LGIMA's Multi-Asset Market Update

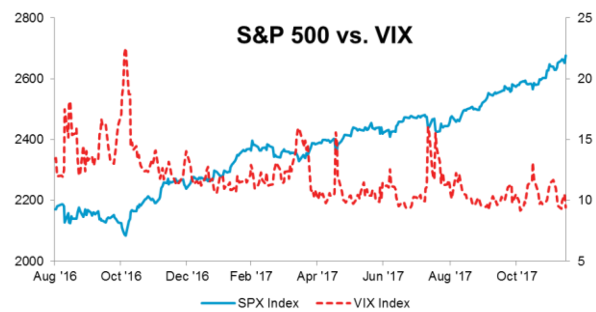
December 2017

Equity Market

Equity markets remain strong with the US leading the way. The S&P 500 hit new record-highs while small caps also realized strong gains. Europe and emerging markets continued their rallies, Japan saw modest gains, and Asian markets were largely unchanged over the period. The MSCI World top sector performers were telecom and consumer discretionary, which indicates a momentary tilt to value. Utilities was the only sector to finish in the red. The US equity market price returns highlighted the probable passing of tax reform, while geopolitical risk in the world markets has been muted, clearing the path unabated for the global bull market.

Index	One month	Three months	One year
S&P 500	3.9%	7.5%	20.9%
Russell 2000	2.6%	7.2%	13.7%
Euro Stoxx 50 (LC)	0.4%	1.5%	12.0%
Nikkei 225 (LC)	0.7%	14.1%	18.4%
Hong Kong Hang Seng (LC)	-1.1%	4.1%	36.1%

As of December 15, 2017
Source: Bloomberg

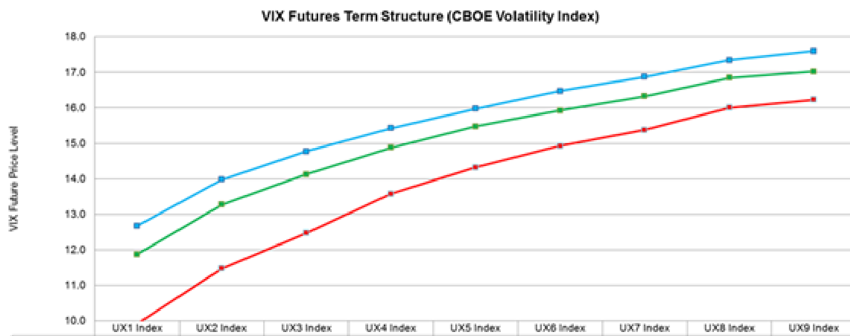


Source: Bloomberg

Equity Volatility

When on November 15th the monthly VIX Futures contract settled at 13.79 - the highest since April - it appeared as if the equity option market was leading the pack in terms of an emergent sense of caution. In this following month since, however, the market has now superseded even the 'buy the dip' dynamic with outright 'just buy it - period'. One-month realized volatility has risen from a cyclical low last month of 3.4% to a more average 2017 level near 7%. Simultaneously, as spot has moved up, the 1-month ATM volatility level has fallen impressively down to just 7%, thereby compressing to nearly zero the previously available positive carry P&L of short volatility trades. The strength in upward spot price action is further expressed via the increase in realized volatility, exhibiting a 'volatility up / spot up' dynamic, whereby the greatest daily percentage moves have been to the upside - four trading days of +80-100 basis points spot increases.

Despite the impressive deflation in implied volatility, the overall surface remains anchored in what has been the standard holding pattern - very steep skew and term structure as a result of very low 'locally' marked implied volatility in shorter-dated and near-the-money strikes.



	UX1 Index	UX2 Index	UX3 Index	UX4 Index	UX5 Index	UX6 Index	UX7 Index	UX8 Index	UX9 Index
11/16/2017	12.7	14.0	14.8	15.4	16.0	16.5	16.9	17.4	17.6
12/01/2017	11.9	13.3	14.1	14.9	15.5	15.9	16.3	16.9	17.0
12/15/2017	9.9	11.5	12.5	13.6	14.3	14.9	15.4	16.0	16.2

Source: Bloomberg

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Rates Market

The persistent flattening of the yield curve continued through December, with 5s30s closing at 69 basis points in November, and hitting 53 basis points the Friday after the December FOMC meeting. As expected, the FOMC hiked rates for the fifth time in the past two years, raising their target rate to 1.25-1.5. In their summary of economic projections, the Fed kept their inflation outlook and the median path of rate hikes unchanged. Perhaps factoring in the proposed tax bill, the Fed increased their 2018 GDP growth forecast by 0.4% to 2.5%.

Despite this relatively strong picture of growth and labor market strength from the Fed, rates rallied decently in December, with the 30-year Treasury rate closing November at 2.83 before rallying 14 basis points over the next two weeks, to close at 2.69 on December 15th. While PPI beat expectations, wage growth in the November employment report disappointed, and on the day of the Fed meeting, CPI came in below consensus as well. This week has seen rates sell off to near month end levels, with the 30-year rate currently trading at 2.81. Earlier this move seemed fueled by further evidence that the Republicans will have the votes to pass some version of their proposed tax bill. On Tuesday, Germany announced that they will increase the supply of long end debt, sending bund yields higher on light volumes leading into the holiday weekend. This weakness in bunds has spread to the long end of the US curve as well.

