



# Technical Analysis

# Introduction

- Technical analysis is the attempt to forecast stock prices on the basis of market-derived data.
- Technicians (also known as quantitative analysts or chartists) usually look at price, volume and psychological indicators over time.
- They are looking for trends and patterns in the data that indicate future price movements.

# Chart Type

## ➤ Charting Stocks

- Bar Charts and Japanese Candlestick Charts
- Point and Figure Charts
- Line Chart

## ➤ Major Chart Patterns

## ➤ Price-based Indicators

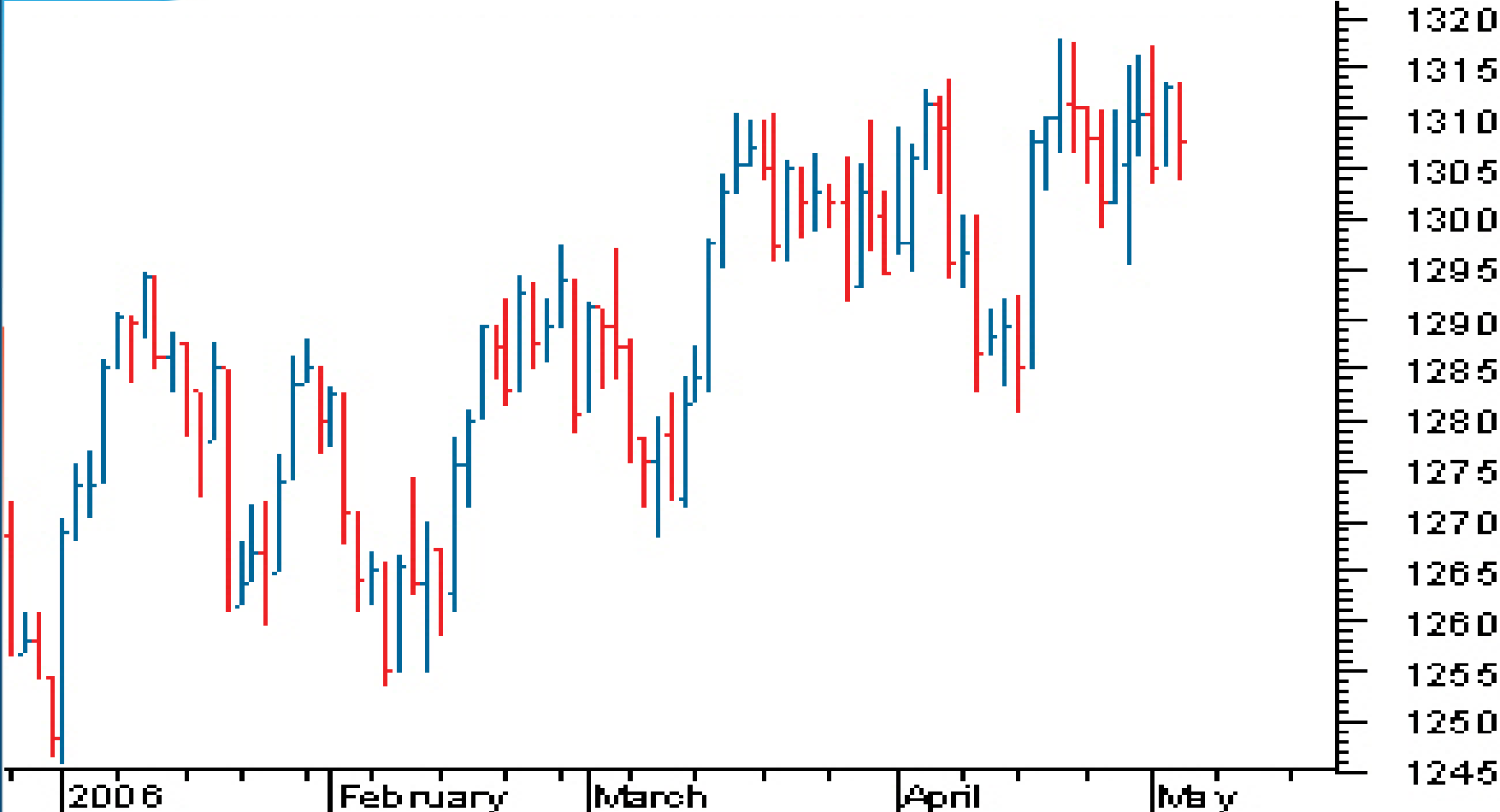
# Basic Technical Tools

- Trend Lines
- Candle stick
- Moving Averages
- Price Patterns
- Indicators

# Bar Chart

- The chart is made up of a series of **vertical lines** that represent each data point. This vertical line represents the high and low for the trading period, along with the closing price. The close and open are represented on the vertical line by a horizontal dash.
- The opening price on a bar chart is illustrated by the dash that is located on the left side of the vertical bar. Conversely, the close is represented by the dash on the right. Generally, if the left dash (open) is lower than the right dash (close) then the bar will be shaded GREEN, representing an up period for the stock, which means it has gained value.
- A bar that is colored red signals that the stock has gone down in value over that period. When this is the case, the dash on the right (close) is lower than the dash on the left (open).

# Bar Chart

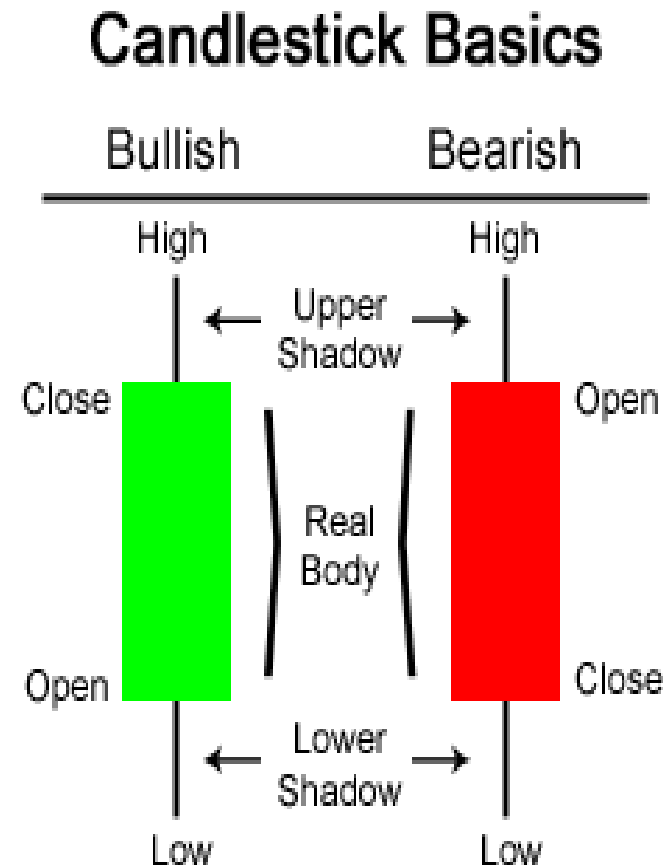


# Candlestick Basics

Candlestick charts are an effective way of visualizing price movements.

There are two basic candlesticks:

- **Bullish Candle:** When the close is higher than the open (usually green or white)
- **Bearish Candle:** When the close is lower than the open (usually red or black)



# Candlestick Parts

- There are three main parts to a candlestick:
  - **Upper Shadow:** The vertical line between the high of the day and the close (bullish candle) or open (bearish candle).
  - **Real Body:** The difference between the open and close; colored portion of the candlestick.
  - **Lower Shadow:** The vertical line between the low of the day and the open (bullish candle) or close (bearish candle).



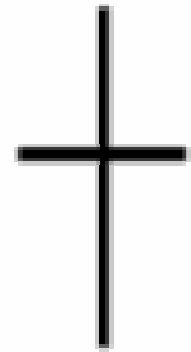
# Candlestick Patterns

➤ Candlestick Charts is with multiple candlesticks forming reversal and continuation patterns.

- Bullish Engulfing Pattern
- Bearish Engulfing Pattern
- Dark Cloud Cover
- Doji
- Dragonfly Doji
- Gravestone Doji
- Evening Star
- Morning Star
- Hammer
- Hanging Man
- Harami
- Inverted Hammer
- Piercing Line Pattern
- Shooting Star

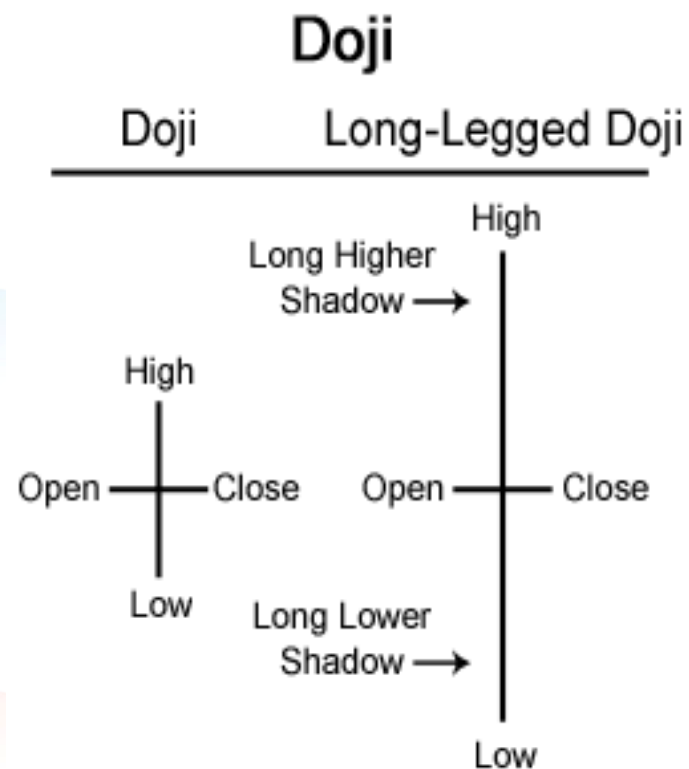
# Doji

- The open and close are very close together, creating a very small body
- It represent indecision between the bulls and the bears.



# Long-Legged Doji

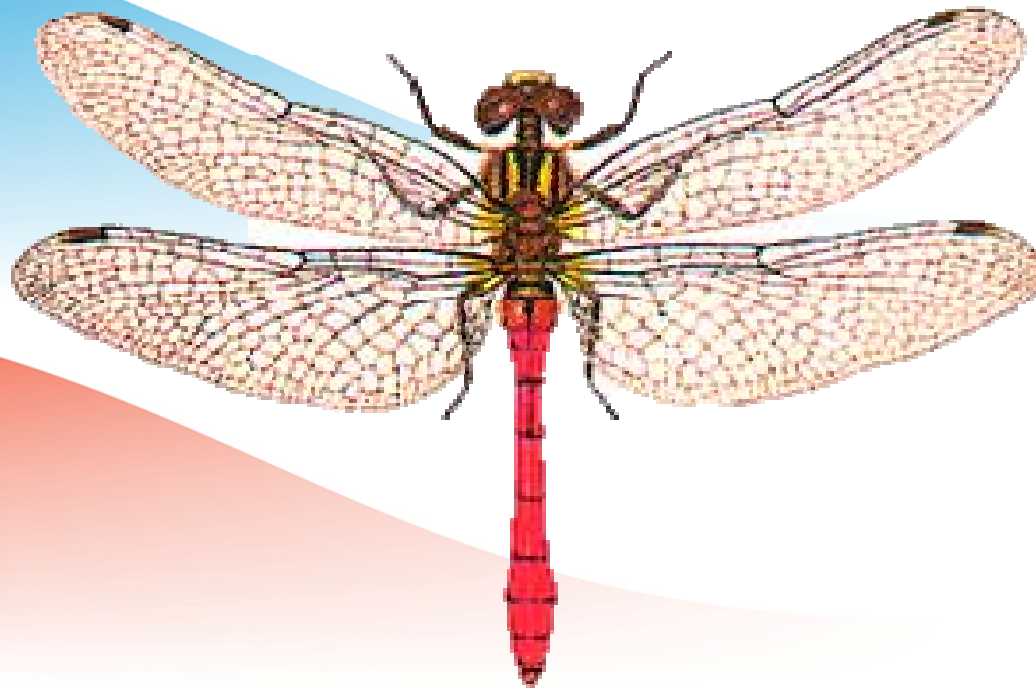
- A long-legged Doji is the same as Doji, except the upper and lower shadows are much longer than the regular Doji formation.



# Example of Long-Legged Doji



# Dragonfly Doji

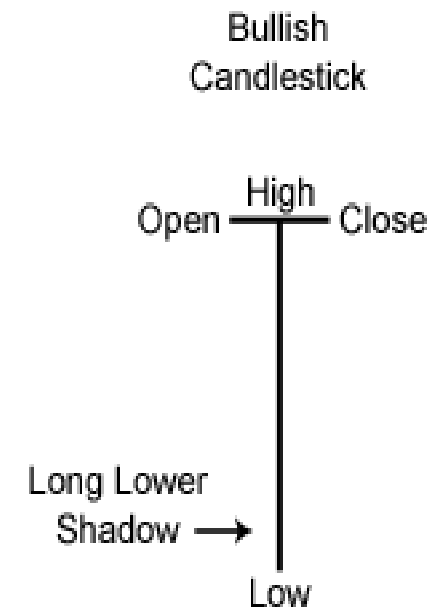


# Dragonfly Doji

- The Dragonfly Doji is a significant bullish reversal candlestick pattern that mainly occurs at the bottom of downtrends.
- The most important part of the Dragonfly Doji is the long lower shadow.

## Dragonfly Doji

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# Example of Dragonfly Doji

2-Reliance Comm. Ltd. - 29/05/15

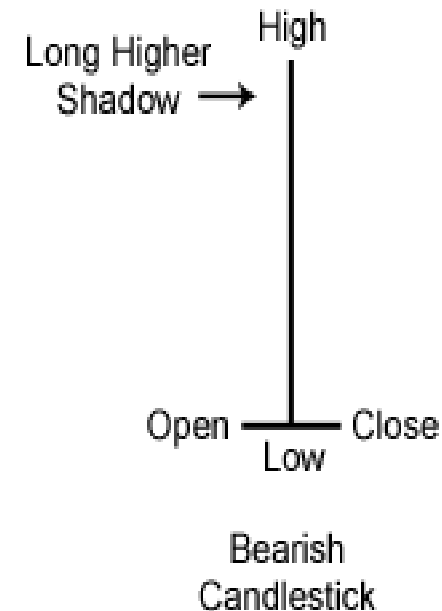


# Gravestone Doji

- The Gravestone Doji is a significant bearish reversal candlestick pattern that mainly occur at the top of uptrends.
- The most important thing about the Gravestone Doji is its long upper shadow.

