October 2021

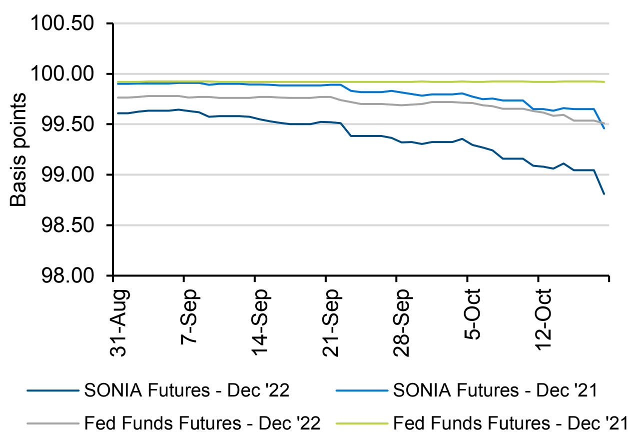
Multi-asset Market Update

Equity market

As any humble history major will remind you, “the shot heard ‘round the world” refers to the battles of Lexington and Concord, which began the American Revolutionary War in 1775. However, Britain may have returned that volley in monetary policy terms earlier this month.

Markets price short-term Sterling interest rates via SONIA futures, which are the equivalent to Fed Funds futures for the US. As global central banks’ rhetoric began shifting tone on current inflation dynamics from “transitory” to potentially more persistent beginning in late September, short-term rate futures in both the UK and US declined for the December 2022 maturity (i.e., the probability of rate hikes by December 2022 went up). Then the Bank of England became more aggressively hawkish, suggesting the possibility of rate hikes in the near-term, and both the December ’22 and December ’21 SONIA futures took notice. Given the typically low volatility of these instruments, the moves over recent days are significant.

Figure 1 – Short-term interest rate futures

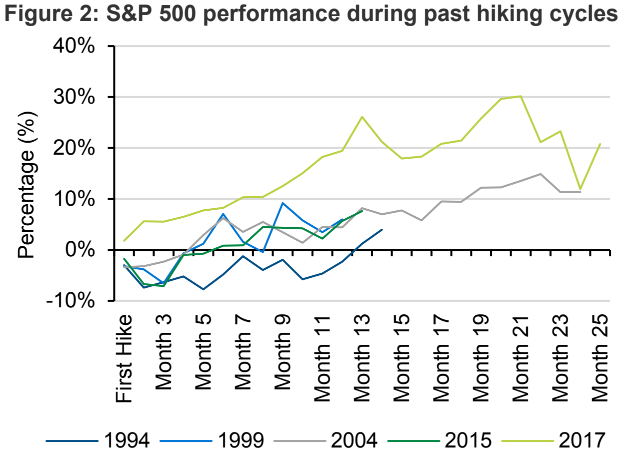


Source: Bloomberg, data as of October 18, 2021.

Coincidentally, Fed speakers have continued to shift expectations about current inflation dynamics. Earlier this year as inflation began picking up, the belief was that it would be transitory (owing both to base effects and temporary dislocations from the pandemic) and not broad-based. In fact, many discussions and analyses focused on median or trimmed versions of inflation metrics to exclude outliers. But now, as these central measures persistently rise, the Fed and markets may have to recalibrate not only their words but also their actions.

For example, the Fed “dot plot” was slightly higher on average at the September meeting than at previous meetings, but nevertheless showed that the Fed’s most likely scenario is not to hike until late-2022 or early-2023. *Figure 1*, which shows market pricing, is consistent with that notion. However, just this week, short-dated interest rate volatility markets began pricing in significantly more volatility over the coming months (more on this in the interest rate volatility section). Our interest rate strategists repeatedly illustrate that inflation is a global dynamic. So, if short-term rate markets outside the US and short-term rate volatility in the US are starting to become wary of more nefarious inflation, it seems prudent now to prepare for that possibility.

Figure 2: S&P 500 performance during past hiking cycles



Source: Bloomberg, data as of October 18, 2021.

