.4%. This fall is driven by Energy and Materials, where our teams expect earnings to slip by 29% and 16%, respectively.

Portfolio Perspectives & Key Picks

Our model portfolio retains a tilt to value and cyclicals, albeit less pronounced than in 2021. We maintain our preference for Energy, Materials and Financials. We are UW sectors that are long duration in nature, such as Tech, REITS and Staples. While we have some holdings in these sectors, we remain cautious considering what is set to still be many months of tightening by central banks around the world.

On the Energy front, J.P. Morgan has a strongly held global view that a long period of under-investment, coupled with ongoing geopolitical instability, will continue to drive an energy 'supercycle'. In light of this positioning, as well as our positive bottom-up view on the sector, we maintain a large Energy OW. In terms of Materials, we see clear signs of stimulus taking hold in China as re-opening continues across those cities that have been in lockdown. This should drive higher activity that will be supportive of bulk and base metal prices.

Within our OW sectors, our largest holdings (relative to benchmark) are: **ANZ**, **NAB**, **QBE**, **BSL**, **QAN**, **BHP** and **JBH**.

Upside catalysts

- Lower-than-projected inflation prints
- Persistent strength in retail sales, highlighting the underlying strength of the consumer
- Strong full-year results season in August

Downside risks

- Wage price growth surprises to the upside, heightening the risk of a wage price spiral
- Trade tensions with China remain elevated or deteriorate
- Sharp downturn in business sentiment

Global SMid Caps

The recent correction gives us a bit more comfort than we have had YTD... Most SMid indices are down double digits since our Mar 1 cautious stance (see "The math says careful" report), with the drawdown from 2021 highs now pricing in the historical average peak-to-trough declines around recessions pre-2000 (post-2000 ones still imply 25% further downside).

Figure 39: How Much Are SMid-Caps Pricing In?

Recession Dates	Peak to Trough Perf: Russell 2000	Peak to Trough Perf: S&P 600
Jan '80 - Jul '80	-26.7%	-
Jul '81 - Nov '82	-29.2%	-
Jul '90 - Mar '91	-34.0%	-
Mar '01 - Nov '01	-46.1%	-33.8%
Dec '07 - Jun '09	-59.9%	-59.2%
Feb '20 - Mar '20	-41.6%	-41.4%
Avg. Return	-39.6%	-44.8%
Pre 2000 Average	-30.0%	-
Post 2000 Average	-49.2%	-44.8%
Perf from 2021 Peak	-31.8%	-25.3%
Implied Perf to Pre 2000 Avg	2.7%	-
Implied Perf to Post 2000 Avg	-25.5%	-26.1%

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

…with many data points painting a still benign outlook for SMid-Caps in 2H22.

- **Fundamentals remain strong:** SMid balance sheets are strong (ND/EBITDA stands at just 0.6x globally), Sales/Total Assets are now starting to recover from multi-year lows which bodes well for profitability, earnings growth remains in double-digit territory, and all despite margins likely to feel the pressure of rising input costs against what consensus is calling for.

- **Valuations remain supportive:** Valuation multiples are now meaningfully off all-time highs in Pan-Europe, and closer to historical averages elsewhere in the world; and all with SMid-Caps still trading at a discount to Large-Caps in most regions. Global SMid sports a trailing P/E of 21.1x (0.9x below its historical avg), a P/B of 2.5x (in-line), and a FCF Yld of 2.5% (+1.4% above its hist. avg), all computed on an equal-weighted average ex-outliers basis.

- **Sell-side sentiment** is still too bullish, but the broader mkt has already started to price in risk in some of the higher beta asset classes like SMid-Caps. Sell-side analysts' price targets for SMid-Caps remain optimistic, with consensus EPS growth estimates also being high (ests call for +23.6% in '22); but the broader market is starting to price in risk—country CDS spreads have widened, high-yield interest rates and equity volatility have spiked, and the AAII survey of bulls vs bears is near lows and pointing to gains in SMid indices over the coming month).

- **And all with technicals pointing to pockets of opportunity and a short-term rally.** The OFR index of financial stress and the RSIs of the main SMid-Cap indices all point to high-single-digit to low-teen returns over the coming 6-12 months, and all with 30-40% of SMid-Caps down >20% YTD alone in most regions.

But visibility remains low. As we have argued since our Mar 1st cautious stance on SMid, the asset class was likely to suffer from a clear lack of macro visibility. First, it was the Russia/Ukraine war, then it was the pace of central bank rate hikes and asset purchases, and lastly it was China shutting down as a result of its zero-COVID-19 policy. As we stand, China is reopening, most key central banks have pronounced themselves and much tightening is now being discounted in the market, and the impact of the Russia/Ukraine war on commodities seems to have been priced in, with prices not having rallied much over the last 3 months. Against this however, we have financial conditions tightening with consumer confidence having fallen to multi-cycle lows, and our econ team having slashed their 2022 real GDP growth estimates worldwide YTD.

We are sticking to our relative calls which have served us well YTD:

Expect SMid to continue to hold up well vs Large in 2H. As we have argued YTD, 2022 is not a year to pound the table on SMid, but the asset class is unlikely to underperform Large-Caps by much. Indeed, the Russell 2000 has underperformed the S&P 500 only marginally YTD, with its historical average underperformance around recessions suggesting there is little relative downside left. On an equal-weighted average ex outliers basis however, SMid has actually outperformed Large in all regions of the world YTD ex Japan and Australia.

Figure 40: SMid vs Large performance around recessions

Recession Dates	Peak to Trough Perf Russell 2000	S&P 500
Jan '80 - Jul '80	-26.7%	-17.1%
Jul '81 - Nov '82	-29.2%	-27.1%
Jul '90 - Mar '91	-34.0%	-19.9%
Mar '01 - Nov '01	-46.1%	-49.1%
Dec '07 - Jun '09	-59.9%	-56.8%
Feb '20 - Mar '20	-41.6%	-33.9%
Avg. Return	-5.6%	
Pre 2000	-8.6%	
Post 2000	-2.6%	
Relative Return from 2021 Peak	-8.4%	

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

Stick to those areas of SMid that offer the kind of visibility that the broader market simply doesn't have.

- **OW Energy…** Either value names in Oil & Gas or Equipment & Services names as these have not kept up with oil prices. Despite Energy Oil & Gas being the best performing SMid industry YTD in most regions and Energy Equipment & Services being the second best, the latter will still have to more than double to match the spike in oil prices since the start of last year (S&P 600 Energy Equip & Svcs is up 35% since then vs the 128% spike in WTI).
- **OW Materials…** When commodity-related stocks see the price of the commodity they produce increase, they turn into cash machines, paying down debt with their equity valuation approaching their EV. In our view, the market is still missing this value creation opportunity with the S&P 600 Materials index for example being actually down since the start of 2021 while all commodities are sitting meaningfully higher. We have talked to all of JPM's analysts covering Materials in Asia, Europe, and the US and find that all believe commodity prices will likely remain elevated through at least the end of '23.
- **OW Infrastructure Plays…** At a time when the macro offers little visibility and it is perhaps hard to see what will propel growth over the coming years, one part of the economy seems to enjoy the prospects of strong and sustainable demand… infrastructure. The US is starting to execute the largest infrastructure investment plan the country has witnessed since WWII, and this is happening while China is also turning to infrastructure spending as a way to boost growth and Europe is accelerating its move towards an eco-friendly economy powered by green energy.
- **OW Leisure (with focus on summer tourism)…** Our channel checks indicate that bookings have recovered to 2019 levels following an Easter holiday that already signaled strong consumer demand for leisure. A recent collaboration report from our research department ("Cost of Living — Views from 5,000 consumers"), also showed that consumer discretionary spending will likely be down high-single to low-double digits this year, but Leisure ranks right at the top of their spending plans. But this does not look priced in… the S&P 600 Hotels, Restaurants, and Leisure index, for example, down 54% from highs vs the 26% fall of the S&P 600.
- **OW Spain…** Spanish SMid-Caps continue to offer an attractive value/growth proposition to investors. They trade on an average FCF Yld of 6.6% (way above the 4.9% average of Pan-European SMid-Caps, and the 2.5% of Global SMid), with growth for the more domestic names likely to be helped by a reopening trade that should be far more significant than the one many other countries will endure. Note that tourism accounts for close to 12% of Spain's GDP and around 14% of its employment; with the burst of the housing bubble also having had an abnormally high impact on the Spanish economy (its GDP as a % of global GDP having fallen from 2.6% in 2007 to 1.5% last year).

With a preference for EM vs DM… We remain OW on EMs (ex-Russia) vs DMs. South Africa and LatAm benefit from higher raw material prices, while China is also likely to hurt less than DMs thanks to its higher stocks of several commodities and is already pricing in a meaningful economic slowdown, with the MSCI Small Cap China index down 46% from its 2021 highs. All of this while EMs exhibit a superior growth/value proposition, and in the case of EM Asia, far less financial leverage than we see in DM SMid-Caps.

Figure 41: EM vs DM SMid (Equal Weighted Avgs ex-Outliers)

	EM	DM
Net Debt/Ebitda	0.4x	0.9x
Est. EPS Grw '22E	28.7x	17.8x
Trailing P/E '21	23.4x	18.4x
PEG '22E	0.8x	1.0x

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

…and all through the lens of value. While valuation dispersion has corrected meaningfully, it remains high, as value has only partially recovered from its vast underperformance vs growth within SMid over the last 15 years. We note too that SMid investors are still paying a large premium for those stocks with the richest growth expectations, an investment strategy that has seldom delivered alpha over the last 30-odd years. We therefore continue to recommend investors avoid paying up for rich expectations of growth, focusing instead on stocks that offer a GARP proposition, or those with valuations that fail to price in what we believe is still a sizeable recovery story.

Recommended Trades:

- **Index Pair Trade: Stay long RUJ vs RUO.** Valuation dispersion is still high, at levels not seen since the tech bubble; the most expensive quintile of the US SMid universe is made up of those stocks with the highest consensus expectations of EPS growth… one of the most consistent contrarian indicators of 12-mth forward performance we can find; and the sector mix of the Russell 2000 value is more aligned with our SMid Strategy views (being more exposed to Energy, Materials, Fin, and Real Estate, and far less exposed to Tech, Healthcare, Cons. Discretionary, and Industrials).

Figure 42: Russell 2000 Value vs Russell 2000 Grw

	Russell 2000 Growth	Russell 2000 Value
Trailing P/E	189.5x	26.3x
Pos Trailing P/E	14.0x	10.3x
Fw P/E	32.9x	12.6x
P/B	3.6x	1.6x
Est. EPS Grw	476.7%	109.2%
Est. Post EPS Grw	5.9%	10.0%

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

- **A few screens/tradable baskets. i) Long GARP vs GAAP** – Investors have been paying up for consensus expectations of growth when doing so has consistently destroyed alpha for decades. Instead, we prefer to short what in our view has become GAAP (growth at any price) against being long a more traditional GARP approach. That is shorting our "Growth Shorts" while being long our "Growth Havens". **ii) Invest against 3 sigma expectations** – the dispersion in growth expectations among SMid-Caps is at levels only seen in the tech bubble. Short our "Pie in the Sky" basket while being long our "Left for Dead" one. **iii) Hedge against this year's margin pressure** – the feedback we get from the companies we talk to is all pointing to input costs pressures that mgmt. teams hope to pass on to customers with a lag of 1 to 2 quarters. Our experience shows this is never a perfect equation and margins tend to suffer. Investors are chasing high EBITDA margin stocks in hopes that they would be able to weather the storm better than their counterparts. We are long our "High Flyers" basket (made up of the highest margin businesses in each SMid industry) against our "Bottom Feeders" (lowest margin businesses).
- **And 26 stocks picks...** See here.

Market Volatility

In the first half of the year we remained in a medium to high volatility regime, with the VIX averaging ~26 year-to-date. The elevated volatility levels were driven by a number of macro surprises and their knock-on effects. These include persistent inflation surprises that caused global central banks to remove monetary accommodation earlier and faster than expected, the war in Eastern Europe that raised geopolitical risks and caused disruptions to commodity flows, lingering COVID lockdowns (particularly in Asia) and supply chain disruptions, a crash in crowded speculative risk assets, and a collapse in market liquidity with feedback loops between volatility, liquidity and flows from convex strategies (e.g. see here).

While we don't expect these issues to disappear overnight, we expect some improvement over H2 that will allow volatility levels to gradually decline. The market already absorbed and priced in the bulk of the change in monetary policy, and inflation is likely peaking which can allow central banks to over time ease off the brakes. The war in Ukraine is likely to converge to a settled solution in H2, and in any case the market is learning to adjust to its effects. China is likely to ease lockdowns and counter their effects with additional stimulus measures. And record corporate buybacks along with positively biased flows from systematic and macro investors (given positioning is near minimums currently) should help to stabilize the market. As such, **we expect the VIX to decline moderately from current levels in the 30s to an average of ~22-24 in 2H22**. Volatility also correlates with various macroeconomic variables related to economic growth, employment, housing, consumer confidence, etc. We analyzed ~100 of these relationships and found that nearly all of them indicate the VIX should be lower, pointing to an average of ~20. We set our target somewhat higher than the model suggests, to allow for some additional slowing in macro variables and to adjust for weak liquidity conditions.

2022 has so far been a challenging year for short-volatility strategies, unlike 2021 which was positive both in absolute and risk-adjusted terms. Amongst liquid global equity indices, volatility selling on the Hang Seng delivered the worst performance and largest maximum loss. Volatility selling on the S&P 500, Euro STOXX 50 and DAX also generated losses, but with more benign maximum losses and VaR, while the strategy generated decent absolute and risk-adjusted returns for the Nikkei 225, FTSE 100 and KOSPI 200 indices. In the second half of 2022 we expect volatility carry strategies' performance to improve, while continuing to deliver sub-par risk-adjusted returns, as uncertainty linked to central banks' policy and inflation and the Ukraine war persist.

We expect European implied volatility to moderate in the second half of the year. We forecast a median level of 22-24 vol points for the VSTOXX in H2 2022. This level is in-line with that of the VIX, as in our view the relative impacts of risk factors in the two regions balance out. On one hand, the war in Ukraine and the high exposure of European economies to the risk of energy shortages are risks affecting predominantly European equities, but on the other hand US equities have higher sensitivity to the US rates volatility.

For Japan, we expect VNKY to fall towards a one-year moving average of 22 in 2H22. Year-to-date cumulative notional share buybacks announced by Japan companies have beaten a record set in 2019 by a substantial margin (see here). We think 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 Hong Kong/China, we expect VHSCEI to fall from current level of ~36 with the magnitude of potential decline depending on fiscal stimulus delivery. The supply and demand dynamics in Hong Kong/China market are turning more favorable for long investors. We see early signs of speculative buying interest and selling exhaustion (see here). Considering light positioning and low expectation, incremental good news, especially on the policy front, should help volatility levels to gradually decline.

Risk/reward on implied dividends is generally favorable globally, with most dividend futures curves in backwardation and already pricing in expectations of a recession. We favor being long 2022 and 2023 contracts on the S&P 500 given strong announced dividend increases and corporate balance sheets, and high energy prices driving upside via Energy companies' variable dividend programs; long 2023 dividends on the Euro STOXX 50 and SX7E given elevated nominal discounts to bottom-up estimates; and long 2023 and 2024 NKY dividends to play a potential catch-up in dividend futures to our bottom-up estimates in 2H22.

Figure 43: Year-to-date performance of 1M systematic variance swap selling

Ticker	Name	Avg PnL	Max Loss	VaR 99	Avg IR Premium
UKX	FTSE 100	0.5%	-21.1%	-19.0%	4.2%
DAX	DAX	-1.0%	-42.4%	-32.0%	3.1%
HIS	Hang Seng	-9.7%	-54.3%	-52.2%	-1.8%
KOSPI2	KOSPI 200	1.7%	-8.2%	-8.0%	3.2%
NKY	Nikkei 225	2.9%	-6.9%	-6.0%	3.6%
SPX	S&P 500	-1.5%	-23.3%	-18.6%	2.3%
SX5E	Euro STOXX 50	-1.6%	-41.9%	-30.5%	2.5%

Source: J.P. Morgan Quantitative and Derivatives Strategy

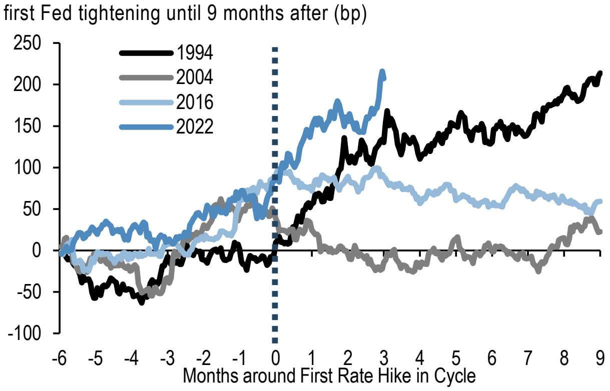
Rates

US Rates: Treasuries

The Fed's hawkish pivot has driven tumult in the Treasury market, as the Fed has raised rates 150bp over the last 3 months, including its first 75bp hike since 1994, and it appears set to deliver another 150bp of hikes by early 2023. We had argued in our *2022 Outlook* that with the Fed starting its tightening campaign only once labor markets were tight amid above-target inflation, that this tightening cycle was going to look much different than the last cycle and potentially the 2004 cycle as well, leaving scope for yields to move significantly higher over 1H22. Even with that, we've been surprised, as yields have risen 150-250bp, the broad curve has flattened 100bp end to end, and our US GBI has returned -11% on the year, the weakest return in the near 40-year history of this index.

