LGIMA's Multi-asset Market Update

February 2020

Equity market

We wrote last month just as news of the coronavirus was beginning to make headlines. We are not virologists, so the best we can offer is empathy to all those afflicted. We will focus this month on more objective (we hope) observations of the mania that seems to be gripping bulls and bears alike.

Let's start by noting that we bothered to state upfront that we're not virologists. It's possible we might employ someone in a second career who previously studied infectious diseases, but we don't. Yet much of what we hear and see in financial news seems to project expertise about both the propagation of the virus and the human and economic effects. It's obvious that we do not and cannot know with certainty the future path of markets even without a significant exogenous shock. As investment professionals, our role is to seek to understand possible scenarios, evaluate risk and return, and optimize for an objective. An epidemic or pandemic is one such scenario, and it is part of a wide distribution of outcomes. What we are observing, however, can be represented as a simplified matrix. Our impression is that there is no spectrum, no real distribution of outcomes, assumed by pundits and commentators. It seems implausible that the outcomes are binary—either the bull market rages on or we will face doom and destruction—and there is a lack of reflection on creating a conjunction fallacy.

Market Reaction	Virus: Extremely serious	Virus: No big deal
Resilient		
Fragile		

The theories and prognostications from the bearish side are plausible, potentially uncomfortable, and in many cases rational. It is tough to grapple with the veracity (or lack thereof) of Chinese data. It is too early to extrapolate international cases to the various models that have been fitted to that Chinese data, and many of those models illustrate that we are likely still too early in the outbreak to be very confident in its future path. It is uncomfortable but also entirely rational that the narrative as we know it so far follows the playbook outlined in Event 201, a simulated pandemic exercise hosted by Johns Hopkins, the World Economic Forum and the Gates Foundation last October. A very significant portion of the Chinese workforce has either not yet returned to work or is not yet at full capacity, revenue guidance is being cut by China-sensitive companies, and this morning we came to know of a potential nationalization of a domestic Chinese airline. All these data points paint a pretty bleak picture of the human and economic cost in China and possibly beyond.

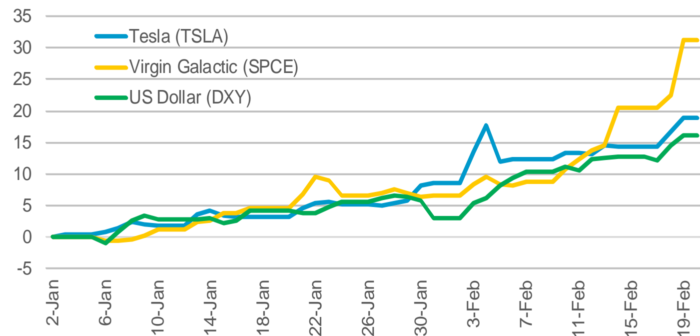
The bullish theses are also compelling and generally sensible. Apple is the most prominent company to cut revenue guidance for 1Q20, but if you're due for an upgrade or simply in the mood to treat yourself as consumer sentiment data suggests, does it really matter if you get that new iPhone in March or May? Globally, central banks are publicly stating that they will pump money into economies and markets to counter disruptions due to the virus, and we emphasized last month the strength of markets' reaction function to this commitment. Growth, particularly in emerging markets, was inflecting positively into 1Q20.

Valuations are above average but not extreme, as is investor positioning. Together, these data points remain quite supportive of markets.

Our approach has been to adjust positioning to reflect the increased potential risk, particularly considering how much we don't know. We don't believe it is sufficient to probability-weight the matrix above to evaluate a full spectrum of outcomes. We don't know how this virus will resolve nor the timeline, and it is the timeline that seems critical. China has successfully managed V-shaped recoveries from previous crises. Whether that's possible in this case—and whether Apple and others may have to reduce guidance beyond 1Q20—is, to us, unknown at this point. Our concern stems partly from the recent performance of China-sensitive positions and partly from cross-asset performance during the somewhat elevated realized volatility of late.

