LGIMA's Multi-asset Market Update

June 2019

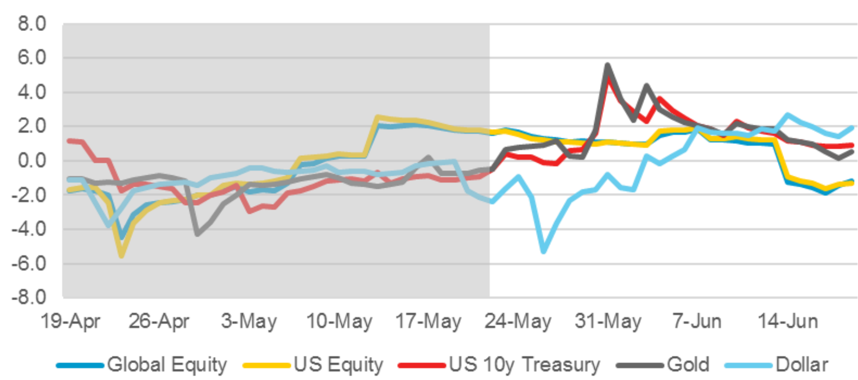
Equity market

The amplifier for Fed takes and economic analysis has been "turned up to 11" in the past few days, so please bear with the slightly longer than usual report this month as we simply "make ten louder" in an attempt to be more reasonable[1].

Indeed, some of the more senior members of our team commented that the June 19 Fed announcement was possibly the most intriguing since perhaps summer 2006, and our global economics and investment teams have been carefully dissecting other historical analogues such as the 1995 and 1998 rate cycles. However, after Wednesday's announcement, a logical debate of future scenarios seems nearly impossible amid the violent chart crimes that have flooded our inbox. The analyses show intriguing comparisons of, for example, S&P 500 drawdowns at the ends of hiking cycles or lagged unemployment with short-term interest rate expectations. We were unable to recreate these without significant manipulation of scales and time horizons, so we don't immediately share their extremely bearish conclusions. We retain our short-term neutral view of equities, although we remain a bit more constructive over the medium-term.

Last month, we set expectations for equity volatility to subside after the Trump tweet that reignited the trade tensions with China (it has). Further, we acknowledged that cross-asset volatility might be a good gauge of whether the placid economic environment could continue supporting equities. The chart below extends our analysis from the May 2019 report (shaded area). While off recent highs, we do note the increase in realized volatility of rates, gold, and the US Dollar.

Realized Volatility (30d, normalized)



Source: Bloomberg, LGIMA as of 6/20/19.

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[1]"This is Spinal Tap" (1984), see https://www.youtube.com/watch?v=KOO5S4vxi0o