Figure 44: The move in long-term yields has even exceeded the 1994 experience

Cumulative changes in 10-year Treasury yields from 6 months before the first Fed tightening until 9 months after (bp)



* Dates used: 2/4/1994, 6/30/2004, 12/14/201, 3/16/22

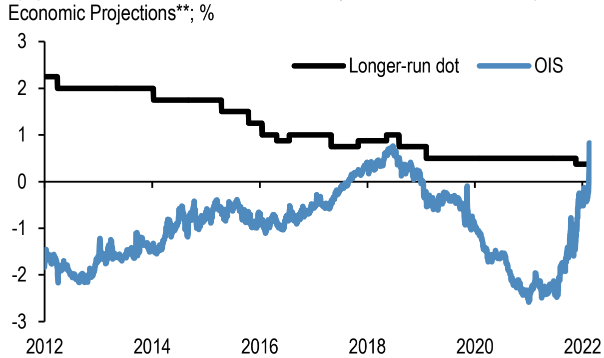
Source: J.P. Morgan

These moves have far exceeded anything observed in any prior tightening cycle over the last 30 years: Figure 44 shows the behavior of 10-year Treasury yields from 6 months prior to the first hike through 9 months after, in each of the last 3 cycles (1994, 2004, and 2016), compared with the current. (We exclude the December 2015 hike as the Fed was on hold for a year before actually commencing its tightening cycle.) Yields rose more aggressively in advance of Fed liftoff in March, somewhat tracking the 2004 experience, but have followed through higher, more closely resembling the movements in 1994, when the Fed raised rates by 300bp over a 12-month horizon. However, as the figure shows, 10-year yields have continued even higher in the last week as the Fed telegraphed and delivered a supersized 75bp hike at the June FOMC meeting. With this move, 10-year yields have risen nearly 200bp YTD, on par with the maximum move that occurred 9 months into the 1994 cycle. Expectations clearly play a role as the Fed's latest projections show the funds rate moving to 3.4% by YE22 and 3.8% by YE23 and markets are pricing in a similar peak.

Looking ahead, we believe economic momentum has already slowed and our forecasts incorporate more sluggish growth than in the Fed's projections—we see growth slowing toward trend by early 2023. Accordingly, our forecast is less hawkish than the Fed's: we see the Fed funds rate rising to 3.125% by YE 22 and 3.375% in 1Q23. What does this mean for Treasury yields? It stands to reason that the bulk of the move to higher rates is behind us, and we expect more stability going forward, for a number of reasons. **First**, we no longer discern a major disconnect in real policy expectations: Figure 45 shows that 1y1y real Fed expectations were still in negative territory as recently as early June, but have finally retraced into positive territory, and sit above the Fed's longer-run dot, reflecting somewhat restrictive monetary policy expectations over the next two years.

Figure 45: Real policy expectations are firmly in restrictive territory

1y1y real OIS rate* versus real median longer-run dot from Summary of Economic Projections**; %



* 1y1y OIS – 1y1y ZC inflation swap ** Longer-run dot – 2%

Source: Federal Reserve, J.P. Morgan

Second, one would expect long-term nominal Treasury yields to converge with the Fed funds rate closer to the end of the cycle, which would indicate limited scope for intermediate and long-end yields to move higher from current levels. Indeed, with policy rates expected to move into significantly restrictive territory by early 2023, even as growth slows, we think long-end Treasuries will find firmer footing. Nevertheless, we do not expect yields to retrace immediately lower, as demand dynamics are likely to remain challenging. In particular, we expect commercial bank demand to remain relatively weak: after adding $700bn Treasuries over 2020-2021, demand has moderated sharply, totaling just $85bn over the first 5 months of 2022. Going forward, Fed balance sheet normalization and the associated reserve draining will result in slower deposit growth and reduced demand for securities, especially given the extension of mortgage assets on bank balance sheets over the last 6 months. Thus, we expect commercial bank demand for Treasuries to remain relatively muted in 2H22.

In addition, foreign investors, which have represented a major source of demand for Treasuries over the last decade, are unlikely to offer strong support for US government bonds. Global foreign exchange reserve balances have declined $500bn YTD and do not appear set to reverse higher any time soon, limiting reserve manager demand for Treasuries. Turning to private investors, the currency-hedged yield pickup for foreign investors funded in local currency has declined meaningfully year-to-date, making it less attractive to hold US fixed income. Looking ahead, these trends are likely to keep foreign demand for Treasuries muted, keeping yields somewhat elevated.

Net of these factors, we present our interest rate forecast below in Figure 46. On the surface, this presents a relatively benign path, particularly when compared with the moves experienced YTD: we look for 10-year yields to approach 3.50% by year-end, where they were at their highs earlier this month, caught in the cross currents of a Fed that delivers less tightening than is priced into OIS forwards with a tepid demand outlook. If our forecast comes to fruition and the Fed finishes its tightening cycle in early-2023, this should represent the peak in yields. However, we look for the curve to flatten further, indicative of later cycle dynamics, and see the broad curve inverting modestly as policy rates move restrictive later this year.

Figure 46: We think the bulk of the move to higher yields is behind us, but look for the curve to flatten further in 2H22

J.P. Morgan Interest Rate Forecast; %

	Actual	1m	3Q22	4Q22	1Q23	2Q23
	16 Jun	16 Jul	30 Sep	31 Dec	31 Mar	30 Jun
Rates (%)						
Fed funds	1.60	1.60	2.60	3.10	3.35	3.35
SOFR	0.69	1.50	2.20	2.95	3.30	3.30
3-mo LIBOR	2.06	2.06	3.00	3.45	3.50	3.55
2-yr UST	3.16	3.25	3.50	3.60	3.50	3.35
3-yr UST	3.36	3.40	3.60	3.60	3.55	3.50
5-yr UST	3.37	3.40	3.55	3.60	3.55	3.45
7-yr UST	3.38	3.40	3.55	3.60	3.55	3.40
10-yr UST	3.30	3.30	3.45	3.50	3.45	3.35
20-yr UST	3.61	3.65	3.70	3.65	3.60	3.50
30-yr UST	3.36	3.35	3.40	3.45	3.45	3.40

Source: J.P. Morgan

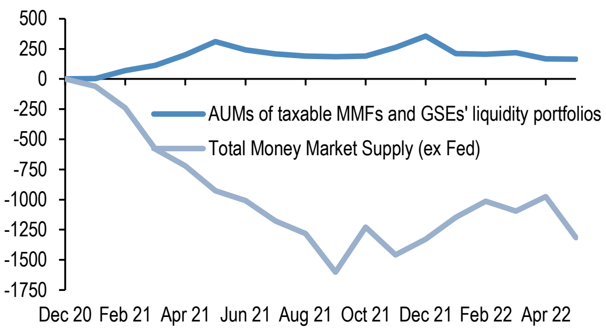
Though these forecasts project lower volatility in Treasury yields over coming quarters than we observed in 1H22, we would caution that this reflects our modal view and we recognize we did not fully anticipate the magnitude of these adjustments in 1H22. Moreover, we think that Treasury volatility is likely to remain elevated over the coming months: on one hand, there is still significant risk of a 75bp hike at the next FOMC meeting in July, and markets are no longer priced for this outcome. Meanwhile, on the other hand, we are cognizant that domestic data have disappointed relative to consensus expectations in recent weeks, suggesting we could see a quicker slowdown in growth than we have forecast.

US Rates: Short-Term Fixed Income

In 2H22, the evolution of the Fed's monetary policy will continue to bring both relief and continued challenges for the short-term markets. On one hand, further Fed rate hikes will continue to meaningfully boost yields away from the zero lower bound, allowing money funds to recapture more fee waivers and other liquidity investors to earn a non-zero yield. However, the relatively slow pace of Fed balance sheet normalization and the uncertainty regarding the speed and magnitude at which the Fed might move rates into restrictive territory will continue to create a challenging environment for the front end. Importantly, the Fed's policies will exacerbate what is already a sharp supply-and-demand imbalance in the money markets, which we estimate is currently around $1.5tn (Figure 47). Indeed, even as the Fed has begun QT, we estimate only $470bn of liquidity will be drained from the financial system this year. Furthermore, we believe most of the liquidity drain will come from reserves as opposed to RRP, given MMFs' increased sensitivity to market rates versus bank deposits. To that end, the divergence between bank deposit yields and MMF yields has already begun this year (Figure 48). We expect the spread to continue to widen in 2H, incentivizing more cash to flow out of bank deposits and into MMFs, and ultimately create more demand for front-end assets.

Figure 47: We expect a continued supply-and-demand imbalance in the money markets, which we estimate is currently around $1.5tn

Cumulative change in total money market supply (ex-Fed) and AUMs of taxable MMFs and GSE liquidity portfolios ($bn)

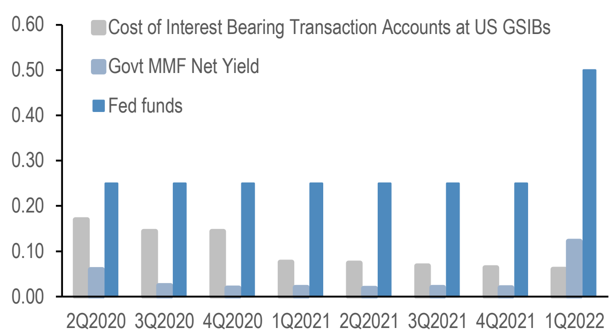


Source: Bloomberg Finance L.P., Federal Reserve Bank of New York, FNMA, FHLMC, J.P. Morgan

At the same time, the Fed's desire to stay nimble and do whatever it takes to fight inflation will encourage investors to maintain a shortening bias, moving from the long end to the short end and from the short end to the even-shorter end (i.e., overnights). It might also continue to foster short market positioning, thus leading to an increased amount of specials trading in the Treasury repo market, biasing SOFR lower.

Figure 48: Spread widening between bank deposit yields and MMF yields is likely to incentivize more cash to flow out of bank deposits and into MMFs

MMF yields, estimated bank deposit yields, and Fed funds (%)



Source: S&P Cap IQ Pro, Crane Data, J.P. Morgan

Overall money market supply should also remain anemic, as Treasury is unlikely going to revitalize its net T-bill issuance anytime soon. Our Treasury strategists are expecting continued T-bill paydowns through the summer, reversing course only in 4Q22. In 2022, they expect total net T-bill issuance to be around $130bn. YTD, T-bill outstandings are down about $165bn, which implies we could see upwards of $300bn in 4Q22. Still, relative to the $2tn of excess liquidity at the Fed's ON RRP, this will be easily digested by the markets.

Net, **we expect money market rates will move higher in 2H, in step with fed funds, though the curve will likely remain steep** as investors stay short in anticipation of Fed rate hikes. More specifically, we do not expect EFFR to drift higher in the target range, as liquidity remains ample across the banking system, even with QT. **We look for continued elevated RRP balances (above $2tn) and for SOFR to continue to trade at or through RRP. T-bill valuations should remain rich** as the combination of excess cash relative to supply, limited investor access to RRP, and the risk-off market sentiment prompt investors to crowd into this market. Spreads should remain compressed as the supply-demand gap persists, particularly in the shorter end of the money markets curve. **We see EFFR, SOFR (1-month trailing average), and 3m Libor ending the year at 3.10%, 2.95%, and 3.45%, respectively** (Figure 49).

Figure 49: We expect money market rates will move higher in 2H, in step with fed funds, though the curve will likely remain steep

J.P. Morgan short-term interest rate forecasts (%)

	3Q22	4Q22	1Q23	2Q23
	30-Sep	31-Dec	31-Mar	30-Jun
Rates (%)				
EFFR	2.60	3.10	3.35	3.35
SOFR**	2.20	2.95	3.30	3.30
3-mo LIBOR	3.00	3.45	3.50	3.55

** 1-month trailing average

Source: J.P. Morgan

Is a technical adjustment on the horizon given how rich SOFR and T-bills are trading relative to RRP? It's possible, though we suspect we would need to see more sustained deterioration in the repo markets along with downward pressures on EFFR to manifest. Indeed, despite the ultra-soft financing conditions in the repo markets, EFFR has so far remained stable and has been trading well within the target range. Furthermore, there are other options the Fed can consider to harden the RRP floor, such as expanding the list of eligible RRP counterparties or raising the counterparty caps. If the Fed were to make a technical adjustment, we believe they would raise both RRP and IORB by the same amount.

Meanwhile, spreads in the longer end of the money markets and the 1-3y sector are vulnerable to widening. We like floating versus fixed as a better hedge against the rapid rise in interest rates. As our High Grade strategists note, higher rates and higher rate vol are likely going to lead to wider spreads for fixed-rate bonds in the near-term. That said, while floating might be a better hedge in the current environment, SOFR as a benchmark for FRNs continues to demonstrate its shortcomings, particularly in periods of market stress (e.g., it tends to move in the opposite direction of Libor). The lack of investor preference for SOFR as a benchmark might exert some pressure on spreads.

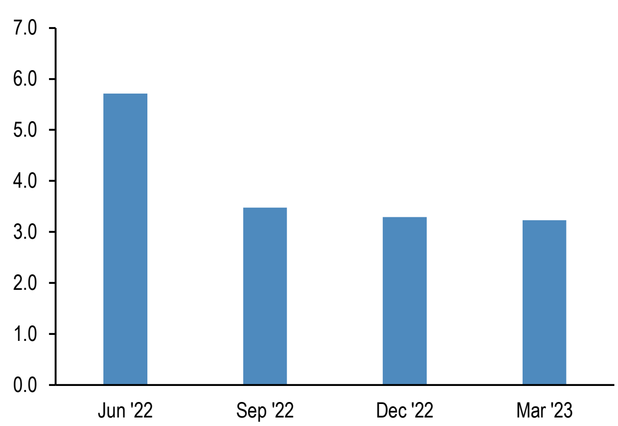
US Rates: Interest Rate Derivatives

Recent months have borne witness to unprecedented volatility in US Rates markets, driven to a large extent by rapidly shifting expectations for the pace of Fed hikes. The Sep 2022 3M SOFR futures contract, for instance, has cheapened by nearly 250bp this year and by 150bp since the first hike in March. The Fed's attempt to provide some policy clarity at the May meeting, by strongly indicating a near-term trajectory of 50bp hikes, proved short lived as it delivered a 75bp hike at the very next meeting this month. Such a foggy near-term outlook has taken its toll, severely compromising liquidity in markets and causing volatility to spike through the roof—implied volatility in the "upper left" sector of the vol grid, such as the 6Mx2Y for instance, is now above levels seen in previous hiking cycles and near the highs only seen during the crisis of '08.

If 1H22 was all about an escalation in the pace of hikes, the remainder of the year is likely to bring about a moderation in the hiking expectations. Chairman Powell's comments after the June meeting indicate that the Fed's aggressive hike represents a desire to front-load hikes (given negative real rates at the front end). Although it is possible that terminal rates for this hiking cycle as priced into Reds and Greens are likely to drift somewhat higher, the first order impact of such front loading of hikes is a decrease in the amount of remaining tightening that must be priced into forwards. Indeed, the 3Mx3M / 15Mx3M SOFR swap yield curve has flattened sharply after the June meeting, in a reflection of this effect. This suggests that with each passing meeting and rate hike, the Eurodollar curve is likely to flatten further. Moreover, a moderation in inflation prints is already anticipated in the inflation swap markets (Figure 50), and its realization would be additionally supportive of a gradual stabilization in Fed expectations.

