NCFM

NSE's CERTIFICATION IN FINANCIAL MARKETS

Surveillance in Stock Exchanges Module
Work Book

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NATIONAL STOCK EXCHANGE OF INDIA LIMITED

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CHAPTER 1

SURVEILLANCE IN STOCK EXCHANGES

1.1 IMPORTANCE OF SURVEILLANCE

The development and regulation of capital markets has become a critical issue in the recent past, as an emerging middle class in many developing countries creates growing demand for property ownership, small-scale investment, and savings for retirement. Capital markets offer individuals and small and medium-scale enterprises a broader menu of financial services and tailored financial instruments like government debt, housing finance, and other securities. A competitive, diversified financial sector, in turn, broadens access and increases stability.

Effective surveillance is the *sine qua non* for a well functioning capital market. As an integral part in the regulatory process, effective surveillance can achieve investor protection, market integrity and capital market development. According to IOSCO, “the goal of surveillance is to spot adverse situations in the markets and to pursue appropriate preventive actions to avoid disruption to the markets.”

In India, the stock exchanges hitherto have been entrusted with the primary responsibility of undertaking market surveillance. Given the size, complexities and level of technical sophistication of the markets, the tasks of information gathering, collation and analysis of data/information are divided among the exchanges, depositories and SEBI. Information relating to price and volume movements in the market, broker positions, risk management, settlement process and compliance pertaining to listing agreement are monitored by the exchanges on a real time basis as part of their self regulatory function. However, regulatory oversight, exercised by SEBI, extends over the stock exchanges through reporting and inspections. In exceptional circumstances, SEBI initiates special investigations on the basis of reports received from the stock exchanges or specific complaints received from stakeholders as regards market manipulation and insider trading.

1.2 MARKET SURVEILLANCE MECHANISM

In order to ensure investor protection and to safeguard the integrity of the markets, it is imperative to have in place an effective market surveillance mechanism. The surveillance function is an extremely vital link in the chain of activities performed by the regulatory agency for fulfilling its avowed mission of protection of investor interest and development and regulation of capital markets.

The surveillance system adopted by SEBI is two pronged viz.:

(1) Surveillance Cell in the stock exchange and
(2) the Integrated Surveillance Department in SEBI.

(1) <u>Surveillance Cell in the stock exchange</u>

The stock exchanges as said earlier, are the primary regulators for detection of market manipulation, price rigging and other regulatory breaches regarding capital market functioning. This is accomplished through Surveillance Cell in the stock exchanges. SEBI keeps constant vigil on the activities of the stock exchanges to ensure effectiveness of surveillance systems. The stock exchanges are charged with the primary responsibility of taking timely and effective surveillance measures in the interest of investors and market integrity. Proactive steps are to be taken by the exchanges themselves in the interest of investors and market integrity as they are in a position to obtain real time alerts and thus know about any abnormalities present in the market. Unusual deviations are informed to SEBI. Based on the feedback from the exchanges, the matter is thereafter taken up for a preliminary enquiry and subsequently, depending on the findings gathered from the exchanges, depositories and concerned entities, the matter is taken up for full-fledged investigation, if necessary.

(2) <u>Integrated Surveillance Department in SEBI</u>

SEBI on its own also initiates surveillance cases based on references received from other regulatory agencies, other stakeholders (investors, corporates, shareholders) and media reports. Being proactive is one of the necessary features for success in taking surveillance measures. Keeping the same in mind, the *Integrated Surveillance Department* of SEBI keeps tab on the news appearing in print and electronic media. News and rumours appearing in the media are discussed in the weekly surveillance meetings with the stock exchanges and necessary actions are initiated. Apart from the above, the department generates reports at the end of each day on the details of major market players, scrips, clients and brokers during the day in the Cash and F&O segment of the stock exchanges. This ensures timely identification of the market players responsible for unusual developments on a daily basis. The department monitors the market movements, analyses the trading pattern in scrips and indices and initiates appropriate action, if necessary, in conjunction with stock exchanges and the depositories. Thus, SEBI supplements the primary regulator i.e., the stock exchanges in ensuring safe market for the investors.

Other initiatives by SEBI

- A major initiative taken by SEBI that has gone a long way in taking pre-emptive actions is the Weekly Surveillance Meetings. These meetings have helped in better coordination between the stock exchanges and ensured uniformity in the surveillance measures taken by the stock exchanges.

- SEBI has established standards for effective surveillance in Indian securities markets in line with global standards thereby setting global benchmark for effective surveillance in securities market. SEBI also ensures a rigorous application of the standards and effective enforcement against offences to ensure the safety and integrity of the market. SEBI also established cooperation among overseas regulators of securities and futures markets to strengthen surveillance on cross border transactions. As a result, the securities market in India is considered as one of the most efficient and sound markets in the world.

- **Integrated Market Surveillance System:** In order to enhance the efficacy of the surveillance function, SEBI has decided to put in place a world-class comprehensive Integrated Market Surveillance System (IMSS) across stock exchanges and across market segments (cash and derivative markets). The proposed IMSS solution seeks to achieve the following objectives:

    a) An online data repository with the capacity to capture market transaction data and reference data from a variety of sources like stock exchanges, clearing corporations/houses, depositories, etc., in different formats for the securities and derivatives markets;

    b) A research and regulatory analysis platform to check instances of potential market abuse; and

c) Sophisticated alert engines, that can work with various data formats (database, numeric and text data) to automatically detect patterns of abuse and then issue an alert. These include insider trading engine, fraud alert engine and market surveillance engine.

SEBI initiated the process for implementing the proposed IMSS system by appointing a high level technical committee comprising eminent technical experts to study the technical matrix of SEBI's requirements and frame a set of parameters which formed the basis for structuring of tenders, evaluation of bids, recommending terms of contract etc., for the IMSS. After following the process of global competitive bidding, a vendor has been identified to implement the IMSS solution in a time bound manner.

- **Interim Surveillance Arrangement**: While the Integrated Market Surveillance System (IMSS) is in the process of being fully operationalised, an interim surveillance mechanism has been put in place since June 2003. A regular system of weekly surveillance meetings with major stock exchanges, viz., BSE, NSE; and depositories viz., NSDL, CDSL is now in place to provide a confidential platform for exchange of view on areas of emerging concern-specific abnormalities and to consider pre-emptive actions and discuss general surveillance issues. In the weekly meetings, inputs from SEBI, exchanges and depositories are pooled for better coordination, sharing of information and pro-active, coordinated actions. The meeting also provides a highly specialized in interactive forum to discuss prevailing surveillance issues and emerging concerns, if any, so as to expeditiously initiate appropriate surveillance action. During 2004-05, 57 such surveillance meetings were held. In addition, such meetings are also held as and when felt necessary depending on market exigencies.

- **Inter-Regulatory Alert System:** In view of the growing linkages between the securities market and the banking system, it was felt desirable to set up an inter-regulatory alert system between SEBI and RBI. Towards this end, a SEBI-RBI Group on Integrated System of Alerts has been set up to share information and to recommend suitable measures for co-ordinated action. In accordance with the recommendations made by the Group, appropriate alerts and data have been identified. A system making use of the same has been put in place since February 2004 and the system is fully functional.

- **Constitution of Special Surveillance Investigation Team at the Head Office and Regional Offices for Special Inspection:** As part of surveillance measures, SEBI advised the exchanges to prepare a suspect list of entities/brokers/clients that appear to be having a noticeable trading pattern across scrips. Based on the findings of the exchanges, brokers were short-listed for further scrutiny. In such cases, entity based investigation would be more effective than scrip based investigation. Therefore, Special Surveillance Inspection Teams (SSIT) consisting of both surveillance and inspection officials have been constituted for this purpose. The teams have commenced conducting surprise and special inspections at the premises of suspect entities.

At this backdrop of importance and mechanism of surveillance in stock markets, in the subsequent chapters other relevant topics like rules and regulations; surveillance of market activity; role of surveillance in risk management and preliminary analysis and investigation would be discussed in details apart from few concepts pertaining to basic investment mathematics.

CHAPTER 2

BASIC INVESTMENT MATHEMATICS

2.1 RETURN AND RISK

Return and risk are the two key determinants of security prices or values. This calls for an explicit and quantitative understanding of the concepts.

2.1.1 Return and Risk of a Single Asset

Return on an investment/asset for given period, say a year, consists of annual income (dividend) receivable plus change in market price. Symbolically,

Rate of Return (R) = $\dfrac{Yd_t + (P_t - P_{t-1})}{P_{t-1}}$

Where,

Yd_t = annual income/cash dividend at the end of time period 't'.

P_t = security price at time period 't' which is closing/ending price.

P_{t-1} = security price at time period 't-1' which is opening/beginning price.

For example, for a security if price at the beginning of the year is Rs. 50.00; dividend receivable at the end of the year is Rs. 2.50; and price at the end of the year is Rs. 55.00 then, the rate of return on this security is:

$$\frac{2.50 + (55.00 - 50.00)}{50} = 0.15 = 15\%$$

The rate of return of 15 per cent has two components:
(i) Current yield i.e. annual income ÷ opening/beginning price = 2.50 ÷ 50.00 =.05 = 5% and
(ii) Capital gains/loss yield, i.e. (end price-opening price) ÷ opening/beginning price = (Rs.55 – Rs. 50) ÷ Rs. 50 =0.1 = 10%

Risk may be described as variability/fluctuation/deviation of actual return from expected return from a given asset/investment. Higher the variability, greater is the risk. In other words, the more certain the return from an asset, lesser is the variability and thereby lesser is the risk.

Types of Risks

The risk of a security can be broadly classified into two types such as systematic risk and unsystematic risk. Standard deviation has been used as a proxy measure for total risk.

Systematic Risk

Systematic Risk refers to that portion of total variability (/risk) in return caused by factors affecting the prices of all securities. Economic, political, and sociological changes are the main sources of systematic risk. Though it affects all the securities in the market, the extent to which it affects a security will vary from one security to another. To put it differently, the systematic risks of various securities differ due to their relationship with market. Systematic risk can **not** be diversified. Systematic risk can be measured in terms of Beta (ß), a statistical measure. The ß factor describes the movement in a security's or a portfolio's return in relation to that of the market returns. The beta for market portfolio is equal to one by definition. Beta of one (ß=1), indicates that volatility of return on the security is same as the market or index; beta more than one (ß>1) indicates that the security has more unavoidable risk or is more volatile than market as a whole, and beta less than one (ß<1) indicates that the security has less systematic risk or is less volatile than market.