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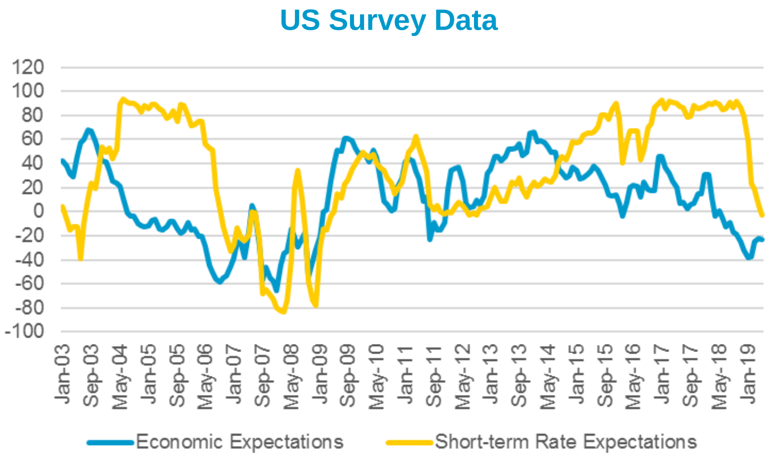
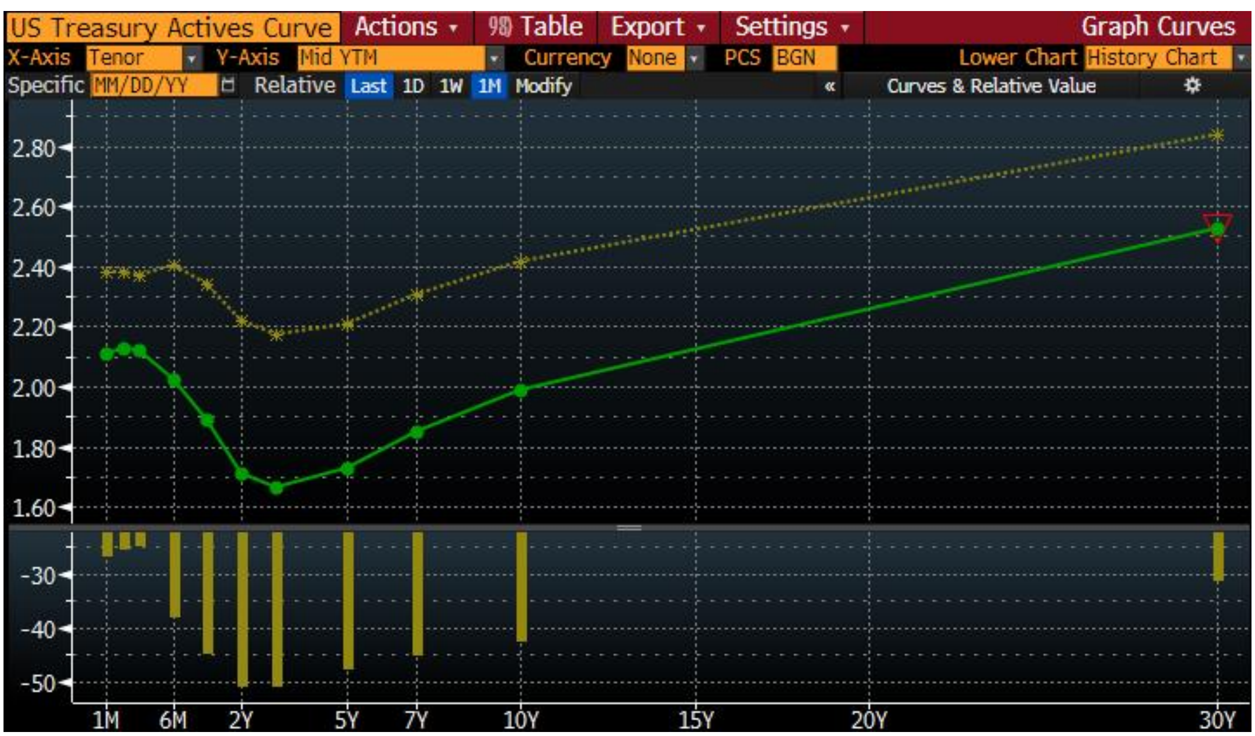
We believe that these are potentially important indicators because they may influence how we interpret growth, inflation, and nominal rates with respect to their support for equity markets, and because they could portend general economic uncertainty which would likely be damaging to the current economic cycle. For example, survey data on economic growth has been trending down for quite some time as the cycle has aged, but plummeting rate expectations are more striking.



Source: Bloomberg, LGIMA as of 6/20/19.

The decline in rate expectations is particularly obvious in Eurodollar futures or other markets that efficiently price very short-term rates, and the steepening of the yield curve (e.g. as commonly cited as the difference between US 10-year and 2-year Treasury yields) is well known. However, we find it somewhat concerning that much of the steepening is between the 6-month and 2-year points. A logical interpretation of both these rate dynamics could be that the market expects early Fed cuts (as indicated by the Eurodollar futures) in advance of declining economic activity (the significant decrease in rates 6-24mos out that would align with a typical bearish pivot in the cycle). This interpretation is not consistent with the bullish response of equities and credit spreads that we are witnessing in the immediate aftermath of the Fed, though.



Source: Bloomberg, LGIMA as of 6/20/19.