## Gravestone Doji

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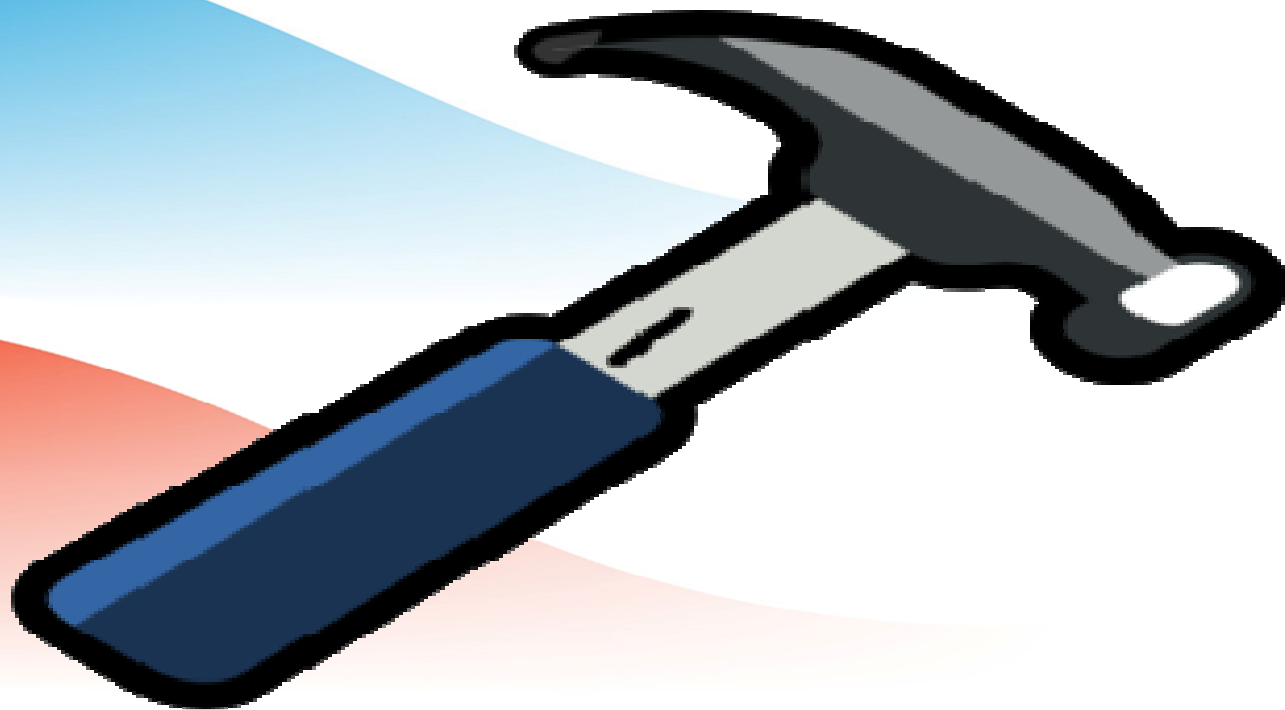


# Example of Gravestone Doji



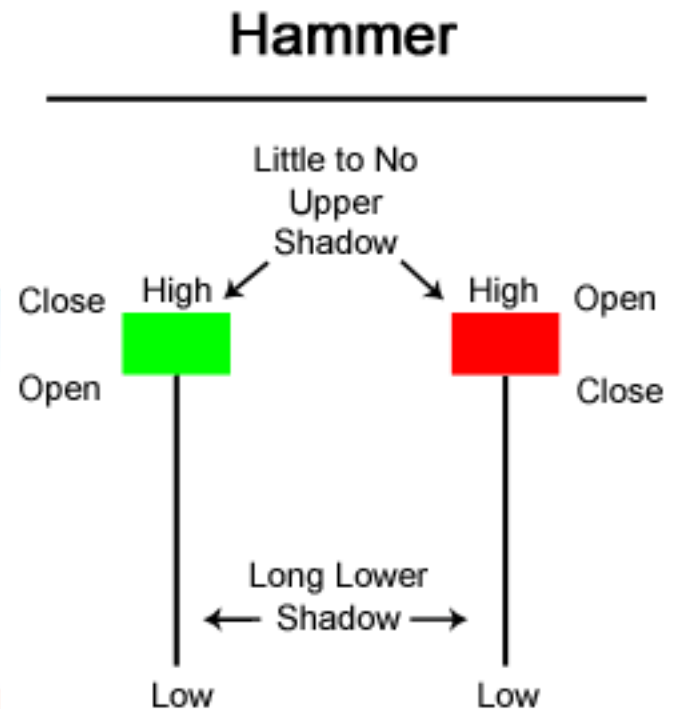


# Hammer



# Hammer

- The Hammer candlestick formation is a significant bullish reversal candlestick pattern that mainly occur at the bottom of downtrends.
- It has a long lower shadow twice the length of the upper body.



# Classic Example of Hammer

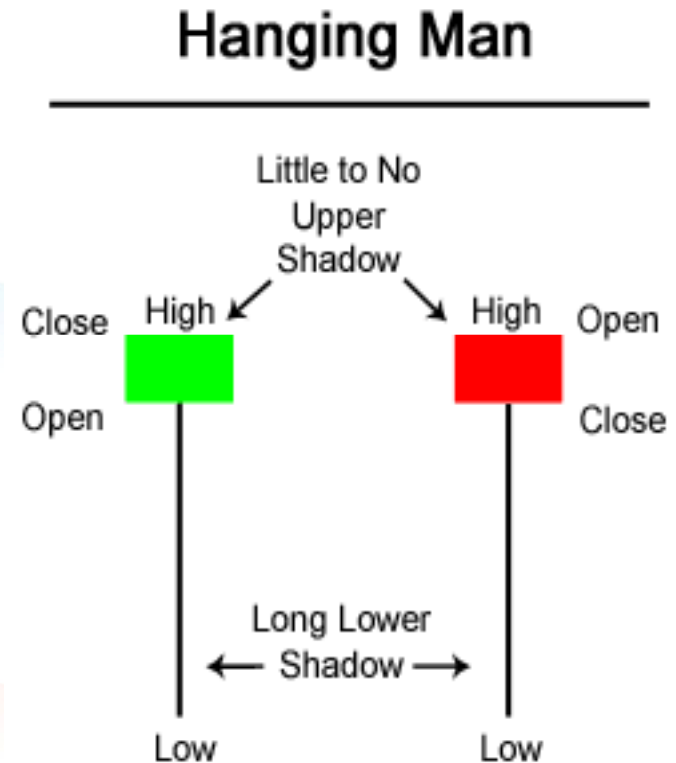


# Hanging Man



# Hanging Man

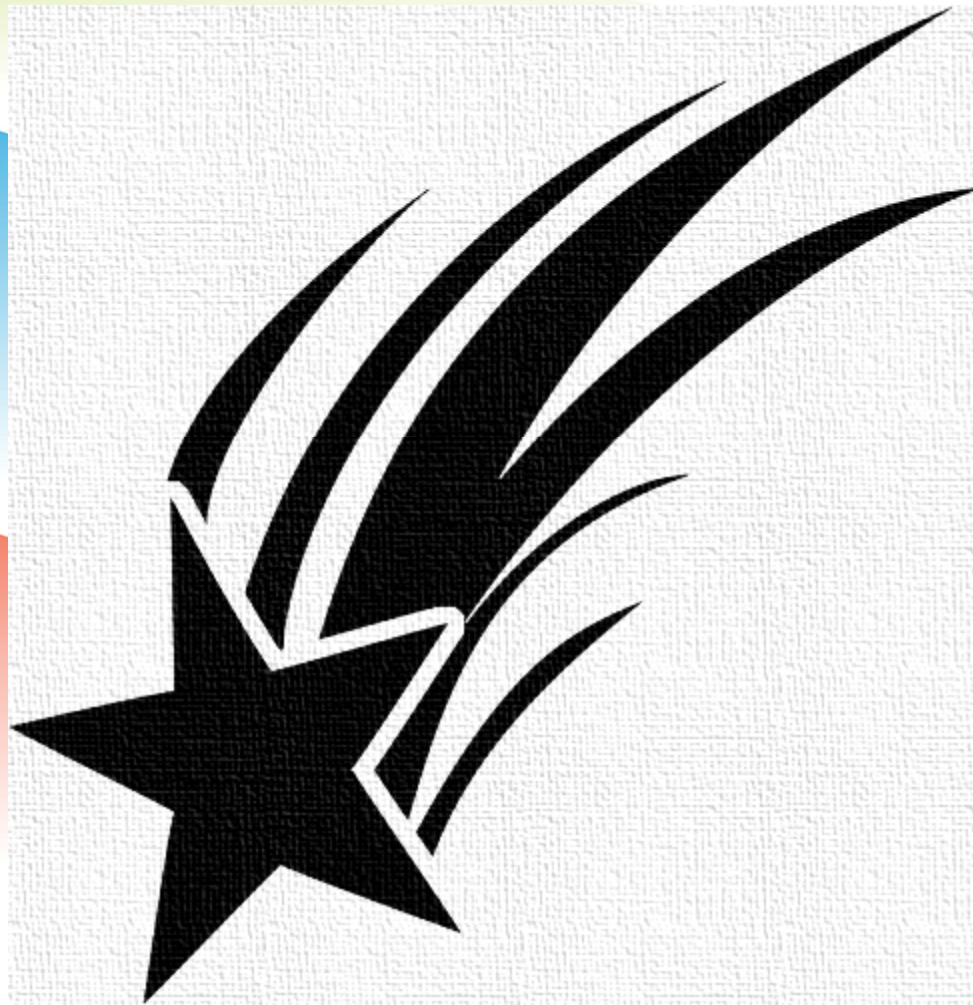
- The Hanging Man candlestick formation is a bearish sign. This pattern occurs mainly at the top of uptrends and is a warning of a potential reversal downward.
- There is a long lower shadow, which should be at least twice the length of the real body.



# Classic Example of Hanging Man



# Shooting Star

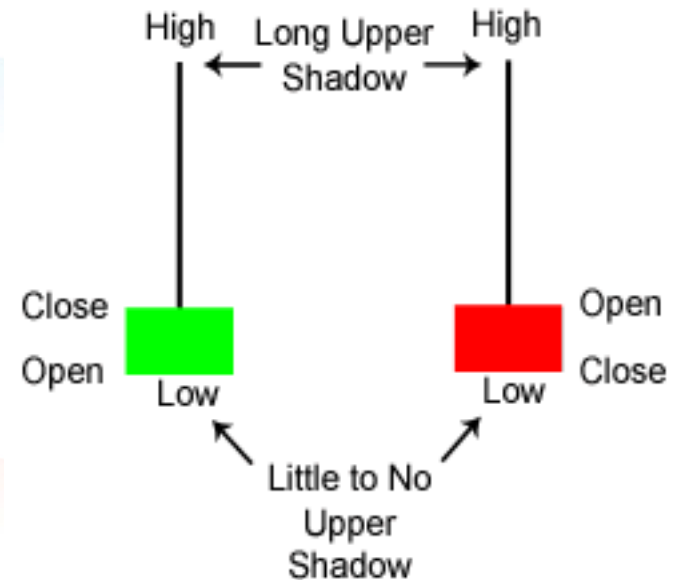




# Shooting Star

- The Shooting Star candlestick formation is a significant bearish reversal candlestick pattern that mainly occur at the top of uptrends.
- There is a long upper shadow, generally defined as at least twice the length of the real body.

