S&P 500 Weekly Forecast 9/13

From: SqueezeMetrics <info@sqzme.co>
To: SqueezeMetrics <info@sqzme.co>
Subject: S&P 500 Weekly Forecast 9/13
Date: Sunday, September 13, 2020 9:03 PM
Size: 635 KB

Hey everyone,

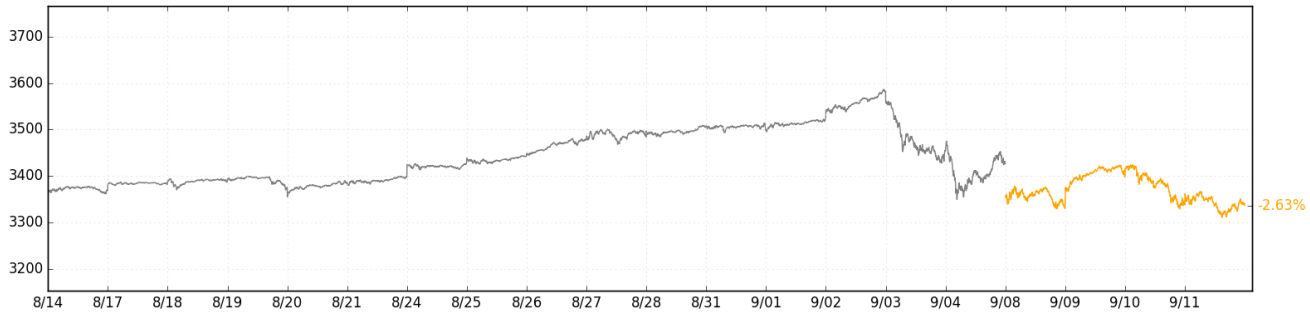
We have an update: After our discussion last weekend on developing a sentiment indicator from the realized-implied volatility spread... it, uh, turns out it's *really hard to derive a signal from the realized-implied volatility spread.*

And maybe that shouldn't come as a surprise, given that armies of computers trawl through this type of easily-accessible data, looking for trade signals. This isn't to say that we turned up *nothing* in our examination of up- and down-volatility, though -- just that what we found isn't quite what we were looking for. Indeed, what we found was actually the *opposite* of what we were looking for. (And it's not the first time that's happened.)

We'll talk about what we found in a moment, but first...

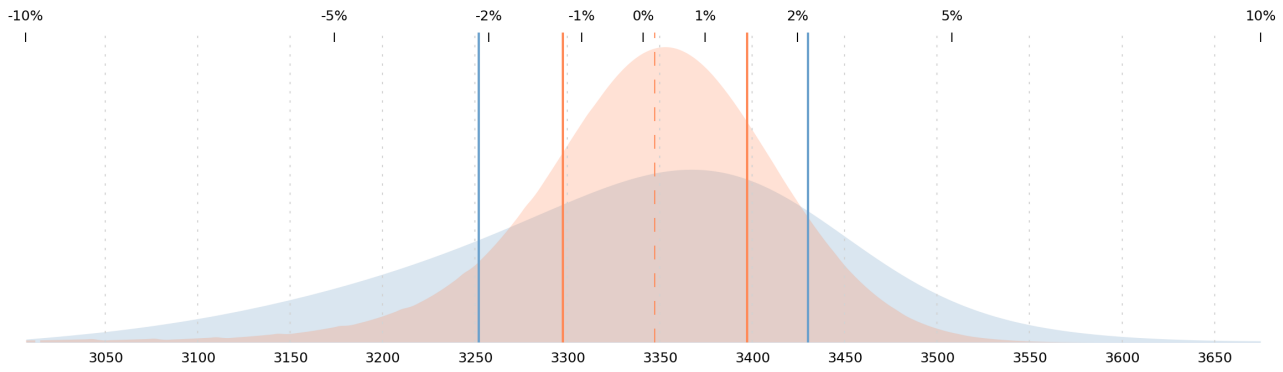
1. The short week behind
2. The long week ahead
3. Upon further inspection...

The short week behind
The S&P 500 ended the week down **2.63%**. Almost all of that loss, though, came from the weekend gap down. The remainder of the week, though volatile, was an exercise in mean-reversion. Our 3400-centered iron flies were able to profit from this turn of events, and so was our short VXX (which closed *last* Friday at 28.92, and closed *this* Friday at 25.52).



We said we saw "quite a bit of edge" for this past week, and hopefully you saw that come to fruition.

The long week ahead
The situation is pretty similar to last weekend, though there's a bit less edge out there. We'll be holding on to our short VXX position, at least through tomorrow, and we'll me moving into another iron fly for Friday, given the differential between the two probability densities below.



