Chart Patterns Tutorial

Technical Analysis Articles | Written by TradingEducation.com |

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Traders have debated the merits of "technical analysis" versus "fundamental analysis" for years. In reality, most traders probably do not make such a rigid distinction between these two approaches to market analysis and use some of both in making their decisions.

Fundamental analysis studies factors such as supply, demand, weather, political developments, economic reports and the like to come up with their forecast for potential price direction. But many traders do not have access to all of the vast amount of fundamental information available nor do they have the ability to interpret the significance of much of this information on the market they are trading. Conclusions from fundamentals tend to be quite subjective.

Instead of trading to digest all of this fundamental information and convert it into an opinion on prices, those who use technical analysis believe that everything that is to be known about a market is incorporated into one thing, price, and look only at data generated by the action of the market itself. The technical trader's main resource is a price chart, which shows visually what has happened to prices historically and, based on past market action, what is likely to happen when the same conditions arise in the present.

Even the staunchest advocate of market fundamentals is likely to refer to a price chart before making a trade, if for no other reason than to get some perspective on how current prices fit into a market's price history. By the same token, even the most dedicated follower of technical analysis is likely to keep in mind the importance of key fundamentals such as natural disasters, political upheavals, major economic reports, etc.

This trading tutorial focuses on the basics of technical analysis, which involves several underlying assumptions:

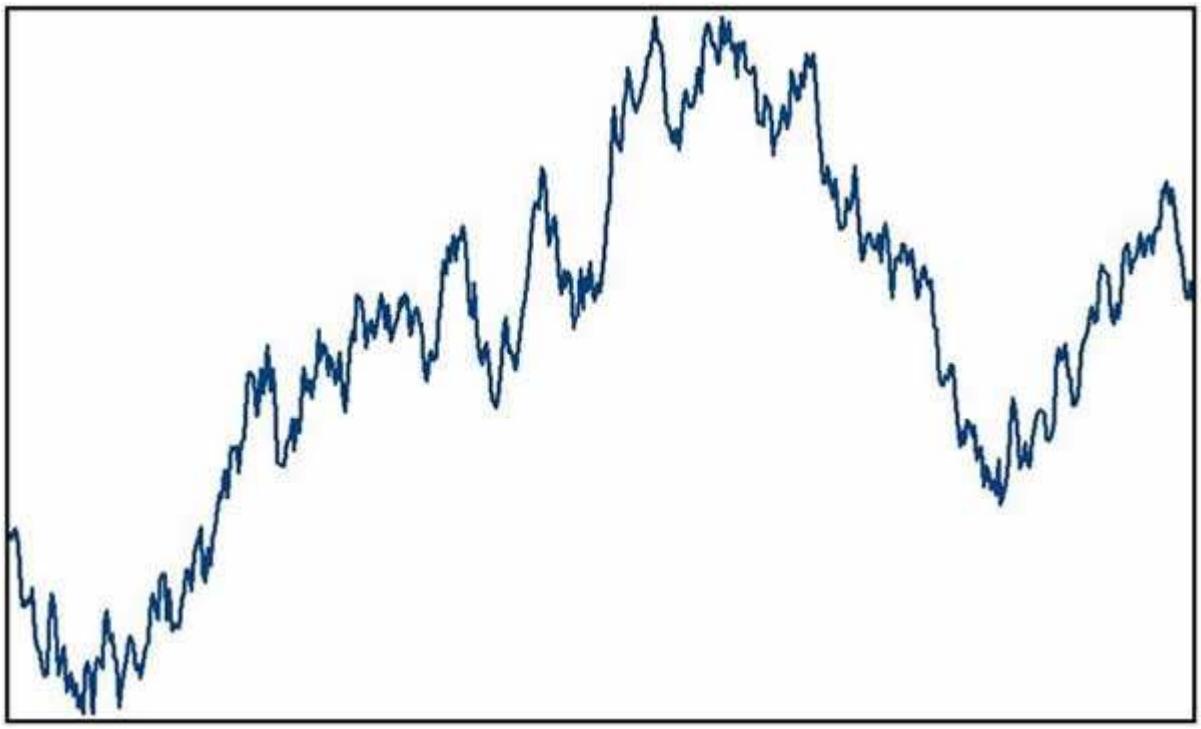
- All fundamentals or any other inputs known to the market are reflected in price.
- History repeats itself so that a study of what prices did in the past can provide clues about what they will do in the future.
- Prices tend to move in trends – up, down or sideways – and changes in existing trends provide potential trading signals.

Technical analysis can be rather simple or quite complex, depending on the capabilities you have to manipulate the market data. The "primary" trading tools include basic chart patterns, such as triangles, double tops and bottoms, head-and-shoulders, flags, pennants and, of course, one of the most basic, yet most powerful, trading tools, the trend line. As long as you have the relevant price data, these basic tools do not even require a computer although a computer does make analysis much faster and easier.