## Shooting Star



# Classic Example of Shooting Star

ADANI PORTS [N15083] 333.10, 334.70, 326.65, 329.90, 542171 -0.93%

Price



Source : www.SpiderSoftwareIndia.Com

Vol

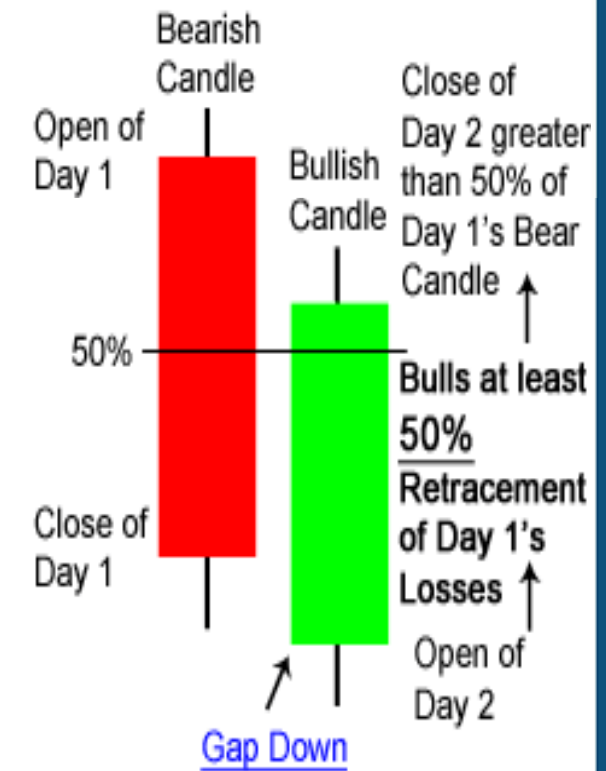
Lk

Dly

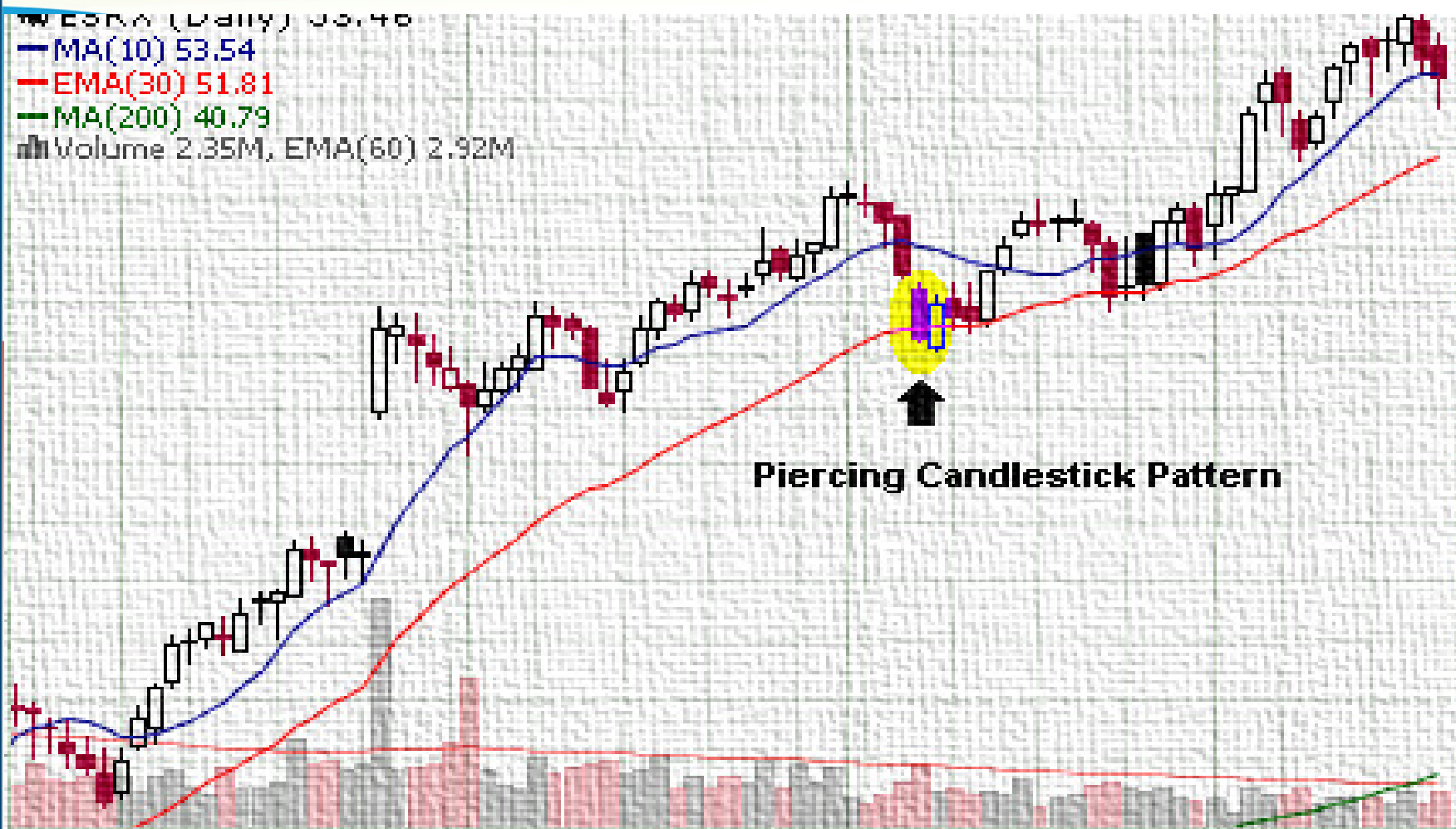
# Piercing Pattern

- The Piercing Pattern is a bullish candlestick reversal pattern, There are two components of a Piercing Pattern formation:
  - Bearish Candle(day 1)
  - Bullish Candle (day 2)
- Piercing pattern will often end a minor downtrend.
- Green candle will close above the midpoint and opening of the bearish candle ,i.e. more than halfway up the Red candle.

## Piercing Pattern

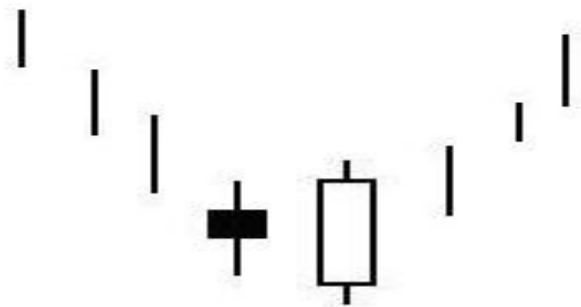


# Piercing Pattern

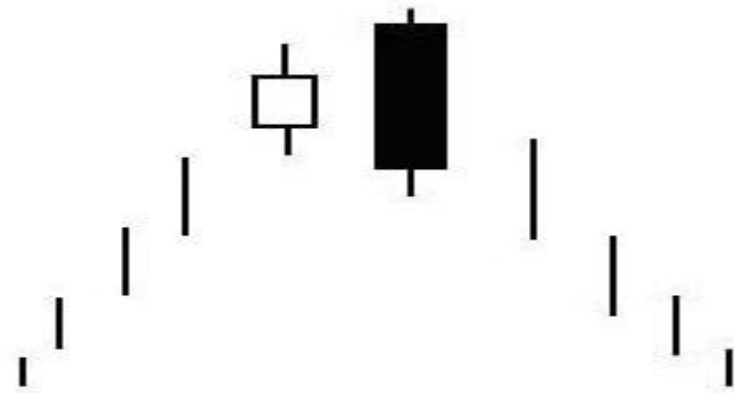


# Engulfing Patterns

- Engulfing patterns have one bearish and one bullish candle.
- The second candle must fully cover the first candle.
- Bullish or bearish, according to the second candle.



**Bullish Engulfing**

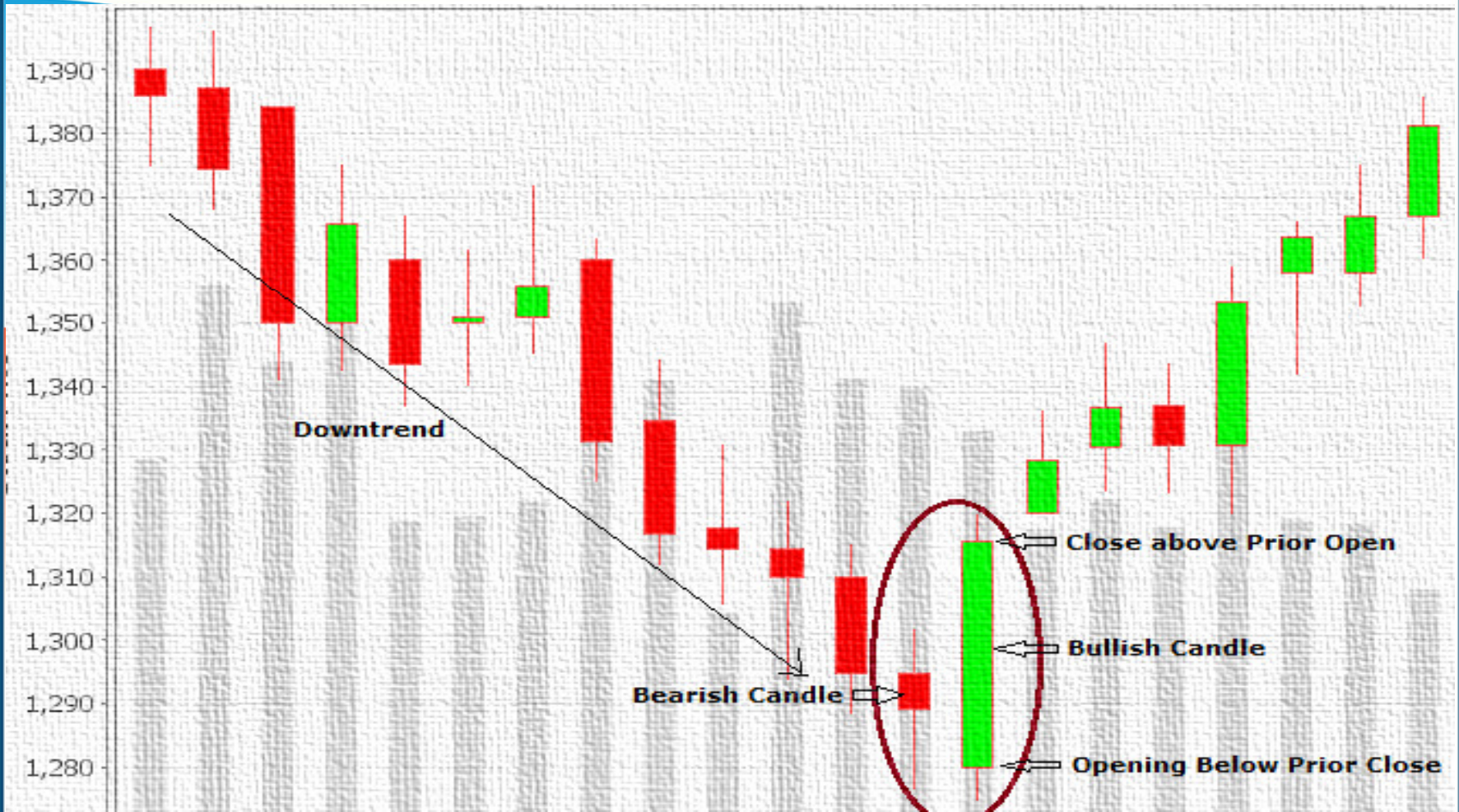


**Bearish Engulfing**

# Bearish Engulfing Patterns



# Bullish Engulfing Patterns



# Morning Star



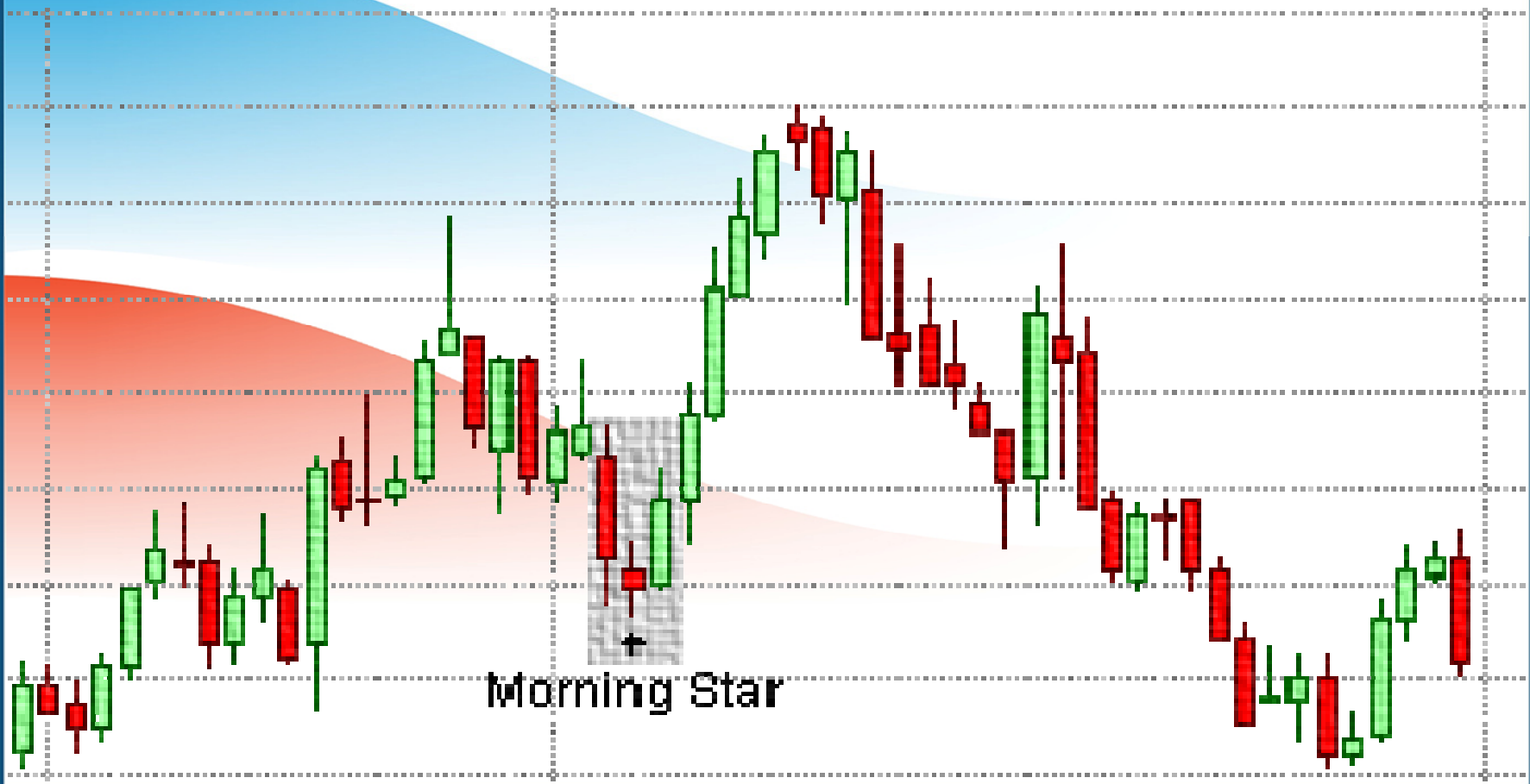


# Morning Star

- It is a bullish candlestick pattern that consist of three candles.
- The first candle is a large bearish candle located within a defined downtrend.
- The second candle is a small bodied candle (bullish or bearish) that closes below the first red bar.
- The last candle is a large bullish candle that open above the middle candle and close near the middle of the first candle.