To make the current relationship between short-term rates and risk markets more believable, we think that these moves may reflect a change in the market's reading of the Fed's reaction function. Meaning, the Fed will cut preemptively to keep the party going like it's 1999 (or the late-90s more generally). As to the historical analogues:

- We do not believe that the US economy has slowed below trend as in 1995, although this example does support the idea of pre-emptive rate cuts.
- The risk of contagion and financial crisis is not immediately obvious as it was in 1998, although this example does support the idea of cuts to support the economy in the face of exogenous events (then it was Asian FX and Russian default, now it is perhaps trade and geopolitics[2]).
- We also struggle with what has changed since the December 2018 hike that would warrant doubling down on the dovish pivot.

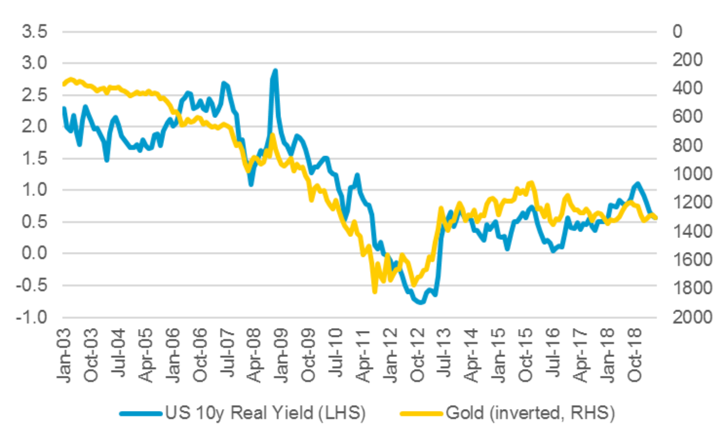
		S&P 500 Prev. 12 mos	Fed Funds	PCE (Core, YoY)	AHE	Unemployment	Subsequent Cuts	S&P 500 Next 12mos
06/30/1995	Jul-95	22.1%	6.0%	1.9%	2.8%	5.7%	-75bps (6mos)	26.0%
08/31/1998	Aug-98	8.1%	5.5%	1.4%	4.0%	4.4%	-75bps (3mos)	19.6%
11/30/2018	Dec-18	5.1%	2.1%	1.8%	3.4%	3.8%		
05/31/2019	Jun-19	3.1%	2.4%	1.2%	3.4%	3.9%		

Source: Bloomberg, LGIMA as of 6/20/19.

The bullish market response last week would set up well if the experiences of 1995 and 1998 repeated, however. There have also been several surveys this week noting higher degrees of bearishness across investors of all types, a typically contrarian (i.e. bullish) indicator. Positioning in equities has been conservative, indicated by net futures and put buying volumes. These three pieces of evidence add up to a potential chase if equities do continue to rally, especially into year-end as conservative positioning to date would likely cause investors and fund managers to lag performance benchmarks.

Short-term catalysts have kept us neutral on equities through 2Q19. However, our US economist's view of the Fed announcement included removing the risk of overtightening that we thought could lead to a recession earlier in 2020. Not only is that risk removed, but we also see an increased chance of a boom scenario given potential additional Fed stimulus.

We offer two ways to think about positioning for how this economy-rates-risk markets dynamic could unfold. First, we continue to look for opportunities to add risk in less constrained mandates. Another more cautious approach is adding (or merely maintaining) equity synthetically combined with hedges such as put spread collars. Second, we acknowledge the risk to a supportive medium-term view given the



Source: Bloomberg, LGIMA as of 6/20/19.

[2] As if on cue, saber-rattling headlines regarding Iran are hitting the tape as we write.

length of the cycle and the potentially increased economic uncertainty that we are wary of. As such, we are tactically long gold. Its price relates well to real rates (please forgive the chart), which we would expect to decline in the face of a deteriorating outlook. Further, it represents a safe haven against ongoing debt monetization and currency debasement (lest we fail to acknowledge the dovish ECB that preceded the Fed).

If you still wish to turn the dial to 11, please reach out with any interest in more detail behind the historical analogues or to discuss current positioning and hedging ideas.