Charts for traders

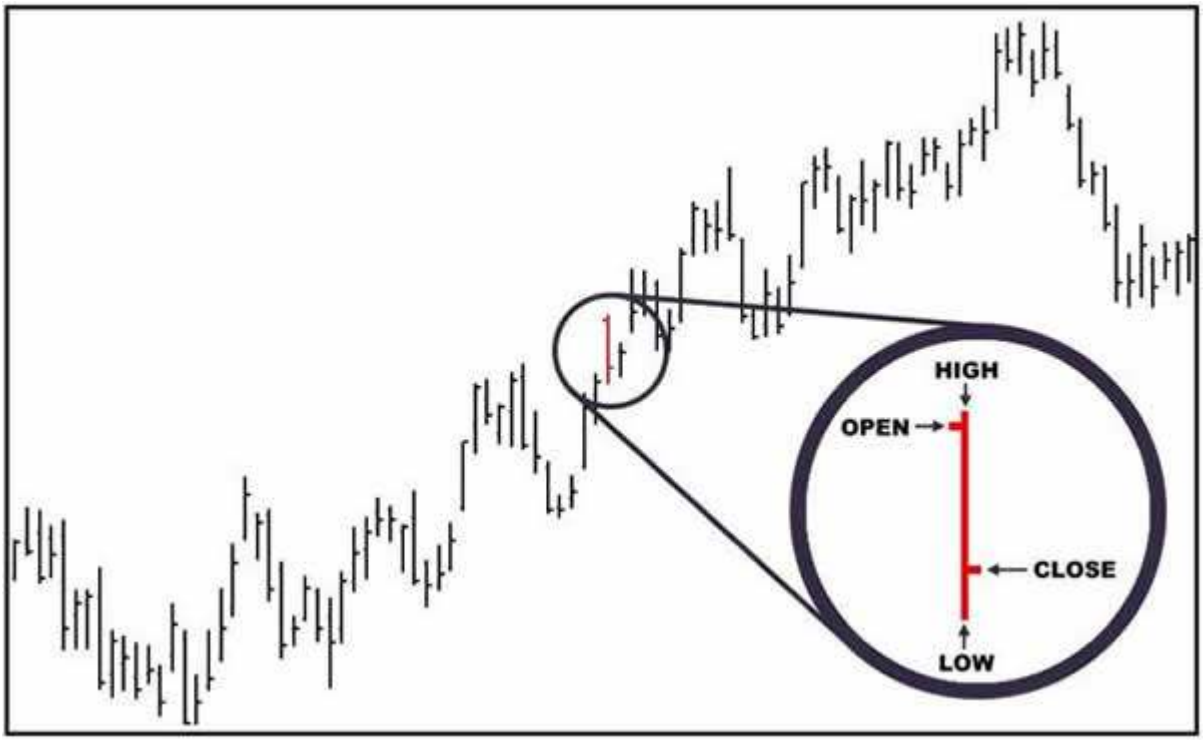
Over the years traders have developed a number of different types of charts in an effort to get a better view of price action. Old chart techniques are resurrected and new chart ideas devised, but the following types of charts continue to be the most widely used.

Close-only charts - As its name suggests, only the close for a time period is plotted, and a line connects the dots of these closes. These work best for an overview, especially over a long period of time.



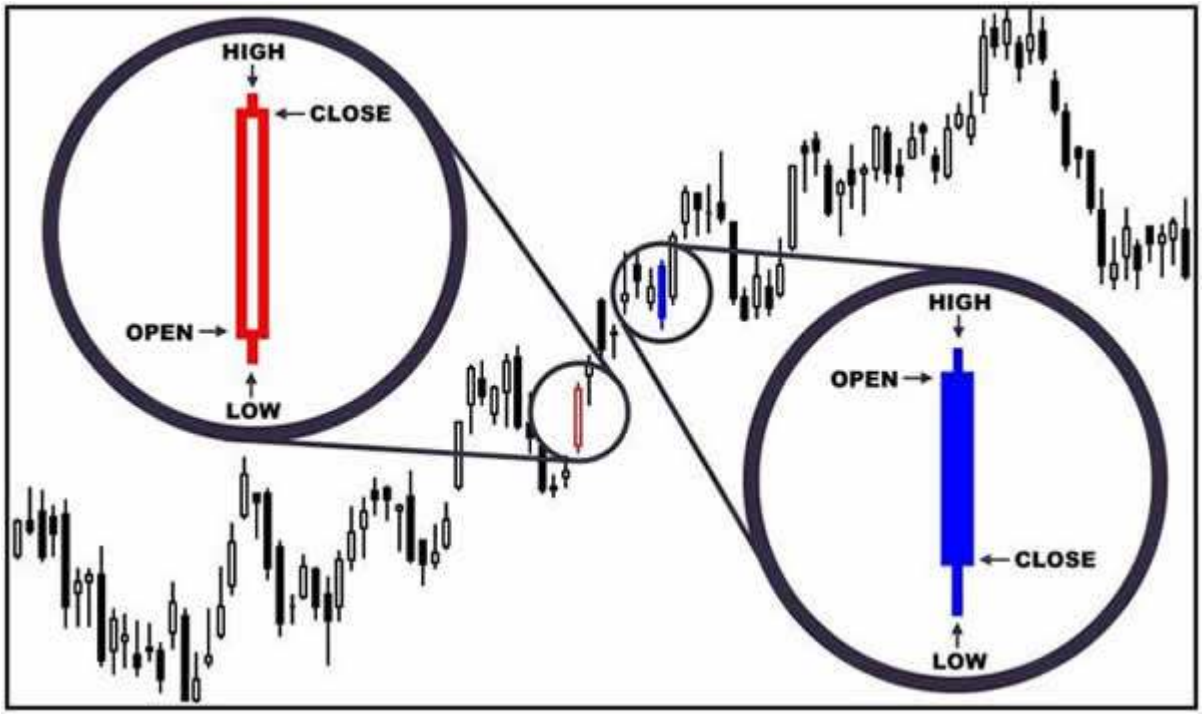
Source: VantagePoint Intermarket Analysis Software

Bar or line chart - Perhaps the most popular type of chart, the bar chart adds new information for the trader, showing the high and low prices for a time period in addition to a horizontal notch on the right side of the vertical bar indicating the close. Many chart services also show the opening price with a horizontal notch on the left side of the vertical price bar.



