

## Range Deviation Pivots (Historical)

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, which only appear on intraday charts.

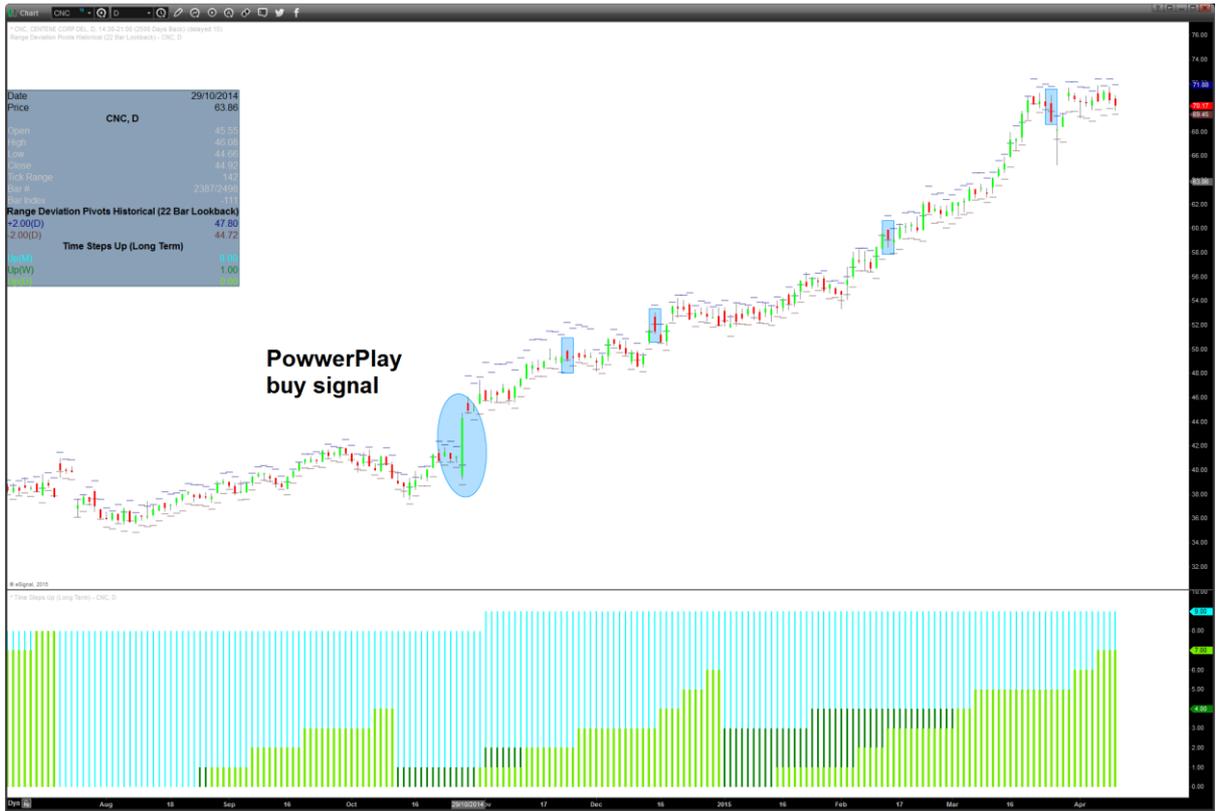
## Philosophy

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.