Unsystematic risk

Unsystematic Risk refers to that portion of total risk that is unique or peculiar to a firm or an industry, above and beyond that affecting securities markets in general. Factors like consumer preferences, labour strikes, management capability etc. cause unsystematic risk (/variability of returns) for a company's stock. Unlike systematic risk, the unsystematic risk can be reduced/avoided through diversification. Total risk of a fully diversified portfolio equals to the market risk of the portfolio as its specific risk becomes zero.

Measurement of Risk for a Single Asset:

The statistical measures of a risk of an asset are: (a) Standard Deviation and (b) Co-efficient of variation.

(a) ***Standard Deviation of Return (*** s_R): Standard deviation (s), is the most common statistical measure of risk of an asset from the expected value of return. It measures the fluctuations around mean returns. It represents the square root of average squared deviations of individual returns (R_i) from the expected return ($\overline{R}$). Symbolically,

$$s_R = \sqrt{\sum_{i=1}^{n} \frac{(R_i - \overline{R})^2}{N}}$$

Variance **(** s^2 **)** on the other hand, equals to average of squares of deviations of individual returns (R_i) from expected returns ($\overline{R}$). Symbolically,

$$s^2{}_R = \sum_{i=1}^{n} \frac{(R_i - \overline{R})^2}{N}$$

Thus, Standard Deviation (s) equals to the positive square root of variance (s^2) i.e.

Standard Deviation = $\sqrt{Variance}$.

Example-1: The stock returns of the company A for past five years are 10%, 20% 5%, 30% and 35%. What is the *standard deviation* of the returns for the returns of the company A?

$$\overline{R} = \frac{10+20+5+30+35}{5} = 20$$

$$s_R = \sqrt{\frac{\sum_{i=1}^{N}(R_i - \overline{R})^2}{N}}$$

$$s_R = \sqrt{\frac{[(10-20)]^2 + [(20-20)]^2 + [(5-20)]^2 + [(30-20)]^2 + [(35-20)]^2}{5}}$$

$$s_R = \sqrt{\frac{(-10)^2 + (0)^2 + (-15)^2 + (10)^2 + (15)^2}{5}}$$

$$s_R = \sqrt{\frac{100+0+225+100+225}{5}} = \sqrt{\frac{650}{5}}$$

$$s_R = \sqrt{130} = 11.40$$

(b) Co-efficient of variation: is a measure of risk per unit of expected return. The actual dispersion/variation as determined by standard deviation is called absolute dispersion. Co-efficient of variation converts standard deviation of expected values into relative values to enable comparison of risks associated with assets having different expected values. The coefficient of variation (CV) is computed by dividing the standard deviation of return, s_R, for an asset by its expected value, $\overline{R}$. Symbolically,

$$CV = \frac{s_R}{\overline{R}}$$

It is generally expressed as a percentage. The larger the CV, the larger the relative risk of the asset. A disadvantage of the coefficient of variation is that it fails to be useful when $\overline{R}$ is close to zero.

Example-2: Security A gives a return of 10% with a dispersion of 3.5%, while security B gives a return of 20% with a dispersion of 5%. Which security is more risky?
Coefficient of Variation for Security A = (3.5/10) = 0.35 or 35% and
Coefficient of Variation for Security B = (5/20) = 0.25 or 25%. Therefore, the security A is more risky in relation to its return.

(c) Covariance:

Covariance describes the nature of relationship between two variables. For instance, it may be the relationship between return on a security and the return on Market portfolio or may be the relationship between two securities etc.
If X and Y are two securities, then the covariance between the two securities is given by the following formula:

$$\text{cov}_{xy} = \frac{\sum_{i=1}^{N} [\,(Xi - \overline{X})\,(Yi - \overline{Y}\,)]}{N - 1} \qquad \text{where } i = (1, 2, 3, .., n)$$

When two securities are combined, if rates of return of two securities move together, their interactive risk/covariance is said to be positive and vice versa. If rates of return are independent, then the covariance is zero.

Example-3: Following are the returns of two securities X and Y for 5 years:

Year	Return on Security X	*Return on Security Y*
1	5	4
2	7	6
3	9	8
4	11	10
5	13	12

Calculate the covariance between the two securities X and Y.

Solution:

Year	**Ret on Security X**	**Ret. on Security Y**	$Xi - \overline{X}$	$Yi - \overline{Y}$	$(Xi - \overline{X})(Yi - \overline{Y})$
1	5	4	-4	-4	16
2	7	6	-2	-2	4
3	9	8	0	0	0
4	11	10	2	2	4
5	13	12	4	4	16
Total	**45**	**40**	**0**	**0**	**40**

$$\overline{X} = \frac{5+7+9+11+13}{5} = 9 \qquad \overline{Y} = \frac{4+6+8+10+12}{5} = 8$$

$$\text{cov}_{xy} = \frac{\sum_{i=1}^{N}[(Xi - \overline{X})(Yi - \overline{Y})]}{N-1} = \frac{40}{5-1} = 10$$

Thus the covariance between the two securities X and Y is positive.

2.1.2 Calculation of Beta (ß)

The risk of a well diversified portfolio, as we have seen, is represented by its market risk of the securities included in the portfolio. The market risk of a security reflects its sensitivity to market movements. Such sensitivity of a security is called beta (ß). As mentioned earlier, the beta for market portfolio is equal to '1' by definition. Beta of one (ß=1), indicates that volatility of return on the security is same as the market or index; beta more than one (ß>1) indicates that the security has more unavoidable risk or is more volatile than market as a whole, and beta less than one (ß<1) indicates that the security has less systematic risk or is less volatile than market.

Given return on security-X which is a dependent variable (R_x) and return on Market portfolio, the independent variable (R_m), Beta for the security X is calculated by following formula:

$$ß = \frac{\text{cov}(R_x, R_m)}{Var(R_m)}$$

Example-4: Given return on security-X and the return on Market portfolio, calculate beta of the security X:

Year	Ret on Sec. X: (R_x)	Ret. on Market Portfolio: (R_m)	$Rx_i - \overline{Rx}$	$Rm_i - \overline{Rm}$	$(Rx_i - \overline{Rx}) * (Rm_i - \overline{Rm})$	$(Rm_i - \overline{Rm})^2$
1	5	11	-2	2	-4	4
2	7	12	0	3	0	9
3	-3	-9	-10	-18	180	324
4	11	13	4	4	16	16
5	15	18	8	9	72	81
	35	**45**	**0**	**0**	**264**	**434**

Expected return on Security X:

$$\overline{R}_x = \frac{5+7-3+11+15}{5} = \frac{35}{5} = 7$$

Expected return on Market portfolio:

$$\overline{R}_m = \frac{11+12-9+13+18}{5} = \frac{45}{5} = 9$$

The **covariance** between return on security-X and the return on Market portfolio is:

$$\text{cov}_{xm} = \frac{\sum_{i=1}^{N}[(Rx_i - \overline{Rx})(Rm_i - \overline{Rm})\ ]}{N-1} = \frac{264}{5-1} = 66$$

Variance of return on the market portfolio (s^2_m) is calculated:

$$s^2_M = \frac{\sum(Rm_i - \overline{Rm})^2}{N-1} = \frac{434}{5-1} = 108.5$$

Thus, **beta** of security X can be calculated as:

$$ß_x = \frac{\text{cov}(R_x, R_m)}{Var(R_m)} = \frac{66}{108.5} = 0.61$$

Since Beta of Security X is 0.61 (which is less than 1), we may infer that its return is less volatile than the return on the market portfolio. If the return on market portfolio increases/decreases by 10% then return on security X would be expected to increase/decrease by 6.1% (0.61*10%).

2.1.3 Relationship between Return and Risk

Capital Asset Pricing Model

Portfolio Theory developed by Harry Markowitz is essentially a normative approach as it prescribes what a rational investor should do. On the other hand, Capital Asset Pricing Model (CAPM) developed by William Sharpe and others is an exercise in positive economics as it is concerned with:
(i)what is the relationship between risk and return for efficient portfolio? And
(ii)what is the relationship between risk and return for an individual security?

CAPM assumes that individuals are risk averse. CAPM describes the relationship/trade-off between risk and expected/required return. It explains the behaviour of security prices and provides mechanism to assess the impact of an investment in a proposed security on risks and return of investors' overall portfolio. The CAPM provides framework for understanding the basic risk-return trade-offs involved in various types of investment decisions. It enables drawing certain implications about risk and the size of risk premiums necessary to compensate for bearing risks.

Using beta (ß) as the measure of non-diversifiable risk, the CAPM is used to define the required return on a security according to the following equation:

$$R_S = R_f + b_s (R_m - R_f)$$

Where:

R_s = the return required on the investment

R_f = the return that can be earned on a risk-free investment (e.g. Treasury bill)

R_m = the average return on all securities (e.g., S&P 500 Stock Index)

b_s = the security's beta (systematic) risk

It is easy to see that the required return for a given security increases with increases in its beta.

