3 INVESTMENTS IN EQUITY

LEARNING OBJECTIVE

After studying this chapter, you should be able to:

- Understand the difference between owned fund and borrowed funds
- Describe different types of equity shares
- Understand the structure and calculation of stock market Indices
- Learn trading and settlement process of equity shares
- Define different terms used in the equity market
- Understand the various equity valuation models used

KEY TERMS

This chapter features these terms which you should strive to do more research about:

Redeemable Preference Share	Bonus Share	Right Issue
Treasury Stock	Stock Split	SENSEX
NIFTY	P/E Ratio	EPS
Dividend Yield	Market Capitalization	Market Order
Limit Order	OTC	Book Building
Dividend Payout Ratio	Dividend Discounting Model	Fundamental Analysis
Security Market line	Capital Market Line	CAPM
Gordon Model	H Model	P/B Ratio

CONCEPT OF EQUITY AND DEBT

A firm can raise two types of funds: owned funds (simply called equity) and borrowed funds (called debt). A firm sells shares to acquire equity funds. An equity claim represents ownership. Owners of common stock are the owners of the company that issues the stock. Equity claims are paid after all debt obligations are met. This residual status means that owners reap the rewards when a business is successful but may sustain substantial losses when the operation is unsuccessful. This does not mean that lenders/creditors may not sustain losses. But the owner has a riskier position than the creditor. Correspondingly, the owner may earn a greater return for bearing more risk. These may be partly paid-up or fully paid-up.

Definition of a Stock

Stock is a part/contribution/share in the ownership of a company. Ownership of a share is ownership of a percentage of a company. A share is the smallest unit representing the ownership in a company.

A stock is represented by a stock certificate. This piece of paper is the proof of our ownership. In today's computer age, we won't actually get to see this document because the depository firm such as NSDL keeps these records electronically, which is also known as holding shares in a dematerialized form. This is done to make the shares easier to trade. In the past, when a person wanted to sell his or her shares, that person physically took the certificates down to the brokerage which is not the case now anymore.

Being a shareholder of a public company does not mean that we have a say in the day-to-day running of the business. Instead, one vote per share to elect the board of directors at annual meetings is the extent to which we have a say in the company. The management of the company is supposed to increase the value of the firm for shareholders. If this doesn't happen, the shareholders can vote to have the management removed.

Profits are sometimes paid out in the form of dividends. The more shares one own, the larger the portion of the profits he or she get. Our claim on assets is only relevant if a company goes bankrupt. In case of liquidation, one will receive what's left after all the creditors have been paid.

Another extremely important feature of stock is its limited liability, which means that, as an owner of a stock, we are not personally liable if the company is not able to pay its debts. Other companies such as partnerships are set up so that if the partnership goes bankrupt the creditors can come after the partners personally and sell off their house, car, furniture, etc. Owning stock means that no matter what, the maximum value one can lose is the value of his or her investment.

What is in a share?

Every business has its assets and liabilities. Assets are like the machinery, buildings, land, furniture, stocks, cash, investments, etc. Liabilities are what the company owes other people, such as bank loans, creditors etc. Excess of these two is the capital of the organization. So in equation we can say:

Assets – Liabilities = Capital

Capital is the amount the owner has in the business. As the business grows and makes profits, it adds to its capital.

This capital is subdivided into shares (or stocks). So if a company's capital is Rs 10 crore (Rs 100 million), it could be divided into 1 crore (10 million) shares of Rs 10 each.

Part of this capital, or some of the shares, is held by the people who started the business, called the promoters. The other shares are held by investors. These investors could be people like you and me or mutual funds and other institutional investors.

Benefit from Investing in Shares

Investors invest their money in the shares of a company in the anticipation of return on their invested capital. As one acquire more stock, our ownership stake in the company becomes greater. Shares can provide regular income through payment of dividends and provide capital growth through increases in share prices. If the company makes profits, then they returns dividend to shareholders. Returns of shareholders consist of dividend and capital gains (or loss) by selling their shares. Whether we say shares, equity or stock, it all means the same thing. So there are following ways to get benefits from buying shares:

1. **Earning a Dividend**

   Usually, a company distributes to its shareholders a part of the profit it earns as dividend. For example:

   A company may have earned a profit of Rs 1 crore (Rs 10 million) in 2007-08. It keeps half that amount within the company. This will be utilized on buying new machinery or more raw materials or even reduce its borrowing from the bank. It distributes the other half as dividend.

2. **Selling the shares at a higher rate than what you bought them**

   As the company expands and grows, acquires more assets and makes more profit, the value of its business increases. This, in turn, drives up the value of the stock. So when you sell, you will receive a premium over (more than) what you paid. This is known as capital gain and this is the main reason why people invest in stocks. They want to make money by selling the stock at a profit.

3. **Getting Bonus Shares:** Free shares are given to you and are called bonus shares.

4. **Getting Right Shares**

   Existing shareholders can also get the right to purchase further shares of the company in a concessional rate in compare to others.

   So you must have understood now that owning a share means owning a share in the business. When you invest in stocks, you do not invest in the market. You invest in the equity shares in a company. That makes you a shareholder or part owner in the company. Since you own part of the assets of the company, you are entitled to the profits those assets generate and bear the loss if any.

   So, for example, if you own 100 shares of ACCL, you own a very small part -- since ACCL has millions of shares - of the company. You own a share of its assets, its liabilities, its profits, its losses, and so on, therefore, holding shares means having a share of a business without the headache of managing it.

For instance, your ACCL shares, will rise in value if the company makes good profits, or may do badly if people stop building houses and demand for cement falls.

The advantages of Equity are:

- You do not have to pay back your investors even if your company goes bankrupt
- Business assets do not have to be pledged as collateral to obtain equity
- Businesses with sufficient equity will look better to lenders, investors, etc.
- Your business will have more cash available because it will not have to make debt payments

Disadvantages of Equity are:

- You will have to relinquish ownership and a share of your businesses profit to other investors
- Other owners may have different ideas than yours on how businesses should be run
- Payments to investors in C-corporations are not tax deductible

Features of Equity and Debt: It is necessary to understand the differences between debt and equity financing. Some of the key features are listed below.

Table 3.1: Features of Equity and Debt

Debt	Equity
Must be repaid or refinanced.	Can usually be kept permanently.
Requires regular interest payments. Company must generate cash flow to pay.	No payment requirements. May receive dividends, but only out of retained earnings.
Collateral assets must usually be available.	No collateral required.

Debt providers are conservative. They cannot share any upside or profits. Therefore, they want to eliminate all possible loss or downside risks.	Equity providers are aggressive. They can accept downside risks because they fully share the upside as well.
Interest payments are tax deductible.	Dividend payments are not tax deductible.
Debt has little or no impact on control of the company.	Equity requires shared control of the company and may impose restrictions.
Debt allows leverage of company profits.	Shareholders share the company profits.

In conclusion Debt and Equity Financing should not be seen as substitutes for each other. Instead, they are very different in nature and complement each other. Debt needs to be repaid in cash. Equity needs to be rewarded with long-term profits. Depending on individual circumstances and opportunities the trick for each investment is to find the best mix of both.

TYPES OF SHARES

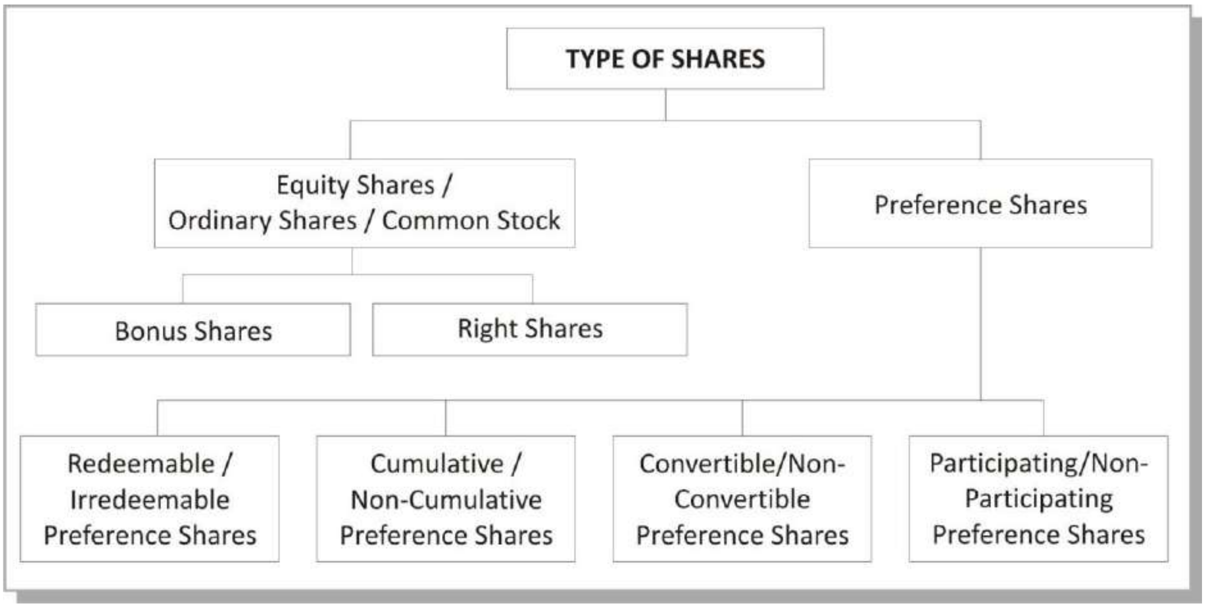


Exhibit 3.1: Detailed Classification of Shares

There are two main types of stocks:

1. Equity Shares
2. Preference Shares

1. Equity Shares or Ordinary Shares (Common Stock)

Equity shares are shares whose profit sharing depends on the profit making of the company. If the company makes huge profits, there dividend sharing will be high else it will be low. Dividends to Equity Share Holders is optional and at company's discretion. After all the obligations of the company are over, the equity share holders get their share. Investors who buy them become part owners in the issuing company and have the right to vote and to receive any profits through dividend payments.

When people talk about stocks they are usually referring to this type. In fact, the majority of stock is issued is in this form. Common shares represent ownership in a company and a claim (dividends) on a portion of profits.

These shares are called common or ordinary because these have only common or ordinary rights in regard to income and redemption of share of capital (no special rights). When a company is formed, it first issues equity shares to the promoters then outsiders as per the need financing needs. Investors get one vote per share to elect the board members, who oversee the major decisions made by management.

2. **Preference Shares (Preferred Stock)**

   Owners of these shares are called Preference shareholders and capital contributed by them is called Preference share capital. Preference shares have preference over ordinary shares in terms of payment of dividend and repayment of capital if the company is wound up (but still after debt holder). These may be issued with or without a maturity period. Preference shares holders are get a fixed rate dividend.

   Preferred stock represents some degree of ownership in a company but usually doesn't come with the same voting rights. (This may vary depending on the company.) With preference shares, investors are usually guaranteed a fixed dividend. This is different than common stock, which has variable dividends that are never guaranteed. Another advantage is that in the event of liquidation, preferred shareholders are paid off before the common shareholder (but still after debt holders).

Types of Preference Shares

Redeemable Preference Shares: They are shares with maturity and may be repurchased by the issuing company at some time in the future, usually at the discretion of the company. Generally, the company must pay the full face value of the shares to redeem them.

