Range Deviation Pivots

This study looks at the range over a user-defined look back period and places 1, 2, and 3 standard deviations around the opening, but with an in built propriety algorithm that creates a skew for the current trend. This means that pivots are not symmetrical in contrast to Volatility Time Bands.

Philosophy

Normal Pivot theory on Historical charts has inherent flaws in that they are often based on just the previous day or last few days price action, and then predict the limits of range or support and resistances points based on the daily bars value. This means that overnight gaps can make the values redundant. They also suffer from the fact that if yesterdays range is wide today's pivots will be wide, and narrow range days, (which are often ahead of heavy news days), mean that the pivots are narrow just when an expansion is due. The final flaw is the fact that the values are symmetrical and take no account of the dominant trend.

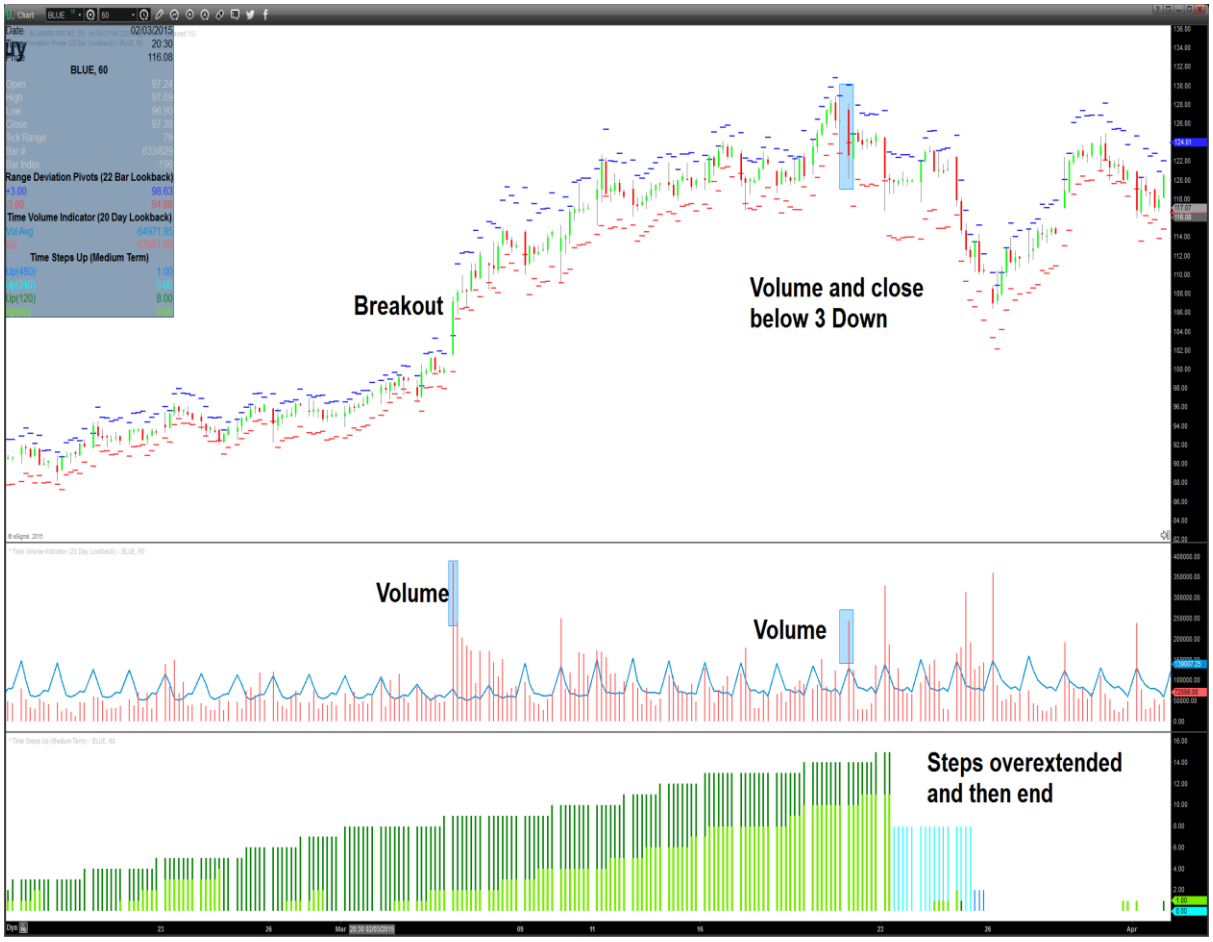
Range Deviation Pivots attempt overcome these problems in various ways. Firstly the computation of the three Pivot levels is set at 1 2 and 3 standard deviations around the opening price of the current bar. This means that any gap opening does not affect the reference points, if looking at the first bar of the new trading day. Secondly, they use a user defined lookback period far longer than traditional pivots so are not affected by the more recent price action. Finally and most crucially, they have in built propriety algorithm that analyses the strength of trend and means that the pivots above and below the opening are not necessarily symmetrical. If the trend is down then the pivots below the market will be wider apart from the ones above the market. This does two things. It allows the trend more room to develop and accelerate, and also tightens the risk parameters for what qualifies as a trend ending or reversing. (See page 44 of Trading Time and the Appendix for probability tables and statistics on Stocks).

