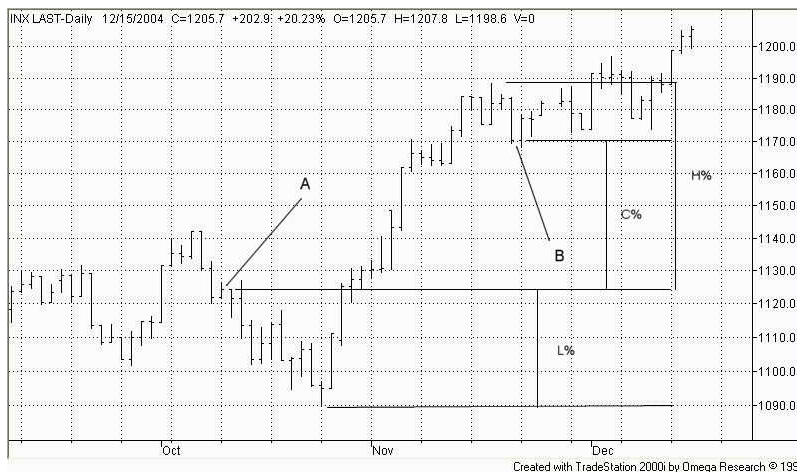


“Projecting a market range for option strategies with the ODI” by Chris Marczak

There may be unlimited number of approaches to the markets and their usefulness can be both obvious and questionable. As mass psychology is a basic engine which drives markets forward, so the analysis is derived from market psychology and as such it may seem more attractive than actually is. On the other hand sound analytical methods do not get significant attention at times, as they are effective but not necessarily “promising” and give traders the truth, which sometimes may be hard to accept.

In March 2005 edition of “Futures” magazine the ODI (Option Deviation Index) was presented, which takes measure of market fluctuation based on the entry point (Fig.1). The result is being calculated as percentage of entry value divided into negative, positive and closing series. Based on this assumption we can create various time models showing statistical dispersion of the index readings.



In previously described example we used the ODI concept in form of calculating Total Periodical Deviation (TPD) obtained as:

$$\text{TPD} = \text{H\%} + \text{L\%} + \text{C\%}$$

and smoothing the result with simple moving average (we used MA's length of 9 in this example).

Fig. 1

Source: Trade Station

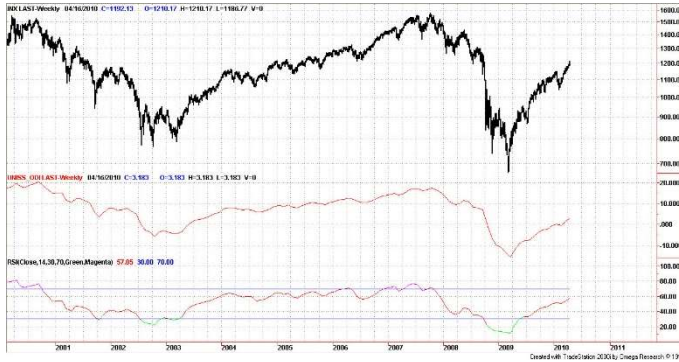
Since then the markets have gone through rough period reaching all time volatile point during financial meltdown of 2008. In this article we are reviewing the ODI concept 5 years later after its inception and showing other ideas of applying this technique for a market analysis.

ODI concept has successfully survived market crash of 2008. In fact, it turned out to be helpful tool during periods of extremely high volatility, when commonly known techniques had very limited use.

There are many ways of using ODI concept. The most basic is to analyze Option Deviation Index using classical technical tools such as MACD or RSI. As ODI filters a lot of market noise, applying these simple methods to the ODI drawn as single line can give us clearer picture of the present market condition.

The simple example of this technique is shown in the Figure 2. To achieve better long term result we used ODI calculation for periods starting on first session of the month and ending on the following month's expiration day drawn as single line with Relative Strength Index (with classical length input of 14) applied to the chart. Both bear markets of the last decade were clearly recognized by the study. In

addition, this picture allow for clear identification of divergences between ODI line and RSI oscillator both in the years 2000 and 2007, early enough to be prepared for the downturns which followed these turning points.



However, the biggest advantage of using analysis based on ODI concept is forecasting the range of the underlying index (S&P500) in separate time segments. For illustration of this ODI usage we chose a model period between option's monthly expiration dates, although any other length may be used as long as entry and exit points follow the same selection rule through analyzed data.

Fig. 2

As our model needs to be engineered to work on the S&P500 futures options our periods start at the open of the first session following expiration day, which is every third Friday of the month and end on close of the next month's expiration day session. By using calculation shown in the Figure 1 we can simply draw bar chart of analyzed periods to perform statistical picture of market activity (Fig. 3 below).