Source: VantagePoint Intermarket Analysis Software

Candlestick chart - This concept was introduced to western traders in the late 1980s and adds yet another dimension to the standard open-high-low-close price data to make the price action during a period more visual at a glance. The open and close have the most significance with the difference between the two making up the "body" of the candle. If the close is higher than the open, the body is usually shown as clear or white and indicates the market gained strength during the period – the bulls won the day. If the close is lower than the open, the body is usually black or dark and indicates the market lost strength during the period – the bears won the day. Price action outside the range of the body is shown as "tails" or "shadows" and gives further clues about price movement during the time period specified.



Source: VantagePoint Intermarket Analysis Software

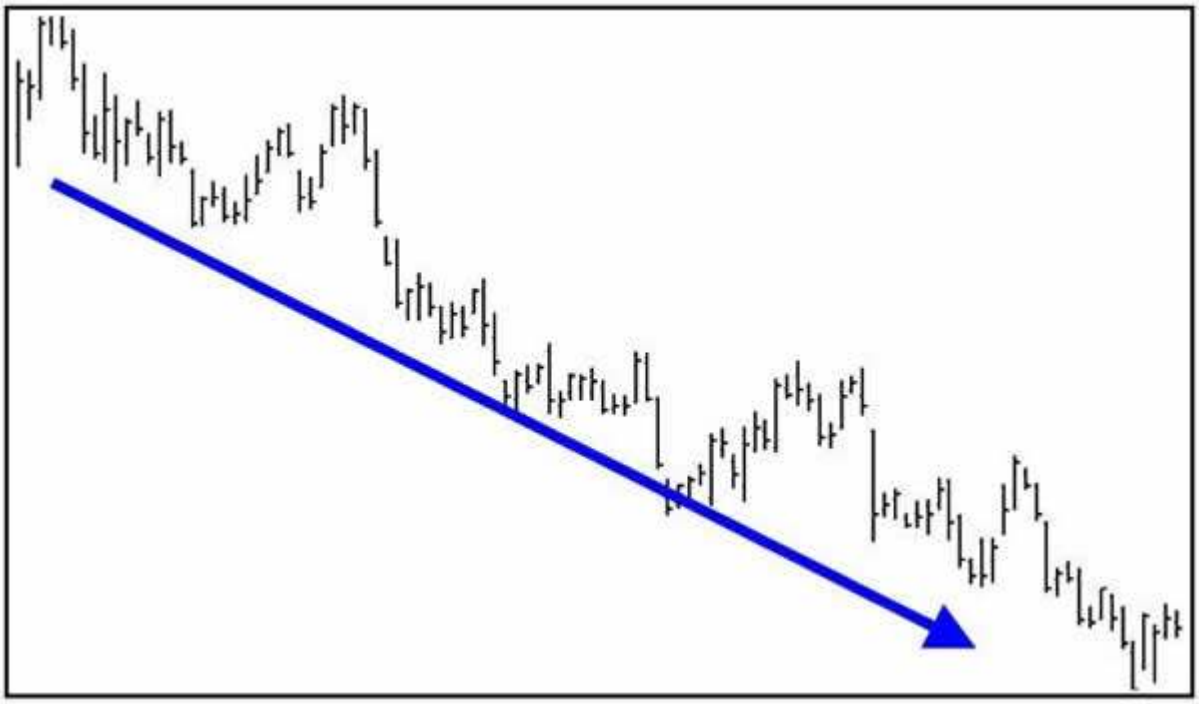
The Basic Tool: Trend lines

No matter what chart type you use, the first thing you should try to determine as a trader is the trend of market. You can use all kinds of clever ideas and sophisticated techniques to arrive at your trading decisions, but a basic building block of whatever trading style you use should be trend analysis.

Here is what respected technical analyst John J. Murphy says about trend lines in his excellent book, *Technical Analysis of the Futures Markets*: "The importance of trading in the direction of the major trend cannot be overstated. The danger in placing too much importance on oscillators, by themselves, is the temptation to use divergence as an excuse to initiate trades contrary to the general trend. This action generally proves a costly and painful exercise. The oscillator, as useful as it is, is just one tool among many others and must always be used as an aid, not a substitute, for basic trend analysis."

The definition of a trend is pretty simple. An uptrend is a series of higher highs and higher lows. A downtrend is a series of lower highs and lower lows.

