KNOWLEDGE BASE – TECHNICAL ANALYSIS – TYPES OF CHARTS

Technical analysis refers to the study of past price action as a guide in forecasting future price movements. This involves looking at candlestick formations, chart patterns, and indicators.

The Dow Theory, which is based on the collective writings of Charles Dow, is used as the framework for modern technical analysis. Other techniques, such as those introduced by Ralph Nelson Elliott and William Delbert Gann, also comprise the commonly used

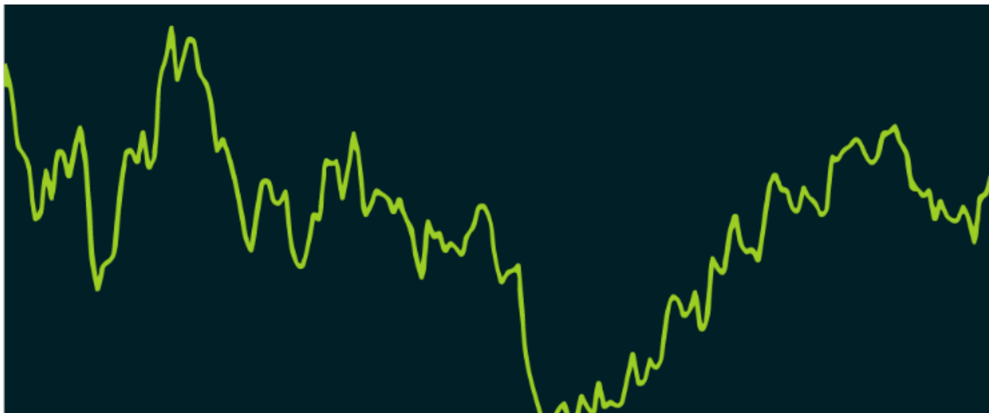
techniques in technical analysis of financial markets.

The underlying concept behind these ideas is that all market information is reflected in the asset price and that history tends to repeat itself. In other words, forex market factors such as economic data and risk sentiment are already incorporated in the exchange rate and that historical price patterns have a high probability of occurring again and again.

Types of charts

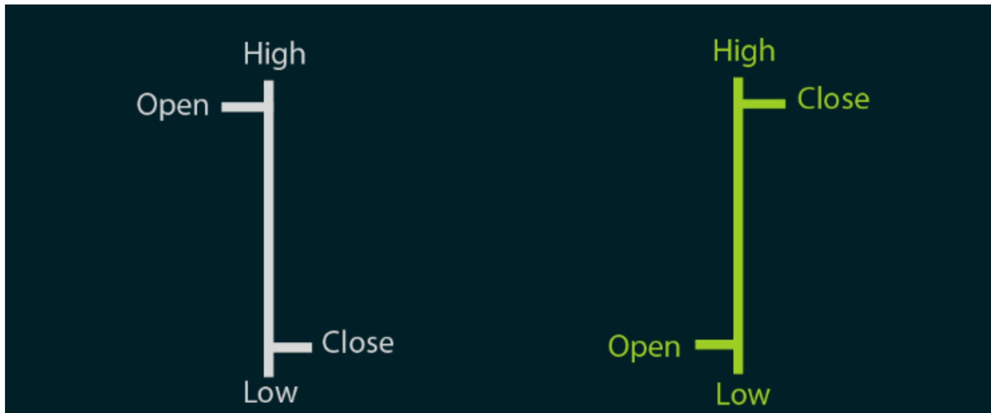
One of the most basic foundations of technical analysis is watching price charts. There are three popular types of charts used by forex traders and these are line charts, bar or open-high-low-close charts, and candlestick charts.

The line chart is the simplest among the three, with a price line connecting one closing price to the next. This allows the trader to gauge the general direction of price action, whether the exchange rate is trending higher or lower.

