August 2021

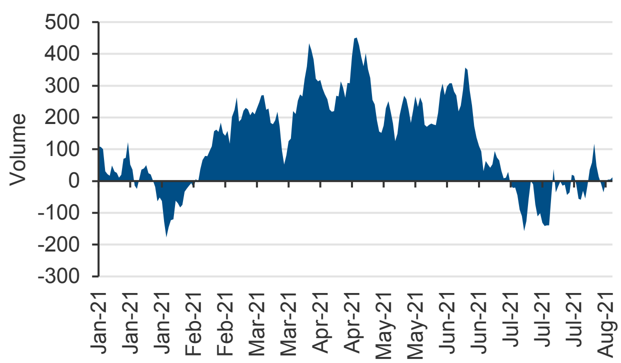
Multi-asset Market Update

Equity market

August has been characteristically quiet in markets. Realized volatility of the S&P 500 using short observation windows has declined from about 15% to 5% annualized since our last publication.[1] We attribute the lack of movement in part to the typical summer vacation cycle, which can mean fewer people trading or allocating and doing so on much smaller risk budgets. However, as noted by our senior equity volatility portfolio manager on one of this week's morning calls, there is also an element of dispersion that is keeping a lid on realized volatility. This occurs when some sectors or stocks rise significantly while others fall significantly, such that there may be more extreme moves below the surface, but the index is little changed overall.

There are a few other intriguing aspects of the recent, muted index price action, as well. First, let's remind ourselves that the S&P 500 total return is a sneaky +20% year-to-date. But market breadth, i.e., various measures of how many stocks are going up against how many are declining, has been terrible. This means that very few stocks are supporting indices (not just the S&P 500) steady advances to higher all-time highs.[1]

Figure 1 – NYSE advance-decline (30dma)
Above zero - more stocks rising; below zero - more stocks falling

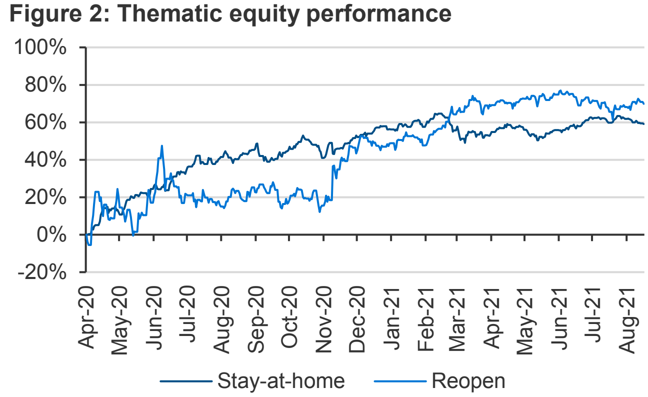


Source: Bloomberg, data as of August 16, 2021.

One intuition behind the narrow leadership of broad market advances might be that discerning investors are more carefully picking names that could benefit from a post-pandemic, mid- to late-cycle environment. However, trading counterparty data doesn't necessarily support this. Morgan Stanley highlighted the relentless flows into ETFs; Deutsche Bank demonstrated that institutional equity futures and ETF holdings remain very elevated; and equity derivative pricing continues to be quite rich for adding additional synthetic long exposure. All those factors point to high participation in, and continued demand for, generic equity index beta from institutions and retail investors alike.

Another explanation could be that lingering pandemic concerns are greater than we'd wish after a more normal early summer. However, thematic equity baskets from Goldman Sachs that seek to benefit either from economic reopening or staying at home show that the stay-at-home basket has performed relatively worse during the recent uptick of delta-variant cases. Said differently, we would otherwise expect pandemic-related worries to translate into stay-at-home outperformance.

Figure 2: Thematic equity performance



Source: Bloomberg, data as of August 16, 2021.

Our bullish medium-term outlook on equities was recently downgraded as we are quite skittish about the prevalence of delta in China and implications for growth both in China specifically and globally. However, the pattern of narrow breadth with broad participation could also be a classic sign of bull market exhaustion, regardless of (or in addition to) virus-related growth risks. And—with more to come below—the elevated risk premia in options markets belies potential complacency through the short-term as investors await any potential clarity on conflicting underlying equity index dynamics. In short, we are stuck again somewhere between FOMO and avoiding "Oh, no!" with no obvious resolution to that tension on the immediate horizon.

Equity volatility

Since last month, US equities are modestly higher while volatility conditions have continued to diverge between what is implied by the option market and what is subsequently occurring in the market. Therefore, while we believe implied volatility is "rich," we also believe that there is room to interpret some complacency in the very shortest dated maturities.