Figure 50: Inflation swap markets are pricing in a gradual easing in inflation going forward

1Y inflation from the inflation swap market, for forward dates corresponding to the end of the next four quarters; 6/15/2022; %

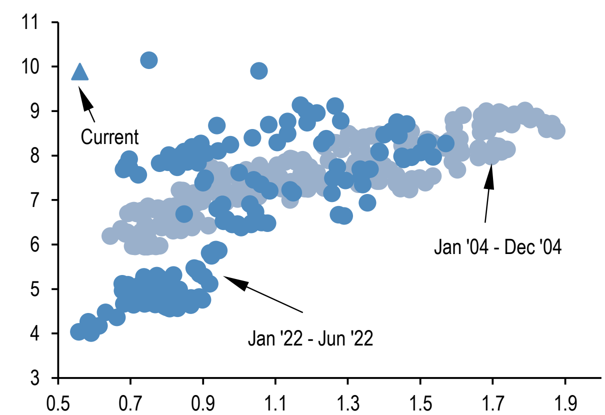


Source: J.P. Morgan

Such a stabilization in hiking expectations, should it come to pass, would have significant implications for the swaptions market. As we have often noted, the slope of the 1st / 5th Eurodollar curve (or its OIS equivalent, a proxy for the amount of tightening priced over the 6-month to 18-month forward period), is a key driver of implied volatility on short tails during hiking regimes (Figure 51). Already, markets are pricing in a much flatter OIS forward curve (near 55bp), and implied volatility appears unsustainably high given this flatness of the Eurodollar forward curve. Thus, we expect that **one of the key themes going forward will be the normalization in the vol surface**. As specific instances of such normalization, we expect 3Yx10Y implied volatility to decline to 5bp/day, the 1Yx1Y minus 10Yx1Y implied vol expiry curve to decline to 1bp/day, and the 1Yx1Y minus 1Yx10Y implied volatility tail curve to decline to 1.5bp/day over the remainder of the year.

Figure 51: The slope of the 3Mx3M / 15Mx3M OIS curve—a proxy for the cumulative tightening that remains beyond the near term—has been a key determinant of upper left vol in tightening regimes, and points to implieds now being unsustainably high

6Mx2Y swaption implied volatility (bp/day), versus the 3Mx3M / 15Mx3M OIS curve (%)



Source: J.P. Morgan

If the slope of the OIS curve is likely to be a key determinant of vol, the level of the funds rate is more relevant for swap spreads, particularly at the front end. We have previously described our empirical fair value framework for front end spreads, using forward OIS rates, the 10Y swap spread, 2s/10s Treasury curve, and Fed purchases as drivers. More recently, we have also discussed the possibility that the beta with respect to forward OIS has likely been attenuated because of near-zero policy rates over much of the history used in estimation. Indeed, while model estimates for the sensitivities are stable for other drivers, the sensitivity with respect to forward OIS rates has been trending higher as OIS rates have risen, and is most likely understated (see Inflation permeates the cosmic background). A review of the sensitivity during the 2004-06 hiking cycle suggests that this beta could be closer to 10.0 or even higher, which is about two times the raw statistical estimate. As we look ahead over 2H22, we believe that risks are skewed in favor of the beta being closer to say 10.0, and use this adjusted beta in our fair value framework for 2-year spreads, shown in **Figure 52**. Using current and 6M-ahead projected future values of the drivers, we can see that the fair value for 2-year spreads is considerably wider, and also that the fair value estimate is likely to decline over time as more hikes are absorbed into the market and forward OIS begins to decline on the back of eventual easing expectations. Thus, **we look for front end spreads in the 2-year sector to trend significantly wider initially, but then eventually start to narrow (albeit to levels still wider than current values) as the hiking cycle matures**.

Figure 52: Our empirical framework for 2-year maturity swap spreads reflects a view that the sensitivity to OIS rates will likely be greater than straightforward statistical estimates, and points to wider swap spreads in the 2-year sector

Statistics* from regressing 2-year maturity matched SOFR swap spreads against its drivers, current and projected 6M ahead values for the drivers, and fair value estimates for 2Y swap spreads; 6/15/2022

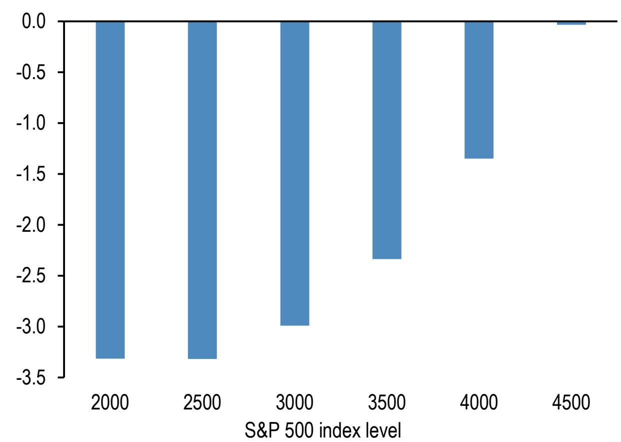
	Coeff	Current	Projected
1Y Forward 1M OIS (%)	10.0	3.85	3.5
10Y spread (bp)	0.7	-22.4	-20.0
2s/10s UST curve (%)	11.7	0.1	-0.1
Fed UST purchases ($bn 10s)	0.04	0	0
Intercept	-4.7		
Fair Value (bp)		19.8	15.3
Current (bp)		8.0	

* Model coefficients estimated over 6.5 years of history, as of 6/15/2022. But the beta with respect to forward OIS has been replaced with a higher value, reflecting our best judgment as discussed above.
Source: J.P. Morgan

At the long end of the curve, swap spreads will likely be impacted more by the performance of risky assets than by either OIS rates or the OIS curve. This is to a significant extent because of the likely asymmetric profile of Variable Annuities' duration risk, with respect to equity valuations. Interest rate risk in variable annuities (which are commonly linked to the performance of equities) stems from minimum return guarantees (or minimum annuitization rates) embedded within the policies. As such, when equities rise high enough to be far away from embedded strikes (as was the case in 2021), these options become deep out of the money, and the associated rate-delta declines. Of course, the reverse occurs when equities fall, and this effect is quite nonlinear—if equities continue to fall going forward, VA duration will climb at an accelerating rate. Our estimate for this impact is shown in **Figure 53**—notably, **at current levels of the S&P500 index, we estimate that each 1% decline in equities could lead to about $2bn 20-year equivalents of receiving pressure.** This sensitivity is likely to worsen further, to $3bn 20-year equivalents per 1% drop in the index, if the S&P500 index were to fall to near 3000. To be sure, this is partially priced in, and long end spreads are trading narrow relative to our estimate of fair value. Nonetheless, **barring a healthy rebound in equities, risks are likely biased towards narrower spreads at the long end of the curve over the remainder of the year.**

Figure 53: The partial sensitivity of VA duration to the S&P500 index is already sizeable, and likely to worsen if equities fall further

Partial sensitivity of estimated VA duration to a 1% move in the S&P500 Index, for various levels of the S&P500 index; $bn 20-year equivalents



* For details of our approach, see The TLDR – Technicals, Liquidity & economic Downturn Risk.
Source: J.P. Morgan

International Rates

Euro area

In the second half of 2022 we believe that the DM rates market ex-US will face a tug of war between central banks that are starting the summer with a clear strong bias to deliver more aggressive policy rate normalization and a growth outlook that will start to feel the pressure of the global tightening, inflation pressures that are likely to ease towards the end of the year and consumers facing the squeeze on real income on the back of higher energy prices. The evolution of inflation expectations and their impact on wage dynamic will be a critical factor in determining how far the tightening cycle will last, with potentially some differentiation cross market.

In the Euro area, our call is for the ECB to deliver a policy rate hike at each meeting between now at year end, with 25bp as benchmark move with the exception of the September meeting where we expect a 50bp hike. Given current valuations we believe that 10Y Bund yield is already trading close to the higher end of its 2H22 range, as we believe that the frontloading combined with its macro impact on the growth outlook will limit the amount of additional tightening needed to be priced in for mid- to late 2023. We target Bund yield at year end at 1%, and while we believe that the risks vs. the forecast are skewed to the upside (1.25%), we have decent conviction that the impact of the tightening and the eventual fragility of the Euro area will challenge the latter part of the tightening cycle that is priced in for mid- to late 2023, leading to a retracement in Bund yield.

We believe that over the short term the market can price an even more aggressive ECB frontloading leading to some bear flattening of the curve, however valuations and current frontloading warrant caution. Some support to the intermediate/long-end flattening could also come from receiving pressure from real money or long-term investors finding the long end of the DM ex-US bond curves as attractive. We aim to be tactical around this trading theme and are biased to enter flatteners on any tactical re-steepening of the curve at least in the early part of the semester. Eventually a bull steepening of the curve as the market anticipates a quick end of the tightening cycle with a sharp reversal of the policy rate trajectory will take place, however we believe it could take a bit longer than already by year end.

On intra-EMU spreads, we have a broadly constructive outlook for 2H22 with a forecast for 10Y Italy-Germany spread ending the year around 200bp and 10Y France-Germany spread around 45bp. The constructive outlook is based on our view that the ECB will announce a credible anti-fragmentation tool in the coming months which should act as a policy safety-net to shield spreads from external macro/geo-political shocks, as the PEPP did during the COVID crisis. However, over the near-term we remain cautious as we believe that the market would continue testing the ECB until they announce this anti-fragmentation tool. In late 2022, we project some pressure on Italian spreads on increasing political uncertainty as we head into parliamentary elections in early 2023. We believe any new Italian government in 2023 will have to converge on a broadly mainstream stance with similar pro-Europe and/or pro-NATO. We, therefore, expect the political discount to eventually fade post the election.

We have a narrowing bias on swap spread as we believe that the flow effect of no net QE purchases should cheapen funding rates and narrow swap spreads, especially after some widening from tighter financial conditions and higher policy rate is already priced in. In Euro volatility, we are biased for lower gamma implieds as current levels are not sustainable. Further, as we go through the hiking cycle, we are likely to get more clarity on the central bank hiking which should help in the reduction of risk premium. We highlight that implieds are likely to settle below current levels but well above their lows of past few years as the fundamental macro uncertainty in terms of growth and inflation volatility will persist.

Figure 54: We forecast lower yields in 2H22 than current levels in Germany, the Antipodean and modestly in UK

Current and end of 2022 forecast for DM ex-US 10Y benchmark yields (%) and intra-EMU spreads for 10Y France and Italy (bp)

Yield in %	Current	End 2022 forecast	YTD change	Forecast move to YE 22
10Y Germany	1.69	1.00	187	-69
10Y UK	2.47	2.25	150	-22
10Y Japan	0.25	0.20	18	-5
10Y Australia	3.97	3.20	230	-77
10Y New Zealand	4.27	3.50	193	-77

Spread in bp	Current	End 2022 forecast	YTD change	Forecast move to YE 22
10Y France-Germany	55	45	19	-10
10Y Italy-Germany	213	200	75	-13

Source: J.P. Morgan

UK

In UK, the BoE has shifted to a more accelerated rate tightening path with increased focus on combating inflation, reflected in the revised guidance at the June BoE meeting that it will “act forcefully” in response to inflationary pressures. This introduces some optionality into the BoE’s reaction function but with increased likelihood that the BoE steps up the size of future rate hikes from 25bp to 50bp steps. We now expect a 50bp hike in August with the possibility of further 50bp hikes later in the year and a terminal rate for the cycle that could end up at or above the 3% level.

The story for most of 1H22 has been one of SONIA rate market pricing looking excessive vs. our forecasts as rate hike expectations have massively increased with 1Yx1Y SONIA over 200bp higher since the start of last year. Current market pricing continues to look excessive but we think the potential for a significant further sell-off in 1Yx1Y SONIA is becoming more limited given market pricing of the terminal rate is likely into restrictive territory. However, the pass-through from tighter financial conditions into higher mortgage interest costs is sticky and the recent fiscal stimulus package, alongside possible modest further fiscal support in the autumn budget, may cushion an expected growth slow-down. Given the BoE’s inflation focus we see limited value in long duration exposure for now but expect to gravitate towards a bullish duration stance over 2H22, conditional on the data flow.

We forecast 10Y yields at 2.25% by the end of this year, modesty lower than current levels. The 2s/10s SONIA curve is inverted and at flat levels historically and we see modest flattening pressure given uncertainty around the potential for 50bp hikes and increased BoE front loading. We expect the curve to gradually steepen in late 2022 as the end of the BoE rate hike cycle comes closer. We have a narrowing view on 5Y swap spreads on relative valuations and the fact that the potential for tighter financial conditions is becoming more limited.

Japan

Our baseline view is that the BoJ will stick to the current policy for a while. A tweak to forward guidance is a possibility as Japan enters an endemic equilibrium although that is not going to be done in the context of a possible policy change. We believe that further increases to normal Rinban purchase operations are conceivable going forward given the current situation. Despite the BoJ's strong commitment, the battle between YCC skeptics vs. BoJ has intensified yet again lately. Against this backdrop, the BoJ has ramped up defense of YCC using fixed-rate purchase operations and unscheduled Rinban operations. Its defense operations come with costs: the yield curve is now partially inverted as the 7Y JGB trades well above 0.25%—the upper band of YCC.

Given the end of Governor Kuroda's term next April, we envisage that speculation around policy normalization will spread more widely later this year. Domestic players have been steadfast so far, but they are likely to become cautious of policy normalization risks down the road. That said, we do not expect the BoJ to lose the battle of YCC defense. However, at the same time, we may be able to think of a scenario in which the BoJ finds costs of maintaining YCC higher than benefits. Therefore, we are cognizant of a risk that the BoJ may announce unwinding of YCC in an unexpected way even if it has not met the inflation goal.

Turning to the supply-demand balance, the JGB outstanding balance (ex. T-bill) in the market (ex. BoJ purchases) **is expected to grow by +JPY24tn in FY2022** driven by issuance in the long/super-long sectors (6-10Y: +13tn; 11-20Y: +9tn; 21-30Y: +7tn; 31-40Y: +4tn). In particular, the 20Y sector appears vulnerable as there may be a vacuum of demand should domestic banks' demand wane. Banks grew holdings of 20Y JGBs throughout the Kuroda's tenure, but as the end of Kuroda's term is just around the corner, they may prefer holding short maturity paper including 10Y.

Antipodean

AUD fixed income enters 2H22 with the RBA's tightening cycle underway, and like several other DM central banks, expecting a run of larger than usual hikes. The RBA is responding more to spot inflation outcomes more than domestically generated labour cost dynamics, which remain quite benign and should mean lower risk of a stagflationary, overtightening scenario than elsewhere. However, OIS pricing significantly exceeds JPM/consensus expectations for the policy path, and the RBA's guidance regarding the near-term destination for rates (2.5%). We expect under-delivery vs the forwards, but not over the next few meetings, where we look for more 50bp hikes (July and August). Conditional on this, the curve is overly steep, having not flattened throughout the step-shift to even larger Fed hikes. We advocate AUD 3s/5s IRS flatteners. Similarly, the 3Y sector still screens rich on our fair value models for the ACGB curve, which underpins a further bear-flattening dynamic near-term.

RBA balance sheet run-off is passive and not very impactful for reserve quantities over 2H22, but repo is rising quickly with the cash rate and short collateral is very rich on asset swap: sell short bonds (ACGB Apr-24 vs maturity-matched OIS). 10Y swap spreads similarly remain wide for an environment of increasing net supply to the market sector post QE. Stay defensive on semi government paper as liquidity premia are rising and the largest buyers (banks/RBA) are already very overweight relative to ACGB.

New Zealand's tightening cycle is more advanced than most, with the policy rate already at the RBNZ staff's assessment of neutral (2%) and macro-prudential policy back to tight settings. House prices are falling at a double-digit annualized pace and household consumption has been under pressure for several quarters. Inflation in New Zealand had already popped in 2021 on domestically-driven factors, particularly housing exuberance. Given this sequential path, the peak in the annual rate should also be earlier than other DMs (our forecast is 2Q22, as opposed to 2H22). This should allow the RBNZ more scope to argue that it is ahead of the curve in 2H22, and we expect a significant under-delivery vs the forwards, particularly after the July meeting. Received RBNZ OIS meeting positions from August 2022 through February 2023 offer value.

The NZGB curve is expected to outperform vs the rest of DM over 2022 given already full pricing and progress in tightening financial conditions; stay overweight in the midcurve (2027s) vs UST. The steepening impulse from recent RBNZ QT announcements should be faded, as they only reiterated previous plans announced in February; asset sales of longer NZGB holdings back to the DMO will be reissued in synch with maturing short bonds, meaning overall WAM of net issuance is unlikely to lengthen.