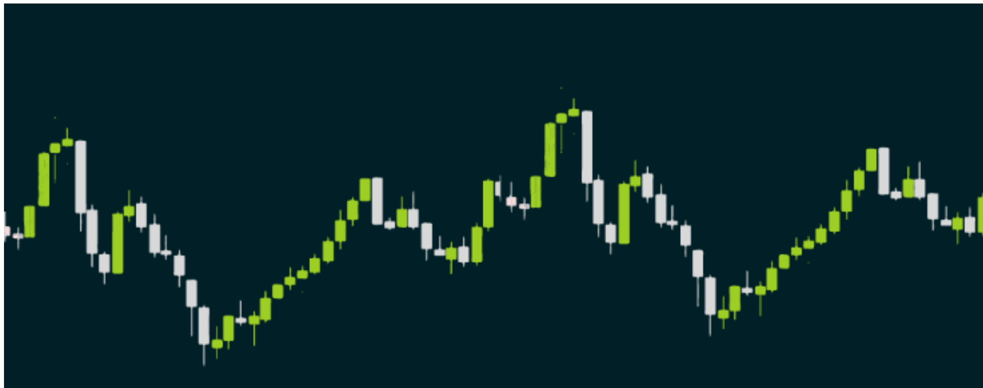


The **bar chart**, which is also called the **OHLC** (open, high, low, close) chart, is a little more complex. Eac h bar notates the open, high, low, and close of the price depending on the time frame used.

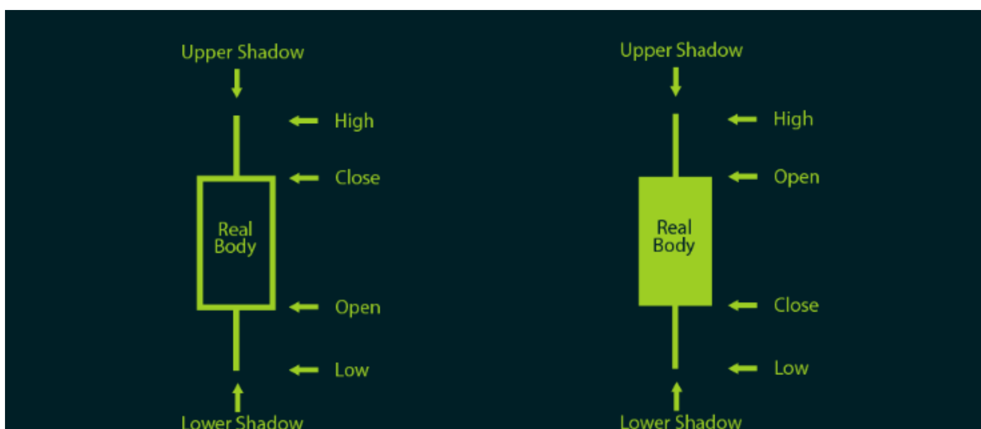
Zooming in to each bar, the horizontal line to the left marks the open price for the period while the horizontal line to the right marks the closing price. The highest point of each bar stands for the high for the period while the lowest point is for the low.



Lastly, the Candlestick chart is the most commonly used by forex traders. Similar to the OHLC chart, candlesticks also indicate the open, high, low, and close of price action during the period.



What sets candlestick charts apart is that the bars have a coloured body, which makes it easier to visualize whether price went up or down during the period. When price closed higher than its open price for the period, the candlestick is coloured white or green. When price closed lower than its open price for the period, the candlestick is coloured black or red. This way, forex traders can get a clearer idea of whether buying or selling pressure is building up.



