S&P 500 Weekly Forecast 3/14

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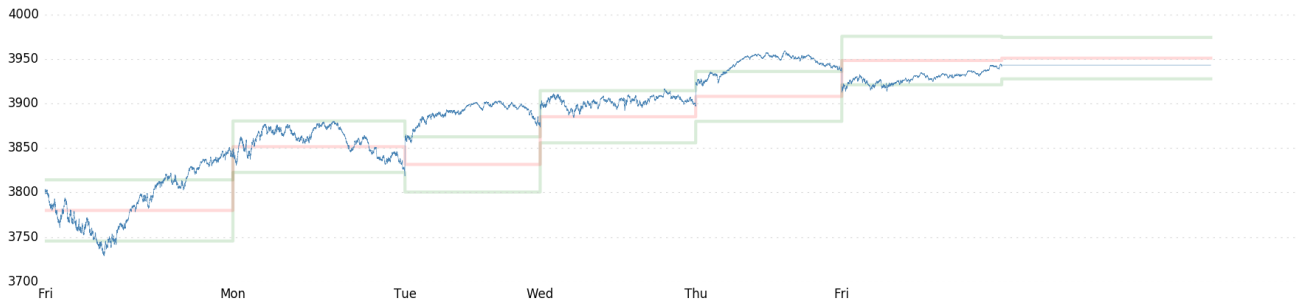
Hey everyone,

How 'bout them SuMo bands.



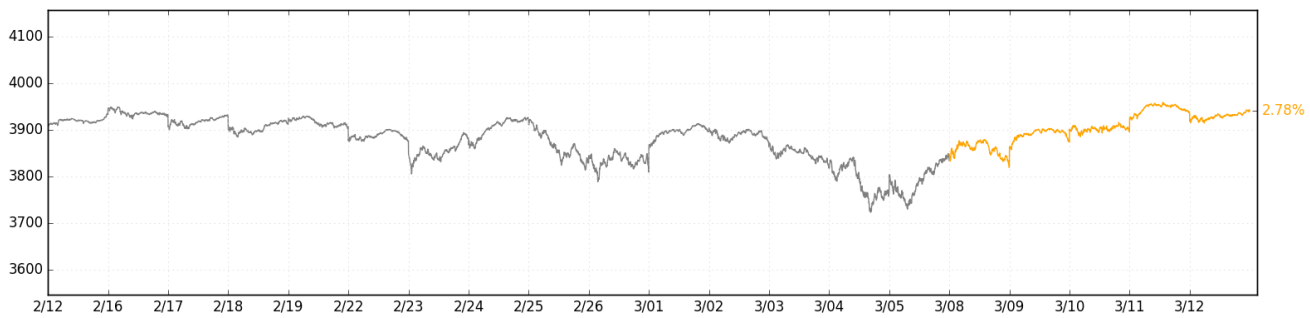
Yowza. That's nice. Not once did the index fall below the support band for more than a few minutes. Clearly, there is a relationship between S&P 500 implied volatility and S&P 500 price on an intraday level -- even if it's not what we initially thought it'd look like.

This week, we're going to introduce a hypothesis about the relationship between *S&P 500 implied volatility (IV) and S&P 500 realized volatility (RV),* and how that *should* have an impact on prices too. Very meta.

But first...

1. Strength
2. Week-ness
3. Charts, chartists, chartistry

Strength
Strong week.



Our only position, short March/April VIX, did well. We pared that position by the end of the week, as VIX

reached the 20 handle.

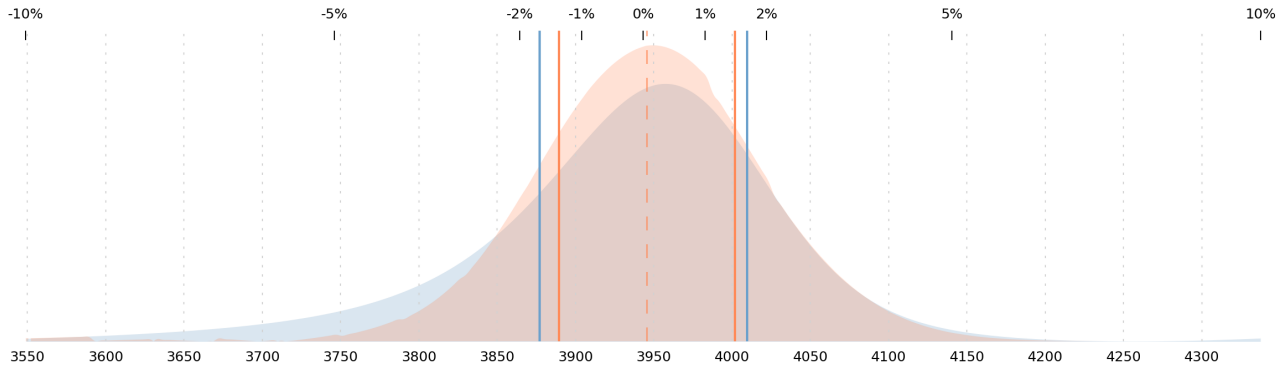
It's worth mentioning that, though SPX is butting up against its highs, NDX is not. The Great Reflation Rotation is still underway, and it still looks like it has staying power. Interesting. Without momentum, Big Tech slowly decays (low volatility drift flat/down) like the call option that it is. And, ironically, a primary source of S&P 500 index volatility disappears.