EM

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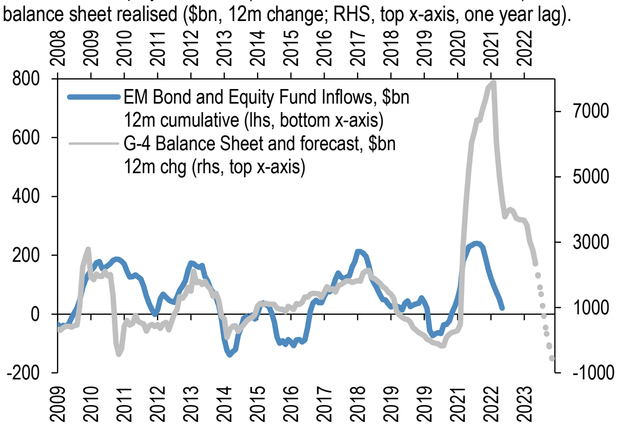
The challenges for EM fixed income into H2 will continue from the ongoing tightening in global financial conditions in order to tame inflation. The conditions that have put pressure on EM fixed income in 1H22 will continue in 2H22, in our view, as the process of taming inflation is not complete. Global inflation is high, with a large demand-led component as well as supply constraints most recently triggered by the Russia/Ukraine war. Our economists see the Fed—and many other central banks—focused on inflation control, and containing inflation will mean financial conditions continue to tighten. We have argued that EM assets are typically pressured in such an environment with financing costs rising and the availability of capital being reduced, as seen in YTD EM bond outflows (Figure 55). This in turn puts stresses on EM credit markets where financing is needed, EM currencies and EM local rates. The unknowns from the great unwinding of over a decade of loose financial conditions keeps the bar high for adding quickly back to EM fixed income assets in H2, despite a large drawdown in returns YTD. Our cyclical view on EM fixed income sees further global tightening, leading to a defensive stance on the asset class. See our *Emerging Markets Outlook & Strategy* for H2 publication for more details.

Figure 55: Normalising DM central bank balance sheets should imply falling inflows to EM

EM bond and equity fund flows ($bn, 12m sum; LHS, bottom x-axis); G4 balance sheet realised ($bn, 12m change; RHS, top x-axis, one year lag).



Source: J.P. Morgan

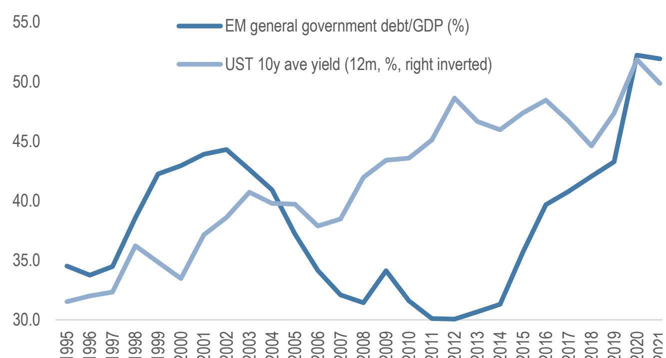
We stay UW EM local bonds and EM FX, and MW EM sovereigns and corporates where we revise spread forecasts higher. While EM growth overall is forecast to recover in H2 mainly due to China, focus for EM markets has been on the path of inflation which has yet to peak and global tightening. We note that EM rates typically overprice eventual policy rates and only peak late in the hiking cycle. With risk premia not high at this stage, we stay UW EM local rates. EM FX also sees low real carry given the current account positions of many countries and we stay UW seeing further USD strength, particularly versus commodity importers. Commodities remain a significant dividing line between EM countries across our recommendations, which favor exporters over importers, although the best of that theme may have already played out in H1. As the cycle progresses, financing conditions will exert more pressure, but EM sovereign and corporate credit both have supports keeping us MW currently. Commodity prices are helping support financing in frontier country commodity exporters, and a low starting point for EM corporate leverage also helps keep refinancing needs lower. However, we revise spread targets higher given the strong cyclical headwinds. China's recovery path is a potential source of upside and downside risks for broader EM assets in H2, with a more gradual path of CNY depreciation in our forecast.

Tightening US (and global) financial conditions typically lead to weaker EM fixed income assets. As the cost and availability of financing increase, there is less demand for risky EM assets and this exposes vulnerabilities in EM countries that need that financing for debt or external financing. We have shown this previously by the relationship between G4 central bank balance sheet changes and EM fund flows, which have both now turned lower with balance sheets forecast to keep falling. The ability of EM countries to fund in hard currency has been affected already this year, with issuance falling to historically low levels as financing conditions have not been favorable. This is already a problem for EM assets, but how much more of a problem as liquidity tightens further depends on the fundamental starting points. For EM credit, this is about financing needs for debt service, budget deficits, and external borrowing requirements. For EM local rates, focus will remain on transmission of higher DM rates to local rates, domestic inflation, and risk premia needed from credit/FX risks. For EM currencies, primarily this impacts through the financial account (capital flows).

For EM Local Rates, the path of least resistance for EM Rates is still higher and we are UW. EM inflation continues to be revised higher, with EM rates typically only peaking late into hiking cycles and risk premia is currently not high. Where we are MW duration in select markets that is mostly due to carry/reward-to-risk considerations, rather than our expectation that yields have peaked in this cycle. Since EM Asia's rate hiking cycles are still reasonably early, paying rates there is still a strategic trade with the top UW remaining in Thailand. Similarly, in Latam we continue to hold payers despite a more advanced hiking cycle, as inflation's momentum has not waned, leading to continued uncertainty as to the potential end of the hiking cycles. We recently took profit in UW Colombian TES, which is consistent with improved valuations there. In EMEA EM we have been arguing that front ends price a lot but long ends need more premia. CEE could be nearer to end of hiking cycle, but Israel and SA are still quite early. In CEE we have recently moved UW CZGBs (see here), which have one of the most negative market implied risk premium vs GBI-EM peers. We have also recently entered payers in Israel (see here). In South Africa, we hold a modestly bullish rates view via 5s20s bond flatteners.

EM debt repayment concerns are likely to increase as the cycle progresses. Financing EM's debt burden—particularly for smaller frontier countries—is going to remain in focus as the cycle progresses (see our analysis of sovereign external repayment risks here). Given an environment of low rates since the GFC, EM countries have taken on additional debt (Figure 56), with government debt/GDP set to be at all-time highs this year. A combination of high debt levels, fiscal deficits and rising yields is making financing costs a binding constraint already in some frontier countries. In the most vulnerable commodity importers such as Sri Lanka, this has already led to domestic pressure and a default on hard currency debt. For other countries this is a mounting problem with debt repayment burdens likely to increase as US financing conditions tighten (see *EM Sovereign External Repayment Risks*). The EM sovereign HY default rate could reach 10% this year given refinancing pressures.

Figure 56: EM government debt/GDP has risen as risk free rates have fallen



Source: J.P. Morgan.

Credit

Global

Recently in *Credit Watch: Different Spreads for Different Threads* and *Credit Watch ALERT: Feast, Famine and the Fed*, we have focused on potential pricing across alternative macroeconomic scenarios and, more latterly, the increased velocity of market expectations, the result of this being the outsized moves in credit spreads which we have seen over the past weeks (see **Figure 57**). **Right now, market participants seem to be heavily discounting the Fed's and other central banks' ability to 'thread the needle', seemingly embracing an accelerated version of our second, inflationary scenario.**

If the scenario horizon over which market participants are thinking is also falling well-short of the initial 12-18 month timeframe we considered, it's hard to argue that an accelerated cocktail of higher inflation, higher interest rates and ultimately weaker growth and/or recession bodes anything but ill for spreads. This is essentially reflected in our spread forecasts to the end of the year, albeit to varying degrees depending on region and market segment (see **Figure 58**). One thing to note is that, a bit like the initial phase of the sell-off in global credit markets earlier this year, we expect US High Yield to outperform on a relative basis through 2H22. The relevant factors here are short duration, lack of defaults, lack of supply and Energy exposure.

Figure 57: Macroeconomic Scenarios from Different Spreads for Different Threads

Scenario	Description
I. 'Thread-the-Needle' Base Case	Economy passes resiliency test with growth running above trend and inflation settling above previous norms but not high enough so that central banks impair growth (Fed gets to mid-3s).
II. Inflationary Case	Economy passes resiliency test but inflation stays high. Fed above 4% and recession in 2024.
III. Recessionary Case	Economy fails resiliency test. This scenario delivers weak growth and CBs stop before we get to neutral. It could be a recession scenario or something more like 2011-12.

Source: J.P. Morgan

Figure 58: Global Credit Spreads – Current, Tights, Wides and Year-End Forecasts

Bp

	US IG	US HY	Euro IG	Euro HY	EM Corps
End 2021	118	375	111	350	272
YTD Tight	113	370	110	337	265
YTD Wide	173	537	208	576	446
Current	**163**	**527**	**208**	**576**	**334**
YTD Move	*45*	*152*	*97*	*226*	*62*
% Year-to-Date	*38%*	*41%*	*87%*	*65%*	*23%*
2022 YE Forecasts	**175**	**525**	**225**	**625**	**375**
Forecast Move to YE22	*12*	*-2*	*17*	*49*	*41*
% to YE22	*7%*	*0%*	*8%*	*9%*	*12%*

Source: J.P. Morgan

US HG

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We are revising our YE 2022 spread forecast wider by 50bp to 175bp, versus 163bp at the time of this publication. This is 12bp wider than the current level, implying that we foresee further downside for spreads as the global central bank unwind continues but anticipate that widening for HG bond spreads will be limited relative to already wide valuations.

We remain of the view that credit fundamentals are largely in good shape but we recognize that a much more aggressive Fed than previously expected has repriced valuation across markets and will weaken these strong fundamentals to some extent if they are successful at demand destruction. We also believe a faster Fed brings forward the volatility, raising the likelihood of some stability later in the year but interest rate volatility remains the key driver for spreads and we have less confidence it will settle down near term. This makes valuations a challenging topic, with spreads modestly wide to longer-term averages while yields are very wide to history. Both of these valuation metrics matter, with the wide yields helping keep spreads tighter than they might otherwise be. So long as the tightening of financial conditions continues, however, it is likely that valuation remains wide to reflect the potential downside risks.

HG credit and markets are set up to follow along one of three broad scenarios: the JPM base case where the Fed engineers slower growth and inflation without a recession (in which case spreads probably end up tighter than our forecast), a scenario where inflation remains stubbornly high and the Fed has to keep tightening (a scenario where spreads probably overshoot our forecast) and a scenario where growth slows quickly into a recession over the next few quarters (also a scenario where spreads probably reach levels above our forecast). We are biased to the base case scenario, but the higher probably of the latter two outcomes is likely to be reflected in markets for the next couple of months at least, keeping spreads wide.

We prefer As to BBBs in this environment, even after the recent outperformance, as the risk of recession and the higher yields now available across rating categories are likely to keep investors focused on the up in quality trade. The 5-10yr tenors have underperformed with less foreign demand, while the long end is supported by higher yields. As yields continue to move higher under the JPM forecast we believe 10s30s may flatten modestly more, but the 5s10s steepening YTD may abate. We broadly favor Banks and Energy in 2H22 as they benefit from the current environment (higher yields, high energy prices) while most other sectors are at risk of a weaker consumer and cost pressures from labor markets, supply shortages and the weaker USD. We are revising down our supply forecast by $123bn to $1.23tr, reflecting the impact of higher rates on issuance as well as less M&A financing as the macro outlook deteriorates. The bank supply forecast is unchanged; Energy is the sector with the largest downward supply revision. Under our new forecast average monthly supply going forward is $79bn/month vs $130bn/month YTD, a 40% reduction.

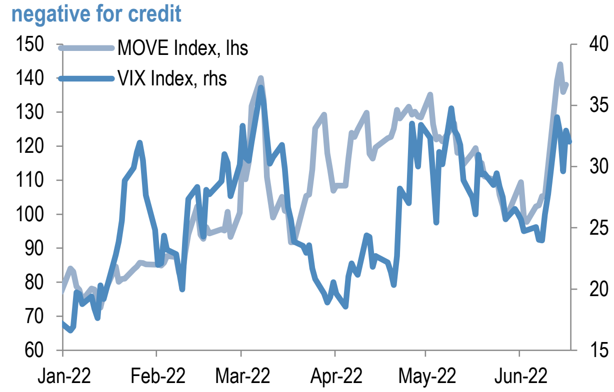
In many ways, 2022 looks to be similar to 2021 in High Grade. We expect a similar magnitude move higher in rates, similar gross supply, continuation of the positive ratings momentum, and similar gross and excess returns. A key difference is the expectation of tighter monetary policy, but we argue this is logical given the strength of the economy and is widely expected. Also notable is that at the start of the prior 3 tightening cycles spreads narrowed. In addition, HG companies have shown stronger earnings and margins with higher inflation recently.

Figure 59: High Grade spreads forecast to tighten to 100bp by YE22

Theme	Current*	YE 2022 Forecast	Change
HG bond spread	163bp	175bp	+12bp
HG bond yield	5.0%	5.30%	+0.3%
HG bond total return	-14.7%	-13.6%	+1.1%
HG bond excess return	-2.5%	-2.5%	0.0%
10s30s spread curve	28bp	21bp	-6bp
HG gross supply	$712bn	$1.23tr	$513bn
HG net supply	$364bn	$636bn	$154bn
Rising Stars (forecast is by YE '23)	$41bn	$201bn	+$160bn
Fallen Angels	$3.5bn	$5bn	+$1.6bn

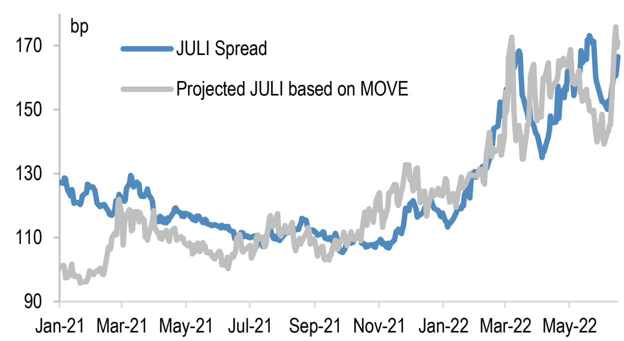
Source: J.P. Morgan. Current is as of 6/15/22. Rising star forecast is for 2022/23 combined

Figure 60: The peak in uncertainty—both equity and rates—is negative for credit



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

Figure 61: Where rate vol goes, spreads will follow



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

US HY and Leveraged Loans

In a tough year for fixed income, leveraged credit has been a relative outperformer due to its lower duration (esp. leveraged loans down 2.5% year-to-date). And now stickier inflation, a more front-loaded response from the Fed, and weakening consumer and business conditions are expected to intensify the economic debate in 3Q. And leveraged credit spreads of 527bp which are now only in-line with the long-term non-recessionary average (519bp) afford minimal cushion as the focus shifts to downside growth risks. These conditions are expected to extend the presently challenging conditions for credit investors over the summer months. That said, we view OIS forwards' 175bp of additional rate hikes priced in by the end of the year as a necessary evil, and are hopeful for a firmer backdrop in 4Q should our economists' call for weaker labor markets, moderating inflation, and an economic soft landing materialize. **Despite rising risks of an adverse macro outcome, we remain constructive on the state of credit fundamentals and the technical.** We continue to forecast a 2022 high-yield bond and leveraged loan default rate of 1.25% apiece which we forecast to rise to 1.75% (HY) and 2.25% (LL) in 2023, respectively. For context, the long-term average default rates for high-yield bonds and leveraged loans are 3.2% and 3.1%, respectively. On the supply side, we adjusted our 2022 leveraged credit new-issue forecasts down due to the significantly more hawkish Fed narrative and higher yield environment. Our forecasts for 2022 high-yield bond gross and non-refi related issuance are $175bn and $100bn, which imply 64% and 48% yoy declines off of 2021's record activity ($483bn/$192bn). **And notably, we expect 2022's $100bn contraction in bonds outstanding to intensify amid the lightest bond supply in a decade and a record pace of rising stars (one-third Energy).**

We recently revised our YE 2022 high-yield bond spread forecast by 175bp to 525bp, or unchanged from the close on June 15th. Incorporating our rates colleagues' upward revisions, this translates into a modest 20bp decline in the YTW by year-end to 8.5% (or slightly above the 30yr average). **These conditions are expected to produce a better return profile for HY of +4.25% over the balance of the year and limit 2022's losses to -7.25%. Given prospects for slower growth, we would position for further decompression across ratings** with CCC spreads of 1100bp in-line with their non-recessionary average. And we highlight BBs given investor positioning (still narrowing large UW in HY portfolios), relative value (i.e. BB/BBB 180bp+), and for their total return potential (YTW 7%). **At a sector level, we continue to like Energy** which excluding rising star candidates trades wide to the index in a $100+Oil/$9 natural gas world. Meanwhile, a leveraged loan product only down 2.5% year-to-date is outperforming bonds by an unprecedented 900bp+. **That said, we view the leveraged loan product as attractively positioned at forward implied yields above 9%.** That said, there are reasons to suspect loans will trade "cheap" to bonds for the foreseeable future such as their fragile technical, weaker credit profile, and, most importantly, the time required to realize the forward curve. **With the focus expected to shift to growth risks, we recently lowered our total return forecast for leveraged loans by 300bp to a FY 2022 gain of 1.5%.** With the average coupon set to exceed 6% by 4Q, this implies a gain of +4% over the balance of the year.

