View Strategy PnL: http://api.ahiasolutions.com:8001/

Background:

I want to capitalize on large moves of a stock and bet that they will not continue and revert back to their mean volatility measure in time. In order to do this, we want to pull outliers out and then initiate an options position in the opposite direction that the underlying went. We want to capitalize on high volatility with the assumption that the volatility will revert somewhat back to its mean.

Method of Calculating Strike and Entry, Calculation, and Example

The data will be used find large moves in volatility above a certain volume threshold (filter out penny-stocks). From here, options positions will be generated that assume the stock will somewhat revert back to its average price, and volatility range prior to the large move in the stock.

For example, if the average volatility over the last 3 months for a stock was 10%. Suddenly, there is a +20% move in one day, this is somewhat out of the ordinary.

prevDayVolatility = .10, **volatility = .25** and the **percentMove = .20**.

We want to open up a position under the assumption that the stock will revert at least the difference between the volatility and prevDayVolatility

- The `targetPrice` is calculated as such: `(abs(.25 [volatility] - .10 [prevDayVolatility])(.20 [percentMove] ) (-1 [factor])**)`
- We will then find a strike that is close to the target price and then open up a conservative bearish position by scanning the options chain.
- Determine whether to short on long based on volume (for higher volume short *implying it's better to hold stocks with large volume* and long *implying it's better to **not** own stocks with lower volume*).

Method of Calculating Exit

- Stop Loss: **If** the underlying moves more than 3% against the position, it will be exited.
- Stop Loss: If the option's price moves more than 16% against the position, it will be exited.
- Take Profit: If the option's position moves more than 20% initiate take profit.

Variables to Track

Underlying Price
Option Price
Black Scholes Option Price
Implied Volatility
Record Date