Irredeemable Preference Shares are shares without any maturity. Companies act does not permit issuance of irredeemable preference shares.

Cumulative and Non-cumulative Preference Shares: According to payment of dividend, preference shares may be cumulative preference shares in which unpaid dividends accumulate are payable in the future. Non-cumulative preference shares are the shares in which dividend in arrears do not accumulate. Cumulative preference shares carry a right that, if the dividend cannot be paid in one year, it will be carried forward to successive years or and may be paid at some later stage when the company has sufficient profits to pay them.

Participating Preference Shares: Participating Preference Shares are given priority rights to profit. A certain level of dividend is paid each year, but shareholders may become entitled to extra dividends resulting from profits after ordinary shareholders have received their dividends.

Convertible Preference Shares: Convertible Preference Shares are convertible to ordinary shares in a specified ratio on a certain date or within a certain period either compulsorily or more commonly at the option of the holder.

Table 3.2: Difference between Preference Shares and Equity Shares according to their features

Preference Shares	Equity Shares
Claims: On assets and income (dividend) ahead of Equity Shareholders.	Residual claim on assets and income as a legal owner of the company.
Dividend: Fixed rate dividend with cumulative and non-cumulative option	Dividends to Equity Share holders is optional and at company's discretion. The dividend rate depends on the company and profits.
Redemption: Both redeemable with maturity date and irredeemable without maturity date options	No maturity date or redemption option
Conversion: Convertible (to equity) options are also available.	Conversion option is not available.

Types of Equity Shares

Bonus Shares

A bonus share is a free share of stock given to current shareholders in a company, based upon the number of shares that the shareholder already owns. Bonus shares are new ordinary shares issued to existing shareholders in some proportion to the number of existing shares held. Bonus shares are issued to the existing shareholders by converting free reserves or share premium account to equity capital without taking any consideration from investors. These are additional shares given without any cost to existing shareholders. Bonus shares do not directly affect a company's performance. Bonus issue has following major effects.

1. Share capital gets increased according to the bonus issue ratio.
2. Liquidity in the stock increases.
3. Effective Earnings per Share (EPS), Book Value and other per share values stand reduced.
4. Markets take the action usually as a favorable act.
5. Market price gets adjusted on issue of bonus shares.
6. Accumulated profits get reduced.

These shares are issued in a certain proportion to the existing holding. So, a 2 for 1 bonus would mean you get two additional shares free of cost for the one share you hold in the company.

If you hold 100 shares of a company and a 2:1 bonus offer is declared, you get 200 shares free. That means your total holding of shares in that company will now be 300 instead of 100 at no cost to you.

Right Shares

They are similar to a bonus issue except that there is a price to be paid to exercise the right to the new shares being offered and the issues need not necessarily involve equity shares. Rights issues are often made to existing shareholders on a favorable basis relative to the current share price and in proportion to the numbers of shares held. By the right issue existing shareholders have a right to subscribe for the shares which are offered by the company after initial allotment until some special right is reserved for any other person by special resolution in this respect. Rights issues are made to allow more capital to be raised by the company from its shareholders.

Example: A right issue of one for five at Rs. 75/- would allow the holder of five Rs. 100/- shares to obtain an extra share by paying the Rs. 75/-.

During the period of rights trading, the theoretical value of the rights being traded is determined by taking the cost of the new share away from the average value of the five shares that will exist after the end of rights trading. It can be shown by taking our earlier example:

Total cost of the six (5 + 1) shares = (100 $\times 5$) + 75 = Rs. 575

Average cost the share: 575/6 = Rs. 95.84So value of the right will be approximately Rs. 20.84 (95.84-75).

Example: BATA company offers a rights issue of one for four for Rs. 100/-. The present price of the stock is Rs. 200/-. If the share price does not change during the time of trading prior to the exercise date, what is the price of a share after the rights are taken up?

Solution:

Value of shares held (4 $\times$ Rs. 200/-)	= Rs. 800/-
Value of one rights share (1 $\times$ Rs. 100/-)	= Rs. 100/-
Total	= Rs. 900/-

The investor will now be getting 5 shares at Rs. 900/-. Hence the new price of a share (ex-rights) will be Rs. 180/- (900/5)

Renounceable Rights

They offer the rights which may be bought or sold separately on the stock exchange. An offer issued by a company to shareholders to purchase more shares of the company's stock (usually at a discount). Renounceable rights have a value and can be traded. Stockholders that have received renounceable rights have three choices of what to do with the rights.

1. They can act on the rights and buy more shares as per the particulars of the rights issue;
2. They can sell them on the market; or
3. They can pass on taking advantage of their rights.

Warrants

A warrant is a call option to buy a stated number of shares. Warrants are distributed to stock holders in lieu of a stock or cash dividend or sold directly as a new security issue. It sweetens the offering. These are long term rights that offer holders the right to purchase equity shares in a company at a fixed price (usually higher than the market price) within a specified period. Warrants are in the nature of options on stocks.

Example: A debenture or a bond may be sold by the company along with warrants.

These are sweeteners issued by the companies along with fixed income securities. They give the holder the long term rights to buy the shares of the company at a given specified price (usually higher than the market price) on or before a predetermined date. Warrants are in the nature of options on stocks. They are sometimes traded on the stock exchanges.

Stock Split

Stock split is a corporate action that increases the number of the corporation's outstanding shares by dividing each share, which in turn diminishes its price. A stock split or stock divide increases the number of shares in a public company. The price is adjusted such that the before and after market capitalization of the company remains the same and dilution does not occur. Just like, the value of the Rs. 100/- note does not change if it is exchanged for two Rs.50/- notes.

Example: A company with 1000 shares of stock priced at Rs.50/- per share. The market capitalization is 1000 × 50, or Rs. 50,000/-. The company splits its stock 2-for-1. There are now 2000 shares of stock and each shareholder holds twice as many shares. The price of each share is adjusted to Rs.25/-. The market capitalization is 2000 × Rs.25/- = Rs. 50,000/-, the same as before the split

Ratios of *2-for-1*, *3-for-1*, and *3-for-2* splits are the most common, but any ratio is possible. Splits of 4-for-3, 5-for-2, and 5-for-4 are used, though less frequently. It is also possible to have a reverse stock split: a 1-for-10 means that for every ten shares you own, you get one share.

Rationale for a Stock Split

It is often claimed that stock splits, in and of themselves, lead to higher stock prices; research, however, does not bear this out. What is true is that stock splits are usually initiated after a large run up in share price.

So, if the value of the stock does not change, what motivates a company to split its stock? The first reason is psychology. The primary motive is to make shares seem more affordable to small investors even though the underlying value of the company has not changed. Splitting the stock brings the share price down to a more "attractive" level. The effect here is purely psychological and entices new investors.

In any case, stock splits do increase the liquidity of a stock, there are more buyers and sellers for 10 shares at Rs. 10/- than 1 share at Rs. 100/-.

It also gives existing shareholders the feeling that they suddenly have more shares than they did before, and of course, if the prices rise, they have more stock to trade.

Another reason, and arguably a more logical one, for splitting a stock is to increase a stock's liquidity, which increases with the stock's number of outstanding shares. By splitting shares a lower bid/ask spread is often achieved, thereby increasing liquidity.

Another psychological effect is many investors believe that a stock split will result in an increased share price and purchase the stock Others also thinks that the management of a company, by initiating a stock split, impliedly signaling its confidence in the future prospects of the company. Thus the share price of the company rises.

Par Value: Par value is the face value of a share. Equity shares have a par value which is nothing but a nominal stated value. New shares cannot be sold for less than par value. If equity shares are sold for more than par, the excess is transferred to Share premium account.

These terms are used to describe the make-up of a company's share capital:

- **Authorized Capital** is the maximum amount of capital a company can issue.
- **Issued Capital** is that portion of authorized capital which has actually been issued by the company.
- **Subscribed Capital** is the amount of money that the prospective shareholders actually agree to invest in return for their shares. The subscribed capital can quite often be less than the issued capital.
- **Paid-up Capital** is the issued capital which has been fully or partly paid-up by the shareholders;
- **Uncalled Capital** is that part of the issued capital on which the company has not requested payment;
- **Reserve Capital** is that part of the share capital that the company has decided will only be called up if the company is being wound up and for the purposes of it being wound up;
- **Share Premium** is the excess paid above a share's nominal value. This excess must be recorded separately in the company's financial records in a 'share premium account'

Other Common Terms Used in Equity Market

Bid is the price that the market participants are willing to pay.

Blue Chip Stocks: Stock in well-established, financially-sound, and stable company that has demonstrated its ability to pay dividends in both good and bad times.

Day-Trading: Traders who take positions and liquidate them prior to the close of the same trading day.

Green Shoe Option: Under the green shoe option the amount of the shares to be cover-allotted can be up to 15% of the issue size out of the shares borrowed from the promoters which allows a company to retain the amount of oversubscription in case of a fresh public issue. It is the option of allocating shares in excess of the shares included in the public issue and operating a post-listing price stabilizing mechanism through stabilizing agent.

Market Maker: A person who provides both buy and sell quotes for a security.

Mark-To-Market: The daily adjustment of margin accounts to reflect profits and losses.

Odd Lot: A lot of share that is less than the marketable lot is called an odd lot.

Open Order: An order to buy or sell a security that remains in effect until it is either canceled by the customer or executed.

Open Interest: The cumulative number of either long or short contracts which have been initiated on an exchange, and have not been offset.

Over the Counter (OTC): A security which is not traded on an exchange, usually due to an inability to meet listing requirements. For such securities, brokers/dealers negotiate directly with one another over computer networks and by phone.

Pay-in: When securities and funds are given by brokers to the Clearing House.

Pay-out: The day when the Clearing House gives securities and funds to the brokers.

Position: An interest in the market, either long or short, in the form of open contracts.

Rally: An upward movement of prices following a decline, the opposite of a reaction.

Short Selling: The selling of a security that the seller does not own, or any sale that is completed by the delivery of a security borrowed by the seller.

Stag: A person, who invests in the primary market, i.e. buys shares only in IPOs and sells on allotment.

Stock Split: The division of company's existing stock into more shares. In a 2-for-1 split, each stockholder would receive an additional share for each share formerly held.

Stop Loss Order: An order placed with a broker to buy or sell when a certain price is reached.

Tick: Smallest increment of price movement possible.

Trend: The general direction of the market.

Volume: The number of shares or contracts traded in a security or an entire market during a given period.

Differential Pricing is the issue of shares at different prices in (i) public and rights issues and (ii) firm allotment category and net offer to public.

Underwriting: In case the issuer company is making an issue of securities to the public through book-building, the entire net offer (i.e. 100% and 75% respectively) should be compulsorily underwritten by the syndicate members/book runners.

Qualified Institutional Buyers (QIB) means

1. A public financial institution (PFI)
2. Banks
3. Mutual Funds
4. Foreign institutional investors (FIIs) registered with the SEBI
5. Multilateral and bilateral development finance institutions
6. Venture capital funds (VCFs) registered with SEBI
7. State industrial development corporations (SIDCs)
8. Insurance companies registered with IRDA
9. Provident funds with minimum corpus of Rs. 25 crore
10. Pension funds with minimum corpus of Rs. 25 crore.