Application of the CAPM can be demonstrated:

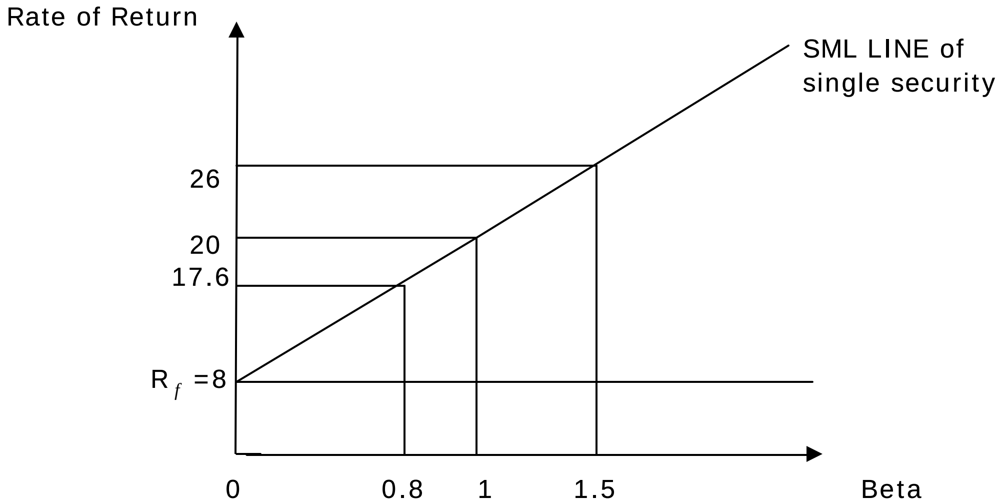
Example-5: Assume that a security with a beta of 1.5 is being considered for investment at a time when the risk-free rate of return is 8 % p.a. and the market return is expected to be 20% p.a. The expected/required return can be calculated by substituting the given data into the CAPM equation:

$$\begin{aligned} R_s &= 8\% + [1.50 * (20\% - 8\%)] \\ &= 8\% + [1.50 * 12\%] \\ &= 8\% + 18\% = 26\% \end{aligned}$$

The investor should, therefore, require a 26 percent return on this investment, a compensation for the non-diversifiable risk assumed, given the security's beta of 1.5. Such security is *aggressive* security. If the beta is 1.00, then the security is considered as *neutral* and the required return would be 20 percent [8%+ [1.00*(20%-8%)]: and if the beta had been lower, say 0.80, then the security is considered as a defensive security and the required return would be 17.6 percent [8%+ [0.80* (20%-8%)]. Thus, CAPM reflects a positive mathematical relationship between risk and return, since the higher the risk (beta) higher is the required return.

Security Market Line:

In order to define Security Market Line, Beta is placed on horizontal axis and the rate of return is on vertical axis. The two parameters defining security market line are the intercept (R_f) and the slope [$E(R_m)$- R_f]. The intercept represents the nominal rate of return on the risk-free security. It expected to be equal to the risk free rate of return plus the inflation rate. The Example-5 and the variations in the required return corresponding to variations in beta are reflected in the following diagram of **Security Market Line**:



2.1.4 Return and Risk of a portfolio

Investors prefer investing in a portfolio of assets (combination of two or more securities/assets) rather than investing in a single asset. The expected return on a portfolio is a weighted average of the expected returns of individual securities or assets comprising the portfolio. The weights are equal to the proportion to amount invested in each security to the total amount.

For example, when a portfolio consists of two securities, its expected return is:

$$\overline{R}_P = w_1 \overline{R}_1 + (1 - w_1)\overline{R}_2$$

where,

$\overline{R}_P$ = Expected return on a portfolio

w_1 = proportion of portfolio invested in security 1

(1- w_1) = proportion of portfolio invested in security 2.

In general, expected return on a portfolio consisting of 'n' securities is expressed as:

$$\overline{R}_P = \sum_{i=1}^{n} w_i \overline{R}_i$$

Example-6: What is the portfolio return, if expected returns for the three assets such as A, B, and C, are 20%, 15% and 10% respectively, assuming that the amount of investment made in these assets are Rs. 10,000, Rs. 20,000, and Rs. 30,000 respectively.

Weights for each of the assets A, B, and C respectively may be calculated as follows:
Total Amount invested in the portfolio of 3 assets (A, B, and C) = Rs. 10,000 + Rs. 20,000 + Rs.30,000 = Rs. 60,000.

Weight for the asset A	= 10000/60000	= 1/6 = 0.1667
Weight for the asset B	= 20000/60000	= 1/3 = 0.3333
Weight for the asset C	= 30000/60000	= 1/2 = 0.5

Given expected returns for the three assets A, B, and C, as 20%, 15% and 10% respectively, Returns on Portfolio
= (0.1667*0.20)+(0.3333*0.15)+(0.5*0.10)
= 0.13334*100 =13.33%

<u>Measurement of Risk for a portfolio</u>

According to the Modern Portfolio Theory, *while the expected return of a portfolio is a weighted average of the expected returns of individual securities (or assets) included in the portfolio, the risk of a portfolio measured by variance(or standard deviation) is* ***not*** *equal to* the *weighted average of the risk of individual securities included in the portfolio.* The risk of a portfolio not only depends on variance/risk of individual securities but also on co-variances between the returns on the individual securities.

Given the covariance between the returns on the individual securities, the portfolio variance consisting of 'n' securities is calculated as:

Var (R_p) = $s_P^2 = \sum_{a=1}^{n} \sum_{b=1}^{n} w_a w_b Cov(R_a, R_b)$ .... (2.1)

Since the covariance between two variables is the product of their standard deviations multiplied by their co-efficient of correlation, covariance between the returns on two securities, [$Cov(R_a, R_b)$] may be expressed as:

$Cov(R_a, R_b) = r_{ab} s_a s_b$

where,

r_{ab} = coefficient of correlation between Ra and R_b

s_a = standard deviation of Ra

s_b = standard deviation of R_b

Hence, in case co-variances are not known and correlation co-efficients are given, the Portfolio variance (s_p^2) can be calculated with following formula:

$$s_p^2 = \sum_{a=1}^{n} \sum_{b=1}^{n} w_a w_b r_{ab} s_a s_b \qquad \text{........... (2.1a)}$$

Portfolio with Two Securities:

Assuming a portfolio consisting of two securities (i.e. n=2), Portfolio Variance for the two securities is calculated by substituting n=2 in the formula (2.1) as follows:

Var (R_p) =

$$s_P^2 = w_1 w_1 r_{1.1} s_1 s_1 + w_1 w_2 r_{1.2} s_1 s_2 + w_2 w_1 r_{2.1} s_2 s_1 + w_2 w_2 r_{2.2} s_2 s_2 \qquad \text{.... (2.2)}$$

The first and the last terms can be simplified. Clearly the return on a security is perfectly (positively) correlated with itself. Thus, $r_{1.1}$=1, as does $r_{2.2}$=1. Because $r_{2.1} = r_{1.2}$, the second terms can be combined. The result is:

Portfolio Variance, $Var(R_P) = s_P^2 = w_1^2\sigma_1^2 + w_2^2\sigma_2^2 + 2\, w_1\, w_2\, r_{1.2}\, s_1 s_2$

OR substituting $r_{1.2}\ s_1 s_2$ by Cov. (1, 2), we get,

$Var(R_P) = s_P^2 = w_1^2\sigma_1^2 + w_2^2\sigma_2^2 + 2\, w_1\, w_2 Cov\ (1, 2)$

Portfolio Risk (standard deviation) $s_P = \sqrt{PorfolioVariance}$

Example-7: The standard deviation of the *two securities* (a, b) are 20% and 10% respectively. The two securities in the portfolio are assigned equal weights. If their correlation coefficient is +1, 0 or –1 what is the portfolio risk?

(i)When the correlation is +1

Portfolio Variance $= 0.5^2*0.2^2 + 0.5^2*0.10^2 + 2*0.5*0.5*$ Cov (a, b)

$= 0.25*0.04 + 0.25*0.01 + 2*0.25*1*0.2*0.1$

$= 0.0100 + 0.0025 + 2*0.25*1*0.02$

$= 0.0100 + 0.0025 + 0.0100$

$= 0.0225$

Portfolio Risk (Standard Deviation) = $\sqrt{PorfolioVariance} = 0.15$

(ii) When the correlation is 0

Portfolio Variance $= 0.5^2*0.2^2 + 0.5^2*0.10^2 + 2*0.5*0.5*$ Cov (a, b)

$= 0.0100 + 0.0025 + 0$

$= 0.0125$

Portfolio Risk (Standard Deviation) = $\sqrt{PorfolioVariance} = 0.1118$

(iii) When the correlation is -1

Portfolio Variance $= 0.5^2*0.2^2 + 0.5^2*0.10^2 + 2*0.5*0.5*$ Cov (a, b)

$= 0.0100 + 0.0025 + (-0.0100)$

$= 0.0025$

Portfolio Risk (Standard Deviation) = $\sqrt{PorfolioVariance} = 0.05$

Portfolio with Three Securities:

Example-8:

Consider the following three securities and the relevant data on each:

	Security1	Security2	Security3
Expected return	10	12	8
Standard deviation	10	15	5
Correction coefficients:			
Stocks 1, 2 = .3			
2, 3 = .4			
1, 3 = .5			

The proportion (weights) assigned to each of the securities as security 1= 0.2; security 2=0.4; and security 3=0.4. What is portfolio risk?

Using the formula for portfolio risk (equation 2.1) and expanding it for N = 3, we get:

$$s_p^2 = W_1^2 s_1^2 + W_2^2 s_2^2 + W_3^2 s_3^2 + 2W_1 W_2 r_{1.2} s_1 s_2 + 2W_3 W_2 r_{2.3} s_3 s_2 + 2W_3 W_1 r_{1.3} s_3 s_1$$

2.2 FUNDAMENTAL ANALYSIS

Fundamental analysis is an examination of future earnings potential of a company, by looking into various factors that impact the performance of the company. The prime objective of a fundamental analysis is to value the stock and accordingly buy and sell the stocks on the basis of its valuation in the market. The fundamental analysis consists of economic, industry and company analysis. This approach is sometimes referred to as a top-down method of analysis.

2.2.1 Valuation of a Stock

Dividend Discount Model

According to Dividend Discount Model (DDM), the value of a stock is equal to the present value of all future cash flows in the form of dividends plus the present value of the sale price expected when the equity share is sold. The DDM assumes that the constant amount of dividend is paid annually and that the first dividend is received one year after the equity share is bought.

If investors expect to hold an equity share for one year, then the current price of the share can be calculated as:

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

Where

P_0 = Current price/market price of the share today

D_1 = Dividend expected at end of year 1

r = required rate of return/discount rate

P_1 = market price/expected price of share at end of year 1

Illustration-1:

In future, a company is expected to consistently pay dividend of 15% p.a. on its share par value of Rs. 100. If the investors' required rate of return on the share is 12%, What would be the current theoretical value (sell price) of the share now?

