

# MARKET INTELLIGENCE

## → TECHNICAL ANALYSIS

# Trading on Volatility

By Ng Ee Hwa

**W**ith emerging markets like China's and India's economies growing at a fast pace and recording high percentage growth year on year, the bullishness has spilled over to global stock markets with all major indices hitting new highs at the end of last year. However, it is unlikely that the indices will continue to scale

up without any corrections. A classic example of a worldwide market correction occurred when the Chinese stock market recorded a near 9 per cent drop in a single-day in February. This, together with the Yen Carry Trade, triggered a chain reaction of global stock markets meltdown. Since then, global markets had a fast recovery with the likes of the STI index touching 3,500 points and the Dow Jones breaking the 13,000 points barrier in April.

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The global markets meltdown and fast recovery demonstrate how volatile the stock market can be. The willingness to take a higher risk is heavily linked to the fact that people are better educated and information is easily available with the help of the Internet. Moreover, the one factor in the stock market that has not changed since its establishment is market psychology – fear, greed and hope remain the main culprits of high volatility in the stock market.

### USING BOLLINGER BANDS

The Bollinger Band, developed by Mr John Bollinger, is widely used by traders to trade the market effectively. The Bollinger Band is constructed using three lines – the upper Bollinger band, the Simple Moving Average line (SMA) and the lower Bollinger band. The upper and lower Bollinger bands are usually placed at a distance of two standard deviations above and below the SMA respectively. Standard deviation is a mathematical term in which the value is proportional to the volatility of the price movement.

SMA line is the averaging of the close price over a certain number of days. Hence, when the stock is trading sideways or the price volatility is low, the upper and lower bands will converge toward the SMA line. On the other hand, the upper and lower bands will begin to widen and move away from the SMA line when there is substantial fluctuation in the stock price.

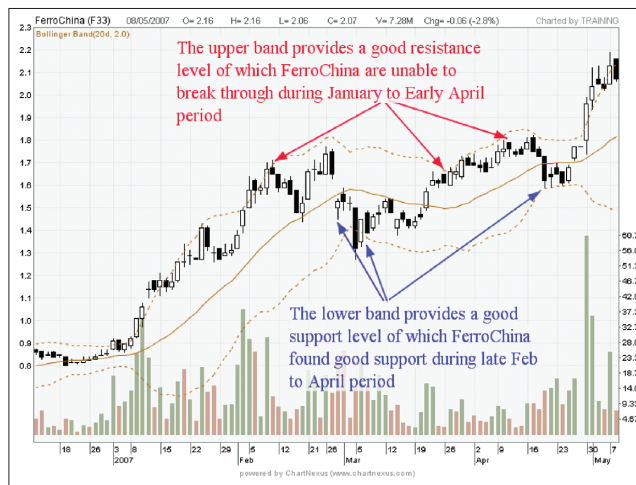


Figure 1: Use of Bollinger Band as Support and Resistance

The first application of the Bollinger Band is in providing an indication of support and resistance level. As we expect prices to move in between the upper and lower bands, the upper band acts as a resistance level to more upsides while the lower band acts as a support level to more downsides. Figure 1 shows how the upper and lower bands provide support and resistance to the price movement.

During the months of January to April, FerroChina's stock price was well-resisted by the upper band, refusing to break new grounds. On the other hand, during the price retracements in early March and late April, FerroChina was able to find good support level at the lower band that prevented the price from diving further.



Figure 2: Bollinger Squeeze and Subsequent Bullish Breakout

### IDENTIFYING BUYS AND SELLS

The second application of the Bollinger Band is in the powerful Bollinger Squeeze, which triggers high probability buy and sell signals. The Bollinger Squeeze occurs when a stock protracted to a period of low volatility has the upper and lower bands appearing to be squeezed together. A buy or sell signal is generated when there is a Bollinger breakout from this squeeze of the lower and upper bands. Figure 2 shows the occurrence of the Bollinger Squeeze and the subsequent Bollinger breakout when the upper and lower bands begin to expand suddenly.