Qualified Institutional Placement (QIP)

It has been introduced with effect from May, 2006, to make the Indian Capital market more competitive and efficient, as an additional mode for listed companies to raise funds from the domestic market. The QIP would not be a part of preferential issues of capital. A listed company can raise funds up to five times of its net worth through qualified institutional placement. A maximum of 50% of the issue size can be allotted to one single QIB/allot tee.

Bull: Bull is a particular kind of investor who purchases shares in the expectation that the market price of that company's share will increase. S/he sells her/his stock at a higher price and pockets the profit. Simply put, the bulls buy at a lower price and sell at a higher price.

For instance, if a bull buys a company's share at Rs 100, s/he would prefer selling the same stock at Rs 120 or any price higher than Rs 100 to make a profit.

Bear: Bull's counterpart is the bear. It is a market in which prices are declining or falling.

A bear sells stocks first that s/he owns or borrows from, say a friend, and then purchases the same quantity of shares at a lower price. If a bear sells first, say 100 shares of Ranbaxy at Rs 400, and later purchases the same number of shares at Rs. 375, then her/his profit is Rs. 25 (400-375) per share. This way s/he has got back the 100 shares of Ranbaxy and simultaneously made a profit of Rs. 2500. The shares can later be returned to the bear's friend if s/he had borrowed the same from a friend.

There are bears in the market that sell shares first without actually owning them unlike in the above example. Such selling is called naked short selling or going short on a stock. Bears are happy in a falling market. While individual investors can engage in selling first and buying later (also referred to as short selling), mutual funds and foreign institutional investors are not allowed this luxury in India yet.

Market efficiency is present where the current prices of securities fully reflect available information about that security in an instantaneous and unbiased manner.

Features of an efficient market:

- The investor cannot predict price.
- Prices are set relative to current information.
- The expected return is the weighted average returns of a series of possible outcomes. The weighted average may be none of the possible outcomes.

Convertible security is a financial instrument that can be converted into a different security of the same company under specific conditions is referred to as convertible security.

Convertible Debenture is a debenture which is convertible partly or fully, into equity shares. The option of conversion is either at the discretion of investor i.e. optional or compulsory (if it is specified)

Earnings per Share (EPS)

Earnings per Share (EPS) is calculated by dividing a company's net profit/ earnings by the currently outstanding shares of the company.

$$\text{Earning Per Share (EPS)} = \frac{\text{Total Earnings or Net Profit}}{\text{Number of Outstanding Shares}}$$

Example: ABC LTD. has one million outstanding shares and earned a profit of 1 million, then EPS is Re. 1/-.

This gives you a number you can use to compare the earnings of companies since it is unlikely any two companies will have the same number of shares outstanding. It is also known as EPS; the portion of a company's profit allocated to each outstanding share of common stock. EPS serves as an indicator of a company's profitability.

EPS can be of:

- Trailing EPS – last year's numbers and the only actual EPS
- Current EPS – this year's numbers, which are still projections
- Forward EPS – future numbers, which are obviously projections

Price Earnings Ratio (P/E)

The P/E ratio is the price of the stock to the company's per share earnings. This ratio facilitates the comparison of firms. It indicates the amount that the market is willing to pay for each rupee of earnings.

$$\text{Price Earning Ratio}\left(\frac{P}{E}\right) = \frac{\text{Market Value Share}}{\text{Earning Per Share (EPS)}}$$

If market price of a share is Rs. 45/-, and EPS is Rs. 5, then P/E is 9 (45/5).

P/E ratio is most often used as a relative measure, with investment decisions being made according to the level of a company's P/E ratio relative to that of other companies in the same sector or market.

Example: A P/E of 14 means that the stock is selling for 14 times the firm's earnings. Generally firms in the same industry tend to have similar P/E.

Dividend Yield gives a percentage return received from cash dividends on holding a stock.

Formula:

$$\text{Dividend Yield} = \frac{\text{Dividend Per Share}}{\text{Market Price Per Share}}$$

Example: NIPS Ltd. paid dividends Rs. 5/- per share and whose shares market price Rs. 20/-. Then dividend yield will be:

$$0.25 = [5/20] * 100$$

Dividend Payout Ratio measures what a company's pays out to investors in the form of dividends. One calculates this ratio by dividing dividends per share by the Earnings Per Share. Formula for Dividend Pay-Out Ratio:

$$\text{Dividend Pay} - \text{Out Ratio (DPR)} = \frac{\text{Dividend Per Share}}{\text{Earning Per Share (EPS)}}$$

Example: If a company paid out Rs.2/- per share in annual dividends and had Rs.3/- in EPS, the DPR would be 66%. 0.66

Plough Back Ratio (Retention Ratio): It tells us what percentage of earnings has been retained and reinvested into the business. It can also be calculated as "1- Dividend Payout Ratio"

$$\text{Plough Back Ratio} = \frac{\text{Residual Profit}}{\text{Net Profit}}$$

Book Value: The book value per share is simply the net worth of the company, which is equal to paid up equity capital plus reserves and surplus divided by the number of outstanding equity shares.

Example: If the net worth of Alok Industries Ltd. is 50 million and the number of outstanding equity shares of Alok Industries Ltd. is 2 million, the book value per share works out to Rs. 25.00 $\left(= \frac{\text{Rs. 50 million}}{2} \right)$

Liquidation Value

The liquidation value per share is equal to:

(Realized value- Creditors)/Number of outstanding Equity Shares

Assume that ABC Ltd would realize Rs. 50 million from the liquidation of its assets and pay Rs. 15 million to its creditors and preference shareholders in full settlement of their claims. If the number of outstanding equity shares of ABC Ltd. is 2 million, the liquidation value per share works out to:

(Rs. 50 million – Rs. 15 million) / 2 million = Rs. 17.50

The measure of liquidation value seems to make sense only for firms which are 'better dead than alive' – such firms are not viable and economic values cannot be established for them.

Return on Equity (ROE)

ROE, tells investors how much profit a company earned in comparison to the total amount of shareholder equity on the balance sheet. It is a measure of how well a company used reinvested earnings to generate. It is used as a general indication of the company's efficiency. In other words how much profit it is able to generate given the resources provided by its stockholders. The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

ROE is expressed as a percentage and calculated as:

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Shareholder's Equity}}$$

If ABC Ltd. had a net worth of 100 million and it made 5 million profits, than it would be earning 5% on equity: $\frac{5.00}{100.00} = 0.05$

Net income is for the full fiscal year (before dividends paid to common stock holders but after dividends to preferred stock.) Shareholder's equity does not include preferred shares. Investors usually look for companies with returns on equity that are high and growing.

Growing Rate: Growth rate of a company may be calculated by using ROE as follows:

Growth Rate = Return on Equity $\times$ Plough Back Ratio

Example: NIPS Ltd. having 1 lakh number of shares of Rs. 10/- per share and earned a net profit of Rs. 5 lakh during the last year and paid 10% dividend. Book value per share is Rs. 20/-.

So total amount of dividend paid = Face value of shares $\times$ % of dividend $\times$ No. of shares = 10 $\times$ 0.1 $\times$ 100000 = Rs. 1,00,000/-.

Now we calculate Plough Back ratio:

$$\text{Plough Back Ratio} = \frac{\text{Residual Profit}}{\text{Net Profit}}$$

Amount of residual profit after paying dividend is Rs. 4 lakh (5,00,000 -1,00,000). So Plough Back Ratio will be = Residual profit/ Net Profit

Dividend Payout Ratio

$$\text{Dividend Payout Ratio} = \frac{\text{Total Divident}}{\text{Net Profit}}$$

Dividend Payout Ratio = Total Dividend/ Net Profit $= \frac{100000}{500000} = 0.20$

As Plough Back Ratio is also:

Plough Back Ratio = 1 – Dividend Payout Ratio

So Plough Back Ratio here = 1-0.20= 0.80

Book Value or Net worth of the company = Rs. 20 $\times$ 1,00,000 = Rs. 20,00,000/-.

Return on Equity (ROE) = $\frac{500000}{2000000}$ = 0.25 = 0.25 or 25%

Growth rate of earnings = R.O.E $\times$ Plough Back Ratio = 0.25 $\times$ 0.8 = 0.20 or 20%

Price to Book Value Ratio

The book value per share is the net worth of the company (total assets minus total liabilities) divided by the number of equity shares issued. The market price of the share, in contrast, is mainly determined by how the market assesses its earning power.

The PBV ratio (Price to Book Value) has always drawn the attention of investors.

PBV is valuation ratio used by investors which compares a stock's per-share price (market value) to its book value (shareholders' equity). The price-to-book value is expressed as a multiple (i.e. how many times a company's stock is trading per share compared to the company's book value per share), is an indication of how much shareholders are paying for the net assets of a company.

Formula:

$$\text{Price / Book Value Ratio} = \frac{\text{Stock Price Per Share}}{\text{Shareholder's Equity Per Share}}$$

Components:

$$\frac{\text{Price}}{\text{Book Value}}\text{Ratio} = \frac{67.44}{\frac{4682.8}{247.1}} = \frac{67.44}{18.95} = 3.56$$

The amount in the numerator, Rs. 67.44, is the closing stock price for ABC Ltd. as of March 31,2018. In the denominator, the book value per share is calculated by dividing the reported shareholders' equity (balance sheet) by the number of common shares outstanding (balance sheet) to obtain the Rs. 18.95 book value per-share figure. By simply dividing, the equation gives us the price/book value ratio indicating that, as of ABC Ltd yearend, its stock was trading at 3.56-times the company's book value of Rs.18.95 per share.

Variations

A conservative alternative to using a company's reported shareholders' equity (book value) figure would be to deduct a company's intangible assets from its reported shareholders' equity to arrive at a tangible shareholders' equity (tangible book value) amount. For example, ABC Ltd F.Y. 2018balance sheet reports goodwill (in millions) of Rs. 2,428.80 and net intangible assets of Rs.756.60, which total Rs. 3,185.40. If we deduct these intangible assets from its shareholders' equity of Rs. 4,682.80 of the same date, ABC Ltd is left with a significantly reduced tangible shareholders' equity of Rs. 1,497.40. Factoring this amount into our equation, the company has a book value per share of only Rs. Rs.6.04, and the price/book value ratio then skyrockets to 11.2 times.

Commentary

If a company's stock price (market value) is lower than its book value, it can indicate one of two possibilities. The first scenario is that the stock is being unfairly or incorrectly undervalued by investors because of some transitory circumstance and represents an attractive buying opportunity at a bargain price. That's the way value investors think. It is assumed that the company's positive fundamentals are still in place and will eventually lift it to a much higher price level.

On the other hand, if the market's low opinion and valuation of the company are correct (the way growth investors think), at least over the foreseeable future, as a stock investment, it will be perceived at its worst as a losing proposition and at its best as being a stagnant investment.

Some analysts feel that because a company's assets are recorded at historical cost that its book value is of limited use. Outside the United States, some countries' accounting standards allow for the revaluation of the property, plant and equipment components of fixed assets in accordance with prescribed adjustments for inflation. Depending on the age of these assets and their physical location, the difference between current market value and book value can be substantial, and most likely favor the former with a much higher value than the latter.

