

Chart Studies in DAS Trader

Price

This indicator is unusual because it is a histogram plotted vertically on the chart. The histogram represents the volume of trades for each price level (with the price level selection specified in parameters). User can specify either the total number of price intervals or the size of each price interval. Volume by Price can be used to see which prices invoke the most volume and activity throughout the day.

Volume

Volume is one of the most important technical analysis tools to learn and understand how to apply to price movements. Volume increases every time a buyer and seller transact their stock or futures contract. If a buyer buys one share of stock from a seller, then that one share is added to the total volume of that particular stock. Volume has two major premises:

1. When prices rise or fall, an increase in volume is strong confirmation that the rise or fall in price is real and that the price movement had strength.
2. When prices rise or fall and there is a decrease in volume, then this is interpreted as being a weak price move, because the price move had very little strength and interest from traders.

Moving Average

The Simple Moving Average is arguably the most popular technical analysis tool used by traders. The Simple Moving Average (SMA) is used mainly to **identify trend direction**, but is commonly used to **generate buy and sell signals**. The SMA is an average, or in statistical speak - the mean. An example of a Simple Moving Average is presented below:

- The prices for the last 5 days were 25, 28, 26, 24, 25. The average would be $(25+28+26+26+27)/5 = 25.6$. Therefore, the SMA line below the last days price of 27 would be 26.4. In this case, since prices are generally moving higher, the SMA line of 26.4 would be **acting as support**.

STO - Stochastic Oscillator

Stochastic Fast

Stochastic Fast plots the location of the current price in relation to the range of a certain number of prior bars (dependent upon user-input, usually 14-periods). In general, stochastics are used to **measure overbought and oversold conditions**. Above 80 is generally considered overbought and below 20 is considered oversold. The inputs to Stochastic Fast are as follows:

- **Fast %K**: $[(\text{Close} - \text{Low}) / (\text{High} - \text{Low})] \times 100$
- **Fast %D**: Simple moving average of Fast K (usually 3-period moving average)

Stochastic Slow

Stochastic Slow is similar in calculation and interpretation to Stochastic Fast. The difference is listed below:

- **Slow %K**: Equal to Fast %D (i.e. 3-period moving average of Fast %K)
- **Slow %D**: A moving average (again, usually 3-period) of Slow %K

Momentum

The Momentum indicator compares where the current price is in relation to where the price was in the past. How far in the past the comparison is made is up to the technical analysis trader. The calculation of Momentum is quite simple (n is the number of periods the technical trader selects):

- The current price minus the price n -periods ago

Hence, if the current price is higher than the price in the past, then the Momentum indicator is positive. In contrast, when the current price is lower than the price in the past, then the Momentum indicator is negative.

RSI - Relative Strength Index

One of the most popular technical analysis indicators, the Relative Strength Index (RSI) is an oscillator that measures current price strength in relation to previous prices. The RSI is a versatile tool, it can be used to:

- **Generate buy and sell signals**
- **Show overbought and oversold conditions**
- **Confirm price movement**
- **Warn of potential price reversals through divergences**

OBV – On Balance Volume

On Balance Volume (OBV) combines price and volume to **determine whether price movements are strong or are weak** and lacking conviction. On Balance Volume is a simple calculation, which is given below:

1. On an up day, the volume is added to the previous day's OBV
2. On a down day, the volume is subtracted from the previous day's OBV.

Volume is usually interpreted as follows:

- Increasing or decreasing price accompanied by increasing volume, confirms the price trend.
- Increasing or decreasing price accompanied by decreasing volume, indicates that the price movement is weak and lacking conviction.

CMF – Chaikin Money Flow

The Chaikin Oscillator or Volume Accumulation Oscillator consists of the difference between two exponential moving averages (usually 3 and 10-day) of the Accumulation Distribution Line indicator and is **used to confirm price movement or divergences in price movement**. The Chaikin Oscillator is more accurate than the On Balance Volume indicator.

- **On Balance Volume:** adds all volume for the day if the close is positive, even if the stock closed only a penny higher or subtracts all volume for the day if the stock closes lower.
- **Chaikin Oscillator:** factors in the closing price in relation to the highs, lows, and average price and determines the appropriate ratio of volume to be attributed to the day.

This indicator is used to warn of breakouts and provides useful trend confirmation.

It is based on the observation that buying support is normally signaled by increased volume and frequent closes in the top half of the period's range. Likewise, selling pressure is evidenced by increased volume and frequent closes in the lower half of the period's range. It is calculated by summing Accumulation Distribution for N periods and then dividing by the total volume for those periods.

VAD – Value Area Indicator

The Value Area Indicator provides an automated band representing the volume-weighted Value Area. The Value Area bands represent the prices between which a certain percent of the volume was traded. The Value Area preferences have a setting for "Standard Deviations". A

standard deviation setting of 1 will result in bands containing 68% of the volume. A standard deviation of 2 will result in bands containing 95% of the volume.

Envelopes

- **Simple Moving Average (SMA) Envelope**
Plots a channel with two lines that are N% above and below an SMA line.
- **Exponential Moving Average (EMA)**
Similar to SMA, but more weight is given to later time periods. It is calculated by applying a percentage of later time period's closing price to the previous EMA value.
- **Exponential Moving Average (EMA) Envelope**
Plots a channel with two lines that are N% above and below an EMA line.

Bollinger Bands

Bollinger Bands is a versatile tool combining moving averages and standard deviations and is one of the most popular technical analysis tools available for traders. There are three components to the Bollinger Band indicator:

1. **Moving Average:** By default, a 20-period simple moving average is used.
2. **Upper Band:** The upper band is usually 2 standard deviations (calculated from 20-periods of closing data) above the moving average.
3. **Lower Band:** The lower band is usually 2 standard deviations below the moving average.