# Classic Example of Morning Star

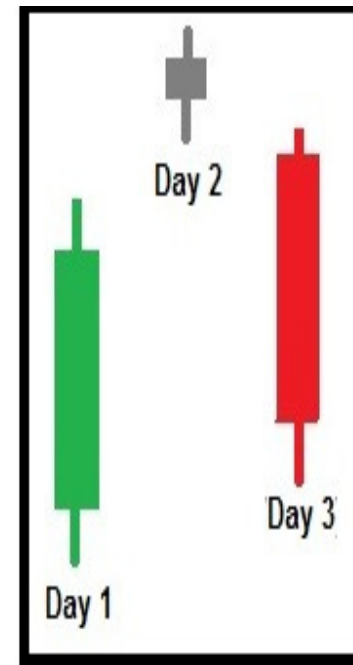


# Evening Star

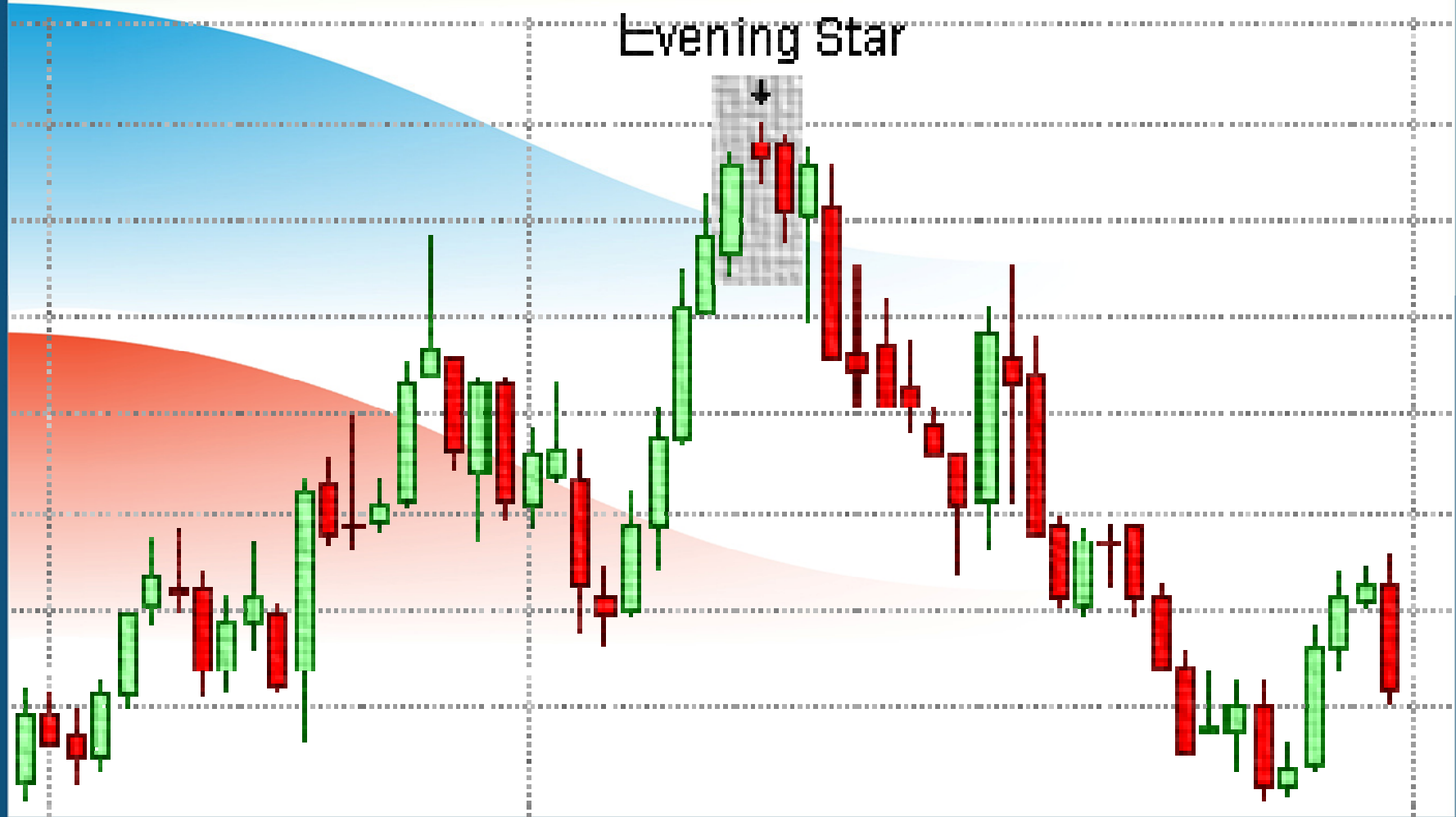


# Evening Star

- An evening star is a bearish candlestick pattern consisting of three candles.
- The first candle is a large white bullish candlestick located with an uptrend.
- The middle one is a small bodied candle (bullish or bearish) that close above the first candle.
- The last candle is a large bearish candle that open below the second candle and closes near the first candle's center.

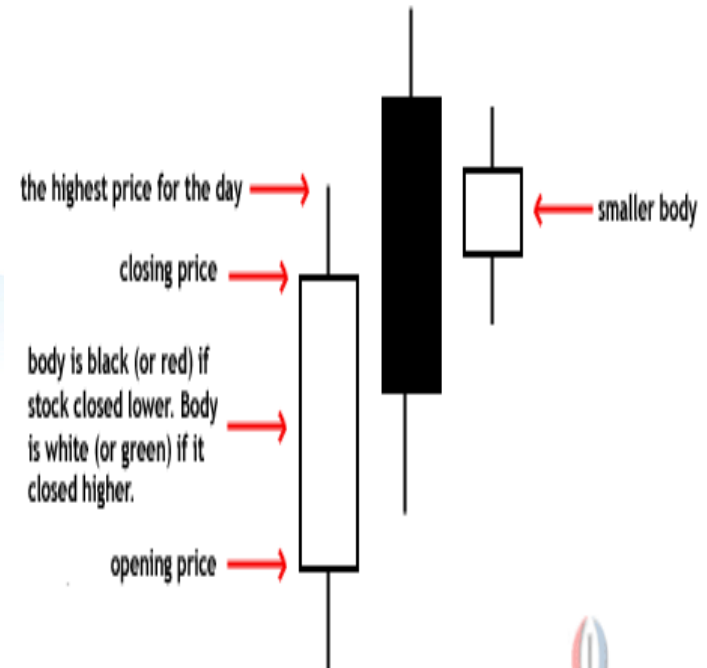


# Classic Example of Evening Star

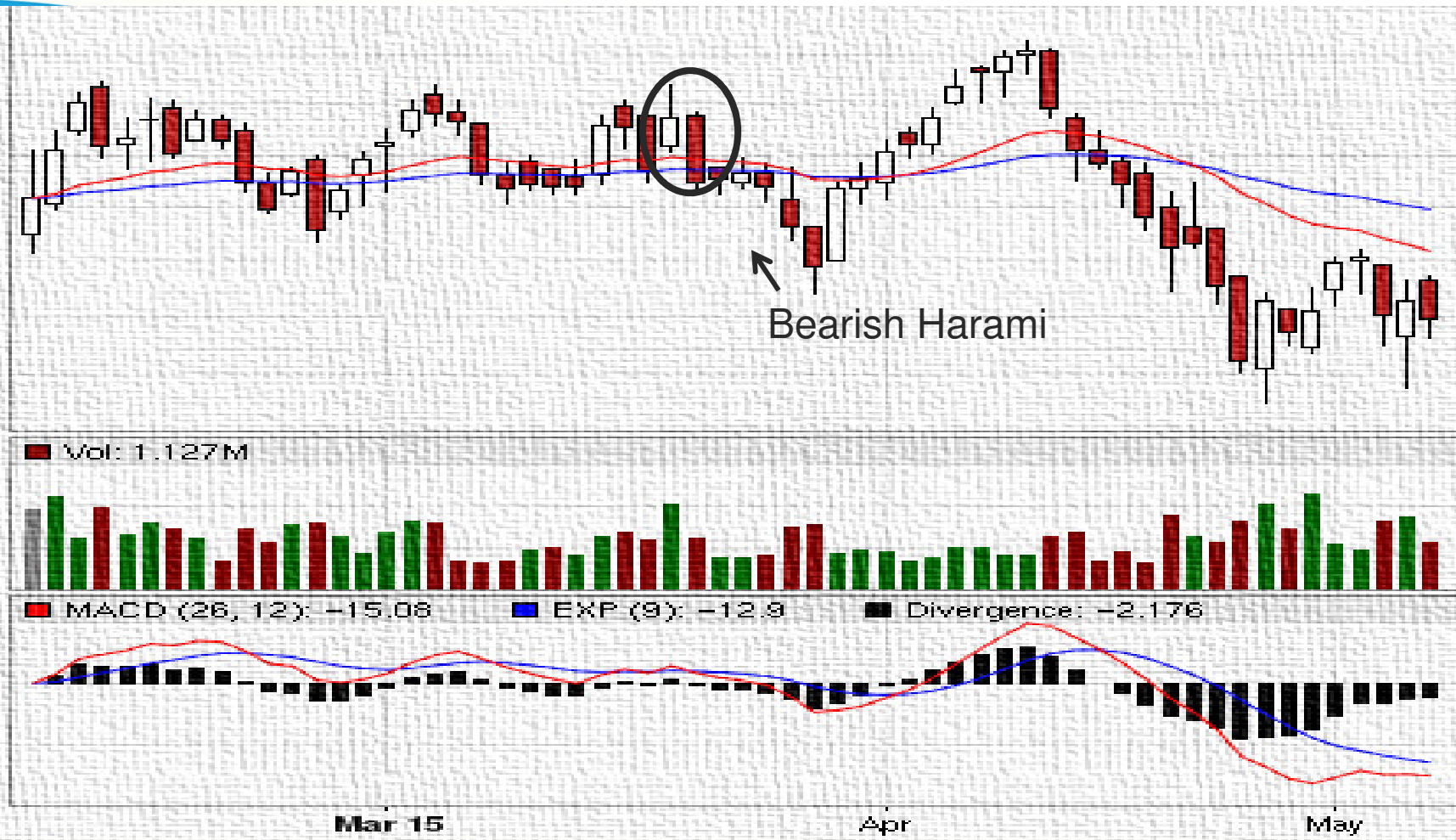


# Bearish Harami

- A trend indicated by a large candlestick followed by a much smaller candlestick with that body is located within the vertical range of the larger candle's body.
- Such a pattern is an indication that the previous upward trend is coming to an end.

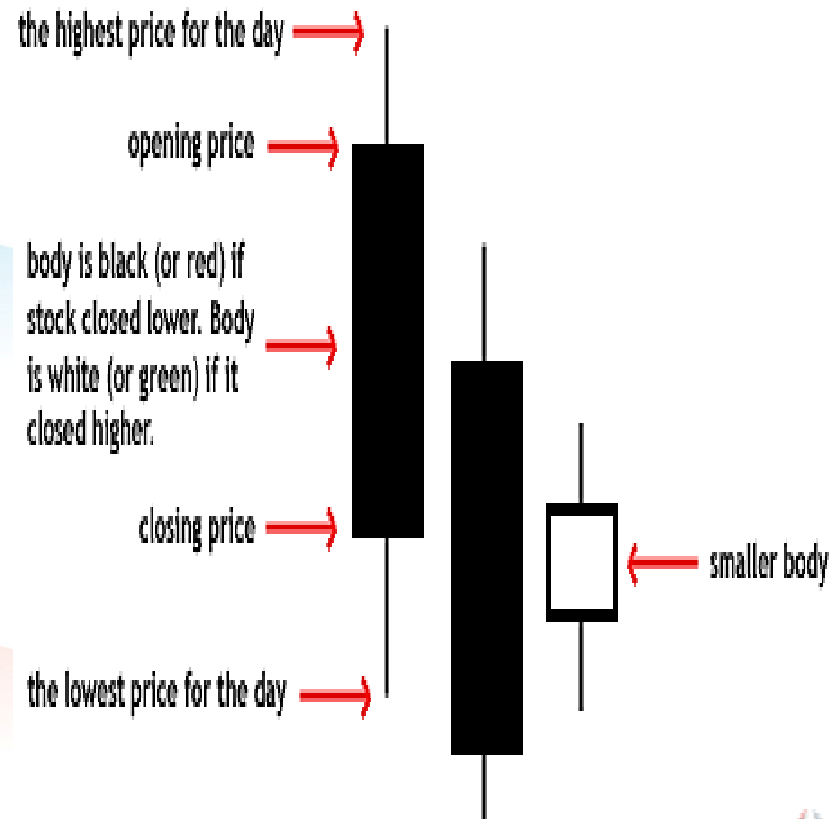


# Bearish Harami



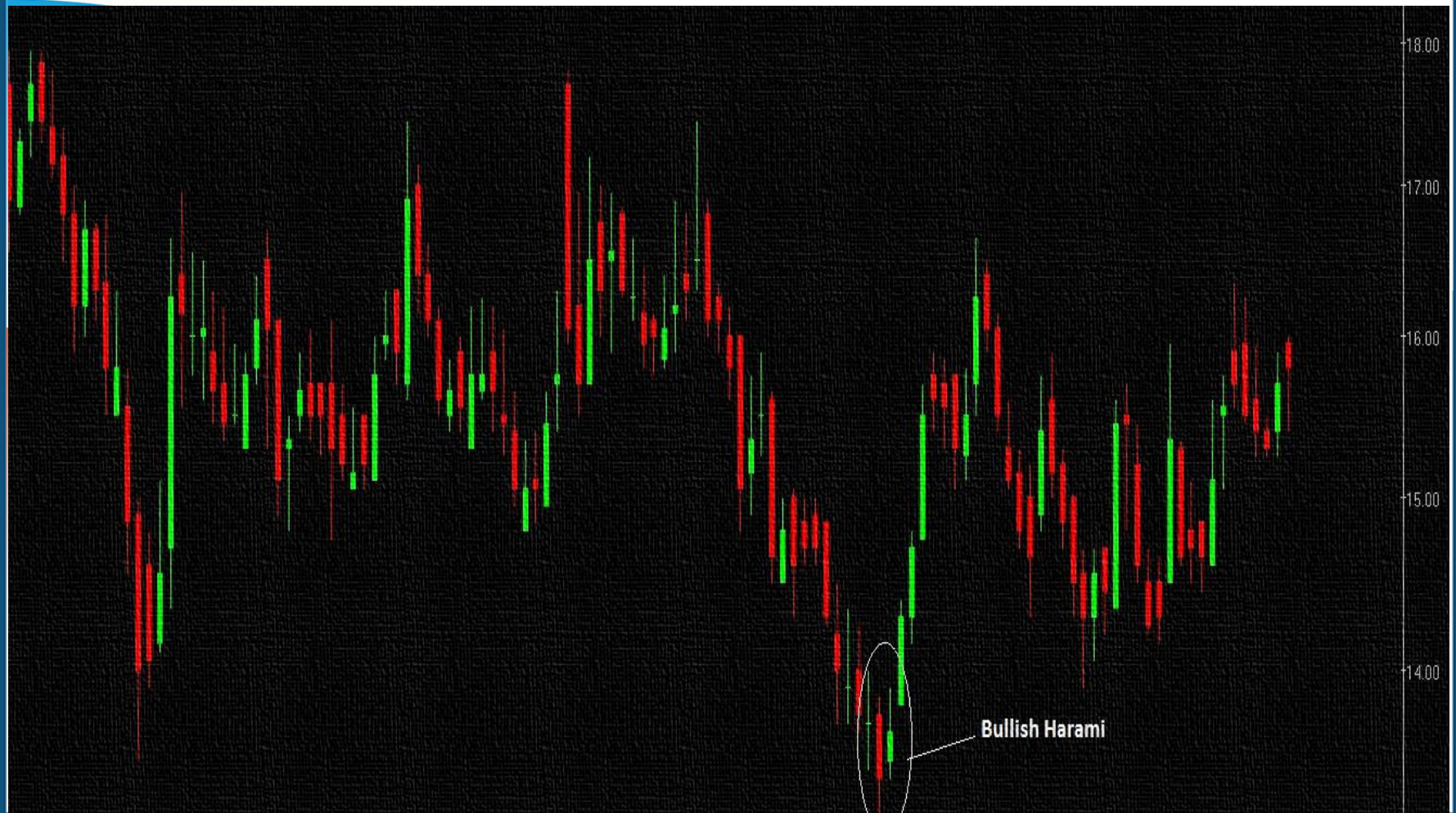
# Bullish Harami

- A candlestick chart pattern in which a large candlestick is followed by a smaller candlestick whose body is located within the vertical range of the larger body.
- In terms of candlestick colors, the bullish harami is a downtrend of negative-colored (RED) candlesticks engulfing a small positive (GREEN) candlestick, giving a sign of a reversal of the downward trend.