To be clear, our forecast is not for Fed hikes this year nor for runaway inflation. And, to be fair, rising inflation and rate hikes have not troubled equity markets in most historic scenarios. However, the early-1970s (of which probably very few readers have an active memory) are sometimes presented as an analog. Then, such as now, inflation pressure was driven from the supply side. Now, unlike then, the supply constraint seems mainly to be in labor. Then, more oil could be pulled from the ground. Now, with labor markets already tight, we cannot pull more workers from the ground, as we are also not forecasting a zombie apocalypse.

We are on the lookout for rising real rates (rather than break-evens), and we anticipate that high interest rate volatility could lead to higher risk asset volatility. For corporate pensions, this implies potentially higher funded status but a turbulent path to get there. As we recently estimated that averaged funded status is around 90%, we think it may be particularly prudent to think about asset allocation along fund status glide paths, equity hedging and/or other approaches to buttress those balance sheets. We have seen an uptick in client appetite for more sophisticated approaches to equity hedges and more moves to "buy-and-maintain" cash flow matching credit mandates. We believe these moves will better help those plans meet their end game objectives.

Equity volatility

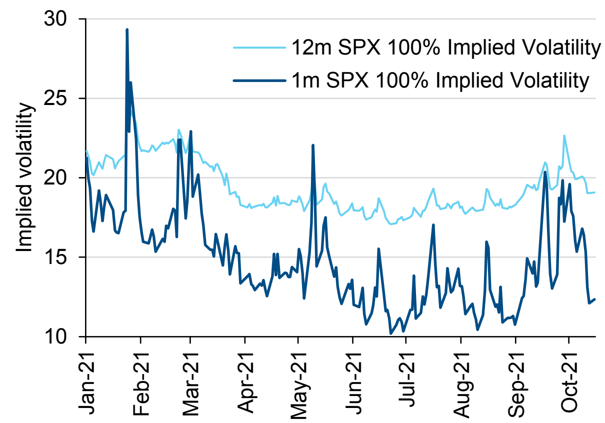
Over the past month, US equities have risen modestly while exhibiting elevated realized volatility. Many of the themes from past months prevail. Equity option implied volatility remains cyclically elevated, as is skew (puts vs calls). Recently, however, as the stock market bounces from a near 6% dip from all-time-highs, realized daily percentage moves were large enough that the implied versus realized volatility risk premium that had otherwise prevailed all year was temporarily compressed. Ultimately, though, calm prevails for now and carry has remained nervously profitable.

Despite elevated realized volatility, the entire implied surface has softened with a widening term structure, where shorted dated contracts implied levels are lower than those of the longer dated ones. For example, one to three-month maturities are approximately 12-16%, 6-month around 17%, and 1-year and out north of 19%.[1]

This dynamic continues to reflect what we have been describing for some time as sticky longer dated contracts which continue to price in sustained stress since the COVID-19 crisis began, while the shorter dated contracts yet allow for brief pockets of calm.

As year-end rapidly approaches, we continue to roll forward protective exposure for clients into 2022, especially when considering overall favorable pricing to common collaring strategies. Additionally, however, in some circumstances we have taken on outright hedges to protect year-to-date gains within allotted budgets. We also continue to maintain and monitor systematic strategies to find the right balance of cost and benefit as applicable to each plan's position and exposure.

Figure 3: S&P 500 Implied Volatility



Source: Bloomberg, data as of October 18, 2021.

Rates market

Figure 4 - US rates environment

Index	10/18/2021	One month ago	Three months ago	One year ago
Fed Funds Rate	0.25	0.25	0.25	0.25
2y	0.43	0.22	0.22	0.15
5y	1.17	0.86	0.77	0.33
10y	1.60	1.36	1.29	0.77
30y	2.03	1.90	1.92	1.56

Source: Citi, data as of October 18, 2021.