Also, intellectual property, particularly as we progress at a fast pace into the so-called "information age", is difficult to assess in terms of value. Book value may well grossly undervalue these kinds of assets, both tangible and intangible.

The P/B ratio therefore has its shortcomings but is still widely used as a valuation metric. It is probably more relevant for use by investors looking at capital-intensive or finance-related businesses, such as banks.

In terms of general usage, it appears that the price-to-earnings (P/E) ratio is firmly entrenched as the valuation of choice by the investment community.

Market Capitalization

Market capitalization is a measurement of economic size equal to the share price times the number of shares outstanding of a public company. As owning stock represents owning the company, including all its assets, capitalization could represent the public opinion of a company's net worth and is determining factor in stock valuation.

Market cap or market capitalization is simply the worth of a company in terms of its shares! To put it in a simple way, if you were to buy all the shares of a particular company, what is the amount you would have to pay? That amount is called the “market capitalization”! To calculate the market cap of a particular company, simply multiply the “current share price” by the “number of shares issued by the company”!

Example, a company that trades at Rs.100 per share and has 1 million shares outstanding has a lesser value (Market Capitalization) than a company that trades at Rs.50 that has 5 million shares outstanding (Rs.100 x 1 million = Rs.100 million while Rs.50 x 5 million = Rs.250 million).

The market capitalization of the Global Top 100 has increased by 15% in 2018. This compares with a 11.5% increase in the MSCI World Index. Top 100 companies market cap increased by 15% compared to 31 March 2017.The US is the largest contributor of the Top 100, gaining $1,259bn to total $12,187bn.China, the second largest contributor to the Top 100, saw an increase of 57% when compared to the Top 100 companies at 31 March 2017, totaling $2,822bn.**Treasury Stock** is known as Buy back of Shares, where a corporation purchases its own stock

Benefits to Company

Adds demand for the company’s shares, which could boost the company share price

Reduces the number of free float shares, consequently increasing earnings per share

Can be a financial instrument in giving returns to shareholders

Generates capital gain for the company - if the company’s management is confident of future performance and believes that the company’s share price is significantly lower than its fundamental value; share resale in a proper time will generate profitable returns.

Benefits to Shareholders

Increases earnings per share after the listed company repurchases shares, its number of free float shares will decline. The repurchased shares will not be counted in earnings per share calculation. The higher earnings per share may accordingly boost share prices, which may create the opportunity for shareholders to profit from stock trading without paying taxes.

Increases dividends per share because repurchased shares are not included in dividend per share calculation.

STOCK MARKETS AND INDICES

Stock Exchange means anybody of individuals, whether incorporated or not, constituted for the purpose of regulating or controlling the business of buying, selling or dealing in securities.

Stock Exchange indexes are invaluable for correctly reading the financial markets. Like a barometer, these indexes enable investors to gauge general sentiments about stocks and shares at any particular time. Statistically, indexes measure the movement in an underlying trend.

The SEBI regulates the activities of the stock exchanges and the intermediaries. The Bombay Stock Exchange (BSE) is the oldest exchange in the country and also in Asia, established in the year 1875. NSE was established in 1992. At present there are 23 operative stock exchanges in India.

Benefits & Needs: The stock market exists in any country primarily for the purpose of assisting corporations and governments to raise the capital they need to fund their operations. Also investors influence the national economy by contributing to its capital base and also receive a return on their investments. The stock market is an ever-visible barometer of a nation’s economic vitality.

Some clichés about investing in stock markets

1. Shares have the capacity to produce both income and capital growth.
2. Over the long-term they will outperform all other investments.

3. Shares provide a hedge against inflation.
4. Shares can yield tax advantages through dividend imputation.
5. Shares can be bought with lower transaction costs (brokerage, duty etc.) than managed investments and property.
6. Shares can be more readily bought and sold than property holdings.
7. Shares have the capacity to provide good dividend yields that grow over time.

Major Stock Market Indices

Initial Price		Final Price	Shares (Mln)	Initial Value of Outstanding Stock	Final Value of Outstanding Stock	Price Relative
A	Rs.25	Rs. 30	20	Rs.500m	Rs.600m	120
B	Rs.100	90	1	Rs.100m	Rs.90m	90
	Rs.125	Rs. 120		Rs.600M	Rs.690M	210

Price weighted index = (Rs. 120/125) × 100 = 96

Value weighted index = (Rs.690/600) × 100 = 115

Equal weighted index = (Rs.210/200) × 100 = 105

BSE-Sensex

The Bombay Stock Exchange Sensitive Index, popularly called the Sensex reflects the movement of 30 sensitive shares from specified and non-specified groups. The index for any trading day reflects the aggregate market value of the sample of 30 shares on that day in relation to the average market value of these shares in the base year 1978-79. This means that this is a value-weighted index. The base value is 100. From September 1, 2003, Sensex is being constructed on the basis of free float market cap rather than full market cap.

Nifty

The S&P CNX Nifty, popularly called Nifty, is arguably the most rigorously constructed stock market index in India. The Nifty reflects the price movement of 50 stocks selected on the basis of market cap and liquidity (impact cost). The base period for Nifty is the close of price on November 3, 1995. The base value of the index has been set at 1000. It is market-cap weighted index. But it is going to free float very soon.

Participants in the Equity Market

There are many participants in the securities markets and those are:

- Regulators: Like Company Law Board (CLB), Reserve Bank of India (RBI), Securities Exchange Board of India (SEBI), Department of Economic Affairs (DEA), Department of Company Affairs (DCA), etc.
- Stock Exchanges:
- Listed Securities
- Depositories
- Brokers
- FIIs
- Merchant Bankers or Investment Bankers
- Mutual Funds
- Custodians
- Registrars
- Underwriters
- Bankers to an issue
- Debenture trustees

- Venture capital funds.
- Credit rating agencies

Listing on the Stock market

There are two markets in which investors can acquire company securities:

- Primary Market is the new share issue market. It is a process by which a company raises its initial capital from the public and obtains listing on the stock exchanges.
- Secondary Market is the day-to-day activity of the stock exchange, the actual market place provided by the stock exchanges where, on behalf of investors, stock-brokers can buy or sell existing securities. By providing a method of buying and selling of securities, it overcomes the basic mismatch between the needs of savers/investors that provide new money and the requirements of capital raisers/borrowers.

Table 3.3: Primary Market V/s Secondary Market

Primary Market	Secondary Market
Securities are created by means of an IPO	Investor's trade previously–issued securities without the involvement of the issuing-companies. It is an equity trading avenue.
Company raises initial capital from the public by listing in the stock exchange first time.	When people are referring to secondary market when they talk about the stock market.
Offered to general public for raising capital.	Secondary market could be either auction or dealer market. While stock exchange is the part of an auction market, Over-the-Counter (OTC) is a part of the dealer market.

Corporate Actions for Shares

Public Issue

A company may raise equity capital in the primary market from the public by making issue of shares called public issue. It involves sale of securities to the public at large. All listed companies are eligible to make public issue of equity shares/securities convertible into, or exchangeable with equity shares at a later date on the condition that the issue size in terms of the aggregate of the proposed issue and all previous issues made in the same financial year does not exceed the 5 times its pre-issue net-worth as per the audited balance sheet of the last financial year.

Procedure of Public Issue in India

- Approval of the board of directors
- Approval of shareholders
- Appointment of the lead manager
- Due diligence by the lead manager
- Appointment of other intermediaries like co-managers, advisors, underwriters, bankers, brokers, and registrars
- Preparation of the draft prospectus
- Filing of the draft prospectus with SEBI
- Application for listing in stock exchanges
- Filing of the prospectus (after any modifications suggested by SEBI) with the Registrar of Companies
- Promotion of the issue
- Printing and distribution of applications
- Statutory announcement
- Collection of applications

- Processing of applications
- Determination of the liability of underwriters
- Finalization of allotment
- Giving of demat credit (or dispatch of share certificates) and refund orders
- Listing of the issue

1. Initial Public Offering (IPO):

Initial Public Offering (IPO) means the selling of the shares of a company, for the first time, to the public in the country's capital markets. This is done by giving to the public, shares that are either owned by the promoters of the company or by issuing new shares.

During an Initial Public Offer (IPO) the shares are given to the public at a discount on the intrinsic value of the shares and this is the reason that the investors buy shares during the Initial Public Offering (IPO) in order to make profits for themselves.

IPO in India is done through various methods like book building method, fixed price method, or a mixture of both. The method of book building has been introduced in the country in 1999 and it helps the company to find out the demand and price of its shares. A merchant banker is nominated as a book runner by the Issuer of the IPO. The company that is issuing the Initial Public Offering (IPO) decides the number of shares that it will issue and also fixes the price band of the shares. All these information are mentioned in the company's red herring prospectus.

During the company's Initial Public Offering (IPO) in India, an electronic book is opened for at least five days. During this period of time, bidding takes place which means that people who are interested in buying the shares of the company make an offer within the fixed price band. Once the book building is closed then the issuer as well as the book runner of the Initial Public Offering (IPO) evaluate the offers and then determine a fixed price. The offers for shares that fall below the fixed price are rejected. The successful bidders are then allotted the shares.

2. Private Placement: When a listed company doesn't want to go for further public issue and the objective is to raise huge capital by issuing bulk of shares to selected group of people, private placement and preferential allotment is a good option. A private placement is an issue of shares or of convertible securities by a company to a select sophisticated group of persons under Section 81 of the Companies Act, 1956, such as financial; institutions, mutual funds, venture capital funds, banks etc. which is neither a rights issue nor a public issue. This is a faster way for a company to raise equity capital. . It refers to sale of equity or equity related instruments of an unlisted company or sale of debentures of a listed or unlisted company. Presently corporate debentures in India mostly placed privately and managed by a lead arranger who is also the advisor & investment banker to the issue, Book Building mechanism is commonly used in price determination.

3. Preferential Allotment: A private placement of shares or of convertible securities by a listed company is generally known by name of preferential allotment. In short, preferential issue means allotment of equity to some selected people by a company which has its share already listed at a price which may or may not be related to the prevailing market price. The price at which a preferential allotment of shares is made should not be lower than the higher of the average of the weekly high and low of the closing prices of the shares quoted on the stock exchange during the six months period before the relevant date or during the two weeks period before the relevant date.

4. Follow on Public Offer (FPO)

A follow-on public offer (FPO) is the issuance of shares to investors by a public company that is currently listed on a stock market exchange. An FPO is a stock issue of additional shares made by a company that is already publicly listed and has gone through the IPO process. FPOs are popular methods for companies to raise additional equity capital in capital markets through an issue of stock. sA follow-on public offer (FPO) is also called further public offer. When a listed company comes out with a fresh issue of shares or makes an offer for sale to the public to raise funds it is known as FPO.

In other words, FPO is the consequent issue to the public after initial public offering (IPO). The word FPO came into news after the YES Bank announcement to raise Rs 2,000 crore through FPO and debt.

5. Offer for Sale (OFS)

Offer for sale (OFS) is a simpler method of share sale through the exchange platform for listed companies. The mechanism was first introduced by India's securities market regulator Sebi, in 2012, to make it easier for promoters of publicly-traded companies to cut their holdings and comply with the minimum public shareholding norms by June 2013. The method was largely adopted by listed companies, both state-run and private, to adhere to the Sebi order. Later, the government started using this route to divest its shareholding in public sector enterprises.

