

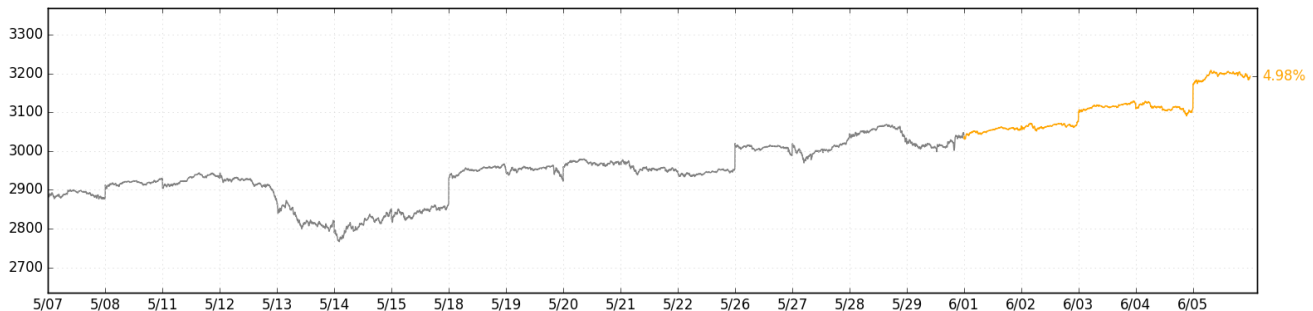
S&P 500 Weekly Forecast 6/7

From: SqueezeMetrics <info@sqzme.co>
To: SqueezeMetrics <info@sqzme.co>
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Hey everyone,

We were expecting another week with a 3% move or less. What we got was +5%, thanks almost entirely to overnight gaps. If you didn't think the overnight action was crazy before, then you've probably changed your mind by now -- the amount of S&P 500 gains that occur in illiquid overnight hours is pretty absurd these days.

Not even sure how long we've been saying this now, but: "Short gamma intraday, long gamma overnight" is a good way to go.



But we've spent enough time talking about overnight gaps. *One-sentence recap: Option dealers appear to be "allowing" gaps to occur because those dealers are long gamma, and when you're long gamma, you make money when there are gaps, so it does not behoove a dealer to delta-hedge in the illiquid overnight, because that would cause prices to mean-revert before the cash open, which would make subsequent delta-hedges less profitable. Make sense? So now let's talk about something slightly different.*

There are two theories about the recent bullishness that we see getting trotted around the Twittersphere and elsewhere that we think are really interesting. These theories have to do with call options: The influence of retail traders, the effects of speculative long call positions, and the effects of call overwriters' rolling. A common opinion seems to be that this recent rise in the index is an effect of unprecedented amounts of speculative call positions (see [here](#)), a broad theory best elucidated by Luke Kawa ([here](#)). Another (albeit less so) common opinion is that call overwriters are getting squeezed right now, and are forced to buy back their sold call positions ([example](#)). Both theories rely on the dealer delta-hedging mechanism as an explanation for recent gains.

Both of these things can happen. Both of these things have happened to some degree in the past. It's also a very clever explanation, but it seems a bit crazy that this is *all* about call options. Is this really a possibility?

But before we get there...

1. A posteriori

2. A priori
3. A possibility?

A posteriori

This past week, the S&P 500 went up 4.98%. That's 150 points up. And out of those 150 points, around 70 were overnight, when liquidity is scarce.