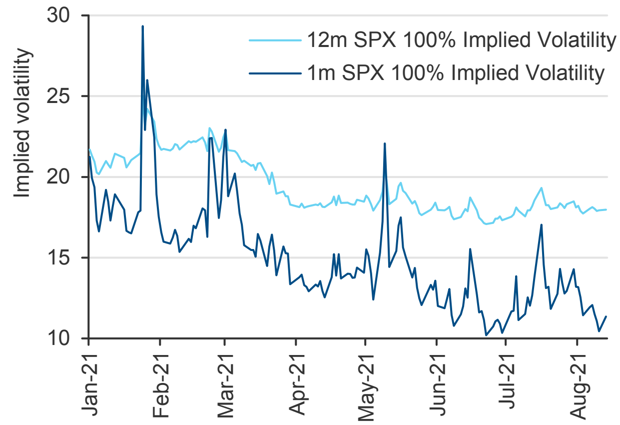
Despite the equity market rising amidst very low realized volatility, conditions which would typically lead one to expect a calmer option market, at-the-money implied volatility has risen between 0.5-1.0 volatility points and has steepened further still. For example, while 30-day realized volatility continues to hover around COVID-19-era lows of about 10% annualized, two- to three-month implieds are at a material premium to that at around 15-16%.[1]

On the other hand, as pictured, the very shortest maturities of the implied volatility term structure (30 days or less) continue to widen against stickier longer dated pricing, proxied by the one-year maturity point. We have been highlighting this widening of front implied volatility declining more relative to the back throughout the past few months, and the dynamic has become quite pronounced most recently.

Overall, we interpret this juxtaposition as the option market likely contributing to stabilizing risk market conditions due to a reasonable amount of volatility already "priced in" over the medium term, yet also note that the very front of the term structure may be pricing in too much of a summer lull.

While client activity has continued to revolve around longer dated and strategic overlays, we have recently implemented and observed greater attention to more tactical shorter dated hedges (particularly to lock-in gains for the year). We also observe clients seeking more solutions that relate cross-asset derivatives and alternatives that could more precisely suit plan conditions and use pricing discrepancies to fit them more appropriately.

Figure 3: S&P 500 implied volatility



Source: Bloomberg, data as of August 16, 2021.

Rates market

Figure 4 - US rates environment

Index	08/16/2021	One month ago	Three months ago	One year ago
Fed Funds Rate	0.25	0.25	0.25	0.25
2y	0.21	0.22	0.15	0.15
5y	0.76	0.77	0.81	0.29
10y	1.27	1.29	1.63	0.69
30y	1.93	1.92	2.34	1.43

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

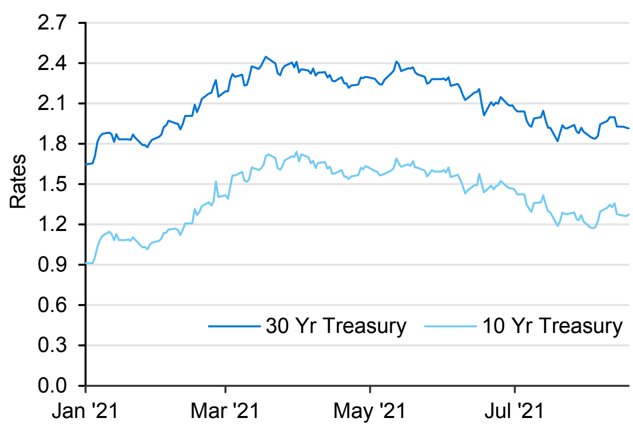
June CPI continued the trend of surprising to the upside, spurred on by gains in products that benefit from reopenings, such as lodging and airfare, causing the curve to flatten and pivot around the 5-year point. Later in the week in his testimony to Congress, FOMC Chair Powell emphasized that inflation is transitory. When pressed by questioning, he noted that while the Fed will adjust their monetary policy as information and data comes in (such as inflation pressures persisting in non-reopening-sensitive categories), they believe that PCE will be back near 2% by 2022. The final auction of the 30-year May bonds tailed 2.4 basis points, but real money accounts quickly came in to buy at those levels.[1]

The July FOMC meeting two days before month end did not have much impact on the market. While the accompanying statement noted the recovery "continues to strengthen," they tempered this by noting that some sectors "have not fully recovered." They also optimistically (and hopefully not prematurely) changed their wording to note that the path of the economy "depends" on the course of the virus rather than "depends significantly." The Fed also announced they are establishing domestic and international standing repo facilities. Leading up to month end the initial 2Q GDP number came in at +6.5% growth, well short of the 8.4% consensus estimate, but the rates market seemed relatively unfazed by the data.