Japanese Candlestick Basics

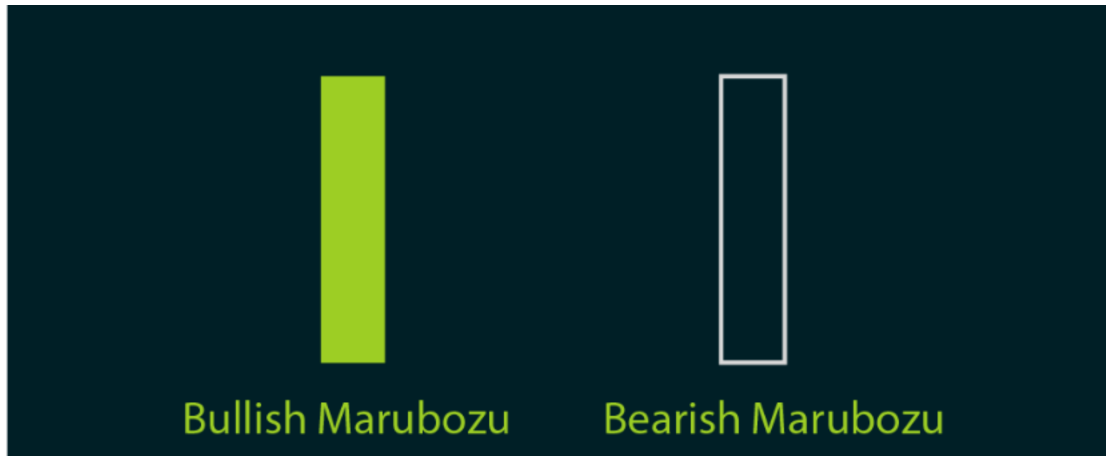
Candlestick charting originated around the 17th century among Japanese rice traders. Munehisa Homma developed this methodology to monitor daily changes in the prices of rice in order to help him make better decisions when it comes to buying or selling the commodity. These methods were eventually compiled and improved on by the more popularly known proponent of candlestick patterns, Steve Nison, who published his book entitled Japanese Candlestick Charting Techniques in the early 90s. As discussed in the previous section, one of the best features of using candlestick charts to watch forex price action is that it provides a snapshot of buying and selling pressure. A quick glance at a Japanese candlestick chart could easily show whether bulls or bears are in control, allowing one to determine whether a reversal or continuation of the trend is more likely to happen.

Aside from that, the open and close of price action for longer-term charts such as the daily and weekly time frames tend to act as support or resistance for intraday price action. These open and close levels are marked by Japanese candlestick patterns and the highs and lows could act as gauges for when breakouts are taking place. In addition, the length of the candlesticks is also indicative of market behaviour. Long green candles mean that buyers are very aggressive in pushing the pair higher while long red candles suggest that sellers have found a catalyst to keep shorting the currency pair. Short candles reflect indecision or could be early signals for a market reversal.

Shadows or candlestick wicks representing the highs and lows also provide helpful clues on future price behaviour. A candlestick with a long upper wick and a short lower wick means that buyers bid prices higher but that sellers refused to back down. Conversely, a candlestick with a long lower wick and a short upper wick suggests that sellers tried to pile up their short positions but that buyers are similarly aggressive. Candlestick patterns come in various sizes and numbers. There are single candlestick patterns, useful in both long-term and intraday trading. A single candlestick pattern can be indicative of a continuation or a potential reversal, pending confirmation from the succeeding candlestick or from technical indicators. Double candlestick patterns are also classified as common signals of reversal or continuation, as the first candlestick is considered the signal bar while the second one is called the confirmation bar. Group candlestick patterns, which are typically comprised of three candlesticks, comprise more complex formations. This can be tedious to remember but are very helpful particularly for longer-term price movements. These are also rarer compared to their single counterparts, but they are usually much more reliable signals. However, these can be frustrating to trade at times since patterns seem evident for the first two bars only to lack confirmation from the third or last candlestick. Of course, trading based solely on candlestick patterns has its drawbacks, as this method mostly relies on technical signals and doesn’t incorporate

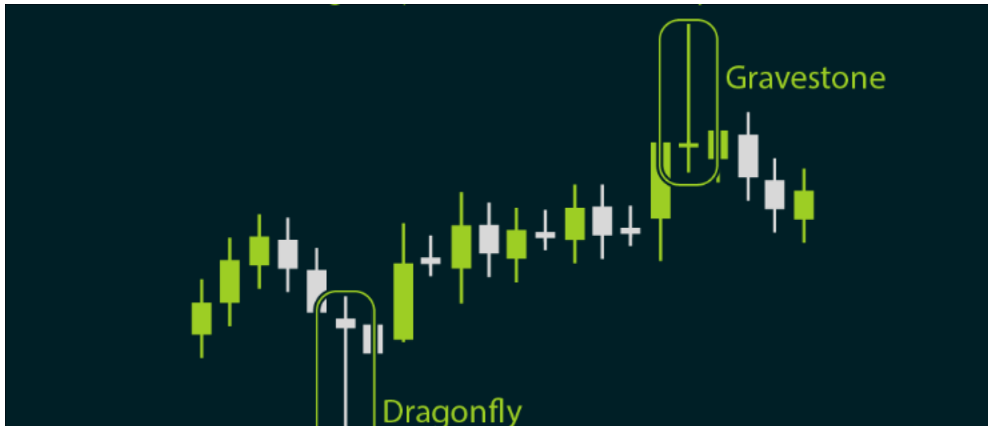
economic analysis. Despite that, knowing how to read candlesticks is a useful tool when it comes to understanding market behaviour and improving profitability in trading.

