Bulletin of the *Transilvania* University of Braşov • Vol. 6 (55) •No. 2 - 2013
Series V: Economic Sciences

ELEMENTS OF STOCK MARKET ANALYSIS

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Abstract: *The paper represents a starting point in the presentation of the two types of stock/market analysis: the fundamental analysis and the technical analysis. The fundamental analysis consist in the assessment of the financial and economic status of the company together with the context and macroeconomic environment where it activates. The technical analysis deals with the demand and supply of securities and the evolution of their trend on the market, using a range of graphics and charts to illustrate the market tendencies for the quick identification of the best moments to buy or sell.*

Key words: *fundamental analysis, technical analysis, volume analysis, investor.*

1. Introduction

Everyone cannot beat the market…simply because everyone is the market. But that does not preclude the possibility that some investors, utilizing more sophisticated approaches than the public at large, can earn above average returns on their investments. The first step in building a successful investment strategy is to learn as much as possible about where in general are headed.

Game theorists call the stock market a *positive sum game* because in the long run the market rises and in aggregate, all invertors make money. An old Wall Street adage goes, *don't tell me what to buy, tell me when to buy it.* In fact, what and when are two sides of the same coin- both essential to a successful investment strategy.

2. Fundamental analysis

Fundamental analysis presumes security prices are based on the intrinsic value of the underlying company. The fundamentalist believes that with time, stocks will move up to minimize the disparity between their present value and their perceived intrinsic value. Thus, fundamental analysis presumes the future prospects of a security are best analyzed through a proper assessment of the intrinsic value of the underlying company.

In pursuit of value, the fundamentalist collects, analyzes, and models company information, including earnings, assets, liabilities, sales, revenue, and other information required to evaluate the company. Assumptions of the fundamentalist include a belief that markets are not completely efficient and that all necessary information is available to the public, but the company may not always be efficiently priced. Overall, fundamentalists are concerned with what the price should be according to their valuation models.

A turning point in the popularity of technical analysis occurred in the mid-

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1930s. The Securities Exchange Act of 1934 created the Securities and Exchange Commission, which was broadly empowered to legislate and regulate the industry. Any attempts to manipulate the market now met with swift and harsh penalties. These reforms provided much needed regulation of the markets and regulation of publicly traded companies. In 1934, about the time of these reforms, Graham and Dodd at Columbia University released *Security Analysis,* now considered the Bible of fundamental analysis. The approach promised that adequate returns and safety could be achieved via a thorough analysis of the underlying company. Through such analysis, they argued that one could identify the “intrinsic value,” or true worth, of a company. Graham and Dodd discounted the importance of the short and intermediate movements of the markets. Instead, they advocated owning stocks as long-term investments, not in timing the market. [1]

While price can be observed with certainty, no one can ever be sure what constitutes true value. Although it may be difficult to determine current value, in the light of hindsight it is clear that price does tend to revolve around it. Several indicators have been developed which purport to measure value.

Dividend Yield is calculated by dividing the indicated rate for the next twelve months by current price. In the last century common stocks have provided an average annual dividend yield of about 4,5% ranging from a low to a high of 8%. When yields are very low stock price are high and frequently overvalued. When the marketplace is rife with pessimism, investors demand a much higher than normal dividend yield to induce them to buy stocks. This indicator is a relatively poor predicator of shorter-term price trends, but a forecaster of long-term trends.

Price/Dividend ratio measures the number of dollars the market is willing to pay for one dollar of dividends. In reality the dividend yield and the Price/dividend ratio are identical, one is merely the reciprocal of other. For example, a yield of 4% is comparable to a Price/Dividend ratio of 25.

Price/Earnings ratio is cal calculated by dividing current price by the latest 12 months earnings per share. Dividend yields and P/E ratios are highly correlated since they both relate a measure of company performance to the same variable- the price of a stock. Dividends to have one notable advantage: stability. Earnings fluctuate seasonally. Company management seek to moderate these fluctuations by maintaining a dividend payout proportioned to the long run prospects of the company. Distributing cold cash to stockholders requires a hard economic decision- once paid out is irretrievable.

In the long run earnings mean nothing to stockholders unless they are ultimately paid out in dividends. A company can go on exclusively reinvesting earnings in future growth only so long. Price/Earnings ratios become distorted during severe economic contractions. Under normal conditions a persistent decline in prices relative to earnings results in a falling P/E. A low Price/Earnings ratio is generally bullish.