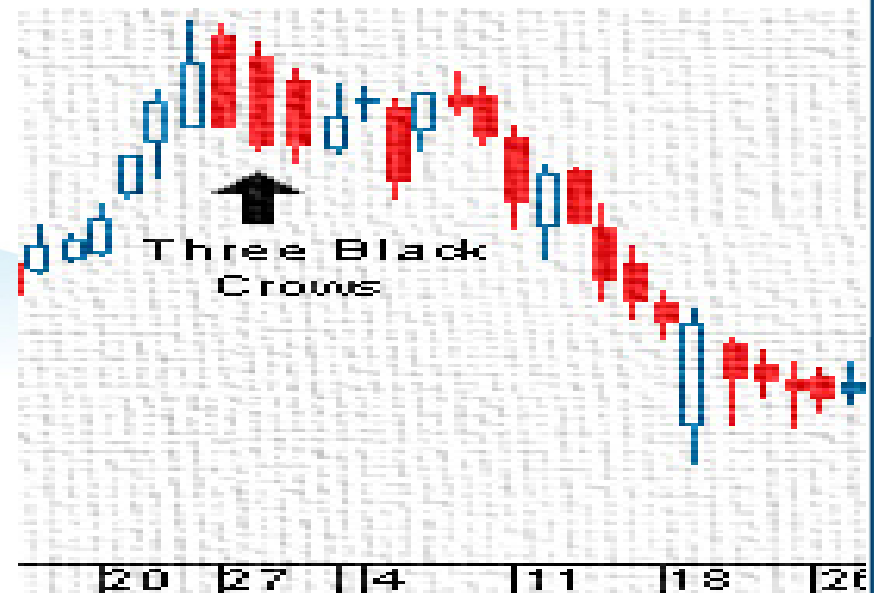


# Bullish Harami



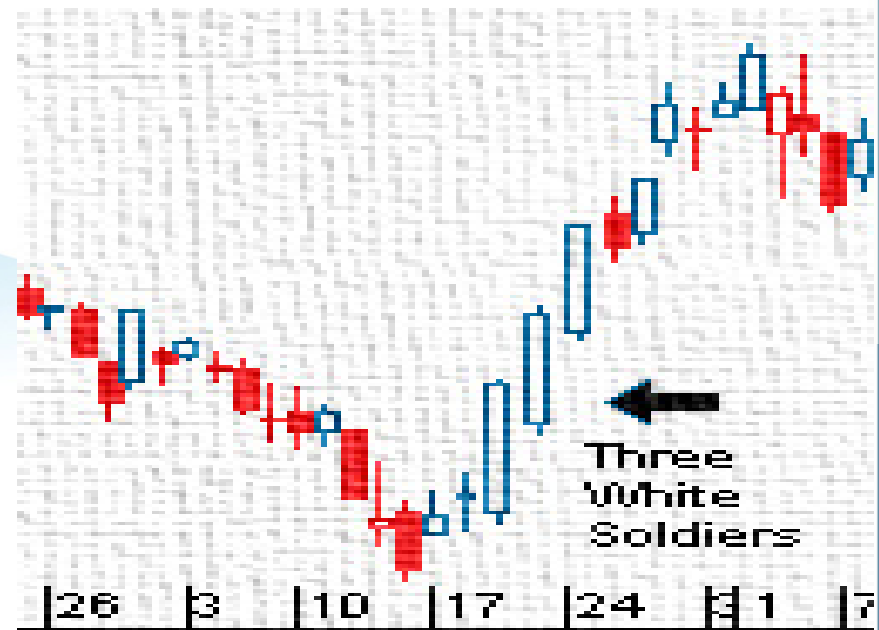
# Three Black Crows

- It is a bearish candlestick pattern that is used to the reversal of the current uptrend.
- This pattern consists of three consecutive long-bodied candlesticks that have closed lower than the previous day with each sessions opening occur within the body of the previous candle.



# Three White Soldiers

- A bullish candlestick pattern that is used to predict the reversal of the current downtrend.
- This pattern consists of three consecutive long-bodied candlesticks that have closed higher than the previous day, with each session's open occurring within the body of the previous candle.



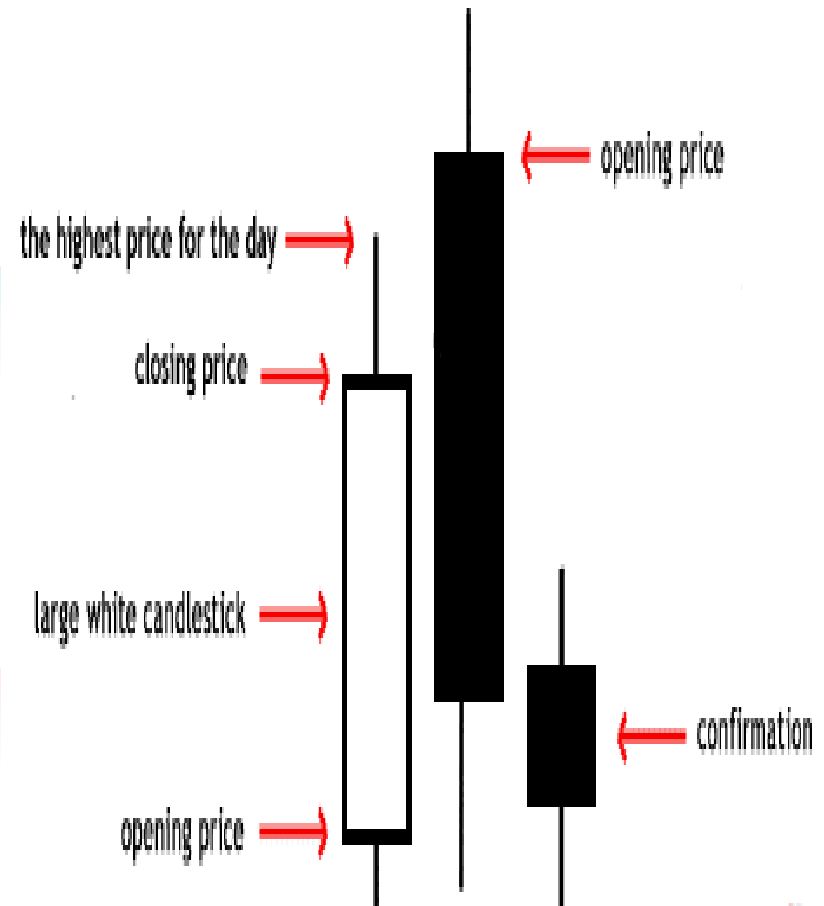
# Dark Cloud Cover

➤ A pattern where a black candlestick follows a long white candlestick. It can be an indication of a future bearish trend.

➤ Essentially, the large black candle is forming a "dark cloud" over the preceding bullish trend.

The dark cloud must have a closing price that is:

- within the price range of the previous day.
- But below the mid-point between open and closing prices of the previous day.

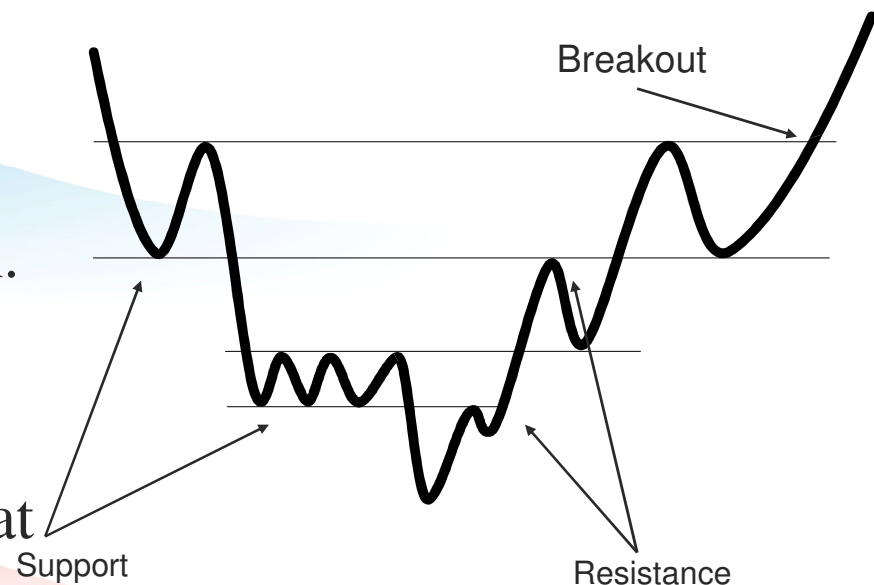


# Dark Cloud Cover



# Support & Resistance

- Support and resistance lines indicate likely end of trends.
- Resistance results from the inability to surpass prior high.
- Support results from the inability to break prior low.
- If support has broken then that level become the resistance, and vice-versa.



# Historical Support & Resistance





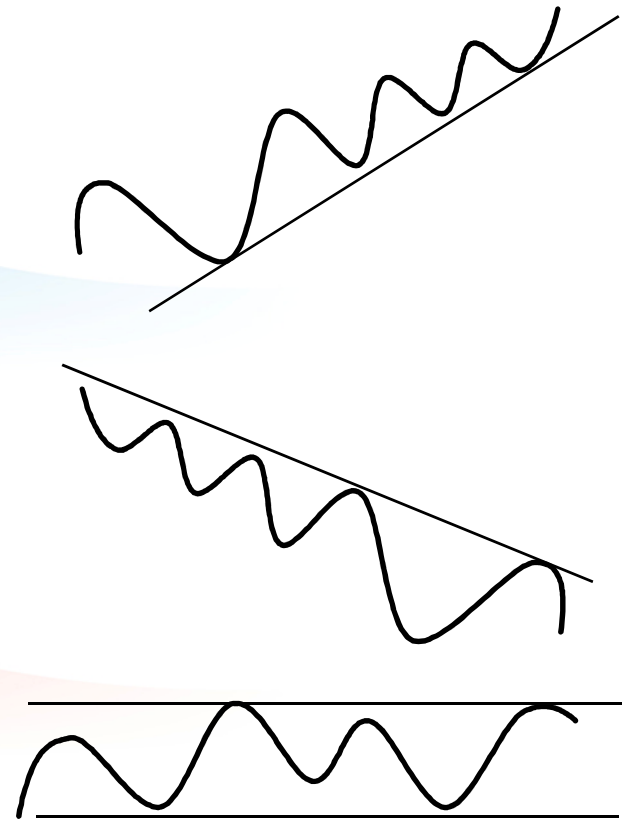
**Tea Break**



# Trend Lines

➤ There are three basic kinds of trends:

- An Up trend where price are generally increasing.
- A Down trend where price are generally decreasing.
- A Trading Range.



# Simple Moving Averages

- Moving averages are used to identify current trends and trend reversals as well as to set up support and resistance levels.
- Moving averages can be used to quickly identify whether a stock is moving in an uptrend or a downtrend depending on the direction of the moving average. When a moving average is heading upward and the price is above it, the stock is in uptrend. Conversely, a downward sloping moving average with the price below can be used to signal a downtrend.
- Another method of determining momentum is to look at the order of a pair of moving averages. When a short-term average is above a longer-term average, the trend is up. On the other hand, a long-term average above a shorter-term average signals a downward movement in the trend.

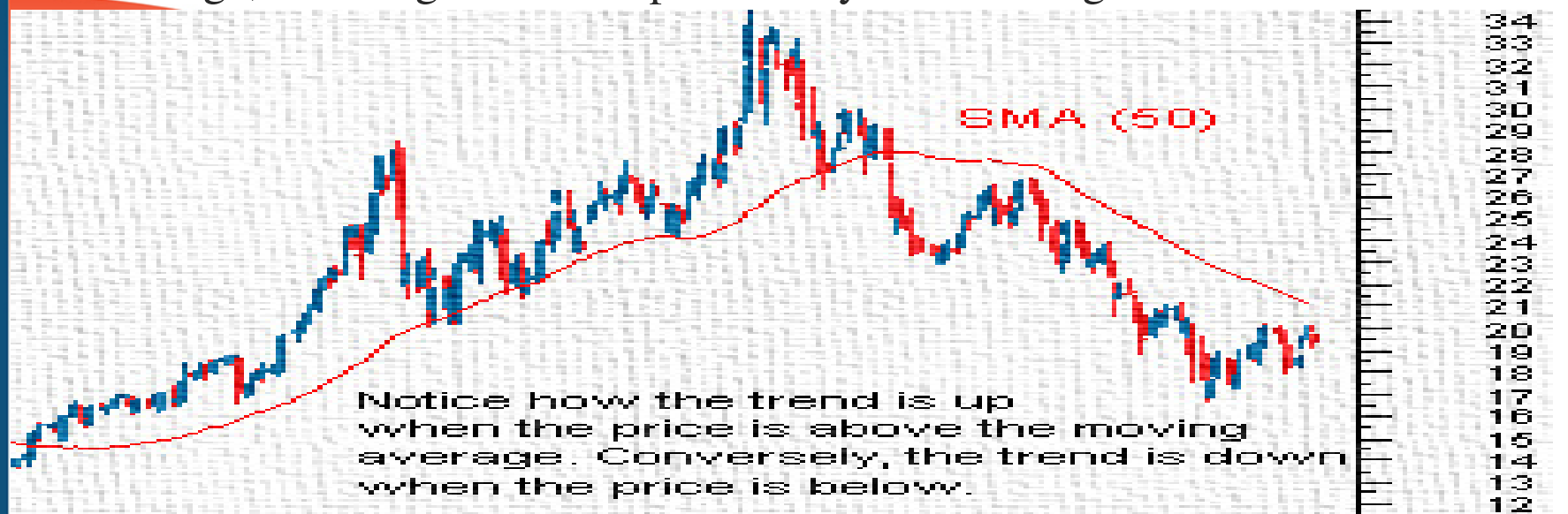
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# Simple Moving Averages

- Moving averages are a powerful tool for analyzing the trend in a stock. They provide useful support and resistance points and are very easy to use. The most common time frames that are used when creating moving averages are the 200-day, 100-day, 50-day, 20-day and 10-day.
- 200-days average is a good measure of trading year, a 100-day average for half a year, a 50-day average for quarter, a 20-day average for month and 10-day average for two weeks.

