

# Trading Divergence on S&P e-Mini Futures

June 2006

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Any indicator provides its strongest signal when it diverges from price. For decades technical traders have compared the line shapes of indicators such as MACD, Stochastic, RSI and LRS against the price line of its underlying contract or issue, and have attempted to trade in front of the tendency for price to re-align with its indicator.

In the 1990's I enjoyed consistent profitability by trading in the direction that an indicator diverged from its price index. However, after the advent of Internet-based charting and trading platforms in the latter half of the decade, the efficacy of this method began to diminish. Over time the proliferation of real-time information and analytical tools all but destroyed the consistency of this strategy. Why? Institutional traders were able to anticipate trading decisions of day traders and consistently exploit this knowledge.

To be successful your trading methods must be clearly defined and the results must be consistent. When the performance of any strategy I am using falls below 80% I stop using it and move on in search of new ideas and methods.

One such idea was the notion of comparing line shapes of a single indicator running on different data series. This has been done before but a fellow trader and I discovered a new variation that has proven to be consistent in its directional indication and is highly reliable. It also appears to be impervious to manipulation by predatory traders, as the latent directional force this method recognizes is stronger than any trading cartel can withstand.

## **The Indicator**

The indicator we chose was RSI with a speed setting of 5. RSI is the fastest oscillator, which means it is the most error-prone, however by being the most sensitive to change it is the most effective at detecting latent emergent changes in complex data streams. The speed setting of 5 boosts the sensitivity of this indicator to an extreme.

## **The Data**

Comparing an indicator against its price provides an isolated view of directional force. What is needed is a broader view of market strength and the latent but emerging changes in trader sentiment.

The broadest real-time measure of sentiment is the Advance-Decline line on NYSE stocks. Subtracting the number of advancing stocks from declining stocks provides a positive or negative integer that reflects market psychology at that moment.

Using RSI with a speed of 5 and a smoothing value of 3, we plotted the *spread* of the Advance-Decline Line (“A-D Spread”). In other words, the input data for the indicator was set to (Input = NYSE shares advancing – NYSE shares declining) and the resulting RSI line indicates the current directional force of *the entire NYSE in real-time*.

For *price* we used the S&P e-mini contract (symbol: ESH06), which is the contract we prefer to trade and because it is interrelated to NYSE, and we plotted RSI with the same speed settings as the A-D Spread.

By comparing the line shape of the RSI plot on A-D Spread against the line shape of the price data, we could see divergence *as it began to occur on a broader level*.

After some experimentation we discovered that a 15-minute time frame is the most effective for this method, as it seems to capture major turns in sentiment and price.

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| <b>When the A-D Spread RSI diverges from price RSI, the probability of a price move in the direction of the spread RSI line is extreme.</b> |
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Here is how this method works in practice. The data below is from my trading charts and describes a real trade I made on the morning of June 16, 2006.