Book Value is calculated by adding up all of a company assets, subtracting all of its liabilities and dividing by the number of common shares outstanding. If the price of a stock is far below its book value per share, the stock is considered undervalued and should be purchased. When the Price/ Book value is high, a stock may be significantly overvalued and should be sold. If a company has a high asset value but never earns any money nor pays any dividends, it is worth very little to the stockholders. [2]

3. Technical analysis

Technical analysis is the study of the market through its creators, the investors. Therefore, the focus of technical analysis is the behavior and motivations of investors observed primarily through their own actions. It is imperfect people who determine market prices, not highly perfected valuation models. However, the technician does not deny that the pursuit of value is a primary source of market movement. Yet, the technical perspective deems that market price is formed by the collective opinions of market participants pursuing value. Thus, in the mind of a technician, price is less about company facts and more about investors' feelings and perceptions concerning those facts.[3]

In the exchange markets, prices are determined by what one party is willing to pay and another is willing to accept. Therefore, price is ultimately the end result of a battle between the forces of supply and demand, manifested through the actions and behaviors of investors.

Price represents all that is known, feared, and hoped for by the market. It is through the diagnostics of price, volume, and other technical metrics formed by the actions and sentiments of market participants that the technician gauges stock performance.

The technician's objective is to develop an understanding of the behavioral forces producing price (such as supply and demand). The core aspects of the technician include believing that the markets are efficient at discounting even future developments, price moves through trends, investors are both logical and emotional creatures, and past behaviors tend to repeat themselves more so when enough time has elapsed that the behaviors have been forgotten.

The modern father of technical analysis is considered to be none other than Charles H. Dow, the founder of *The Wall Street Journal*. Dow began his career as a financial reporter in the 1870s, a time when equities were not the dominant investment vehicle. Financial information about common stocks was scarce, and the information available often was unreliable. Much of the knowledge about the underlying companies was limited to people "in the know" who frequently used that knowledge to manipulate stock prices. Dow used his bird's-eye position as a member of the New York Stock Exchange to change much of this by introducing a newsletter called *Customers' Afternoon Letter*. If investors knew how stocks were performing, they might be able to predict the actions of the overall economy. These ideas gave rise to Dow Theory, commonly regarded as the bedrock of modern technical analysis. In 1894, Dow created what is now called the Dow Jones Transportation Average from nine railroad companies. In 1896 he created its more popular companion, the Dow Jones Industrial Average, composed of 12 industrial stocks.

A string of individual price bars drawn in sequence creates the chart's trend. A price bar contains six key pieces of information: the open, the high, the low, the close, the change, and the range.

The open - The opening value is the first trade of the day. It represents the position clients want to be in at the beginning of the day. After the investors have time to review the markets overnight, the open represents the desired position of investors to begin the day.

The high - The high is the highest point the stock traded during the session. The high is the furthest point the bulls were able to advance the stock higher before sellers regained control to push the stock back down. The high represents a stronghold for sellers and a resistance area to buyers. There is one exception. When the stock closes on the high, it did not encounter any real resistance from the sellers. The buyers just ran out of time.

The low is the lowest point the stock traded during the session. The low is the furthest point the bears were able to force down the stock before buyers regained control to push the stock up. The low represents an area where enough supportive demand existed to prevent the price from moving lower

The close is the last price agreed between buyers and sellers ending the trading session. It is perhaps the most important piece of information of all financial data. The close is the market's final evaluation. The close represents investors' sentiments and convictions of investors at the end of the day when the books are closed. The closing price is the first price the majority of investors desire to know.

The change is the difference from close to close. This is the difference of the closing value one day versus the closing value the next day. When this difference is positive, it tells us that demand is outweighing supply. When this difference is negative, it tells us that supply is increasing beyond demand.

The range is the spread of values within which the stock traded throughout the day. The range spans between the bar's highest point and the same bar's lowest point. It is measured from the top of the bar, where resistance set in, to the low, where support came in. The wider the range, typically, the easier it is for the forces of supply and demand to move the stock price.[1]

4. Volume analysis

When securities change hands on the auction markets, the volume of shares bought always matches the volume sold on executed orders. When the price rises, the upward movement reflects that demand has exceeded supply or that buyers are in control. Even the most casual investor knows what matters about a stock-price. You are taught early on to buy low and sell high. The evening news tracks the major indexes as if they were horse races, so most people naturally believe that a higher close is good news and a lower close is bad; yet you are left none the wiser about navigating your own finances by knowing this daily result. Price surely matters. But this is a market. Waiting for the final number on a given day or week tells you what happened but not why or, more importantly, how.