Common Candlestick Formations



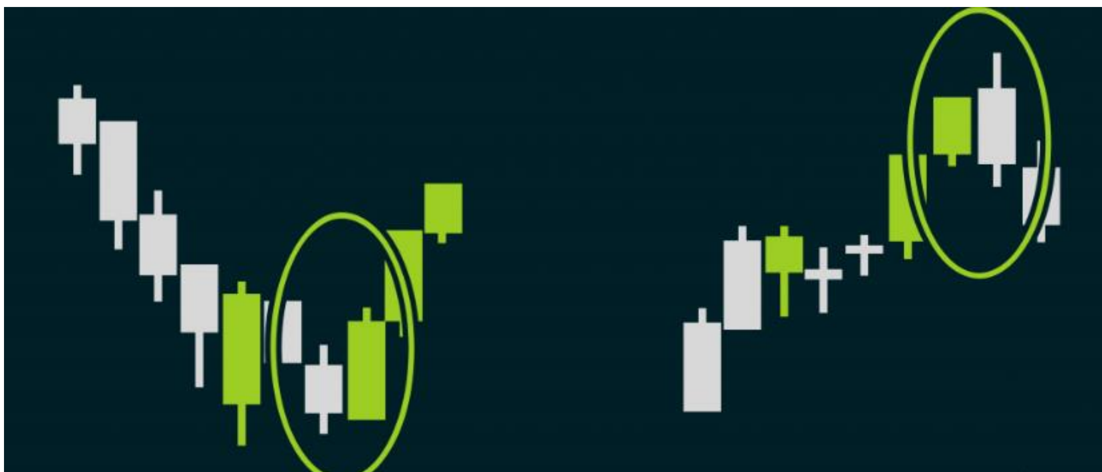
Single candlestick patterns are perhaps one of the most straightforward ways of reading price action and interpreting market psychology. Candlesticks with long bodies and short wicks signify strong buying or selling momentum that is likely to carry on until a reversal candlestick is formed. Meanwhile, candlesticks with long wicks and short bodies can either reflect indecision or a battle between buyers and sellers. The most well-known single long candlestick pattern is the marubozu, which means bald in Japanese. Strictly speaking, a marubozu is either a long green or red candle with no wick at all. However, a long candlestick with very small upper or lower wicks can still fall under this category. A bullish marubozu is a long green or white candle, which has an open price equal to the low of the period and a close price equal to the high of the period. A bearish marubozu is a long red or black candle, with the open price equal to the high of the period and a close price equal to the low.

When a bullish marubozu is formed on a daily chart, this means that buying has occurred throughout the day and is likely to carry on the next day. Conversely, a bearish marubozu on a daily chart indicates that sellers were in control of price action the entire trading day and are likely to push the pair lower for the next day. Another common single candlestick pattern is the doji. This is easily recognized as a candle with long upper and/or lower wicks with practically no body. In Japanese, doji translates to a mistake, which means that plenty of action took place during the period, but that price eventually closed right where it opened. There are several varieties of doji candlesticks, and these are usually associated with reversals. For instance, a dragonfly doji, which is formed when the open, high, low and close of price action for the period are all equal, acts as a bullish signal when it forms at the bottom of a downtrend. A gravestone doji, on the other hand, is formed when the open, close, and low for the period are all equal and it can serve as a bearish signal when it occurs at the top of an uptrend.



In addition to the dragonfly and gravestone dojis, the long-legged doji can also be used to signify potential market reversal. However, this usually requires confirmation from the next candlestick. Spinning tops are also treated as signals for price action reversal, although their reliability is said to be lower compared to that of doji candlesticks. Spinning tops have a small body with long wicks on both ends.