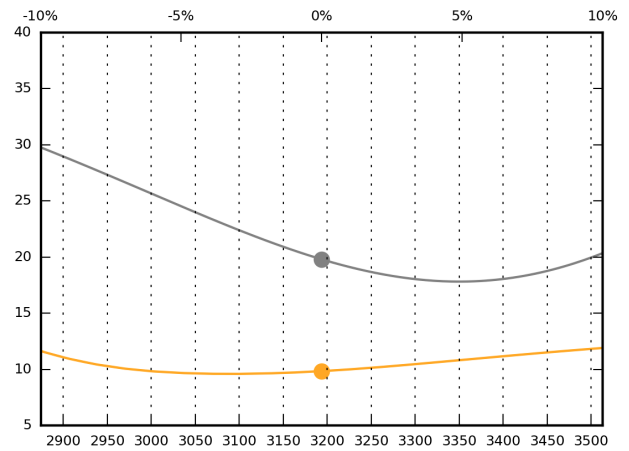
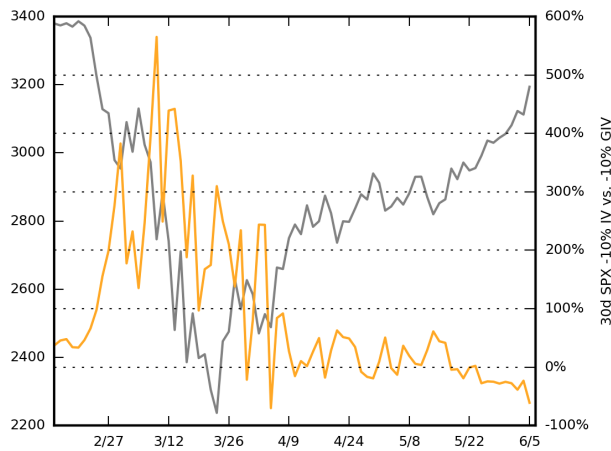
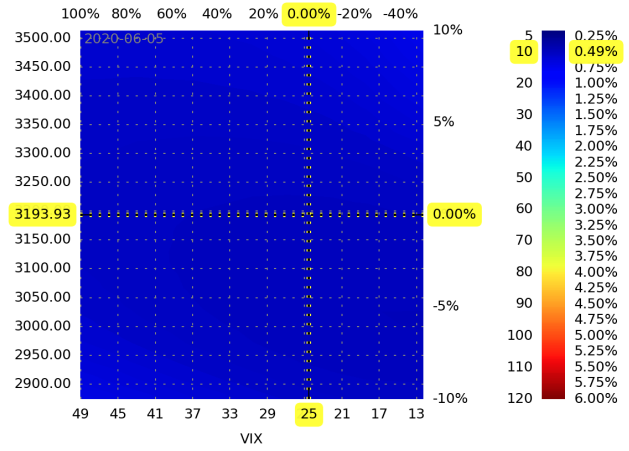
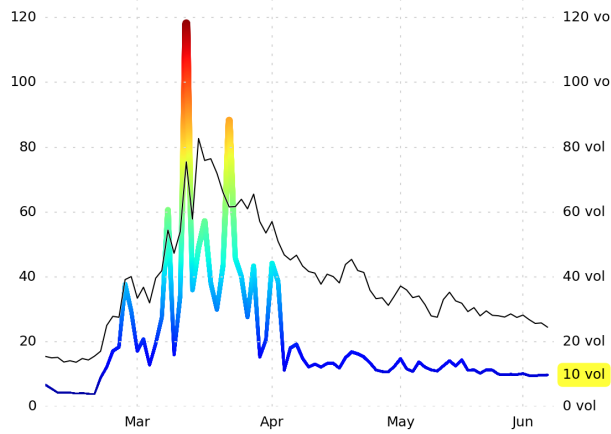
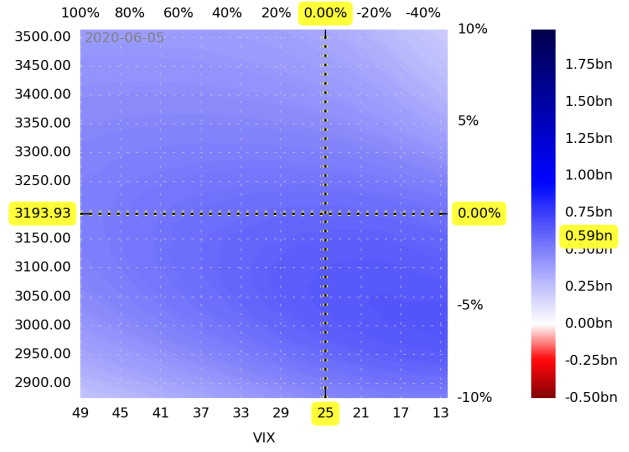
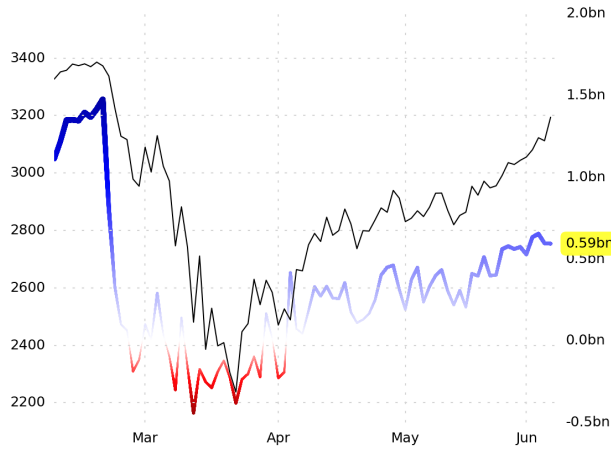
No, this bullishness is nothing new (recall our DIX discussion last weekend, and several months of talking about how crazy safe this market is), and we've been talking about these gnarly gaps for a long time, too -- but even we got caught off-guard by this week. Short VIX performed, long SPX performed, "long gamma overnight, short gamma intraday" performed, but short weekly realized vol (like weekly iron flies) did *not* perform. Sad.