Given, Dividend = D_1 = Rs. 15; r = 12%; P_1 = 100 the current price (P_0) will be:

$$P_0 = \frac{D_1}{(1+r)} + \frac{P_1}{(1+r)} = \frac{15}{1.12} + \frac{100}{1.12} \text{ = Rs. 102.68}$$

Constant Growth DDM:

Constant Growth DDM presumes that the dividend per share is growing at constant rate (g). The value of the share (P_0) can be calculated as:

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

Where,

D_1 = Dividend per share at the end of first year.

r = Expected rate of return/Discount rate

g = Constant growth rate

Illustration-2: In future, company is expected to pay dividend of 15% p.a with growth rate of 5% on its share par value of Rs. 100. If the required rate of return on the share is 12%. What is the theoretical value of the share?

$$P_0 = \frac{15}{(0.12 - 0.05)} = \frac{15}{0.07} = Rs.214.29$$

2.3 FINANCIAL STATEMENT ANALYSIS

Financial statement consists of Balance Sheet, Profit and Loss Account, Sources and Uses of Funds Statements, and Auditors' Notes to the Financial statements. The Balance sheet shows the financial position of the firm at a particular point of time. The profit and loss account (Income Statement) shows the financial performance of the firm over a period of time. The sources and uses of funds statements reflect the flow of funds through the business during a given period of time.

2.3.1 Balance Sheet

The balance sheet of a company, according to the Companies Act, should be either in account form or the report form.

Balance Sheet: Account Form

Liabilities	**Assets**
Share Capital	Fixed Assets
Reserves and Surplus	Investments
Secured loans	Current Assets, loans and Advances
Unsecured loans	Miscellaneous expenditure
Current liabilities and provisions	

Liabilities:

- Share Capital: Share capital has been divided into equity capital and preference capital. The share capital represents the contribution of owners of the company. Equity capital does not have fixed rate of dividend. The preference capital represents contribution of preference shareholders and has fixed rate of dividend.
- Reserves and Surplus: The reserves and surpluses are the profits retained in the company. The reserves can be divided into revenue reserves and capital reserves. Revenue reserves represent accumulated retained earnings from the profits of business operations. Capital reserves are those gained which are not related to business operations. The premium on issue of shares and gain on revaluation of assets are examples of the capital reserves.
- Secured and Unsecured Loans: Secured loans are the borrowings against the security. They are in the form of debentures, loans from financial institutions and loans from commercial banks. The unsecured loans are the borrowings without a specific security. They are fixed deposits, loans and advances from promoters, inter-corporate borrowings, and unsecured loans from the banks.
- Current Liabilities and Provisions: They are amounts due to the suppliers of goods and services brought on credit, advances payments received, accrued expenses, unclaimed dividend, provisions for taxes, dividends, gratuity, pensions, etc.

Assets:

- Fixed Assets: These assets are acquired for long-terms and are used for business operation, but not meant for resale. The land and buildings, plant, machinery, patents, and copyrights are the fixed assets.
- Investments: The investments are the financial securities either for long-term or short-term. The incomes and gains from the investments is not from the business operations.
- Current Assets, Loans, and Advances: This consists of cash and other resources which can be converted into cash during the business operation. Current assets are held for a short-term period. The current assets are cash, debtors, inventories, loans and advances, and pre-paid expenses.
- Miscellaneous Expenditures and Losses: The miscellaneous expenditures represent certain outlays such as preliminary expenses and pre-operative expenses not written off. Though loss indicates a decrease in the owners' equity, the share capital can not be reduced with loss. Instead, Share capital and losses are shown separately on the liabilities side and assets side of the balance sheet.

Balance Sheet: Report Form

I. **Sources of Funds** 1. Shareholders' Funds (a) Share Capital (b) Reserves & surplus 2. Loan Funds (a) Secured loans (b) Unsecured loans II. **Application of Funds** (i) Fixed Assets (ii) Investments (iii) Current Assets, loans and advances Less: Current liabilities and provisions Net current assets (iv) Miscellaneous expenditure and losses

2.3.2 Profit and Loss Account

Profit and Loss account is the second major statement of financial information. It indicates the revenues and expenses during particular period of time. The period of time is an accounting period/year, April-March. The profit and loss account can be presented broadly into two forms: (i) usual account form and (ii) step form. The accounting report summarizes the revenue items, the expense items, and the difference between them (net income) for an accounting period.

Mere statistics/data presented in the different financial statements do not reveal the true picture of a financial position of a firm. Properly analyzed and interpreted financial statements can provide valuable insights into a firm's performance. To extract the information from the financial statements, a number of tools are used to analyse such statements. The most popular tool is the Ratio Analysis.

2.3.3 Ratio Analysis

Financial ratio is a quantitative relationship between two items/variables. Financial ratios can be broadly classified into three groups: (I) Liquidity ratios, (II) Leverage/Capital structure ratio, and (III) Profitability ratios.

(I) Liquidity ratios

Liquidity refers to the ability of a firm to meet its financial obligations in the short-term which is less than a year. Certain ratios which indicate the liquidity of a firm are: (i) Current Ratio, (ii) Acid Test Ratio, (iii) Turnover Ratios. It is based upon the relationship between current assets and current liabilities.

(i) Current ratio $= \dfrac{Current.Assets}{Current.Liabilities}$

The current ratio measures the ability of the firm to meet its current liabilities from the current assets. Higher the current ratio, greater the short-term solvency (i.e. larger is the amount of rupees available per rupee of liability).

(ii) Acid-test Ratio $= \dfrac{Quick.Assets}{Current.Liabilities}$

Quick assets are defined as current assets excluding inventories and prepaid expenses. The acid-test ratio is a measurement of firm's ability to convert its current assets quickly into cash in order to meet its current liabilities. Generally speaking 1:1 ratio is considered to be satisfactory.

(iii) Turnover Ratios:

Turnover ratios measure how quickly certain current assets are converted into cash or how efficiently the assets are employed by a firm. The important turnover ratios are:
- Inventory Turnover Ratio,
- Debtors Turnover Ratio,
- Average Collection Period,
- Fixed Assets Turnover and
- Total Assets Turnover

Inventory Turnover Ratio $= \dfrac{Cost\ of\ Goods\ Sold}{Average\ Inventoty}$

Where, the cost of goods sold means sales minus gross profit. 'Average Inventory' refers to simple average of opening and closing inventory. The inventory turnover ratio tells the efficiency of inventory management. Higher the ratio, more the efficient of inventory management.

Debtors' Turnover Ratio $= \dfrac{NetCreditSales}{AverageAccountsReceivable(Debtors)}$

The ratio shows how many times accounts receivable (debtors) turn over during the year. If the figure for net credit sales is not available, then net sales figure is to be used. Higher the debtors turnover, the greater the efficiency of credit management.

Average Collection Period $= \dfrac{AverageDebtors}{AverageDailyCreditSales}$

Average Collection Period represents the number of days' worth credit sales that is locked in debtors (accounts receivable).

Please note that the *Average Collection Period* and the *Accounts Receivable (Debtors) Turnover* are related as follows:

Average Collection Period $= \dfrac{365\,Days}{Debtors Turnover}$

Fixed Assets turnover ratio measures sales per rupee of investment in fixed assets. In other words, how efficiently fixed assets are employed. Higher ratio is preferred. It is calculated as follows:

Fixed Assets turnover ratio $= \dfrac{Net.Sales}{Net Fixed Assets}$

Total Assets turnover ratio measures how efficiently all types of assets are employed.

Total Assets turnover ratio $= \dfrac{Net.Sales}{Average Total Assets}$

(II) Leverage/Capital structure ratios

Long term financial strength or soundness of a firm is measured in terms of its ability to pay interest regularly or repay principal on due dates or at the time of maturity. Such long term solvency of a firm can be judged by using leverage or capital structure ratios. Broadly there are two sets of ratios: First, the ratios based on the relationship between borrowed funds and owner's capital which are computed from the balance sheet. Some such ratios are: Debt to Equity and Debt to Asset ratios. The second set of ratios which are calculated from Profit and Loss Account are: The interest coverage ratio and debt service coverage ratio are coverage ratio for leverage risk.

(i) Debt-Equity ratio reflects relative contributions of creditors and owners to finance the business.

Debt-Equity ratio $= \dfrac{Debt}{Equity}$

The desirable/ ideal proportion of the two components (high or low ratio) varies from industry to industry.

(ii) Debt-Asset Ratio: Total debt comprises of long term debt plus current liabilities. The total assets comprise of permanent capital plus current liabilities.

Debt-Asset Ratio $= \dfrac{Total\ Debt}{Total\ Assets}$

The second set or the coverage ratios measure the relationship between proceeds from the operations of the firm and the claims of outsiders.

(iii) Interest Coverage ratio $= \dfrac{\textit{Earnings Before Interest and Taxes}}{\textit{Interest}}$

Higher the interest coverage ratio better is the firm's ability to meet its interest burden. The lenders use this ratio to assess debt servicing capacity of a firm.

(iv)Debt Service Coverage Ratio (DSCR) is a more comprehensive and apt to compute debt service capacity of a firm. Financial institutions calculate the average DSCR for the period during which the term loan for the project is repayable. The Debt Service Coverage Ratio is defined as follows:

$$\frac{Profit.after.tax + Depreciation + OtherNoncashExpenditure + Interest.on.term.loan}{Interest\ on\ term\ loan + Repayment\ of\ term\ loan}$$

(III) Profitability ratios

Profitability and operating/management efficiency of a firm is judged mainly by the following profitability ratios:

(i) Gross Profit Ratio $= \dfrac{\textit{Gross Profit}}{\textit{Net Sales}}$

(ii) Net Profit Ratio $= \dfrac{\textit{Net Profit}}{\textit{Net Sales}}$

Some of the profitability ratios related to investments are:

(iii) Return on Total Assets = $\dfrac{\textit{Net Income}}{\textit{Average Total Assets}}$

(iv)Return on Capital Employed = $\dfrac{\textit{Net Profit}}{\textit{Capital Employed}}$

(Here, Capital Employed = Fixed Assets + Current Assets - Current Liabilities)

Return on Shareholders' Equity

$$= \frac{\textit{Net Income After Tax}}{\textit{Average Total Shareholders' Equity or Net Worth}}$$

(Net worth includes Shareholders' equity capital plus reserves and surplus)

A common (equity) shareholder has only a residual claim on profits and assets of a firm, i.e., only after claims of creditors and preference shareholders are fully met, the equity shareholders receive a distribution of profits or assets on liquidation. A measure of his well being is reflected by return on equity. There are several other measures to calculate return on shareholders' equity:

(i) Earnings Per Share (EPS): EPS measures the profit available to the equity shareholders per share, that is, the amount that they can get on every share held. It is calculated by dividing the profits available to the shareholders by number of outstanding shares. The profits available to the ordinary shareholders are arrived at by net profits after taxes and preference dividend.

