

Why options traders focus on volatility over price

THIS MATERIAL MAY BE PROTECTED BY
COPYRIGHT LAW AND MAY NOT BE
REPRODUCED WITHOUT PERMISSION FROM
THE PUBLISHER.

Option traders buy and sell volatility like futures traders deal in prices, and they don't need a supercomputer or an exchange membership to do it.

"The futures trader is interested in where the market arrives; the option trader is interested in how it arrives," Sheldon Natenberg, an independent trader in Chicago, says in describing the difference in trading emphasis.

That's not to say underlying price is not important to options traders. Few take positions without some opinion on market direction (see table).

In simple terms, volatility is the velocity of the underlying market. It

measures how far from a norm prices vary in a given amount of time.

To a speculator, behind every option position is hope that the market moves by a certain time above or below a particular price. The more variance in prices, the greater chance it can wind up where the trader wants.

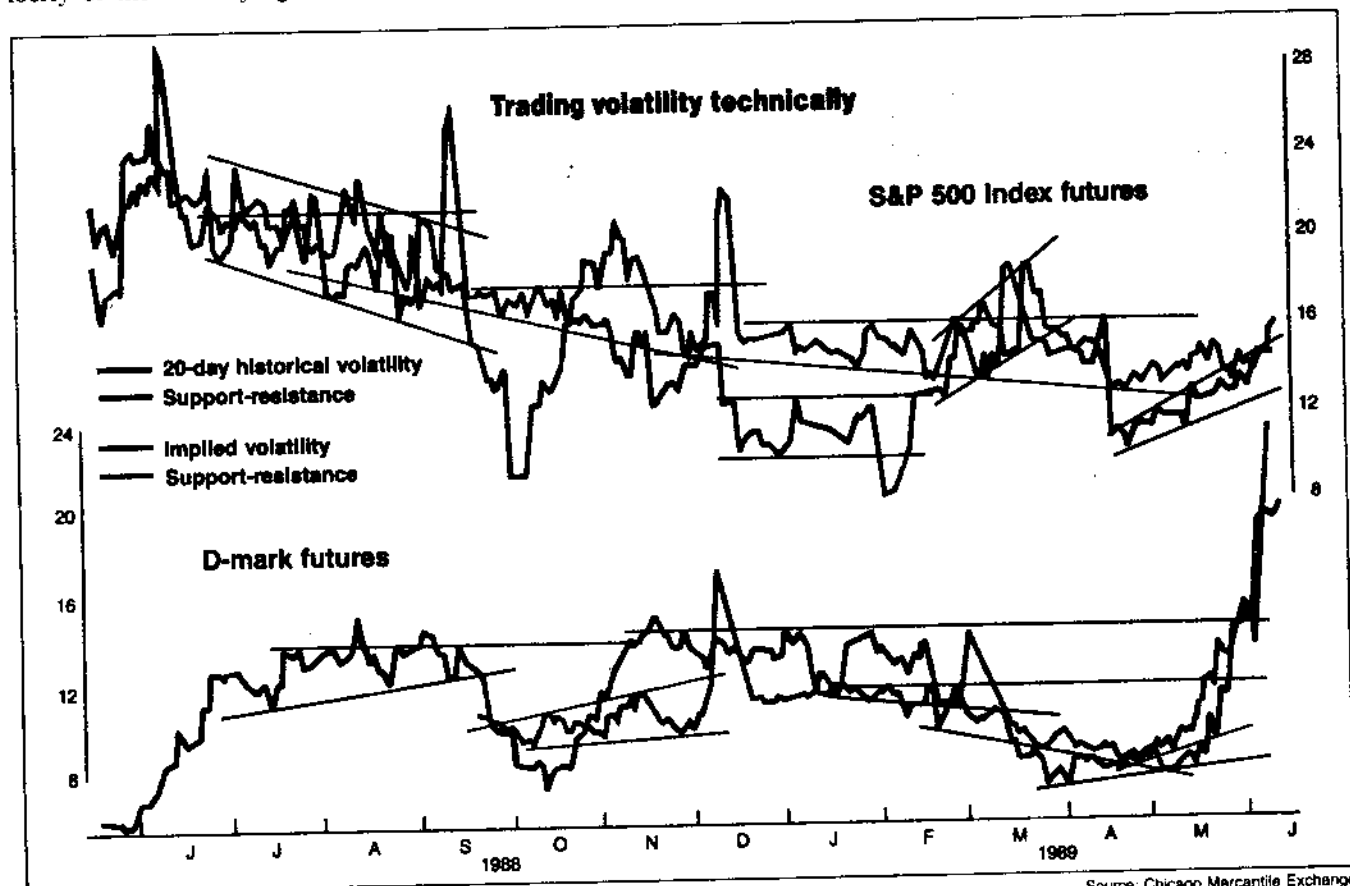
That's why volatility is one of the most important factors in the pricing of options. Regardless of underlying prices, the higher the volatility, the more expensive the put and call options. That's why an options trader trades volatility, not price direction.

