



# Brainy's Articles on Technical Analysis

## Bollinger Bands Indicator

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page 1 of 2  
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### Introduction

In the world of technical analysis, there are many different indicators that can be applied to a price chart. One of these is the Bollinger Bands indicator. This article in Brainy's series on Technical Analysis (number TA-4310) provides an introduction to the Bollinger Bands indicator.

### Bollinger Bands Indicator

The Bollinger Bands indicator was developed by John Bollinger, and looks a little similar to moving average envelopes. As you can see in the sample Weekly price chart in Figure 1 below, Bollinger Bands are comprised of three curves (the green ones in this sample) — the middle curve is basically a Moving Average (typically a 20 period Simple MA), while the upper and lower "bands" are a distance away from the middle curve by an amount that is based on the volatility of the price. That is, the more volatile the price (that is, the greater the range in price in a bar or candle), the further apart the bands are spaced. The amount of volatility used is commonly referred to as two standard deviations of the average share price. So the resulting plot is actually "moving standard-deviations" plotted as bands around a moving average of the share price.

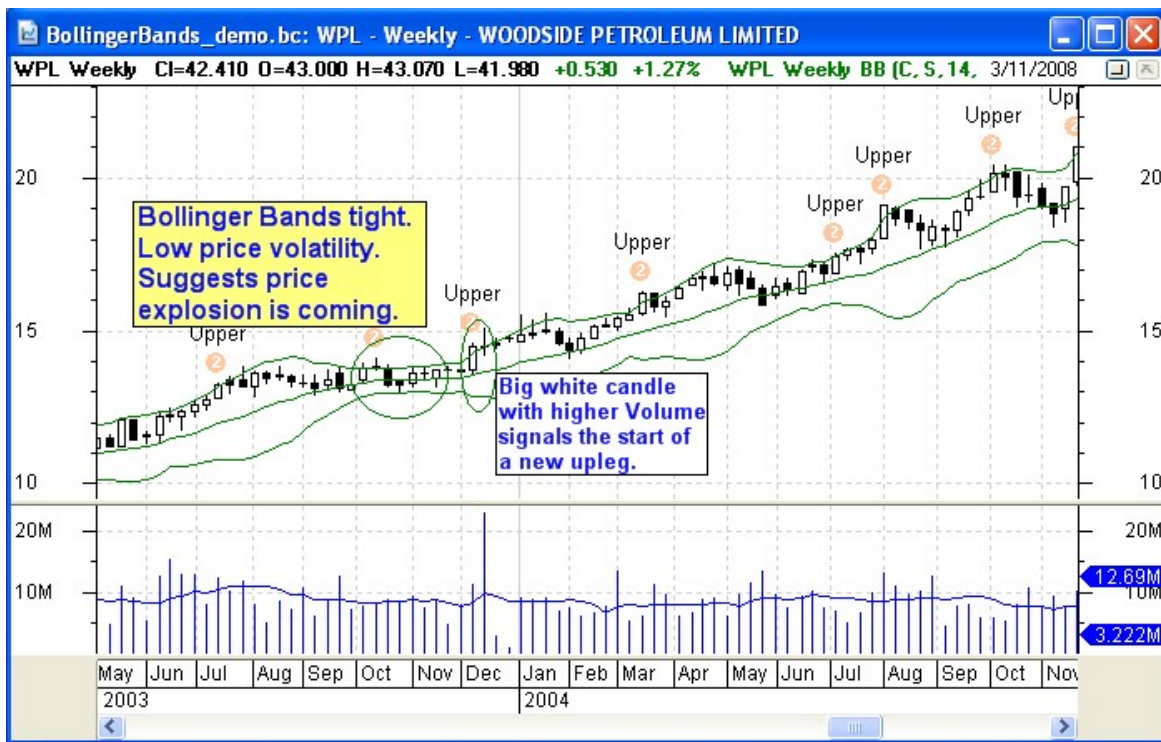


Figure 1: Bollinger Bands indicator.

Note the following feature in the sample price chart above. In late Oct 2003 (about the time of the start of a bull market) the Bollinger Bands had narrowed over a 9 week period, indicating a reduction in volatility. This is followed by an expansion of the bands coinciding with the Big White candle in early December, and signalling the start of a trend. This was confirmed with higher volume in the week of the Big White, and also in the following week. In the Volume pane of the price chart above (the lower section of the chart) the squiggly line running across the chart is a Moving Average of Volume. Any significant increases in Volume above this Moving Average are worth noting. Remember that a rise in Volume accompanied by a rise in share price is bullish.

Bollinger Bands are usually overlaid on the Closing share prices, but they can be displayed on other values (eg. open, high or low share prices, or on the volume chart or maybe on a chart of the Trades).