Interpretation

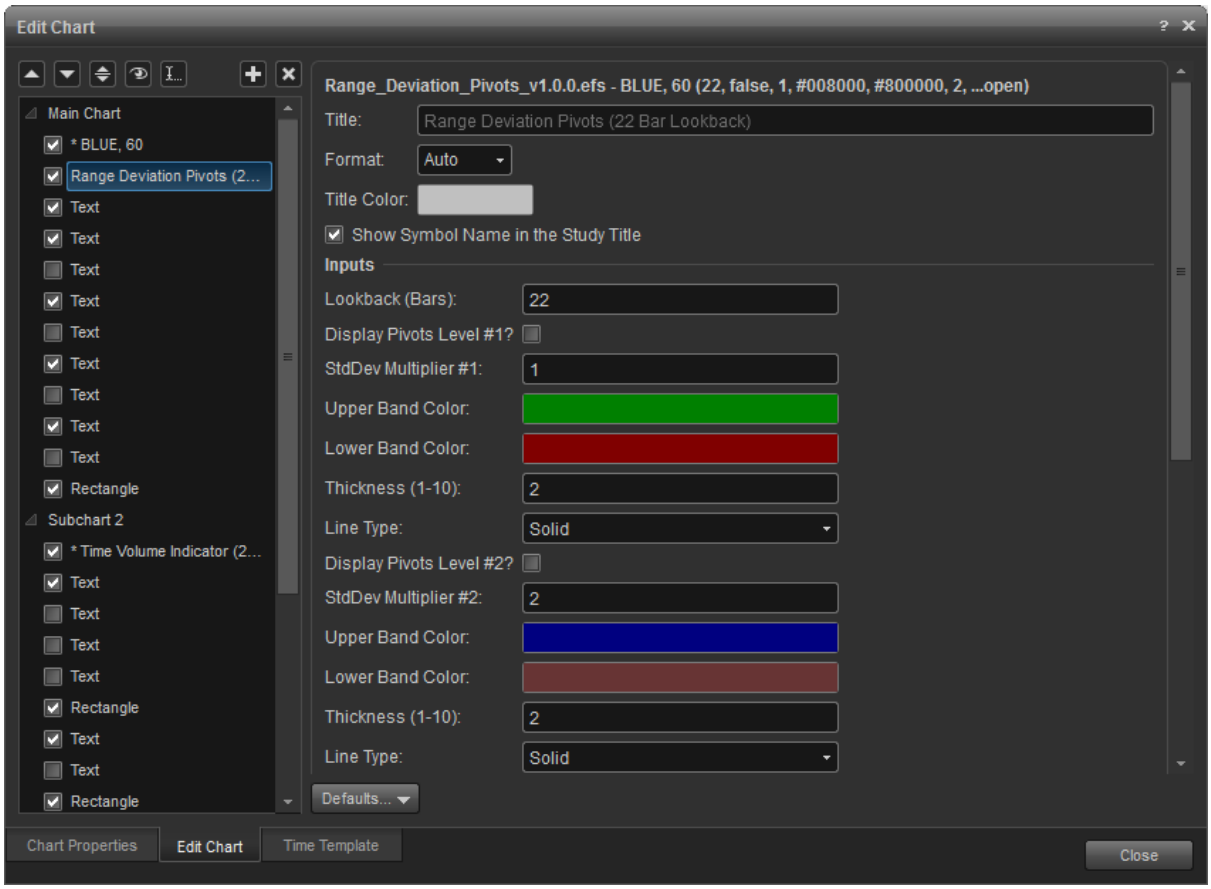
There are many applications to the Pivots which are explained in detail in Trading Time.

The first is ability to qualify the behavior or any bar. This is particularly useful when looking at reversals or accelerations on intraday charts. The chart below is a 60-minute chart of a high flying volatile stock with the ticker of Blue. Range Deviation Pivots signal a breakout with a strong close above the 3rd deviation up. This is qualified further by the Time Volume study which shows that volume for the time of day is over 100% above its average. Time Steps Up (Medium Term) is already showing a positive trend.

The stock marches higher until there is a reversal signal which is flagged by a close below the 3rd Deviation down which is also in high volume. Shortly afterwards with the 120-minute steps having reached an overextended level of 15, it resets to zero, before the entire set of steps all return to zero, signalling that for now the trend is over.


Breakout
Volume and close
below 3 Down
Volume
Volume
Steps overextended
and then end

Within the Set-Up there are various variables that can be changed in terms of what is displayed. First is the Lookback Period which has a default of 22. If there is a sudden jump in volatility this number can be lowered. The Default will display 1, 2 and 3 Deviations plus the Base line.



Some basic uses involve pyramiding to existing trend following systems. Most pyramids are based on entering on the close which means that the risk is greater on the pyramid because if the trend is down the close is more likely to near the low of the day. As the pivots are based on the opening value there is a fixed level at which to pyramid at the 1st deviation up if in a downtrend. The more dynamic the trend the closer the 1st Deviation will be to do opening due to the in built skew for trending. Analysis of the vast majority of trend following systems show not only an increase in profitability, but more importantly, no decrease in the stability of the system results.

The next application involves the qualification of breakouts, especially in individual stocks. These can be linked to Bollinger Band confirmation or for qualifying reversal patterns such at TD Combo™ and TD Sequential™. This involves price closing beyond the 3rd Range Deviation or reversing from one side of the Pivots to the other side.

The next application involves the qualification of Pivot levels by the Volatility Time Bands. Hitting a range Deviation Pivot when at the 3rd deviation of the Volatility Time Bands on 30 or 60 minute charts qualifies short term profit taking points or aggressive contra trend trades.

Finally the appendix of Trading Time shows various tables that measure the probability of how many pivots can be touched in any one trading day. This has particular application in understand risk and expectation for day trading purposes.