Volatility Analysis

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Volatility refers to the differences in stock price changes, ie, the statistical dispersion of the price of a stock or commodity. When volatility is high, and there are big changes up or down, it is usually a signal of market uncertainty and risk. In the stock market, volatility tends to be higher in bear market situations, and lower during bull markets. "The markets edge up, but crash down." This has been especially true in recent years, when volatility levels have plummeted as the markets have been rising.

1 Measuring Volatility

1. The Beta: This is an indicator that compares the volatility of a stock against that of the market.
   - If beta < 1, it means that the stock has less volatility than the market (usually the S&P 500 is taken as the market measure).
   - If beta $= 1$, it means that the stock moves with that intensity, ie has the same volatility, as the market.
   - If beta > 1, the stock has a greater volatility than the market, and therefore sees bigger price moves than the market does.
   - The higher the beta of a stock, the more volatile and risky it is, but also the more significant it moves, and therefore the more potential of making (or losing) money trading it.
   - It is easy to find the beta value. It is listed on the summary section of Yahoo Finance stock page.
2. Realized (or Historical) Volatility: This is the amount of volatility a stock has had in the past. The 'past' is usually a 12 month period.
3. Implied Volatility: This is the amount of volatility the option market is predicting for a stock in the near future.
4. IV Rank: This is an easy way to make comparisons between realized and implied volatility.
   - An IV between 0 and 40 means that the market is predicting low volatility for this stock compared to its historical average.
   - An IV between 40 and 60 means that the market is predicting volatility levels that are in line with their historical average.
   - An IV between 60 and 100 means that the market is predicting high volatility levels compared to its historical average.
   - The higher the IV levels the more expensive options (and other 'insurance' derivatives) will be.

2 Profiting from Volatility

1. There is nothing worse for the active trader than markets with low volatility. Volatility creates big price movements, up or down, which can make for great short-term trades. So if you can get in and get out at the right times, volatility can be extremely profitable.
2. The VIX Index
   - A VIX below 12 $\Rightarrow$ Very low Volatility. Usually this happens during bull markets, and when people are very content and complacent with the market.
   - A VIX between 12 and 15 $\Rightarrow$ Low Volatility.
   - A VIX between 15 and 20 $\Rightarrow$ Moderate Volatility. Common sense precautions are taken whereas with lower volatility people tend to skip some precautions because the market is doing so well and they see no end in sight so why spend money to hedge a sure thing.

- A VIX between 20 and 25 $\Rightarrow$ High Volatility.
- A VIX higher than 25 $\Rightarrow$ Very high Volatility. People are freaking out, running around with their hair on fire trying to put out fires that seem to come from nowhere and are sparking faster than they can be put out.
- The VIX index reached its record of 80.86, its record so far, in November 2008, after the 2007 housing market crash.

3. When buying or shorting stocks you can only make money if you guess the direction correctly. The beauty of volatility is that you can profit without having to guess which direction the stock will move.

4. In our fund we believe that volatility is mean-reverting. That means that, ceteris paribus, the volatility levels of a stock will return to its historical mean at some point. So what if you could "buy" or "sell" volatility? It turns out you can.

3 Volatility Trading Tools

1. The VXX and other Volatility ETF's. When all you know is to buy or sell stocks, the only way you can buy or sell volatility is through the volatility ETF's As a general rule: If you believe volatility will increase you Buy the VXX and/or Short the XIVH. If you believe the volatility will decrease you Short the VXX and Buy the XIVH.

2. Options: It is through options where you really get to play around with volatility, as the implied volatility affects the price of options. You can create very diverse strategies, and can mix a long/short poition with a stock, with a long/short position on volatility, giving you more flexibility, and therefore increasing your chances of success and your overall returns.