Figure 62: Average Spreads during and outside a US Recession

	HY	IG	BBB	BB	B	CCC	HY/IG	BB-BBB	B-BB	CCC-B
Current	527bp	147bp	180bp	358bp	552bp	1091bp	380bp	178bp	194bp	539bp
2022 High	537bp	154bp	186bp	361bp	575bp	1116bp	383bp	174bp	214bp	541bp
2022 Low	370bp	94bp	115bp	248bp	399bp	718bp	277bp	132bp	151bp	319bp
US Recession Average	971bp	252bp	355bp	561bp	925bp	2149bp	719bp	245bp	363bp	1225bp
US Non Recession Average	519bp	116bp	171bp	331bp	520bp	1053bp	409bp	177bp	189bp	533bp
% Above/(Below) US Non Recession Avg.	2%	26%	5%	8%	6%	4%	(-7%)	1%	3%	1%
% Below US Recession Average	-46%	-42%	-49%	-36%	-40%	-49%	-47%	-27%	-47%	-56%

Note: Periods indicated as a US recession are identified by using USRINDEX on Bloomberg.

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

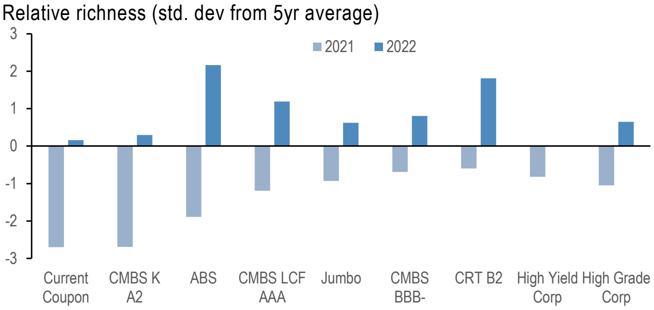
Securitized Products

Click [here] for the full Outlook

One year ago securitized products traversed a range of historically rich valuations. The story has completely reversed with a significant portion of securitized space shifting to historically cheap (Figure 63), and getting cheaper. Market participants are now talking about pricing relative to how close we are to past recession valuations. A majority of products fall into the 50-60% of recession spread wides.

Figure 63: From rich to cheap in securitized products

Relative richness (std. dev from 5yr average)



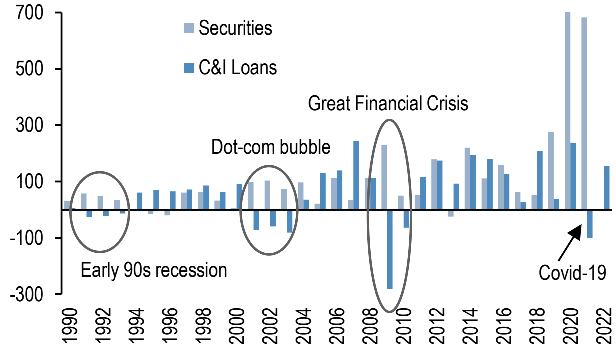
Source: J.P. Morgan

Volatility remains high, liquidity poor and FED balance sheet runoff is only beginning. FED funds target rates are now 3.25-3.5% by early 2023. Mortgage rates are 5.5% (private) to 6% (conforming). Banks are tier 1 capital constrained[1]. Why are banks capital constrained? Monetary stimulus from the pandemic translated into a significant increase in bank deposits. This negative duration of deposits required banks to accumulate duration and compete with the FED for agency MBS (Figure 64). Turn to today where mortgage rates are 300bp higher over a period of 6-7 months and banks are sitting on significant ASF losses, which directly hits T1 capital. Consequently, banks are much more capital aware and potentially looking for capital relief. This means that money managers, insurance companies and hedge funds (private equity) are the marginal buyers of agency MBS and other securitized products (Figure 65) with high risk weights. Monthly supply is still very high and that is putting additional pressure on spreads given all of the aforementioned challenges.

[1] Recall the tier 1 capital ratio for banks is capital / risk weighted assets.

Figure 64: Banks are full on duration and some have a developing risk capital problem

Large bank (defined as the top 25 by balance) annual change in securities and C&I loan holdings, $bn

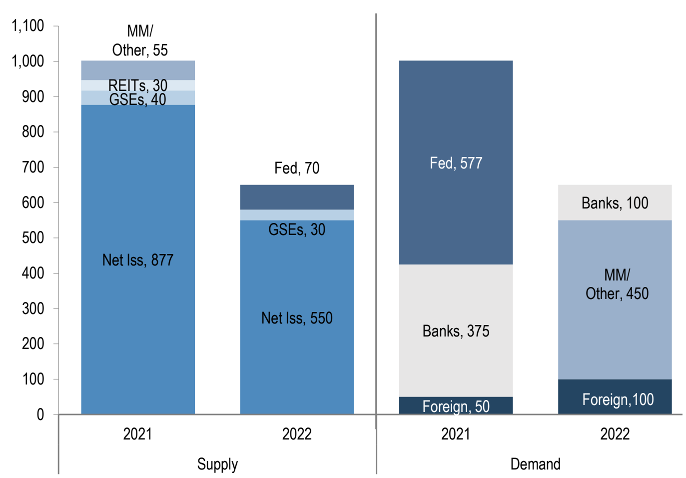


Source: J.P. Morgan, Fed H.8

Before jumping into spread targets, it's important to sketch the baseline economic narrative. Our economists have outlined a few potential economic outcomes, some result in a recession and others nearly avoid it. Regardless, low growth is in the cards. Our official economic forecast for GDP by year-end is 1.9% with inflation at nearly 7%. This is pretty close to stagflation and the view is that the FED will continue to tighten monetary policy until inflation is under control. This will likely continue to keep volatility high and mortgages rates higher. It's feasible to see 7+% mortgage rates if inflation isn't under control by year-end. Key risks are rising unemployment in a low growth environment.

Figure 65: The private market needs to absorb a large amount of supply in 2022

Historical and projected net supply by year, $bn



Source: J.P. Morgan, Company Filings

We expect spreads to widen across the board by year-end. Agency MBS needs to find levels where money managers are willing to buy. Historically, this is in the

35-50bp OAS range. Non-agency jumbo 2.0 is already pricing at 4+ points back of TBA. In OAS terms, this is roughly 93bp. We see jumbo 2.0 hovering in this price range, with OAS likely getting closer to 105bp. CRT B2s, the bottom the capital structure, is trading at a 1300bp DM@10CPR. Spreads are likely to get worse before getting better. We target 1500DM for CRT B2s by year-end. Supply in Q4 will be more muted relative to current levels. That could be a tailwind to turn the tide on spreads if other risk factors are better understood. Regardless, we lean wider based on the information that we have now.

In CMBS, we expect spreads to bear steepen into year-end with 10yr conduit CMBS LCF AAAs widening to T+140 (T+135 currently) and 10yr BBB-s widening to T+625 (T+570 currently). While CRE and CMBS fundamentals can remain resilient, lack of liquidity on heightened rates volatility can push spreads wider. Counter-balancing the widening pressures will be better supply/demand technicals as new issue supply is expected to decline in the second half of this year. We continue to favor high quality floating rate SASB AAAs trading at discounts to par and think the rates induced volatility can continue to present opportunities for investors to pick up cheap, fundamentally sound bonds.

Given the outlook for still very low employment in the year ahead, we believe **ABS** spreads are fundamentally cheap and are currently too wide relative to comparable unsecured credit spreads. Our year-end spread target for AAA 3-year credit card ABS is Treasury +50bp versus current levels at +55bp. Current levels are the widest since October 2015 (excluding the 2020 COVID-19 lockdown sell-off). Unlike corporate credit spreads, ABS has not seen any recovery from the macro interest rate and Russia-Ukraine induced sell-off earlier this year, as continued heavy new issue activity put sustained pressure on spreads. While the issuance pace will likely remain brisk over 2H22, net supply in ABS remains very manageable given the rapid run-off/short WALs of ABS paper. On the credit side, in bankcard ABS, for example, bondholders benefit from near record-high excess spreads levels and robust subordination (that were increased after the Great Recession) to protect against credit deterioration. We believe ABS technicals should improve and relative value is attractive, but broader financial market volatility remains the most disruptive factor.

Housing Outlook

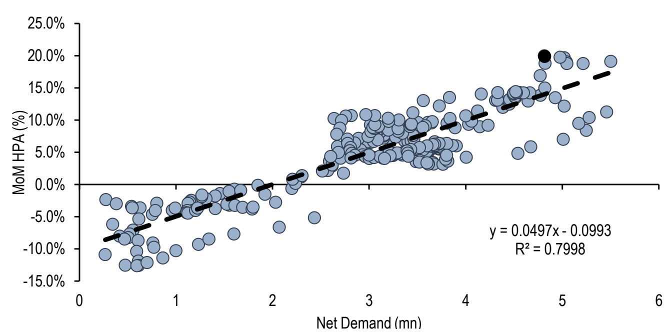
Rapidly rising mortgage rates will subdue home price growth (+12.5% HPA in 2022, 2.5% in 2023). We have already realized 9.3% hpi growth in the first 4 months of the year (Case-Shiller). This means we expect 3.2% for the remaining 8 months. This is very achievable even with higher mortgage rates.

We currently see conforming mortgage rates at roughly 6%. This is 300bp higher than Q3 2021 levels. Naturally, the question investors have is what this does to home prices and affordability. We can see existing home sales pushed from current levels of 5.61mm to a low-4mn level. EHS rarely ends up in the 3s and only dipped into that territory twice over the past 23 years.

Supply is expected to increase from record-low levels of 1.03mm, slowly back to average levels of roughly 2mm, but that may take 2-3 years. We don't see a sudden and immediate supply of homes hitting the market, like during the GFC. Consequently, this makes 2.5% a reasonable target for 2023 home prices. We will be wrong if we enter a recession where unemployment hits double digits and this forces selling. The corresponding grid below shows a reasonable range of home price outcomes as demand declines and supply increases (Figure 66 and Figure 67).

Figure 66: Net demand and HPA are strongly correlated

YoY Case-Shiller HPA (%) regressed on net demand (mn). Net demand is existing home sales minus available homes for sale



Source: J.P. Morgan, Case-Shiller, NAR

Figure 67: Net demand can drop by 2mn from current levels and home prices are likely to remain slightly positive. Concerns emerge when net demand falls below 2mn

Implied YoY HPA under different existing home sales and inventory scenarios

		EHS								
		5.50	5.25	5.00	4.75	4.50	4.25	4.00	3.75	3.50
	1.00	12.4%	11.2%	10.0%	8.7%	7.5%	6.2%	5.0%	3.7%	2.5%
	1.25	11.2%	10.0%	8.7%	7.5%	6.2%	5.0%	3.7%	2.5%	1.3%
	1.50	10.0%	8.7%	7.5%	6.2%	5.0%	3.7%	2.5%	1.3%	0.0%
Inventory	1.75	8.7%	7.5%	6.2%	5.0%	3.7%	2.5%	1.3%	0.0%	-1.2%
	2.00	7.5%	6.2%	5.0%	3.7%	2.5%	1.3%	0.0%	-1.2%	-2.5%
	2.25	6.2%	5.0%	3.7%	2.5%	1.3%	0.0%	-1.2%	-2.5%	-3.7%
	2.50	5.0%	3.7%	2.5%	1.3%	0.0%	-1.2%	-2.5%	-3.7%	-5.0%
	2.75	3.7%	2.5%	1.3%	0.0%	-1.2%	-2.5%	-3.7%	-5.0%	-6.2%

Source: J.P. Morgan, Case-Shiller, NAR

What about commercial real estate? According to Real Capital Analytics, US commercial real estate property prices are up 3% through April this year after posting a

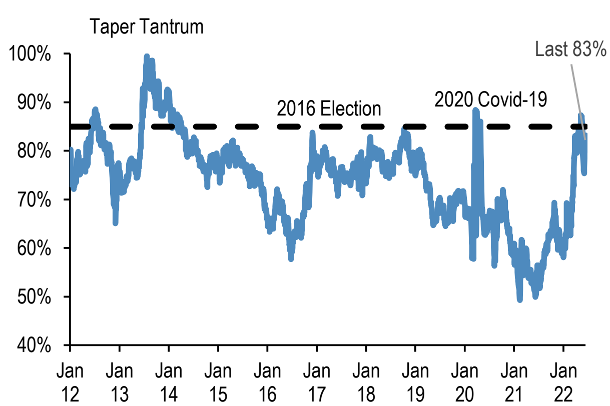
19% gain in 2021. We still think property prices can reach 8% growth for full-year 2022, which is the low-end of our expected range coming into this year. Across property types, performance is likely to vary widely with property types like multifamily rentals and industrials expected to outperform on rent and property price growth given large supply/demand imbalances that will take time to resolve. Office properties, on the other hand, are likely to underperform given the persistence of the remote work dynamic on office space demand.

US Municipals

In 2H22, the municipal market braces for continued volatility against the backdrop of an active Fed, battling to rein in inflation, without an undue negative impact on employment and the broader economy. **The unstable US rate backdrop is expected to persist as markets digest the efficacy of Fed actions and impacts on the economy, while further exacerbated by impaired liquidity.** So while the degree of change between current rates and our year-end 2022 forecast suggests a relatively benign backdrop, there is a lack of conviction around a modal outcome. **As such, we believe that core muni investors should consider moving closer to shore versus benchmarks and peer group comparisons.**

Amidst the expected volatility, we suggest a buy the dip mentality, as rate dependent outflows drive a feast or famine narrative. Performance is expected to be bifurcated, with far better liquidity inside of 10yrs and progressively improving towards the shortest portions of the curve. Conversely, the longer portion of the curve, and sub-5% coupons and in spread product in particular, have seen little support from traditional buyers, who are entrenched in the largest outflow cycle on record (-$74bn). As such, this continued to be the area of opportunity for crossover buyers.

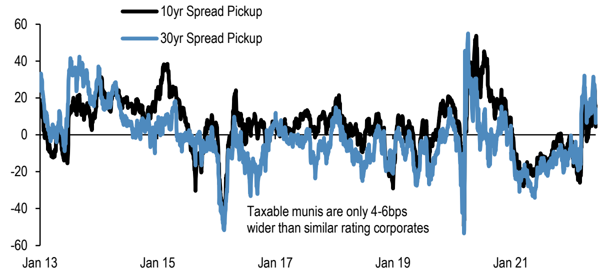
Figure 68: Since the Credit Crisis in 2008, longer dated AA tax-exempt municipal yields, have not spent much time over 85% of the rate on similar corporates



Muni Yld / Corp Yld, %

Source: Refinitiv, J.P. Morgan

Figure 69: AA Taxable municipal yields are now similar to the corporate bond market, after recent spread widening



Source: ICE, J.P. Morgan

Key credit themes for the second half of 2022 include continued strength in tax collections (+14% YoY from 1Q21 to 1Q22), which we expect will provide financial flexibility and support budget management for states and local governments. Continued tailwinds from federal aid received under COVID-19 legislation and the bipartisan infrastructure package will further bolster fiscal management and benefit infrastructure investment across sub-sectors.

Potential headwinds from rising inflation, given impacts to costs and the interest rate environment, but note the positive correlation between changes in tax collections and inflation levels, particularly during periods of extreme change (JPM Muni Strategy: Tax Receipts and Inflation). Conversely, in recessionary periods, while there is a somewhat higher incidence of default and negative rating actions, the magnitude of change is significantly lower than seen in more idiosyncratic sectors of the capital markets (JPM Muni Strategy: Downgrades-Defaults During Recession).

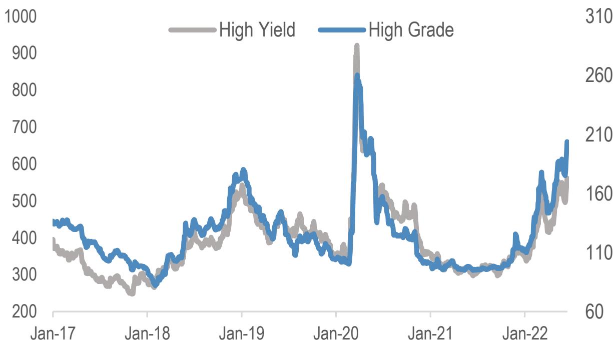
Municipal revenue sectors offer unique strengths and challenges, but we expect the credit picture will largely focus on rising expenses given inflation, the still tight labor market, and rising fuel costs. However, we highlight the defensive and essential nature of sectors such as public utilities, as well as the robust liquidity across sectors such as airports and healthcare. Further, we emphasize the relative strength of municipal credits during periods of economic downturn, particularly compared to more idiosyncratic sectors.

