SECURITY ANALYSIS AND PORTFOLO MANAGEMNT: UNIT-3

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INTRODUCTION TO FUNDAMENTAL ANALYSIS

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1. Technical Analysis
2. Efficient Market Hypothesis (b)
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TECHNICAL ANALYSIS

- Technical Analysis can be defined as an art and science of forecasting future prices based on an examination of the past price movements.
- Technical analysis is not astrology for predicting prices. Technical analysis is based on analyzing current demand-supply of commodities, stocks, indices, futures or any tradable instrument.

- Technical analysis involve putting stock information like prices, volumes and open interest on a chart and applying various patterns and indicators to it in order to assess the future price movements.
- The time frame in which technical analysis is applied may range from intraday (1-minute, 5-minutes, 10-minutes, 15-minutes, 30-minutes or hourly), daily, weekly or monthly price data to many years.

There are essentially two methods of analyzing investment opportunities in the security market viz fundamental analysis and technical analysis.

You can use fundamental information like financial and non-financial aspects of the company or technical information which ignores fundamentals and focuses on actual price movements.

The basis of Technical Analysis What makes Technical Analysis an effective tool to analyze price behavior is explained by following theories given by Charles Dow:

- **Price discounts everything**
- **Price movements are not totally random**
- **What is more important than why**

Price discounts everything

“Each price represents a momentary consensus of value of all market participants – large commercial interests and small speculators, fundamental researchers, technicians and gamblers- at the moment of transaction” – Dr Alexander Elder

10 Technical analysts believe that the current price fully reflects all the possible material information which could affect the price. The market price reflects the sum knowledge of all participants, including traders, investors, portfolio managers, buy-side analysts, sell-side analysts, market strategist, technical analysts, fundamental analysts and many others. It would be folly to disagree with the price set by such an impressive array of people with impeccable credentials. Technical analysis looks at the price and what it has done in the past and assumes it will perform similarly in future under similar circumstances. Technical analysis looks at the price and assumes that it will perform in the same way as done in the past under similar circumstances in future

Price movements are not totally random

- Technical analysis is a trend following system. Most technicians acknowledge that hundreds of years of price charts have shown us one basic truth – prices move in trends.

- If prices were always random, it would be extremely difficult to make money using technical analysis.

- A technician believes that it is possible to identify a trend, invest or trade based on the trend and make money as the trend unfolds. Because technical analysis can be applied to many different time frames, it is possible to spot both short-term and long-term trends.

“What” is more important than “Why”

- It is said that “A technical analyst knows the price of everything, but the value of nothing”.
- Technical analysts are mainly concerned with two things:

1.The current price

2. The history of the price movement

- All of you will agree that the value of any asset is only what someone is willing to pay for it. Who needs to know why? By focusing just on price and nothing else, technical analysis represents a direct approach.
- The price is the final result of the fight between the forces of supply and demand for any tradable instrument. The objective of analysis is to forecast the direction of the future price.
- Fundamentalists are concerned with why the price is what it is. For technicians, the why portion of the equation is too broad and many times the fundamental reasons given are highly suspect.

Technicians believe it is best to concentrate on what and never mind why. Why did the price go up? It is simple, more buyers (demand) than sellers (supply). The principles of technical analysis are universally applicable. The principles of support, resistance, trend, trading range and other aspects can be applied to any chart. Technical analysis can be used for any time horizon; for any marketable instrument like stocks, futures and commodities, fi xed-income securities, forex, etc

Top-down Technical Analysis

Technical analysis uses top-down approach for investing. For each stock, an investor would analyze long-term and short-term charts. First of all you will consider the overall market, most probably the index. If the broader market were considered to be in bullish mode, analysis would proceed to a selection of sector charts. Those sectors that show the most promise would be selected for individual stock analysis. Once the sector list is narrowed to 3-5 industry groups, individual stock selection can begin. With a selection of 10-20 stock charts from each industry, a selection of 3-5 most promising stocks in each group can be made. How many stocks or industry groups make the fi nal cut will depend on the strictness of the criteria set forth. Under this scenario, we would be left with 9-12 stocks from which to choose. These stocks could even be broken down further to fi nd 3-4 best amongst the rest in the lot.

Technical Analysis: The basic assumptions The fi eld of technical analysis is based on three assumptions:

1. The market discounts everything.
2. Price moves in trends.
3. History tends to repeat itself.

The market discounts everything

Technical analysis is criticized for considering only prices and ignoring the fundamental analysis of the company, economy etc. Technical analysis assumes that, at any given time, a stock's price reflects everything that has or could affect the company - including fundamental factors. The market is driven by mass psychology and pulses with the flow of human emotions.

