# S&P 500 Weekly Forecast 7/18

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Hey everyone,

This is an important note. But it's also going to be a bit didactic. Sorry about that.

The predominant theme of the last month of our notes (since 6/20) has been "long QQQ, short IWM." The reason for this trade was that the gamma tension of QQQ was positive, and the gamma tension of IWM was zero to negative. In other words, the "default" for QQQ as time passes, or as volatility falls, is to go up; and the "default" for IWM as time passes, or as volatility falls, is to go down.

Well, QQQ has gone up 4.37% over the last month, and IWM has gone down 3.23%. That's very significant. If we may be so bold, we believe it suggests that we've isolated a substantial edge here. Yes, we're very much aware of the role that luck plays, and that the role of luck is *always* outsized on any 1-month period. Yes, we agree that, generally, it would be too hasty to simply draw a conclusion from *any* anecdotal 1-month stretch of returns.

But we don't think we're not being too hasty here, and that's why we sent you the historical IWM tension data last weekend: So that you could see for yourself that there is a demonstrable edge persistent over the past... *decade*—and that very good returns are actually *to be expected*. Some of you identified this in the data already. But even if you already did, it would be very useful to standardize the way we discuss it. Because what matters here is the *median expected return* indicated by the data.

So here's *our* plot of the data we sent last weekend (this is generated using the *exact* same spreadsheet that you have).



Nerds: If you'd like to replicate the plot, or extend it, we can send you the Python script we used to draw it.

The orange line is the *median 5-day return (y)* associated with a historical *tension value (x)*. Data is 2010 to present. The vertical pink line is where tension is at right now.

On the y-axis, a mean absolute deviation (MAD) of +1 means that the return was positive by one 1-month MAD. One MAD is simply the average move in the stock. So, e.g., if the average weekly move in IWM over the past month was +/-2.50%, then a +1 MAD means that the stock went up 2.50%. Similarly, a reading at -2 MAD would mean that the stock went down 5.00% that week. Seeing returns in the context of volatility (i.e., isolating direction) is essential to understanding whether your edge *depends* on volatility. (Ours does not.)

So, with all this in mind, what kind of return should we expect from IWM over the course of the next week? Well, according to this data, we should expect about -1 MAD (which is where the purple line meets the orange line). And so, if IWM has a historical volatility of around 19% (that's what IBKR says it is), then the implied 1-week MAD is about +/-2.14%, and thus, a -1 MAD would imply a median return of -2.14% in IWM for this coming week.

## Nerds: 19.0 \* sqrt(5/252) \* sqrt(2/pi) = 2.1354%

Does that kind of make sense? You don't need to understand the whole thing. IWM is still bearish.



Current tension (x) is around +0.04. That's associated with +0.30 MAD median weekly returns (y). With historical volatility around 12%, 1 MAD would be +1.3487%, so +0.30 MAD would be +0.40%. So the current QQQ tension data predicts QQQ gains, on average, of 0.40% this week.

This is exactly what's been happening for the past month. This is why we keep talking about +QQQ / -IWM.

But there's a lot *more* to talk about. So let's drill down further, after the break.

- 1. Flaccid
- 2. Firm
- 3. What's the difference?

#### Flaccid

It was a weak-looking week for the index.



And if we had to conjure up an explanation for that, it'd be the same explanation as you've been hearing for many of the third weeks of the month recently—people are frontrunning the [known] decrease in liquidity that occurs after monthly OpEx.

And they're not wrong to do it. After all, GEX+ fell substantially, to \$410mm per SPX point. Just like it did last month at this time. Seriously. Same exact thing.





Do you remember what happened next?

#### Firm

Of course you do! There was a strong bid over the course of the next month. At the time, we were convinced that short VIX was the way to go, and that went wonderfully. From 6/20:

*But* there appears to be no reason to believe in *increased* volatility to the downside, and that's what we really care about when we're short VIX. Heck, even <u>DIX</u> is telling us that there's a bid under the index. So if the July VIX contract opens higher than it closed on Friday, we'll be happy to gradually up our size on that.

Thing is... this time there is one reason to at least sort of believe in increased volatility to the downside: NPD.



As we've been saying for the past couple days, SPX net put delta (NPD) is telling us that folks aren't buying their usual put insurance here (-3.63). This means that fewer investors are "protected" against volatility, and that there are ultimately a higher-than-usual number of investors who hold opposite sides of the same put option. (Usually, dealers are short the bulk of the puts, and customers are long.)

This all adds up to a higher *vol-of-vol* expectation. I.e., a choppy VIX. See, generally, dealers keep volatility in line because they're replicating the payoff of the customer's long put (which has a short gamma impact on the index), but when customers are paired off *against each other*, nobody's doing continuous hedging. This means that, when one or the other customer wants to monetize or roll their option position, *a whole ton of deltas* get dumped on the market all at once, and unpredictably. This makes for choppy vol.

But then if we had to guess which way vol is going to "chop" next, we'd probably say *down*. VIX at 18.45 is pretty high, all things considered. There is a small cohort of readers who, no doubt, have already stocked up on their VXX puts (or July VIX, which expires on Wednesday!) for this occasion. Because VIX could very easily make the journey to 16 or so, and the "vol-of-vol" implicit in that bullish move is probably underappreciated right now. E-minis, right now, are disagreeing with our direction, but in any case, "chop" seems likely.

Another reason to feel the underlying bullishness, of course, is <u>DIX</u>—which has done a nice job of guiding us recently (as it so often does), and indicated strong support for the index on 18 June, just as it is right now.

So let's sum up the weekly forecast as "volatile VIX, but [relatively] calm SPX."

## What's the difference?

But who cares about all that mumbo-jumbo and these little tactical edges? Why worry about this volatility garbage if you can just say, "I'm long healthcare, short energy." This stuff plays *way* better at a cocktail party, anyway.

Luckily, we have isolated a clean signal that comes from the subtle-but-persistent transmogrification of vol risk into deltas. And when derived in *just the right way*, it works in all sorts of places across the market. It's quite tidy, and it's an edge.

As an introduction to this edge, we propose a sort of "market dashboard" comprising a number of large, liquid, and important indices, assets, and sectors. To that end, take a look at <u>this</u>. You should be able to gain a lot of context from this little dashboard. Use the walkthrough we gave in the section above to understand what each of the charts are saying. "Long/short" pairs should come pretty naturally.

We will look into updating it on a daily basis and then placing it on the GammaVol page as a downloadable PDF, just like all the other stuff. Perhaps we can have that done by next weekend.

### Make sense?

Now would be a good time to ask questions, if you're hung up on anything. Anyone who wants the Python script to generate the charts, let us know. Anyone who wants some more historical tension data to test, let us know. We can pack up a bunch of tickers for your testing pleasure.

Nerds: Some of you tested the IWM data and said, "Hmm, there's a useful signal here, but since the data is at the close, it's tough to know how much of the utility is coming from the overnight returns." Fear not: The closing data can be reliably derived before the close. There is not a lookahead bias here.

The Premium subscription remains closed indefinitely. Thank you all for being along for the ride!

The SqueezeMetrics Team