August got off to a rough start with growing concerns about the impact of the delta variant. These concerns, coupled with data misses in ISM manufacturing and ADP, led to a risk off rally that saw the 10-year rate reach 1.12 and the 30-year rate drop to 1.80. The market took a decidedly bearish tone later in the week on some unexpectedly hawkish comments from Fed Vice Chair Clarida. He stated (albeit with some caveats) that if growth data remains strong, the Fed could announce tapering of their monthly bond purchases this year. He also said he sees liftoff from the zero lower bound of rates happening in 2023. A strong NFP print further fueled the selloff and rates ended the first week of August 5-6 basis points higher than month end.[1]

Rates have traded mostly sideways since then but with some volatility. Rates sold off headed into 10-year and 30-year supply last week, but this was counteracted by July CPI barely hitting expectations. This was interpreted as a disappointment, given the previous 4 prints had exceeded even the most optimistic expectations. Last Friday's University of Michigan Consumer Sentiment came in at the lowest level in a decade. That surprise, coupled with continued delta concerns and the Taliban takeover of Afghanistan immediately after the removal of US Troops, has led to a small rally this week with the 5-year rate currently at 0.77 and the 30-year at 1.92.

Figure 5: US Treasury rates



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

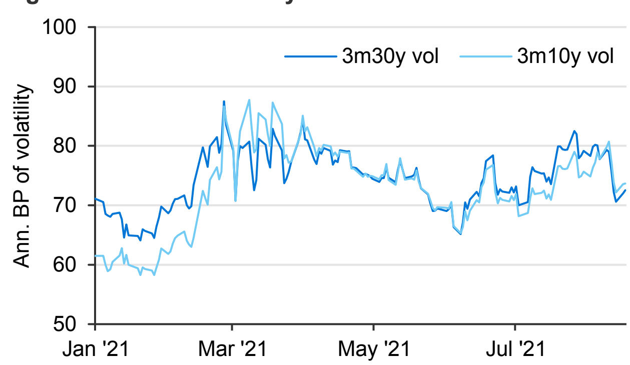
Rates volatility

During past month, rate gamma and longer dated rate vol are lower, while intermediates are slightly higher. However, there were certainly larger moves in implied vols getting to that point. In late July, as rates rallied to local lows, gamma saw a huge spike with 1y and in expiries rising 3-10 annuals across most of the surface. One-month trailing realized vol on 10-year and 30-year tails hit its highest level in a year and the front-end forwards, like 2y2y delivered vol, were at their highest since March.[1]

Dealers seemed to be short gamma, which exacerbated some of the moves lower in rate and pushed vols higher as rates continued to rally. But as the rally in duration subsided fast money accounts started selling and vol remained relatively unchanged, traded sideways with continued buying demand from mortgage accounts. The move lower in rates predictably led to a richening in higher strike skew, specifically in longer tails as the yield curve flattened. Vol remained elevated heading into the July FOMC meeting, but as the event passed without any real surprises, gamma dropped 1-4 annuals.[1]

Going into month end, the prevailing theme in rates options was limited bearish expressions – buying payer spreads or payer ladders in the long end that profit from rates going higher, but not higher than peaks we saw in March. High strike payers should remain well bid if the Fed speak continues to take a somewhat hawkish tone and there are more concrete discussions of tapering later this year.

Figure 7: Annual volatility



Source: Citi, data as of August 17, 2021.

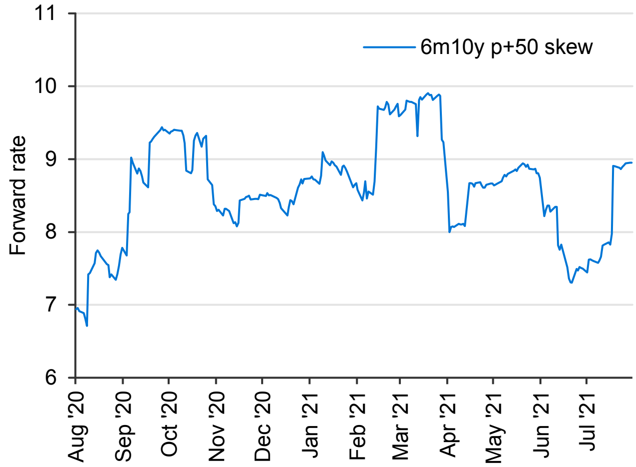
Figure 6: Rate volatility

P/Tail	1y	Change	2y	Change	5y	Change	10y	Change	30y
1M	**1M**	14.4	*-2.2*	26.3	*-4.8*	61.1	*-7.4*	74.2	*-8.5*
3M	**3M**	17.3	*-1.0*	30.4	*-0.2*	62.5	*-1.2*	73.9	*-2.9*
6M	**6M**	22.9	*-0.8*	38.2	*-0.5*	65.1	*-1.3*	73.5	*-0.6*
1Y	**1Y**	37.0	*-1.2*	50.1	*0.6*	67.4	*0.1*	72.1	*0.8*
2Y	**2Y**	60.3	*0.0*	65.6	*1.8*	70.7	*1.9*	71.4	*1.4*
3Y	**3Y**	69.9	*0.5*	70.9	*3.3*	70.9	*1.8*	70.3	*1.1*
4Y	**4Y**	72.7	*3.0*	72.8	*4.3*	70.8	*1.7*	69.2	*0.5*
5Y	**5Y**	72.5	*3.0*	72.8	*4.2*	70.5	*1.6*	68.5	*0.4*
10Y	**7Y**	70.4	*2.1*	70.9	*2.4*	68.9	*0.8*	66.2	*-0.2*

Source: Citibank, data as of August 17, 2021.

