

BASICS OF TECHNICAL ANALYSIS

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INTRODUCTION

Technical Analysis is the forecasting of future financial price movements based on an examination of past price movements. Like weather forecasting, technical analysis does not result in absolute predictions about the future. Instead, technical analysis can help investors anticipate what is “likely” to happen to prices over time. Technical analysis uses a wide variety of charts that show price over time.

There are many technical analysis tools that traders can use to analyze the charts and determine future price behavior. They have varying degree of complexity – some are perfectly suited to beginners while other require some advanced knowledge to be understood properly. In this comprehensive guide, we have picked the most widely recognized tenets of technical analysis which we believe every trader should know.

Though written to guide and assist beginners in their first steps in the trading world, this eBook is also suitable for more experienced traders, keeping them on top of all the basics one must be familiar with when trading cryptocurrencies.



BASICS OF CHART ANALYSIS

WHAT ARE CHARTS

A price chart is a sequence of prices plotted over a specific timeframe. In statistical terms, charts are referred to as time series plots.

Technicians, technical analysts, and chartists use charts to analyze a wide array of securities and forecast future price movements. The word “securities” refers to any tradable financial instrument or quantifiable index such as stocks, bonds, commodities, futures or market indices. Any security with price data over a period of time can be used to form a chart for analysis.

Because charts provide an easy-to-read graphical representation of a security's price movement over a specific period of time, they can also be of great benefit to fundamental analysts

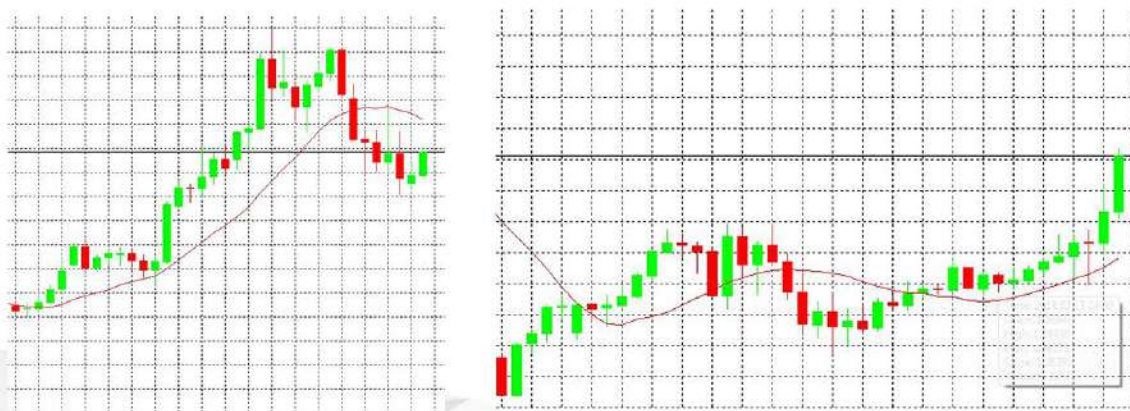


BASICS OF CHART ANALYSIS

HOW TO CHOOSE THE RIGHT TIME-FRAME

The timeframe used for forming a chart depends on the compression of the data: intraday, daily, weekly, monthly, quarterly or annual data. The shorter is the duration of particular segment of the price, the more data is generally displayed. For example, below you can see 2 examples of candlestick chart representing price movements of the same asset.

For the first picture we selected time frame, meaning each candle in the lookback period is showing price fluctuations happening within the entire day while the second picture shows hourly time frame which allows to concentrate on shorter term movements on the price.



- Traders usually concentrate on charts made up of daily and intraday data to forecast short-term price movements. The shorter the timeframe and the less compressed the data is, the more detail that is available. While long on detail, short-term charts can be volatile and contain a lot of uncertainty. Large sudden price movements, wide high-low ranges, and price gaps can affect volatility, which can distort the overall picture.
- Investors usually focus on weekly and monthly charts to spot long-term trends and forecast long-term price movements. Because long-term charts (typically 1-4 years) cover a longer timeframe with compressed data, price movements do not appear as extreme and there is often less noise.

