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Had a bunch of questions after that last thread on what the heck, exactly, forward starting variance or volatility is. And just got on a BART train so here's a quick recap.

An ordinary option or variance swap is "spot-starting". In the case of an option, it has a strike price, which gives it convexity (asymmetric risk/reward; its exposure to the underlying goes up as the underlying goes up; or becomes less negative, in the case of a put).

This convexity means that a hedged option position makes money on a large move in the underlying. If you are long a delta hedged call and spot goes up \$10, enough to move your option delta from 0.2 to 0.4, your net delta was probably 0.1 on average for that \$10 move, or \$1 PnL.

For the mathy-minded, gamma PnL is the second term of a Taylor expansion for option value, $dV(x, t) \approx dV/dx(x, t) * dx + 0.5 * d^2V/dx^2(x, t) * dx^2$.

In the case of a variance swap, the daily return of the underlying is squared and counted in the payoff of the swap at maturity. So that's very transparent.

Ordinary options and variance swaps also have vega, or exposure to implied volatility, which represents the market's priced-in expectations of future realized PnL from moves in the underlying.

A forward starting volatility position has that vega exposure to market expectations for volatility *over some future time period*, but has no actual convexity to movements in spot prices *today*.

For example, forward starting variance has an explicit start date and end date: today I buy 500k vega of a variance swap that will start on the listed June 2020 expiration and end on December 2020 expiration. The daily moves in spot don't count towards the payoff until start date

Variance is fun and easy because it is exactly additive: if you combine (in the right weights) a one month spot starting variance swap with a forward variance swap that starts in one month and ends in two months, you have a two month spot starting variance swap.

Options are a little more subtle. You can actually trade forward starting options OTC- for example, an at the money straddle with a TBD strike that will be set at the closing spot price on some future expiration date.

With vanilla options, you can create forward volatility exposure in a specific future time range by buying options that correspond to the end of that time range and selling others that correspond to the start of the time range, gamma neutral.

So a ratio calendar spread, short Jun20 and long Dec20, flat gamma and long vega, for example. That gives you exposure to implied volatility between Jun-Dec20 with no local exposure to spot price movements.

And of course, good old VIX futures, which represent linear forwards on future levels of 1-month variance.

You'd have a forward volatility position instead of a spot starting one if you want the implied volatility exposure but you don't want the convexity with respect to spot prices (and the theta decay that comes with it).