THE USE OF CHARTS FOR THE TECHNICAL ANALYSIS OF THE SHARES QUOTED ON THE STOCK EXCHANGE

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The evaluation of the future levels, that the different shares quoted on the stock exchange will be traded at, is a complex activity, which involves gathering and processing a high volume of information and also experience and a little flair in their interpretation. ***The Technical Analysis*** *is a statistical method for estimating the evolution of the shares prices depending on the past evolution of these and on the volume of the transactions. It relies on using the charts for prices and volumes of the shares and also on a series of measures based on these. Its aim is to forecast the evolution on short term of the stock prices by considering the hypothesis that the historical trends reiterate in time and that there is a logical explanation regarding this evolution.*

Key words: Technical Analysis, shares, stock exchange, candlestick chart

1. Introduction

The evaluation of the future levels, that the different shares quoted on the stock exchange will be traded at, is a complex activity, which involves gathering and processing a high volume of information and also experience and a little flair in their interpretation. When establishing the shares that have to be bought, two analysis methods are used by the investors on the stock exchange: the fundamental analysis and the technical analysis. In addition, market information regarding the future events that will influence the price of a specific share are to be considered.

The technical analysis is a statistical method for estimating the evolution of the share prices depending on the previous evolution of these and on the volume of the transactions. It relies on using the charts for prices and volumes of the shares and also on a series of measures. Its aim is to forecast the evolution on short term of the stock prices by considering the hypothesis that the historical trends reiterate in time and that there is a logical explanation regarding this evolution. The selling/buying decision is influenced by quantifiable financial factors, but also by emotional factors, which are not quantifiable (the fear, the uncontrolled desire to gain) which leads to mistakes. Such mistakes tend to repeat in time, which provides behavior models that can be apprehended after a rich practical experience only.

In order to carry out its objectives, the Technical Analysis relies on the use of charts, but also on statistical indicators.

The charts are made both for prices and for transactions' volume. On a price chart you can see three essential elements: the evolution trends, the thresholds and the patterns.

The trends of price evolution must be followed on long term or short term, depending on the investor's profile. In case of long-term trends, the chart should be drawn for a period of 3-5 years or even for the entire transaction's period. This way, we can identify the general trend of that share, but also the eventual cycle oscillations.

Another important element the charts provide are *the thresholds or the levels*. These represent minimum values (support level) and maxim values (resistance level) of the prices repeatedly reached in a specific period.

Regarding *the patterns*, these represent an estate of different trends or a combination of trends and levels. Generally, a share evolution trend is repeating in time under the influence of some psychological factors. The investors know that a long period of time with low decreases of a share price is followed by an accelerated growth on a short period, situation which increases the chances for such a model to repeat itself. The identification of a behavior model of a share price helps the investors to estimate its future evolution.

2. Chart Types

The technical analysis uses more ***types of charts***, such as: simple or line charts; bar charts; candlestick chart; point and figure chart; volume histogram. The first four types of charts show the evolution of trade prices, while the fifth one regards the transactions' volume.

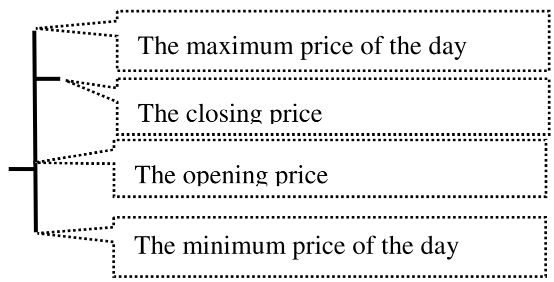
1. The Simple Chart

It is used to follow the trends on long and medium term. The chart is drawn by the union with a continuous line of the closing price level for every day of trading. Between the advantages of this type of chart we can underline its simplified elaboration and interpretation, and as disadvantages we can notice the lack of any information regarding the price oscillations during a trading session.

2. The Bar Chart

A vertical line is drawn for each trading day, on which four elements are represented:

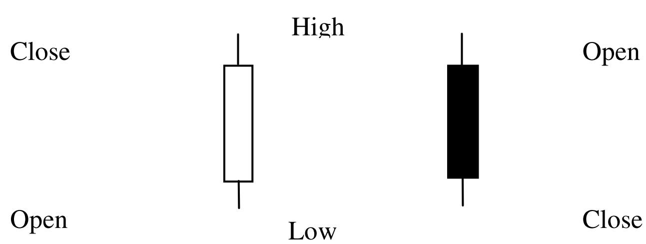
- The top of the vertical line represents the maximum price reached in a trading day;
- The bottom of the vertical line represents the minimum price reached in a trading day;
- The short horizontal line to the left shows the opening price of the day;
- The short horizontal line to the right shows the closing price of the day.



- As compared with a simple chart, this one provides more information through the four characteristic prices of the day.