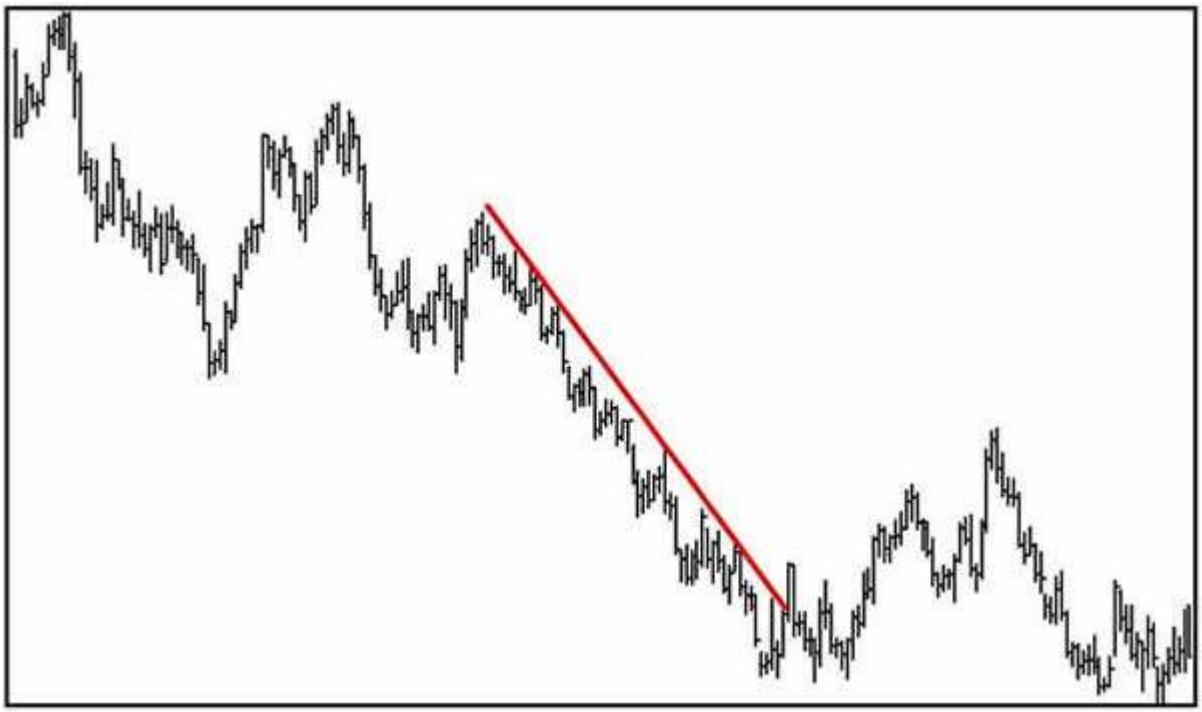
Source: VantagePoint Intermarket Analysis Software



Source: VantagePoint Intermarket Analysis Software

Like much of technical analysis, however, drawing trend lines is more art than science. When drawing an uptrend line, you draw a straight line up to the right along successive "reaction" lows (see chart below). During a downtrend, a line is drawn to the right along successive rally peaks (see chart below). It's important to note that the more times the trend line touches rally peaks or reaction lows, the more powerful and more valid the trend line becomes.

***Source:** VantagePoint Intermarket Analysis Software*



***Source:** VantagePoint Intermarket Analysis Software*

As mentioned in the basic rules of technical analysis, a trend in motion tends to stay in motion. Of course, at some point any trend will end. One rule for negating trend lines is that prices must penetrate the trend line resistance or support level and then show evidence of follow-through strength or weakness during the next trading session. However, if prices make a big push above or below the trend line, then that trend line is negated without needing follow-through confirmation.

In some cases, you can draw a line parallel to the uptrend or downtrend line to form a trading channel, providing some boundaries within which the trend unfolds. In an uptrending move, the straight line across the reaction lows reveals the trend, and a parallel line across the highs defines the channel. In a downtrending market, the straight line across the highs determines the trend and a channel line is drawn across the lows.

Source: VantagePoint Intermarket Analysis Software

Channels make the trend clearer, and breakouts in either direction can provide signals to initiate or exit positions.

Prices do not always move up or down but spend much of their time chopping back and forth. One example of a channel is the formation that develops during a sideways trading range or a basing pattern when prices hold in a generally narrow band at lower price levels for a period of time. The longer the sideways basing action, the more powerful the upside breakout from the trading range is likely to be.

Source: VantagePoint Intermarket Analysis Software

Basic Chart Patterns: Continuation

A market trend tends to persist, as we mentioned in the previous section. As long as price action continues to respect a trend by bouncing off a trend line, the trend line is perhaps the most powerful continuation pattern. But other price movements also suggest that the trend in place is likely to continue.

Bullish flags - Bullish flag patterns occur when a market makes a very strong uptrend in prices, followed by a pause or sideways to lower trading for a few price bars, and then the market resumes a strong price uptrend. The countertrend move against the main trend usually lasts just a few days. Sometimes the initial surge off a bottom looks like a flagpole and can be used as a measurement device, adding the length of the flagpole to the point where prices break out above the flag to project a price target.

Markets typically fluctuate between periods of high volatility and periods of low volatility, and that is how flag patterns are formed as the market seems to take a breather to reassess the situation before resuming its upward climb.

Source:* *VantagePoint Intermarket Analysis Software

Bearish flags - Bearish flag patterns are formed when a market makes a strong price downtrend followed by a pause or sideways to higher trading for a few price bars, and then a resumption of the strong price downtrend. As with a bullish flag, the congestion area that forms is a period when the market consolidates and reassesses what it has done before returning to its downward trek.

Source:* *VantagePoint Intermarket Analysis Software

Symmetrical triangles or pennants - Several types of triangle-shaped patterns are continuation patterns. Price action seems to tighten into a coil, with highs and lows producing smaller ranges as prices move toward the apex of the triangle. Technical odds favor a price breakout from the triangle pattern in the direction of the most recent dominant price trend – in the chart example above, down.

Descending triangle - Adding to the succession of patterns suggesting a continuation of the downtrend on the chart above is the descending triangle. The market is able to find buying support at about the same general level for several days in a row, but the highs for the day get progressively lower as prices move toward the apex of the triangle. As with other triangles, when

buyers decide they can no longer hold the price at the level on the horizontal side of the triangle and the breakout eventually occurs, prices are expected to move in the direction of the dominant trend.