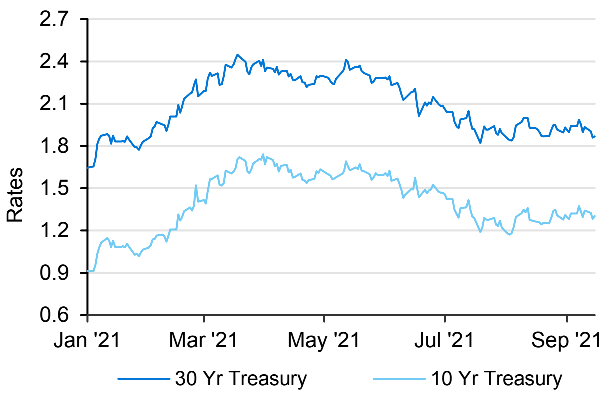
A hawkish surprise from the September FOMC meeting sparked a selloff as front-end rates hit new post-COVID-19 highs and the yield curve flattened. The updated dot plot showed nine members now see at least one rate hike in 2022. Additionally, the statement indicated that tapering was likely to start this year, as early as the November meeting. At the ensuing press conference, Chair Powell reinforced this message, even went as far as to suggest that tapering could be concluded by mid-2022. While Powell made it a point to emphasize that the end of tapering is uncorrelated to the start of hiking, the market did start to pull forward its expectation of rate hikes.

By the end of the week, 2-year and 5-year Treasury rates had hit new local highs. Although some of the exuberance of the optimistic Fed meeting was tempered by the evolving story of China's Evergrande potential to default on some of their $300bln of debt.[1] Going into month-end, the curve twist steepened as concerns mounted around the looming debt ceiling issues the US would face in October. The 5-year Treasury rate closed out the month at 0.96 while the 30-year rate was at 2.04%, the first month end closing above 2% since June.[1]

October started with the yield curve bear steepening as macro data came in as expected to slightly above expectations, while the Senate reached a deal on a $480bln debt limit increase, and the ECB minutes mentioned “inflation” more than 100 times. While the September payroll print came in lower than expected (+194k jobs increase vs +500k consensus), the unemployment rate dropped to 4.8% from 5.2% the prior month and the market interpreted this as further support for the Fed to commence tapering and rate hikes sooner rather than later.[1]

From there, crude oil prices rose above $80 per barrel for the first time since 2014 and the market began to seriously question whether the recent inflationary pressure is still transitory or something that’s here to stay.[1] CPI prints came in high while PPI prints came in a bit low, but overall inflation surges continue to be a global concern. Consumer demand rebounded quickly, but supply chain bottlenecks, paired with increases in raw materials and energy prices, have made it difficult to meet that demand and keep prices stable.

Figure 5: US Treasury rates



Source: Bloomberg, data as of October 18, 2021.

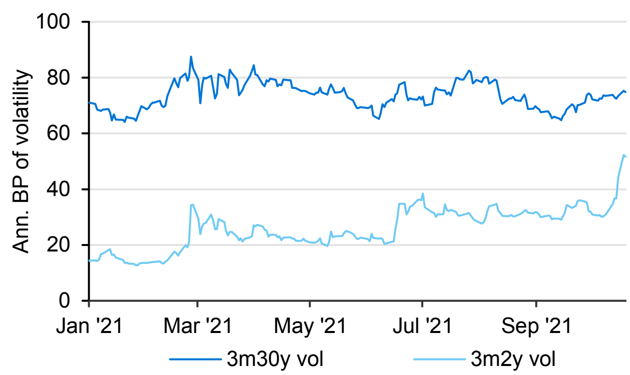
In the past week alone, the 5s30s treasury curve flattened 10 basis points, as the front end continues to hit new highs.[1] The 5-year Treasury rate is currently trading at 1.16 while the 30 year is at 2.08, while the December 2022 Eurodollar contract is now pricing in roughly 2.5 hikes by the end of next year.[1] All eyes will be on the major central banks for guidance, with particular focus on the Fed’s November 3 meeting for potential tapering announcements and further discussions of recent inflation concerns.