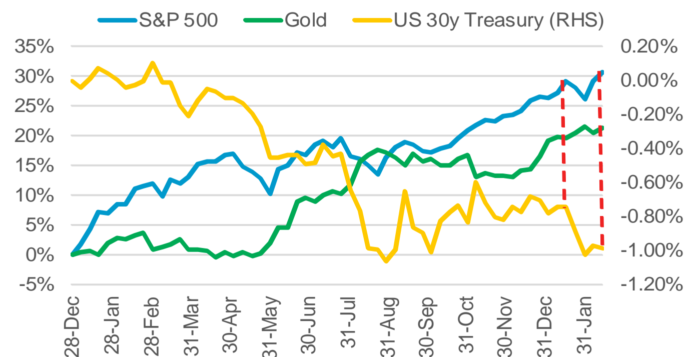
For example, there has been much attention given to possible speculative mania around several individual stocks but, considering trailing volatility, we've also witnessed a comparable move in the US Dollar. When equities have declined, rates have reached for new lows. When equities have rallied, rates have demonstrated a sort of reluctance to return fully to their previous local highs. Simultaneously, gold is making a multi-year high. We interpret a very cautious bias to these movements, and we will continue to monitor these dynamics for signs of how the market is pricing a possible prolonged downturn or the effects of additional central bank stimulus. If our late cycle belief is indeed correct, the elevated leverage and stretched growth prospects of the global economy are difficult prospects for a lengthy disruption in global activity.

Volatility-adjusted cumulative returns



Source: Bloomberg, as of 2/19/2020

Logarithmic returns since year-end 2018



Source: Bloomberg, as of 2/19/2020

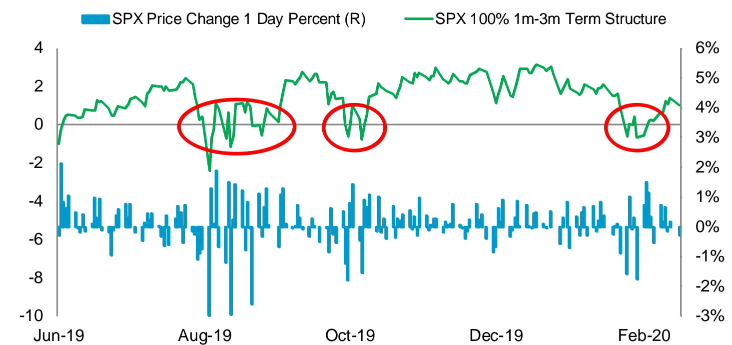
Equity volatility

The S&P 500 continued to new highs, despite a 3% dip at January month-end. Option market conditions remain sanguine, similar to what we described last month, but it is worth highlighting the hair-trigger reaction they can exhibit.

Implied volatility has once again reset towards the lower range of historical observations. At-the-money 3-month puts imply around 12% volatility whereas the one-year level is below 15%. Realized volatility over the last thirty days was about 12%, which expresses an average +/- 0.75% daily move in the underlying spot price.

However, current characteristics don't fully express the sensitivity and shift in tone observed in the market during the last week of January when the S&P 500 experienced two daily declines worse than -1.5%. This caused short-dated implied volatility to rise significantly—from 12% to above 16% (although that is likely a level consistent with investors' long-term expectations). Additionally, this spike caused an inversion in the implied volatility term structure. For example, as pictured below, the circled data points portray observations when 1-month at-the-money implied volatility rose above the 3-month maturity.

1-month minus 3-month term structure vs. SPX price change



Source: Bloomberg, as of 2/19/2020

Rates market

For the first time in recent memory, rates took their cues from something outside of trade war escalation and central bank rhetoric. Fears and uncertainty surrounding the corona virus have caused global rates to rally sharply.