# Price & Moving Average Crossover

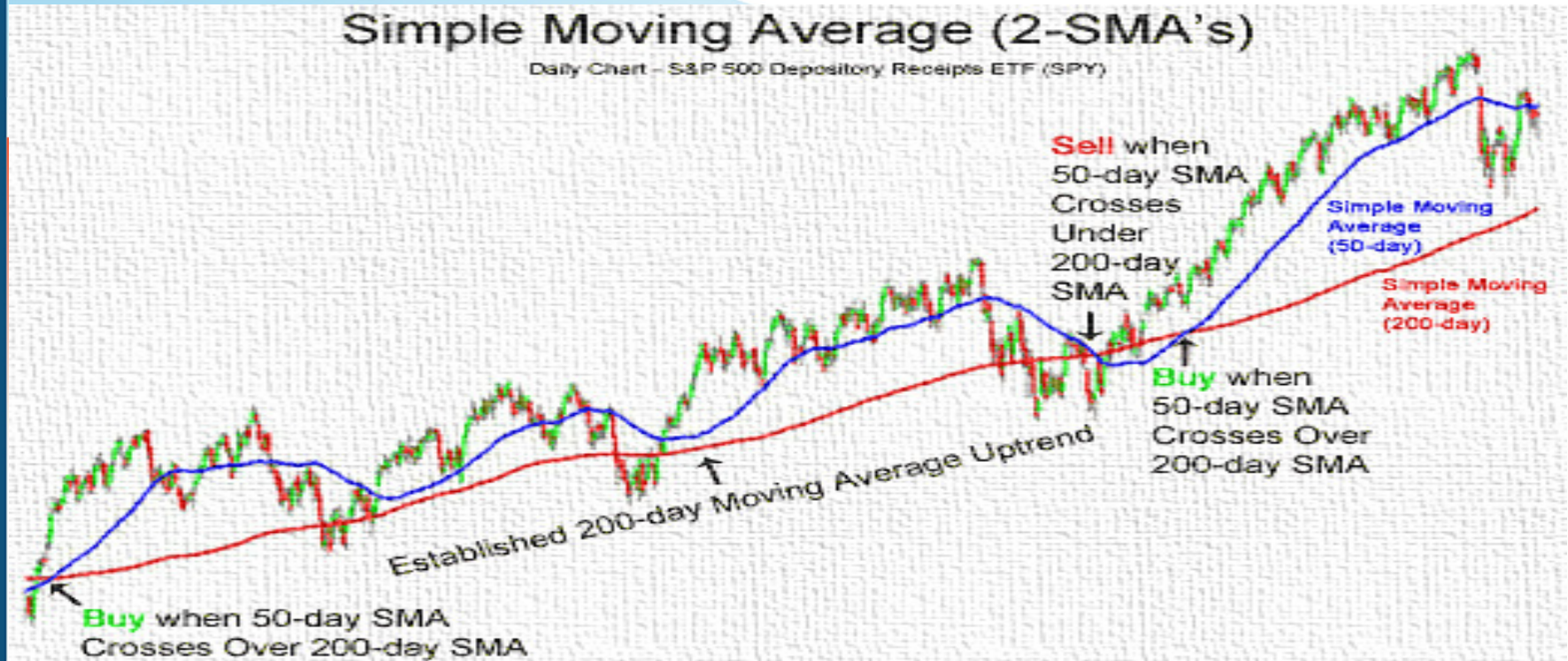
- Moving average trend reversals are formed in two main ways:
  - When the price moves through a moving average and when it moves through moving average crossovers. The first common signal is when the price moves through an important moving average. For example, when the price of a security that was in an uptrend falls below a 50-period moving average, it is a sign that the uptrend may be reversing.





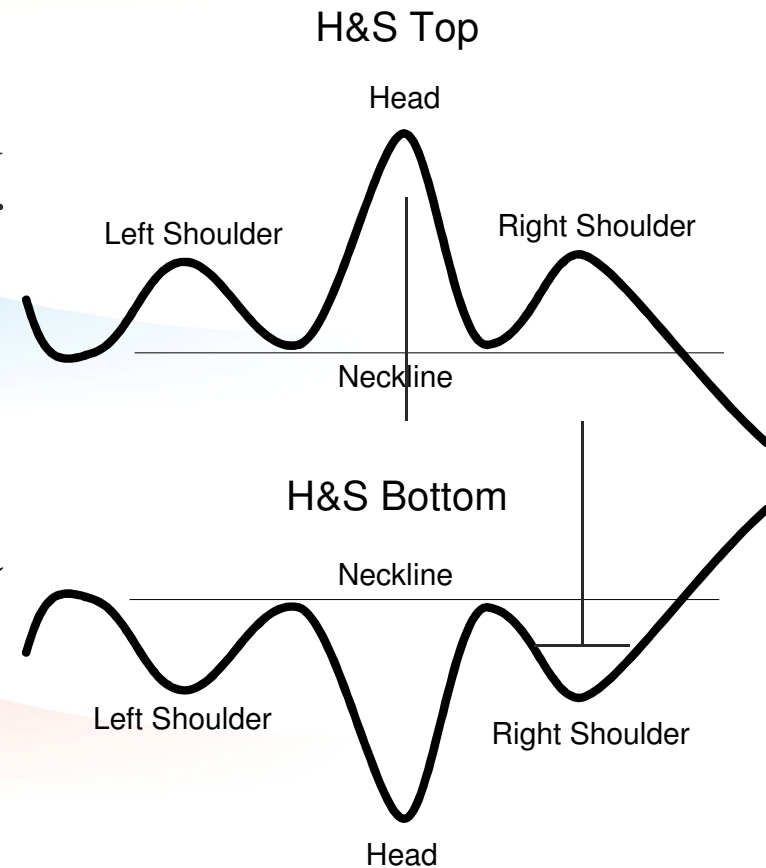
# Moving Averages Crossover

- The other signal of a trend reversal is when one moving average crosses through another. For example, if the 50-day moving average crosses above the 200-day moving average, it is a positive sign that the price will start to increase.

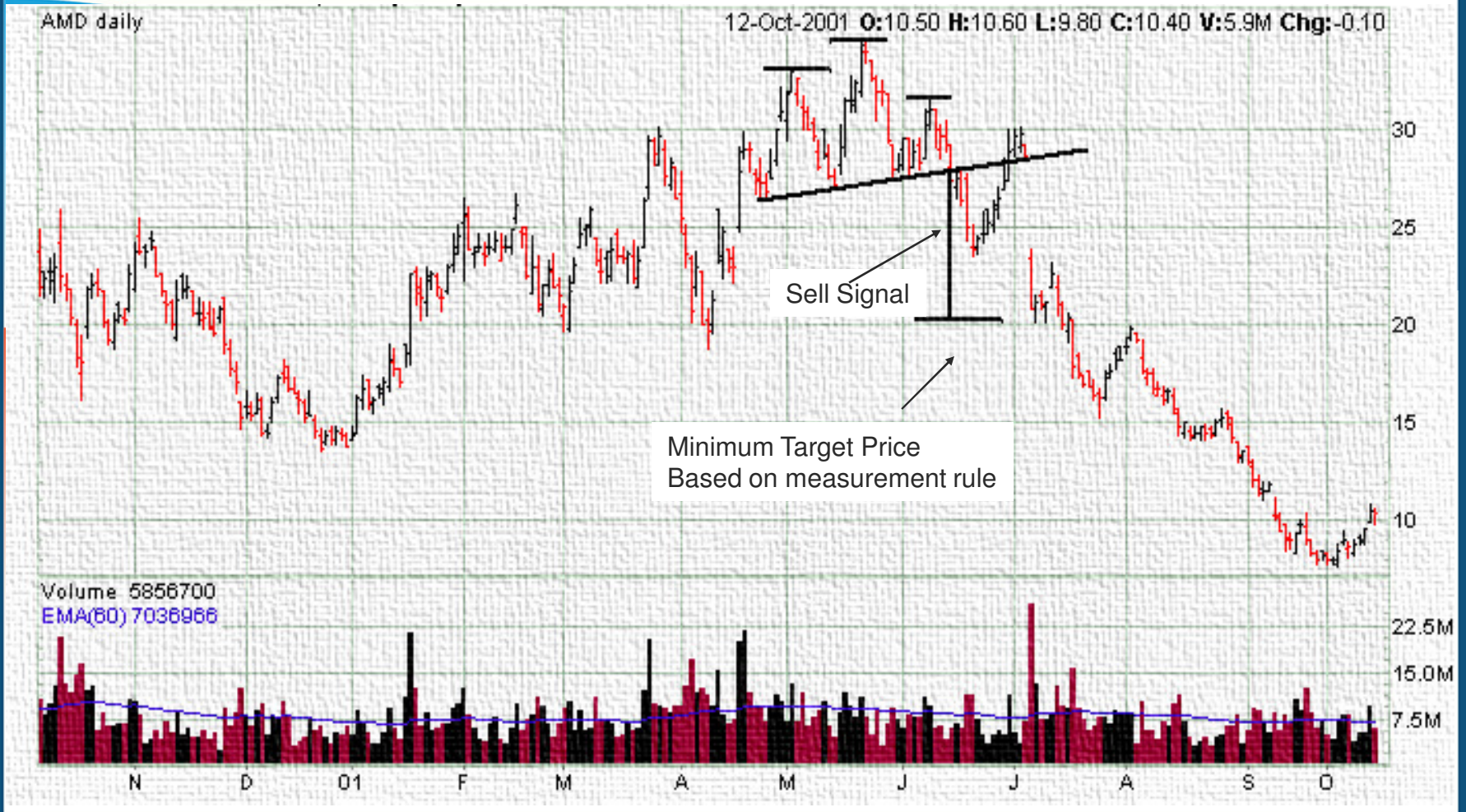


# Head and Shoulders

- This formation is characterized by two small peaks on either side of a larger peak.
- This is a reversal pattern, meaning that it signifies a change in the trend.

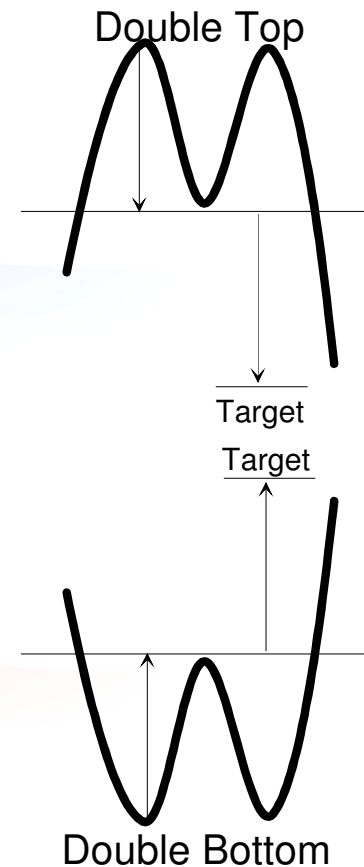


# Example of Head & Shoulder



# Double Top & Double Bottom

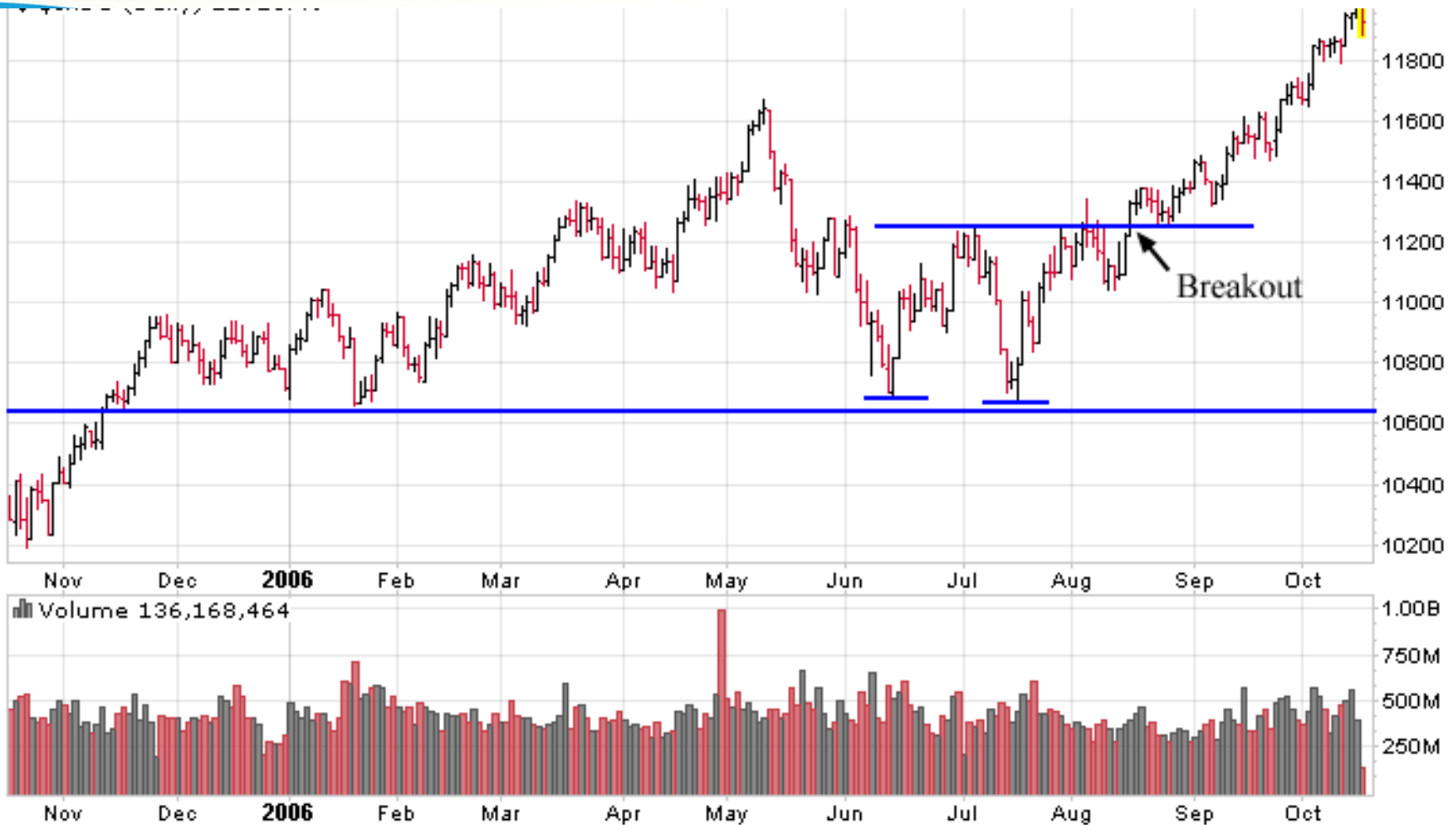
- These formations are similar to the H&S formations, but there is no head.
- These are reversal patterns with the same measuring implications as the H&S.
- The **Double Top** is a frequent price formation at the end of a bull market. It appears as two consecutive peaks of approximately the same price on a price-versus-time chart of a market.
- The **Double Bottom** describes as the drop of a stock a rebound, another drop to the same level as the original drop, and finally another rebound.