In August, there has been a big rotational move out of 30-year tails and into shorter dated tails. Even though payrolls surprised to the upside and rates sold off, we saw the biggest gains in vol the day prior, coinciding with the biggest move in real rates on the week. The options market showed some new-found faith in US growth and the reflation trade: high strike payers jumped up to the highest levels since April on 10y tails and in. These elevated levels held until the lackluster CPI print. Gamma took a significant hit in the wake of the data release and the selling continued through the next day's session. Overall gamma was down 1-7 annuals on the week with 30y tails underperforming, marking the second week in a row that 30-year tails underperformed – the first week as vols were going up and the second week as rates were going down.[1]

Figure 8: Volatility spreads



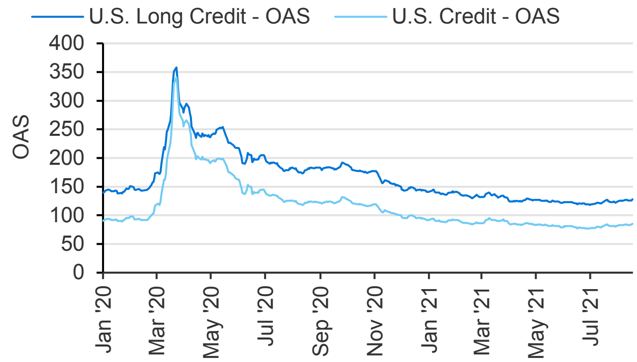
Source: Citi, data as of August 17, 2021.

Longer dated vega in the lower right is down about 1 annual over the past month. This is from a combination of dvega/drate dynamics of callable books getting longer in the selloff, the unwinding of forward vol trades (which in turn richened the intermediate expiries), and a surprisingly high $500mm of callable Formosa issuance in the past week.[1]

Credit market

During the first half of August, US Credit has traded modestly wider, as spreads have increased 3 basis points. The widening has been reasonably orderly as the ratio of BBB-A-rated spreads remains relativity low. Investors seem to be primarily concerned with the same suspects: the spread of the delta variant and persistent inflation. Although the trend over the past 2 months has been that of Credit widening, earnings have surprised to the upside and the benchmark is still 13 basis points tighter on the year at 128.[1]

Figure 9: US credit spreads



Source: Bloomberg, data as of August 17, 2021.

Valuations remain near all-time highs, although certain pockets of the macroeconomic outlook are starting to display cause for concern. Relative to forecasts made earlier this year, the recovery in services spending has fallen short of expectations due to capacity constraints and the Delta variant. While demand for entertainment services should eventually exceed 2019 levels due to pent up demand, this scenario is taking longer than expected to transpire. As a result, growth may be slower in 2021 than initially forecast. However, in a more positive light, the period of above-trend growth could be more prolonged.

Turning to the Fed, the trend of accommodative monetary policy held steady in July, as ample liquidity was seen in the credit market. After observing above-expectation payroll numbers last month, many anticipate the Fed to begin tapering sooner than expected. Consensus is that an announcement will likely be made at the September or November FOMC meeting. From a fiscal perspective, the infrastructure bill recently passed through the Senate. However, delays in the House are expected until a budget reconciliation deal is agreed between the two parties.

Recent developments in fiscal and monetary policy have resulted in heightened investor concerns, especially with respect to inflation. Supply has slowed, and new issues have struggled to attract demand in the market, as concessions are on the rise and oversubscriptions are near the lows since 2019. Both retail and foreign demand have steadied at modestly lower levels.

As 2Q earnings season draws to a close, initial expectations were exceeded by a wide margin. Revenue and earnings growth are on track for an increase of 25% and 85% respectively, relative to initial expectations of 18.5% and 62%.[1] Gross debt continues to contract, and the strength of first half earnings has helped the median investment grade company unwind almost all of the 2020 increases in leverage. This is a much faster improvement than anticipated at the start of the year. With that said, given escalating geopolitical concerns, lofty valuations, unattractive technicals and anticipated hawkish fed announcements, we have lowered our short-term outlook to moderately bearish for the foreseeable future.■

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1. Bloomberg