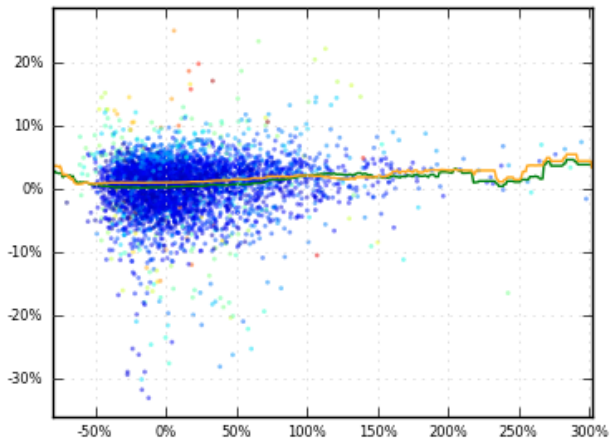
With a centered strike at 3350 (or halfway between 3350 and wherever we open, which is the heuristic that we usually use) and two wings, we intend to capture pretty much exactly what we did last week. Specifically, we're looking at 100-wide wings, so, e.g., **+3250p -3350p -3350c +3450c**. With the given differential between the 5-day distributions above, we expect this to have a similar return profile to last weekend's, but we've encountered some trouble with the Juice Algo today (which, as you might imagine, has lots of moving parts), so we won't try quoting "exact" numbers.

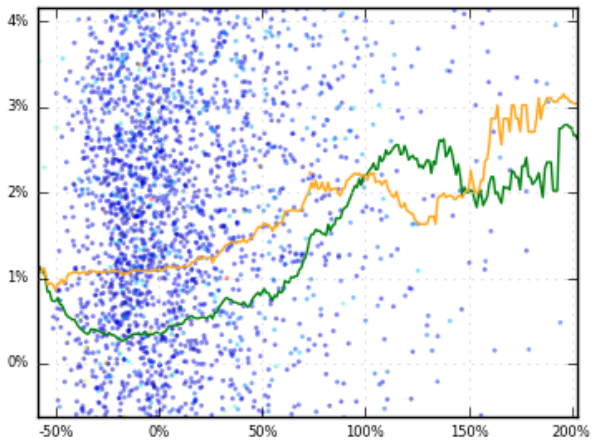
Suffice it to say that we believe we have edge again going into this week, though we expect to size things a bit smaller (and likely to trim the short VXX position soon). As you already know, crash risk is low, and GEX+ doesn't turn negative until SPX gets below ~3100. The vol market doesn't seem to know that (which is why we're having such a wonderful time shorting VXX), so make hay!

Upon further inspection...
Last weekend, we talked about how we wanted to break S&P 500 realized volatility into "up" and "down" volatility, and then compare each of those separately to implied volatility. The idea was that, by considering volatility "directionally," we might be able to isolate a "momentum" factor, and perhaps a "support" factor. Some initial (but not great) tests supported that it may be possible, and even on a short-term basis.

Upon further inspection: No.

Upon *further* further inspection: Look at this, though.





This is a plot of

- (X) the ratio between *1-month implied volatility and 1-month realized up-volatility*, and

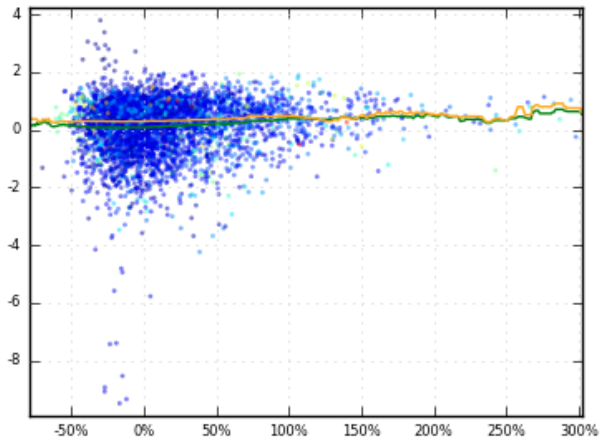
- (Y) subsequent *1-month (%) returns*.