Ascending triangle - The ascending triangle reverses the appearance of the descending triangle. Sellers keep the lid on price movement at the horizontal side of the triangle but buyers keep pressing the market higher, causing the lows to be higher each day until the breakout above the horizontal line occurs. As the chart indicates, it may take a few more days of trading as buyers and sellers retest the breakout. As with other triangles, the expected move after the breakout is in the direction of the dominant trend.

Source: VantagePoint Intermarket Analysis Software

Cup and saucer - Some analysts call this formation a cup and handle, but the type of trading activity is the same. A market makes a gradual descent, trades at a lower level for a while and then makes a gradual ascent to form a rounding bottom – the saucer or the cup, depending on the name you give this formation. After prices reach the lip on the right side of the saucer (or cup), the market runs into resistance from the lip on the left side and sets back for a short time before moving back up to the lip level, forming the cup (or handle). When prices do pick up enough momentum to break above the lip level, they often do so with rather vigorous market action on higher volume, sometimes leaving a gap at the start of what becomes an extended uptrend.

Source: VantagePoint Intermarket Analysis Software

Basic Chart Patterns: Reversals

Like their name implies, these patterns suggest that one trend is ending and the market is ready to begin another trend in the opposite direction or, perhaps more likely, move sideways for a while. As with continuation patterns, a trendline is the basic pattern to watch. If prices break through a trendline and then follow through in the same direction, this is the best evidence of a trend reversal. Keep in mind that all chart patterns apply to all trading time frames – daily, weekly, monthly, yearly, hourly or even minute-by-minute bar charts.

Double tops - This phenomenon occurs when prices reach a fresh high, back off from that high, re-test the high and back off again. The longer the time between the "twin peaks" of the highs, the more powerful the chart signal is likely to be. Variations of this pattern that look somewhat similar are called "M" tops or 1-2-3 swing tops, but the second high is usually lower than the first high for these patterns. In all of these cases, the key points are the highs, which mark a barrier that becomes strong resistance, and the interim low. If prices drop below that low, the top is confirmed, and it is signal to sell.

Source:* *VantagePoint Intermarket Analysis Software

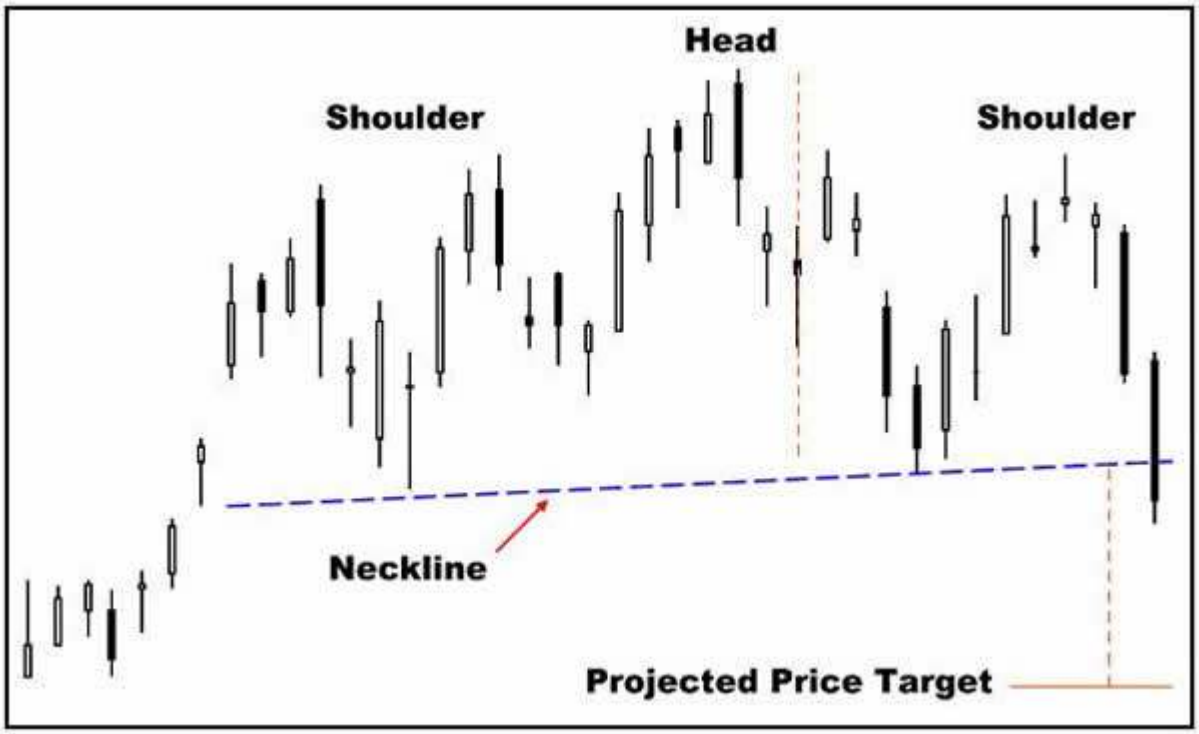
Double bottoms - The principle of this pattern is the same as the double-top reversal, except reversed. Similar patterns are the "W" bottom or 1-2-3 swing bottom. In all of these patterns, prices reach a fresh low, rebound a bit, drop back to re-test the low and then move back higher. When prices exceed the interim high, a bottom is confirmed, and the market is providing a signal to buy.