Emotions may respond rapidly to extreme events, but normally change gradually over time. It is believed that the company's fundamentals, along with broader economic factors and market psychology, are all priced into the stock, removing the need to actually consider these factors separately. This only leaves the analysis of price movement, which technical theory views as a product of the supply and demand for a particular stock in the market.

- Price moves in trends “Trade with the trend” is the basic logic behind technical analysis.
- Once a trend has been established, the future price movement is more likely to be in the same direction as the trend than to be against it.
- Technical analysts frame strategies based on this assumption only.

History tends to repeat itself

People have been using charts and patterns for several decades to demonstrate patterns in price movements that often repeat themselves. The repetitive nature of price movements 12 is attributed to market psychology; in other words, market participants tend to provide a consistent reaction to similar market stimuli over time. Technical analysis uses chart patterns to analyze market movements and understand trends.

Importance of Technical Analysis

- **Not Just for stocks**

Technical analysis has universal applicability. It can be applied to any financial instrument - stocks, futures and commodities, fixed-income securities, forex, etc

- **Focus on price**

Fundamental developments are followed by price movements. By focusing only on price action, technicians focus on the future. The price pattern is considered as a leading indicator and generally leads the economy by 6 to 9 months. To track the market, it makes sense to look directly at the price movements. More often than not, change is a subtle beast. Even though the market is prone to sudden unexpected reactions, hints usually develop before significant movements. You should refer to periods of accumulation as evidence of an impending advance and periods of distribution as evidence of an impending decline.

- **Supply, demand, and price action**

Technicians make use of high, low and closing prices to analyze the price action of a stock. A good analysis can be made only when all the above information is present Separately, these will not be able to tell much. However, taken together, the open, high, low and close reflect forces of supply and demand.

Support and resistance

Charting is a technique used in analysis of support and resistance level. These are trading range in which the prices move for an extended period of time, saying that forces of demand and supply are deadlocked.

Pictorial price history

A price chart offers most valuable information that facilitates reading historical account of a security's price movement over a period of time. Charts are much easier to read than a table of numbers. On most stock charts, volume bars are displayed at the bottom. With this historical picture, it is easy to identify the following:

- Market reactions before and after important events
- Past and present volatility
- Historical volume or trading levels
- Relative strength of the stock versus the index.

Assist with entry point

- Technical analysis helps in tracking a proper entry point. Fundamental analysis is used to decide what to buy and technical analysis is used to decide when to buy.
- Timings in this context play a very important role in performance. Technical analysis can help spot demand (support) and supply (resistance) levels as well as breakouts.
- Checking out for a breakout above resistance or buying near support levels can improve returns. First of all you should analyze stock's price history. If a stock selected by you was great for the last three years has traded flat for those three years, it would appear that market has a different opinion. If a stock has already advanced significantly, it may be prudent to wait for a pullback. Or, if the stock is trending lower, it might pay to wait for buying interest and a trend reversal.

Efficient Market Hypothesis

Introduction

- An efficient capital market is a market that is efficient in processing information.
- In other words, the market **quickly** and **correctly** adjusts to new information.
- In an information of efficient market, the prices of securities observed at any time are based on “correct” evaluation of all information available at that time.
- Therefore, in an efficient market, prices immediately and fully reflect available information.

Definitio

- *"In an efficient market, competition among the many intelligent participants leads to a situation where, at any point in time, actual prices of individual securities already reflect the effects of information based both on events that have already occurred and on events which, as of now, the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value."*