European Credit

Click here for the full outlook

The first half has been even more turbulent than we predicted in our cautious 2022 Outlook, as the anticipated slow retreat of central bank liquidity has turned into a sprint. In the absence of a central bank put, and with concerns growing around corporate fundamentals, we find it hard to turn constructive even at these wider levels. **We look for more spread weakness in H2, and revise our spread targets to 225bp in euro high grade and 625bp in high yield, which implies spread widening of 25bp and 75bp, respectively.**

Figure 70: Euro High Grade and High Yield Spreads, bp

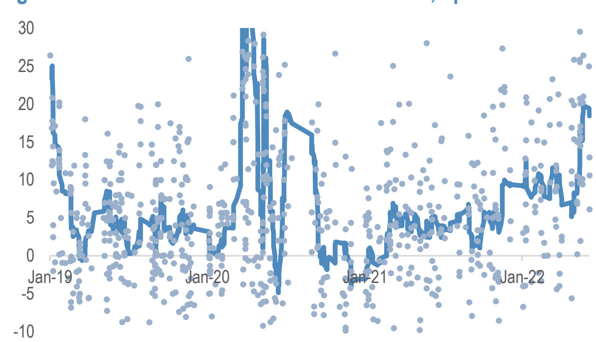


Source: J.P. Morgan, MARKIT Group.

After half a decade of using corporate bond purchases as a way to stimulate the economy, we believe central banks will be comfortable with wider spreads to tackle high inflation. **Credit markets are facing a 'cliff edge' in ECB CSPP purchases** at the end of this month, while **the BoE plans to start selling down its corporate bond holdings** from September.

The absence of the ECB means that the euro high grade market will have to absorb twice as much net supply in the second-half as it did in the first-half. This is despite the fact that we've taken down our gross issuance forecast from €645bn to €510bn. With the central bank currently buying an estimated 15% of each eligible deal in primary, new issue premiums will stay elevated, we believe (Figure 71).

Figure 71: Non-Financials New Issue Premium, bp

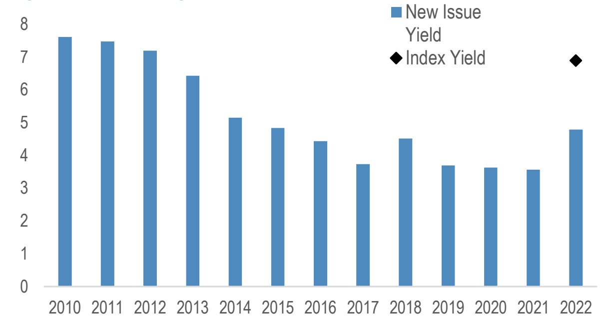


Source: J.P. Morgan. 20-deal rolling average.

As the 'search for yield' goes into reverse, investors will be able to hit their required return hurdles by taking less risk. This poses a further challenge for credit markets, in our view, as insurers substitute investment grade bonds for rates products, and high grade funds sell off-benchmark high yield assets.

Another impact from higher rates is a **potential cash flow shock as coupons reset**. This will be most swiftly felt by any unhedged borrowers in the leveraged loan market: based on current futures pricing, average loan coupons will jump ~65% by this time next year. In the high yield market this effect will be slower moving, as there are few near-term maturities. Over time, however, we think lower-rated issuers will need to de-lever if we're truly in a new interest rate regime.

Figure 72: Euro High Yield New Issue Yields



Source: J.P. Morgan.

Away from the impact of tighter monetary policy, we see fundamental concerns picking up due to the squeeze on margins from persistent inflation. Furthermore, while our economists' base case is still for above-trend growth, the number of risks to the economic recovery continues to grow, not least rising commodity prices and threats to European energy supplies.

Even though rating agencies have yet to translate these challenges into downgrades, we think the default cycle is turning less benign. From today's ultra-low level of 0.5%, **we see default rates rising to 1% by YE22 and then 2.5% by YE23**; this assumes recession can be avoided. The risk of a more abrupt rise in default risk will also keep leveraged finance origination suppressed, we believe: our FY issuance forecast of €55bn for high yield bonds would be the lowest figure in a decade, yet this is arguably an optimistic estimate given the ongoing volatility.

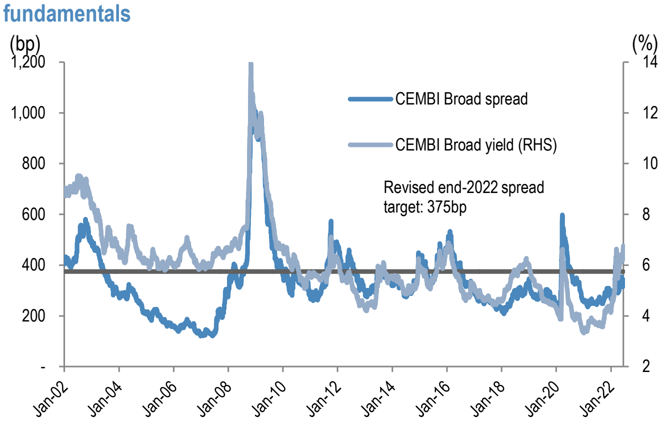
With concerns over the economy starting to mount, we think investor focus will shift away from avoiding duration, and towards avoiding credit risk instead. Spread decompression is our core theme for the second-half, which we express by trading up in quality: **OW A vs UW BBB; OW BB vs UW B/CCC**. Our other trading themes are **OW financials vs non-financials** on relative value grounds, and **OW synthetics vs cash**.

Finally, **in leveraged finance we prefer bonds over loans**, given that the loan market is lower-rated and issuers are more exposed to rising rates. With CLO economics being challenged by widening liability spreads, the European loan market is now missing its main buyer base, and the risk that existing warehouses liquidate is growing, though still not our CLO colleagues' base case.

EM Corporates

EM corporates are challenged by the uncertain market environment and macro risks, which are partly mitigated by the strong standalone fundamentals and supportive technicals. Such resilience has enabled CEMBI to hold up better than other EM fixed income this year, but leaves relative spread valuations against US credit closer to the historical average. The recent elevated inflation prints and 75bp rate hike by the Fed are driving market sentiment towards the inflationary case (Scenario II from our *note*), where we expected CEMBI to move close to 450bp over 12-18 months. Indeed, market expectations have been shifting rapidly and we think the elevated volatility is likely to keep investors sidelined until there is better visibility on the macro outlook. Reflecting the more challenging backdrop, we revised wider our end-2022 CEMBI Broad spread target to 375bp which implies about 40bp widening from current level. We still think EM corporates will remain less volatile than other EM fixed income given the robust credit metrics and conservative behavior, which can help keep spreads from widening out to extreme levels. Nevertheless, the heightened concerns over inflation and rate volatility are likely to make it difficult for spreads to compress as we had previously expected.

Figure 73: CEMBI Broad spread under pressure from macro concerns, but some support from strong standalone fundamentals



Source: J.P. Morgan.

EM corporate fundamentals are at the strongest level in over 10 years, which we think provides a significant buffer against a recession or continued inflationary pressure. We also think that the maturities over the coming years are likely to be manageable as the composition is skewed towards segments/countries with better alternative refinancing abilities. EM corporate HY default rate has reached 5.4%, almost entirely coming from Russia/Ukraine and China property. We maintain our 8.5% forecast for full-year 2022, but excluding idiosyncratic segments, the underlying default rate would be very modest at only 1.5%. EM corporate new issuance is running at the lowest level since 2016, and we cut our full-year 2022 supply forecast by nearly -25% to $400bn from $525bn. The reduced gross supply assumption leads to a significantly lower net financing forecast of -$77bn for 2022 and should more than offset outflows. Cash levels remain elevated due to the uncertain macro environment and concerns over outflows, though investors do not seem to be in a hurry to deploy. We are modestly OW Asia regionally and globally prefer credits benefitting from higher commodity prices, in particular oil. We believe credit-loosening and economic reopening should facilitate improvement in China credits, with some signs of better funding access for the leading developers. We continue to like Indonesian HY credits with positive catalysts. In Latin America, we are generally neutral given macro risks and election noise. We find CEEMEA IG valuations too tight, and prefer HY commodity names and African towers.

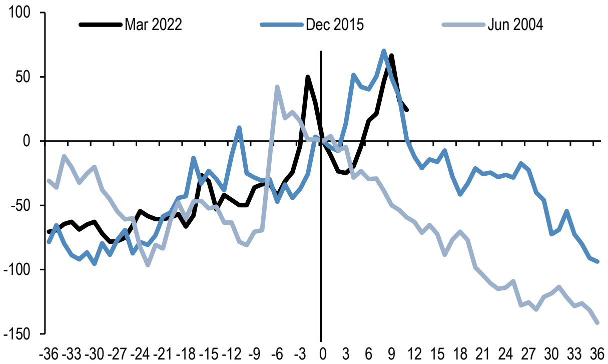
EM Sovereigns

Click here for the full Outlook

Cycle dynamics are unsupportive of EM credit, but the commodity price uplift continues to be the saving grace for many countries, alleviating some concerns about imminent debt defaults. EM sovereign credit has been under pressure for some time, with QT, among other things, compounding lingering debt and growth complications from the pandemic. The Russia-Ukraine conflict has accentuated the divide between commodity importers and exporters, with more acute balance of payment pressures and larger fiscal deficits compounding issues for importers especially in places where rising debt burdens were already a pre-existing condition. However, for many EM countries, particularly commodity exporters, spreads are being cushioned by this commodity shock. EM sovereign repayment capacity is back in focus as public debt ratios have doubled since the Global Financial Crisis and as refinancing the higher debt burden is more difficult amid higher costs (see *EM Sovereign External Repayment Risks*). Beyond the larger debt stacks in Russia and Ukraine and Sri Lanka which is officially in default, we see default candidates primarily among smaller economies which should not pose systemic risks. All told, the EM sovereign HY default rate could reach 10% this year.

Figure 74: EMBIGD spreads have tended to widen into the start of a Fed hiking cycle and tighten thereafter

Spread change into and after a Fed hiking cycle, with t = 0 being the start of a hiking cycle; x-axis: number of weeks

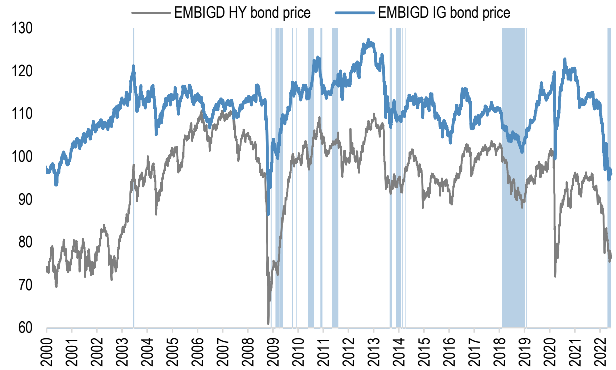


Source: J.P. Morgan

Technicals and liquidity could turn poorer into the summer months, but we see scope for spreads to modestly tighten by year-end. Tighter monetary conditions and weaker growth outlook are the main challenges for EM sovereign spreads to tighten, but EMBIGD spreads have tended to widen into Fed hiking cycles and tighten thereafter (Figure 74). Furthermore, we have been arguing that the repricing wider in EMBIGD spreads began earlier than other credit markets. We look for modestly tighter spreads of 425bp at year-end. The rising level of dispersion in credit profiles within the EMBIGD warrants segmenting the asset class into more compartmentalized strategies. We favor distressed debt where prices have fallen to levels which warrant higher recoveries, with $130bn of C-rated bonds trading with an average price of 36; we are OW Sri Lanka and long ELSALV 2023. Convexity looks attractive and average bond prices look low when normalized for the level of UST (Figure 75), particularly in long-end IG bonds trading with a 60/70 handle, and we recommend curve flatteners in steep curves with low long-end cash prices; hold 10s30s flatteners in Chile and Mexico. Meanwhile, we remain more wary of the 'middle' part of the EMBIGD where true beta characteristics remain, particularly among commodity importers; stay UW Turkey, Kenya and Costa Rica. However, there are headwinds to near-term technicals as we head into summer months with lower cash flows, while outflow pressures remain. What might mitigate this is a combination of cleaner positioning and higher cash balances (Figure 76). Click here for the full outlook.

Figure 75: Average bond prices are low when normalized for UST

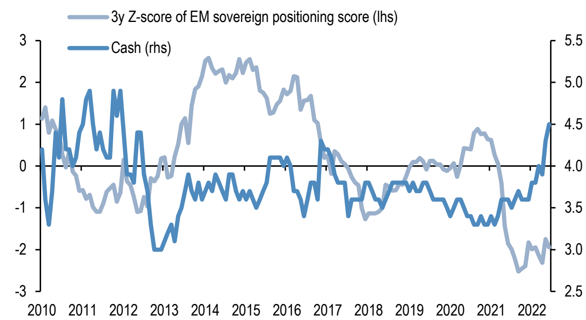
Average EMBIGD IG and HY prices; shaded areas show periods when 10y UST yields are within 10% of the current range



Source: J.P. Morgan.

Figure 76: Cash balances are the highest since 2012, while positioning has been trending lower

3y z-score of positioning (lhs) and cash balances from the J.P. Morgan EM Client Survey (rhs, %)



Source: J.P. Morgan.

Currencies

Click here for the full Outlook

G10

In our year-ahead outlook published in November 2021, we laid out a bullish case for the dollar. The main takeaways were: First, a greater outright lift to USD on a transition to Fed hikes, with expectations that the dollar will outperform low-yielders the most. Hence, USD longs vs. EUR and JPY comprised our core recommended positions. Second, outside of the Fed, a wide range in the mix of inflation-growth and the central bank responses warranted careful differentiation between good hikes (growth driven like CAD and NOK) and bad ones (inflation driven or ones with local vulnerabilities like GBP and NZD). Third, among the low-yielders, CHF was expected to outperform as the SNB was expected to be less accommodative than the BoJ which was expected to be the most dovish central bank globally. Finally, there was a clear and growing tail-risk where the Fed moves earlier and more aggressively, and dollar strength broadens out against the high-yielders as well, i.e. both sides of the smile come into play. FX vol was deemed to be too low against this global macro backdrop.

What has changed in the FX landscape going into 2H… Six months on, **the view is mostly tracking but there are several key changes in the macro backdrop and FX landscape** that investors should keep in mind going into 2H22.

- **First, non-transitory inflation is pushing even the most dovish central banks to normalize.** The Fed has indicated readiness to go restrictive in order to curb inflation. Even the most dovish like the Riksbank and SNB are being pulled into the fray with the BoJ getting tested on YCC.
- Second, **growth momentum has slowed and late-cycle anxieties have notably increased**. Growth outside the US had already been slowing since February, but now it is slowing in the US as well so we have transitioned from US exceptionalism to a *global* slowdown. Our economists' models are indicating nearly 1/3rd odds of a US recession in the coming year, up from sub-10% only two months ago.
- Third, **liquidity in macro markets has plummeted** substantially and is approaching its shallowest since the onset of COVID.
- Finally, on a more positive note, **pockets of value (G10) and carry (EM) opportunities have finally emerged** in FX, and even with modest deterioration, **external balances are still in much better shape compared to history**. These developments insulated high beta currencies from rising DM yields and modest downgrades to the growth outlook for most of 1H.

…and what hasn't. What hasn't changed is that the **differentiation between "good" and "bad" hiking cycles** is still quite pronounced. **Commodity prices** are still expected to stay elevated due to supply constraints which should serve as a support for improving terms of trade for exporters. And finally, **FX vol still remains cheap** as it is still undershooting relative to other macro markets.

The takeaway is to be more defensive with late-cycle hedges. For FX market participants, the backdrop of differentiated country-level growth-inflation conditions, higher carry and more value opportunities, would normally open scope for FX RV and differentiated returns as well. The fly in the ointment is that the combination of global uncertainties (EU's energy dependence, China's zero COVID, US late-cycle anxieties), poor liquidity and still-low vol is conducive for a USD-centric and bullish environment in which correlations rise, particularly vs. growth challenged and high beta currencies as we move to the defensive side of the dollar smile.

Overall trade recommendations in FX thus have become increasingly more defensive. Specifically, we are:

- **Short the euro bloc** via EUR and GBP. **EUR/USD to test parity.**
- **Broadly overweight USD vs. high beta FX** (G10 commodity FX plus SEK) and underweight EM. Look for **USD/CNY** to approach **6.95**.
- **Broadened longs in traditionally defensive funders (CHF, JPY).**
  - **Bullish CHF** on a SNB pivot was a key theme in our annual outlook from six months ago; we stay overweight.
  - Bias on **JPY has evolved** from long USD/JPY as a US yield proxy to short high beta cross-yen as a late-cycle hedge. **Exploring late cycle hedges** via short high beta/yen crosses.
- **Reduced overweights in commodity FX** relative to 1H. For instance, in G10, CAD and AUD are preferred candidates followed by NOK, all expressed in RV format.

