

S&P 500 Weekly Forecast 10/10

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Subject: S&P 500 Weekly Forecast 10/10
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Hey everyone,

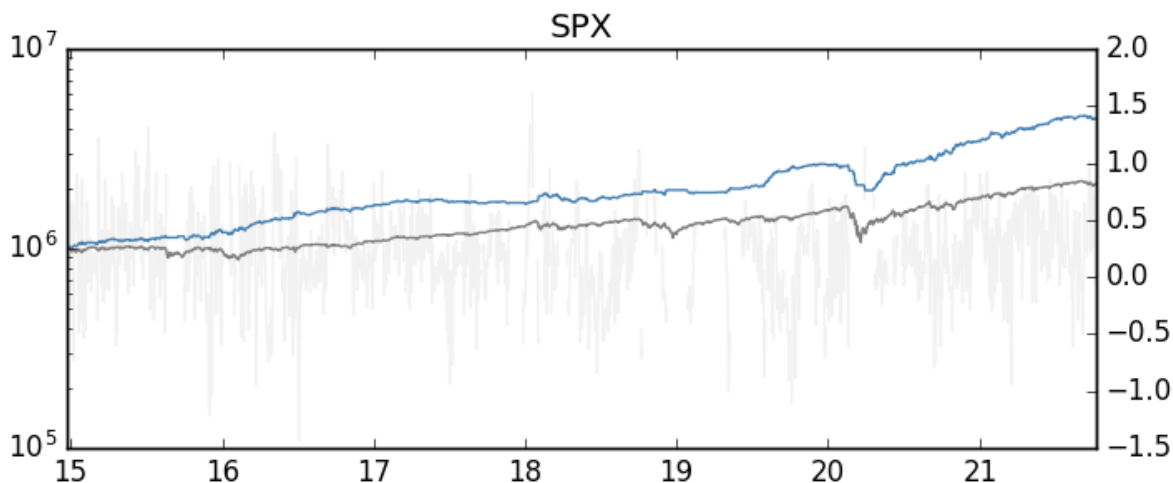
Robot Jim has been doing well. His expected weekly S&P 500 distributions continue to match our intuition, and that's great. But a couple weeks of anecdotal evidence isn't enough—we need to run an event-driven backtest to know if this would have felt just as good in the past. We hate doing this work, but it needs to be done.

For the sake of the test, we're going to assume that we're trading SPX at the close. For that reason, we can't use end-of-day DIX data—we have to use the *prior* day's print to avoid look-ahead bias. Same with NPD—we can't take a good guess at the closing NPD data until the next morning, so we have to look back further. The rest of the data (GEX, VEX, and VGR) can be more or less accurately imputed from existing positioning information and an option decay model, so we'll leave those axes alone, assuming that we can take a good guess at each of them before the close.

(By the way, the VGR heatmap is finally on the Sentiment Sheet PDF. Take a look!)

Robot Jim's model outputs a 5-day mean expected return, and the backtest uses that expected return to decide simply whether to be long or short at the close. The model "trains" on five years of data from 2010 to 2015, then starts trading. On the right-y axis is the edge (in weekly MAD) that the strategy believes it has. Any time it's above 0.0, we're long; any time it's below 0.0, we're short. Any time there's no good signal, we're neutral. No subtlety here. *Nor is any leverage employed.* Just 100% long or 100% short.

Here are the results:



\$1mm invested in a buy-and-hold of cash SPX (gray) at the beginning of 2015 ended at \$2.1mm. The same \$1mm invested in Robot Jim's unleveraged long/short fund (blue) ended at \$4.5mm.

We try to avoid deriving pithy stats from these tests (Sharpe, Sortino, drawdowns). If the chart looks good and the test was performed well, that's about as good a read as you can get without fooling yourself. With a log axis, you can see where the portfolios diverge in terms of growth, which is what matters (late 2017 was not great, as you can see, because GEX+ and NPD both indicated that a market crash was possible at the time!)

This is, in our estimation, a very good chart.

