S&P 500 Weekly Forecast 11/15

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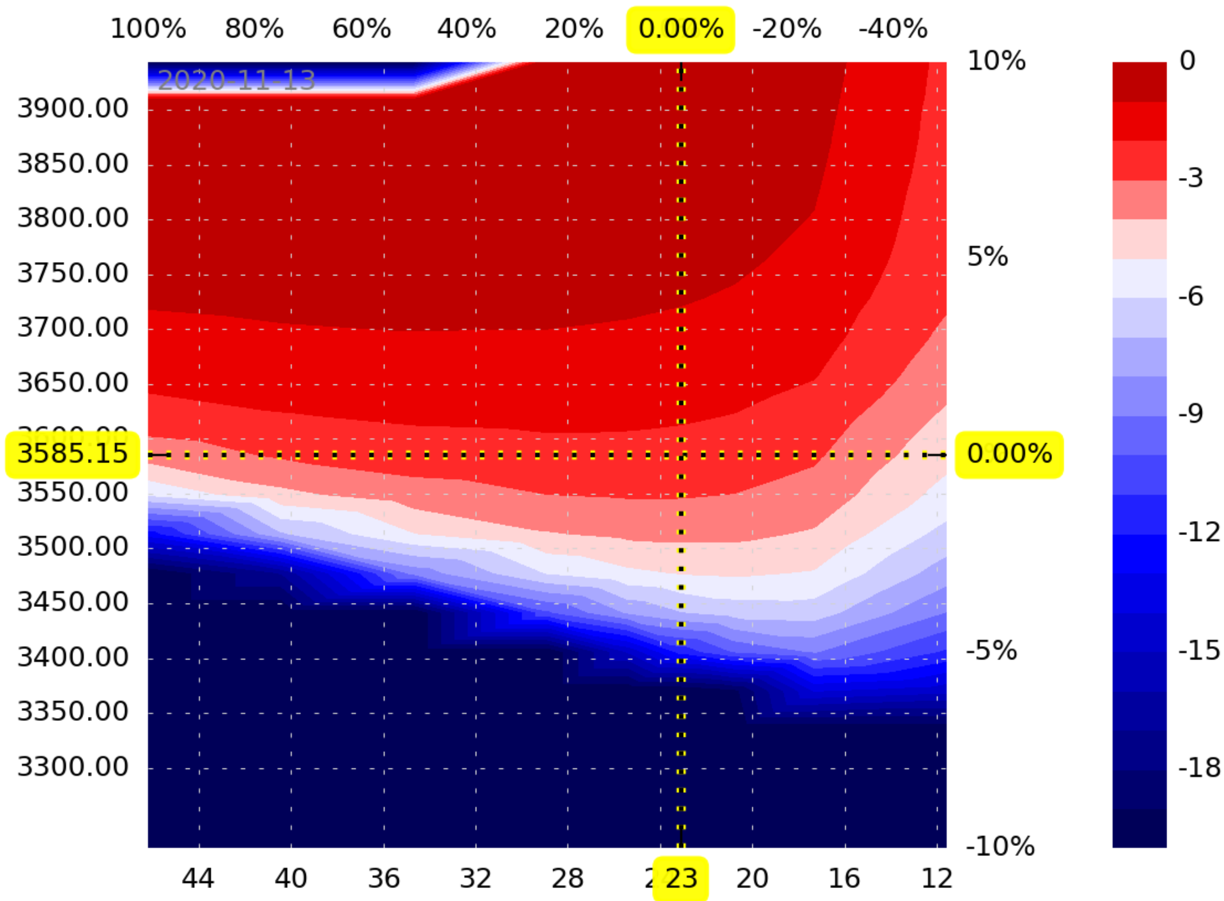
Hey guys,

It was a tough week to be long puts, made only marginally easier by the fortuitous Monday open. But then, it's almost always hard to hold puts. For the time being, it seems that dealer gamma and vanna exposure (GEX+ is $700mm) have been able to keep the index pretty stable -- but with regard to customer positioning, we're exactly where we were a week ago: unstable.

But what does "unstable" mean? To understand this, we'd do well to make reference to "attractor landscapes," which is a tidy and intuitive way to understand the equilibria and tipping points ("attractors" and "repellers") in a system. Fortunately, it works just as well for describing asset prices as it does for a pond's fish population. It's all just balls on hills (this will, um, only make sense if you clicked the link above).