Index	12/15/2017	One month ago	Three months ago	One year ago
Fed Funds Rate	1.50	1.25	1.25	0.75
2y	1.84	1.72	1.38	1.25
5y	2.15	2.06	1.81	2.07
10y	2.35	2.34	2.20	2.59
30y	2.69	2.78	2.77	3.17

Source: Bloomberg

Source: Bloomberg

Rates Volatility

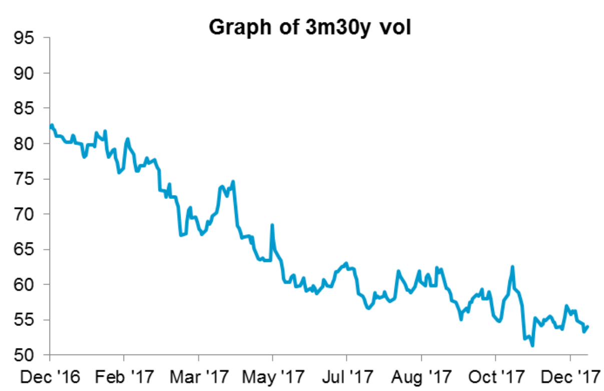
Rate volatility continues to remain at or near all-time lows. Formosa issuance this year is on pace to exceed last year's supply, keeping a lid on vega and pushing 10y10y volatility to 63.6 basis points, its lowest level in nearly 20 years. Despite gamma being in the 3.5 basis points/day range, delivered volatility remains stagnant, and program selling of gamma continues to be a profitable trade.

Current volatility level 1-year percentile

Trailing 1y percentilez
0-10%
10-20%
20-30%
30-70%
70-80%
80-90%
90-100%

12/15/2017	2y	5y	7y	10y	30y
1m	7.9%	0.7%	0.3%	0.3%	2.3%
3m	5.9%	1.5%	0.7%	0.7%	3.5%
6m	3.1%	0.3%	0.3%	0.3%	0.0%
1y	0.3%	0.3%	0.3%	0.3%	0.3%
3y	0.3%	0.0%	0.0%	0.0%	0.3%
5y	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Barclays Live



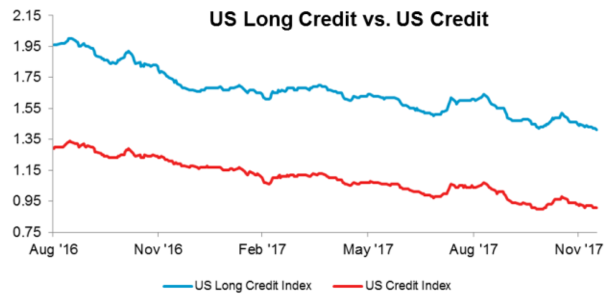
Source: Barclays Live

Credit Market

Credit spreads were relatively flat over the last month due to stagnant yields, uncertainty around tax reform, and mixed technicals. Revenue and EPS numbers for 3Q looked very similar to 2Q at an aggregate level, but the dispersion in results was much higher. A healthy supply continues to feed into fixed income, as investment grade issuance set another record in 2017, and is running 5.13% above last year's pace.

Index (OAS)	OAS at 12/15/17	One month	Three months	One year
US Long Credit	1.71	-6.0%	-10.8%	-17.5%
US Long Gov Credit	1.06	-6.7%	-10.6%	-20.8%
US Long Credit A+	1.32	-7.1%	-13.9%	-20.5%
US Credit	1.19	-6.2%	-11.7%	-23.5%
EM	2.99	-4.9%	-5.6%	-21.7%
HY	4.05	-3.3%	-3.8%	-13.6%

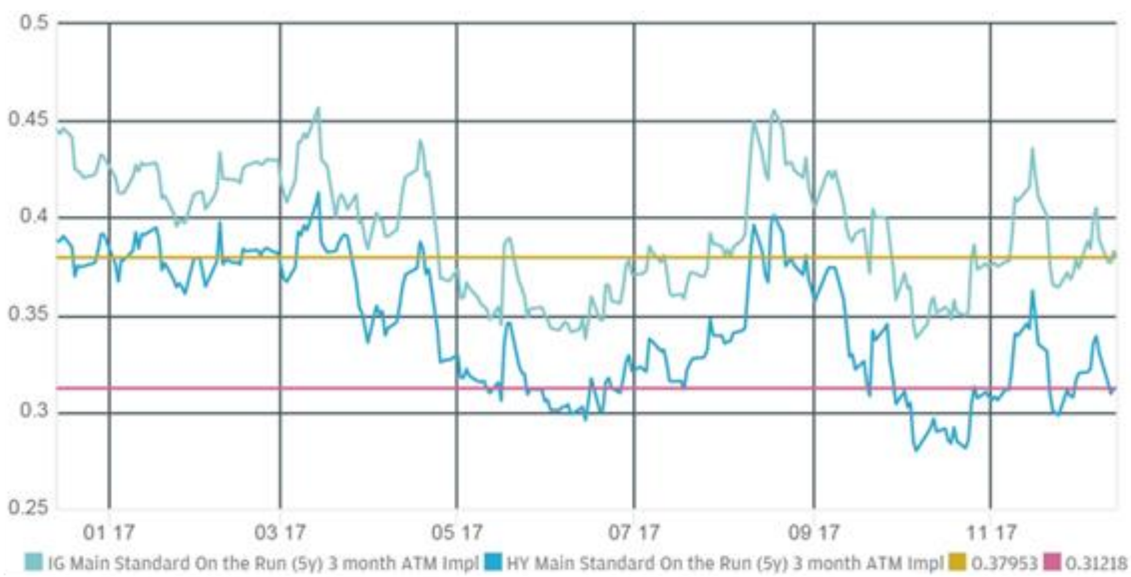
As of December 15, 2017
Source: Bloomberg