Equity volatility

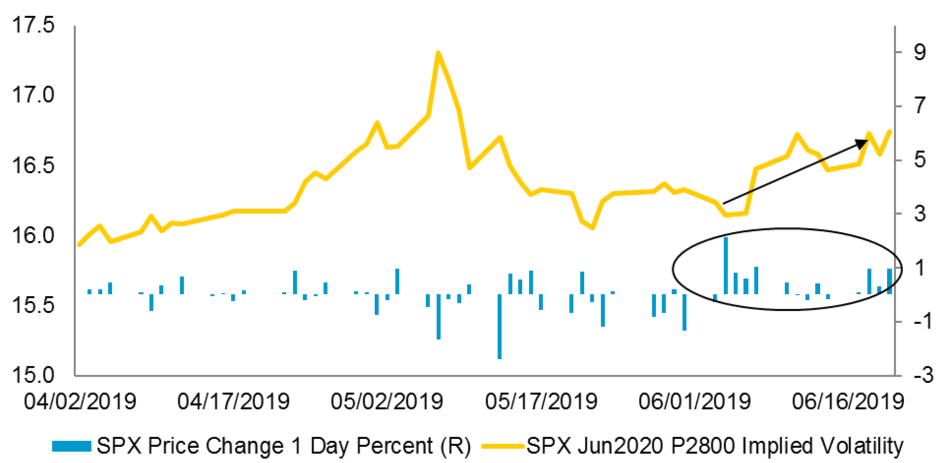
As the S&P 500 makes all-time highs and the VIX declines from above 19 to nearly 14, we want to highlight a dynamic often described as “spot-up vol-up.” Despite otherwise favorable changes to risk and liquidity, both skew and fixed-strike implied volatility ticked up and potentially express a subtle repricing of the option market’s price for risk.

As highlighted below, the S&P 500 sustained nearly uninterrupted daily percentage moves higher in spot, including a series of observations around or above one percent a day. This is known as “realizing to the upside,” meaning that the market is relatively volatile as it rises. Typically, the market moves up slowly, and declines quickly.

For a deeper look, one should recognize the difference between different types of risk parameters. For example, the VIX index is a calculation that places a higher weight on the at-the-money contract. Therefore, in the presence of skew, or lower strikes tending to have a greater implied volatility than higher strikes, a rising market will naturally interpolate a lower value to the VIX.

But due to the relatively volatile nature of the market ascent, implied volatility of the June 2020 2800 put has risen almost a full point. This is an expression of both skew steepening, and the market slightly repricing volatility risk higher.

Internally, we continue to implement new protective overlays to shape outcomes for clients seeking to manage future upside versus downside. Although the percentage strikes available in costless put spread collars have tightened, it is the absolute dollar level of spot at which the hedge is struck that dominates future hedge outcomes. With that in mind, we still highlight the attractiveness of these programs.



Source: Bloomberg, LGIMA as of 6/20/19.

Rates market

Dovish turns by the Fed and other global central banks have pushed long end rates to multi-year lows and steepened the yield curve to local highs. In late May, separate speeches from Fed members Bullard and Evans showed they were weary of the dangers of low inflation and made the case for the Fed cutting rates. This helped start a rally that continued through Memorial Day weekend with the EU elections and China taking a hardline stance against giving in to US demands on tariffs. After the market close on May 30, President Trump announced a new round of tariffs on Mexico in order to try to get the Mexican government to address the illegal immigration issue that was a pillar of his campaign. Rates gapped lower on the following open and continued to rally into the end of the day, with the 30-year Treasury rate closing out May at 2.57, down from 2.93 at April and nearly 90 basis points lower than the local high of 3.45 last November. Bunds also hit their lowest yields of all time, with the 10-year bund ending the day at -0.20. The US yield curve ended the month inverted at several key points – 2s5s was inverted in Treasuries, the 10-year rate traded below the three month rate, and the 5-year forward 5-year rate traded below the overnight GC funding rate. The 2s30s Treasury curve ended the month at 64 basis points.

