

Technical Analysis - 7 - Bollinger Bands

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Bollinger Band: Leading Indicator

Bollinger Bands, a popular tool among investors and traders, helps gauge the volatility of stocks and other securities to determine if they are over- or undervalued.

- The bands widen when a stock's price becomes more volatile and contract when it is more stable.
- Don't trade during sideways trend in Bollinger bands.
- If after the contraction of band price is moving outside the band it indicate that the price will move in that direction for sometime.



Pull back in prices indication as the green candle is completely outside the Bollinger band and only the lower is touching th upper band of Bollinger band.

- As long as the price is moving in a lower direction touching the lower band of Bollinger band, it indicates the downtrend.



Fake Signal Example:



Sharp change in the price crossing the 20 EMA line and going up but after touching the upper band it is moving in the opposite direction.

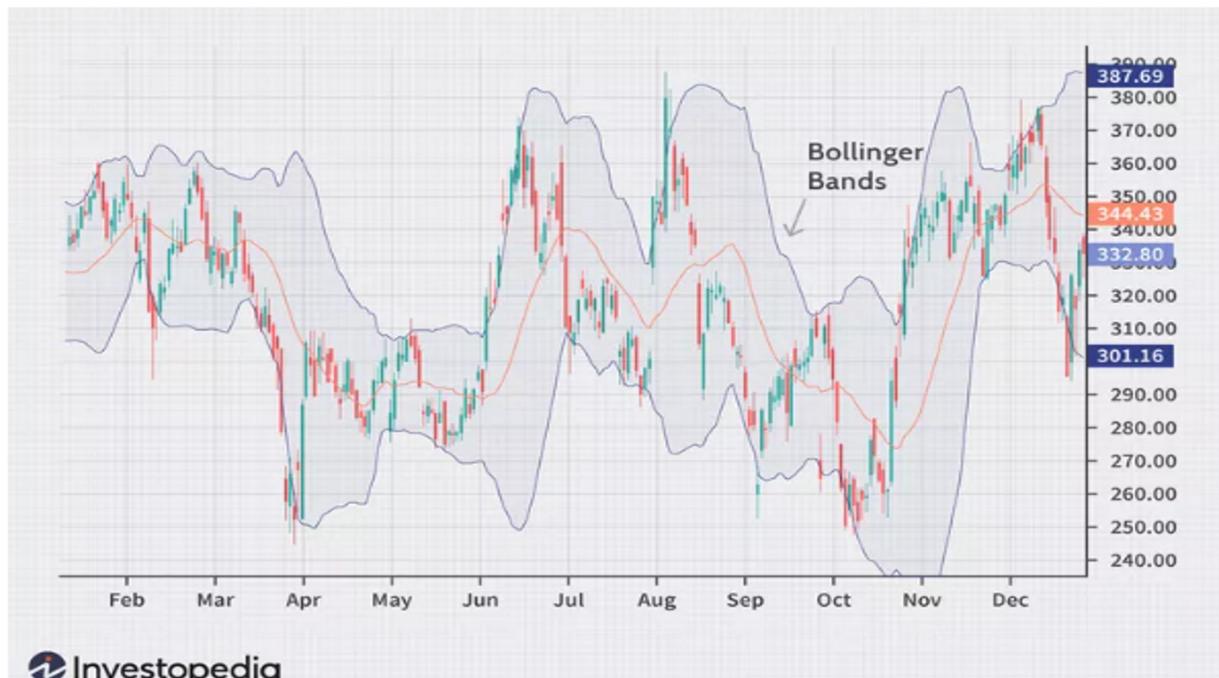
Note: In this case we have to do the support & resistance analysis before taking decision.



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Bollinger bands is commonly used volume indicator, created by John Bollinger, that can show you not only what direction prices are going but also how volatile the price movement is. Bollinger bands consist of two bands—an upper band and a lower band—and a moving average that are generally plotted on the price movement of a chart. Bollinger bands are typically based on a 20-period moving average. This moving average runs through the middle of the two bands. The upper band is plotted 2 standard deviations above the 20period moving average. The lower band is plotted 2 standard deviations below the 20period moving average.