Eligibility

- Promoter(s) / promoter group entities of companies that are eligible for trading and are required to increase public shareholding to meet the minimum public shareholding requirements
- All promoters/promoter group entities of top 100 companies by market capitalization in any of the last four completed quarters, market capitalization being calculated as average market capitalization in a quarter.

6. Book Building

It is the process of optimum price discovery in which the company decides the price of the security by asking various investors about how much and at what price would they invest in the company's equity. Book building is a method of offering shares to investors in which the issue price is not fixed in advance (as is done in a fixed price offer) but is determined through a bidding process. In a book-built offer, pricing reflects revealed demand and contemporary market conditions.

The mechanism of book building works as follows:

- The Company announces the public issue giving an indicative price band which is determined in consultation with its lead merchant bankers.
- Investors interested in the issue submit the bid-cum-application form, mentioning the investor's price and volume options to syndicate members, who are on an electronic inked platform across the country. The electronic platforms of BSE and NSE are used for this purpose. When a bid is submitted, it is uploaded on the NSE/BSE system. The status of the book can be seen on the bidding terminals by investors. Investors can revise their bids any number of times before the bidding period closes.
- Once the bidding period is over; the lead manager ascertains the demand function and decides the issue price and the pattern of allocation in consultation with the issuer. Pricing is generally aimed at ensuring that there is a healthy demand overhang leading to a post-listing price that is higher than the issue price.

Table 3.4: Difference between Book Building and Public Issue

Book Building	Public Issue
Securities offered at prices above or equal to the floor prices.	Securities are offered at a fixed price in case of a public issue.
Demand can be known every day as the book is built.	Demand is known at the close of the issue.
Book building is more institutional investor driven.	Public issue is rather retail oriented.

Book Building	Public Issue
Book building is more common in developed markets.	Public issue is common in emerging markets.

Advantages of 100% Book-building:

- Time lag between pricing and listing is less.
- Issue can be completed in a single stage, unlike partial book building.
- Results in a better price discovery as institutional investors have the necessary expertise to analyze the information.
- Marketing of issue to wholesale bidders works out cheaper.
- Allows issuers to assess market demand and then fix a price band or floor price.
- Issue can be sold at the correct price, and not at a lower price, as was often done in fixed pricing earlier in order to make it attractive to retail investors.
- Gives the option to defer or scrap the issue if the discovered price is not attractive.
- Institutional investors gain an upper hand in dictating the price trend.
- Retails investors may not have all the information to judge the issue and, thus, may not be able to arrive at a correct pricing.
- With the high discretionary powers to lead managers, there is possibility of collusion between issuers and institutional investors to hype the issue to get retail participation.
- Possibility of negotiated deals happening between issuers and favored institutional clients.
- Issuers may have to sell the issue cheap due to the collective bargaining power of institutional investors.
- The high institutionalized holding may make the stock illiquid as well as volatile in case of bulk offloading

Floor Price: The lowest price a seller is willing to take for an investment. It is a limit beyond which a cost/price will not be allowed to fall.

Price Band: The issuer/issuing companies can mention a price band of 20% (cap in the price band should not exceed 20% of the floor price) in the offer document filled with the SEBI and the actual price can be determined at a later date before filling it with the Registrar of Companies (ROCs).

Table 3.5: Difference between moving price band and floor price

	Moving Price band	Floor Price
Definition	Investors can price their bids within the price band only.	Investors can bid at or above the indicated floor price.
Bids	Most come at the upper end of the price band and affect price discovery	Bids come at or just above the floor price, again affecting price discovery.
Investors	Get flexibility to bid in a wide range, and can revise bids in case the price band is moved either way.	Investors tend to bid just above the floor price, leading to under-pricing.
Issuers	Can reject bids that do not fall in the price band. Can move the price band upwards or downwards by 50% depending upon demand, leading to a better price discovery.	Have to accept all bids-below, at or above the indicated price. Have to choose one cut-off price at which to accept bids. Usually, the offer-price is fixed at the level which gets the maximum subscription, though the market may have an appetite for an even higher price.

7. Bonus Shares

As we have discussed earlier issuing of bonus shares involves capitalization of reserves as when bonus shares are issued, the reserves decline.

If authorized by its articles, a company may resolve to use any undistributed profits, or any sum credited to the company's 'share premium account' or 'capital redemption reserve' to finance an issue of wholly paid up 'bonus' shares to the members in proportion to their existing holdings. The shareholders to whom the shares are issued pay nothing. Issuing of bonus shares involves capitalization of reserves as when bonus shares are issued, the reserves decline whereas equity capital increases by the face value of bonus shares issued.

8. Buy Back

Buy-Back is a corporate action in which a company buys back its shares from the existing shareholders usually at a price higher than market price. When it buys back, the number of shares outstanding in the market reduces.

A buyback allows companies to invest in them by reducing the number of shares outstanding on the market; buybacks increase the proportion of shares a company owns. Buybacks can be carried out in two ways:

- Shareholders may be presented with a tender offer whereby they have the option to submit (or tender) a portion or all of their shares within a certain time frame and at a premium to the current market price. This premium compensates investors for tendering their shares rather than holding on to them.
- Companies buy back shares on the open market over an extended period of time.

The reasons for buy-back:

- To improve earnings per share;
- To improve return on capital, return on net worth and to enhance the long-term shareholder value;
- To provide an additional exit route to shareholders when shares are under valued or are thinly traded;
- To enhance consolidation of stake in the company;
- To prevent unwelcome takeover bids;
- To return surplus cash to shareholders;
- To achieve optimum capital structure;
- To support share price during periods of sluggish market conditions;
- To service the equity more efficiently.

9. Delisting Of Shares

A Public company grows and carries out its business utilizing public shareholding capital. Equity shareholder is at the bottom of the pyramid and takes up high risk. The primary reason to take up this risk is that the listed companies provide them the opportunity of easy exits, as the shares can be sold in the secondary market. Listed companies have a lot of compliances and the market regulations are strict enough to facilitate safeguarding shareholders' interests against unfair practices. Whenever a company initiates corporate privatization then the shareholders can be in a vulnerable position and their interests can be at stake since the available market in the form of a stock exchange is taken away.

Delisting and Types

Delisting of securities means that the stock of the company will no longer be traded on the stock exchanges and the company will be a private company. The delisting procedure is governed by the SEBI (Delisting of Equity Shares) Regulation, 2009.

Compulsory Delisting

Non-compliance and omission to any of the regulations as set in the listing agreement can get the company delisted as a penal measure. Rule 21A of the Securities Contract Regulation Act along with Securities Contract (Regulation) Rules, 1957 lists down the reasons for a company to be compulsorily delisted:

- If the company has incurred losses for three consecutive years and has a negative worth.
- If the trading of the company has been suspended for over 6 months.
- If the shares are traded infrequently for the last 3 years.
- The company director(s) or promoter(s) have been convicted for not less than 3 years due to failure in complying with regulations of the Depositories Act, SEBI Act, and the company has incurred a loss of not less than Rupees 1 crore.

Voluntary Delisting

Whenever the delisting is initiated by the company by following a due procedure than it is voluntary delisting. Reasons for delisting could be as follows:

- It is possible that the company is about to be taken over by an acquirer who is likely to hold a higher stake than permissible by the minimum public shareholding norms. In such a case, it will be taken private, since the acquirer would prefer to have flexibility in the operations and also do away with the payment of a listing fee to the stock exchanges.
- In the initial liberalization phase, the FDI policies prevented 100% foreign ownership however subsequent opening of 100% FDI in sectors, preference was given to holding wholly owned subsidiary in India and therefore MNCs' started de-listing.1
- Many companies may find it difficult to comply with the regulations for the listed companies and may get themselves delisted.

Secondary Market

It refers to a market where securities are traded after being initially offered to the public in the primary market and/or listed on the Stock Exchange. Majority of the trading is done in the secondary market. Secondary market comprises of equity markets and the debt markets. For the general investor, the secondary market provides an efficient platform for trading of his securities. For the management of the company, Secondary equity markets serve as a monitoring and control conduit—by facilitating value-enhancing control activities, enabling implementation of incentive-based management contracts, and aggregating information (via price discovery) that guides management decisions.

Regulatory Framework

The four main legislations governing the securities market are:

1. The SEBI Act, 1992
2. The Companies Act, 1956
3. The Securities Contracts (Regulation) Act, 1956
4. The Depositories Act, 1996

RBI, regulator of banking companies and financial institutions and non-banking financial companies, regulates the contracts for sale and purchase of government securities, gold related securities, money market securities and derivatives.

Indian Stock Market

As of January 2005 there were 23 stock exchanges recognized by the central government. The most important development in the Indian stock market was the establishment of the National Stock Exchange (NSE) in 1994. Within a short period it emerged as the largest stock exchange surging ahead of the Bombay Stock Exchange (BSE)

National Stock Exchange (NSE)

The NSE is a ring less, national, computerized exchange. The NSE has two segments: The Capital Market Segment and the Wholesale Debt Market Segment.

Trading members in the Capital Market Segment are through VSATs. The trading members in the Whole-Sale Debt Market are linked through leased lines. The NSE has opted for an order-driven system. All trades on NSE are guaranteed by the National Securities Clearing Corporation.

Bombay Stock Exchange (BSE)

The BSE switched from the open outcry system to the screen-based system in 1995. Jobbers play an important role on the BSE. A jobber is a broker who offers a two-way quote or a bid-ask quote. Since both jobbers and brokers feed their orders, the BSE has adopted a 'quote-driven' system and an 'order-driven' system.

Screen Based System: The kind of screen based system adopted in India is referred to as the open electronic order (ELOB) market system. Buyers and sellers place their orders on the computer

TRADING OF SHARES

Shares are bought and sold on the stock exchanges the two main ones in India are the National Stock Exchange (NSE), and the Bombay Stock Exchange (BSE). You can use three different routes to buy shares:

Exhibit 3.3: Various ways of Investing in Equity

Types of Orders

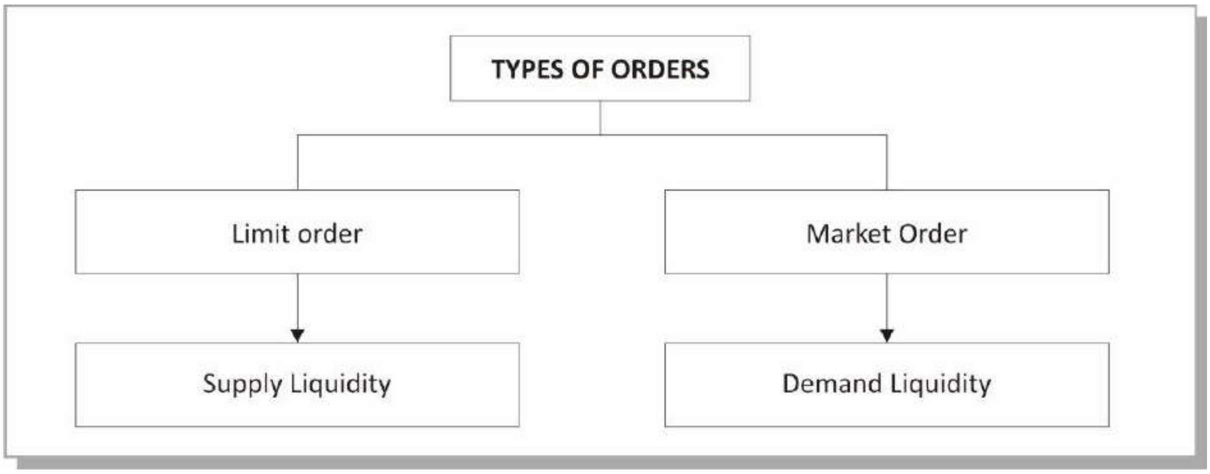


Exhibit 3.4: Different types of Order in Equity Market

Computer instantly tries to match mutually compatible orders on a price-time priority. The limit order book, the list of unmatched limit orders is displayed on the screen.