Source: Bloomberg

Credit Volatility

Markets traded range-bound as investors awaited word from a number of central banks and more details on the outcome of the US tax bill. Volatility remained largely unchanged over the month, with early spike around the US tax bill retracing. On the margin, credit volatility has ticked up slightly, more pronounced in IG over HY. On a 1-year trailing basis, 3-month ATM implied spread volatility in IG and HY is at the 49th and 34th percentile respectively. The implied to realized volatility ratio in CDX is around 1.4x, at the middle of its 1-year range.



Source: Barclays Live, Morgan Stanley

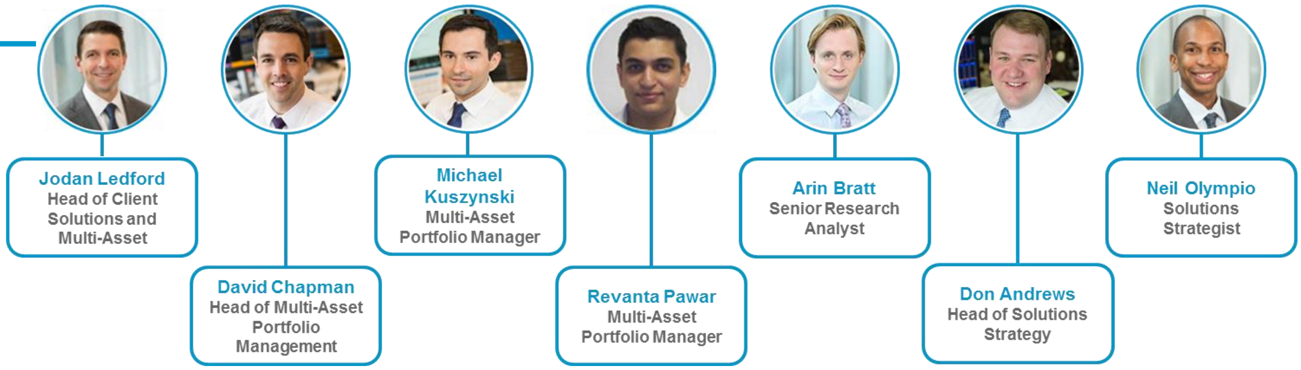
Scenario Based Asset Allocation

SCENARIO SUMMARIES

Name	Description	Risk Assets	Inflation	Rates	USD	Probability
Global Slowdown	• Dominated by fears of imminent recession, GDP growth trackers start to fall • US only manages 0-1 rate hikes in 12 months, UK cuts rates back to 0.25% • Commodities drop, political uncertainty contributes to slowdown • US corporates under pressure, EM falters	▼	▼	▼	▼	10%
Longer Liquidity	• Inflation prints continue to disappoint • Despite falling unemployment and stable (if unimpressive) growth, the Fed raises rates slower than expectations • ECB QE does not end after currently announced period	▲	—	▼	▼ / —	20%
Roadmap Central Scenario	• Cyclical global recovery, but structural problems mean rates unlikely to fully normalize • US overheating in 2019 prompted by tax cuts • EM prospects brightening in absence of trade war • ECB tapering progresses as currently announced	▲	▲	▲	▲	30%
Global Growth	• Stronger growth environment driven by EM and EU, ahead of US • Still some pick up in US inflation leading to some rate hikes • Other economic data does not point to any overheating	▲	▲	▲	▼ / —	15%
Rates Rebound Risk Off	• Central banks need to counter looser monetary conditions by hiking more, which slows growth expectations • Global government bond yields rise fuelled by rising rate and future expectations • Equity markets sell off on the back of higher yields (similar market reaction expected for protectionism)	▼	▲ / —	▲	—	15%
Fed Found Out	• Inflation stays below trend, but the Fed presses on with planned rate hikes • Longer dated rates don't rise as investors bet on a Fed error • No significant slowdown of growth • New concern on the ineffectiveness of monetary policy	▼	—	—	▲	10%

Source: LGIMA

Contributors



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