- Others might use a combination of long-term and short-term charts. Long-term charts are good for analyzing the large picture to get a broad perspective of the historical price action. Once the general picture is analyzed, a daily chart can be used to zoom in on the last few months.



CANDLESTICK CHART

Originating in Japan over 300 years ago, candlestick charts have become quite popular in recent years. For a candlestick chart, the open, high, low and close are all required. A daily candlestick is based on the open price, the intraday high and low, and the close. A weekly candlestick is based on Monday's open, the weekly high-low range and Friday's close.

Many traders and investors believe that candlestick charts are easy to read, especially the relationship between the open and the close. Green candlesticks form when the close is higher than the open and Red candlesticks form when the close is lower than the open. The red and green portion formed from the open and close is called the body. The lines above and below are called shadows and show the daily fluctuations of the price represented by lower and upper shadows respectively.



SUPPORT AND RESISTANCE

Understanding support and resistance is the first step that every trader should take in studying technical analysis. No tool is used more frequently than support and resistance that is why it may be of great benefit for Bitcoin and other cryptocurrency traders if used appropriately.

Support and resistance represent price levels through which the price rarely goes above or below.

- **Support is the price point through which the asset rarely falls.**
- **Resistance, on the other hand, is the level above which the market rarely goes up.**

Support and resistance are very important in terms of market psychology, as resistance literally represents the point above which traders are not willing to buy, while support outlines the price below which traders are reluctant to sell. Picture below demonstrates the most striking instance of support and resistance on the chart :



We clearly see that the price was not trading higher than than 1.6800 while 1.6780 was a hurdle for the price to go further down, resulting in a prolonged price consolidation between mentioned levels.

HOW TO IDENTIFY SUPPORT AND RESISTANCE

- Support can be established with the previous reaction lows.
- Resistance can be established by using the previous reaction highs.

After each bounce off support at 1.18500, the price traded all the way up to resistance. Resistance was first established at around 1.2000 level. As you can see, the price seems to have established a trading range between 1.2000 and 1.1850 and lacked momentum to break any of the mentioned levels for some time. That is why breakout of long term area of support or resistance is usually thought to be a call to action regardless of direction.



SUPPORT EQUALS RESISTANCE

Another principle of technical analysis stipulates that support can turn into resistance and vice versa. Once the price breaks below a support level, the broken support level can turn into resistance. The break of support signals that the forces of supply have overcome the forces of demand. Therefore, if the price returns to this level, there is likely to be an increase in supply, and hence resistance.



Also, identifying trading range can be helpful in determining support and resistance as turning points or as continuation patterns. A trading range is a period of time when prices move within a relatively tight range. This signals that the forces of supply and demand are evenly balanced. When the price breaks out of the trading range, above or below, it signals that a winner has emerged



TRENDS

A trend is the tendency of the market to move in a particular direction over time. It is an amalgamation of predictable price movements which the market takes when reaching support and resistance levels varying over time. Trends can be found on various time frames, and those found on the higher time frames can last for weeks, months and years. In simple words, market trend is the general direction in which the market goes or a period when the pattern of its movements remains unchanged.



BULLISH TREND

Bullish trend (or an uptrend) is a term used to describe the market which is appreciating in value with each consecutive time period. In most of the cases, a trend is called bullish when the market is closing the day above the opening price. A bullish trend is associated with significant confidence and increased investing in anticipation that prices would rise in the future.

BEARISH TREND

Bearish trend(or a downtrend) is an opposite to the bullish trend and is characterized by a general decline in the price of financial instruments over the period of time. It is usually triggered by a sudden shift from investor optimism to the fear and pessimism. Bear markets are associated with periods of elevated economic uncertainty and underlying downside risks.

CHART PATTERNS

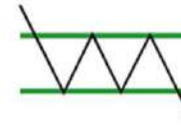
Patterns play vital role in trader's ability to identify long-term trends and trade successfully. With over 50 patterns known to analysts very few have actually stood the test of time and proved useful in predicting potential outcomes.

In many ways, chart patterns are simply more complex versions of trend lines. It is important that you read and understand parts of this guide on Support and Resistance as well as Trend Lines before you continue.