In the US, the 30-year rate closed 2019 at 2.40 and was hovering in the 2.20s when the Phase One deal with China was signed as planned on January 15th. Rates dropped steadily once corona virus headlines started hitting around January 21st. New corona virus headlines have been steadily streaming in on a daily basis. Infections in the US and in other countries have been confirmed, along with person-to-person disease transmission. China shut down their stock market for over a week. Major airlines have suspended flights to/from China. There was a brief respite from the rally when a company in Hong Kong announced they may have a vaccine, but it will still take time to test it.

The January FOMC meeting was essentially a non-event, particularly in light of the corona virus news. The Fed stayed on hold (as expected) and raised IOER 5 basis points to 1.6%. They also announced that they will continue buying Treasury bills into Q2 and extend their repo lending "at least" through April. A day after the FOMC meeting, the WHO declared the corona virus a global health emergency. By the end of January, the 30-year rate had dropped below 2% intraday for the first time since October and closed out the month at 2%.

There was a small (and temporary) turnaround at the start of February. Even though the month got off to a rough start (as Macau announced they were closing some casinos, South Korea was halting some automobile output due to fears of a spreading corona virus, and a mildly disastrous set of issues delaying the Democratic Iowa caucus results), sentiment shifted as the PBOC injected 1.7 trillion yuan of liquidity into the market via reverse repos and reports came out showing the spread of the virus was slowing. Additionally, there was positive economic data out of Europe and the UK. During the first week of February, the long end rate in the US had climbed back up to 2.15. But the selloff was short lived. Despite a strong jobs report (including strong wage growth) new cases of the corona virus in the Japan led to the temporary suspension of many manufacturing plants.

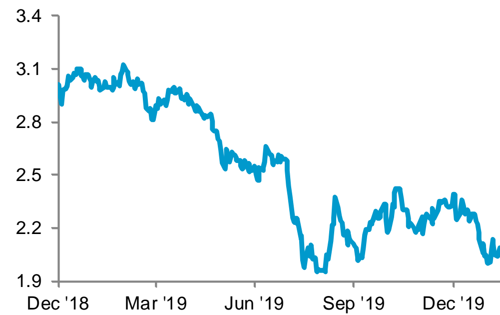
In the Fed's semi-annual Monetary Policy Report to Congress, Chair Powell acknowledge the uncertainty around the virus outbreak and that it would not be known for some time what the economic impact would be. Weak retail sales numbers coupled with a continuing climb in newly confirmed corona virus cases helped long end rates rally back below 2%. While markets were closed for Presidents' Day on Monday, the PBOC took further actions to mitigate the economic damage from the corona outbreak by offering nearly $30bln in one-year loans to commercial banks at a 10 basis point discount to their previous offerings. Additionally, they injected an additional 100bln yuan into the market via continued reverse repo operations. Fed speak and the FOMC minutes released this week still emphasize a desire to keep rates on hold for the foreseeable future, but the futures market is now pricing in more than an 80% chance of a rate cut by the end of the year, compared to the 50% chance priced in at the beginning of the year.

US Rate Environment

Index	2/19/2020	1-month ago	3-months ago	1-year ago
Fed Funds Rate	1.75%	1.75%	1.75%	2.50%
2 year	1.42	1.56	1.60	2.51
5 year	1.41	1.62	1.62	2.49
10 year	1.57	1.82	1.78	2.66
30 year	2.01	2.28	2.25	2.99