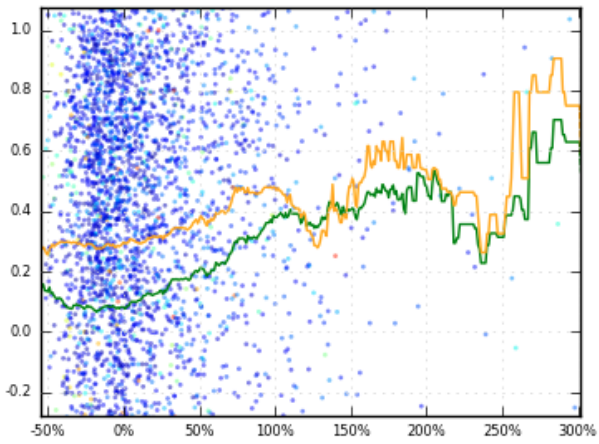
The green line is the mean return. The orange line is the median. The rightmost plot is simply zoomed in. Notice that as we increase along the x-axis (as IVs become relatively *higher* than realized up-RV), 1-month returns increase meaningfully. When IV and up-RV are the same (0% on the x-axis), mean 1-month returns are about 0.25%. When IV is 100% higher than up-RV, mean 1-month returns are over 2.00%.

Usually when you look for a directional signal in volatility, you end up finding an iteration of the same thing every time: When vol is higher, mean returns are higher. E.g., when VIX is 50, the S&P 500 tends to go up over the next month, on average. This isn't interesting or useful -- it's just a risk premium that we're all aware of.

What makes the above interesting is that it is decidedly *not* the same thing as this volatility risk premium. Note that the dots are color-coded: The hotter colors are during high-IV periods. If this signal were relying on the same ol' risk premium, the returns toward the right of the x-axis would be associated with more hot dots. But they're not.

To clarify this fact, we re-plotted percent returns in terms of the standard deviation of the implied volatility, so as to neutralized the high vol factor. Note that the relationship holds: A 0% (IV = up-RV) on the x-axis results in 0.1 standard deviation gains, on average. A 100% (IV 2x up-RV) on the x-axis results in 0.4 standard deviation gains, on average.

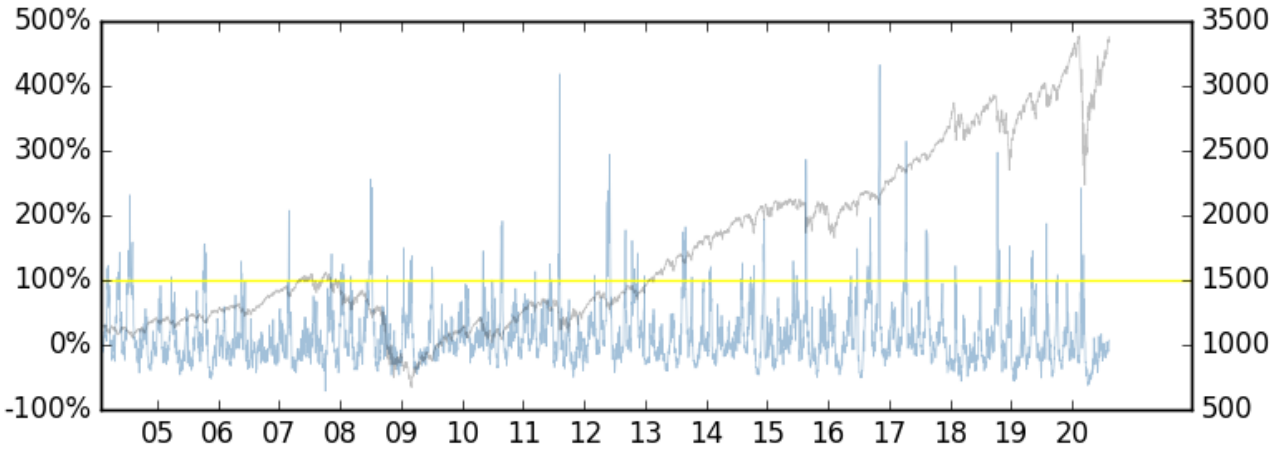




So if this isn't a volatility risk premium, what is it?

We're not really sure, but perhaps we could call it a "mean-reversion risk premium," or maybe a "volga risk premium" (to make it sound smart). We say this because historically, the biggest divergences between IV and up-RV are when the market takes a quick, unexpected dive and the increase in IV relative to the muted upside realized volatility, suggest that a mean-reversion is in the cards. It's very likely that the spike in volatility is overdone, and that the tails of the distribution will be -- more often than not -- quickly repriced lower by vol sellers, eventually driving the index back up.

You can see that it's actually a pretty unique signal. It doesn't cluster -- it just flashes and then disappears.



In function, this is pretty much the *exact opposite* of the "support-momentum" indicator we thought we might find by looking into this data. It's neither support nor momentum: It's a "buy-this-dip-real-quick" indicator.

Would love to hear any feedback on this one, positive or otherwise. Anything similar out there? Dataset available on request if anyone would like to do some digging. We'll try not to turn this into too deep a rabbit hole.

Enjoy the week!

The SqueezeMetrics Team