During the period of January to March, the big gap between

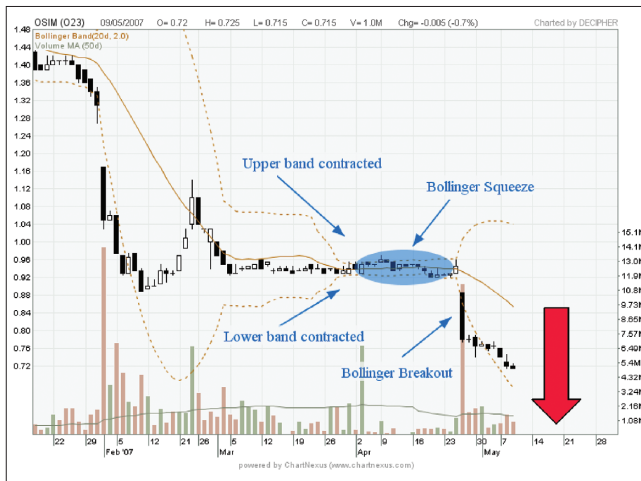
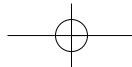


Figure 3: Bollinger Squeeze and Subsequent Bearish Breakout

the upper and lower bands shows that Hyflux was trading with high volatility. However in April, Hyflux started trading sideways and as a result, the upper and lower bands contracted and squeezed together, indicating the occurrence of the Bollinger Squeeze. A Bollinger breakout then happened when both bands suddenly diverged with the price hugging the upper band thereby triggering a bullish signal. The reverse is true for a breakout to the downside. This is illustrated in Figure 3 where a Bollinger Squeeze was formed in April, with the subsequent bearish breakout happening on April 23.

**RELATIVE STRENGTH INDICATORS**

We can further enhance the Bollinger breakout after the Bollinger Squeeze with another indicator, thus increasing the probability of making a trade in the right direction of breakout. One popular indicator that can be used together with the Bollinger Squeeze is the Relative Strength Index (RSI) that was developed by J Welles Wilder. The RSI is a powerful indicator used to measure the velocity of the price movements, and the values are calculated based on the number of days that the price closes up and the number of



Figure 4: Use of Bollinger Squeeze with RSI indicator

days that the price closes down over a certain period. In this article, the period used is 14 days as originally proposed by Wilder. Let us re-visit the earlier chart (Figure 2) that features

Hyflux where a buy signal was generated by Bollinger Squeeze on the April 25. An analysis of the RSI indicator shows that the RSI was well supported during the Bollinger Squeeze and was trending upwards as the price approaches the Bollinger breakout. This signifies that the price action remains firm throughout the Bollinger Squeeze and it grew in strength as breakout came back-

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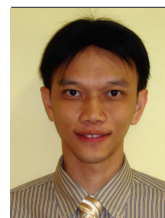
oning. Figure 4 shows the chart of Hyflux using the RSI indicator in conjunction with the Bollinger Band. The scenario of combining the RSI and the Bollinger Band in our analysis can be easily captured by using an automated software programme such as the ChartNexus XPerTrader (www.chartnexus.com) that can be used to automatically screen the whole market for stocks that have Bollinger Squeeze together with the RSI trending higher.

This article has highlighted the importance of understanding the volatility of the stock market in order to make profitable trades. A powerful indicator such as the Bollinger Band is widely used to identify buy and sell signals based on two applications. The first involves using the bands as support and resistance with the second involving looking for a Bollinger Squeeze followed by a Bollinger breakout. Combining the Bollinger band with the RSI indicator also significantly increases the probability of the signal being valid. **SI**

**STRATEGIES USING CHART FORMATIONS**

Chart formations such as Head & Shoulder, Double Top, Cup & Handle give powerful bullish and bearish signals. Combining this field of technical analysis with technical indicators greatly increases the probability of the trading signals being right. Join us on this special evening when chart formations and the market psychology behind them will be introduced.

Date: July 19, 2007 (Thursday)  
 Time: 7:00pm – 9:00pm  
 Venue: SGX Auditorium, Level 2, SGX Centre 1, 2 Shenton Way, Singapore 068804 (Next to Lau Pa Sat)  
 Course fee: \$20  
 A dinner reception will be held for all participants. To register or to find out more information about this event, please visit <http://www.chartnexus.com/events> or call (65) 64911453 / 64911454.



A graduate of the Royal Melbourne Institute of Technology, Ng Ee Hwa is a trainer for ChartNexus, conducting regular courses on technical analysis and workshop sessions on maximising stock market returns through the use of technology.