Source: Bloomberg, as of 2/19/2020

30-Year Treasury Rates



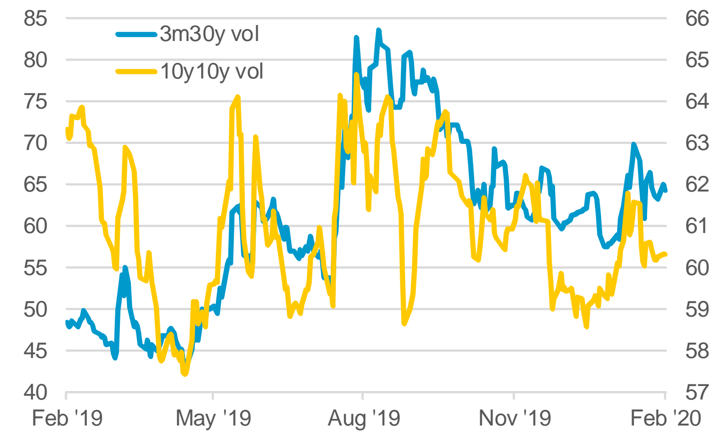
Source: Bloomberg, as of 2/19/2020

Rates volatility

Implied volatility across the surface spiked with the outbreak of the corona virus. The increase in volatility was notably higher than the move in January post-drone strike in Iran, but implied volatility failed to reach the levels seen during the August 2019 rally. Program sellers have started to re-emerge, which has helped push short dated option volatility back down from the local highs. Even as the threats of the corona virus were first emerging, long-end rates failed to drop to the all-time low levels set last summer. Volatility could rise sharply if those levels get tested again in the near future. Intermediate expiries on the left-hand side remain elevated - this seems to stem from an increasing market sentiment that the Fed will need to cut rates later this year, despite their adamant defense of keeping rates on hold.

Thus far, the front end of the curve has remained anchored as the 2s30s Treasury curve in the US has flattened roughly 13 basis points since the corona virus outbreak. The steepness of the volatility surface still makes forward volatility trades look attractive, particularly on the right-hand side of the surface. Receiver skew remains rich to ATM volatility and payers still trade at a discount. Payers in short tails look considerable cheaper than in longer tails. This is fueled by the belief that even if the corona virus is contained and a global recession is avoided, the Fed is still a long way from raising front-end rates. There is a

3m10y Implied Volatility and 10y10y Implied Volatility



Source: Citibank, as of 2/19/2020

strong conviction in the market that any selloff will be led by the long-end, which has been expressed through a variety of bear steepening option structures trading in the market as well as curve volatility purchases. Formosa issuance continues to be extended into 40y callables, further inverting the 30s40s swap curve. The spread went from -3bps at the end of 2019 to -4.8bps currently.

Current Implied Volatility Levels and Change Over One Month

P/TAIL	1Y	CHANGE	2Y	CHANGE	5Y	CHANGE	10Y	CHANGE	30Y	CHANGE
1M	44.2	18.2	62.2	21.4	69.9	16.4	71.2	15.3	69.6	15.2
3M	50.5	15	60.9	13.8	65.1	6.6	66.9	6.2	64.4	6.2
6M	54.4	13.5	62.2	11.4	65.3	6.3	66	4.2	63.1	4
1Y	60.5	9.4	64	7	65.9	4.3	65.7	3.2	62.2	3.4
2Y	63.3	-0.1	64.1	0.2	66	2.1	65.2	2	61.2	2.4
3Y	66.7	2.3	66.5	1.4	65.7	1.4	64.5	1.4	60	1.9
4Y	66.5	1	66.4	0.8	65.7	1.1	64.4	1.1	58.8	1.5
5Y	66.7	0.2	66.3	0.7	65.6	0.9	63.8	1	57.8	1.2
7Y	66.1	0.9	65.1	1.2	64.4	0.8	62.5	0.8	55.9	0.2
10Y	64	0.5	63.3	0.8	62.5	1	60.3	1	54	0.5

