

WEEKLY VOLATILITY NOTE

The Fed For EM Volatility: This week comes with three big central bank meetings. The Fed's meeting comes on Wednesday with the ECB and BOJ on Thursday. The BOJ is the least likely to surprise, with continued yield curve targeting and further asset purchases in what has come to become the most predictable (but also most aggressive) balance sheet build of any of the large central banks. With respect to the Fed, the obvious focus will be on the hiking trajectory (three vs. four hikes, the market is currently pricing in 3.4) and any changes in expectations of the terminal (neutral) rate. But for the VIX, this hiking trajectory is largely priced in, so any hawkishness has to be especially strong to really impact the VIX. A hawkish read will likely reinforce the dollar rally, which would re-highlight EM vulnerability at a time when several countries – Turkey, Argentina, Brazil and perhaps Mexico – are hardly proving out Powell's recent comments on EM increasing resilience. We will also be particularly intrigued with any references to the Italian political situation; it was Fed funds futures which were among the most aggressively bought at the height of the Italian turmoil two weeks ago. If the Fed telegraphs that it is not overtly concerned about European issues, that will mark a significant incremental weakening of the Fed put.

...But the ECB for the VIX: From a VIX perspective, however, we think the ECB is the big kahuna. If they signal a more hawkish balance sheet trajectory, that will have a meaningful impact on the term premium for the 10 year Treasury, which, we think, means higher Treasury volatility and, by extension, a higher VIX (see our detailed note from last week on the Term Premium's relationship with the ECB's balance sheet and cross asset volatility). The ECB's balance sheet is highly significant because it is essentially the swing factor in the prospective global liquidity machine; the Fed is reducing its balance sheet but that has been well signaled and not likely to change. The BOJ, on the other hand, is continuing to build its balance sheet in a highly predictable way. Next winter the amount of Fed reduction will most likely be offset by the quantity of BOJ's expansion. This leaves the ECB as the swing factor for both liquidity, but also the term premium and Treasury volatility, both of which are at extremely low levels.

A further wrinkle in this volatility/central banking discussion is FX. If the ECB comes with a more hawkish message on the balance sheet, that will also underscore support for the Euro, and may well mark the end of the dollar's recent rally (especially if the Fed comes with a dovish hike). That will actually help those EM assets which have been especially vulnerable to dollar strength, but also raise questions regarding European equities.

We continue to suggest that European equity volatility looks cheap, especially if the ECB comes hawkish. Similarly, IWM volatility (Russell 2000) is very low (and the spread to VIX is close to life time lows); with many capex surveys rolling over and the dollar rally exposed to a reversal, and the Russell outperformance looking tired, Russell 2000 volatility is a buy.

Notable Street Trades

FOXA: 20k Jul 40/44 call spreads bought for 1.10 and 20k Jul 37 puts sold at .95, opening trade vs 1.2mm 39.00

HPQ: 5k Aug 24 calls sold at .50 to open vs 200k 23.42

CZR: 30k June 12 calls sold at .35 to close vs 1.75m 12.1857

ADNT: 20k June 55 puts bought for .90 to close vs 1.48m 56.00

PAGS: 15k Nov 30/35 call spread bought for 2.35 (rolling calls down) PAGS: 18k July 25 puts sold at .81 to open

BBD: 20k Jan 6 puts sold at .53 to open and 20k Jan2020 5 puts bought for .54 to open

SQ: 27k June 60 calls bought for 1.60 to close and 27k July 65 calls sold at 1.45 to open

TWTR: 30k June 20 calls sold to close and 30k Dec 35 calls bought to open, collected 12.05 vs 715k 41.08

MLCO: 18k July 32 calls bought for .45 vs 400k 29.155

BGCP: 10k Aug 12.5 calls bought for .35 to open

PCG: 4.5k July 37.5 / 42.5 strangle bought for 1.70 to open

WFT: 50k June 3.5 puts bought for .11 to close vs 3m 3.50

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TLT: 25k June 120 puts sold at 1.55 to close and 40k June 118 puts bought for .49 to open
 XLF: 15k Jan2020 30 calls sold at 1.65 to open vs 700k 27.85