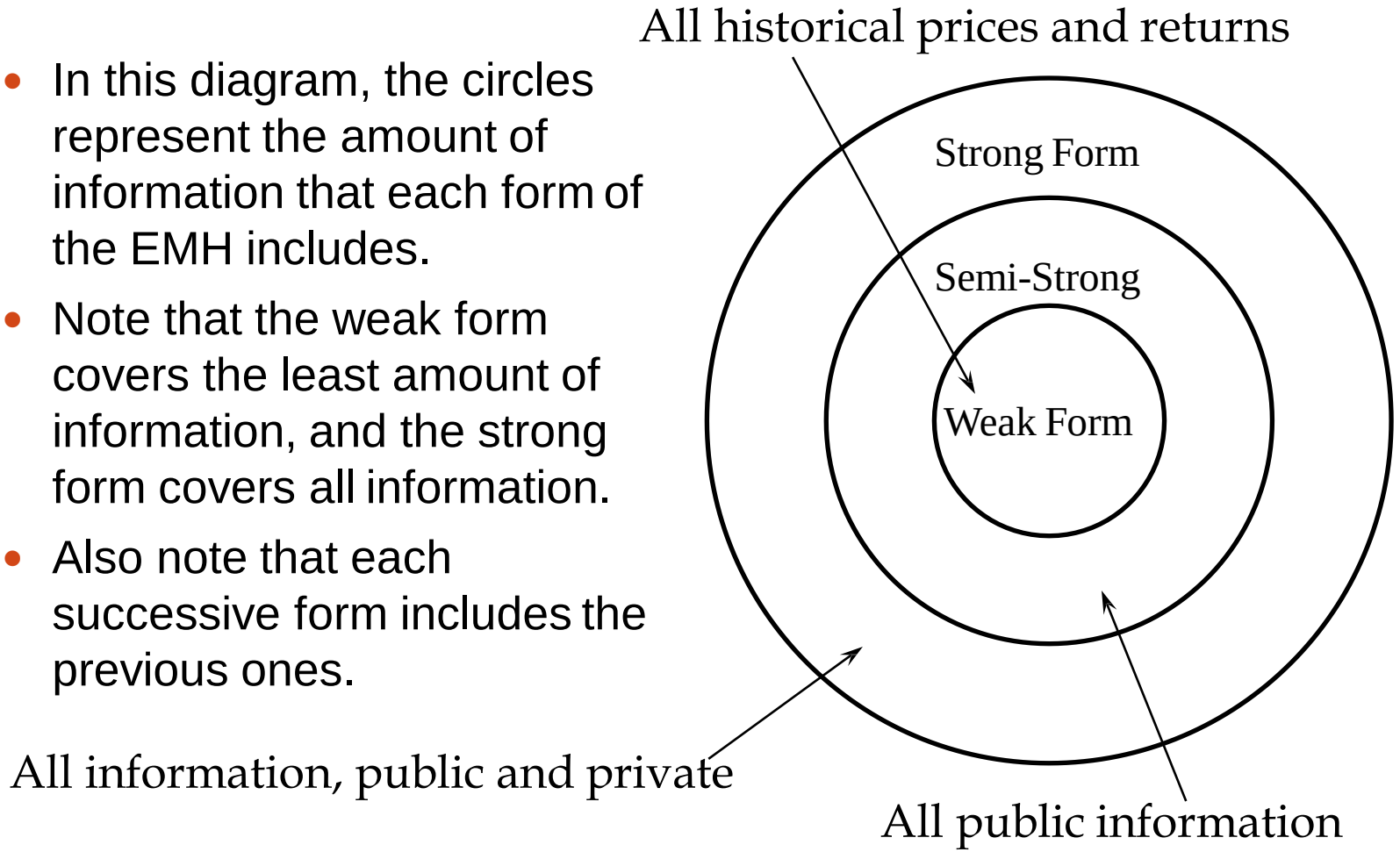
- Professor Eugene Fama,

The Efficient Markets Hypothesis

- The Efficient Markets Hypothesis (EMH) is made up of three progressively stronger forms:
  - Weak Form
  - Semi-strong Form
  - Strong Form

The EMH Graphically

- In this diagram, the circles represent the amount of information that each form of the EMH includes.
- Note that the weak form covers the least amount of information, and the strong form covers all information.
- Also note that each successive form includes the previous ones.



The Weak Form

- The weak form of the EMH says that past prices, volume, and other market statistics provide no information that can be used to predict future prices.
- If stock price changes are random, then past prices cannot be used to forecast future prices.
- Price changes should be random because it is information that drives these changes, and information arrives randomly.

- Prices should change very quickly and to the correct level when new information arrives (see next slide).
- This form of the EMH, if correct, repudiates technical analysis.
- Most research supports the notion that the markets are weak form efficient

The Semi-strong Form

- The semi-strong form says that prices fully reflect all publicly available information and expectations about the future.
- This suggests that prices adjust very rapidly to new information, and that old information cannot be used to earn superior returns.
- The semi-strong form, if correct, repudiates fundamental analysis.
- Most studies find that the markets are reasonably efficient in this sense, but the evidence is somewhat mixed.

The Strong Form

- The strong form says that prices fully reflect all information, whether publicly available or not.
- Even the knowledge of material, non-public information cannot be used to earn superior results.
- Most studies have found that the markets are not efficient in this sense.

DIVIDEND CAPITALISATION MODEL

Gordon’s Model

The **Gordon’s Model**, given by Myron Gordon, also supports the doctrine that dividends are relevant to the share prices of a firm. Here the **Dividend Capitalization Model** is used to study the effects of dividend policy on a stock price of the firm.