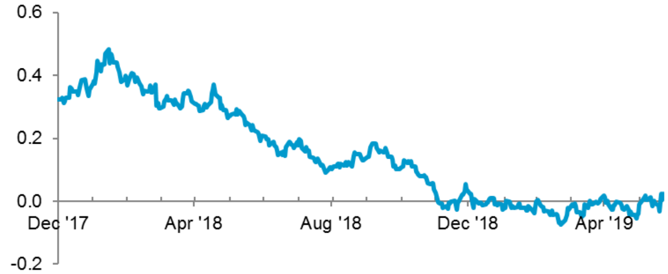
The bull steepening continued on the first trading day in June as global PMI data came in at its worst level in over six years, signaling a contraction in global manufacturing. US ISM continued to decline as well. Bullard continued his dovish rhetoric by noting in a speech that a rate cut might be necessary for "insurance in case of a sharper than expected slowdown" and pointing out that the current yield curve suggests that the current policy rate is "inappropriately high." Powell mitigated these statements somewhat in a speech later in the week, saying the Fed will "act appropriately" with respect to any headwinds from trade related issues. Evans walked back some of his May statements by saying he felt "pretty comfortable" with the Fed's current policy rate. At their June meeting, the ECB left their benchmark rate unchanged and gave forward guidance that the rate will likely be unchanged until at least the middle of next year and they will continue to reinvest any maturing assets beyond the first rate hike. Rates traded sideways from there in anticipation of the Fed meeting this week; the only notable data being a disappointing CPI and lackluster May payrolls that saw jobs grow by +75k but had -75k in previous month revisions and average hourly earnings failing to move higher. The FOMC meeting last week was even more dovish than most had anticipated. While the benchmark rate remained unchanged, the "patient" language had been removed from the statement and replaced with "closely monitoring" and references to "uncertainties" looming in the future. More notable than this was the move in the dot plot. Although the 2019 median didn't move, eight members placed dots favoring easing, most of them by 50 basis points this year. The 2020 median dot moved down by 50 basis points and the long run median is 30 basis points lower. After the meeting the 2-year Treasury rate rallied 15 basis points to close the day at 1.74 and putting the 2s30s steepness at 80 basis points. The 30-year rate ended the day at 2.535, but traded below 2.48 the following morning, the lowest level since summer 2016. Fed funds futures are currently pricing in a 100% probability of a rate cut in July, which would be the first cut since 2008, and the first non-quarterly meeting rate move in this cycle.

US Rate Environment

Index	06/20/2019	One month ago	Three months ago	One year ago
Fed Funds Rate	2.50	2.50	2.50	2.00
2y	1.78	2.22	2.40	2.55
5y	1.78	2.20	2.33	2.77
10y	2.03	2.42	2.53	2.90
30y	2.54	2.84	2.97	3.03

Source: Bloomberg, LGIMA as of 6/20/19.

2s/5s



Source: Bloomberg, LGIMA as of 6/20/19.

Rate volatility

The meteoric rise of rate volatility off the all-time lows continued over the past month, with the left side of the surface (2-year-5-year tails) once again outperforming the right side (10-year-30-year tails) as global economic slowdown and increasing likelihood of central bank rate cuts persist. Implied volatility on short dated options is up 3-44abpv, intermediates are up 1.5-6abpv, and longer dated volatility is up 1.5-2abpv. Volatility spiked going into May month end as rates moved to new local lows. The more the yield curve bull flattens, the higher implied volatility seems to go. Panic and uncertainty surrounding the oil tanker attacks in the Strait of Hormuz helped pushed shorter dated volatility to a local high on June 14, but it has subsided somewhat in the wake of the event risk of the FOMC meeting passing. Some dealers were quick to point out that not much has traded in these volatility run ups. As fast money tried to cover short positions, the dealer community was hesitant to sell, resulting in prices gapping higher. It does seem like rate volatility could be poised to enter into a higher implied regime, fueled by slowing global growth, trade war uncertainty, and central banks looking increasingly likely to implement rate cuts in near future. In skew, receivers still remain rich to payers, although the richness of low strikes relative to high strikes has started to come down off the recently elevated levels.

6m2y implied volatility

Source: Citi, LGIMA as of 6/20/19.