It indicates the value of equity in the market.

$$\text{EPS} = \frac{\text{Net Profit}}{\text{Number of Ordinary Shares Outstanding}}$$

(ii) Price-earnings ratios = P/E Ratio $= \dfrac{\text{Market Price per Share}}{\text{EPS}}$

(iii) Cash Earnings per share (CPS/CEPS):

$$\text{CPS/CEPS} = \frac{\text{Net Profit} - \text{Preference Dividend} + \text{Depreciation}}{\text{Number of Equity Shares}}$$

<u>Illustration</u>:

Balance Sheet of ABC Co. Ltd. as on March 31, 2006

(Rs. in Crore)

Liabilities	Amount	Assets	Amount	
Share Capital (1,00,00,000 equity shares of Rs.10 each)	16.00	Fixed Assets (net)		60.00
Reserves & Surplus	22.00	Current Assets:		23.40
Secured Loans	21.00	Cash & Bank	0.20	
Unsecured Loans	25.00	Debtors	11.80	
Current Liabilities & Provisions	16.00	Inventories	10.60	
		Pre-paid expenses	0.80	
		Investments		16.60
Total	**100**	**Total**		**100**

Profit & Loss Account of ABC Co. Ltd.
for the year ending on March 31, 2006:

Particulars	Amount	Particulars	Amount
Opening Stock	13.00	Sales (net)	105.00
Purchases	69.00	Closing Stock	15.00
Wages and Salaries	12.00		
Other Mfg. Expenses	10.00		
Gross Profit	16.00		
Total	**120.00**	**Total**	**120.00**
Administrative and Personnel Expenses	1.50	Gross Profit	16.00
Selling and Distribution Expenses	2.00		
Depreciation	2.50		
Interest	1.00		
Net Profit	9.00		
Total	**16.00**	**Total**	**16.00**
Income Tax	4.00	Net Profit	9.00
Equity Dividend	3.00		
Retained Earning	2.00		
Total	**9.00**	**Total**	**9.00**

Market price per equity share - Rs. 20.00

Current Ratio = Current Assets / Current Liabilities
= 23.40/16.00 = 1.46

Quick Ratio = Quick Assets / Current Liabilities
=Current Assets-(inventory + prepaid expenses)/Current Liabilities
= [23.40-(10.60+0.8)]/16.00 = 12.00/16.00 = 0.75

Inventory Turnover Ratio = Cost of goods sold/Average Inventory
= (Net Sales-Gross Profit)/ [(opening stock + closing stock)/2]
= (105-16)/ [(15+13)/2] = 89/14 = 6.36

Debtors Turnover Ratio = Net Sales/Average account receivables (Debtors)
=105/11.80 =8.8983

Average Collection period = 365 days / Debtors turnover
= 365 days/8.8983 = 41 days

Fixed Assets Turnover ratio = Net Sales / Net Fixed Assets
= 105/60 = 1.75

Debt to Equity Ratio = Debt/ Equity
= (21.00+25.00)/(16.00+22.00) = 46/38 = 1.21

Gross Profit Ratio = Gross Profit/Net Sales
= 16.00/105.00 = 0.15238 or 15.24%

Net Profit Ratio = Net Profit / Net Sales
= 9/105.00 = 0.0857 or 8.57 %

Return on Shareholders' Equity = Net Profit after tax/Net worth
= 5.00/(16.00+22.00) =0.13157 or 13.16%

2.4 COST OF CAPITAL

Capital like any other factor of production involves a cost. The cost of capital is an important element in capital expenditure management. The cost of capital of a company is the average cost of various components of capital of all long term sources of finance. Understanding the concept of the Cost of capital is very helpful in making investment and financing decision. For e.g. if a company is in need of Rs.30 crore, cost of capital will be the major factor determining whether the same should be financed by debt or equity capital. There are three types of capital costs, namely, (i) Cost of Debt, (ii) Cost of preferred Shares and (iii) Cost of Equity.

2.4.1 Cost of Debt

The debt capital can be broadly classified as Perpetual Debt Capital or redeemable debt capital. The cost of perpetual debt capital (Kdp) is calculated by

Kdp= $\frac{I}{SV}(1-tx)$

Where
I= Annual Interest Rate
SV= Sales proceed of the bond/debenture
tx = tax rate

Kdp is the tax adjusted cost of capital (i.e. the cost of debt is on after tax basis). To calculate before tax cost of debt (1-tx) will not be considered.
The cost of debt is generally the lowest among all sources partly because the risk involved is low but mainly because interest paid on debt is tax deductible.

2.4.2 Cost of Preference Shares

The preference capital can be broadly classified as perpetual preference capital or redeemable preference capital. The cost of perpetual preference capital (Kpsp) is calculated by

$$Kpsp = \frac{d(1+tx)}{p(1-f)}$$

Where
d = constant annual dividend
p = expected sale price of preference share
f = floatation cost
tx = Tax on preference dividend

Kpsp is the tax adjusted cost of preference capital. To calculate before tax cost of preference capital (1+tx) will not be considered.
It may be noted that while assessing tax liability, the preference dividend paid to the preference shareholders is not allowed as a deductible item of expense.

2.4.3 Cost of Equity

There are two approaches to compute cost of equity capital: (1) Dividend growth Model approach which is discussed in this section and (2) Capital Asset Pricing Model which is discussed in section 2.1.3.

Dividend growth Model approach: Dividend growth Model approach assumes that the price of equity stock depends ultimately on the dividend expected from it.

Dividend Growth Model:

$$K_e = \frac{D}{P_e} + g$$

Where
Ke = Cost of Equity Capital
D = Dividend
g = rate at which dividends are expected to grow
P_e = Price of equity shares

Example-1:
Stock price of XYZ Ltd. is trading at Rs. 66. The firm is expected to declare dividend of Rs. 7 per share and is expected to grow at rate of 10 per cent per year. What is the cost of equity under dividend growth model?

$K_e = \dfrac{D}{P_e} + g$

K_e = (7/66) + .10
= .10606 +.10
= .20606 x 100 = 20.61%

2.4.4 The Weighted Average Cost of Capital

The weighted average cost of capital is the weighted average of the after-tax costs of each of the sources of capital used by a firm to finance a project where the weights reflect the proportion of total financing raised from each source.

$K_{wacc} = W_d\ K_d\ (1 - T_c) + W_{ps}\ K_{ps} + W_e\ K_e$

W = Weight
Kd = cost of Debt Capital
Kps = Cost of Preference Share Capital
Ke = Cost of Equity capital

Example-2:
What is the average cost of capital of XYZ Ltd.?, if the cost of capital from each source such as debt, preferred stock and equity is 7%, 16% and 23% respectively and being financed with 40% from the debt, 10% from the preferred stock and 50% from the equity.
K_{wacc} = 40% *7% + 10%*16% + 50%*23% = 15.9%

2.5 CAPITAL STRUCTURE

The objective of the firm is to maximize shareholder's wealth or in other words the value of the firm. The main sources of finance for a firm are equity and debt. The question arises is what should be the proportion of the equity and debt so that the shareholders wealth is maximized. It may be noted that the value of the firm and the cost of capital is inversely related i.e. the value of the firm is maximized when the cost of capital is minimized and vice versa.

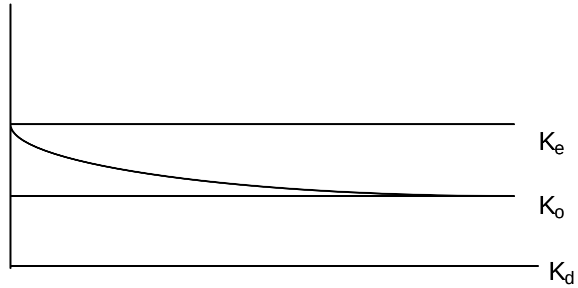
2.5.1 Net Income Approach

Under the net income approach, the cost of debt capital (k_d) and the cost of equity capital (k_e) remain unchanged, when the degree of leverage varies meaning

$k_o = k_d\left(\dfrac{B}{B+S}\right) + k_e\left(\dfrac{S}{B+S}\right)$

Where K_o = Overall Capitalisation rate for the firm
K_d = Cost of Debt Capital
K_e = Cost of Equity Capital
B = Market value of the Debt
S = Market value of the Equity

Cost of capital

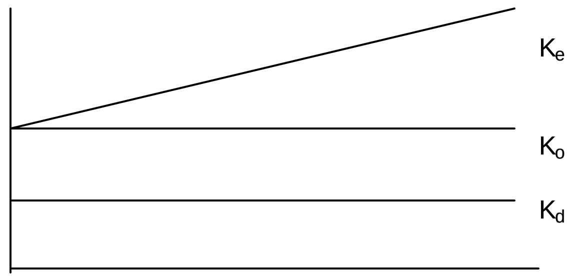


Degree of leverage (debt/equity)

As leverage increases, the overall cost of capital decreases, because the weight of debt capital which is relatively a cheaper means of finance in the capital structure increases.

2.5.2 Net Operating Income Approach

Under net operating income approach, the overall capitalization rate and the cost of debt remains constant for all degrees of leverage. The reason for the same being that the market capitalizes the firm as a whole at a rate which is independent of its debt-equity ratio.