Source: VantagePoint Intermarket Analysis Software

Head-and-shoulders top reversal - This classic trend reversal pattern occurs when the market makes a new high (left shoulder), drops back, runs up to a higher high (head), drops back again, rallies to a high that is at about the same level as the left shoulder high (right shoulder) and then declines again. The key point is the "neckline" or the horizontal line that connects the two interim lows on the chart.

When prices drop below the neckline, that signals the completion of the top and the potential beginning of a downtrend although, in many cases, prices tend to react back to the trendline so the break does not produce a downtrend immediately. Sometimes the neckline break occurs as a gap or with a strong move down, reinforcing the price reversal.

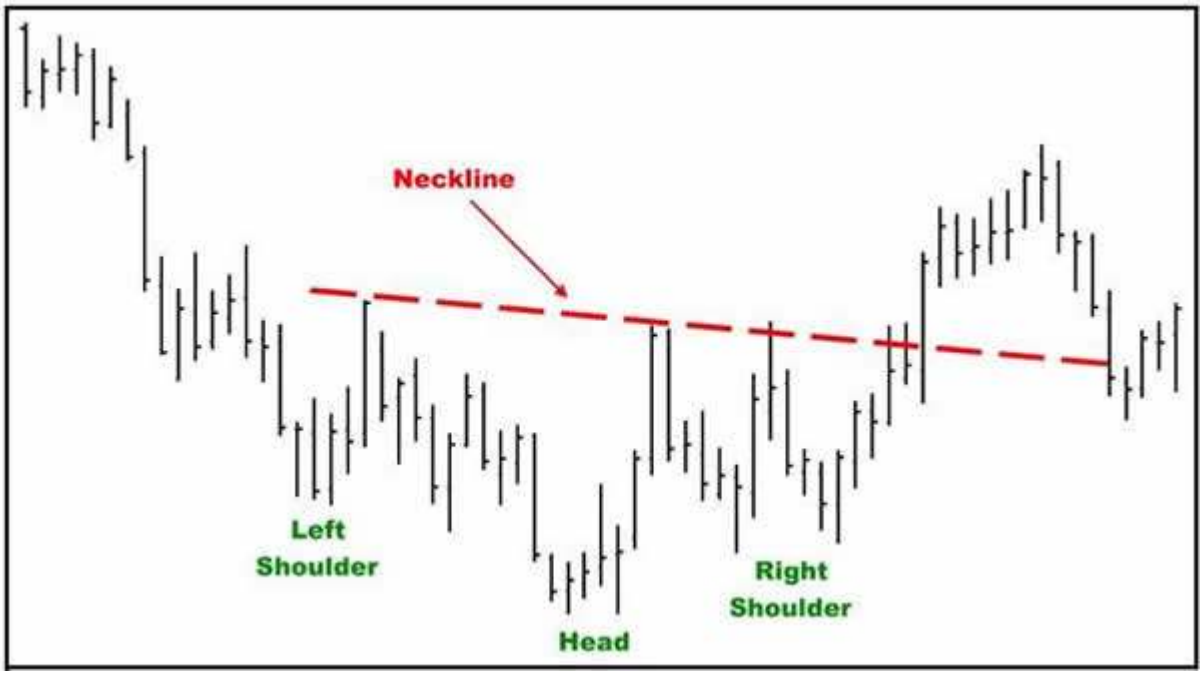
The head-and-shoulders is one of several chart patterns that can be used to project a price target. Analysts measure the distance from the top of the head to the neckline and then subtract that distance from the neckline break to calculate how low prices might go.



Source: VantagePoint Intermarket Analysis Software

Head-and-shoulders bottom reversal - Just as the double bottom mirrors the double top, the head-and-shoulders bottom is like the head-and-shoulders top but in reverse. That is, prices slide to a low (left shoulder), rally, then fall back to a lower low (head), move back up, then sink again to a low at approximately the same level as the left shoulder low (right shoulder).

The neckline again is an important point. When prices break through the neckline, the reversal pattern is complete and a potential uptrend may begin. As with the head-and-shoulders top, there is likely to be some trading back and forth on either side of the neckline as the market makes its decision on which way to go, and the distance between the neckline and the head can be used to project how high prices might go.