Week-ness

With NDX losing steam, it finally becomes believable that VIX falls below 20. And to bolster that belief, see that VGR is -3.83 right now. Last time VIX was at 20, VGR was -2.7. Recall that, as VGR moves closer to zero, that means option customers become more sensitive to volatility, and VIX tends to rise. With VGR at -3.83 right now, you could finally believe that VIX at 18/19 is possible (after which it would rise again!). So yes, there is *some* room for VIX to fall more.

This coming week is also Gamma Week (monthly OpEx Friday). If there is ever a time for realized volatility to get unduly compressed, it's Gamma Week. Later in the week (late Thursday, Friday), things may be able to get moving as folks begin to front-run next week's likely-higher volatility -- but in the meantime, our base case is some more low-vol upside drift.

As you know, we've been rather sour on iron flies recently, as they have been presenting little edge according to the GEX+ probability densities (front of the vol curve has been compressed!). This remains the case even now.



But if you're not keen on being short VIX, the 1-week density above tells us that there is some edge in being short ATM (3950) and long around 3850, capturing the elevated probability that the index moves somewhere between -2% and +1%, but not lower than 3850. Short ATM / slightly ITM put, long OTM put.

Should be pretty boring!

Charts, chartists, chartistry

We mentioned "volatility cones" last weekend. They look like this, and people in the '90s apparently liked them. They tell you the relationship between recent realized volatility and current implied volatility, by simply overlaying one on top of the other. Conceptually, the chart looks *forward* (IV) and *backward* (RV) from the current moment.

This purpose of a volatility cone is to gain some context into what current option prices imply, relative to recent moves in the underlying. The question that the volatility cone seeks to answer is, "Are options currently cheap or expensive relative to recent history?" This is the same question that is asked when someone draws 30-day RV and 30-day IV on a chart (which happens all the time). It's a bit of an odd

question. Who's to say whether RV or IV is "right?" After all, they're not *supposed* to be the same. They mean different things, and they measure different periods of time (forward, backward).

Consider an alternative question: "Did people who bought (sold) 30-day volatility 30 days ago win (lose) between then and now?" This question introduces *observers* to the problem set, and considers realized volatility as a factor in whether option prices could actually, in the recent past, be considered "right" or "wrong." *I.e., instead of looking at the volatility cone, it looks at the people who were looking at the volatility cone (observers).* Very meta.

Furthermore, we can deduce exactly what magnitude move in the S&P 500 would bring 30-day realized volatility in line with past implied. E.g., if the S&P 500 has moved 1.00% on average, every day for the past month, and ATM implied volatility one month ago was 18.25 (implying ~1.15% average daily moves), then we can say that "short vol is winning" over the past month, because realized has been lower than implied. But we can *also* say that short vol over the past month *would stop winning* all of a sudden if there was a 1-day 4.15% move -- because a 4.15% move would bring the *average* 1-month realized move up to 1.15%, and this would shake up everyone's positioning from the prior month.

Is there any magic that occurs when these volatility stars align? When winners suddenly become losers and vice versa? We're keen on finding this out, because one of the things we're always looking for is "vol-of-vol." Whenever people start suddenly shifting their volatility positioning, volatility *itself* becomes volatile (and liquidity in the underlying becomes thin). This would be one very simple, intuitive reason to expect that sudden shift.

Of course, all of the above is a hypothesis, founded only on a hunch. So next week you get to find out if our idea of a simple vol-of-vol indicator is dumb or not.

If it's *not* dumb, though -- wouldn't it be nice to see this on a chart next to the SuMo bands? In either case, you can expect us to be chasing down this idea for the next couple weeks. There's *something* here. There *must* be.

There'd better be...

Happy Gamma Week!

The SqueezeMetrics Team