Gordon’s Model assumes that the investors are risk averse i.e. not willing to take risks and prefers certain returns to uncertain returns. Therefore, they put a premium on a certain return and a discount on the uncertain returns. The investors prefer current dividends to avoid risk; here the risk is the possibility of not getting the returns from the investments.

But in case, the company retains the earnings; then the investors can expect a dividend in future. But the future dividends are uncertain with respect to the amount as well as the time, i.e. how much and when the dividends will be received. Thus, an investor would discount the future dividends, i.e. puts less importance on it as compared to the current dividends.

According to the Gordon's Model, the market value of the share is equal to the present value of future dividends. It is represented as:
P = [E (1-b)] / Ke-br

Where, P = price of a share
E = Earnings per share
b = retention ratio
1-b = proportion of earnings distributed as dividends
Ke = capitalization rate
Br = growth rate

Assumptions of Gordon's Model

1.The firm is an all-equity firm; only the retained earnings are used to finance the investments, no external source of financing is used.
2.The rate of return (r) and cost of capital (K) are constant.
3.The life of a firm is indefinite.
4.Retention ratio once decided remains constant.
5.Growth rate is constant (g = br)
6.Cost of Capital is greater than br

Criticism of Gordon's Model

- It is assumed that firm's investment opportunities are financed only through the retained earnings and no external financing viz. Debt or equity is raised. Thus, the investment policy or the dividend policy or both can be sub-optimal.
- The Gordon's Model is only applicable to all equity firms. It is assumed that the rate of returns is constant, but, however, it decreases with more and more investments.

It is assumed that the cost of capital (K) remains constant but, however, it is not realistic in the real life situations, as it ignores the business risk, which has a direct impact on the firm’s value.

Thus, Gordon model posits that the dividend plays an important role in determining the share price of the firm.

Walter’s Model

According to the **Walter’s Model**, given by prof. James E. Walter, the dividends are relevant and have a bearing on the firm’s share prices. Also, the investment policy cannot be separated from the dividend policy since both are interlinked.

Walter’s Model shows the clear relationship between the return on investments or internal rate of return (r) and the cost of capital (K). The choice of an appropriate dividend policy affects the overall value of the firm. The efficiency of dividend policy can be shown through a relationship between returns and the cost.

- If **r>K,** the firm should retain the earnings because it possesses better investment opportunities and can gain more than what the shareholder can by re-investing. The firms with more returns than a cost are called the “Growth firms” and have a zero payout ratio.
- If **r<K,** the firm should pay all its earnings to the shareholders in the form of dividends, because they have better investment opportunities than a firm. Here the payout ratio is 100%.

- If **r=K,** the firm's dividend policy has no effect on the firm's value. Here the firm is indifferent towards how much is to be retained and how much is to be distributed among the shareholders. The payout ratio can vary from zero to 100.

Assumptions of Walter's Model

- All the financing is done through the retained earnings; no external financing is used.
- The rate of return (r) and the cost of capital (K) remain constant irrespective of any changes in the investments.
- All the earnings are either retained or distributed completely among the shareholders.
- The earnings per share (EPS) and Dividend per share (DPS) remains constant.
- The firm has a perpetual life.

Criticism of Walter’s Model

1.It is assumed that the investment opportunities of the firm are financed through the retained earnings and no external financing such as debt, or equity is used. In such a case either the investment policy or the dividend policy or both will be below the standards.

2.The Walter’s Model is only applicable to all equity firms. Also, it is assumed that the rate of return (r) is constant, but, however, it decreases with more investments.

3.It is assumed that the cost of capital (K) remains constant, but, however, it is not realistic since it ignores the business risk of the firm, that has a direct impact on the firm's value.

Note: Here, the cost of capital (K) = Cost of equity (Ke), because no external source of financing is used.

What is the Earnings Multiplier?

The earnings multiplier, or the price-to-earnings ratio, is a method used to compare a company's current share price to its earnings per share (EPS).

It is used as a valuation tool to compare the share price of a company with that of similar companies. The earnings multiplier also shows how much an investor will be paying for one dollar earned by the company.

The earnings multiplier can be used to assess a company's financial health. The price-to-earnings ratio of several companies can be compared while making investment decisions.

The earnings multiplier calculates the return an investor will get against the invested amount. Furthermore, a company's share price depends on the future value of the company issuing the shares. It also shows the performance of a company compared to its industry counterparts.

Formula of the Earnings Multiplier

The earnings multiplier can be calculated using the following formula:

Earnings Multiplier or P/E Ratio = Price Per Share/ Earnings Per Share

Where:

- **Price per share** is the prevalent market price of a company's stock. It is the price at which the company's shares are trading in the exchange market.
- **Earnings per share** is the net profits earned by the company per share outstanding in the stock market.

Thank You!!