Source: VantagePoint Intermarket Analysis Software

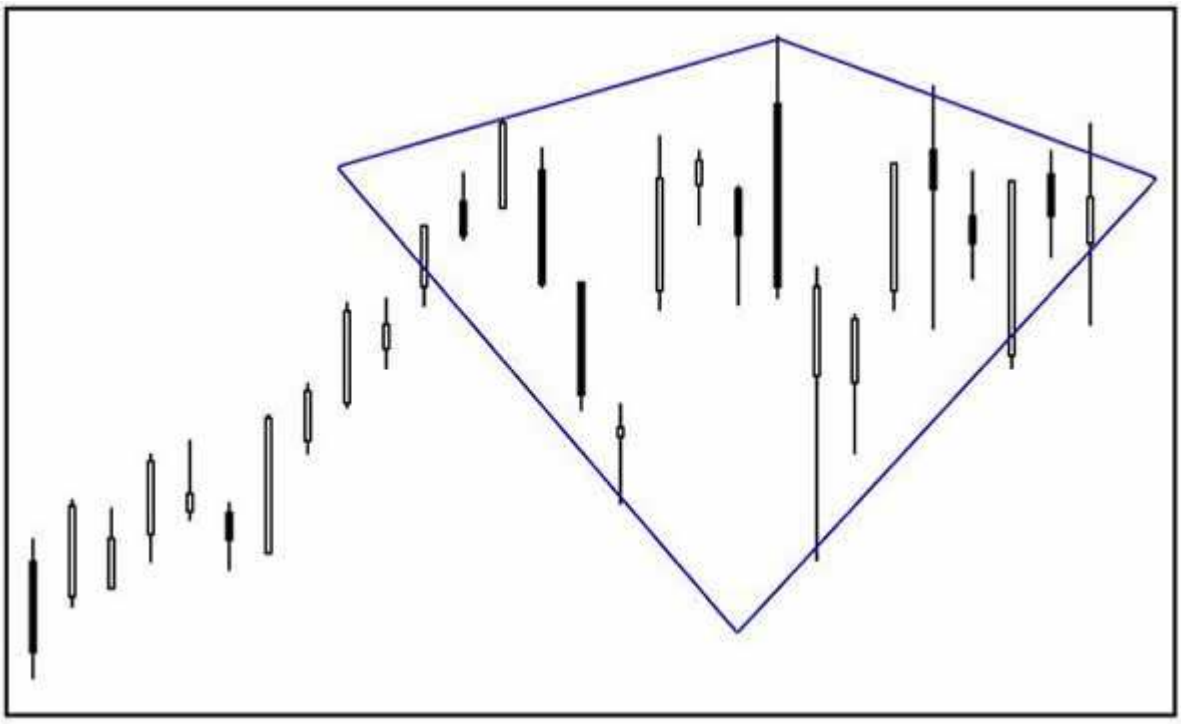
Falling wedge - This pattern occurs when the market is in an overall price downtrend and the highs are declining faster than the lows, forming a wedge shape. Sellers are able to push prices lower but there is enough buying support to keep the market from tumbling. Eventually, the force of selling begins to dry up and can't take prices lower, and the market starts to rebound as buying power exceeds selling power. These patterns are usually bullish and do portend a change in trend.

Source: VantagePoint Intermarket Analysis Software

Rising wedge - This pattern is the reversal of the falling wedge and occurs when the market is in an overall price uptrend s. Buyers keep pushing the lows of the day up, but there is enough selling to keep the market from taking off higher. Eventually, buying dries up and the sellers take over, pushing prices below the short-term wedge uptred line. These patterns are usually bearish and do portend a change in trend.

Source: VantagePoint Intermarket Analysis Software

Diamond pattern - This is a relatively rare pattern that usually occurs at market tops. Volatility increases at higher price levels, producing wider range days to form the widest part of the diamond. Then volatility decreases on the right side of the high and the price bars get smaller as they move into a triangle-like pattern to complete the diamond formation. This low-volatility, high-volatility, low-volatility combination usually resolves itself with a turn to the downside.



Source: VantagePoint Intermarket Analysis Software

More Chart Basics

Several other concepts need to be mentioned in any discussion of basic chart patterns because they are an integral part of any technical analysis toolbox.

Support and resistance - As has been mentioned previously in this tutorial, technical analysis begins with the trend line. The trend line is also the first point of support and resistance. Projecting a trend lines to determine future support and resistance areas is extremely effective. As the charts in the trend line discussion illustrated, a trend line along the lows in an uptrend or across the highs in a downtrend is a key barrier for prices to cross if the market is to change trend direction.

But trend lines aren't the only source of support and resistance. One of the favorite methods for determining support and resistance levels is to look at a bar chart and its past price history and then see at what price levels the highs, lows and closes seem to be touching the most. This method of determining support and resistance levels works on any bar chart timeframe –

hourly, daily, weekly or monthly. Many times a bunch of highs or lows will be concentrated in a small price area but not at one specific price. Instead, you have a support or resistance "zone" that should be rather narrow to be effective.

Major price tops and bottoms are also major resistance and support levels. Unfilled price gaps on charts also qualify as very good support and resistance levels. Moving averages, especially longer-term ones, can also provide support or resistance. Still another way that support and resistance levels can be identified is through geometric angles from a certain key price point, a concept most often associated with W.D. Gann, a legendary stock and commodity trader who died in 1955.

Finally, support and resistance levels can be determined by "psychological" price levels. These are usually round numbers that are very significant in a market. For example, in crude oil, a psychological price level might be $60 per barrel. For soybeans, that might be $5 or $6 per bushel or in cotton, 50 cents a pound. These levels mark clear step-up or step-down prices where the market often pauses to reassess the situation.

Many chart patterns develop as a result of price action at support and resistance areas. For example, a double bottom may form because prices find support from an earlier bottom, or a triangle may form as prices are unable to overcome short-term trend line support or resistance until a breakout eventually does occur.

One important point to note about support and resistance is that when a key support level or zone is penetrated on the downside, that level or zone will likely become key resistance. Likewise, a key resistance level or zone that is penetrated on the upside will then likely become a key support level or zone.

