

S&P 500 Weekly Forecast 8/1

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Hey everyone,

We've been tracking down a hunch. That hunch is that the steepest part of a stock's "zomma curve" is associated with illiquidity (vol-of-vol), and that we can use that potential illiquidity to our benefit by buying stuff that's real curvy to the right, and selling stuff that's real curvy to the left.

[...] with the idea being that as the broad market moves down, our short is more beta-sensitive than our long

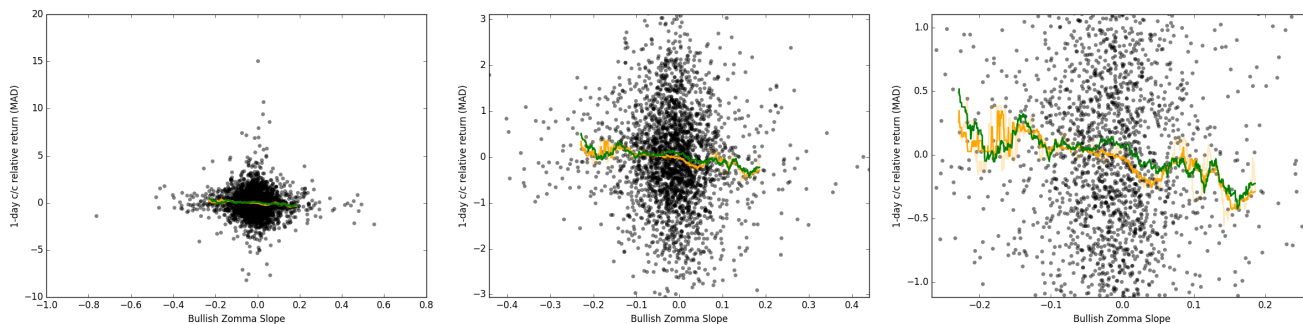
The only reason we've been barking up this same tree for so long is that we've been running a weirdly successful discretionary strategy based in this premise for a couple weeks now. But finding a justification in the numbers has proven... extremely difficult.

So we devised a test to finally get to the root of it: (1) Create zomma curves back to 2010 for a large, optionable stock (AAPL) and an index ETF that it comprises (SPY); (2) every day, analyze the relative steepness of the curves, to the right and to the left of the respective spot prices; (3) track whether the stock or the index relatively outperformed the other the next day, on a vol-neutral basis.

This was a pain to set up, but we needed to do it. The hypothesis is that, when AAPL has a relatively steeper curve than SPY to the right ("above," in price terms) of spot price and shallower to the left ("below"), AAPL will outperform SPY; and, by the same token, when AAPL has a steeper curve segment to the *left* ("below" spot price) and shallower to the right, AAPL will underperform.

Again, this makes sense because the steepness of the curve should act as a "booster," and shoot the price of AAPL—irrespective of its correlation to SPY—through those price levels. On the plot below, the x-axis describes the relative [bullish] steepness of AAPL (so, a positive number should be bullish for AAPL), and the y-axis denotes the relative 1-day (c/c) return.

Thus, we expect the lines (mean and median return) to denote a *positive correlation*. So take a loo...



... oh.

That's not good.

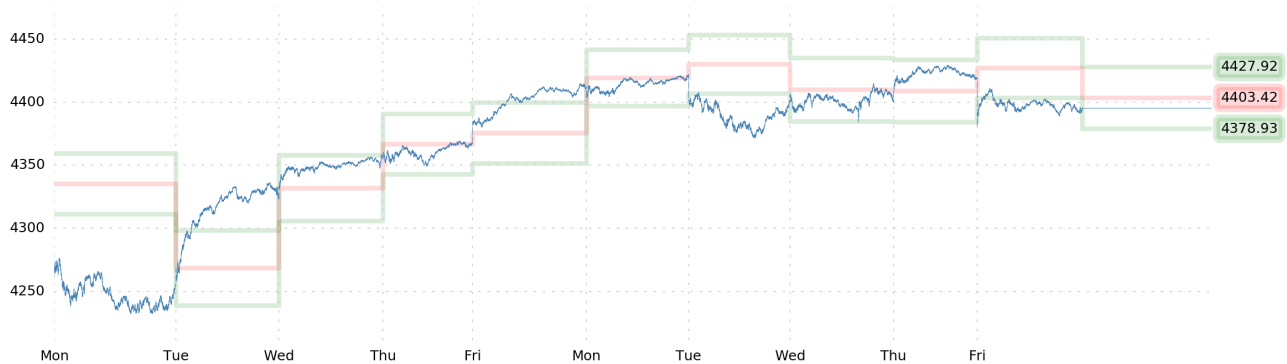
1. Noise
2. More Noise
3. Signal

Noise

Here's last weekend's forecast.

The way the week ended [...] doesn't favor long SPX *so much as it favors short VXX*. [...] We are currently short SPX / short VIX (as of late Friday), with the expectation that SPX takes a breather and August VIX keeps falling. [...] ever since NPD has been printing these nice negative numbers (-9 and such), it feels good to be betting on a persistent, low-grade SPX support with downward pressure on VIX.

Well, SPX went down 0.37% on the week. August VIX was flat. The short SPX / short VIX trade didn't lose, but it sure didn't win much. Even a dud of a FOMC day didn't do anything to drop VIX.