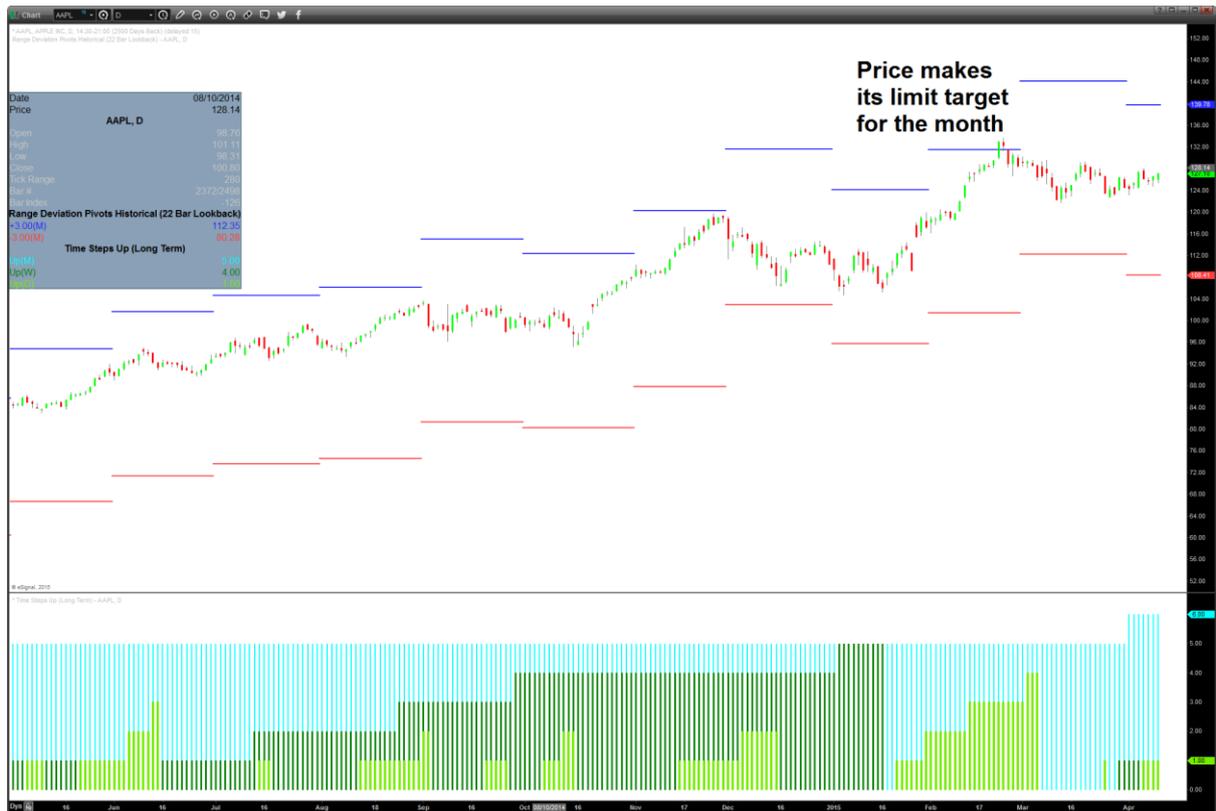
Range Deviation Pivots attempt overcome these problems in various ways. Firstly the computation of the three Pivot levels is set at 1 2 and 3 standard deviations around the opening price of the current bar. This means that any overnight gap opening does not affect the reference points. Secondly, they 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, in terms understanding the strength of any trend and any potential reversal signals. The second is a form of pyramiding. Extensive testing of trend following systems normally shows that a process of pyramiding or adding to an existing position, will increase profits but raise risk. This is largely due to the fact that most pyramids trade on the closing price. In an uptrend not surprisingly the closes will tend to be near the high of the day and vice versa for down trends. The correct application of Range Deviation Pivots for pyramiding means that profits can be increased, but not at the expense of stability in risk. This is done by buying the corrective phases to the dominant trend. Due to the fact that the Pivots are based on the opening price value, they do not change through the day. This allows for limit orders to be placed. The chart below is of stock Centene (CNC). The breakout was flagged by a PowwerPlay buy signal. From there, if wishing to pyramid, orders are placed at the 2<sup>nd</sup> Pivot down value, as long as the existing position is in profit and the Time Steps (Long term) daily number is at 2 or above (Green Histogram). The various pyramid points are highlighted in blue.



It is possible to place Range Deviation Pivots on daily data but from a weekly and monthly prospective. This allows for extremes being qualified in those higher timeframes. The chart below is a daily of Apple with a month Pivot. When a trend established and long standing such as this one, if price reaches the 3<sup>rd</sup> Deviation up, it is a profit taking signal. The earlier in the month this happens the more important the signal is. It does not mean the trend is over, but it does mean that at least a period of reflection is required.



The next chart is the same but with the Daily Pivots added. If at extremes in a higher timeframe an ideal scenario is if price reaches an extreme at the same time in a lower timeframe. In this instance when price hit its monthly target it also reached is 3 up target on the daily chart. This becomes an entry as a reversal signal and a compelling profit taking point to a trend following position.



Within the Set-Up, the variables that can be changed are the lookback period and what deviations to be switched on or off. The default is ON.