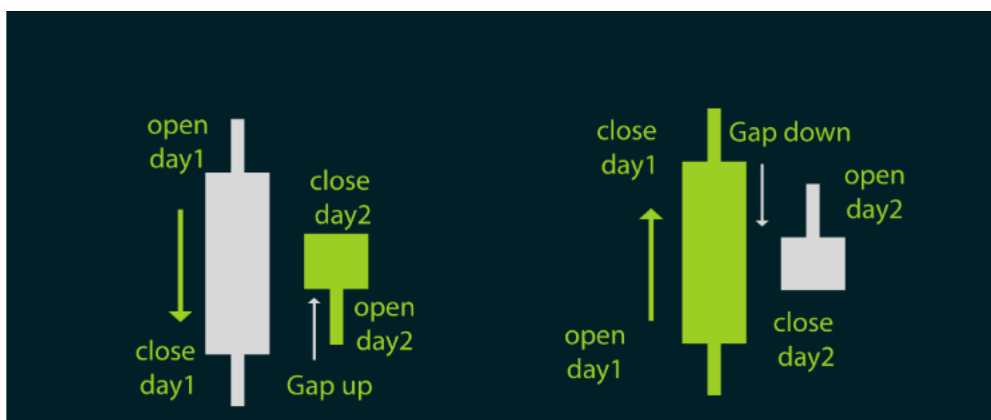
Double Candlestick Patterns



Memorizing double candlestick patterns can be a bit more challenging, but the trading results can be very rewarding. As with the single Japanese candlestick patterns, these come in bullish and bearish versions.

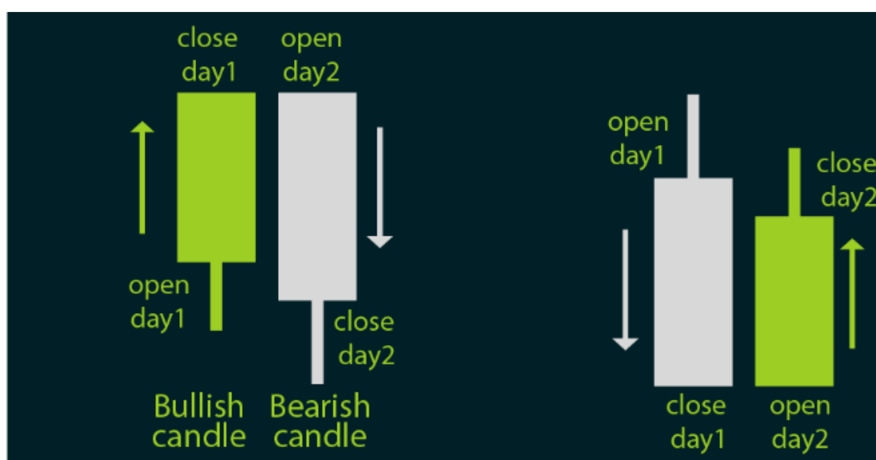
The most basic type of dual candlestick formation is the bullish or bearish engulfing pattern. Simply put, the engulfing pattern occurs at the end of a market trend, with the first or setup candle showing signs of exhaustion and the confirmation candle indicating a complete takeover or reversal.

In other words, the confirmation or second candle's high is higher than that of the setup candle and its low is lower as well. Another kind of dual candlestick formation is the harami. In Japanese, this translates to "pregnant", which is an easy way of remembering how the pattern looks like. It can be considered a reverse of the engulfing pattern, as the confirmation candle has a lower high and a higher low compared to the first candle.



This pattern is also known as an inside day formation. A variation of this pattern is known as the harami cross, wherein the second candle is a doji that is inside the first candle. This also has a bullish and bearish version, both of which indicate a potential price reversal.

Next up are the tweezer tops and bottoms. This kind of double candlestick pattern also occurs on top of an uptrend or at the bottom of a downtrend, signaling a possible price reversal. The name of the formation is given because of the double highs of tweezer tops or double lows of tweezer bottoms which should be of equal length.