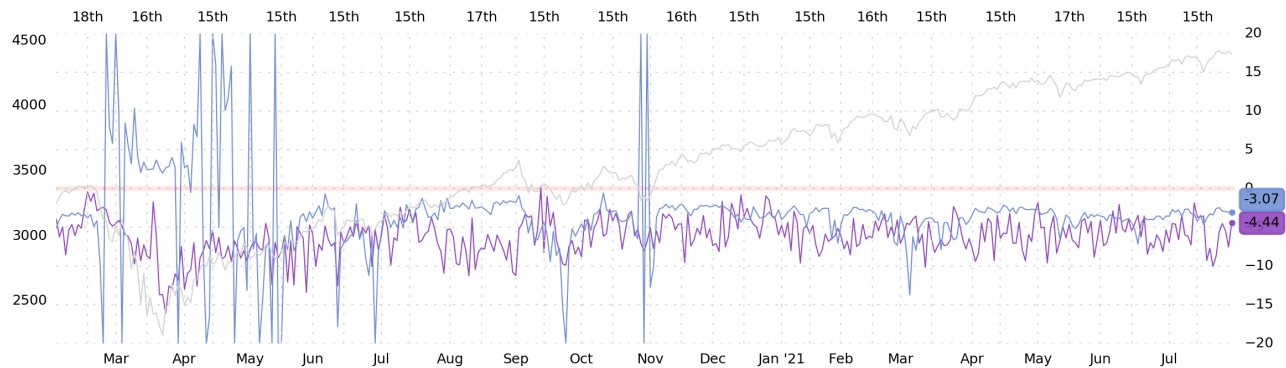


It will be easy to forget this week ever happened.

More Noise

But to an extent, the fact that nothing happened is going to be the premise of this next week. Because by golly it still feels like we're in the right trade (yes, we are still short SPX / short VIX). So really, all we're looking for in this coming week is for August VIX to grind down relatively more than SPX goes up.

Nothing else is going on. GEX+, the GIV curves, VGR, Crash Risk, the probability densities... all essentially unchanged. The only thing that we're watching as it oscillates is net put delta (NPD), which has been generally erring on the side of caution with prints below -5 (indicating meaningful net put-buying), but which isn't *entirely* sure of that (-4.44 on Friday).



It all adds up to a week that's tough to forecast, and tough to get any easy edge on. We're gunning for a wee bit of SPX upside drift (the market's "default" mode), with a visible drop in VXX. Or maybe that's just wishful thinking.

And for the umpteenth time, these summer doldrums are the *reason* that we've been looking into getting into some sector- and stock-specific trades.

And this is why, for the past month-and-a-half, we've been talking about zomma.

Signal

Unfortunately, zomma has proven to be a tough nut to crack. That chart up there appears to be either telling us the *exact opposite* of our hypothesis, or telling us that whatever we're looking for is such a tiny effect that we're not going to see it in the data. We're betting it's the latter: The real reason AAPL underperforms SPY at the left of the plot (where it "should" underperform) is because the impact of SPY dip-buying dwarfs everything else you might see in the data. Since SPY's zomma curve is steeper-to-the-right only after a dip in the index, this makes sense.

So that plot basically just tells us, "buy the S&P 500 on dips." And, by extension, "your zomma idea is stupid."

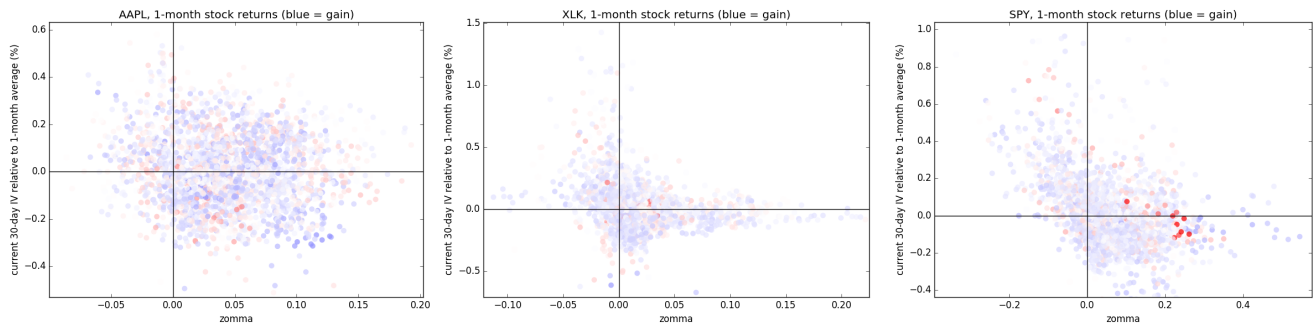
And so we took a step back.

Zomma is *supposed* to be telling us about the sensitivity of a stock's put and call open interest to changes in implied volatility. We landed here because we wanted to a way to simply track the interrelationship of delta, gamma, and vega (their hypothetical profit and loss) in stocks and ETFs over time, and to see if there's a signal in it. Zomma was a way to flatten the "vol triangle" into a single dimension.

But maybe that's just not possible.

So let's reintroduce an "implied volatility" PnL (vega) variable. After all, zomma is telling us about the sensitivity of gamma to changes in IV... so let's see what happens when we look at historical zomma *in the context of recent changes in IV*.

I.e., let's plot zomma on the x-axis, percent change in IV on the y-axis, and subsequent returns on the z-axis (in color). Below are plotted AAPL, XLK (tech ETF), and SPY, for illustration (2010 to present).



Note that red and blue (losses and gains) cluster (sometimes obviously) according to different combinations of zomma and IV change.

Is there some logic behind the way they cluster? There certainly is.

We just have to figure it out.

And we will.

Enjoy the week!

The SqueezeMetrics Team