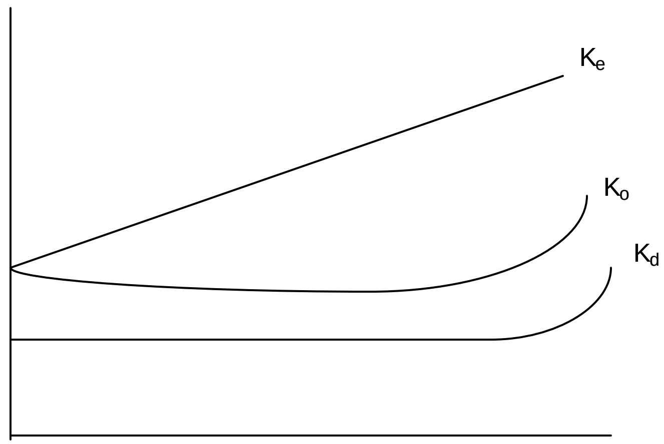
The market value of the firm depends on its net operating income and business risk and not on change in degree of leverage. An increase in use of debt fund is offset by the higher equity capitalization rate. This approach was advocated by David Durand. Modigliani and Miller advanced the proposition that the cost of capital of a firm is independent of its capital structure.

2.5.3 Traditional Approach

The Traditional approach is the midway between the Net Income and Net Operating Income Approaches. The crux of the traditional view relating to leverage and valuation is that through proper use of debt and equity proportions, a firm can increase its value and thereby reduce the overall cost of capital. The rational behind the same is that debt is a comparatively cheaper source of funds to equity.

The main propositions of the traditional approach are:

- o The Cost of debt capital remains constant up to a certain degree of leverage but rises afterwards at an increasing rate.
- o The Cost of equity capital remains constant or rises only gradually up to a certain degree of leverage and rises sharply afterwards
- o The average cost of capital decreases up to a certain point, remains constant for moderate increase in leverage afterwards, and rises beyond certain point.



2.5.4 Modigliani and Miller Approach

The Modigliani and Miller (MM) thesis relating to the relationship between the capital structure, cost of capital and valuation is similar to the NOI approach. The MM approach maintains that the weighted average cost of capital does not change with the change in cost of capital (or degree of leverage). The basic propositions of the theory are:

1. The overall cost of capital and the value of the firm are independent of its capital structure. The cost of capital and the value of the firm are constant for all degrees of leverage. The total value is given by

capitalizing the expected stream of operating earnings at a discount rate appropriate to its risk class.
2. The expected return on equity is equal to the expected rate of return on assets plus a premium. The premium is equal to the debt-equity ratio times the difference between the expected return on assets and the expected return on debt.
3. The cut off rate (of expected return) for investment purposes is completely independent of the way in which the investments are financed.

The MM theory assumes that:
1. The Capital Markets are perfect. The information is perfect and is readily available to the investors. Securities are infinitely divisible. Investors are free to buy and sell. There are no transaction costs. Investors are rational.
2. The expectations of the investors about the future operating earnings are identical.
3. The business risk is equal among all firms within similar operating environment.
4. Dividend payout ratio is 100 percent (The entire earnings are distributed as dividend)
5. There are no taxes.

2.6 CAPITAL BUDGETING

Capital expenditures typically involve a current or future outlay of funds in expectation of stream of benefits extending far in future. The basic characteristics of the same are: (a) They have long term consequences. (b) They involve substantial outlays (c) They may not be reversed. Capital budgeting decisions are of utmost importance in financial decision making as they affect the profitability and competitive position of the firm.

Capital budgeting involves the following phases.
- Identification of projects
- Assembling of proposed projects
- Decision making
- Preparation of capital budget and appropriations
- Implementation
- Performance evaluation of projects

In order to evaluate the project the following five methods are adopted.
- Net Present Value
- Benefit-Cost Ratio
- Internal rate of return
- Payback period

- Accounting rate of return

2.6.1 Net Present Value

Net present value of a project is the sum of the present values of all the cash flows associated with it. The cash flows can be positive or negative.

$$NPV = \frac{CF_0}{(1+r)^0} + \frac{CF_1}{(1+r)^1} ..... \frac{CF_n}{(1+r)^n} = \sum_{t=0}^{n} \frac{CF_t}{(1+r)^t}$$

Where NPV = Net present value
CF = Cash flow occurring at the end of the year t (t=0, 1..., n)
N = Life of the Project
r = Discount rate or required rate of return

The project is feasible or acceptable if the net present value is positive. The project is rejected if the net present value is negative. It is indifferent, if the net present value is zero. Similarly if there are various projects to be evaluated the project which has the highest NPV will get the highest rank and the project that has the lowest NPV will get the lowest rank

Example-1:
A firm requires an initial cash outlay of Rs. 10000, yields the following set of annual cash flows. The required rate of return of the firm is 10% p.a. What is its Net Present Value of the firm?

Year	After-tax Cash flows
1	Rs.4000
2	Rs.3000
3	Rs.3000
4	Rs.1000
5	Rs. 2000

Solution

Year	Cash flows	Present Value Factor: $1/(1+r)^t$	Present Value(2)*(3)
(1)	(2)	(3)	(4)
0	-10000	1	-10000
1	4000	0.909091	3636.364
2	3000	0.826446	2479.339
3	3000	0.751315	2253.944
4	1000	0.683013	683.0135
5	2000	0.620921	1241.843
		Net Present Value:	294.503

The *Advantages* of the NPV method are:

1. It takes into account the time value of money with changing discount rate.
2. It can be used to evaluate mutually exclusive projects.
3. It takes into consideration the total benefits arising out of the project over its lifetime.

The *disadvantages* being:

1. It doest not take into account the life of the project and may not give dependable result for projects having different lives.
2. The NPV method is an absolute method and may not give dependable results in case the projects have different outlays.

2.6.2 Benefit-Cost Ratio

Cost Benefit Ratio (BCR), also known as profitability index (PI), measures the present value of the returns per rupee invested.
BCR= Present value of inflows/Initial Investments
PI= Present value of cash inflows/Present value of cash outflows

Using the BCR the project may be accepted when BCR is greater than 1 and may be rejected if the BCR is less than 1. When BCR equals 1 the firm is indifferent to the project. PI is the superior method than BCR in terms as it can be used in projects where outflows occur beyond the current period.

Example-2:
A firm requires an initial cash outlay of Rs.10000, yields the following set of annual cash flows. The required rate of return of the firm is 10% p.a. What is its Benefit-Cost Ratio?
Using the same illustration as in NPV calculation, where NPV=294.503, we can calculate BCR as follows:

BCR = Present value of inflows/Initial Investments
= 294.503/10000 = 0.029

Since the BCR is less than 1 it is better to reject the project.

Advantages

1. BCR method is superior to NPV method as it evaluates the project in relative rather than in absolute terms.
2. Two projects having different cash outlays and lifetime can be evaluated.
3. It also takes into account the important elements of capital budgeting such as time value of money, totality of the benefits and so on.

2.6.3 Internal Rate of Return

Internal rate of return (IRR) is the discount rate which makes its net present value equal to zero. It is the discount rate which equates the present value of the future benefits with the initial outlay.

$$0 = \frac{CF_0}{(1+r)^0} + \frac{CF_1}{(1+r)^1} \ldots\ldots \frac{CF_n}{(1+r)^n} = \sum_{t=0}^{n} \frac{CF_t}{(1+r)^t}$$

Where, CF = Cash flow
r = Discount rate or required rate of return
n = Life of the Project

It may be noted that the discount rate is not known while calculating the IRR. In IRR calculation the NPV is set to zero to determine the discount rate that satisfies the condition. The calculation of r is a trial and error process. Different values are tried as r till the condition is satisfied.

Example-3:
A firm requires an initial cash outlay of Rs. 10000, yields the following set of annual cash flows. What is the required rate of return of the firm for these cash flows?

Year	After-tax Cash flows
1	Rs.4000
2	Rs.3000
3	Rs.3000
4	Rs.1000
5	Rs. 2000

Solution

Year	Cash flows	Present Value Factor is assumed to be 11.3675%	Present Value(2)*(3)
(1)	(2)	(3)	(4)
0	-10000	1	-10000
1	4000	0.897928	3591.712
2	3000	0.806275	2418.824
3	3000	0.723977	2171.93
4	1000	0.650079	650.079
5	2000	0.583724	1167.448
		Net Present Value:	-0.0063

Therefore, the Internal Rate of Return is 11.367%

Advantage of the IRR method is apart from taking into account the important elements of capital budgeting such as time value of money, totality of the benefits and so on, it does not take use the concept of required return or the cost of the capital. It itself provides a rate of return which is indicative of profitability of the proposal.

The disadvantages being:

1. It involves tedious calculations.
2. IRR may not give dependable results while evaluating mutually exclusive projects as the project with Highest IRR will be selected. However in practice it may not turned out to be the same
3. IRR assumes that all intermediate cash flows are reinvested at IRR. This is not the case in practice

2.6.4 Payback Period

The payback period is the number of years required to recover the initial project cost. Shorter the payback period, more desirable is the project.

Payback period = Number of years required to equal cash flows with initial project cost.

Example-4:

A firm requires an initial cash outlay of Rs. 10000, yield the following set of annual cash flows, what is its payback period?

Year	After-tax Cash flows
1	Rs.4000
2	Rs.3000
3	Rs.3000
4	Rs.1000
5	Rs. 2000

Its payback period is 3 years as the firm is able to recover the initial outlay of Rs. 10000 only in the 3rd year.

Advantages

1. it is simple in concept and application
2. it emphasizes on the early recovery of the project cost it may be useful for the firms which are looking for liquidity

Disadvantages

1. It does not take into account the time value of money.
2. It ignores cash flows beyond the payback period. Projects which have substantial inflows in the later part are ignored.
3. It concentrates only on capital recovery and not on profitability

2.6.5 *Accounting Rate of Return*

Accounting rate of return = $\dfrac{\text{Profit After Tax}}{\text{Book Value of the Investment}}$

Higher the accounting rate of return, the better the project. Generally projects which returns equal to or greater than pre specified cut of return are accepted.

As it is evident that though ARR is easy to calculate and apply, it does not take into account time value of money and is based on the accounting profit and not cash flows.