Security transactions are settled through electronic delivery facilitated by depositories. Presently, the settlement of all trades is a rolling settlement on a T+2 basis. Due to introduction of screen based system and electronic delivery transaction cost of the market has fallen sharply.

Dematerialization of Securities: It is the process by which a client can get physical certificates converted into electronic balances.

An investor intending to dematerialize its securities needs to have an account with a DP. The client has to deface and surrender the certificates registered in its name to the DP. After intimating NSDL electronically, the DP sends the securities to the concerned Issuer/ R&T agent. NSDL in turn informs the Issuer/ R&T agent electronically, using NSDL Depository system, about the request for dematerialisation. If the Issuer/ R&T agent finds the certificates in order, it registers NSDL as the holder of the securities (the investor will be the beneficial owner) and communicates to NSDL the confirmation of request electronically. On receiving such confirmation, NSDL credits the securities in the depository account of the Investor with the DP.

Rematerialisation of Securities: Rematerialisation is the process by which a client can get his electronic holdings converted into physical certificates. The client has to submit the rematerialisation request to the DP with whom he has an account. The DP enters the request in its system which blocks the client's holdings to that extent automatically. The DP releases the request to NSDL and sends the request form to the Issuer/ R&T agent. The Issuer/ R&T agent then prints the certificates, dispatches the same to the client and simultaneously electronically confirms the acceptance of the request to NSDL. Thereafter, the client's blocked balances are debited.

Buying on Margin: You can buy shares on margin, this means that you provide a portion of the purchase value as margin and the rest is given by the broker as a loan to you. When you buy on margin, your upside potential as well as downside risk are magnified.

Short Sale: Short sale is a sale of shares that one does not have. A short seller expects the price of the shares to fall in future so that he can square his position at a profit. Of course, the price can fall, inflicting a loss on the short seller. Example of Individual Stock Quotations

Co., (Prev.Cl.), Open, High, Low, Close [Vol., Val. Rs'000s, Trades]	P/E	M Cap	52-Wk H/L
Satyam (932.65), 937, 948, 931, 932.85[46436, 43591.29, 1384] (BSE)	12.7	(9438.6)	1200/692
(932.80), 940, 949, 931, 933.20[138630, 130216.84, 4404] (NSE)	12.7	(9438.6)	1200/692

Role of Broker and Sub-broker in the Secondary Market: You can contact a broker or a sub broker registered with SEBI for carrying out your transactions pertaining to the capital market.

Broker

A broker is a member of a recognized stock exchange, who is permitted to do trades on the screen-based trading system of different stock exchanges. He is enrolled as a member with the concerned exchange and is registered with SEBI.

Sub-broker

A sub broker is a person who is registered with SEBI as such and is affiliated to a member of a recognized stock exchange.

Registration of Broker

You can confirm it by verifying the registration certificate issued by SEBI. A broker's registration number begins with the letters "INB" and that of a sub broker with the letters "INS". For the brokers of derivatives segment, the registration number begins with the letters "INF". There is no sub-broker in the derivatives segment.

Trade Settlement

Trade Settlement is the process of transferring securities into the account of a buyer and cash into the seller's account following a trade of stocks, bonds, futures or other financial assets. The time period granted for trade settlement allows both parties of the investment transaction to complete his side of the deal. The seller may need to bring stock certificates to his broker, and the buyer has time to bring money to her broker. In the modern world of electronic stock trading, both the stock shares and money usually are held already by the respective brokers, but even if this is the case, the trade becomes official after the number of days designated by trade settlement rules. On the last day of the settlement period, the buyer becomes the owner of record.

Settlement of Shares

Settlement of shares or securities is a business process whereby securities or interests in securities are delivered, usually against (in simultaneous exchange for) payment of money, to fulfill contractual obligations, such as those arising under securities trades.

In the United States, the settlement date for marketable stocks is usually 2 business days or T+2[1] after the trade is executed, and for listed options and government securities it is usually 1 day after the execution. In Europe, settlement date has also been adopted as 2 business days settlement cycles T+2.

As part of performance on the delivery obligations entailed by the trade, settlement involves the delivery of securities and the corresponding payment.

A number of risks arise for the parties during the settlement interval, which are managed by the process of clearing, which follows trading and precedes settlement.

Account Period Settlement

An account period settlement is a settlement where the trades pertaining to a period stretching over more than one day are settled. For example, trades for the period Monday to Friday are settled together. The obligations for the account period are settled on a net basis. Account period settlement has been discontinued since January 1, 2002, pursuant to SEBI directives.

Rolling Settlement

In a Rolling Settlement, trades executed during the day are settled based on the net obligations for the day.

Presently the trades pertaining to the rolling settlement are settled on a T+2 day basis where T stands for the trade day. Hence, trades executed on a Monday are typically settled on the following Wednesday (considering 2 working days from the trade day).

The funds and securities pay-in and pay-out are carried out on T+2 day.

In case of purchase of shares, when do I make payment to the broker?

The payment for the shares purchased is required to be done prior to the pay in date for the relevant settlement or as otherwise provided in the Rules and Regulations of the Exchange.

In case of sale of shares, when should the shares be given to the broker?

The delivery of shares has to be done prior to the pay in date for the relevant settlement or as otherwise provided in the Rules and Regulations of the Exchange and agreed with the broker/sub broker in writing.

How long it takes to receive my money for a sale transaction and my shares for a buy transaction?

Brokers were required to make payment or give delivery within two working days of the pay - out day. However, as settlement cycle has been reduced fromT+3 rolling settlement to T+2 i.e. April 01, 2003, the pay out of funds and securities to the clients by the broker is within 24 hours of the pay-out.

Short Selling and Securities Lending & Borrowing

Short Selling means selling of a stock that the seller does not own at the time of trade. Short selling can be done by borrowing the stock through Clearing Corporation/Clearing House of a stock exchange which is registered as Approved Intermediaries (AIs). Short selling can be done by retail as well as institutional investors. Naked short sale is not permitted in India, all short sales must result in delivery, and information on short sale has to be disclosed to the exchange by end of day by retail investors, and at the time of trade for institutional investors. The Securities Lending and Borrowing mechanism allows short sellers to borrow securities for making delivery. Securities in the F&O segment are eligible for short selling.

Securities Lending and Borrowing (SLB) is a scheme that has been launched to enable settlement of securities sold short. SLB enables lending of idle securities by the investors through the clearing corporation/clearing house of stock exchanges to earn a return through the same. For securities lending and borrowing system, clearing corporations/clearing house of the stock exchange would be the nodal agency and would be registered as the "Approved Intermediaries" (AIs) under the Securities Lending Scheme, 1997.

Under SLB, securities can be borrowed for a period of 7 days through a screen based order matching mechanism. Securities in the F&O segment are eligible for SLB.

Day Trading

Day trading refers to buying and selling of securities within the same trading day such that all positions will be closed before the market close of the trading day. In the Indian securities market only retail investors are allowed to day trade.

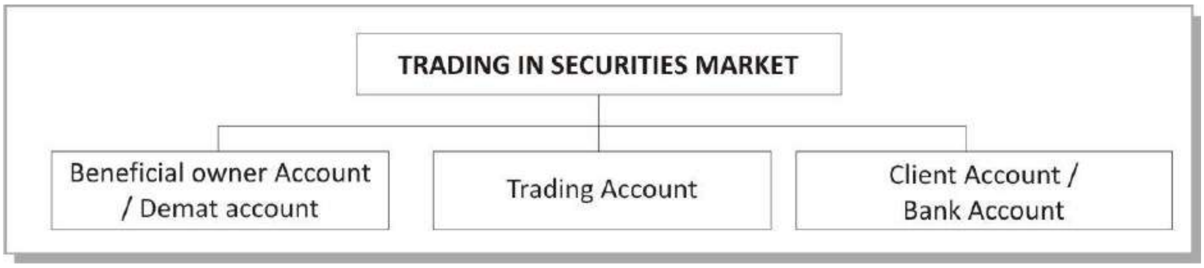


Exhibit 3.5: Different types of Accounts required by Investors for Investing in Equity Markets

Beneficial Owner Account (B.O. Account) / Demat Account: It is an account opened with a depository participant in the name of client for the purpose of holding and transferring securities.

DEMAT account opening by NRI's

In India, both residents and non-residents can avail demat facilities to trade in shares. However, if a Non-Resident Indian (NRI) wants to open a demat account, they have to follow the rules of the Foreign Exchange Management Act (FEMA). NRIs can open both Repatriable and Non- Repatriable demat accounts.

An NRI, for trading in secondary markets can operate demat account only post seeking Portfolio Investment Scheme (PIS) licences from designated banks to make investments in India.

As per the rules of the Reserve Bank of India (RBI), an NRI can only hold up to 5% of paid-up capital in an Indian company. An NRI can invest in Initial Public Offers (IPOs) on a repatriable basis by using NRE demat and funds in their Non-Resident External (NRE) bank account. If the NRI invests on non-repatriable basis, then the Non-Resident Ordinary Rupee (NRO) account and NRO demat will be used.

However, if a person has a demat account before gaining the status of NRI, they can convert it into the NRO category to trade after leaving the country or open a new account. Either way, shares previously owned will be transferred to the new NRO holding account.

Documents required for an NRI to open a demat account:

1. Duly filled demat application form
2. Copy of passport
3. Copy of PAN card
4. Copy of Visa
5. Overseas address proof, like latest copies of utility bills, or rental/lease agreement, or sale deed
6. Passport size photograph

7. FEMA declaration
8. Canceled check leaf of NRE/NRO account

All these documents should be attested at the Notary, Banker or Indian Embassy of the country where the NRI resides.

Rules for investments in equity markets by NRI

Being a fast-growing large economy, investment into equity shares of Indian companies offers an attractive opportunity for investors. NRIs can invest in equity shares of both listed and unlisted companies, subject to certain conditions, sectoral restrictions, and other parameters.

An NRI can invest up to 5% of the paid-up value of the shares of the listed company through a recognized stock exchange in India on repatriation basis, which is further subject to an overall limit of 10% for investments by all NRIs and Overseas Citizens of India (OCIs) put together, in case the company has investments from more than one NRI/ OCI. The 10% limit can be increased to 24% through a special resolution passed by the company. Such investment is treated as 'foreign portfolio investment' as per the foreign exchange regulations. Investment in an unlisted company by an NRI on repatriation basis is treated as 'foreign direct investment' which is subject to stricter valuation/pricing norms, sectoral restrictions and reporting requirements.