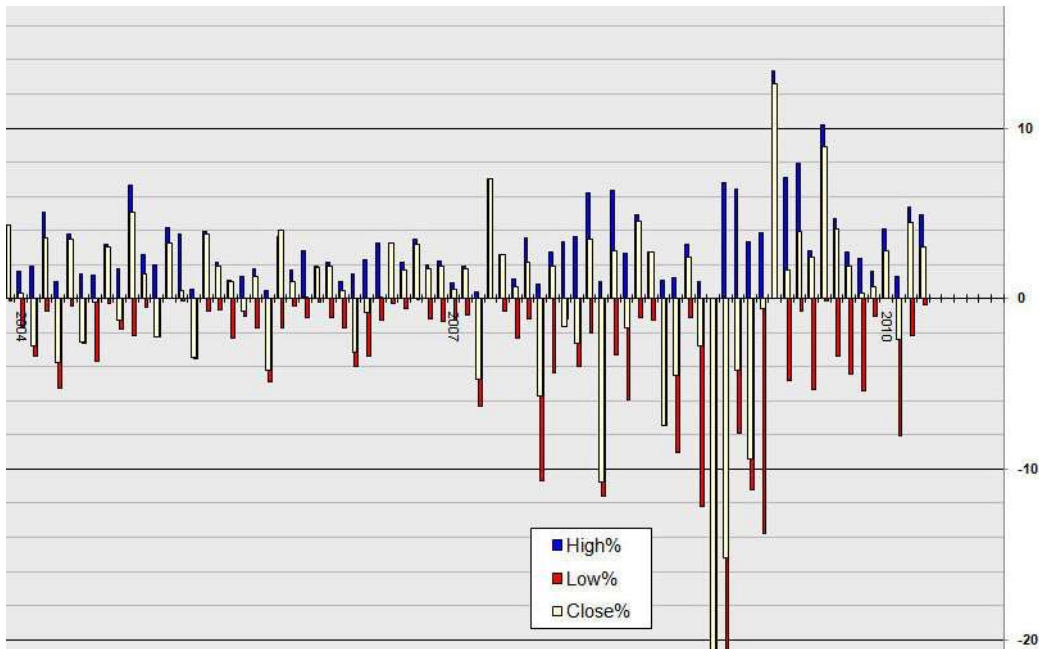


Fig. 3

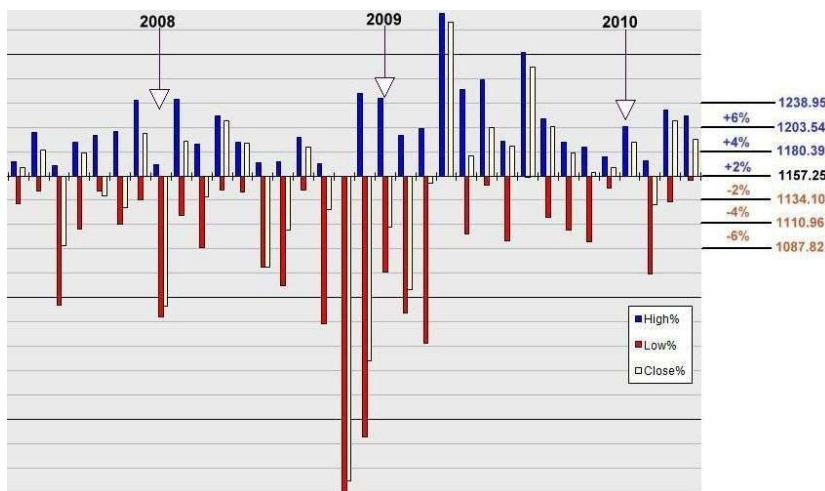
Even preliminary observation without performing complex calculations would give us some idea about projected market range e.g. it is not so difficult to analyze general probability of the market hitting 6% percent level up from the starting point during single analyzed period (expiration to expiration in this case), neither projecting chances for the market drop to 7% down.

This approach to the market activity analysis was named Option Deviation Index Diagram for many reasons, such as:

- The ODI diagram is a better tool for projecting market range rather than particular values or levels, because it corresponds more accurately with option trading strategies than commonly used charts
- The diagram gives a better perspective for option trading as it separates periods of times equal to options' "lives", which eventually end on the expiration day. Besides of the sample period (expiration-to-expiration) used in the study, it can be tailored for any other time frame corresponding with the employed strategy.
- The ODI analysis diagram takes significant part of the "chart psychology" out. For any experienced trader commonly used price chart e.g. bar chart, candlestick chart etc. brings a lot of information per se, as it is related to the trader's professional knowledge such as technical analysis patterns and formations processed with own personal experience. This amount of information creates significant psychological pressure affecting the chartist, whom primary goal is still to analyze and forecast market direction. As most option strategists are rather interested in measuring market range and/or volatility projection ODI Diagram can do better work for them by bringing more clearly picture what may be expected from the market.
- The concept is very simple, and for the same reason reliable. ODI diagram does not attempt to claim any technical formations and because of that it simply projects the market's range, which in turn shows certain regularities.

Another advantage of market activity presentation in a form of diagram is volatility projection. As we analyze market activity during the defined time, the diagram gives us additionally sense of market velocity. For example we can see how the market overreacted in the year 2008, followed by reverse action in 2009.

Application of the ODI concept to the diagram results in "Percentage levels tree" as shown in Fig. 4.



The "Tree" would show possible scenarios of market action during the "life" of particular option starting from the entry point, open price on next Monday following the third Friday of the month, April 16, 2010 in this example. By calculating percentage range taken from starting point we obtain a "map" of strike prices which may be used for a specific

option strategy. And if we trade directional strategy and want to use options for hedging our position, the “Tree” may help as well.

The examples presented here refer to the S&P500 index, however the concept may be used for any other instrument. We have successfully applied this technique to other markets, such as currencies receiving similar results and helping us greatly in preliminary selection of prevailing trending and moving sideways markets as well as in projecting profit windows for our strategies. Actual opportunities of using this concept are not only limited to above techniques, they are rather examples and guidelines for further studies.