Rates volatility

Not surprisingly, the turbulence in rates markets over the past month was evident in moves in the rates volatility market. For the most part rate volatility traded in tandem with rate levels, while increased inflation concerns and the pull forward of rate hike expectations put a spotlight on the upper left over the past two weeks. Rate volatility was a total rollercoaster in the wake of the Fed meeting and ensuing selloff over the next two days. Even with the hawkish surprises from the meeting and upward moves in the dot plot, the immediate reaction to Fed projection release was a flood of selling from fast money accounts. 1m10y was hit down 7 annuals and 3m10y was hit down 3.5 annuals.[1] The only volatility that was unchanged to slightly up were options on 1y and 2y tails, which rose with the sell-off in the Eurodollar contracts.[1]

The post FOMC selling was short lived, however, and by 3PM Eastern time, broker screens for rate volatility were all bid on without offers. However, for the most part, overall volatility was lower on the day. All those moves lower in volatility were quickly reversed out the next day, given that there was an intraday 2-3 standard deviation move in rates across most of the curve. Rate volatility peaked locally with rates near the end of September and then grinded lower as yield levels came back down going into month-end.

Figure 7: Volatility spreads



Source: Citi, data as of October 18, 2021.

Figure 6: Rate volatility

Exp/Tail	1Y	Change	2Y	Change	5Y	Change	10Y	Change	30Y	Change
1M	30.0	*16.1*	50.1	*25.6*	70.8	*12.2*	76.9	*7.6*	77.2	*10.1*
3M	33.4	*12.9*	51.9	*17.4*	71.1	*9.9*	74.6	*3.8*	75.1	*6.2*
6M	43.5	*17.6*	58.8	*17.3*	72.8	*10.3*	74.8	*4.6*	74.2	*6.0*
1Y	61.9	*21.8*	73.0	*20.6*	76.6	*10.5*	75.3	*4.7*	72.5	*4.5*
2Y	78.1	*15.4*	79.1	*12.3*	78.0	*7.9*	74.7	*4.0*	69.6	*3.6*
3Y	82.7	*10.2*	80.3	*7.9*	77.4	*5.8*	73.8	*3.4*	67.4	*2.9*
4Y	81.1	*6.8*	79.3	*6.0*	76.4	*4.5*	72.7	*3.3*	65.8	*2.9*
5Y	79.5	*5.8*	78.0	*4.3*	75.8	*4.0*	71.5	*2.9*	64.1	*2.6*
7Y	75.4	*4.0*	74.6	*3.4*	72.6	*2.8*	68.5	*2.5*	60.4	*1.6*
10Y	69.5	*1.9*	69.2	*2.4*	67.1	*2.1*	63.9	*1.7*	56.0	*1.0*

Source: Citi, data as of October 18, 2021.

Then, October saw the front-end selloff and upper left volatilities were bid through the roof. This Monday alone implied volatilities on the upper left shot up 16 annuals, which is pricing in an additional 1bp/day movement.[1] These volatilities are starting from low levels, so 3m2y volatility was at 30abpv a week ago and is now at 53.[1] The last time we saw this level in volatility was pre-COVID-19 when the 2-year rate was 100 basis points higher.

Broker screens saw bids continuing to escalate with no offers in sight and nothing really trading. There were 2 main drivers for this volatility move - the first is the market pulling Fed hikes forward. But more importantly the street seems to be very short gamma in these structures at these levels. This summer saw significant end user 1x2 buying a few months ago in front end structures, which were initially bearish trades that profited from rates selling off but not pricing in more than 2 hikes by the end of next year.

Banks then offloaded these high strike payers (the "2" leg of the structure) to mortgage servicers. As of October 20th, the December 2022 Eurodollar contract is now pricing in about 2.5 hikes, so both customers and brokers are short gamma.[1] Thus, the bulk of the trades going through in the volatility run up on Monday were stop outs. There have also been stop outs in conditional bear steepeners, which was an attractive trade given the flatness of the forward curve, but the spot and forward curves continue to flatten and stop losses are getting hit, leading to even more demand for upper left high strike options for unwinds.