However, NRIs can purchase equity instruments issued by a company without any limit either on stock exchange or outside it on a non-repatriation basis, subject to certain sectoral restrictions.

Effect of change in residential status on Mutual fund investments When NRI turns RI

The authorised dealer and the depository participants must be informed of the status change. A new demat account with 'resident' status will be opened and the balance held in the NRI account will be transferred to the new one. Resident ? If the NRI had an online trading account, the broker needs to be informed about the change. The trading account with NRI status will have to be closed and a new trading account with resident status will be opened.

When RI turns NRI

NRIs cannot buy or sell equity shares like residents. They can do it by opening a PINS or PIS (Portfolio Investment Scheme) account. So you have to close the existing DEMAT accounts. The stocks already held can be sold or transferred to a new account called the DEMAT NRO account. The process is to first open PIS/PINS account with an authorized dealer. Inform the existing DEMAT broker about the changes.

Trading Account: An account which is opened by the broker in the name of the respective investor for the maintenance of transactions executed while buying and selling of securities.

Client Account / Bank Account: A bank account which is in the name of the respective client and is used for debiting or crediting money for trading in the securities market.

Process of Trading

The normal course of online trading in the Indian Market context is placed below:

Step 1. Investor / trader decides to trade

Step 2. Places order with a broker to buy / sell the required quantity of respective securities

Step 3. Best priced order matches based on price-time priority

Step 4. Order execution is electronically communicated to the broker's terminal

Step 5. Trade confirmation slip issued to the investor / trader by the broker

Step 6. Within 24 hours of trade execution, contract note is issued to the investor / trader by the broker

Step 7. Pay-in of funds and securities before T+2 day

Step 8. Pay-out of funds and securities on T+2 day

In case of short or bad delivery of funds / securities, the exchange orders for an auction to settle the delivery. If the shares could not be bought in the auction, the transaction is closed out as per SEBI guidelines.

EQUITY ANALYSIS

Equity Analysis basically of two types:

A. Fundamental Analysis

It is a method of evaluating a security by attempting to measure its intrinsic value by examining related economic, financial and other qualitative and quantitative factors like company's financials and operations, especially sales, earnings, growth potential, assets, debt, management, products, and competition. It attempts to study everything that can affect the security's value, including macroeconomic factors (like the overall economy and industry conditions) and individually specific factors (like the financial condition and management of companies).

This investment strategy involves evaluating a stock by examining the company, especially its operations and its financial condition. Here we look at several valuation methods, factoring in price/earnings ratio, PEG, dividend yields, book value, price/sales ratio, and return on equity.

The end goal of performing fundamental analysis is to produce a value that an investor can compare with the security's current price in hopes of figuring out what sort of position to take with that security *(Underpriced = Buy, Overpriced = Sell or Short)*. This method of security analysis is considered to be the opposite of technical analysis.

Fundamental analysis is about using real data to evaluate a security's value. For assessing stocks, this method uses revenues, earnings, future growth, return on equity, profit margins and other data to determine a company's underlying value and potential for future growth. In terms of stocks, fundamental analysis focuses on the financial statements of a company being evaluated.

One of the most famous and successful users of fundamental analysis is the Oracle of Omaha, Warren Buffett, who has been well known for successfully employing fundamental analysis to pick securities. His abilities have turned him into a billionaire.

B. Technical Analysis

It is a method of evaluating securities by analyzing statistics generated by market activity, such as past prices and volume. Technical analysts do not attempt to measure a security's intrinsic value, but instead use charts and other tools to identify patterns that can suggest future activity. In technical analysis we examine concepts like moving averages, support and resistance, advance / decline lines, relative strength, momentum and volume. Technical analysts believe that the historical performance of stocks and markets are indications of future performance.

In a shopping mall, a fundamental analyst would go to each store, study the product that was being sold, and then decide whether to buy it or not. By contrast, a technical analyst would sit on a bench in the mall and watch people go into the stores. Disregarding the intrinsic value of the products in the store, his or her decision would be based on the patterns or activity of people going into each store.

Capital Asset Pricing Model (CAPM)

The CAPM is a model which derives the theoretical required return (i.e. discount rate) for an asset in a market, given the risk-free rate available to investors and the risk of the market as a whole.

The CAPM is usually expressed:

$$E_r = R_F + (R_M - R_F)\beta$$

Here R_f = Risk free rate,

$E(R_M)$ = Expected market return

1 β, Beta is the measure of asset sensitivity to a movement in the overall market; Beta is usually found via regression on historical data. Betas exceeding one signify more than average "riskiness"; betas below one indicate lower than average.

2 Is the market risk premium, the historically observed excess return of the market over the risk-free rate.

Once the expected return, $E(r_i)$, is calculated using CAPM, the future cash flows of the asset can be discounted to their present value using this rate to establish the correct price of the asset.

Now we will take an example to understand the significance and use of CAPM in determining the price of a security.

The risk free rate is 6 percent. And the expected return on the market portfolio is 14 percent. The beta of stock is 1.25. Determine the required return on the stock.

Solution: As we know,

$$E_r = R_F + (R_M - R_F)\beta$$

Putting the values in the formula we get:

$$6 + 1.25(14\text{-}6) = 16 \text{ or } 16\%$$

Therefore required return on this stock is 16%.

CAPM decomposes a portfolio's risk into systematic and specific risk. Systematic risk (also known as un-diversifiable risk) is the risk of holding the market portfolio. As the market moves, each individual asset is more or less affected. To the extent that any asset participates in such general market moves, that asset entails systematic risk. Specific risk (also known as diversifiable risk) is the risk which is unique to an individual asset. It represents the component of an asset's return which is uncorrelated with general market moves.

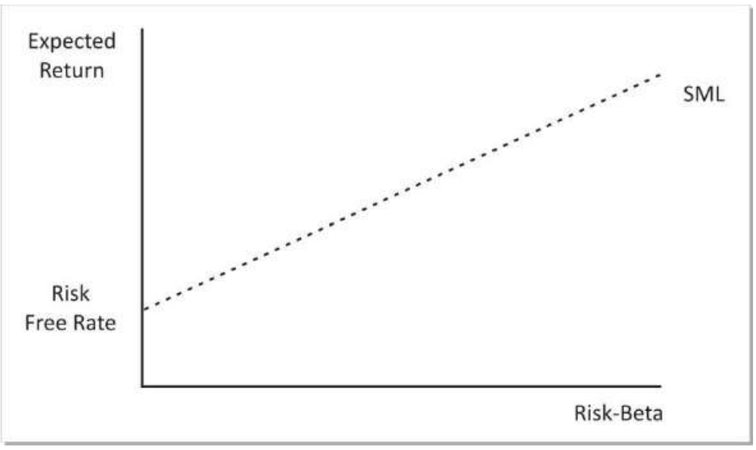
According to CAPM, the marketplace compensates investors for taking systematic risk but not for taking specific risk. This is because specific risk can be diversified away. When an investor holds the market portfolio, each individual asset in that portfolio entails specific risk, but through diversification, the investor's net exposure is just the systematic risk of the market portfolio.

Securities Market Line

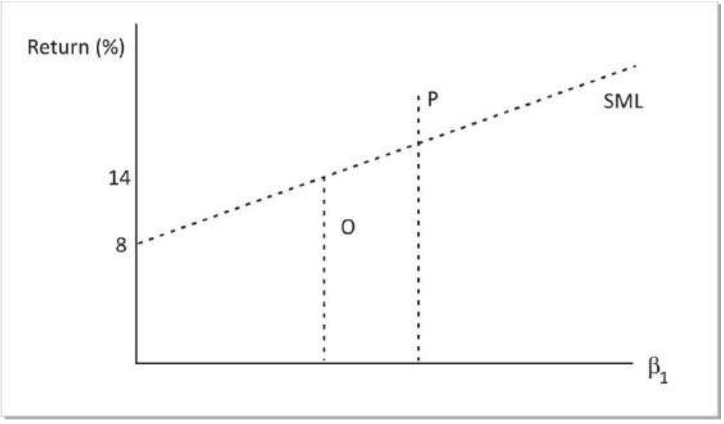
The SML essentially graphs the results from the capital asset pricing model (CAPM) formula. The X-axis represents the risk (beta), and the Y-axis represents the expected return.

The relationship between Beta & required return is plotted on the securities market line (SML) which shows expected return as a function of β. The intercept is the risk-free rate available for the market, while the slope is also known as market risk premium.

Security Market Line



Assets which are fairly priced plot exactly on the SML and underpriced securities plot above the SML, whereas overpriced securities plot below the SML.



In the above graph assets which are fairly priced plot on the SML. Underpriced securities (such as P) plot above the SML, whereas overpriced securities (such as O) plot below the SML. The difference between the actual expected return on a security and its fair return as per the SML is called the security's alpha, denoted by α.

SML is popularly expressed as:

$$E_r = R_F + (R_M - R_F)\beta$$

In words SML relationship says:

Expected return on security i' = Risk - free Return + Excess of Market Risk Premium over Risk free Return β Beta of security 'i'

Equity Valuation Model

People hold common stocks for:

- Higher total returns than fixed instruments
- Protective measure during inflations

Intrinsic Value

Intrinsic value is the value of a stock which is justified by assets, earnings, dividends; define prospects and the factor of the management of the issuing company. It is the economic value as a going concern, taking account of its characteristics, the nature of its business and the investment environment.

Components of intrinsic value:

- Earning power and profitability of the management in the employment of assets
- Dividends paid and the ability to pay such dividends in the future
- Estimates of the growth of earnings
- Stability and predictability of these quantitative and qualitative projections

Dividend Discounting Model (DDM)

The dividend discount model (DDM) is a widely accepted stock valuation tool to calculate the present value of the future dividends that a company is expected to pay to its shareholders.

Dividend discounting / capitalization approach the value of an equity share is the discounted present value of future dividends plus the present value of resale price expected when the equity share is sold.

This makes sense as dividends are the only cash flows investors will get from a company in normal circumstances. The rate used to discount the future dividends is the required rate of return on equity or cost of equity. It is particularly useful because it allows investors to determine an absolute or "intrinsic" value of a particular company that is not influenced by current stock market conditions.

To value a company using the DDM, you calculate the value of dividend payments that you think a stock will pay in the years ahead.

Assumption of Dividend discounting Approach

- Dividends are paid annually which is a common practice for business firms in India.
- The 1st payment of dividend is to be made one year after the equity share is bought
- Sale of equity share if any occurs only at the end of a year and at the ex-dividend terms.

Limitations of Dividend discount model

- All companies do not distribute the cash flow they generate, but rather reinvest into the business. As a result dividend paid will be lower resulting into undervaluation of the share price of those companies.
- This model cannot be used if the growth rate is higher than required rate of return.

Single Period Valuation Model

This model is for an equity share wherein an investor holds it for one year. The price of such equity share will be:

$$P_0 = \frac{D_1}{(1+r)} + \frac{P_1}{(1+r)}$$

Where,

P_0 = current price of the equity share

D_1 = dividend expected a year hence

P_1 = Price of the share expected a year hence

r = rate of return required on the equity share

Example: MVL Ltd. is expected to declare a dividend of Rs. 3.50 and reach a price of Rs. 35.00 a year hence. What is the price at which the share would be sold to the investors now if the required rate of return is 13%?