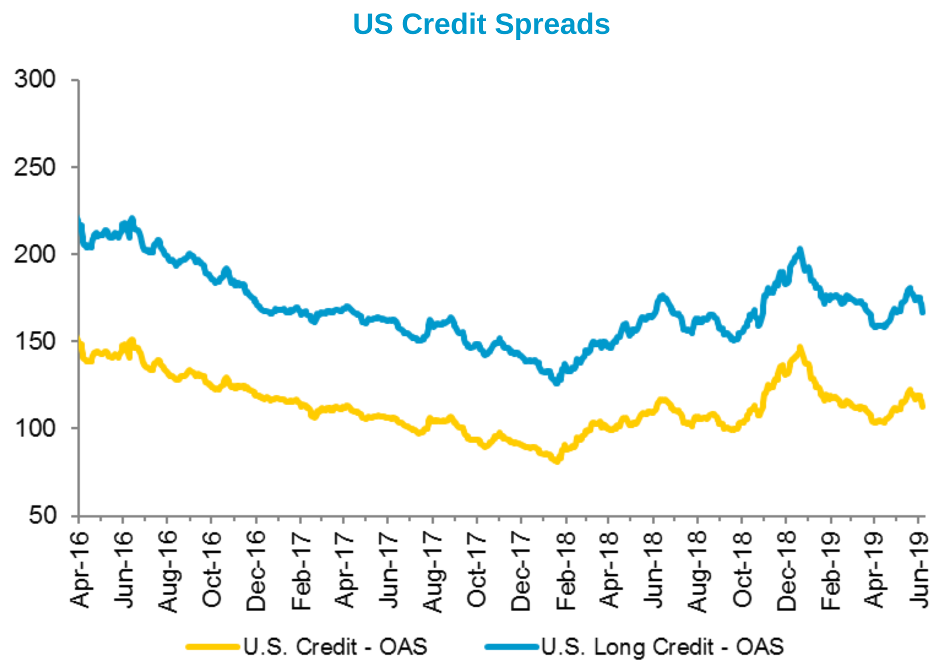
Current implied volatility levels and change over one month

EXPIRY/ TAIL	1Y	change	2Y	change	5Y	change	10Y	change	30Y	change
1M	88.8	44.3	91.9	30.8	78.3	16.6	65.8	8.4	60.6	11.2
3M	80.8	32.4	86.2	23.8	75.7	13.3	66.1	8	60.7	10.8
6M	78.2	20.5	80.2	14.4	72.2	8.4	64.5	4.7	59	7.1
1Y	75.9	10.7	74.5	7	69.5	5.3	63.5	3	57.5	4.8
2Y	74.8	6.4	73.5	5.2	68.4	2.9	63.4	2.3	57.1	3.5
3Y	72.6	2.8	72.1	3.2	67.5	2.1	63.3	2	56.7	2.8
4Y	71.5	1.9	71.3	2.4	67	1.6	63.2	1.5	56.3	2.3
5Y	71	1.4	70.4	1.8	66.8	1.2	63.1	1.1	56.1	1.8
7Y	69.1	1.6	68.2	1.7	65.9	0.9	62.3	1.2	55.5	1.5
10Y	66.2	1.5	65.6	1.5	64.5	1.7	61.3	1.6	54.8	1.8

Source: Citi, LGIMA as of 6/20/19.