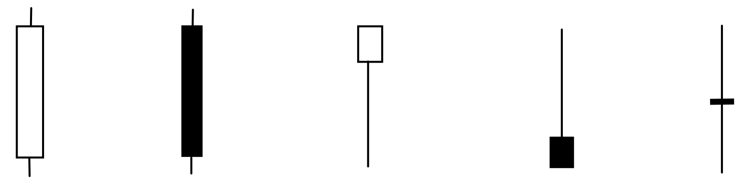
3. The Candlestick Chart

It offers information on the evolution of a price during a day, but also information regarding the movement direction. The representation of the price chart for a trading day is done with the help of a "candle" which has two elements: the body and the shadow (wick) of the candle. This is represented like this:



The body of the "candle" is different painted depending of the price evolution sense, as white or green if the closing price is bigger than the opening price and black or red in vice versa situation.

The price changing during a trading day forms a chart shape which allows the observation of the trends.



A – Known as “the bull sign” reflects a constantly increasing trend, in which the market is opening near the minimum and it is closing near the maximum;

B – “The bear sign” shows a constantly decreasing trend, in which the market is opening near the maximum and it is closing near the minimum;

C- “Without top wick” (Shaven Head) shows an increasing trend, which generally appears after a decreasing of some days. Usually, after the appearance of this sign, it will appear an inversion of the price decreasing trend.

D – “Without bottom wick” (Shaven Bottom) shows a decreasing trend, which usually appears after a few days of growth, symbolizing an inversion of the increasing trend;

E – “Doji Star” represents a body in which the opening and the closing are the same. It can represent a signal of trend change or of indecision of the investors. For many times the appearance of this shows a trend inversion.

4. The Point & Figure Chart

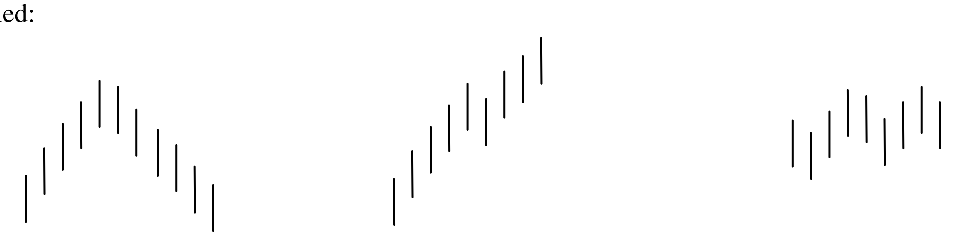
This chart is more rarely met, in which the price increasing is represented by increasing rows of “X”-es, while the decreasing is represented by decreasing rows of “0”-es.

5. The Volume Histogram

For the estimation of share selling price its trend should be correlated to transactions volume. A correlated analyze of the prices and volumes is often more useful than a simple price analyze. The prices and volumes correlated analyze is realized by the combination of a price chart with a volume histogram.

3. The Returning Signals and Patterns

The shapes that different types of charts take offer clues regarding the next evolution of share price. When ***interpreting*** these, the users of the Technical Analysis start on the assumption that the history is repeating. For this reason they looked for the identification of some *returning signals* and *patterns* on which it can be anticipated the future evolution of the share trading price. On a chart, three possible situations can be identified:



The trend is suddenly changing | The trend continues its direction | Period of consolidating the trend

The returning signals appear in the first situation, when the trend direction is changing.

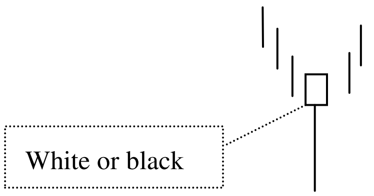
Examples of returning signals identified with the help of the charts:

Hammer & Hanging Man

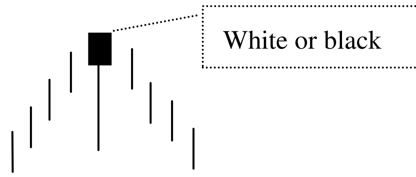
The increasing signal is given by the appearance of the *hammer* lay-out (the end of the decreasing trend), and the falling signal by the appearance of the *hanging man* lay-out (the beginning of the upward trend). Both lay-outs can be recognized after three criteria:

- the real body is very little, so the day opening price is close to the closing price. Its color is not important;
- the down wick is two times bigger than the body height, so that a little minimum price is reached during the trading session;
- the up wick doesn't exist or is very little.

Graphically, the two lay-outs are described as:



Hammer

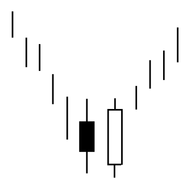


Hanging Man

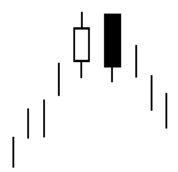
Engulfing Pattern

More signals looking for a possible trend change are obtained by the combination of more lines on the chart. A first such combination, known as engulfing pattern, combines two lines of different colors, as:

- A smaller black body followed by a white body who covers the little body, meaning the beginning of an upward trend (A);
- A smaller white body followed by black body that covers the little body, meaning the beginning of a decrease trend (B).