2.7 TIME VALUE OF MONEY

One of the most important principles in all of finance is the relationship between value of a rupee today and value of rupee in future. This relationship is known as the 'time value of money'. A rupee today is more valuable than a rupee tomorrow. This is because current consumption is preferred to future consumption by the individuals, firms can employ capital productively to earn positive returns and in an inflationary period, rupee today represents greater purchasing power than a rupee tomorrow. The time value of the money may be computed in the following circumstances.

(a) Future value of a single cash flow
(b) Future value of an annuity
(c) Present value of a single cash flow
(d) Present value of an annuity

2.7.1 *Future Value of a Single Cash Flow*

For a given present value (PV) of money, future value of money (FV) after a period 't' for which compounding is done at an interest rate of 'r', is given by the equation

$$FV = PV\ (1+r)^t$$

This assumes that compounding is done at discrete intervals. However, in case of **continuous compounding**, the future value is determined using the formula

$$FV = PV * e^{rt}$$

Where 'e' is a mathematical function called 'exponential' the value of exponential (e) = 2.7183. The compounding factor is calculated by taking natural logarithm (log to the base of 2.7183).

Example 1: Calculate the value of a deposit of Rs.2,000 made today, 3 years hence if the interest rate is 10%.
By **discrete compounding**:
FV = 2,000 * $(1+0.10)^3$ = 2,000 * $(1.1)^3$ = 2,000 * 1.331 = Rs. 2,662
By **continuous compounding**:
FV = 2,000 * $e^{(0.10*3)}$ =2,000 * 1.349862 = Rs.2699.72

Example 2: Find the value of Rs. 70,000 deposited for a period of 5 years at the end of the period when the interest is 12% and continuous compounding is done.

Future Value = 70,000* $e^{(0.12*5)}$ = Rs. 1,27,548.827.

The future value (FV) of the present sum (PV) after a period 't' for which compounding is done 'm' times a year at an interest rate of 'r', is given by the following equation:

FV = PV (1+(r/m))^mt

Example 3: How much a deposit of Rs. 10,000 will grow at the end of 2 years, if the nominal rate of interest is 12 % and compounding is done quarterly?

Future value = 10,000 * $\left(1+\frac{0.12}{4}\right)^{4*2}$ = Rs. 12,667.70

2.7.2 Future Value of an Annuity

An annuity is a stream of equal annual cash flows. The future value (FVA) of a uniform cash flow (CF) made at the end of each period till the time of maturity 't' for which compounding is done at the rate 'r' is calculated as follows:

$$\begin{aligned} FVA &= CF*(1+r)^{t-1} + CF*(1+r)^{t-2} + \ldots + CF*(1+r)^{1} + CF \\ &= CF\left(\frac{(1+r)^{t}-1}{r}\right) \end{aligned}$$

The term $\left(\frac{(1+r)^{t}-1}{r}\right)$ is referred as the **Future Value Interest Factor** for an **Annuity** (FVIFA). The same can be applied in a variety of contexts. For e.g. to know accumulated amount after a certain period,; to know how much to save annually to reach the targeted amount, to know the interest rate etc.

Example 4: Suppose, you deposit Rs.3,000 annually in a bank for 5 years and your deposits earn a compound interest rate of 10 per cent, what will be value of this series of deposits (an annuity) at the end of 5 years? Assume that each deposit occurs at the end of the year.
Future value of this annuity is:
$=Rs.3000*(1.10)^4 + Rs.3000*(1.10)^3 + Rs.3000*(1.10)^2 + Rs.3000*(1.10) + Rs.3000$
=Rs.3000*(1.4641)+Rs.3000*(1.3310)+Rs.3000*(1.2100)+Rs.3000*(1.10) + Rs.3000
= Rs. 18315.30

Example 5: You want to buy a house after 5 years when it is expected to cost 40 lakh how much should you save annually, if your savings earn a compound return of 12%?

$$FVIFA_{t=5\ ,\ r=12\%} = \left(\frac{(1+0.12)^5 - 1}{0.12} \right) = 6.353$$

The annual savings should be:
4000000/6.353=6,29,623.80

In case of **continuous compounding**, the future value of annuity is calculated using the formula: FVA = CF * (e^{rt} -1)/r.

2.7.3 *Present Value of a Single Cash Flow*

Present value of (PV) of the future sum (FV) to be received after a period 't' for which discounting is done at an interest rate of 'r', is given by the equation

In case of **discrete discounting**: PV = FV / $(1+r)^t$

Example 6: What is the present value of Rs.5,000 payable 3 years hence, if the interest rate is 10 % p.a.
PV = 5000 / $(1.10)^3$ i.e. = Rs.3756.57

In case of **continuous discounting**: PV = FV * e^{-rt} OR PV = $\frac{FV}{e^{rt}}$

Example 7: What is the present value of Rs. 10,000 receivable after 2 years at a discount rate of 10% under continuous discounting?
Present Value = 10,000/(exp^(0.1*2)) = Rs. 8187.297

2.7.4 Present Value of an Annuity

The present value of annuity is the sum of the present values of all the cash inflows of this annuity.
Present value of an annuity (in case of **discrete discounting**)

$$PVA = FV\ [\{(1+r)^t - 1\}/\ \{r * (1+r)^t\}]$$

The term $[(1+r)^t - 1/\ r*(1+r)^t]$ is referred as the Present Value Interest factor for an annuity (PVIFA).

Example 8: What is the present value of Rs. 2000/- received at the end of each year for 3 continuous years
= 2000*[1/1.10]+2000*[1/1.10]^2+2000*[1/1.10]^3
= 2000*0.9091+2000*0.8264+2000*0.7513
= 1818.181818+1652.892562+1502.629602
= Rs. 4973.704

Example 9: Assume that you have taken housing loan of Rs.10 lakh at the interest rate of Rs.11 percent per annum. What would be you equal annual installment for repayment period of 15 years?
Loan amount = Installment (A) *PVIFA n=15, r=11%
10,00,000 = A* $[(1+r)^t - 1/\ r*(1+r)^t]$
10,00,000 = A* [(1.11)^15 - 1/ 0.11(1.11^15]
10,00,000 = A* 7.19087
10,00,000/7.19087 = A
A = Rs. 1,39,065.24

Present value of an annuity (in case of **continuous discounting**) is calculated as:

$$PV_a = FV_a * (1-e^{-rt})/r$$

2.8 Market Index

Traditionally, indices have been used as benchmarks to monitor markets and judge performance. Modern indices were first proposed by two 19th century mathematicians: Etienne Laspeyres and Hermann Paasche. The grandfather of all equity indices is the Dow Jones Industrial Average which was first published in 1896; since then indices have come a long way - not only in their sophistication - but also in the variety.

There are three main types of indices, namely price index, quantity index and value index. The price index is most widely used. It measures changes in the levels of prices of products in the financial, commodities or any other markets from one period to another. The indices in financial markets measure changes in prices of securities like equities, debentures, government securities, etc.

The most popular index in financial market is the stock (equity) index which uses a set of stocks that are representative of the whole market, or a specified sector, to measure the change in overall behaviour of the markets or sector over a period of time.

A stock index is important for its use:

1. as the lead indicator of the performance of the overall economy or a sector of the economy: A good index tells us how much richer or poorer investors have become.
2. as a barometer for market behaviour: It is used to monitor and measure market movements, whether in real time, daily, or over decades, helping us to understand economic conditions and prospects.
3. as a benchmark for portfolio performance: A managed fund can communicate its objectives and target universe by stating which index or indices serve as the standard against which its performance should be judged.
4. as an underlying for derivatives like index futures and options. It also underpins products such as, exchange-traded funds, index funds etc. These index-related products form a several trillion dollar business and are used widely in investment, hedging and risk management.
5. as it supports research (for example, as benchmarks for evaluating trading rules, technical analysis systems and analysts' forecasts); risk measurement and management; and asset allocation.

In addition to the above functional use, a stock index reflects changing expectations of the market about future of the corporate sector. The index rises if the market expects the future to be better than previously expected and drops if the expectation about future becomes pessimistic.

Price of a stock moves for two reasons, namely, company specific development (product launch, improved financial performance, closure of a factory, arrest of chief executive) and development affecting the general environment (nuclear bombs, election result, budget announcement, growth in GDP of the economy), which affects the stock market as a whole. The stock index captures the second part, that is, impact of environmental change on the stock market as a whole. This is achieved by averaging which cancels out changes in prices of individual stocks.

2.8.1 Understanding the index number

An index is a summary measure that indicates changes in value(s) of a variable or a set of variables over a time or space. It is usually computed by finding the ratio of current values(s) to a reference (base) value(s) and multiplying the resulting number by 100 or 1000. For instance, a stock market index is a number that indicates the relative level of prices or value of securities in a market on a particular day compared with a base-day price or value figure, which is usually 100 or 1000.

Illustration: The values of a market portfolio at the close of trading on Day 1 and Day 2 are:

	Value of portfolio	**Index value**
DAY1 (base day)	Rs. 20,000	1000
Day 2	Rs. 30,000	1500

Assume that Day 1 is the base day and the value assigned to the base day index is 1000. On Day 2 the value of the portfolio has changed from Rs. 20,000 to Rs. 30,000, a 50% increase. The value of the index on Day 2 should reflect a corresponding 50% increase in market value. Thus,

Index on Day2 = $\dfrac{Portfolio\ Value\ of\ Day2}{Portfolio Value\ of\ Base\ Day} * Index\ Value\ of\ Base\ Day$

$$= \frac{Rs.\ 30{,}000}{Rs.\ 20{,}000} * 1000 = 1500$$

Day 2's index is 1500 as compared to the 1000 of day 1.

The above illustration only serves as an introduction to how an index is constructed. The daily computation of a stock index involves more complexity especially when there are changes in market capitalization of constituent stocks, e.g., rights offers, stock dividend etc.

Attributes of an index

A good stock market index should have the following attributes:

(a) *Capturing behaviour of portfolios*: A good market index should accurately reflect the behaviour of the overall market as well as of different portfolios. This is achieved by diversification in such a manner that a portfolio is not vulnerable to any individual stock or industry risk. A well-diversified index is more representative of the market. However there are diminishing returns from diversification. There is very little gain by diversifying beyond a point. Including illiquid stocks, actually worsens the index since an illiquid stock does not reflect the current price behaviour of the market, its inclusion in index results in an index, which reflects, delayed or stale price behaviour rather than current price behaviour of the market. Thus a good index should include the stocks which best represent the universe.