"Implied volatility" is the option

market's opinion of where underlying volatility is headed. It is easily derived with any good options pricing formula. "Historical volatility" is the variance of the underlying market over a certain time period, usually stated in terms of days. (Traders often monitor 20- or 30-day values.)

As with prices, it is nice to know which way volatility is headed. Some compare how implied volatility tries to predict underlying volatility to how futures project cash prices.

"If you say futures markets perform a price-discovery function, then implied volatility performs a discovery



Source: Chicago Mercantile Exchange

function for underlying volatility," says Joseph Sullivan, president of the New York-based Options Group.

Others view implied and historical values as two interwoven moving averages, with implied leading the way most often. Some traders have experimented with a rule based on buying or selling options when implied is below or above, say, a market's 20-day historical volatility, but most options analysts consider this practice dangerously oversimplified.

"There are people who think you can buy and sell (option premium) based on historical volatility," one leading options analyst remarks. "If markets were random, this would work. But markets trend."

One snag is the consensus that implied leads historical values. If so, historical volatility should trade up to implied, not the other way around.

The chart of volatilities in Deutsche mark futures shows points where the 20-day historical seems to be the guideline. A trader selling D-mark option premium on Dec. 10 or Feb. 27, for example, contending implied was "too high" relative to the historical, would have come out ahead. Yet, on both the D-mark and Standard & Poor's (S&P) 500 Index futures volatility charts, there seem to be more examples of the opposite: historical following the implied levels.

'Average' implied volatility

Another method involves comparing implied volatility to itself rather than the historical values. Knowing where an "average" or "normal" volatility for a market lies is common sense for options professionals.

"There's always a benchmark," says one Canadian dollar options trader, noting 4.5% implied volatility has been the norm lately in that market.

Moving averages can help. The 30-week moving average of implied volatility in the D-mark (not shown) was about 11.5% on June 9, well below the implied. The 30-week average (not shown) for the S&P 500 was just above June 9 implied volatility.

Moving averages are a traditional price chart tool, but volatility and prices are completely different animals. One options trader contends that, while U.S. bond futures can go to zero or to the moon, implied volatilities in bond options usually trade between 7 and 22. Crossing an average in prices often signals a new trend. Such a cross in volatility could mean options are getting overbought.

Dave Caplan, analyst and editor of *Opportunities in Options* in Los An-

geles, employs long-term averages in implied values to determine a volatility range. Like most traders, Caplan usually does not play volatility alone but also includes a directional bias. (This excludes neutral positions such as straddles or strangles.)

"When volatilities get very high, you could probably automatically buy both puts and calls," he says.

But he is cautious with slightly high volatilities "because the implied could go higher." He adds the same consideration applies to low values.

The question is whether volatility regresses to a mean or eventually falls back to its average.

"There's nothing you could prove statistically. You would have to trade

tion trading students to do is separate implied from historical volatility," he says. "What you're trying to do is look at implied vs. future volatility."

Natenberg's system consists of two steps. First, he tries to project a value of underlying volatility for a future date. He then compares his projection to current implied volatilities.

His projection basically comes from averaging historical volatilities of different lengths of time. Different time frames will have different variances. For example, he may use these historical volatilities:

Days	30	50	70	90	110
Volatility	16.3	13.2	11.7	11.0	10.6

The more relevant values are those of periods closer to the options term.

Implied volatility			
Assumes all options have at least 20 trading days until expiration			
Price trend	High	Average	
Down	Sell calls	Sell out-of-the-money calls Buy out-of-the-money puts Bear spread	•
		Buy out-of-the-money calls Sell out-of-the-money puts Bull spread	•
Up	Sell puts	Sell straddle, strangle	•
Sideways	Sell straddle or strangle Put or call ratio spread (2:1) Sell butterfly or condor spread	Sell straddle, strangle	•
Either way, quickly	None	Sell straddle, strangle	•

*Depending on directional bias

it under an experimental basis," contends George Tzakis, options analyst for CAPCOM Futures in Chicago.

One trader tells the story of the "rumor stock." Suppose, he says, option prices reflect a volatility of about 48% but you believe the "average" level is about 18%.

"You sell a bunch of out-of-the-moneys and the next day the rumor dies out. You make \$800," he says. "But what if the rumor is true and the stock goes through the roof? You'd lose \$800."

In short, when the implied volatility is high (or low), it's for a reason. Even if it must return to its mean sometime, it could go higher first.

Some traders believe averages in historical volatility are more reliable. Natenberg bases his strategies on the volatility of the underlying market.

"The most difficult thing for my op-

For an option 83 days from expiration, for example, the 90-day and 70-day historicals carry more weight. In this case, Natenberg gives the 90-day 35% of the weight because it is the closest to the life of the option. The 70-day figure is weighted at 25%, 110 days at 20% and 50 days and 30 days at 10% each.

Multiplying each volatility by its weighted percentage and adding them together gives you 11.9, below the implied volatility of 13.6.

For many markets, especially those related to agriculture, seasonal cycles in volatility have been recognized. Natenberg is now researching new ground: long-term cycles.

"I'm not talking about seasonals. Volatility, over a long period of time, resembles a cyclical graph," he says, noting these cycles can be found in most markets. □