Brainy's Articles on

# Technical Analysis

## Chart patterns — introduction



## *Introduction*

In technical analysis terms, a ***chart pattern*** is usually a number of straight lines placed manually onto a share price chart and which tend to contain the price action. These drawn lines can form a recognisable pattern such as a triangle, or rectangle, etc. This sounds simple, but there are also more complex scenarios as mentioned in the text below.

We need to remember that the opinions of market participants are summarised in the share price charts. This is what results in the discernible "patterns" forming on the price charts as well as lines of *support* and *resistance* which can be the boundaries of a *chart pattern*. How can we spot chart patterns, and use them?

A simple example of a triangle chart pattern is shown in Figure 1 at right, with more details below.

In the world of technical analysis, if we consider what some people refer to as "primary analysis" where we only look at the plain price chart, then the somewhat simple chart patterns can actually tell us a lot about the underlying mood and sentiment of the market. Their usefulness is often under-rated, and in fact many professional traders rely heavily on chart patterns.

*Figure 1: Sample chart pattern - Ascending Triangle.*

In this Article in Brainy's series on Technical Analysis (number TA-3410) we take an introductory look at chart patterns, including an explanation of what causes these patterns to develop, and the relevance and importance of volume.

The eBook (PDF) Article **TA-3420, *"Chart patterns — more details"***, provides more information about the specific types of chart patterns. Readers should also refer to other Articles in this series for more information, in particular the following:

- **TA-3420, "Chart patterns — more details"**,
- **TA-3500, *"Triangle chart patterns"***, and
- **TA-3600, *"Megaphone chart pattern"***.

## *Overview*

The majority of chart patterns tend to fall into one of the following categories:

- Basing or consolidation pattern
- Rectangle
- Triangle
- Double or triple top
- Double or triple bottom
- Head and shoulders
- Wedges
- Flags and pennants
- Rounding top / bottom

There are other known and recognised chart patterns, but those listed here tend to cover the vast majority of more the common patterns.

* — Brainy's eBook (PDF) Articles are only available to ***Share Market Toolbox*** members.
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The first page of every article is free, and some of the articles are completely free (eg. shorter ones and Table of Contents).


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## What is the point?

Traders and investors can use chart patterns to read the mood of the market, and to gauge a possible short-term change in price direction, or a possible change in trend, or a continuation of a trend. They can also help to anticipate a possible price target using the *Measure Rule*, and determine a possible *Reward/Risk ratio* to help make decisions about a possible trade, and to help manage a subsequent trade. Chart patterns can last from a few days to many months or even years. And, in fact, day traders use chart patterns on intraday charts where some patterns cover only several minutes in time.

As with much of technical analysis, the interpretation of chart patterns is not 100% guaranteed, but by understanding this material, we can understand more about the underlying market, and we can improve our chances of success in the markets.

## Continuation or reversal?

Some chart patterns are referred to as *continuation* patterns, because they appear after a price *trend* is established, and they suggest a likely continuation of the trend. Other chart patterns are referred to as *reversal* patterns because they appear after a price trend is established and they tend to suggest a likely reversal of the recent trend. They are useful because once they have almost completed we can be on the lookout for a potentially sudden move either one way or the other. At least we can be ready for the sudden move which would provide a degree of confirmation regarding the most likely next move in price.

In the text here we keep saying "likely to". This is because the charts summarise the opinions of the market participants, and the conclusions that we can draw are based on the probable outcomes. And we have a greater degree of confidence in the conclusion than if we were to have a guess at the possible price movement based on fundamental, or sector strength, observations.

## How to identify the chart patterns?

So how do we find the chart patterns? Simply place one or more straight lines on the chart that seem to enclose *most (or all) of the price action*. We have done this in the weekly chart in Figure 1 above. A **horizontal straight line** at about $4 seems to act as a **ceiling above the price action** (called *resistance*) until December 2006, and an **upward sloping straight line under the price action** seems to act as *support* (like a floor) under the price as it rises from September through to December. It is these two straight lines that resemble the two sides of a triangular shape and hence the name — *Triangle Chart Pattern* in this case.

## Why do they form? — psychology and history

We know that the vast majority of participants in the financial markets buy and sell shares based on their own opinion about what the shares are worth. If the shares are currently trading at a value that is less than their own opinion of fair value, then they are likely to buy, whereas if the shares are trading well above their opinion of fair value, they are not likely to buy.

We said above that the chart patterns summarise the opinions of the market participants — their opinion about the *fair value* of a share. If a stock is trading below the price that they consider to be fair value, then they expect the price to eventually rise to their opinion of fair value. When enough market participants buy and sell the shares based on their opinions of fair value, we can see these price levels on the chart.

As we explained above, we can often place straight lines on the chart around the price action. But you might ask, *“why do prices seem to be bounded by these straight lines?”* Or to put it another way, *“why does the price stay within these straight line boundaries?”* And this is a very good question. There is some good background explanation in the eBook Article **ST-1100, *“Bulls and bears & the (market) auction”***. But, let's try to summarise it briefly as follows.

The share price for any stock can fluctuate from day to day and week to week based on the views and influences of many people. The price that someone pays to buy a stock today is demonstrating their own view about **the current fair value** for the stock. Over time, the perceived fair value for a stock


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will tend to swing between an over-priced value, and an under-priced value. We can see this in the swings on the price chart over time. And these swings can be observed on intra-day charts, and are somewhat smoothed out as we progress to a daily chart, and to a weekly chart.