Index	3m IV	Percentile	2m RV	Percentile	3m Skew	Percentile	12m - 3m Term	Percentile
S&P 500	11.1%	58.7	16.5%	72.6	8.6	45.8	3.2	45.8
Russell 2000	12.9%	0.4	15.6%	66.3	8.5	46.2	2.9	59.8
Nasdaq 100	15.5%	55.6	22.0%	78.9	9.8	52.2	2.2	52.6
DJIA	12.4%	65.6	17.3%	68.1	7.4	21.9	3.3	75.5
EuroStoxx50	12.9%	42.6	12.0%	64.7	8.8	80.2	1.2	22.5
Emerging Market								
EEM	17.3%	64.4	19.8%	71.4	7.1	38.7	1.5	27.3
EWZ	33.4%	98.8	32.2%	82.5	3.7	5.9	-1.2	0.4
EWJ	10.5%	20.3	12.0%	66.7	7.3	72.7	3.0	96.4
FXI	18.6%	52.2	21.7%	67.9	3.6	27.3	0.7	38.7
Fixed Income								
TLT	10.2%	53.3	10.3%	84.5	1.1	79.8	1.3	33.2
LQD	5.6%	88.9	4.7%	84.1	7.1	95.7		
HYG	4.6%	23.6	4.2%	57.5	8.2	81.4	1.5	51.4
Commodity								
Brent	24.4%	39.2	22.8%	95.0	1.0	18.5	1.7	83.4
Gold	9.5%	7.4	10.7%	57.9	-1.5	20.0	1.4	15.3

	Last	1wk Chg	1m Chg
VIX Index	12.34	↓ -3.1%	↓ -1.2%
VVIX Index	94.54	↑ 4.1%	↑ 5.0%
MOVE Index	57.83	↑ 6.5%	↑ 22.9%
EURUSDV1M Index	7.69	↗ 0.1%	↑ 11.7%

Sector	3m IV	Percentile	3m RV	Percentile	3m Skew	Percentile	12m - 3m Term	Percentile
Materials (XLB)	14.8%	68.5	19.5%	76.2	6.9	60.8	1.9	28.2
Energy (XLE)	17.8%	60.8	20.8%	75.0	5.1	49.8	0.9	22.0
Financials (XLF)	16.1%	54.7	21.0%	81.0	6.8	59.6	1.6	52.5
Industrials (XLI)	13.6%	62.5	18.5%	75.0	7.4	61.6	2.6	53.3
Technology (XLK)	14.9%	52.1	21.4%	74.6	9.7	70.2	2.1	56.1
Cons Staples (XLP)	12.3%	70.1	15.4%	85.3	4.9	10.6	0.3	19.6
Cons Disc (XLY)	13.3%	60.4	17.6%	75.0	7.8	78.4	1.7	36.1
Homebuilders (XHB)	18.1%	66.1	20.9%	76.2	6.4	23.5	1.6	34.5
Retail (XRT)	19.0%	13.1	19.5%	58.7	7.1	45.5	1.2	51.4
Healthcare (XLV)	12.6%	61.1	17.5%	73.0	9.9	56.5	1.4	31.8
Utilities (XLU)	13.4%	71.9	13.6%	73.0	3.7	12.9	0.5	21.6
Real Estate (IYR)	11.5%	28.7	12.8%	65.9	7.3	76.9	1.8	60.8

Volatility Measures:

3M IV (Three Month, at-the-money Implied Volatility)

2m RV (Two Month, Realized Volatility) - How volatile the index has been over the last two months.

3m Skew (Three Month, 90% Put vs 110% Call) - How expensive puts are compared to calls.

12m-3m Term (Implied Volatility of Twelve Month at-the-money options minus Implied Volatility of Three Month at-the-money options) - How expensive near term options are compared to longer term options.

Percentile (Current value compared to all values over the past year)

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