EM

Current account deterioration in places may trigger substantial FX/EM policy adjustment given tightening global financial conditions. EM FX is likely to underperform as USD strength is set to continue, particularly versus commodity importers, and real EM FX carry is low given the current account deficits of many EMs. We are UW/short in EM Asia (PHP, INR, KRW, CNY) and EMEA EM (CZK, HUF and TRY), while more balanced in Latam (OW CLP versus UW COP). Currently 14 out of the 20 countries in the GBI-EM index have a current account deficit wider than 3% of GDP based on their last available quarterly seasonally adjusted print (Q4 21 or Q1 22). Five countries had CADs exceeding 6% GDP. Sharp rise in energy prices since then has likely increased imbalances even further. That may indicate that EM countries' relative growth resilience despite the numerous shocks has likely come at the cost of CA positions. We can assess whether EM FX carry is attractive enough by comparing CA positions to real yields. Generally, we find this indicator has a good predictive power for subsequent EM FX performance given real yields indicate both whether monetary policy is responding sufficiently to correct the positions and whether investors are receiving sufficient risk premia (see here for a more detailed analysis). This comparison would suggest that EM real yields are now insufficient at a time that many EM central banks are signaling a hiking fatigue. The set-up is a concern in the context of large risks that the post COVID-19 wave of EM inflows starts to reverse as US financial conditions tighten.

Commodities

Click here for the full Outlook

Conditions of acute scarcity persist across all commodities. The world is entering summer—the traditional peak demand season—with inventories 19% below historical norms. Lack of inventory buffer is leaving the market vulnerable to unplanned supply outages, such as the spiraling Libyan protests, worsening US crop conditions and active hurricane season in the Atlantic that may shut down refiners in the Gulf of Mexico.

With physical stocks low, relative to pre-pandemic levels, realized volatility of the Bloomberg Commodity Index has more than doubled, half of the surge occurring since Russia's invasion of Ukraine. Brent oil volatility is close to 50%, 1.5x the historical average, while intraday volatility for diesel is at around 70%, double the historical norm. Volatility in agricultural products like wheat and palm oil has more than doubled on recent export ban announcements.

Surging volatility has in turn drained liquidity, limiting outright trading activity and volumes. Aggregate open interest across all commodities fell 17% since the start of the conflict, with futures markets open interest alone down almost 20%. Amid strained liquidity, any small shocks to supply will continue to have outsized impacts on prices.

Currently, we estimate that oil prices are moving around $25/bbl for every 1 mbd variation in supply or demand which is nearly double the $15 reaction pre Russia's invasion into Ukraine and quadruple the $9 price sensitivity observed just before the onset of COVID in early 2020. In gas, in recent history buying 100 lots of the prompt futures contract could result in a price move of 5 ticks, whereas today execution of the same size would likely cause the price to move 10 times higher, closer to 50 ticks or 5 cents/MMBtu.

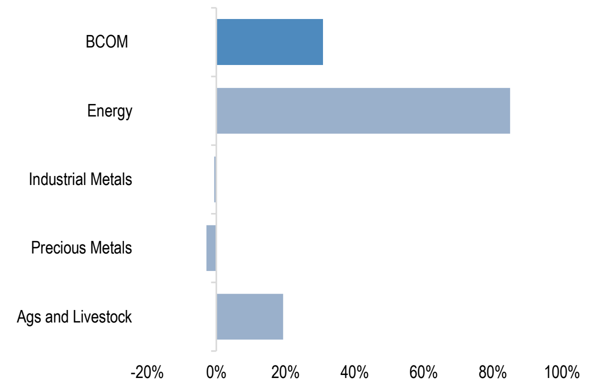
Our baseline view calls for a 10% BCOM return by the end of the summer and 5% by year-end. What remains critical in our view is that the range of near-term price outcomes for commodities has become extreme given the strained liquidity. For oil, this represents $140-150/bbl short-term upside, should oil eventually fall under Western secondary sanctions and full insurance ban. European natural gas remains only one supply disruption away from pricing depletion, which would require an ongoing €120/MWh TTF price.

In the case of agricultural prices, the upside scenarios for wheat ($16/bu) and corn ($13/bu) reflect the possibility of Ukrainian Black Sea ports remaining closed through 2022/23 and production elsewhere disappointing. As a result, exposure to commodities could potentially deliver around a 30% return under an upside scenario.

Macro risks are becoming more two-sided and monitoring demand growth is important. The rotation away from goods to services is manifesting in unsold inventories at major retailers, likely crimping metals demand growth in DM economies, while benefiting crude and cracks in particular. Crucially, demand growth will be increasingly sensitive the higher the prices go and the first cracks in the US gasoline demand are now visible.

Commodities are on pace to deliver a third consecutive year of significant positive returns, up 30% year-to-date (Figure 77). Despite this strong performance, the case for commodities going forward is just as strong, in our view (*2022 Commodities Outlook: Energy and agriculture to drive continued strong returns*, 2 December 2021). Conditions of acute scarcity continue to persist across commodities and the world is entering summer—the traditional peak demand season—with inventories 19% below historical norms. Lack of inventory buffer is leaving the market vulnerable to unplanned supply outages, such as the spiraling Libyan protests, worsening US crop conditions and active hurricane season in the Atlantic that may shut down refiners in the Gulf of Mexico.

Figure 77: Year-to-date performance of the BCOM ER Index and its sub-indices
Percent



Source: Bloomberg Finance L.P.

In our view, almost the entire complex remains a buy. Russian crude is flowing but global **crude** markets have tightened considerably, given three and a half times longer transit times. Limited **gas** pipeline take-away capacity in the prolific US Permian basin could slow oil drilling activity, and potentially oil production growth in early-2023, further tightening global energy balances. Tightness in **LNG** supply—from a US LNG facility (accounting for ~3.5% of global LNG supply) offline for at least three months to Australia (another major LNG supplier) enduring its own domestic gas shortages—suggests that higher prices for longer is the continued theme for the European natural gas market. With Russian oil refining capacity significantly reduced for the foreseeable future and spare refining capacity in China sidelined, the shortage of clean products like **gasoline** and **diesel** we are experiencing today should get only worse as demand for transport fuels picks up during the northern hemisphere summer.

And in **agriculture**, with the exception of soybeans, our balances continue to show draws in inventories through 2022/2023 across the board, however stock-to-use ratios across tradeable inventories remain historically tight. Turning to **base metals**, while we acknowledge the sizeable risks that dynamic zero-COVID policies could continue to hamper economic activity in China, we still see the pieces in place for a stimulus-fueled Chinese demand rebound to stress still-low inventory levels and drive a 2H22 price recovery (*Bullish near-term copper view hinges on a Chinese demand rebound*, 16 June 2022). Finally, **precious metals** remains the more bearish outlier in our view. While firmer inflation on its face is bullish for prices, it is now being quickly counteracted by more aggressive pricing for a policy response from the Fed and other central banks, likely keeping prices constrained.

Despite near record prices, we have so far observed limited supply response, leaving demand destruction as the only balancing mechanism. Yet, putting more pressure on supply chains that are already creaking, policymakers around the world are doing all they can to sustain or even stimulate demand likely prolonging the rebalancing process (*Don't be fuelish*, 7 June 2022). Further adding to inflationary pressures, the realignment in US and European trade objectives necessitates not only a relocation of supply chains leading to significantly higher costs of production, but also government mandated stockpiling as policymakers are trying to ensure security of supply. **Our base-line outlook calls for a 10% BCOM return by the end of the summer and 5% by year-end (Figure 78)**.

What remains critical in our view is that the range of near-term price outcomes for commodities has become extreme given the strained liquidity. For oil, this represents $140-150/bbl short-term upside, should oil eventually fall under Western secondary sanctions. European natural gas remains only one supply disruption away from pricing depletion, which would require an ongoing €120/MWh TTF price, by our estimates. In the case of agricultural prices, the upside scenarios for wheat ($16/bu) and corn ($17.50/bu) reflect the fact that Russia and Ukraine represent nearly a quarter of global wheat and corn exports in the face of already tight inventories, with diesel and fertilizer costs set to rally. And while Chinese demand risks permeate base metals for now and metals are more susceptible to a deterioration in goods consumption, higher energy prices would likely in turn further hit supply, stressing tight inventories. As a result, exposure to commodities could deliver up to 30% return in our bull flex scenario **(Figure 79)**.

Figure 78: JPM Base Case Commodities Index Forecasts

	Current					Return (vs current level)		
	15-Jun	1Q22A	2Q22	3Q22	4Q22	2Q22	3Q22	4Q22
Major Indices								
BCOM ER	129	124	135	143	136	5%	10%	5%
S&P GSCI ER	376	337	389	417	396	4%	11%	5%
BCOM ER Sub-indices								
BCOM Energy	57	46	56	61	57	0%	8%	0%
BCOM Industrial Metals	174	212	180	188	180	3%	8%	3%
BCOM Precious Metals	212	234	213	212	201	0%	0%	-5%
BCOM Agriculture and Livestock	110	109	119	125	124	7%	13%	12%
GSCI ER Sub-Indices								
GSCI Energy	195	159	194	210	196	0%	8%	1%
GSCI Industrial Metals	242	295	252	265	260	4%	10%	7%
GSCI Precious Metals	217	236	217	216	205	0%	-1%	-6%
GSCI Agriculture and Livestock	92	91	101	107	105	9%	16%	13%

Source: S&P, Bloomberg Finance L.P., J.P. Morgan. As of close on June 15, 2022.

Figure 79: JPM Upside Risk Flex Commodities Index Forecasts

	Current					Return (vs current level)		
	15-Jun	1Q22A	2Q22	3Q22	4Q22	2Q22	3Q22	4Q22
Major Indices								
BCOM ER	129	124	135	159	164	5%	23%	27%
S&P GSCI ER	376	337	389	457	457	4%	22%	22%
BCOM ER Sub-indices								
BCOM Energy	57	46	56	66	71	0%	17%	26%
BCOM Industrial Metals	174	212	180	202	201	3%	16%	15%
BCOM Precious Metals	212	234	213	224	228	0%	6%	7%
BCOM Agriculture and Livestock	110	109	119	150	149	7%	36%	35%
GSCI ER Sub-Indices								
GSCI Energy	195	159	194	224	224	0%	15%	15%
GSCI Industrial Metals	242	295	252	285	281	4%	18%	16%
GSCI Precious Metals	217	236	217	228	233	0%	5%	7%
GSCI Agriculture and Livestock	92	91	101	130	128	9%	40%	39%

Source: S&P, Bloomberg Finance L.P., J.P. Morgan. As of close on June 15, 2022.

Thematic Research

The Emerging New International Order

Bretton Woods 2.0 and the great reset for globalization

Russia's war in Ukraine is resetting the international economic order and alliances, with long-lasting consequences and ramifications. There is no precedent for the severity of the sanctions imposed on a G-20 economy that is also a large and diversified commodity exporter with nuclear capabilities. The "Washington Consensus" formed in the 1990s, which was built on globalization, free trade and investment as the path to peace, prosperity and convergence between advanced economies and emerging markets, is being displaced by a new Washington doctrine based on "friend-shoring" and trading with "free but secure" countries. The Russia/Ukraine war has redrawn the contours of the world economic outlook, as Treasury Secretary Janet Yellen pointed out in her April 13 speech, and neutrality is no longer a choice. Gradualism is over as "we ought not to wait for a new normal."

The US has laid out a new concept of international cooperation moving forward, leveraging the power of 30 like-minded countries that represent over 50% of the world's economy, with an emphasis on the common values that will be at the core of international cooperation, trade and investment. Under the new trade order, supply chains would be favored with many trusted countries that share a set of norms and values about how to operate in the global economy and how to run the global economic system. Economic efficiency will no longer act as the driving force for relocation as the decision for partnership will be based on national security considerations. The endgame is to politically isolate Russia and send a clear message to any country that may not align with US and its allies' national interests, including national security.

National elections

Beyond the emerging new international order, we provide a preview of key elections and events likely to attract the most headlines along with a calendar of political events for the second half of 2022:

US midterm elections: Market consensus remains that the US will likely see a divided Congress post-midterm elections with Republicans poised to take the House, while there is a small chance that the Senate may still remain in play. The second half of Biden's term is likely to be marked by gridlock given push back to increased government spending within the Democratic Party, irrespective of whether the Democrats lose the House, the Senate, or both. With the possibility of a divided government, gubernatorial races will be key to watch. Expect to see greater use of Executive Orders that don't require congressional action, focusing on crypto, cyber and anti-trust regulation, and proposals to improve competitiveness vis-à-vis China. The prioritization of national security implies that the US trade agenda will lean towards trade restrictions rather than liberalization. We do not see large-scale tariff reduction, although there could be some scope for expanding exemptions for products deemed non-strategic in nature such as consumer goods. Any read-through into the potential return of Trump in 2024 would probably be too distant a prospect for markets to aggressively re-price to.

French national assembly elections: After winning re-election in April, President Macron lost the parliamentary majority with his Ensemble coalition holding 245 seats, short of the 289 seats needed for a majority in the 577-member chamber. The left-wing alliance, NUPES, under Melenchon is the largest opposition group with 131 seats, while Le Pen's National Rally party scored a 10-fold increase with 89 seats.

Italy general election: We expect the Draghi administration to remain in place until early 2023, with an election in the first half of 2023. Polls have been consistently pointing to a victory of the center-right coalition, with BoI as the largest party, but there are reasons not to take the polls at face value and to expect significant change in the political offer. A trend towards the mainstream from populists is likely to be bolstered by the return to prominence of foreign policy.

Japan Upper House election: Japan's fiscal stance depends on the result of the upcoming Upper House election in July. If the LDP wins overwhelmingly, Prime Minister Kishida will likely have greater power to return to his original intent to place greater priority on fiscal consolidation.

Sweden general election: While NATO membership seems unlikely in the short run, things could change if PM Andersson loses the September election to the right-wing candidate Kristersson, and the national populist party (Sweden Democrats) decides to join forces with the other right-wing parties on NATO-related questions. Big decisions on security issues are traditionally based on consensus across the political spectrum, so a right-wing win in the general election might not be enough.

Brazil presidential elections: The first round of elections is scheduled for the start of October, but the race has been polarized and the outcome will likely be determined by the state of the economy, which should be reflected in polls, making the policy direction clearer, and allowing the market to better interpret what this polarized political scenario might mean for the growth and policy outlook.

Chile's Constitutional Exit Plebiscite: The base case seems to be a too-close-to-call result in September. The president's net approval rate and the approval rate of the new constitution have moved in lockstep. Despite improving by 8%-pts to 44% after his 'Cuenta Publica' address, President Boric's net approval rating continues to print in negative territory. It's worth noting that presidential approval rates tend to increase following the 'Cuenta Publica' address before Congress. The coming weeks will show whether the President's recent address to Congress will prove to be an inflection point, which would have direct implications on the approval of the new constitutional plebiscite as the "No" intention vote continues to hover around 45%.

Colombia presidential election: Gustavo Petro was elected president in the June 19 second round election, bringing the left to power for the first time in modern Colombian history. The president-elect's agenda aspires to profound change via a state-led model, but he has also professed gradualism and responsibility; it remains to be seen whether the president-elect will in fact curb his enthusiasm. We think markets and economic agents will take a wait-and-see attitude for now.

China 20th Party Congress: In the 20th Party Congress, likely to be held in 4Q22, the key focus will be the change in CPC Party leadership teams, which will be followed by the change in the state's leadership in March 2023. A consensus assumption is that President Xi will have a third term as the core leader. At the politburo level, if the implicit age restriction continues to apply, 9 out of 18 non-standing committee Politburo members will retire at the 20th Party Congress.

Figure 80: 2H22-1H23 Global Election and Political Calendar

	Country	Type	Date
Americas	Colombia	Presidential	Second round 19-Jun
	Chile	New Constitution Exit Plebiscite	4-Sep
	Brazil	Presidential & Legislative	First round 2-Oct Second round 30-Oct*
	United States	Congressional	8-Nov
Europe	France	National Assembly	Second round 19-Jun
	Austria	Presidential	September*
	Sweden	General	11-Sep
	Slovenia	Presidential	October*
	Italy	General	Mar-May 2023*
	Finland	General	2-Apr-23
Asia Pacific	Japan	Upper House	10-Jul
	India	Presidential	18-Jul
	China	20th Party Congress	4Q22*
	Thailand	General	Mar 2023*
	Malaysia	General	Can be called any time up until Sep 14 2023
Middle East & Africa	Kenya	Presidential & Legislative	9-Aug
	Angola	General	24-Aug
	Nigeria	General	Feb 2023*

Source: NDI, IFES, EISA, J.P. Morgan. *Date not confirmed

Fog of war gives rise to ESG 2.0

Russia-Ukraine war triggers new ESG considerations

The war in Ukraine has exposed ESG to a world of changing priorities, dealing a tough lesson in realpolitik, and amplifying regional differences in the institutionalization of ESG. We are evolving to a new phase of ESG 2.0, focused on integration of ESG in the face of simultaneous global crises, which cover the spectrum of pandemics, energy security, food security, racial and social injustice and an evolving landscape for geoeconomic interests based on national security priorities. Russia's invasion of Ukraine presents a collision between green ambition and energy security, possibly sidelining green power transition by five to ten years. The war has shifted the focus from energy sustainability to energy availability, affordability and security, spurring a gold rush for new fossil fuel projects amid energy security concerns.

