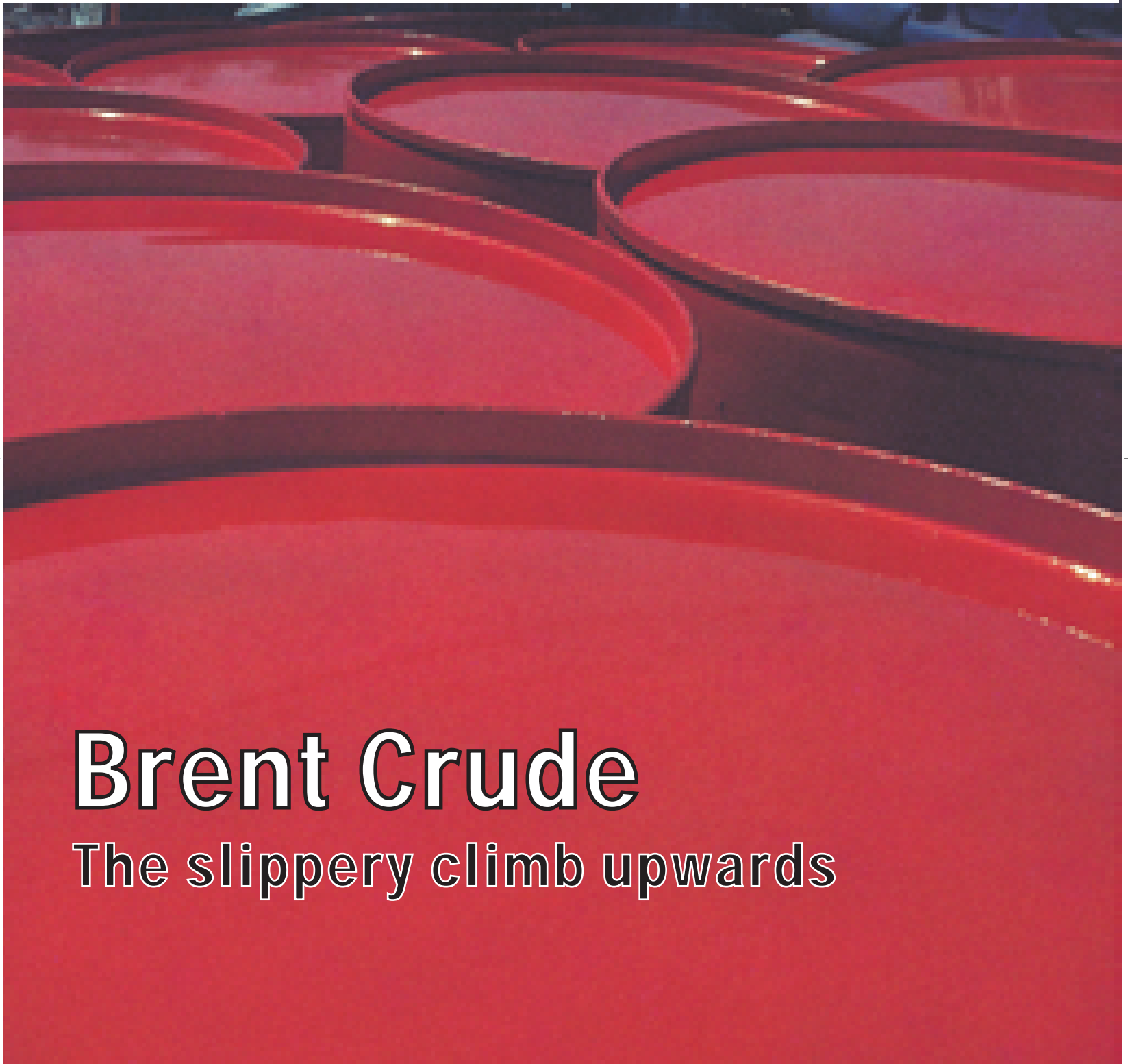


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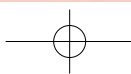
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VOLUME SPIKES AND INDEX REVERSALS

by Steffen Norgren and Andrew von Stuermer

In Volume Analytics, volume data plays more than just a minor supporting role - it is the principal variable used to forecast reversals in stock exchange indices.