CCI – Commodity Channel Index

The Commodity Channel Index (CCI) is a very popular indicator that gives easy to use **buy and sell signals**; the CCI also is used to **identify overbought and oversold areas** of price action. The CCI is calculated so that roughly 75% of price movement should be between +100 (overbought) and -100 (oversold).

MACD – Moving Average Convergence Divergence

The MACD indicator is one of the most popular technical analysis tools. There are three main components of the MACD shown in the picture below:

1. **MACD:** The 12-period [exponential moving average](#) (EMA) minus the 26-period EMA.
2. **MACD Signal Line:** A 9-period EMA of the MACD.
3. **MACD Histogram:** The MACD minus the MACD Signal Line.

StoRSI

The Stochastic RSI combines two very popular technical analysis indicators, [Stochastics](#) and the [Relative Strength Index](#) (RSI). Whereas Stochastics and RSI are based off of price, Stochastic RSI derives its values from the Relative Strength Index (RSI); it is basically the Stochastic indicator applied to the RSI indicator.

ROC – Rate of Change

The Rate of Change (ROC) indicator measures the percentage change of the current price as compared to the price a certain number of periods ago. The ROC indicator can be used to **confirm price moves** or **detect divergences**; it can also be used as a guide for determining **overbought and oversold conditions**. The formula for Rate of Change is expressed below:

- $[(\text{Current Price} / \text{Price } n \text{ periods ago}) - 1] \times 100$

Overlay

The ability to overlay a second symbol to the chart.

DMI – Directional Movement Index

Part of the ADX indicator, the Directional Movement Index (DMI) consists of two lines, the **DMI plus line (DMI+)** and the **DMI minus line (DMI-)**, which generate buy and sell signals.

PriceMarker

Able to set 4 of the following price indicator to the chart study:

Open

Last

YClose

High

Low

Williams %R

Williams %R is an **overbought and oversold technical indicator** that can give easy to interpret **buy and sell signals**.

Donchian

Donchian Channel is a [moving average](#) indicator that plots the highest high and lowest low over the last period time intervals.

The Donchian Channel is a simple trend-following breakout system. The signals derived from this system are based on the following basic rules:

1. When price closes above the Donchian Channel, buy long and cover short positions.
2. When price closes below the Donchian Channel, sell short and liquidate long positions.

Linear Regression

A Linear Regression Line is a straight line that best fits the prices between a starting price point and an ending price point. A "best fit" means that a line is constructed where there is the least amount of space between the price points and the actual Linear Regression Line.

Acc/Dist – Accumulation Distribution

Accumulation Distribution uses volume to confirm price trends or warn of weak movements that could result in a price reversal.

- **Accumulation:** Volume is considered to be accumulated when the day's close is higher than the previous day's closing price. Thus the term "accumulation day"
- **Distribution:** Volume is distributed when the day's close is lower than the previous day's closing price. Many traders use the term "distribution day"

Therefore, when a day is an accumulation day, the day's volume is added to the previous day's Accumulation Distribution Line. Similarly, when a day is a distribution day, the day's volume is subtracted from the previous day's Accumulation Distribution Line.

ATR –Average True Range

True Range (TR) is defined as the greatest of the following:

- The current High less the current Low.
- The absolute value of the current High less the previous Close.
- The absolute value of the current Low less the previous Close.

An SMA of the price "true range" over a number of periods. The "true range" in this case is maximum of the differences between High, Low or Close for the time period.

This indicator measures a security's volatility. It does not indicate price direction or duration, rather the degree of price movement. Average True Range can be interpreted using the same techniques that are used with the other volatility indicators.

PCR – Put/Call Ratio

The put/call ratio is the volume of put options divided by the volume of call options for a specified period of time. Technical analysts use the put/call ratio to predict market turning points. The put/call ratio is generally considered a contrarian indicator. A high put/call ratio occurs when there is a high volume of put options being traded, and a low put/call ratio indicates that a larger percentage of call options are being purchased. To a contrarian investor, a significantly high put/call ratio suggests that investors are overly pessimistic and therefore indicates a market bottom, while a significantly low put/call ratio suggests that investors are overly optimistic and therefore implies a market top. The put/call ratio must be used with caution as unusual market conditions can cause short-term anomalies in apparent market sentiment, giving analysts a misleading put/call ratio indication.

Price Oscillator

The Price Oscillator uses two moving averages, one shorter-period and one longer-period, and then calculates the difference between the two moving averages. The Price Oscillator technical indicator can be used to determine overbought and oversold conditions as well as to confirm bullish or bearish price moves.

Zig Zag

The Zig-Zag indicator is extremely useful for **determining price trends**, [support and resistance](#) areas, and classic chart patterns like [head and shoulders](#), [double bottoms](#) and [double tops](#). The Zig-Zag indicators uses both swing highs and swing lows in its calculation:

- **Swing Highs:** When a price (usually close) is both higher than the price previous to it and after it.
- **Swing Lows:** When a price is both lower than the price prior to it and lower than the price following it.

Parabolic SAR

The Parabolic Stop and Reverse (SAR) indicator combines price and time components to **generate buy and sell signals**. The Parabolic SAR is also effective as a tool to **determine where to place stop loss orders**.

Useful websites:

<http://www.onlinetradingconcepts.com/>

http://stockcharts.com/school/doku.php?id=chart_school:overview:technical_analysis

<http://www.chartpattern.com/>