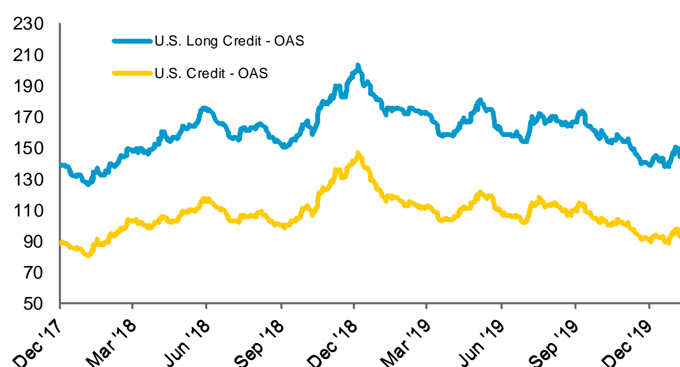
Source: Citibank, as of 2/19/2020

Credit market

Although January was a volatile month for Investment Grade credit, the first half of February has been smoother sailing. Month to date, long duration credit spreads have tightened 6 basis points to 144. However, while market volatility has decreased over the past couple weeks, uncertainty around the impact of the coronavirus is on the forefront of investor's minds. Since Wuhan was initially quarantined in late January, consensus estimates for 1Q 2020 EPS has dampened by ~2%. However, estimates for 2Q20 remain unchanged, implying high conviction from analysts that long-term impacts will be minimal in the US.

As the last major week of earnings season drew to a close on the 14th, approximately 88% of companies in the S&P 500 had reported. So far, consensus EPS has increased ~2% year over year, a 3% beat from initial estimates. Sales rose almost 5%, while net income remained relatively flat, as the implication is that growth was primarily driven by corporate buybacks. While the majority of earnings results have been outperforming expectations, the biggest idiosyncratic story in the IG bond market is the downgrade of Kraft-Heinz to high yield. Following the company's poor 4Q earnings release and decision not to cut its dividend or announce asset sales, both S&P and Fitch downgraded the issuer to BB+. As a result, Kraft is now a fallen angel, marking the 7th largest on record as a share of the HY index (1.9%).

US Credit Spreads



Source: Bloomberg, as of 2/19/2020

Primary bond issuance has been consistent and manageable in February, as borrowers issued a total of $69.7 billion so far, bringing the YTD total to 24.6% higher than this time last year. Throughout January, US IG bond fund and ETF demand continued to climb, resulting in a record $48.1 billion of net inflows. So far in February, daily inflows have somehow increased, illustrating the heavy appetite for fixed income exposure from the bond fund and ETF investor base. As a result of the persistent inflows, demand continues to outweigh supply, creating a positive supply/demand dynamic in the corporate bond market.