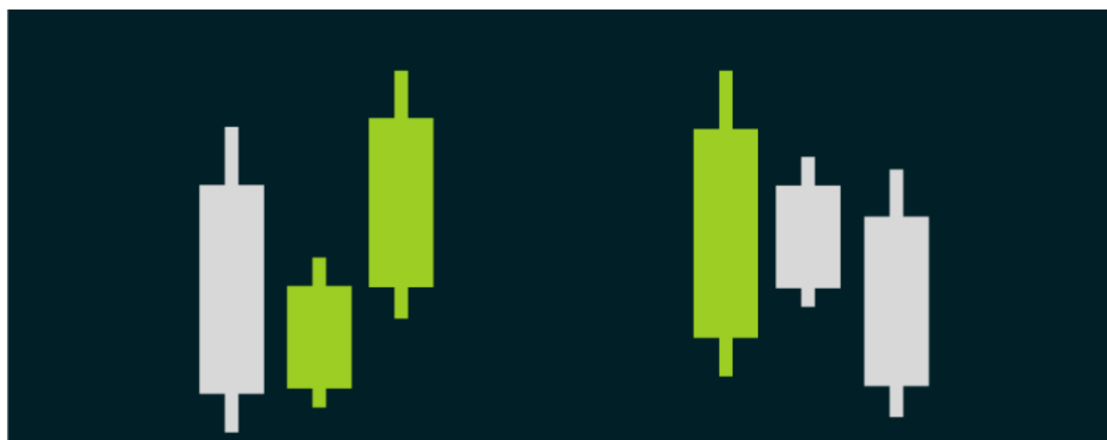


Furthermore, the first candle of the tweezer top or bottom should be in the direction of the previous trend. In other words, a tweezer top should have a bullish first candle while a tweezer bottom should have a bearish first candle. Then the second candle should be the opposite of the previous trend, which means that a tweezer top should have a bearish second candle while a tweezer bottom should have a bullish second candle.

One of the rarer double candlestick patterns are the hammer and inverted hammer, both of which also hint at possible reversals. The hammer has a small body with a long lower wick and no upper wick while the inverted hammer has a small body with a long upper wick and no lower wick.

The bearish hammer is also known as a hanging man while the bearish inverted hammer can also be called a shooting star. For these dual candlestick patterns, the first or signal candlestick is a long candle followed by a gap down before the second or setup candle.

Group Candlestick Patterns



Group candlestick patterns are more creative but take time to form. Generally, these are believed to be more effective signals when they occur on the longer-term time frames.

First is the three-inside-up or three-inside-down pattern, which is basically indicative of a possible reversal. It can be considered a harami double candlestick pattern plus an additional confirmation candle.

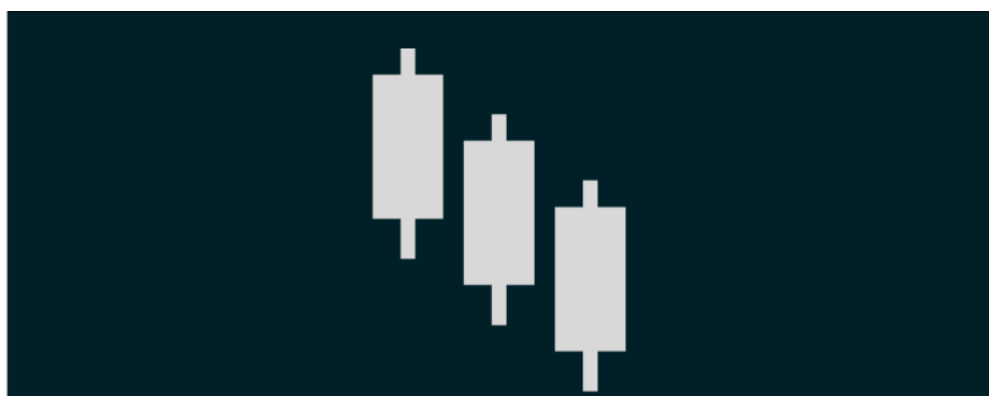
The first candle is a long one in the direction of the previous trend, with the second candle as an inside day pattern. The third or confirmation candle is another long one in the direction of the reversal trend, closing higher than the first candle for a bullish signal or lower than the first candle for a bearish signal.

Next is the three-outside-up or three-outside-down pattern, which basically looks just as it sounds. This can also be considered an engulfing double candlestick pattern with an additional confirmation candle.