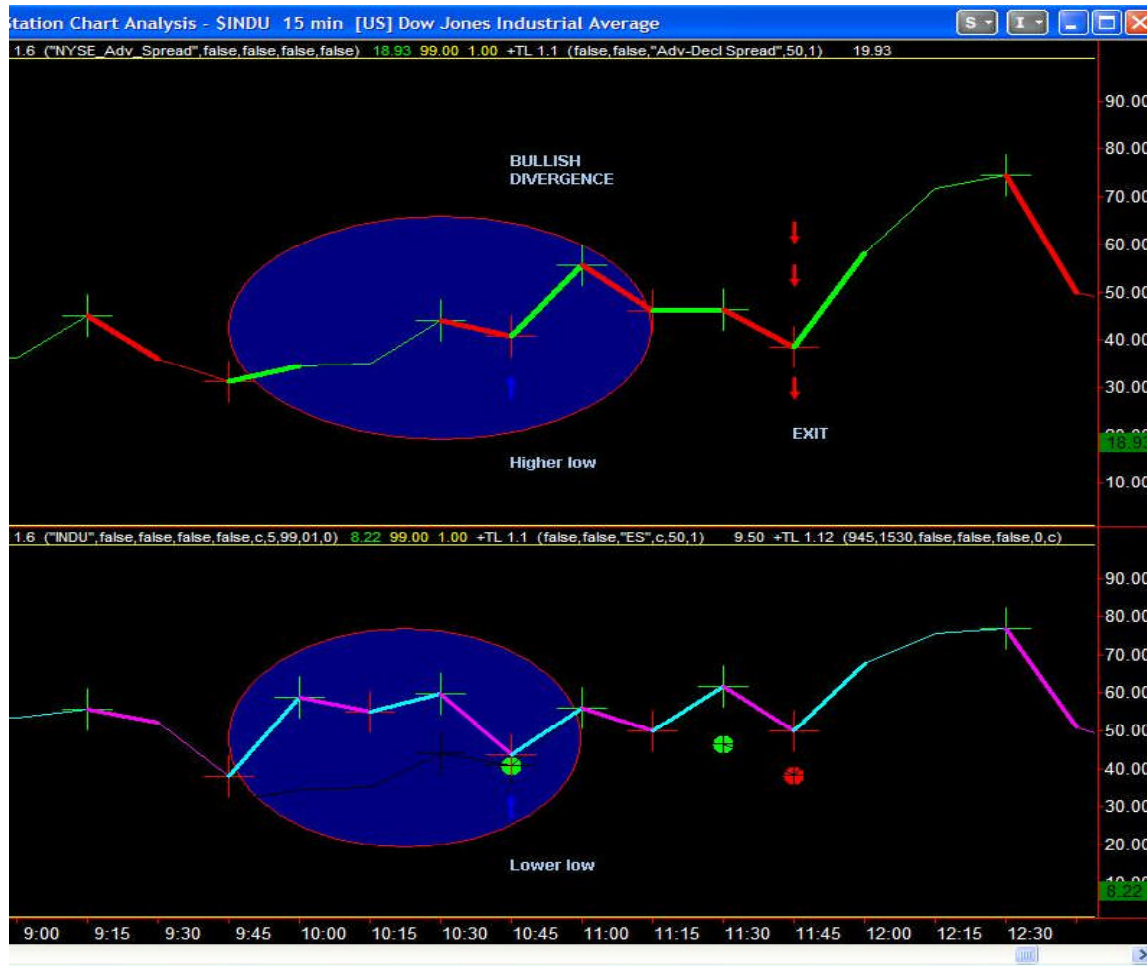
#### EXAMPLE

On June 16, 2006 at 10:45 a bullish divergence printed on the 15-minute RSI spread chart (Chart 1). The A-D Spread RSI printed a higher low while the price RSI printed a lower low. The A-D Spread indicates the direction of the divergence, so I went long at 10:45 two ticks above the prior bar low at 1258.50. My limit order was partially filled at the price of 1259.00 and I added contracts at 1259.25 and 1259.50 because the market had become very bullish.

I held this trade until 11:45, when the price RSI printed a higher top but the A-D Spread RSI turned down into the first leg of a lower bottom. My exit price was 1263.00 and the profit on the trade was + 3.50 points.

Chart 1 shows the divergence as it appeared on the 15-min RSI chart and Chart 2 shows the resulting price movement on a 5-min chart.

*Chart 1*



Because divergence can be difficult to identify in real-time trading, I use a suite of tools and indicators created by MTA. When divergence is forming, MTA gives me one set of signals and when divergence is confirmed I receive an audible notification. The green and red dots that appear on Chart 1 are MTA's line divergence indicator announcing the presence of divergence between the two RSI lines.

Chart 2



As you can see my exit was a bit early, but I was concerned that the high that printed at 09:10 would become a resistance barrier difficult to penetrate. Rather than risk a 14-tick profit, I placed exit limit orders above 1262.75 and was quickly filled.

**Entry Rules**

Using 15-min price bars, I try to enter long at the low of the prior bar and enter short at the high of the prior bar. This greatly improves my win ratio (currently above 95%) although it has left me standing on the sidelines during strong price movements.

A compromise rule that works for me is to enter long trades 2 ticks above the prior low and enter short trades 2 ticks below the prior high. If I get filled and price goes against my entry, I can add more contracts at a better price and if price quickly moves in the direction of my trade I at least have my initial position.

### **Stops**

I never use a stop of less than 2.5 points or more than 3.0 points with this method. If a false signal prints (which is seldom) I don't want to fight a trend breakout and if the signal is a little early (which is common) I don't want to be "shaken out" of a winning position by manipulators.

### **Profit Targets**

If market sentiment is mixed (the A-D ratio is less than 2.0 or greater than -2.0) I will typically use a fixed target based on the proximity of key support/resistance levels. In other words, if I'm long and I see strong resistance 8 ticks above my position, I will work an exit that is 6 points above, or 2 ticks below the resistance barrier.

On days when sentiment is strong, I will typically *hold a position until the A-D Spread RSI begins to turn against the trade*. The trade described above is an example of this method in practice.

### ***Strategy Summary:***

Set up: A-D Spread RSI line begins to move against price RSI line  
Trigger: Divergence prints on 15-min RSI chart  
Entry: +/- 2 ticks from prior bar high/low (15-min price bars)  
Stop: 2.5 – 3.0 points depending on market strength  
Target: Before key S/R is touched – or – when A-D Spread RSI turns against trade

### **About The Author**

Michael Coffin is a private commodity pool operator and hedge fund manager based in Beverly Hills, California. A client of MTA since 2003, Michael has assisted in the design and development of several indicators in the MTA suite.

### **More Information**

Want more information on the My-Trading-Assistant product line of trading indicators? You can contact us through our web site at <http://www.My-Trading-Assistant.com>.