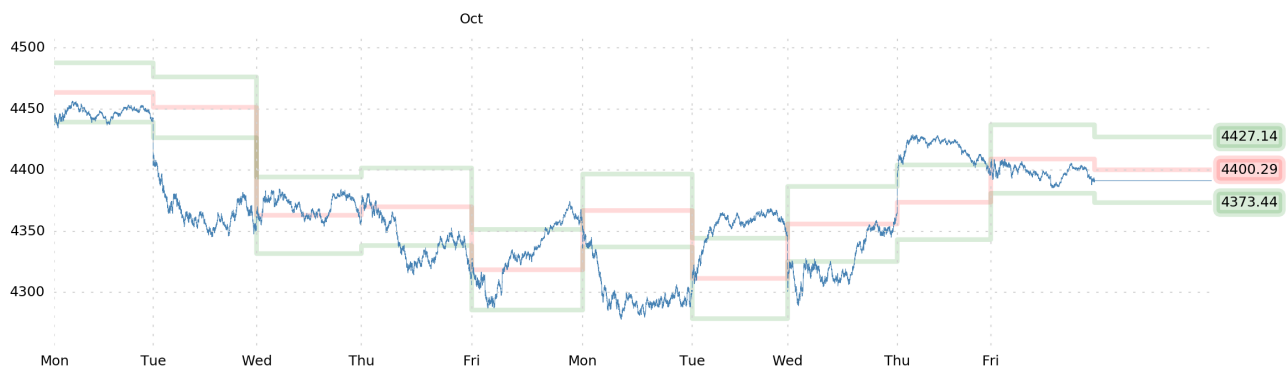
One problem: Since we're using DIX, we can only run this test back to 2010. But if we slice off the DIX, we can test GEX, VEX, NPD, and VGR (sans DIX) all the way back to 2004. So, after the break, let's do that.

But first...

1. Then
2. Now
3. Edge

Then

Robot Jim's prediction was that SPX would be up, on average, 1.90% on the week. Well, it went up 0.79%. Not bad. Didn't do magic for our call spreads, but wasn't the worst thing, either.

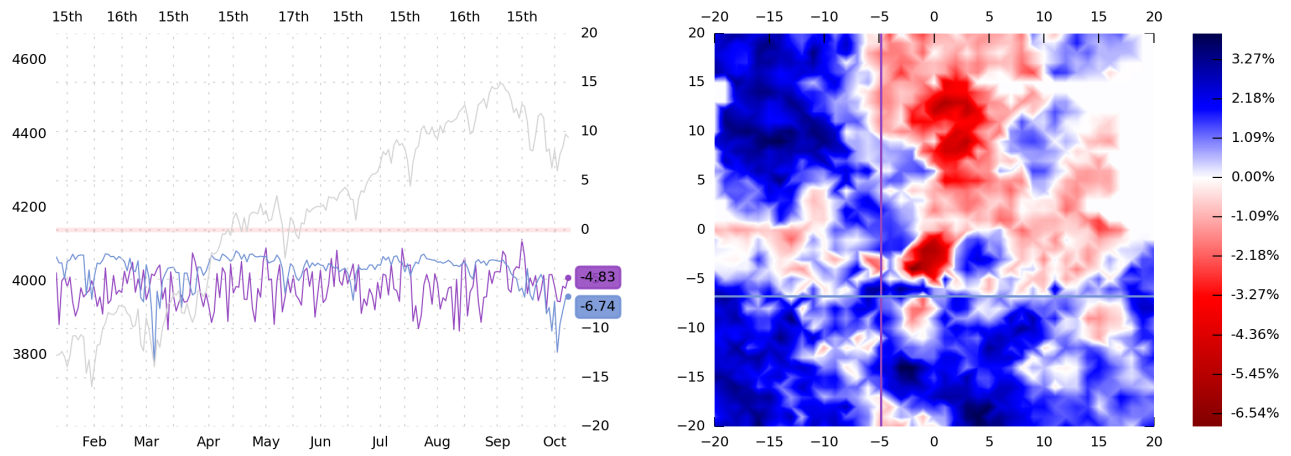


We ended the week with Friday-expiring 4350/4450 doing very little for us, and some farther-out call spreads (~1 mo.) doing fine. We also ended the week holding on to our bullish "drift up" thesis.

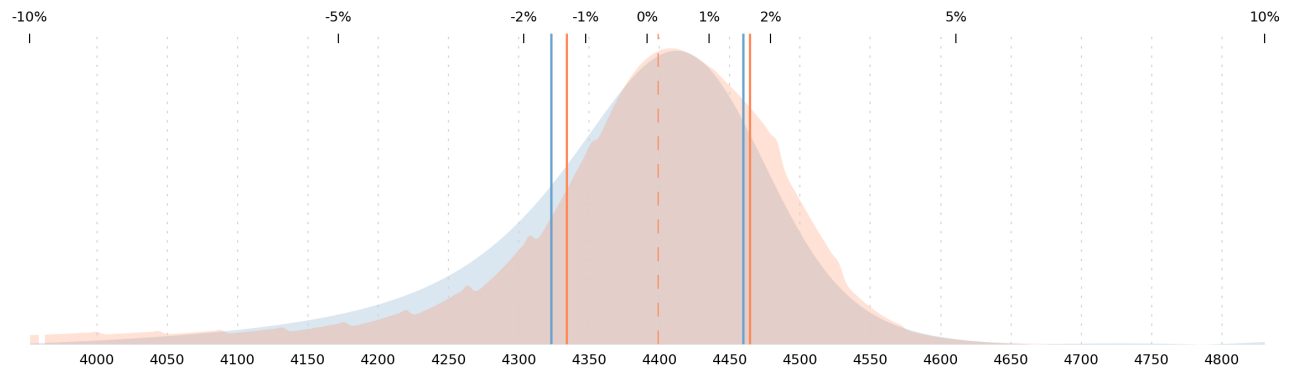
Now

And really, that hasn't changed.