And so to associate the customer vanna-gamma ratio (VGR) with a "landscape," let's refer to an old method: *The heatmap!* Below is the current VGR heatmap, with VGR (color) relative to SPX spot price (y-axis) and VIX (x-axis).



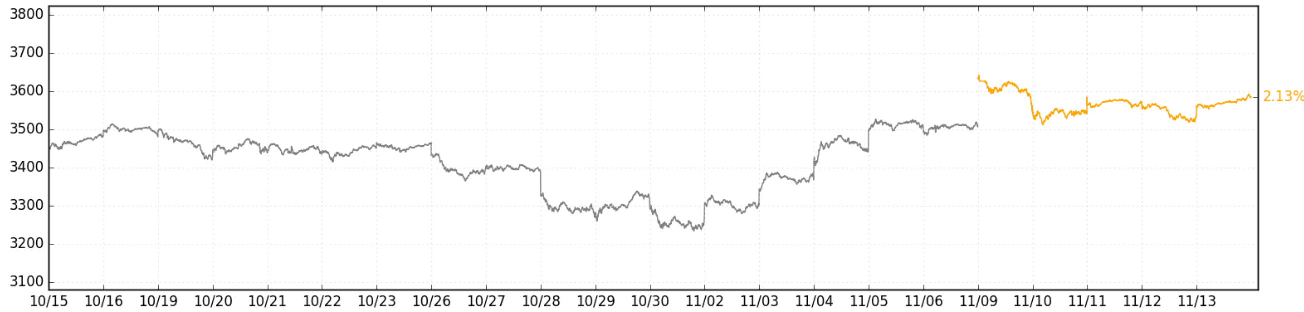
Where the map is *red* (0, -5), that's where VGR is associated with average 1-month losses. Where it's *blue* (-5, -20) is where it's associated with 1-month gains. Where it's *neither* is associated with 1-month mean returns of 0%. Right now, with SPX at 3585, the index has a medium-term headwind. Over the next month, customer positioning will likely lead the index lower. Somewhere around 3475 (-3% or so) that headwind subsides.

Let's dig a bit deeper into this, but first...

1. <-- week
2. week -->
3. Hot or Not

<-- week

Monday started off just peachy. SPX 4000 felt like it was just a couple stimulus checks away. After accumulating some puts, we were hopeful for some downside follow-through. Didn't happen. Though the index was down from the headline-pump open, the week closed up 2.13% from the Friday close.



Our impression is that, ever since the 5th, the index has been held up by a combination of (1) that vaccine headline, and (2) dealer gamma exposure. That Monday gap up allowed a great deal of dealer long gamma to be monetized, but that also served to raise the "GEX floor." With nothing to sufficiently shake things to the downside, we were in a holding pattern. Being that the coming week features some more exciting moments, like VIX expiration and the monthly OpEx, perhaps that can change.

week -->
At some point, we'll need to forge that "middle path" between our iron-fly-selling activity (index options usually overestimate day-to-day volatility *and* trending behavior) and our newfound vanna-directional awareness. What we find exciting is that it seems quite reasonable to think that we can merge VGR/NPD into the Probability Page at some point -- after which we would be able to use our optimization algorithm to find the best expression of our combined GEX+ and VGR/NPD edge. (Ooh!)

But let's not get ahead of ourselves. When we look at the Probability Page and the GEX-implied distributions compared to what the market's offering, we immediately see a typical trademark of "not a great market to sell vol," and that's that the GEX and IV pretty much agree on the 1-day probability density, and that there's very little edge in selling 1-week options. Even if we were to sell an iron fly here (as we so often do), it would be sized very small.

Which makes us even happier about hanging on to our long volatility, short delta bet (currently holding Nov30 puts). As we know, the "attractor strike" is currently around 3% below spot. If we don't appear to be obviously overpaying for that near-term volatility exposure according to GEX+, then all the better!