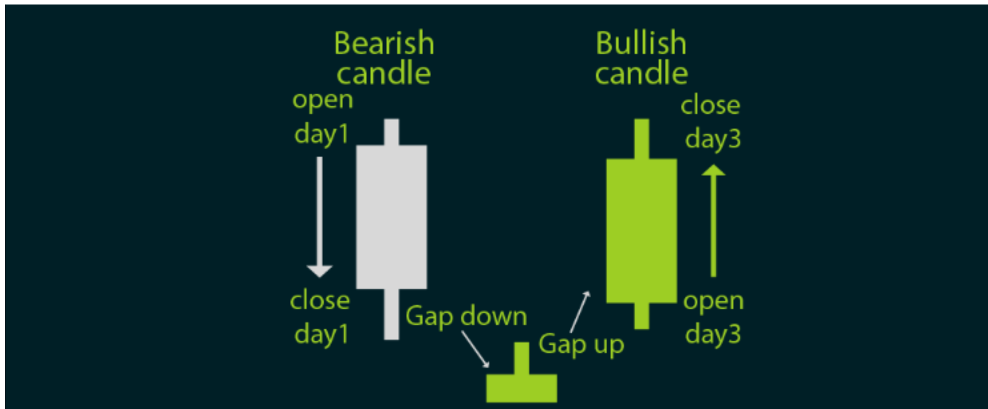
The difference is that the first candle is a short one in the opposite direction of the previous trend. The second candle should engulf the first one and should be in the direction of the reversal. The third or confirmation candle should also be in the direction of the new trend and must close higher than the second candle for a bullish signal or close lower than the second candle for a bearish signal.

Another interesting and reliable triple candlestick formation is the three white soldiers. This is a bullish signal simply comprised of three long white or green candles, hinting at further gains for the forex pair.

The bearish counterpart of the three white soldiers is the three black crows. This is comprised of three long black or red candlesticks, indicating that a deeper selloff is in the cards for the pair.

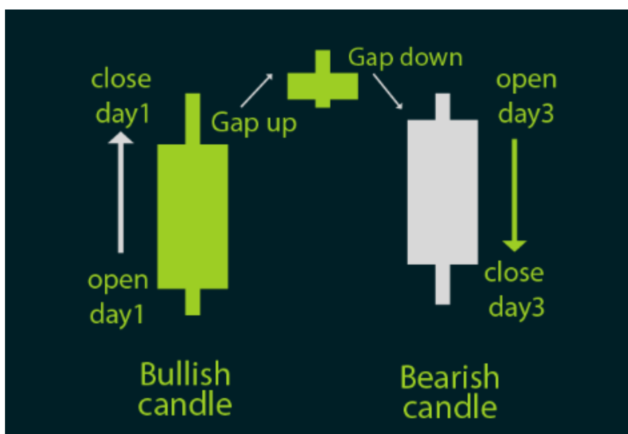


The morning star, which is a bullish signal, occurs at the end of a downtrend and signals the start of an uptrend. The first candle is a bearish one while the second candle gaps down for the open but closes higher. The third candle is a bullish one, covering most of the first candle's body.



The second candle could also be a doji, which would make the pattern a bullish doji star formation.

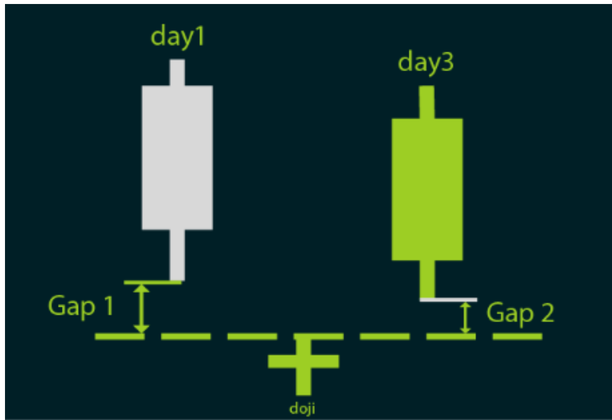
The evening star, which is the bearish counterpart of the morning star, occurs at the end of an uptrend and signals a potential downtrend. The first candle is a bullish one while the second candle gaps higher for the open then closes lower. The third candle is a bearish one, covering most of the first candle's body.



As with the morning star formation, the second candle can also be a doji, making tis a bearish doji star pattern.

A triple candlestick pattern similar to the morning and evening star patterns is the abandoned baby. This is also suggestive of a price reversal.

A bullish abandoned baby pattern has a first candle that is bearish, followed by a gap down and a doji for the next candle. This is then succeeded by a bullish candle gapping higher and closing inside the first candle.



Conversely, a bearish abandoned baby pattern has a first candle that is bullish, followed by a gap higher and a doji for the second candle. This is then followed by a bearish candle gapping lower and closing inside the first candle.