The extensive body of knowledge associated with volume analytics has given rise to a view of the markets that is proven, time-tested, highly consistent, and profitable. Its basic premise is that volume and index behaviors are closely interrelated and that the trading patterns of an index can be predicted, or at least anticipated, from a proper understanding of the unfolding volume patterns. The technique provides the trader with an elegant way of monitoring and analyzing the volume behaviour of a particular index and allows him or her to heed one of the golden rules of trading, "Do not play against the market."

But why apply volume analytics to indexes and exchanges, rather than to individual stocks? Indexes best describe the mood of the market as a whole. Regardless of what you trade, a particular index or sub-index, stocks, options, futures, most of these trading vehicles tend to move in concert with the broad market. As a rule, the market dictates the direction of a particular security, never the other way around. It therefore makes sense to get a good grasp on what is happening at the index or stock exchange level, and we have found volume analytics to be an excellent vehicle to make that determination.

Terminology

Every trader is familiar with moving averages of securities prices, perhaps the most frequently used technical indicator. We simply apply the concept to volume, rather than to price, and plot **Volume Moving**

Averages (VMA) that range in duration from as short as a few minutes to as long as several months.

However, there is a slight twist to this. Volume activity typically follows certain predictable patterns throughout the trading day, with high levels prevalent immediately after the open, lower values around noon, and increased levels once more toward the close. We call this pattern the "**time factor**". Unfortunately, the time factor provides a rather distorted picture of the daily volume activity. It makes it difficult to differentiate those volume events, which are truly significant, from those that are simply part of the normal daily fluctuations. We have solved the time factor issue by **normalizing volume** data before charting it. Charting normalized volume allows a much clearer determination of whether or not volume levels are spiking above normal levels, an aspect that is at the core of our methodology.

We are particularly interested in the appearance of large peaks ("spikes") in the VMA - known as **VMA spikes** - and how an index reacts when they are generated. Sudden VMA surges are indicative of bursts of significant buying or selling activity. As such spikes occur, we determine whether the index is moving up or down at that time. If the direction is up, we call the associated volume surge a resistive VMA spike; if the index direction is down, we label the spike a **supportive VMA spike**. In the absence of distinct volume spikes, we still call any volume generated as the index is moving up **resistive volume**, and as it moves down, **supportive volume**.

Basic principles

The most basic premise of volume analytics is we can always anticipate an index will

react to (significant) volume spikes - as a rule, resistive volume spikes will force a downward move in the index; supportive volume spikes will generate upward index momentum. This basic assertion must be qualified by two key questions:

1. What determines the extent and characteristics of an anticipated move: Will it be short-lived or have staying power over the mid- to long-term? Will it be gradual or sudden?
2. What determines when an anticipated move will most likely occur: Will it happen immediately or will there be a certain time lag (a "delayed volume reaction")?

Our research shows the answers to these questions vary considerably, depending on (a) the general market context, and (b) the technical characteristics of the actual volume spike(s) being analyzed. Therefore, in order to get the most value from volume analytics, it must always be placed in the proper context:

Market context: Where in the larger market picture do supportive / resistive VMA spikes appear: During short-term pullbacks within a larger uptrend? As part of short-term upside corrections within a larger downtrend? At the presumed end of a weakening long-term trend? At the beginning of a new trend or somewhere in its middle? During distinct trend runs or in markets with choppy sideways trading action (i.e., in support / resistance corridors)?