Volume as a general term describes the amount of a given tradable entity (for example, shares of stock, commodities contracts, options contracts) exchanged between buyers and sellers. If volume is high, more units of a security have changed ownership. If it is low, then fewer units have changed hands.

There are several categories of volume to examine:

Market volume (trading volume) - The number of shares exchanged between buyers and sellers during a given period of time, typically a day.

Total volume (exchange volume) - Describes the entire volume of all issues traded on an exchange, such as the New York Stock Exchange.

Index volume - The cumulative sum of the volume traded in all of the components of an index, such as the Dow or the S&P 500.

Total trades - How many transactions occurred within the trading session.

Dollar volume - The value of all the shares traded over the course of the trading session.

Float - The number of shares owned by the public available for exchange.

Average volume (typical volume) - Computed as a moving average, which will smooth the peaks and valleys to show a more representative view of typical volume over a predefined period of time. Average volume enables the technician to discern whether volume is increasing or decreasing relative to the past. In short, is the mall fuller this Saturday compared to every

Saturday in the past year - or relatively empty?

A trade produces only two pieces of information: the price and price's neglected sibling, volume. Perhaps the least appreciated piece of the puzzle, volume represents fertile ground for technical analysis. Proficiency in volume analysis is a rare skill. Properly understood, though, volume analysis can provide its practitioner with the power to peer deeply into market mechanics. Volume is a literal illustration of the power behind the forces of supply and demand. Volume is understood as the validation of price, the source of liquidity, the substantiation of information, the fulfillment of convictions, the revelation of divergent opinions, the fuel of the market, the proponent of truth, and the energy behind the velocity of money.

Volume plays a critical role in securities analysis. Volume answers the deceptively simple question, "How many?" As discussed previously, volume is the quantity of shares traded. But the key is that the more shares exchanged at a given price, the more that volume confirms price. More traders "vote," in the parlance of Graham, for that price at that point in time. In the same way, low volume tells a different story. If fewer investors participate at a given price point, more doubt is cast on the validity of that price. The more people participating in a price movement, the more the price movement is validated. For the technical trader, volume dictates the quality of the price.

The law of cause and effect states that the extent of a market move is directly proportional to the amount of its cause. For volume analysts, that means that the gap between the number of shares offered by sellers versus those bided on by buyers is the cause of price change.

Market volume is money searching for a place to reside. There are only two reasons investors choose to invest. One is to seize on an opportunity. The other is to reduce the risk of being positioned incorrectly.

Volume can provide essential information by indicating a price change before it happens. The message is extremely telling, particularly when the volume reaches extreme levels. Volume offer far superior information than price alone could ever provide.

Volume cannot be properly understood without price any more than price can be adequately assessed without volume. Independently, both price and volume convey only vague market information. However, when examined together, they provide indications of supply and demand that neither could provide independently. Some serious misconceptions among investors exist about how the market functions. According to common perception, the market should be fairly easy to understand. Why does the market go up? The market goes up because there are more buyers than sellers, and the market goes down because there are more sellers than buyers. [1]

5. Comparison between fundamental and technical analysis

A fundamentalist might identify a good valuation point of a stock based on his analysis of the company. The technician observing the actions of market participants through the stock's movements might identify the same price level as a potential support level. What is support? Support is demand (buyers). So where does this demand come from? Often, it originates from the fundamentalist's determination of value. In this way, the two perspectives often yield the same conclusion using different methodologies. One opinion is based on the search for intrinsic value, whereas the other is shaped by extrinsic behavior.

Whatever one's vantage point, price goes up for only one reason: Demand has

surpassed available supply. When the available supply outweighs demand, the price must go back down. Volume is the scale weighing these forces of supply and demand that produce price. In this way, volume ultimately reflects the ebb and flow of money into and out of the market or the security. Volume analysis provides a superior view of the market's internal structure that other forms of analysis do not offer.

Whether one uses the term intrinsic, fundamental, or theoretical value, value is just that: theoretical. Value represents someone's opinion. Price is truth. Investors' ever-changing beliefs are priced into the stock via their actions. All new data, analysis, and events are constantly and efficiently "priced into the stock" as investors respond to these events and speculate about their consequences. As a result, all fundamental data, economic data, and any combination of financial or economic ratios lag price. The fundamentals cannot help one determine when to buy or sell. Only volume and technically manipulated data (such as derivatives of price) have been demonstrated to lead price.[1]

Most fundamental analysts have access and analyze the same information. Such basic measures as current assets ratios, historical sales and earnings growth rates, dividend payout ratio, yields, PER are common place and overused. In most cases any predictive value they might have is incorporated into current stock prices so rapidly as to eliminate their usefulness. If any of these measures do have residual value, it is probably only at the bullish extreme. Companies which appear to be exceptionally undervalued might be isolated for further analysis and then purchased if the undervaluation is confirmed by other factors.