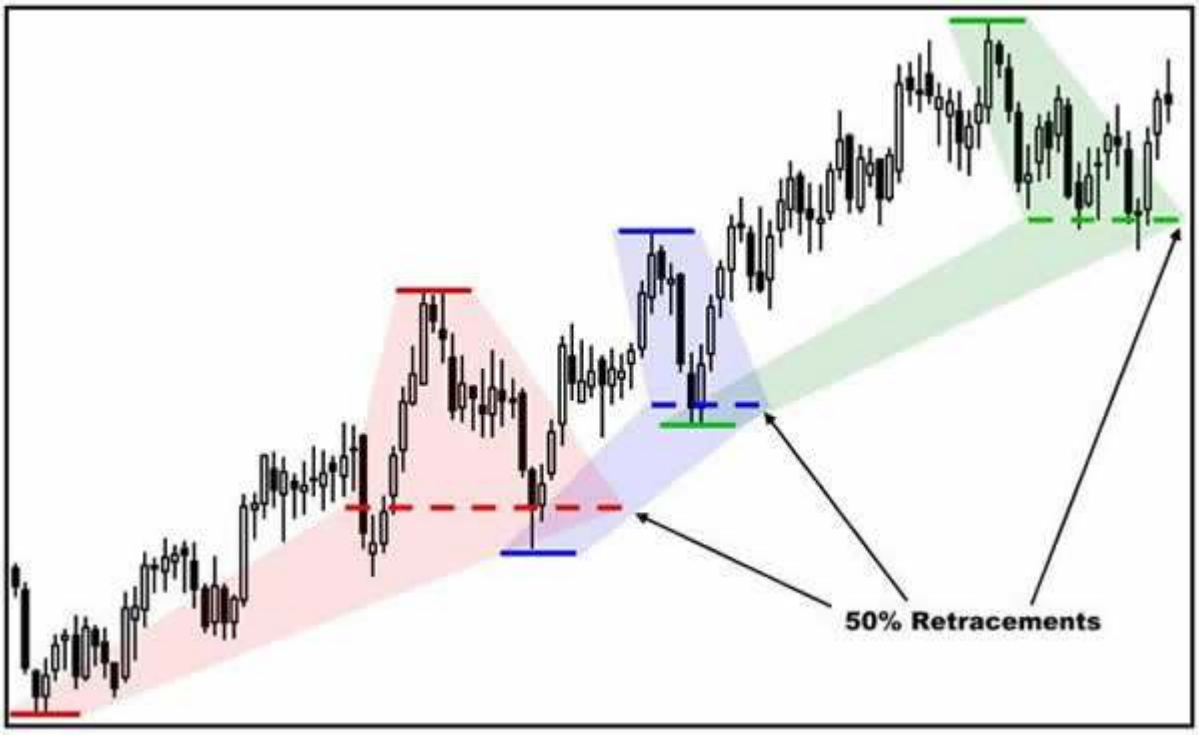
Source:* *VantagePoint Intermarket Analysis Software

Retracements - Another way to discover support or resistance areas is by looking at "retracements" of a significant price move – price moves that are counter to an existing price trend. These moves are also called "corrections." Once a market has broken through a trend line, the first thing many traders want to know is how far this new move or correction will extend.

Based on studies of past price history, a popular retracement is 50% of the previous trend. For example, let's say a market is in a solid uptrend that began at 100 and rallies to 200. Then comes the correction, a common occurrence as markets seldom make one-way moves. How far will prices back off? Analysts who rely on retracements would put a target at 150 or 50% of the move from 100 to 200 and expect prices to bounce back up and resume the uptrend after reaching or nearing that price level. A correction retracement less than 50% indicates a stronger market, a retracement of more than 50% a weaker market.

The 50% mark isn't the only popular retracement level. Some analysts use the 33% and 67% levels as support or resistance. Followers of Fibonacci numbers use 0.382% and 0.618% of a prior move as key support and resistance levels.

No matter what you use as an expected retracement target, it gains heightened validity if it coincides with some other important form of support or resistance such as a trend line, previous high or low or a gap.



Source: VantagePoint Intermarket Analysis Software

Gaps - Gaps are areas on a price chart where no trading occurs. The last bar's low is higher than the previous bar's high for a gap-higher move. The last bar's high is lower than the previous bar's low to form a gap-lower move. For example, if a market closes at 100 in one session and then opens at 105 in the next section, a 5-point gap would be evident on a chart.

With electronic trading 24 hours a day, gaps are less likely to appear as the market moves fluidly from one price to the next. However, for those markets that have only day sessions, which includes most physical commodities as well as stocks, gaps may show up because of some overnight news or development that causes a sudden shift in prices. Price gaps typicallly indicate a strong market move, and many times the gaps will then serve as important support or resistance levels on the chart.

Source: VantagePoint Intermarket Analysis Software

Gaps cannot be characterized as reversal or continuation signals as different gaps mean different things – and sometimes have little impact at all. There are three main types of gaps:

- Breakaway gap. These occur at the beginning of a move as prices reject the previous tend and suddenly reverse course or at the breakout point of a chart formation such as a trend line or a triangle. The breakaway may be due to new conditions that have become known to traders or because pent-up buying or selling erupts in a strong move.
- Measuring gap. As the market moves up or down, it may suddenly leave a gap higher or lower on some new development. Some analysts view such gaps as the halfway point to an ultimate price objective. It obviously is impossible to know that

for sure until a move is complete so these gaps are a little tricky to use in analysis. However, you may be able to combine a gap projection with a well-defined support or resistance area such as a previous high or low to arrive at a potential price target.

- Exhaustion gap. This gap appears at the end of an extended move and reflects a last burst of buying in an uptrend or selling in a downtrend. Once this exuberant buying or selling has occurred, there are no new buyers or sellers to maintain the trend – the force that was driving the trend has been exhausted. As a result, the turn in the trend can produce some dramatic moves in the opposite direction as the late buyers or sellers scramble to unload their losing positions. This is the type of situation that sometimes produces island tops or island bottoms on a price chart. One day or several days of price action may be isolated by an exhaustion gap and then a breakaway gap during the market's sudden turnabout.

Source: VantagePoint Intermarket Analysis Software

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