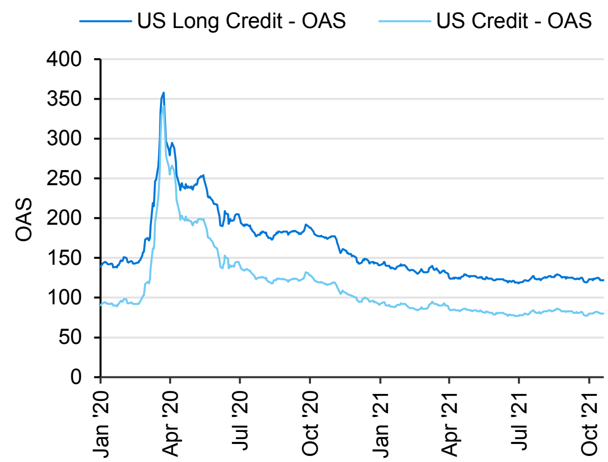
The rest of the volatility surface moved higher in sympathy – gamma on 10-year and 30-year tails was up 2-5abpv and up 6-7annuals in 1-month expiries on the day, which was a bigger one day jump than when we were seeing the 30-year move 15 basis points a day in late September or when the 1m expiries picked up new FOMC meetings.[1] Even though 10-year and 30-year rates were essentially unchanged on the day – and well short of the highest yields of the year – when gamma on short tails jumps by double digits it's hard for other tails to not move up as well.

Longer dated vega was more subdued. While demand for vega in short tails was well bid along with the rest of the left-hand side of the surface, lower right volatility is up about 1-2 annuals on the month, fueled in part by client demand. Program sellers have been staying on the sidelines this week with large jumps in rate volatility but if it stays elevated we could see some cautious sellers entering the market.

Credit market

US Credit Spreads have moved in a range-bound manner throughout the first few weeks of October. Bloomberg US Long Credit Index widened out to as high as 125 basis points in the middle of the month, before tightening to late-September levels.[1] A-rated credit has recovered from the marginal underperformance experienced throughout August and September, while the ratio of BBB-to-A-rated spreads at the long end is back to trading at the 5th percentile. On a sector-by-sector basis, energy has outperformed over the past month, with WTI Crude now above $80, while TMT Companies have underperformed the market. As of October 20th, the Bloomberg US Long Credit Index OAS currently stands at 121 basis points, which is 1-2 basis points tighter on the month, and 20 basis points tighter on the year.[1]

Figure 8: US credit spreads



Source: Bloomberg, data as of October 18, 2021.

US GDP forecasts continue to decline for the remainder of the year, as impacts from the Delta variant and ongoing capacity constraints have negatively impacted consumer spending. These impediments have led to lingering concerns from economists and investors, alike. Furthermore, financial conditions have begun to modestly tighten as higher inflation levels have recently put upward pressure on real yields. The Fed and other major Central Bank officials have signaled their intention to begin tapering; we anticipate a formal announcement to occur as early as the November FOMC. The bottom line is that the mix of growth and inflation is less favorable relative to a few months ago; however, growth remains above trend, and we continue to anticipate 2022 GDP forecasts to rise.

In September, higher than expected issuance led to increased concessions, especially at the end of the quarter. Month-to-date, we have seen an additional $64 billion come to market, bringing the total issuance for the year to $1,174 billion. The third quarter saw a record amount of issuance for LBO's, specifically; however, the pipeline for future deals seems light. On the demand side, flows into Mutual Funds turned negative as rates rose, but we saw a noticeable pickup in overnight demand from Asia. The path forward is opaque, as lower expected supply towards the end of the year could act as a positive catalyst, but higher rates could potentially serve as a headwind for investor demand.

From an international perspective, Evergrande continues to rattle the Chinese property sector, as the conglomerate has struggled to service its recent debt payments. This area will be important to watch, as some market participants expect the issue to be isolated, while others anticipate widespread market contagion. On the domestic front, US Congress managed to avert the debt ceiling crisis, but both government funding levels and infrastructure legislation remain unsolved to date.

In terms of corporate strength, early indicators for Q3 earnings season suggest that upside surprises will be more limited compared to previous quarters. Rising input costs, increased labor costs and global supply chain bottlenecks could act as headwinds to industries across the spectrum. Given the various geopolitical, macroeconomic and corporate concerns, our outlook for the US Credit Market remains moderately bearish going forward.■

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1. Bloomberg