Credit market

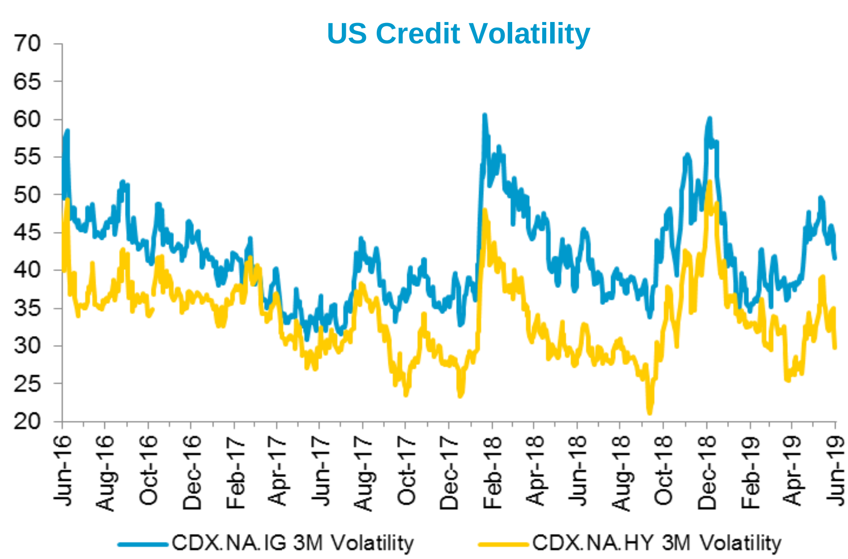
Credit has rebounded since the peak of the most recent sell-off, but investors have remained cautious navigating the volatility across geopolitical headline risk and reactions from the Fed. US Long Duration Credit widened to 181 basis points in the beginning of June and began its retracement once Fed Chair Powell made remarks at a Chicago Fed Conference on June 4 regarding the trade war and mentioned “we will act as appropriate to sustain the expansion.” Investors interpreted these remarks positively in the market as long duration credit has tightened 14 basis points since then. Furthermore, the June FOMC solidified a clear rate cut signal as seven of the 19 participants projects 50 basis points of easing this year. Furthermore, the ECB recently signaled further monetary accommodation unless things improve. The global central bank dovishness has alleviated some of the volatility in the marketplace stemming from geopolitical uncertainty. From a supply/demand perspective, the corporate bond market is currently operating in a positive technical environment. Year-to-date supply is stands at $560 billion, running ~10% behind 2018’s pace. While foreign investors haven’t bought as many bonds this quarter versus 1Q, demand remains robust from mutual funds and ETFs. Investment grade corporate credit total return performance for 2019 is currently ~9%, the highest in 15 years. Mutual fund and ETFs investors tend to chase positive performance, which has resulted in inflows of $2-4 billion per week since February. This week, the market will be watching for any developments on the trade front between Presidents Trump and Xi at the G20 summit.



Source: Citi as of 6/20/19.

Credit volatility

Credit derivatives have rallied across the board in June thus far. However, the strength of the rally has not been uniform across different index products. CDX indices had the strongest recovery after the selloff in May. The on-the-run CDX.IG index has tightened by 16 basis points, effectively reversing all the spread widening from the previous month. While CDX.IG option implied volatility hasn't rallied in line with the index, it is still trading approximately in the middle of its three month range. As a result, the credit options market is reflecting investor caution despite strong index performance. Furthermore, the CDX indices have outperformed their cash counterparts as well. There are a variety of reasons driving the widening of this basis including a liquidity premium in CDX, lower Treasury yields impacting investment grade bonds, and portfolio composition differences between cash and synthetic indices.



Source: Citi as of 6/20/19.

Scenario Based Asset Allocation

SCENARIO SUMMARIES

Name	Description	Risk Assets	Inflation	Rates	USD	Probability (last month)
Global slowdown	• Dominated by fears of imminent recession, US growth below 1%, China faltering and below 5.5%, Europe flirting with recession • US & UK rate cuts • Commodities drop, political uncertainty contributes to slowdown	▼	▼	▼	—	15% (20%)
Cycle stands still	• Inflation print stays below central bank targets • US unemployment remains at current level and growth follows trend. ECB remains accommodative • Trade tensions simmer • No Fed or ECB rate hikes in 2019 • China growth smooths to c.6%	▲	▼ / —	▼	▼ / —	30% (25%)
Roadmap central scenario	• US gradually slows but is above trend for most of 2019 • Steady Europe growth and inflation • China stimulus helps stabilize growth given trade war uncertainty • US inflation returns to target, next Fed move more likely to be up than down	▲	▲	▲	▲	25% (30%)
Global growth	• US growth remains strong thanks to consumer and trade war resolution • China stimulus leads to an overshoot of 6.5%+ • Europe rebounds with EM growth • Other economic data does not point to material overheating	▲	▲	▲	▼ / —	20% (15%)
Rates rebound risk off	• US inflation picks up rapidly, forcing the Fed to hike 2-3 times in the coming 12 months • Global government bond yields rise fueled by rising rate and future expectations • Equity markets sell off on the back of higher yields	▼	▲	▲	▲	10% (10%)
Recently considered scenarios	• Trade war escalation • China/US divergence • Credit led meltdown					0% (0%)

Contributors

DISCLOSURES