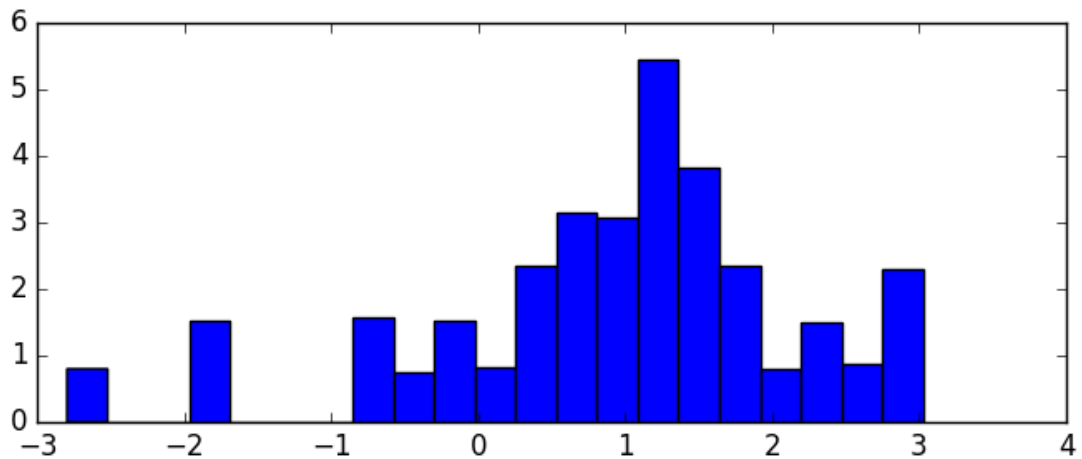
DIX ended the week at 44.3%. That leans bullish. NPD/VGR are still in the bullish zone.



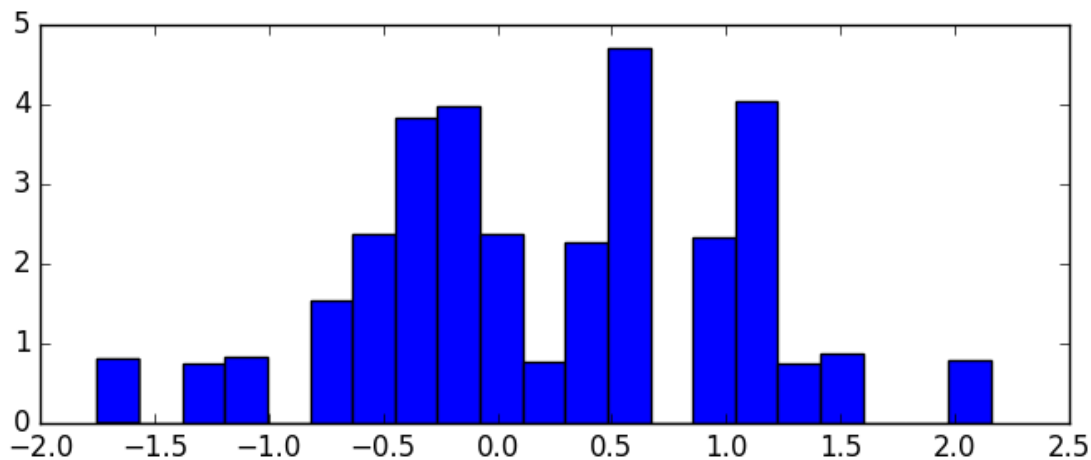
And the current GEX+ situation encourages slightly higher median returns, as evidenced by the 1-week probability density on the Probability Page.



So really, we're expecting more of the same stuff. *"Climbing the wall of worry,"* if you will. Here's Jim's 1-week expectation:



That's strong, with a mean return of nearly +1 MAD (~2.00%). But let's also let Jim tell us what he thinks about tomorrow. Because he may end up having some insight into that, as well.



Interesting. Jim doesn't seem to think that the mean or median return is all that good tomorrow, even though he's rather bullish on the week.

No matter: We're still buying some of this >0.50% dip in /ES tonight.