So keep doing whatever you're doing. Long SPX is as safe as it was two months ago, if not safer (though that's more a function of crash risk than anything else). VIX continues to be overpriced, as do near-term vols. We're still proponents of the iron fly here, but you do you.

On a close-to-close basis, the last five days had an average move of 1.10%. VIX began the week implying average daily moves of 1.50%. GEX implied 0.50%. On this basis, it seems like VIX won this week. Hopefully you were more exposed to one of the strategies that worked.

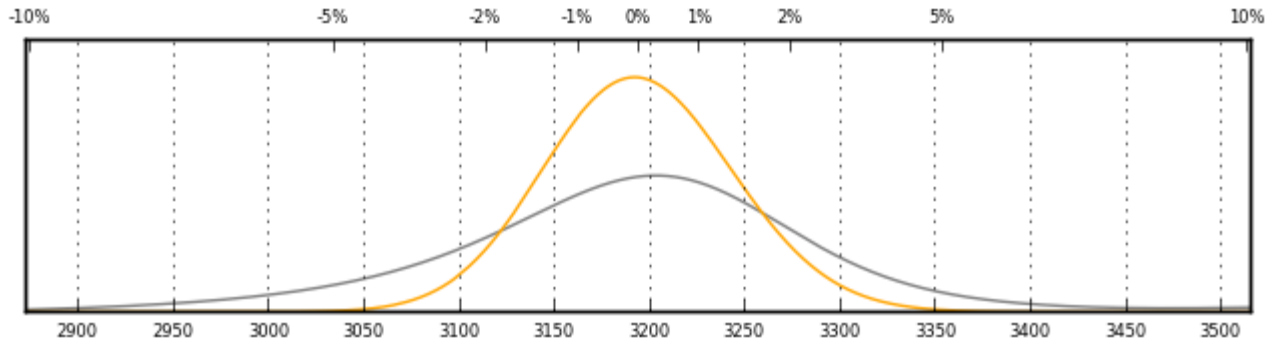
A priori

For the coming week, here's a chart-dump. The first row is GEX+, the second row is GEX-implied volatility (GIV), and the third row is crash risk and volatility skew.



The GEX+ and GIV heatmaps are unequivocal: SPX is presently *above* the point of highest GEX+, meaning that GEX+ would actually *rise* if SPX fell right now. This is unusual, and it has very subtle effects. Note that the GIV/IV skew in the bottom-right panel features a GIV (orange) skew that appears backwards -- i.e., volatility will *increase to the upside and decrease to the downside*.