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Bands get close together (tighten)	→ A big price move might happen soon. This shows the market is quiet, but a breakout could be coming.
Price goes outside the bands	→ The current trend is likely strong and may continue in the same direction.
Price hits a high/low <i>outside</i> the bands, then another high/low <i>inside</i> the bands	→ This may be a sign that the trend is weakening and could reverse soon.

The three Bollinger bands for N-day are calculated as -

$$\text{Central Band} = \text{SMA}(N)$$

$$\text{Upper Band} = \text{Central Band} + k \times \sigma(N)$$

$$\text{Lower Band} = \text{Central Band} - k \times \sigma(N)$$

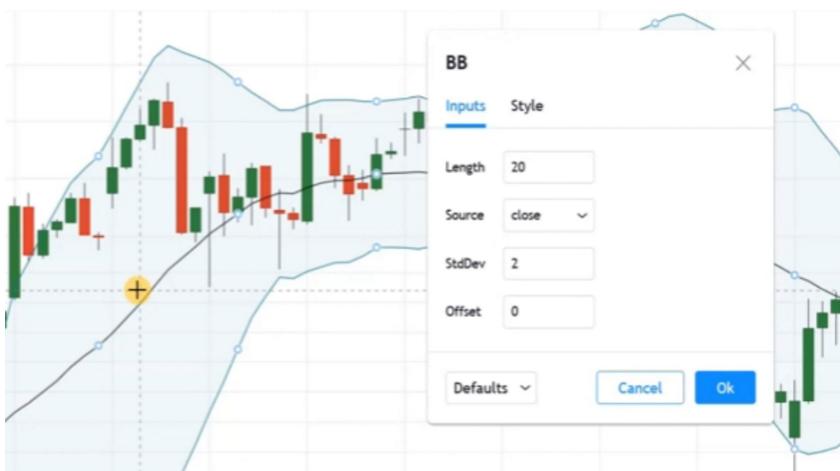
Here, $\sigma(N)$ is the standard deviation of the closing price for last N days.

k is a parameter to be set by the user, which is usually set to 2.

Bollinger Bands Cheat Sheet

Bollinger Band Action	What This Indicates	Potential Reaction
Upward middle band	Indicates an uptrend	Buy or hold long positions
Downward middle band	Suggests a downtrend	Sell or hold short positions
Narrow bands (squeeze)	Less volatility; potential for significant price move	Prepare for a breakout; consider entry points
Price touching or moving outside the upper band	Potentially overbought (poised to fall in price)	Consider selling, shorting, or tightening stop-loss orders
Price touching or falling outside the lower band	Potentially oversold (poised to go up)	Buying or tightening stop-loss orders
Price bounces off the lower band	The upper band becomes a potential exit point if the trend reverses	Consider taking profits or setting up a trailing stop-loss
Price touches the upper band	The lower band becomes a potential target if the reversal occurs	Consider taking profits or setting a trailing stop-loss
Price rebounds from upper or lower bands toward the middle band	Potential buying or selling opportunity, especially in ranging markets ("Bollinger Bounce")	Enter long or short positions; set stop-loss orders
Price move starting at the upper band and continuing outside it, with increased volume	Signals a potential breakout	Enter long positions; set stop-loss orders below recent lows
Decisive move below the lower band, with high volume	Could mean a breakdown or the start of a new bearish trend	Enter short positions; set stop-loss orders above recent highs
Widening bands after a squeeze	Could indicate an imminent breakout	Prepare for entry, watch for confirmation signals
Widening bands	Signals increase in volatility and the potential beginning of a strong price trend	Adjust risk management; consider trend-following strategies
Tightening bands (squeeze)	Suggests a period of lower volatility and consolidation; often a precursor to a major price move or breakout	Prepare for a breakout; consider entry points; tighten stop-loss orders
Longer squeeze	Could indicate a more potent breakout coming	Prepare for a larger price move; increase position size
Tightening bands	Could mean there's no consensus in the market about the future price direction	Adjust risk management; wait for clearer signals before entering positions





Uses of Bollinger Band

- ▶ Indicate Volatility
- ▶ Tells about Breakouts
- ▶ Continuation of Trend
- ▶ Achieve Trend Reversal Signal