Technical considerations: When analyzing a VMA spike, consider its magnitude, both vertically (the height of a thrust) and horizontally (its width or breadth). Comparatively larger and/or wider spikes obviously carry more weight. Caution must be exercised when analyzing volume spikes

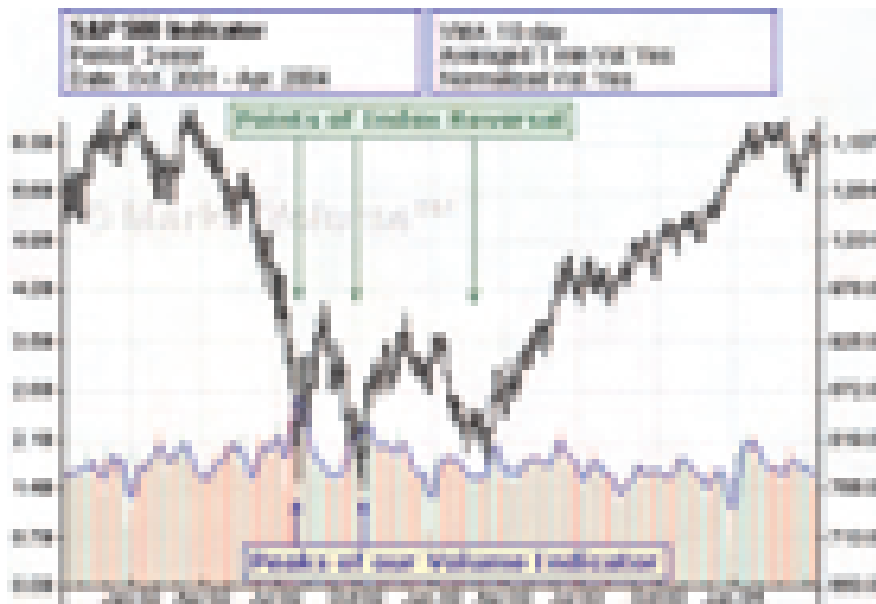


Figure 1.



Figure 2.

on a short time frame, as their potential impacts on mid- or long-term trends can easily be misjudged. A noteworthy spike appearing on a 5-minute chart could well affect an index in the short-term, but it may not necessarily have much of an impact on the prevailing long-term trend.

Practical considerations

We suggest using only real-time intraday index charts and applying volume analytics to highly liquid indexes that reflect not only the US economy, but also the world economy, such as the NASDAQ 100, the S&P500, and the Russell 3000. Place volume spikes in a broader market context by consulting several charts with different settings; we suggest a chart range from intraday to at least 2-years. Compare current volume events with those of the past. Finally, it is essential to use only volume data that has been normalized, so that the spikes you observe are not distorted by the time factor.

Chart examples

Index values will always (sometimes immediately, sometimes with a delay) react to volume spikes, and the greater the magnitude of a spike (or series of spikes), the stronger the ensuing reaction. (The many complex reasons why sudden volume surges take place are beyond the scope of this article).

For example, at the end of 2002/beginning of 2003 the long market downtrend in the S&P 500 finally reversed and switched to a steady up-trend (Figure 1). A volume analysis chart provides us with fresh insight. Three volume spikes (two large ones in July and October 2002, as well as a smaller VMA peak in February 2003) correspond with a distinct long-term trend change for

“INDEX VALUES WILL ALWAYS REACT TO VOLUME SPIKES.”



Figure 3.

the S&P 500. You could argue it was prompted by the outbreak of the war in Iraq. However, our volume analysis demonstrates the index was ready to move up,

given the large buildup of supportive volume, as evidenced by the two very significant volume spikes. It could also be argued that the new uptrend actually began on

October 10, 2002 and that the January 2003 move to retest the recent lows was just a mid-term correction of the new up-trend. Figure 2 (a 30-day chart) clearly shows how each volume spike was followed by an index reversal, whereas Figure 3 shows that the relationship between volume spikes and index reversals applies equally well to the short-term.

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