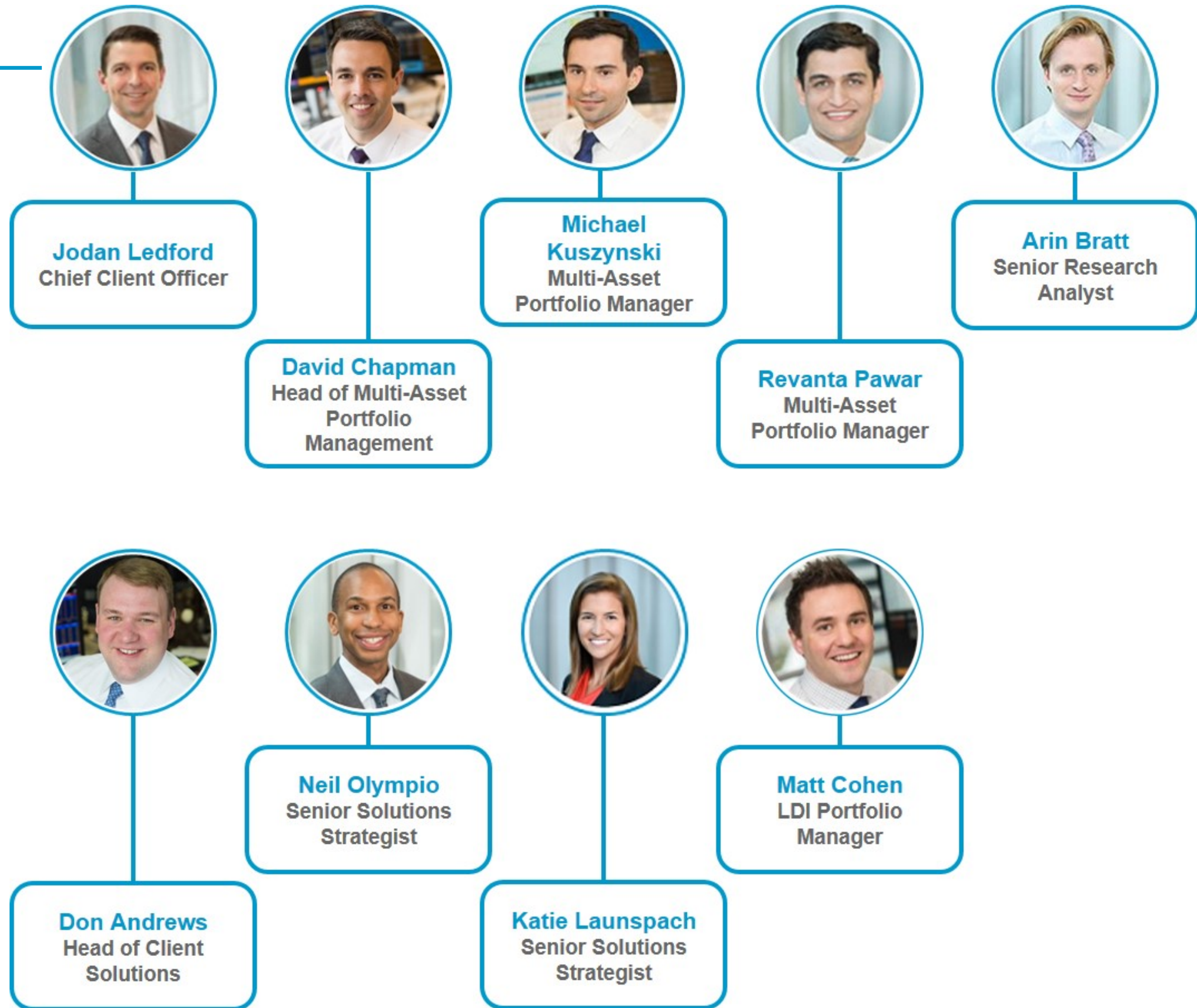
As long as the consumer remains stable, we believe the economic backdrop will also continue to perform in line with trend growth. LGIMA's estimate for the US to enter a recession in 2020 remains unchanged from January, with the probability equating to around 20%.

Scenario-Based Asset Allocation

Scenario Summaries

Name	Description	Risk Assets	Inflation	Rates	USD	Probability (last month)
Global Recession	• Dominated by fears of imminent recession, US growth below 1%, China faltering and below 4%, Europe in recession • US & UK rates near 0 • Commodities drop, political uncertainty contributes to recession	▼	▼	▼	—	15% (15%)
Slugflation	• Sluggish global growth and manufacturing remains in a mild recession • Forcing continued Fed rate cuts (totalling 25-75bps) in 2020 • Inflation remains below target • Simmering trade war tensions	▼	▼ / —	▼	—	25% (15%)
Economic Stabilization (Roadmap)	• US grows around trend • Steady Europe growth and inflation • China stimulus helps stabilize growth given trade war uncertainty • Fed on hold and inflation back to target • Some de-escalation of trade war	▲ / —	▲ / —	—	—	25% (25%)
Global Growth	• US growth strengthens, buoyed by 3 early cuts, strong consumer consumption and no material trade war escalation • China stimulus leads to an overshoot of 5.5%+ • Europe rebounds with EM growth • Other economic data does not point to material overheating	▲	▲	▲	▼ / —	15% (10%)
Rates Rebound Risk Off	• US inflation picks up rapidly, forcing the Fed to hike within the coming 12 months • Global government bond yields rise fuelled by rising rate and future expectations • Equity markets sell off on the back of higher yields	▼	▲	▲	▲	15% (10%)
Trumpilocks	• Growth improves • Inflation does not pick up, so little prospect of central bank hikes and limited response from long-term yields	▲	▼ / —	▲	▼ / —	15% (15%)

Contributors



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