The effect that this has on crash risk (bottom-left panel) is also notable. Crash risk is incredibly low, since GIV implies volatility of around 12 in the event of a 10% drop in prices, and 30-day market IVs anticipate it'd be more like 30. When you actually translate the skews into a 1-week probability density, you get a sense for what they mean for prices (below):



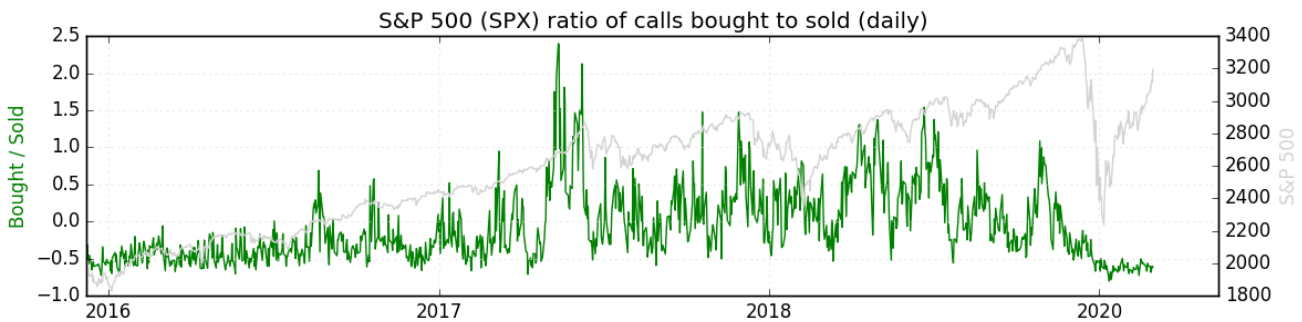
So, according to GEX, there's a much lower probability of a 5% drop this week than the market implies. Also according to GEX, there's a much higher probability of a 0% change than the market implies. This is another opportunity for a risk-reversal (trading against market skew) or iron fly (trading against market ATM probabilities). Or maybe you just want to stick with long SPX or short VIX. In any case, it continues to be a very safe, very liquid market out there.

A possibility?

Now back to that call option stuff:

Back in December '17 to January '18, we watched the craziest squeeze we've ever seen: The S&P 500 rose, triggering institutional call sellers to buy back huge amounts of calls to avoid further losses. This caused dealers to buy S&P futures, pushing price up more. It became a feedback loop, where those call overwriters continued to roll their positions away, and kept getting squeezed out of them. Due to the overwhelming size of that trade, and due to the specific (high) GEX situation, it was one of the most dramatic examples of the S&P 500 option market being too big for the S&P 500.

You can see this episode quite clearly on the chart below (the highest the green line has been in recent history). That was a period of strong net buying of SPX calls, for obvious reasons, and the effect on the index was stunning.



A lot of folks are saying that something similar is happening right now -- that there's a ton of (A) speculative interest or (B) call squeezing, and that it's driving prices up. You can look at the chart and come to your own conclusion.

If anything, it's the opposite, right? Calls are being decisively net sold. And you might wonder, "well, will those sellers *start* to get squeezed soon?" And that's an interesting question, but we'd say that even if they *do* it doesn't matter. S&P 500 gamma exposure (sans vanna) was over \$1.2bn at the beginning of December '17, which suggests that there was a huge bank of sold calls at and above the market. Right now, SPX gamma exposure (sans vanna) is \$340mm -- a fraction of the size. Any call squeezes right now would have a very

small effect.

So, calls are being net sold, but there's not yet enough sold call open interest to trigger a squeeze. As we've been saying for months now -- it's actually quite boring out there in SPX option land. Any bullishness you're seeing right now seems more likely to be due to institutional folks buying the index itself (hence both high DIX and calls being net sold, which is exactly what you'd expect to see if this were the case).

Some folks will try to argue here that single-stock speculative call-buying could be "trickling up" and causing this squeeze dynamic. Let's just say those flows are not *nearly* big enough to affect the broad index.

Now let's say something mean: The purpose of the "call-buying is driving the rally" theory is a psychological crutch. If you're bearish, it feels good to say that the market is rising on "a technicality," and that "there are actually no real buyers." Well, there are definitely buyers. Maybe they're all crazy, but they're buying.

Hope that makes sense. In any case, here's to hoping for a bit of a breather this week.

The SqueezeMetrics Team