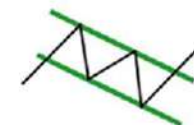
Chart pattern analysis can be used to make short-term or long-term forecasts. The data can be intraday, daily, weekly or monthly and the patterns can be as short as one day or as long as many years. Gaps and outside reversals may form in one trading session, while broadening tops and dormant bottoms may require many months to form.



Head and Shoulders



Rectangles



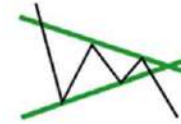
Channels



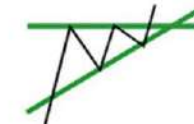
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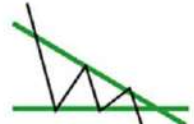
Pennants



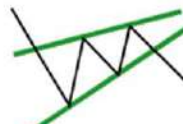
Symmetrical Triangles



Ascending Triangles



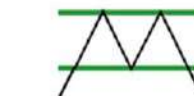
Descending Triangles



Wedge Continuation



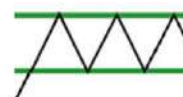
Wedge Reversal



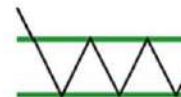
Double Top



Double Bottom



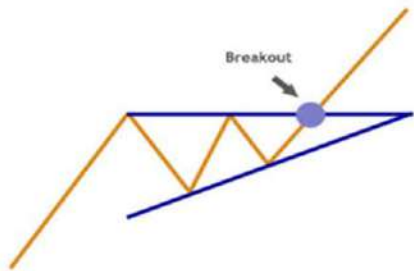
Triple Top



Triple Bottom

ASCENDING TRIANGLE PATTERNS

Ascending triangle patterns are bullish formations usually indicating a continuation of the upward trend. The pattern is characterized by 2 trend-lines. The first trend-line is almost flat and commonly moves along the top of the triangle. The upper line acts as a resistance point which prevents breakouts by sending security's price back to the lower trend-line.



With each subsequent failure to break upper, almost horizontal resistance point both lines eventually converge. Convergence of both lines usually results in a breakout of upper resistance level. The basic interpretation is that the pattern reveals that each time sellers attempt to push price lower, they are increasingly less successful. This pattern is good for cryptocurrency trading as was frequently seen on Bitcoin and Ethereum charts.

Another way of using the pattern is following the supporting lower trend-line. As you may see on the picture above, each subsequent failure to break below the lower line results in a short wave higher until reaching resistance. Sellers get more and more exhausted with each failure to break below the lower line. As such, in combination with right indicators supporting line can be a profitable buy signal.

DESCENDING TRIANGLE PATTERNS

As the name suggests, descending triangle is exactly the opposite to the pattern we've explained above. Characterized by flat supporting line on the bottom and down-sloping vertical line, descending triangle is a strong bearish reversal pattern that can provide traders a strong signal that price will keep moving down once the triangle is complete.

Usually formed during long up-trends this pattern usually indicates that buyers are getting weaker each time the prices bounce off the support. Each subsequent attempt at pushing prices higher is weaker than before, and eventually both lines converge and breakout below the support line takes place.



DOUBLE TOPS

A double top forms when the price makes a high within an uptrend, and then pulls back. On the next rally the price peaks near the prior high, and then falls below the pullback low. It's called a double top because the price peaked in the same area twice, unable to move above that resistance area.

For trading purposes, sell positions may be initiated when the pattern completes. It's also advisable to avoid longs, since the price could decline further. A stop loss on short positions is placed above the latest peak, where recent short term resistance may have been formed



DOUBLE BOTTOMS

A double bottom forms when the price makes a low within a downtrend, and then pulls back to the upside. On the next decline the price stalls near the prior low, then rallies above the pullback high. It's called a double bottom because the price stalled in the same area twice, unable to drop below that support area.

The pattern is complete, and traders may take long positions, when the price rallies back above the pullback high. For example, if the price drops to \$47, pulls back to \$50, drops to \$46.75, then a rally back above \$50 signals that the price will continue to head higher.