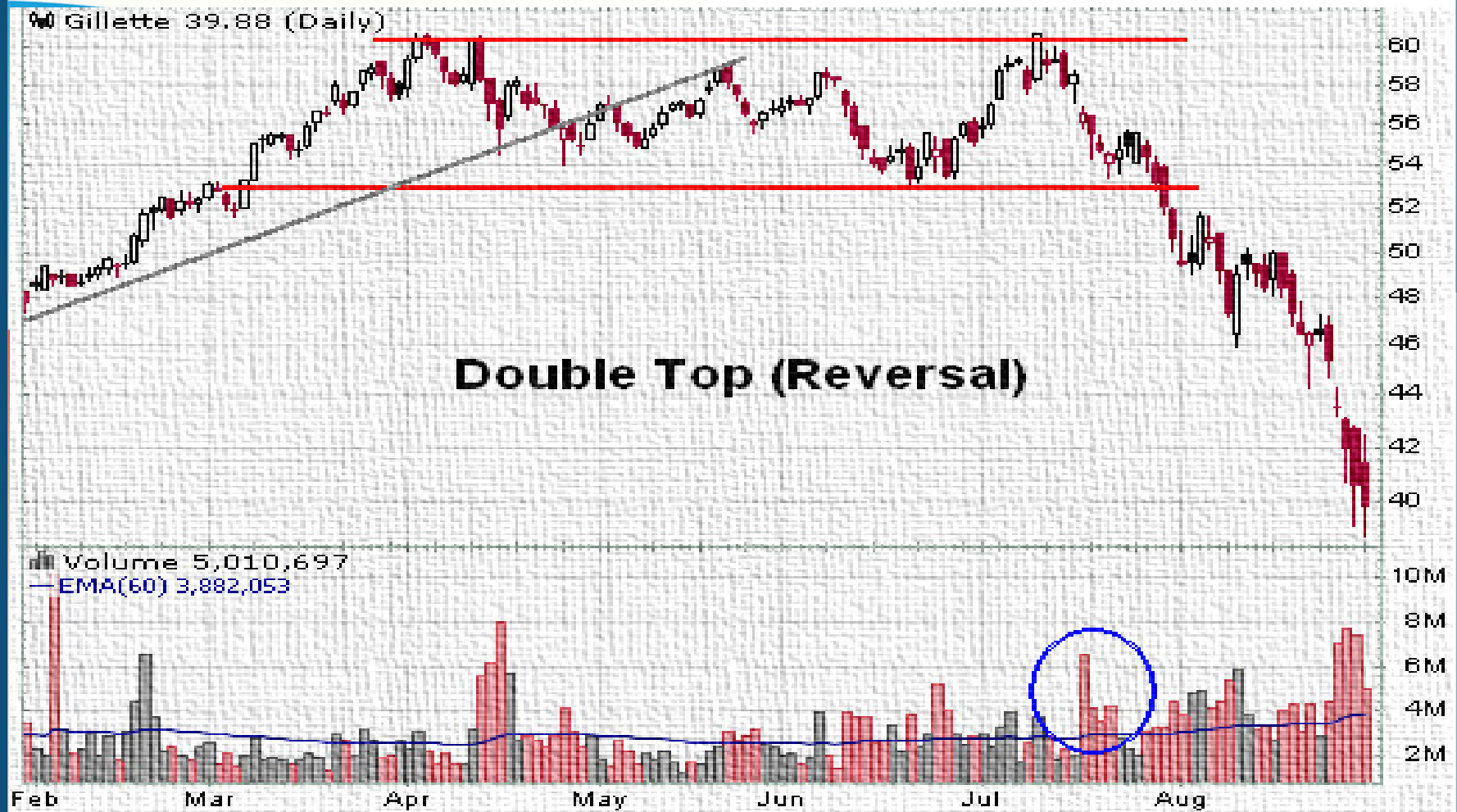




# Example of Double Bottom

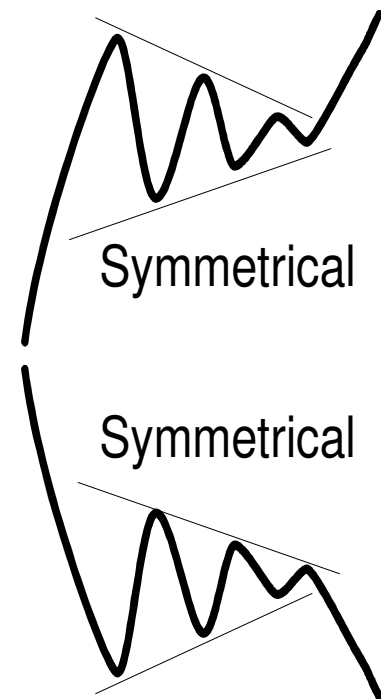
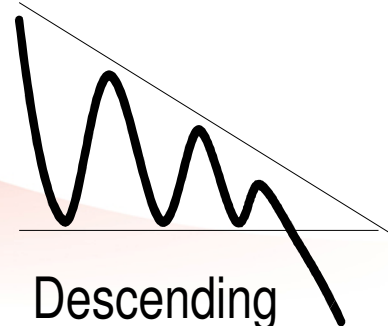
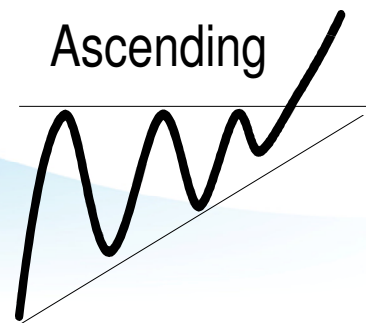


# Example of Double Top



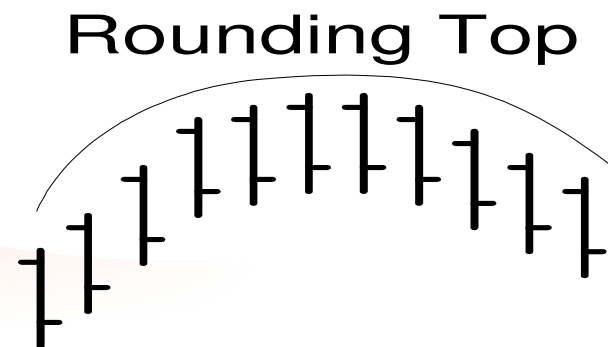
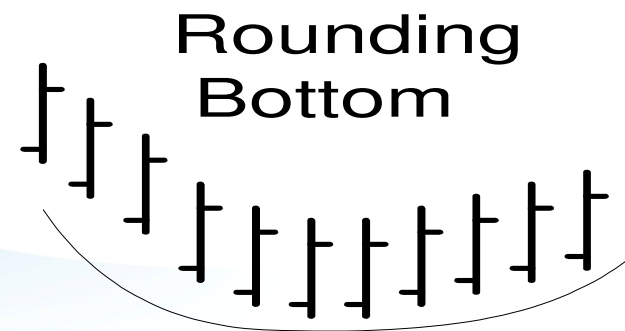
# Triangles

- Triangles are continuation formations.
- Three types:
  - Ascending
  - Descending
  - Symmetrical
- Typically, price should give break out near the apex, and typically breakout would be in the direction of the prior trend.

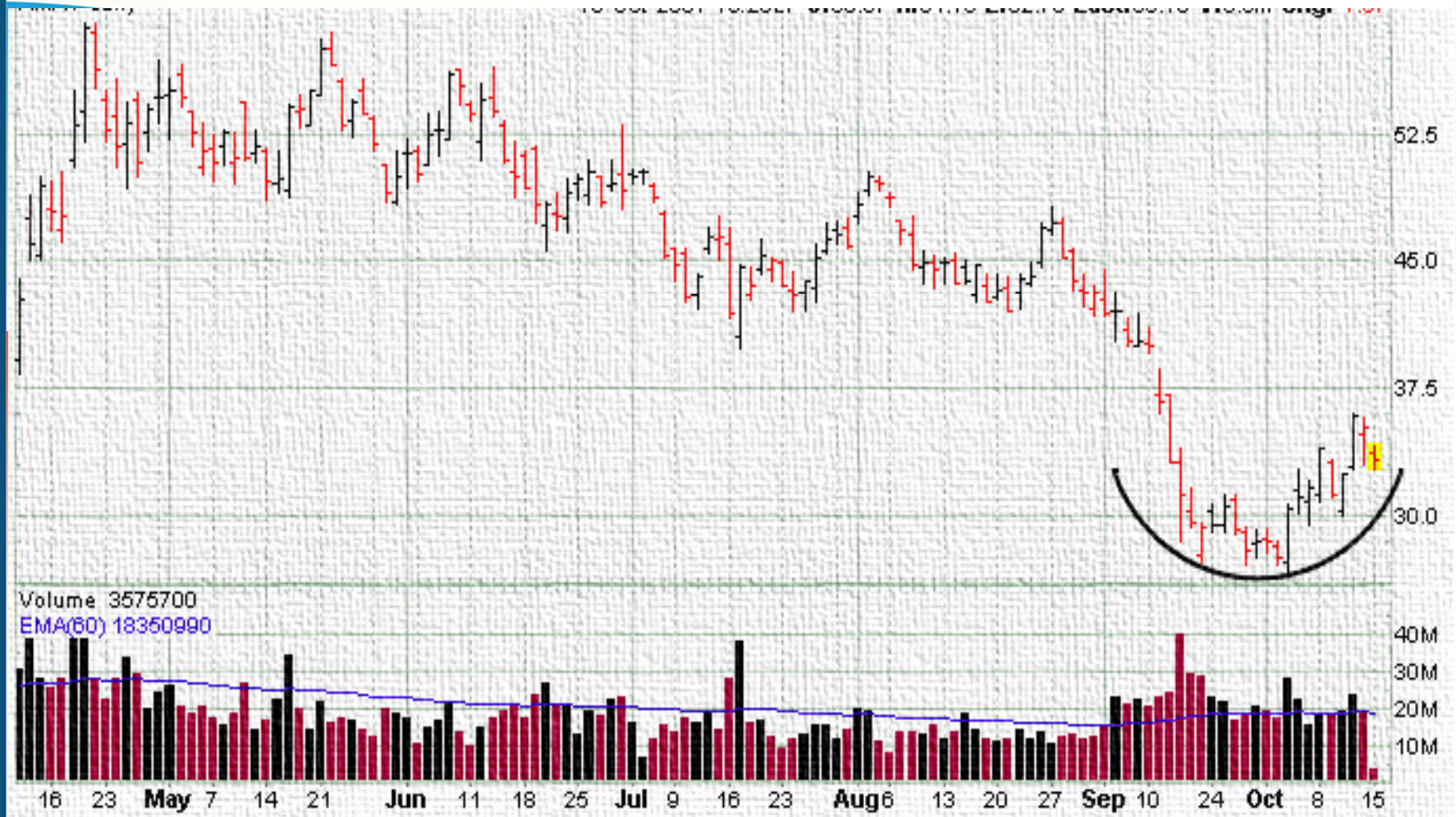


# Rounding Top & Bottom

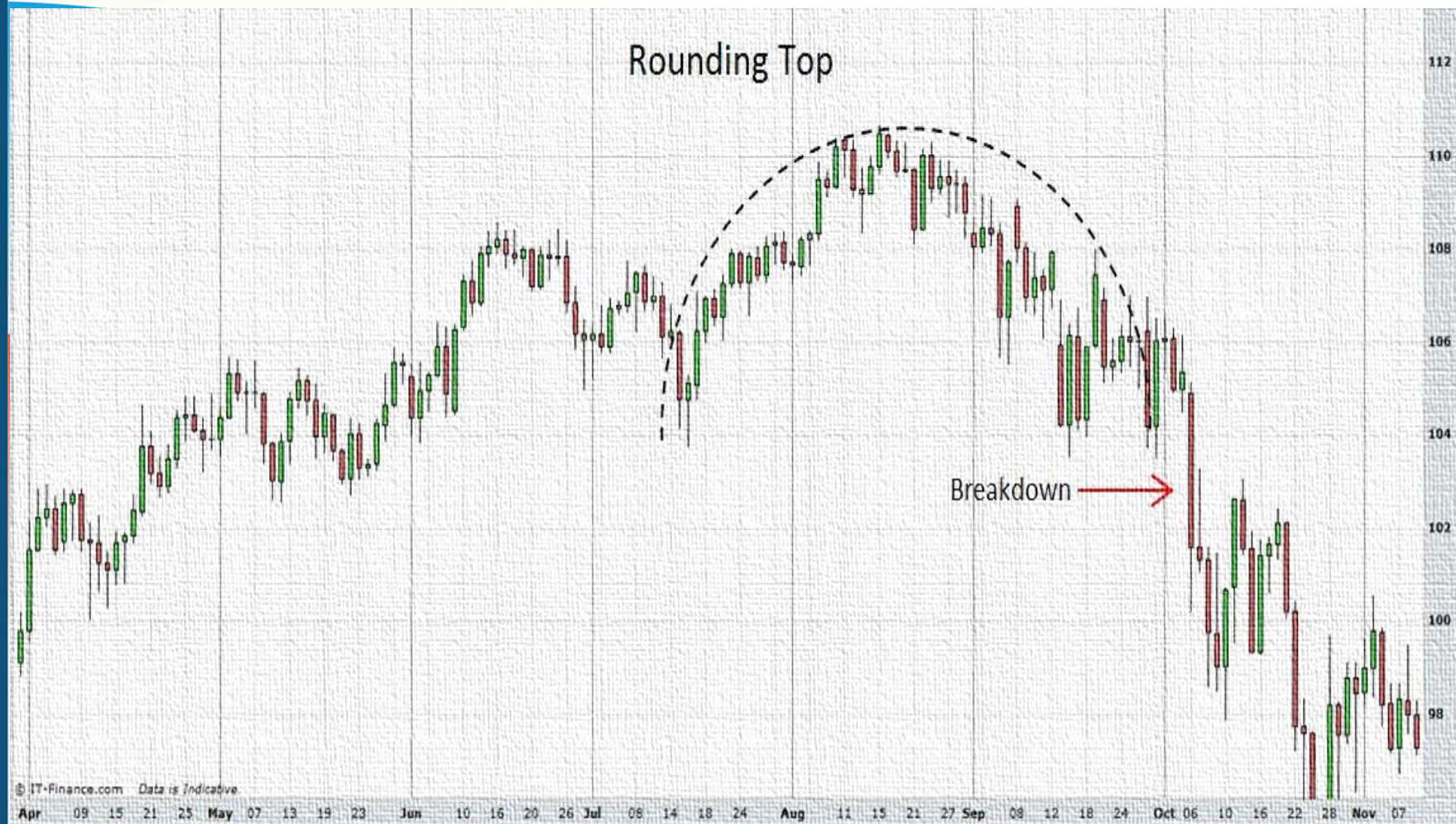
- Rounding formations are characterized by a slow reversal of trend.
- The Rounding Bottom is a long-term reversal pattern that is best suited for weekly charts. It is also referred to as a saucer bottom, and represents a long consolidation period that turns from a bearish bias to a bullish bias.
- A Rounding Top may form at the end of an extended upward trend and indicates a reversal in the long-term price movement. The pattern can develop over several weeks, months or even years, and is considered a rare occurrence by many traders.