As the price swings between the perceived over-bought and over-sold extremes, buyers and sellers exchange the stock. A majority of people who share a similar view about the current *fair value* of a stock will all act together, and their buy/sell actions show up on the price chart as specific price levels. The infamous technical analysis bible *"Technical Analysis of Stock Trends"*[1] constantly refers to this as the balance of supply and demand. As a stock's share price rises too high, sellers step in to take profits, and increase the supply of the stock. At the bottom of the short-term price cycle, as the price falls too much, the buyers step in and increase the demand for the stock.

It is easy to understand that a horizontal line on the chart could be the point at which buyers and sellers become more active. In some cases, the horizontal line is actually a wide "zone" on the chart (as could be drawn with a "fat pencil"). This can be more so on a chart of a market index which is a summary of the prices of many stocks.

But what about the sloping lines on the chart which form the chart patterns? Such as the upward sloping line in Figure 1 above? Well, many traders and investors follow the principles of *trends*, where stock prices tend to move in either an upward trend (consistently rising prices), or downward trend, or with no trend (ie. *range-trading*).

With an up trending share price (with a second "Higher Low"), traders can put a straight line onto the price chart to join the two Higher Lows, and then call the line a *trend line*. Then in coming days when the price rises, then falls back toward this trend line, traders will be ready to buy it again and keep the price above the trend line. In many instances the price will stay above the trend line after several "touches" of the trend line, until at some point the majority of traders in the stock believe that the price is now too high, and the buyers will no longer step in to buy the stock.

For more discussion about trends and non-trends, see the eBook Articles:

- **ST-6120, *"Trends are important (and the 3Ways Rule)"***
- **TA-2200, *"Dow Theory"***
- **TA-3200, *"Trends and Trendlines"***
- **TA-3210, *"Trends — Primary, Secondary and Brainy's 3Ways Rule"***.

So why do these patterns form on the charts? To summarise, it is basically a reflection of the views of the majority of traders and investors (the market participants), and their opinion about the current fair value for the stock. It can also be put down to psychology and emotions, because as a price rises, if people feel they are missing out on stellar increases in price, they tend to join the mad rush in the fear of missing out — that is, they are greedy. And the converse happens as prices fall — if the price falls too far too fast, many people might be fearful of a continuation of falling prices, and sell the stock to limit their losses. The phenomenon known as "the herd mentality" also has an effect in these situations, as many people tend to think alike, and contribute to the formation of these chart patterns.

In some cases it could easily be argued that because of the similar thinking and the influence of a majority of traders, perhaps these chart patterns are self-fulfilling. That is, there are so many traders watching the pattern form that at a crucial point in the pattern it either completes successfully, or it fails. Many traders watch the developing patterns and try to anticipate the outcome.

## Candlesticks? daily? weekly?

What type of chart should we use? — A line chart, or a candlestick chart? And should we be looking at Daily charts or Weekly charts?

Firstly, candlesticks or line? — We need to remember a key point about price charts. That is, the **closing price each day** is very important, because this is the price at which the short-term traders are happy to hold a position overnight. That is, they will be able to sleep at night without worrying about a

1 Edwards & Magee; *"Technical Analysis of Stock Trends"*; 1948.


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potential significant change overnight. So, it would seem that a **daily line chart** could be most useful. And this does tend to be the case. But having said that, it can also be useful to we aware of the full range in price in each day, so it could be argued that candlesticks can be more useful, and any chart pattern could be drawn around the intraday price ranges.

Now, the chart time period — Day traders will be using intra-day charts, and possibly daily charts, and chart patterns appear on these charts just like they do on weekly and monthly charts. The longer-term traders (eg. position traders) and the investors can focus on daily and weekly charts, and perhaps monthly as well. All these time periods are equally valid, and specific patterns may, at times, appear on one and not on others for any specific stock or index.

Remember, it can be useful to see the entire range in price during the period. This is more so on weekly and monthly charts where the daily closing prices are not shown, so viewing candles can be very useful in these cases. On a price chart of just a couple of months, looking for short-term patterns, a daily line chart or weekly candlestick chart tends to be most useful. On a price chart covering several months, or even up to a year or much more, the daily line chart might be the ideal but could appear somewhat cluttered (displaying too much “noise”), in which case a weekly or monthly candle chart would appear to be a simpler chart, and the candlestick tails will show us the price ranges within the relevant periods.

### Volume — it is very important!

In general terms, an upwardly trending share price is normally accompanied by rising volumes as the excess of buyers bid for the inadequate amount of stock that is being offered by the sellers. And the temporary price retracements usually see a drop in volume. This is opposite to the downwardly trending share price where volumes tend to increase on the downward legs, and decrease on the upward retracements.

A number of chart patterns see a narrowing range in prices as the pattern develops, and usually accompanied by falling volumes. This is because traders and investors are not sure about the real value of the stock — if they were, then the volumes would be higher and the price would move out of the pattern. And that is what happens when the pattern completes — there tends to be an increase in volume. For more information on the importance of volume, refer to Article: **TA-3350, *“Volume (it is important)”***.

## *Summary*

In this Article in Brainy's series on Technical Analysis (article number TA-3410) we have taken an introductory look at chart patterns. Readers should also refer to other Articles in this series for more information, in particular:

- **TA-3420, “Chart patterns — more details”**, for more information about chart patterns;
- **TA-3500, *“Triangle chart patterns”***, and
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