While the essence of fundamental analysis is the determination of value, technical analysis is based upon two very different premises. First, that subjective estimates of value are simply imprecise and are thus irrelevant. Second, that future price fluctuations may be predicted through analyses of historical price movements, supply and demand conditions.

Stock price changes can be considered to be caused by two phenomena. One is a properly recognized change in value. The second factor is a more or less erroneous change in investors perception of value. Since value is based upon what will occur in the future (future earnings), it would seem at first glance that with each passing moment the marketplace should develop a newer perception on it. But in fact an infinite future always lies ahead and value always retains its basic elusiveness: it never becomes easier to estimate merely with the passage of time. If price is rarely the equal of true value, it follows that price may as often be drifting away from value as toward it. In some instances the ability of investors to correctly perceive value is worsening, not improving. Technical analysis identifies the existence of such periods and the investor groups who are more likely to be wrong in correctly equating price to value.

Investors are creatures of emotion; they remember the price they paid for a stock and this can influence their decisions of when and at what price to sell it. Investors also tend to allow themselves to be caught up in the market atmosphere of the moment, be it greed, panic, fear or apathy. All those fundamentalists looking at the same factors at the same time tend to move prices to extremes. Thus prices tend to move in trends and trend following has a valid theoretical basis. The reason for great sustained bull market trends is plethora of optimistic earnings reports which emerge after an economic upswing is in progress. Investors tend to jump aboard those issues exhibiting the greatest fundamental improvement and bid them up to greater

extremes. Such situations offer profit opportunities to technicians trading with prevailing price trends. At the same time they ultimately spell down, both for the fundamentalists who bought stocks at the high and for the not inconsiderable number of technicians who bought earlier for purely technical reason but then stay with the fundamentals at the peak.

The most fundamental error of the average individual investor makes is to fail to properly diversify his portfolio. Most of the volatility of a one stock portfolio consists of the volatility associated with only that one company. There is a substantial risk that the stock will even move in the same direction as the market, let alone move in the same direction as the market as we would expect on the basis of the stocks historical volatility. As additional stocks are added, the portfolio will tend to act more and more like the general market.

It is also important to bear in mind that the indicated degree of diversification applies to the common stock portion of an investors portfolio regardless of how small a portion of an investors portfolio regardless of how small a portion of his total assets are invested in common stocks. For example, an investor with half of his assets in bonds, one-quarter invested in real estate and the balance in common stock should still hold a minimum of 20 stocks in his portfolio. [2]

6. Conclusions:

Graham recommends the defensive investor to follow the rules below when selecting the stock: the adequate dimension, solid financial status, uninterrupted payment of dividends over the last 20 years, no loss during the last 10 years, the increase by at least one third of the profit per stock over the last 10 years, the price no higher than 15 times the average profit for the last 3 years. [4]

To make a decision for transacting, one must keep the financial information of the company in sight and use it as the basis for the intrinsic evaluation of the stocks to buy when the price is below that margin and there are perspectives for growth in the future. In the same time, one must take into account the evolution of the stock price in the past and to use elements of technical analysis to determine the best moment to enter or exit the market. In this manner, combining the two types of stock market analysis, it is possible to determine what bonds to buy and when. In what the time horizon is concerned, the fundamental analysis can be used, especially for the long term investments, while the technical analysis will be preferred for the short time investments, because it provides information about the current price evolution. Nevertheless, the author proposes to take into account both methods, making the transactions when they offer similar information. The investors should be ready when, due to a major downfall, the market is under evaluated and to be cautious and limit their acquisitions through stop orders after a long period of growth.

The risk is within us. If we over estimate our ability to really understand an investment or to come out clean after a dramatic price period, it doesn't matter what our portfolio contains or what happens on the market. In the end, the financial risk does not lie in what types of investments have we done, but in what type of investor we are. For this, there are five types of investor profiles: very conservative, conservative or moderate, balanced, growth oriented and dynamic or aggressive. Practically, the last two are suitable for a stock market broker.

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