# Example of Rounding Bottom

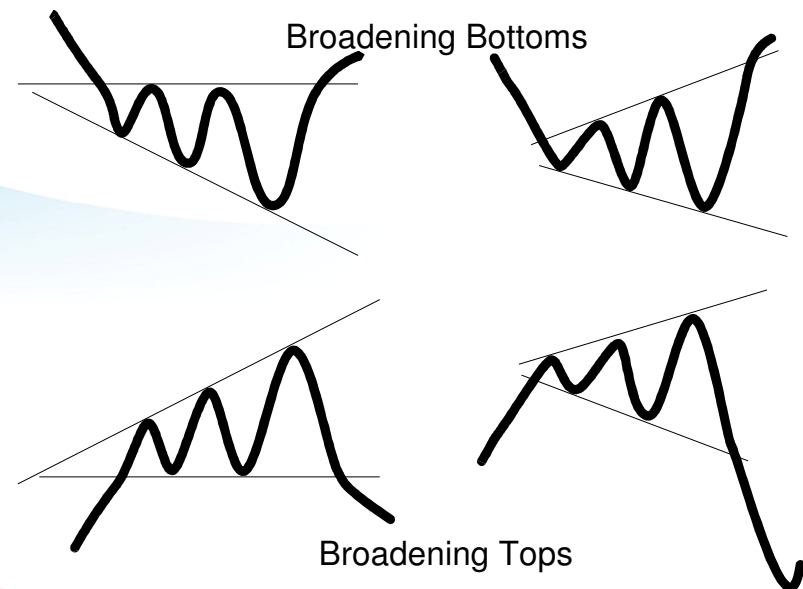


# Example of Rounding Top



# Broadening Formation

- These formations are like reverse triangles.
- These formations usually signal a reversal of the trend.



# Example of Descending Triangle and Trading Range





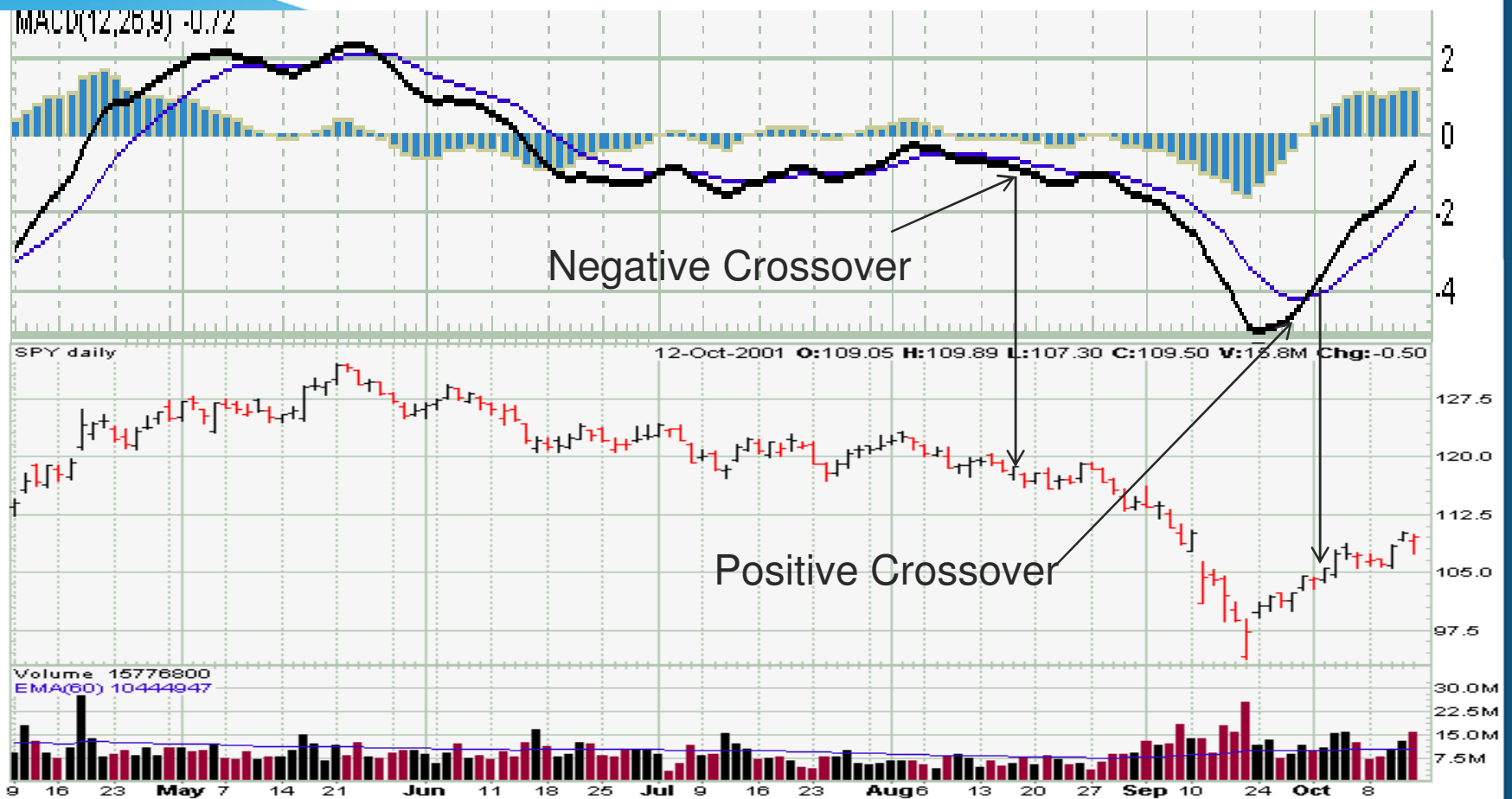
# Technical Indicators

- There are, literally, hundreds of technical indicators used to generate buy and sell signals.
- We will look at few of the major indicators:
  - Moving Average Convergence/Divergence (MACD)
  - Relative Strength Index (RSI)
  - Bollinger Bands

# MACD

- MACD was developed by Gerald Appel as a way to keep track of a moving average crossover system.
- The MACD fluctuates above and below the zero line as the moving averages converge, cross and diverge.
- Traders can look for signal line crossovers, centerline crossovers and divergences to generate signals.
- When the signal line goes from negative to positive, a buy signal is generated.
- When the signal line goes from positive to negative, a sell signal is generated.
- MACD is best used in choppy (trendless) markets, and is subject to whipsaws (in and out rapidly with little or no profit).

# Example of MACD



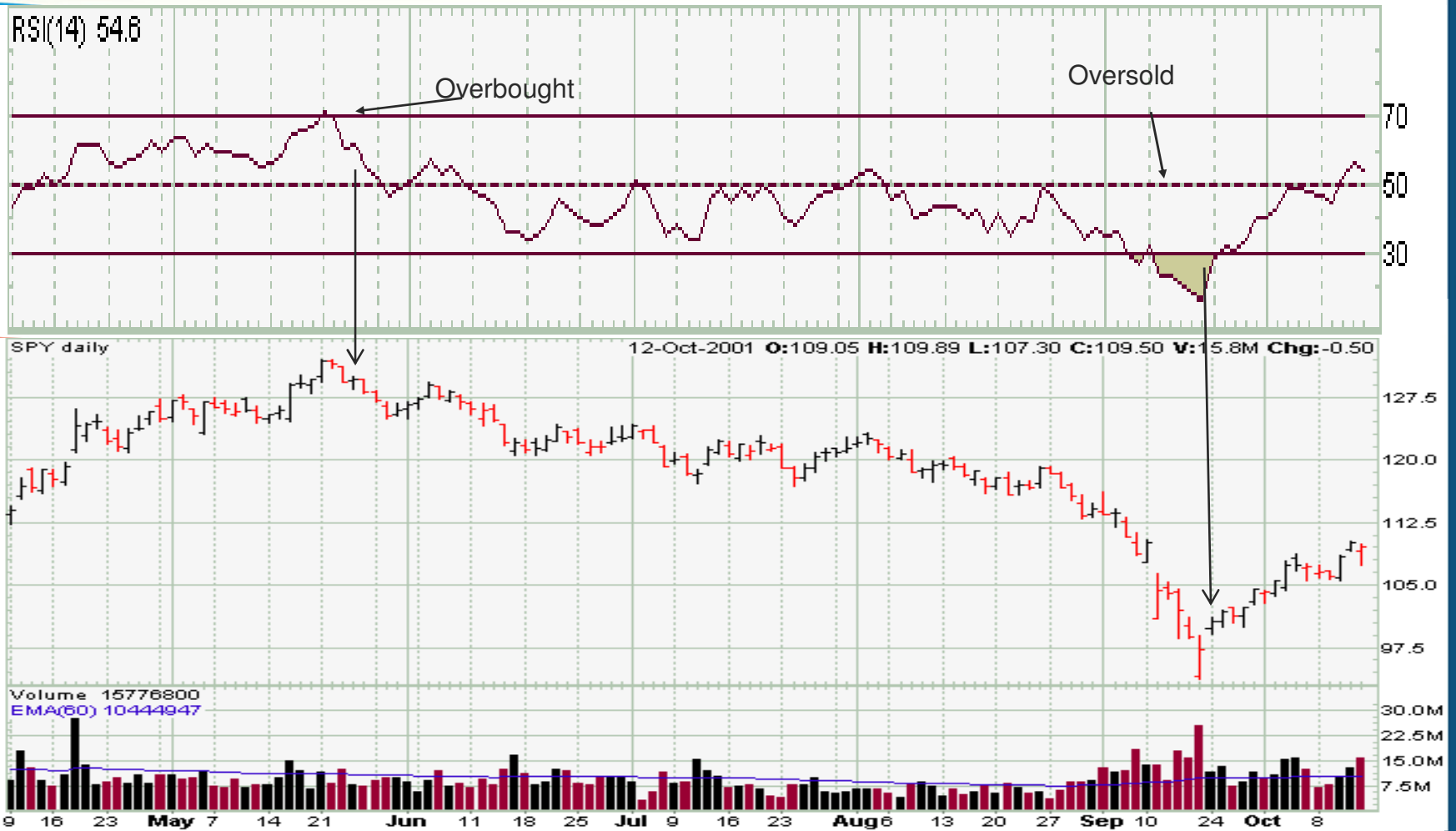
# Relative Strength Index (RSI)

- RSI was developed by Welles Wilder as an oscillator to gauge overbought/oversold levels.
- The most important thing to understand about RSI is that a level above 70 indicates a stock is overbought, and a level below 30 indicates that it is oversold (it can range from 0 to 100).
- Also, realize that stocks can remain overbought or oversold for long periods of time, so RSI alone isn't always a great timing tool.

# RSI

- A technical analysis tool that is banded between two extreme values and built with the results from a trend indicator for discovering short term overbought and oversold conditions. As the value of the oscillator approach the upper extreme value, the stock seem to be overbought and as it approaches to lower extreme level, it seems to be oversold.

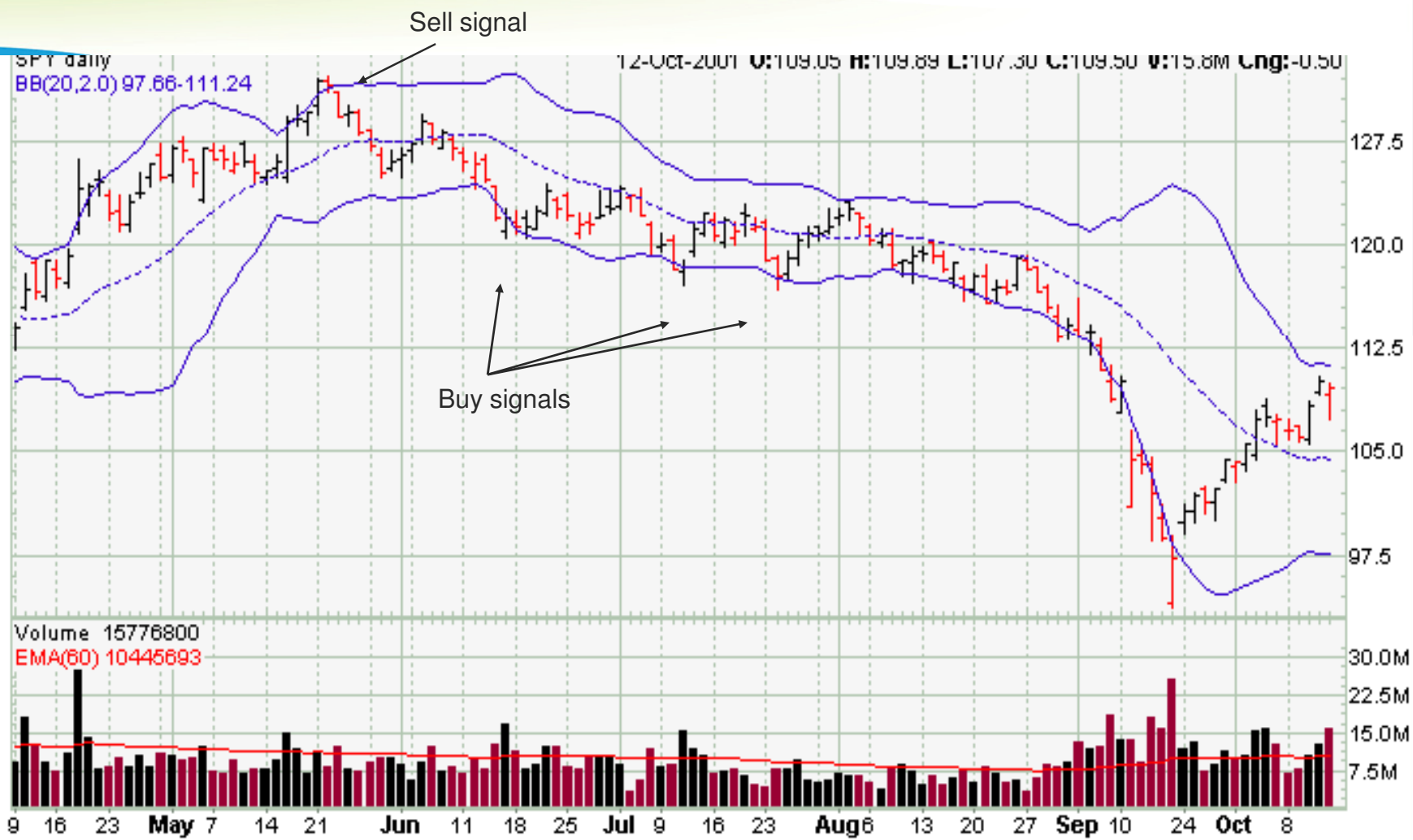
# Example of RSI



# Bollinger Band

- Bollinger bands were created by John Bollinger (former FNN technical analyst, and regular guest on CNBC).
- Bollinger Bands are based on a moving average of the closing price.
- They are two standard deviations above and below the moving average.
- A buy signal is given when the stock price closes below the lower band, and a sell signal is given when the stock price closes above the upper band.
- When the bands contract, that is a signal that a big move is expecting, but it is impossible to say if it will be up or down.

# Example of Bollinger Band





**Thank you**