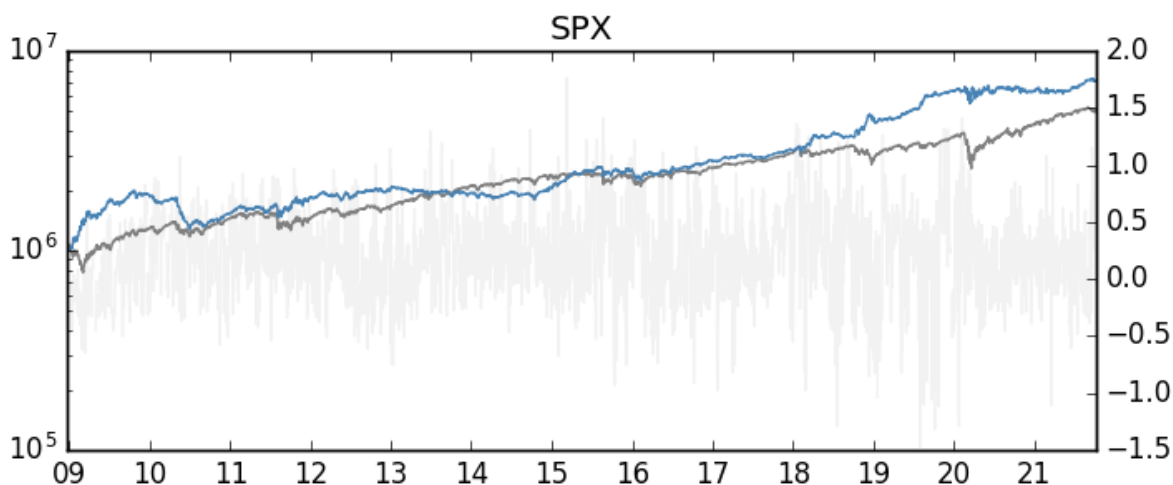
Edge

We have NPD, VGR, GEX, and VEX for the S&P 500 going back to 2004. So let's place each of these data points on a normalized axis of a five-dimensional plot (with vol-adjusted returns on the fifth axis). All of this data is already in the "master spreadsheet" that you get to see every day. Same exact stuff.

Since NPD cannot be replicated, and we rely on a 6am reading, we have to use that *morning's* data to avoid lookahead bias. So let's factor that in, too.

Now, for each day of data, slowly build up the history of returns associated with each axis, and as we step forward, use historical tendencies to inform positioning. Again, use *no leverage*. Positions are binary: 100% cash long, or 100% short.

Here is that test from 2009 to present (2004 + 5 years of "training"):

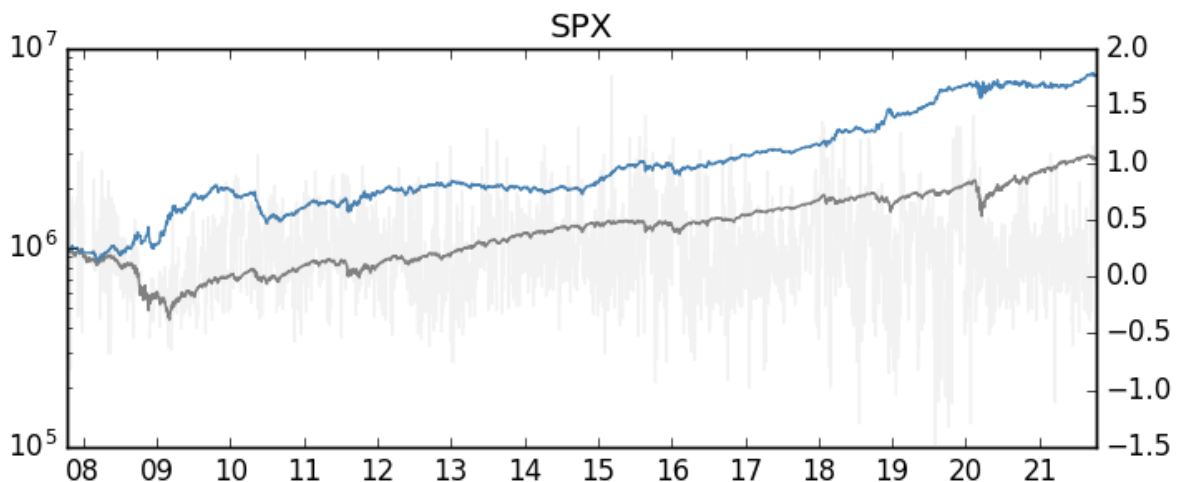


Not bad. Clearly performs better later (post-2016), which should come as no surprise, since it was after 2016 that the SPX option complex became huge (lots of weekly expirations), and gamma became a dominant

factor. And since we're using all SPX option data here, that's when we should have an edge.

But one thing bothers us here, and that's that we're missing 2008, which was a bit... tumultuous. And since we've gone out of our way in the past to claim that our GEX+, NPD, and VGR data would indeed have proven useful at the time, we really ought to make an exception to our 5-year training and take a gander at how we would have done in that environment.

And...



Wow. No complaints. Thank you, Robot Jim.

Enjoy the week!

The SqueezeMetrics Team