Solution:

$$\text{The current price} = P_0 = \frac{D_1}{(1+r)} + \frac{P_1}{(1+r)}$$

= [3.50/1.13]+[35/1.13]=3.09+30.97=34.06

Value of Equity & Expected Return: Price of the equity share is expected to grow at a rate of g% annually then current price Po, becomes Po (1+g) a year hence.

$$P_0 = \frac{D_1}{(r-g)}$$

Expected Rate of Return of Equity: Now we consider what rate of return can the investor expect, given the current market price and forecast values of dividend and share price. The expected rate of return of investor is equal to:

$$r = \frac{D_1}{P_0} + g$$

Example: The expected dividend per share of IPL Ltd is Rs. 5/- per share and it expected to grow with 6% p.a. If the price per share now is Rs. 60/-, then the expected rate of return is:

$$r = \frac{D_1}{P_0} + g$$

$$= \frac{5}{60} + 0.06$$

= (0.0833 + 0.06) = 8.33 + 6 = 14.33%

Constant Dividend: Valuation of common stock assuming constant dividend (**.i.e. no growth**):

Formula:

$$\text{Price of Share} = \frac{\text{Dividend Per Share}}{\text{Cost of Equity}}$$

Example: Consider a company with a Re 1/- annual dividend. If you figure that company will pay that dividend indefinitely, you must ask yourself what you are willing to pay for that company. Assume the 'required rate of return' is 5%. According to the dividend discount model, the company will be worth (1.00 / 0.05) = Rs.20/-.

Zero Growth Model

This is an approach to dividend valuation that assumes a constant, non-growing dividend stream.

- It assume that the dividend per share remains constant year after year at a value of D, r is the rate of return required on the share, then:

$$P_0 = \frac{D}{r}$$

Example: The per share dividend of NRP Ltd. remains constant indefinitely at Rs. 5. Assuming a required rate of return of 12%, compute the value of LMP shares.

Solution: P = Rs. 5/ 0.12 = Rs. 41.67

This model requires no estimation of future dividends and no forecast of future selling price and therefore is simple to operate. Dividend expected at the end of year 1 will help to find out the value of the equity share. However, the unrealistic assumption of the constant dividends itself is the shortcoming of this method. No company is expected to pay forever fixed dividends on equity shares.

Multi-Period Valuation Model

The value of equity share is the sum of the present values of future cash flows (in the form of dividends) discounted at the required rate of return of the investors.

Since there is no maturity period for equity share, the value of an equity share of infinite duration is equal to the discounted value of the stream of dividends of infinite duration.

Formula:

$$P_0 = \frac{D_1}{(1+r)} + \frac{D_2}{(1+r)^2} + \cdots + \frac{D_\infty}{(1+r)^\infty} = \sum_{i=1}^{\infty} \frac{D_t}{(1+r)^t}$$

$$P_0 = \sum_{i=1}^{\infty} \frac{D_t}{(1+r)^t}$$

Where P_0 is the price of the equity share today, D_1 is the dividend expected a year hence, D_2 is the dividend expected two years hence, D_∞ is the dividend expected at the end of infinity, D_t is the dividend expected after 't' year hence, and 'r' is the expected return.

Different Models of Valuation of Stock

There are several dividend discount models based on different assumptions for calculating the value of a stock. Some of them are:

1. Constant Growth Model (Gordon Model)

2. Two- stage dividend discount model
3. H-model

Constant Growth Model (Gordon Model)

For an equity share, the payments are in the form of dividends declared by the company. As the equity share is a perpetual security i.e. with no maturity date, the dividend payments are made in perpetuity. So, the intrinsic value of a share is represented by the equation.

$$D_t = D_0(1 + g)^t$$

Where, D_t = dividend for year t, D_0 = dividend for year 0, g = constant compound growth rate

On simplification:

$$P_0 = \frac{D_1}{(r-g)}$$

We can also derive it in this way also:

$$P_0 = \frac{D_0(1+g)}{(r-g)} = \frac{D_1}{r-g}$$

Where,

P_0 = the stock price at time 0,
D_0 = the current dividend,
D_1 = the next dividend (*i.e.,* at time 1),
g = the growth rate in dividends, and
r = the required return on the stock, and
$g < r$

Assumptions:

- Dividends continue to grow at a constant rate, 'g' for an extended period of time.
- The growth rate is assumed to be less than the required return on equity.
- The growth rate 'g' is the subjective estimate of the investor.

Example: MAL Ltd had paid the following dividends per share

Year	Dividend per share
1	2.00
2	2.10
3	2.15
4	2.45
5	2.50
6	2.90

Assuming a 16% required return and Rs. 3 per share dividend in year 7(D_1) compute the value of shares MAL Ltd.

Solution: The expected constant rate of dividend growth, g, would be equal to the annual growth rate of dividends

Now put the data in CPMD mode of calculator to calculate the constant growth rate. Dividend after end of year one is Rs. 2.00, and at the end of year two it is 2.90

So, END, n = 5, PV = -2, PMT = 0, FV = 2.90, P/Y = 1, C/Y = 1, Solve i = 7.71

Hence, value of the shares will be P = Rs. 3/(0.16-0.0771) = 36.18

So, if we want to get a 10% rate of return on our money, and we assume that the company will grow forever at 7.71% per year, then we would be willing to pay Rs. 36.18 for this stock.

Limitations of Gordon Model

1. The use of this model is restricted to firms that are growing at a stable growth rate.
2. The second limitation of the model is that if the growth rate is equal to the required rate of return, then the value of the stock approaches infinity.

Two-stage Dividend Discount Model

This model assumes two stages of growth, the first phase in which the growth rate is high and the second phase which represents steady state in which the growth rate is assumed to be stable and is expected to continue for a long-term. The initial supernormal growth (is assumed to last for a fixed time say n years, after which a stable growth is assumed forever. It is the easiest extension of the constant growth model that assumes the extraordinary growth (good or bad) will continue for a finite number of years and thereafter the normal growth rate will dominate indefinitely.

According to this model, value of the stock is given by,

$$P_0 = D_1 \frac{1 - \left[\frac{1+g_1}{1+r}\right]^n}{r - g_1} + \left[\frac{D_1(1+g_1)^{n-1}(1+g_2)}{r-g_2}\right]\left[\frac{1}{(1+r)^n}\right]$$

Where,

P_0 = Present value of the share

D_1 = Dividend expected a year hence

g_1 = Extraordinary growth rate applicable for n years

g_2 = Growth rate in the second period

Example: The current dividend on an equity share of SQL Overseas Limited is Rs. 8.00 on earnings per share of Rs. 30.00. Assume that the dividend per share will grow at the rate of 20 percent per year for the next 5 years. Thereafter, the growth rate is expected to fall and stabilize at 12 percent. Investors require a return of 15 percent from SQL Overseas Limited shares. What is the intrinsic value of SQL Overseas Limited's equity share?

Solution: g_1 = 20 %, g_2 = 12 %, n = 5 yrs., = 15 %

D_1 = 8 (1.20) = Rs. 9.60

$$P_0 = D_1 \frac{1 - \left[\frac{1+g_1}{1+r}\right]^n}{r - g_1} + \left[\frac{D_1(1+g_1)^{n-1}(1+g_2)}{r-g_2}\right] \times \frac{1}{(1+r)^n}$$

$$= 9.60 \frac{1 - \left[\frac{1.20}{1.15}\right]^5}{0.15 - 0.20} + \frac{9.60(1.20)^4(1.12)}{0.15-0.12} \times \frac{1}{(1.15)^5}$$

= 45.53 + 369.49 = Rs. 415.02

Limitations of the Two –stage Dividend Discount Model

- Defining the length of the supernormal growth period is quite difficult.
- The terminal price calculated in this model is derived from Gordon model and hence it suffers from the limitations of the Gordon model.

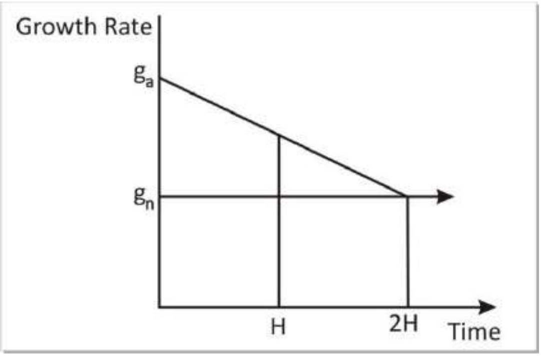
H-Model

This model is similar to the two-stage model except that a gradual change in the growth rate is assumed rather than a sudden change.

Assumptions under H-model

- The growth rate of earnings starts at a high initial rate and declines over the supernormal growth period linearly.
- Dividend pay-out is constant over a time period and not affected by the shifting growth rates.

Graphically we can depict dividend growth rate pattern in the following way:



Value of the Stock: The value of the stock as per H- model can be derived from the following formula:

$$P_0 = \frac{D_0[(1+g_n)+H(g_a-g_n)]}{r-g_n}$$

Where,

P_0 = Intrinsic value of the share
D_0 = Current dividend per share
g_n = Normal long-run growth rate (stable growth)
g_a = Current above-Normal growth rate (Supernormal growth)
r = Rate of return expected by investor
H = One half of the period during which g_a will level off to g_n

This model is best suited to those firms which have a high growth rate in the beginning and a gradual decline in the growth rate over a time period.

Example: The current dividend on an equity share of M/s E-Hills Limited is Rs.9.00 on earnings per share of Rs. 35.00. Assume that the growth rate of 20 percent will decline linearly over a five year period and then stabilize at 12 percent. What is the intrinsic value of M/s E-Hills Limited's share if the investors' required rate of return is 15 percent?

Solution: Here following inputs are required to calculate value under H-model:

D_0 = Rs. 9

g_a = 20%

g_n = 12%

r = 15%

By putting the above inputs in H-Model equation:

$$P_0 = \frac{D_0[(1+g_n)+H(g_a-g_n)]}{r-g_n}$$

$$= \frac{9[(1.12)+2.5\,(0.20-0.12)]}{0.15-0.12}$$

$$= \frac{10.08+0.20}{0.03}$$

= Rs. 342.67

So Rs. 342.67 is the intrinsic value of M/s E-Hills Limited's share at the 15% required rate of return of the investors.

Equity as an Investment Vehicle

Equity / Stock mean a contribution/share in the ownership of a company. A share is the smallest unit representing the ownership in a company. It is a source of long term capital appreciation for the investors. By long Term we mean a time horizon of 3 to 5 years. A wealth manager takes all the investment decisions based upon the risk and return characteristics of the clients and equity as an asset class would always feature in their portfolio in some percentage or the other depending upon the risk averseness of the investor.

Although Equities are one of the best investment vehicles of long term capital appreciation they can be volatile in short run so it becomes imperative that the Wealth Manager makes the investor understands the time horizon requirement and risk features of this asset so as to yield the best long term results.

More over assessing the performance of a single stock in isolation would be incorrect. The performance of a stock should be compared with its peer in the same industry to derive proper results. For e.g.: P/E multiple of a stock would only signify the expensiveness of the stock but a better analysis would be to compare it with that of the industry.