A



B

The recognition of this kind of lay-out is based on three requirements:

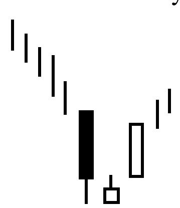
- the existing of a trend clearly defined, of an increase or a decrease, even if this one is on short-term;
- the existing of two bodies of different colors that compose the lay-out engulfing. The exception of this rule is when the first body is very little or is a Doji star;
- the second body must cover the first one and to define the trend direction.

Star

The Star lay-out is represented by a little body that precedes a big size body. It can have four representations: morning star, evening star, doji star and shooting star.

The Morning Star

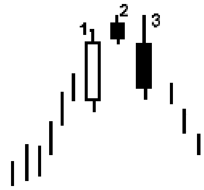
It shows the beginning of an upward trend. It is composed of three bodies: the first is a black one, followed by a small sized body, and in the third day a white colored body.



The Evening Star

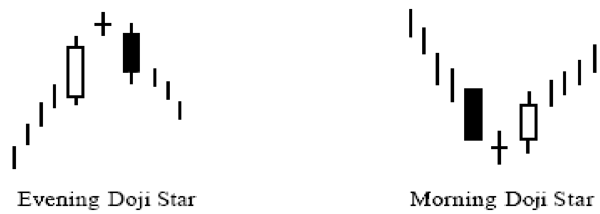
It shows the beginning of an heir trend. It is composed also of three bodies, the first is a white colored one, and the others are black. Besides, it must be accomplished also three conditions:

- to exist a gap between the first body and the second one;
- the third body must close more lower than the closing of the first body;
- to exist a smaller volume in the first day of transaction than in the third day.



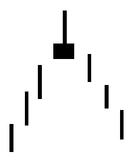
The Morning & The Evening Doji Star

It is met when it appears a Doji sign situated above the transaction ceiling price from the day before on a bullish market (the evening doji star) meaning the end of the upward trend, or when appears a Doji sign situated below the floor price from the day before (the morning doji star) meaning the end of the heir trend.



The Shooting Star

It is a configuration made of a little body (white or black) with a long wick up, showing the change of the upward trend. The signal of changing trend it is more powerful if between configuration body and the others bodies exists a gap.



Regarding the patterns, these can be identified by closely watching the charts for a bigger period of time.

The Head-Shoulders" Pattern

It signalizes a future descendent trend for a specific share. The chart has three tops, the central one being higher than the extremes, which have about the same height.

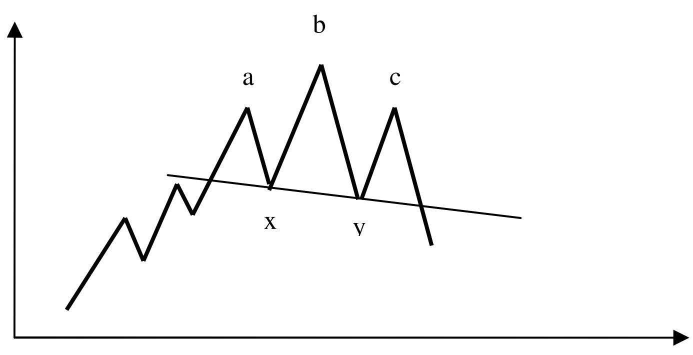


Fig. 1: The "Head-Shoulders" pattern

a – left shoulder; b – head; c – right shoulder.

The signal for changing the trend is the line of the “neck” that unifies a minim of the left shoulder (x) with a minim of the head (y).

The Double Bottom pattern

It is contrary tot the Head-Shoulder model and signalizes an ascending trend for the share. The chart has a “W” shape, with two minimum values recorded in a period of a few weeks, with a maxim level inserted between them.

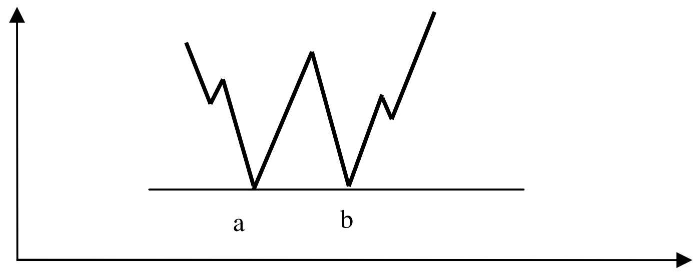


Fig. 2: The Double Bottom Pattern

The increasing trend is more powerful if the second minim is smaller than the first one, because the uninitiated panicked investors will exit the market.

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