ESG is undeniably at a crossroads of a messy landscape in the face of climate realism, coinciding with the size of the market reaching a new milestone. The total notional amount of all ESG-labelled bonds (Green, Social, Sustainability and others) now totals $3 trillion according to the Climate Bonds Initiative. Yet the backlash is also a sign that the market is maturing and evolving in the face of scrutiny. While ESG 1.0 was focused on incremental strategies, raising awareness and setting initial targets, ESG 2.0 is focused on the unbundling of various strategies that cannot be universally defined and can mean different things to different investors.

ESG equity funds are for the first time experiencing outflows, while the pace of green bond issuance has slowed. According to Bloomberg, ESG equity funds saw $2bn outflows in May—the biggest monthly cash pullback ever—following more than three years of inflows. After reaching a record $523 billion for FY 2021, green bond issuance as tracked by the Climate Bonds Initiative (CBI) totaled $93bn in the first quarter of 2022 or 40% lower compared to Q1 2021. 2022 ESG returns have generally been poor as attractive ESG stocks are generally more expensive than the overall market. Soaring fossil fuel prices have shone a harsh light on the mediocre performance of many ESG-focused funds which have underperformed due to an overweight in technology and underweight in energy. After nearly doubling during the height of the pandemic in 2020-21, AUM tracking the J.P. Morgan ESG indices (JESG) have remained resilient at $40bn despite outflow pressures more broadly on fixed income assets.

Regulators take aim at ESG greenwashing

With ESG regulation moving quickly in Europe with the rollout of EU Sustainable Finance Regulation, the US is playing catchup and the SEC has proposed disclosure rules that could result in one of the most significant changes to US public companies' disclosure obligations in recent history. There are two key components of the SEC proposal, first focused on corporate climate reporting disclosure, and second on ESG integration and disclosure by fund managers. The proposed rules aim to give investors more information about mutual funds, ETFs and similar vehicles that take into account ESG factors and would require public companies to enhance climate-related disclosures. If adopted, companies, trade associations and state officials are likely to challenge the proposal as it remains unclear that the SEC has statutory authority to promulgate climate-related disclosure rules. BlackRock continues to favor proposals to make company disclosure more useful on climate-related risks but has declared it will not support most of this year's shareholder resolutions as it views a large number of proposals as unduly "prescriptive and constraining on management."

In the EU, the European Securities and Markets Authority (ESMA) published a sustainable finance roadmap and implementation timeline for EU legislation and provided an updated supervisory statement on SFDR application. The recent DWS raid by German authorities over ESG greenwashing claims signals a new reality for ESG funds globally. Companies will be under greater pressure from policymakers and shareholders to attest to meeting ESG and other supply chain-related requirements.

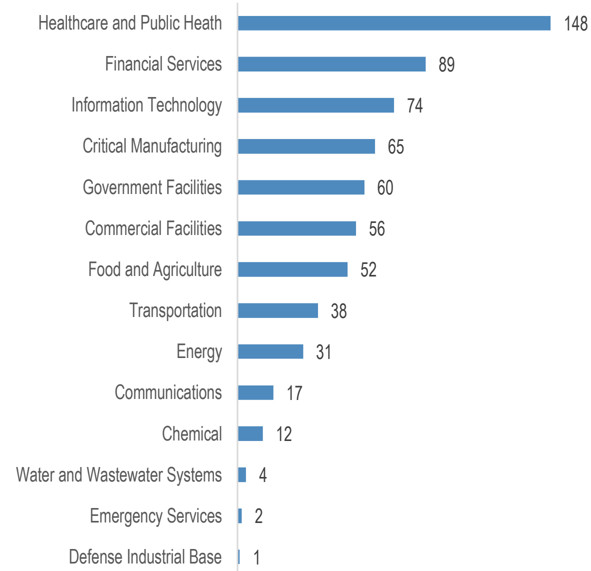
The state of cyber insecurity

Increased cyberattacks and risk of cyber retaliation from Russia's invasion of Ukraine

Cyberattacks accelerated around the outbreak of Russia's war on Ukraine, prompting increased partnership between the government and the private sector and the US and its allies to strengthen defenses, and an even greater proliferation of cybersecurity bills. Microsoft reports that Russia began preparing for Ukraine cyberattacks in March 2021, coinciding with Russia's deployment of troops along its border with Ukraine. In December 2021, Microsoft observed 15 Russian cyberattacks against Ukraine, which rose to 125 by March 2022.[2] In response, Ukraine engaged in "cyber resistance" and has assembled a network of international computer specialists to attack Russian web infrastructure, representing a spontaneous alignment of private sector actors, hacktivists, and individuals who have, in essence, begun to cyberattack Russia to help defend Ukraine from Russian cyber acts. The Biden administration has provided vital threat information to move toward true public-private collaboration as well as expanded cooperation with allies. The US State Department, in support of the European Union, and other partners has publicly shared its assessment that Russia launched cyberattacks in late February against commercial satellite communications to disrupt Ukrainian command and control. US and NATO officials have also raised the possibility that a cyberattack on a NATO member state could trigger Article 5, which says an attack on any member will trigger a response from all members[3].

Critical industries in the US are on high alert, particularly the energy and financial sectors, for the possibility of retaliatory attacks as Western sanctions weigh on the Russian economy. The Biden administration has called for increased public-private partnerships and initiatives to defend critical infrastructure, which is 90% owned by the private sector. Information-sharing programs now allow the government to share information with the organizations that operate critical infrastructure. Section 1550 of the FY 2022 NDAA requires the implementation of a pilot program with internet ecosystem companies "to discover and disrupt use by malicious cyber actors of the platforms, systems, services, and infrastructure of such companies."[4] The spectrum of attacks include ransomware, distributed denial-of-service (DDoS), and supply chain attacks, frequently used by Russian groups such as with the high-profile attacks on Colonial Pipeline and SolarWinds. US businesses and critical industries remain dangerously unprepared for cyberattacks and ill-staffed. The shortage of cybersecurity professionals in the US, by some estimates, is over 597,000 as measured by total cybersecurity job openings. A report by the International Information System Security Certification Consortium, or (ISC)², found that 377,000 cybersecurity professionals are needed to address the workforce gap.

Figure 81: Of the 16 US critical infrastructure sectors, Healthcare was targeted the most by ransomware



Source: FBI IC3 Internet Crime Annual Reports, J.P. Morgan Strategic Research

In 2021, cybersecurity authorities, including the Cybersecurity & Infrastructure Security Agency (CISA), saw an increased globalized threat of ransomware after the FBI's Internet Crime Complaint Center (IC3) reported ransomware attacks against 14 out of 16 US critical infrastructure sectors in 2021 with the Healthcare and Public Health sector targeted the most (Figure 81).

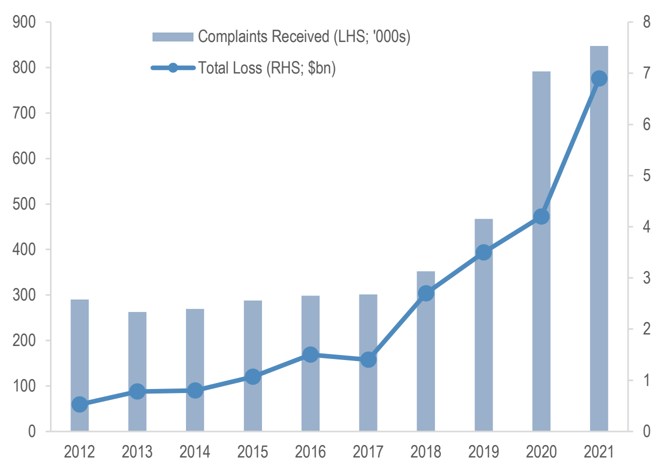
Cybersecurity costs continue to escalate

Cyber threats remain a race that will never finish because the technology continues to advance. Cybersecurity Ventures estimates that costs related to cybercrime will reach $10.5trn a year by 2025 from $6trn in 2021. Meanwhile, global cybersecurity spending was up 13% in 2021 to reach $172bn according to Gartner which also forecasts 11% growth in 2022 and 2023. The federal government cybersecurity budget for FY 2022 is miniscule by comparison at somewhere between $14.4bn and $20bn. The Infrastructure Investment and Job Act, which became law in November 2021, includes close to $2bn for cybersecurity.

[2] Russia's Use of Cyberattacks: Lessons from the Second Ukraine War, Foreign Policy Research Institute, 7 Jun 2022
[3] See NATO will defend itself, Article by NATO Secretary Jens Stoltenberg, 27 Aug 2019
[4] A Shared Responsibility: Public-Private Cooperation for Cybersecurity, CSIS, 22 Mar 2022

The government is taking action to address the growth of ransomware and Ransomware as a Service (RaaS) models, which have been fueled by the proliferation of cryptocurrency and stablecoins. Chainalysis has identified $1.3bn worth of cryptocurrency received by ransomware addresses since the start of 2020. Last year, nearly 75% of cryptocurrency payouts for ransomware went to Russia, according to a study conducted by Chainalysis. In response to concerns that Russia will "monetize its natural resources" for crypto mining to evade sanctions, OFAC included Russian bitcoin miner BitRiver in the list of sanctioned entities. On May 4, 2022, IC3 issued a public service announcement warning US companies of Business Email Compromise (BEC) attacks which has become a $43bn scam and which uses a variety of social engineering and phishing techniques to break into accounts. In its annual Internet Crime Report, IC3 has received 4.2mn complaints with over $23bn in total reported losses over the last 10 years due to cybercrime (Figure 82). For the remainder of 2022, three of the biggest threats businesses can continue to expect to see are ransomware along with mobile device malware and attacks on internet infrastructure according to the Sophos 2022 Threat Report.

Figure 82: 4mn cybercrime complaints tracked in the US with over $23bn in total reported losses over the last 10 years



Source: J.P. Morgan Strategic Research, FBI IC3 Internet Crime Annual Reports

A flurry of cybersecurity bills but few advance

The 117th Congress has so far introduced 500 pieces of cyber-related legislation. Yet, only 13 have been passed by the House and Senate and just 9 have become law[5]. The more notable bills include the ***Cyber Incident Reporting for Critical Infrastructure Act of 2022*** which was passed as part of the omnibus spending bill in March and includes mandated cyber-related incidents reporting from critical infrastructure entities and federal agencies including ransomware payments information to CISA no later than 72 hours after the incident has occurred or within 24 hours if a ransomware payment was made; the ***Better Cybercrimes Metric Act*** signed into law on May 5 would improve how the federal government tracks, measures, analyzes and prosecutes cybercrime through a new taxonomy to categorize different types of cybercrime and cyber-enabled crime. That taxonomy will feed into the National Incident-Based Reporting System to collect cybercrime and cyber-enabled crime reports; the ***National Cybersecurity Preparedness Consortium Act of 2021,*** signed into law on May 12, allows the Department of Homeland Security (DHS) to work with one or more consortia composed of nonprofit entities to develop, update, and deliver cybersecurity training in support of homeland security; and the ***State and Local Government Cybersecurity Act of 2021***, allows federal authorities to conduct cybersecurity exercises with state and local entities and private companies, providing them with cybersecurity resources.

Market implications

While we believe that demand for cybersecurity solutions will remain robust despite macro headwinds, investors are likely to favor high-quality companies with a sticky customer base, healthy FCF generation and a clear path towards sustainable profitable growth. However, we are UW **Darktrace**, a provider of AI-led cybersecurity solutions, given the combination of reputational risks associated with links to Autonomy and the overhang from stock held by employees and pre-IPO shareholders which should lead Darktrace to continue to underperform its peer group (see *Darktrace: Reputational risk muddies the investment case further; reiterate UW*, Varun Rajwanshi, CFA, 24 May 2022).

Cyber insurance is one of the fastest-growing markets in European insurance, growing 27% CAGR between 2017 and 2021, and likely to grow even faster in the coming years. Our analysts flag **Beazley** (OW) and **Munich Re** (OW, AFL) as the two best positioned names to play the cyber insurance theme despite short-term concerns about profitability and risk in the market, as they see these players as best placed to take advantage of rapidly increasing prices and a less competitive backdrop in the class in the coming years (see *First principles – Cyber Insurance: High-growth market with long-term tailwinds* and *European Non-Life Insurance: Cyber insurance – Beazley and Munich Re best positioned*, Kamran M Hossain, 20 Apr 2022).

In the US, cyber insurance is a small proportion of the property and casualty insurance market currently, but policymakers are supportive of the use of insurance as a

[5] See U.S. cybersecurity congressional outlook for the rest of 2022, CSO United States, Cynthia Brumfield, 7 Jun 2022

non-regulatory mechanism that creates incentives. The US Cyberspace Solarium Commission report recommends trying to shape the insurance market as a way to incentivize the implementation of better cybersecurity practices. On a cautious note, risks and losses seem to be increasing as well and underwriting results vary considerably by carrier, a trend we expect to continue. Unless insurers tighten terms/conditions, losses could increase at an even faster pace than premiums. We believe that **Chubb**, **Hartford**, and **Travelers** are the best positioned underwriters to benefit from the hard market and ongoing growth in the cyber insurance business. Brokers such as **AON**, **MMC**, and **RYAN** are even bigger beneficiaries, and can participate in the market's growth without exposure to uncertain loss trends. Of these names, we are currently OW Hartford as the company has multiple catalysts for upside, including progress towards management's margin expansion goals, cost savings, and share buybacks and UW Travelers given an expected modest ROE, mixed outlook for business trends and the stock's relative valuation (see *Property & Casualty Insurance: Cyber Insurance Market: Growth Potential Attractive, but Profitability Uncertain*, Jimmy Bhullar, 7 Dec 2021).

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Put Sale: Investors who sell put options will own the underlying asset if the asset's price falls below the strike price of the put option. Investors, therefore, will be exposed to any decline in the underlying asset's price below the strike potentially to zero, and they will not participate in any price appreciation in the underlying asset if the option expires unexercised.

Call Sale: Investors who sell uncovered call options have exposure on the upside that is theoretically unlimited.

Call Overwrite or Buywrite: Investors who sell call options against a long position in the underlying asset give up any appreciation in the underlying asset's price above the strike price of the call option, and they remain exposed to the downside of the underlying asset in the return for the receipt of the option premium.

Booster : In a sell-off, the maximum realized downside potential of a double-up booster is the net premium paid. In a rally, option losses are potentially unlimited as the investor is net short a call. When overlaid onto a long position in the underlying asset, upside losses are capped (as for a covered call), but downside losses are not.

Collar: Locks in the amount that can be realized at maturity to a range defined by the put and call strike. If the collar is not costless, investors risk losing 100% of the premium paid. Since investors are selling a call option, they give up any price appreciation in the underlying asset above the strike price of the call option.

Call Purchase: Options are a decaying asset, and investors risk losing 100% of the premium paid if the underlying asset's price is below the strike price of the call option.

Put Purchase: Options are a decaying asset, and investors risk losing 100% of the premium paid if the underlying asset's price is above the strike price of the put option.

Straddle or Strangle: The seller of a straddle or strangle is exposed to increases in the underlying asset's price above the call strike and declines in the underlying asset's price below the put strike. Since exposure on the upside is theoretically unlimited, investors who also own the underlying asset would have limited losses should the underlying asset rally. Covered writers are exposed to declines in the underlying asset position as well as any additional exposure should the underlying asset decline below the strike price of the put option. Having sold a covered call option, the investor gives up all appreciation in the underlying asset above the strike price of the call option.

Put Spread: The buyer of a put spread risks losing 100% of the premium paid. The buyer of higher-ratio put spread has unlimited downside below the lower strike (down to zero), dependent on the number of lower-struck puts sold. The maximum gain is limited to the spread between the two put strikes, when the underlying is at the lower strike. Investors who own the underlying asset will have downside protection between the higher-strike put and the lower-strike put. However, should the underlying asset's price fall below the strike price of the lower-strike put, investors regain exposure to the underlying asset, and this exposure is multiplied by the number of puts sold.

Call Spread: The buyer risks losing 100% of the premium paid. The gain is limited to the spread between the two strike prices. The seller of a call spread risks losing an amount equal to the spread between the two call strikes less the net premium received. By selling a covered call spread, the investor remains exposed to the downside of the underlying asset and gives up the spread between the two call strikes should the underlying asset rally.

Butterfly Spread: A butterfly spread consists of two spreads established simultaneously – one a bull spread and the other a bear spread. The resulting position is neutral, that is, the investor will profit if the underlying is stable. Butterfly spreads are established at a net debit. The maximum profit will occur at the middle strike price; the maximum loss is the net debit.

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