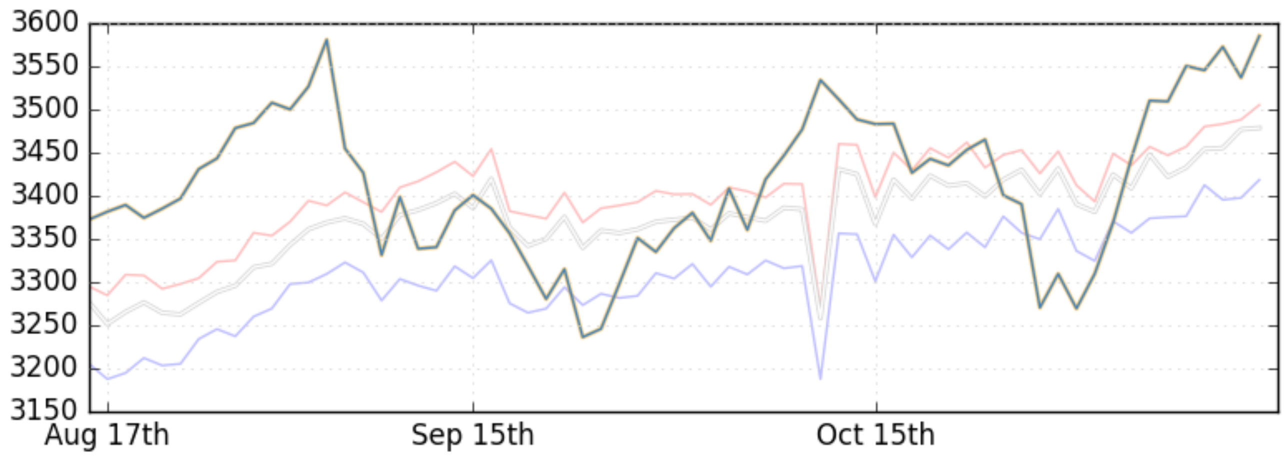
So, another week of sitting on a low-probability bet, with that eternal, nagging question of when it would be best to monetize if the trade starts working. Though we're hoping that the VGR heatmap can give us some guidance here.

Hot or Not
Imagining VGR as a sort of "attractor landscape" and heatmapping the data is only sensible because of what the data has told us about itself: From 2005 to present, VGR between 0 and -5 has resulted in mean 1-month losses for the index, and VGR between -5 and -20 has resulted in mean 1-month gains. The relationship is nice and tidy, with deeper negatives predicting greater returns, and with near-zero readings having a large left tail, and significantly negative mean returns. More recent data exhibits stronger tendencies, so including older data keeps us conservative.

Hypothetically, these tendencies are for all of the reasons that we've been elucidating over the past couple weeks: When customers' option positions are paired off against other customers (instead of against dealers) and the vanna of those options is high relative to their gamma, the impact of a small change in implied volatility becomes magnified, and the index moves toward its equilibrium -- that point at which customer vanna impacts are about 1/5th of customer gamma impacts (that's what a VGR of -5 means). In other words, as customers' market exposure collectively become more a function of IV, the market becomes less stable (and ultimately seeks out stability).

And in practice, thinking of the data this way is pretty compelling. Check out this animated heatmap of the last month of SPX activity in terms of VGR. Notice how the "attractor" (the white area) is indeed a sort of reference point for the index.

Expressed differently, here's some data since mid-August, of where the "attractor strike" (white line) lies relative to the index. Above the red line would be bearish, and below the blue would be bullish.



Just a couple months of this data took a whole day to generate, so we'll circle back to this so we can see where the "attractor" idea works over time, and how well (and where, exactly, it doesn't work so well). If it *does* work, as we think it will, we'll be able to use what we think is a very intuitive concept (much like a simple moving average, or like any number of other old-school charting indicators) to describe the impact of customer option positioning.

Quick nerd note: This VGR thing started a couple months ago as, "we know there must be some directional sentiment indicator hidden in option market data." And we maintain that what we've found is indeed a "directional sentiment*" indicator, because the basis for these different levels of market stability is wrapped up entirely in the way that investors* choose *to use options -- it's not some regulatory requirement or market microstructure phenomenon. It's human behavior. The predictable behavior of those players (e.g., put-sellers rolling from low to lower deltas when IVs rise, but put-buyers preferring to wait for higher gamma) is what we're basing the data on here. You can interpret this as either a weakness of the data or as a strength. The way you see it will depend on whether you think it's sustainable to "play the player" rather than "play the game." Sentiment,* per se*, only really matters if you're a fan of the former.*

Anyway -- raw NPD and VGR data will be added to the daily GEX+ spreadsheet some time this week.

Last [incomplete] thought: Look again at the chart above. See that melt-up in late August where SPX just kept going up, despite being well above the "attractor?" Well, can instability resolve violently to the upside for a while? Are melt-ups part of what an unstable VGR can give us? If this is a potential fear, we can always consider a long strangle, or long VIX futures, which can do a pretty good job of keeping their value in a melt-up scenario. We may be swapping some of our put exposure for some vega in long VIX futures / long VXX.

Enjoy the week!

The SqueezeMetrics Team