(b) *Including liquid stocks*: Liquidity is much more than reflected by trading frequency. It is about ability to transact at a price, which is very close to the current market price. For example, when the market price of a stock is at Rs.320, it will be considered liquid if one can buy some shares at around Rs.320.05 and sell at around Rs.319.95. A liquid stock has very tight bid-ask spread. Impact cost is the most practical and operational definition of liquidity.

(c) *Maintaining professionally*: An index is not a constant. It reflects the market dynamics and hence changes are essential to maintain its representative character. This necessarily means that the same set of stocks would not satisfy index criteria at all times. A good index methodology must therefore incorporate a steady pace of change in the index set. It is crucial that such changes are made at a steady pace. Therefore the index set should be reviewed on a regular basis and, if required, changes should be made to ensure that it continues to reflect the current state of market.

Methodology for index construction

Stock market indices differ from one another basically in their sampling and/or weighting methods.

SAMPLING METHOD

Unlike market indices such as American Stock Market Index and the Hong Kong Stock Exchange All-Ordinaries Index that comprise of all stocks listed in a market, under sampling method, an index is based on a fraction or a certain percentage of select stocks which is highly representative of total stocks listed in a market.

WEIGHTING METHOD

In a value-weighted index, the weight of each constituent stock is proportional to its market share in terms of market capitalization. In an index portfolio, we can assume that the amount of money invested in each constituent stock is proportional to its percentage of the total value of all constituent stocks. Examples include all major stock market indices like S&P CNX Nifty.

There are three commonly used methods for constructing indices:

- Price weighted method
- Equally weighted method
- Market capitalisation weighted method

A price-weighted index is computed by summing up the prices, of the various securities included in the index, at time 1, and dividing it by the sum of prices of the securities at time 0 multiplied by base index value. Each stock is assigned a weight proportional to its price.

Example: Assuming base index = 1000, price weighted index consisting of 5 stocks tabulated below would be:

COMPANY	Share Price at Time- 0	Share Price at Time- 1
Reliance	351.75	340.50
AB & U	329.10	350.30
INFOSYS	274.60	280.40
HLL	1335.25	1428.75
Tata Tea	539.25	570.25
Total	**2829.95**	**2970.20**

Index = $\frac{2970.20}{2829.95}$ *1000 = 1049.56

An equally weighted index assigns equal weight to each stock. This is achieved by adding up the proportionate change in the price of each stock, dividing it by no of stocks in the index and multiplying by base index value.

Assuming base index = 1000, equally weighted index consisting of 5 stocks tabulated in the earlier example would be calculated as:

$$\text{Index} = \frac{\frac{340.50}{351.75}+\frac{350.30}{329.10}+\frac{280.40}{274.60}+\frac{1428.75}{1335.25}+\frac{570.25}{539.25}}{5} * 1000$$

$$= \frac{5.1810682}{5} * 1000 = 1036.21$$

Market capitalisation weighted index: The most commonly used weight is market capitalization (MC), that is, the number of outstanding shares multiplied by the share price at some specified time. In this method,

$$\text{Index} = \frac{\textit{Current Market Capitalization}}{\textit{Base Market Capitalization}} * \textit{Base Value}$$

Where,

Current MC = Sum of (number of outstanding shares*Current Market Price) all stocks in the index

Base MC = Sum of (number of outstanding shares*Market Price) all stocks in index as on base date

Base value = 100 or 1000

Assuming base index = 1000, market capitalisation weighted index consisting of 5 stocks tabulated in the earlier example would be calculated as:

COMPANY	Current Market Capitalization (Rs. Lakh)	Base Market Capitalization (Rs. Lakh)
Reliance	1668791.10	1654247.50
AB & U	872686.30	860018.25
INFOSYS	1452587.65	1465218.80
HLL	2675613.30	2669339.55
Tata Tea	660887.75	662559.30
Total	**7330566.10**	**7311383.40**

Index $= \frac{7330566.10}{7311383.40} * 1000$ = 1002.62

Difficulties in index construction:

The major difficulties encountered in constructing an appropriate index are:

- deciding the number of stocks to be included in the index,
- selecting stocks to be included in the index,
- selecting appropriate weights, and
- selecting the base period and base value.

Important stock indices

The prominent stock market indices are presented in the following Table:

Table: Important Indices in the World

Name of the Index	Country	Weight	No. of Stocks	Base Year	Base Value	Value as on 29 Sept. 2006
S&P CNX Nifty	NSEIL, India	Market Cap	50	1995	1000	3588.40
SENSEX 30	BSE, India	Free Float	30	1978 -79	100	12454.42
NASDAQ 100	NASDAQ, USA	Market Cap	100	1985	125	1654.13
FTSE 100	UK	Free Float	100	1984	1000	5960.80
Hang Seng	Hongkong	Market Cap	33	1964	100	17543.05
Dow Jones	USA	Price	30	1928	100	11679.07
Nikkei 225	Tokyo	Price	225	1949		16127.58

2.8.2 Understanding S&P CNX NIFTY

S&P CNX Nifty (Nifty), the most popular and widely used indicator of the stock market in the country, is a 50-stock index comprising the largest and the most liquid stocks from about 22 sectors in India. These stocks have a MCap of more than 55% of the total MCap of the Indian stock market. The index was introduced in 1995 by the National Stock Exchange (NSE) keeping in mind it would be used for modern applications such as index funds and index derivatives besides reflecting the stock market behaviour. NSE maintained it till July 1998, after which the ownership and management rights were transferred to India Index Services & Products Ltd. (IISL), the only professional company in India which provides index services.

Choice of index set size:

While trying to construct Nifty, a number of calculations were done to arrive at the ideal number of stocks. A simple index construction algorithm was implemented which did not pre-specify the size of the index set, but added and deleted stocks based on criteria of MC and liquidity. Ten index time-series (from 1990 to 1995) were generated by using various thresholds for addition and deletion of stocks from/into the index set. These index sets turned out to range from 69 to 182 stocks as of end-1995 indicating that the ideal number of stocks for the index could be somewhere in the range 69 to 182. For each of these ten index time-series, the correlation between the index time-series and thousands of randomly chosen portfolios was calculated. This gave a quantitative sense of how increasing the index set size helps improve the extent to which the index reflects the behaviour of the market. It was observed that the gain from increasing the number of stocks from 69 to 182 was quite insignificant. It was corroborated by the theory on portfolio diversification, which suggests that diversifying from 10 to 20 stocks results in considerable reductions in risk, while the gains from further diversification are smaller. An analysis of liquidity further suggested that the Indian market had comfortable liquidity of around 50 stocks. Beyond 50, the liquidity levels became increasingly lower. Hence the index set size of 50 stocks was chosen.

Selection of stocks:

From early 1996 onwards, the eligibility criteria for inclusion of stocks in S&P CNX Nifty are based on the criteria of Market Capitalization (MC), liquidity and floating stock.

Market capitalisation: Stocks eligible for inclusion in Nifty must have a six monthly average market capitalisation of Rs.500 crore or more during the last six months.

Liquidity (Impact cost): Liquidity can be measured in two ways: Traditionally liquidity is measured by volume and number of trades. The new international practice of measuring liquidity is in terms of impact cost. An ideal stock can be traded at its ruling market price. However practically, when one tries to buy a stock, one pays a price higher than the ruling price for purchase, or receives a price lower than the ruling price from sale, due to sufficient quantity not being available at the ruling price. This difference from the ruling price in percentage terms is the impact cost. It is defined as the percentage degradation suffered in the price for purchase or sale of a specified quantity of shares, when compared to the ideal price. It can be computed for each individual stock based on order book snapshots. It can also be computed for a market index based on the impact cost of constituent stocks, using their respective index weights. The impact cost of a market index is effectively the cost incurred when simultaneously placing market orders for all constituents of the index, in the proportion of their weights in the index. A highly liquid market index is one where the impact cost of buying or selling the entire index is low.

It is the percentage mark up suffered while buying / selling the desired quantity of a stock compared to its ideal price, that is, (best buy + best sell)/2. Let us assume the order book for a stock looks as follows:

Buy		**Sell**	
Quantity	**Price**	**Quantity**	**Price**
1000	98	1000	99
2000	97	1500	100
1000	96	1000	101

To buy 1500 stocks,

Ideal price = $\frac{99 + 98}{2} = 98.5$

Actual buy price = $\frac{1000 * 99 + 500 * 100}{1500} = 99.33$

Impact cost (For 1500 stocks) = $\frac{99.33 - 98.5}{98.5} \times 100 = 0.84\%$

Impact cost for sell can also be worked out. The impact cost criterion requires that the stocks traded for 90% of the trading days at an impact cost of less than 0.75% can be included in the index.

Floating Stock: Companies eligible for inclusion in S&P CNX Nifty should have atleast 12% floating stock. For this purpose, floating stock shall mean stocks which are not held by the promoters and associated entities (where identifiable) of such companies.

Base date and value:

The base date selected for S&P CNX Nifty index is the close of prices on November 3, 1995, which marks the completion of one year of operations of NSE's Capital Market segment. The base value of the index has been set at 1000.

S&P CNX Nifty has a historical time series dating back to January 1990. It is worth explaining the manner of calculation of the series. On 1st July 1990, BSE (the Stock Exchange, Bombay) data for the preceeding six months was analysed to shortlist a set of stocks which had adequate liquidity. The top fifty companies were included in the index set, and the index time series was calculated for three months from 1st July 1990 to 30th September 1990. The index set was re-calculated afresh at this point (i.e. by dropping some low-liquidity or low MC stocks, and adding better alternatives), and this new index set was used for the next three months, and so on. This methodology avoided selection bias associated with the simple back-calculation, which generates higher returns in the back-calculated series than is really the case. This happens because the index set chosen today is likely to contain stocks, which have fared well in the recent past. Conversely, stocks that fared badly in the past are likely to have lower MCap and hence not get included in today's index set. The historical time-series of Nifty truly reflects the behaviour of an index populated with the biggest 50 stocks, which have required levels of liquidity through out.

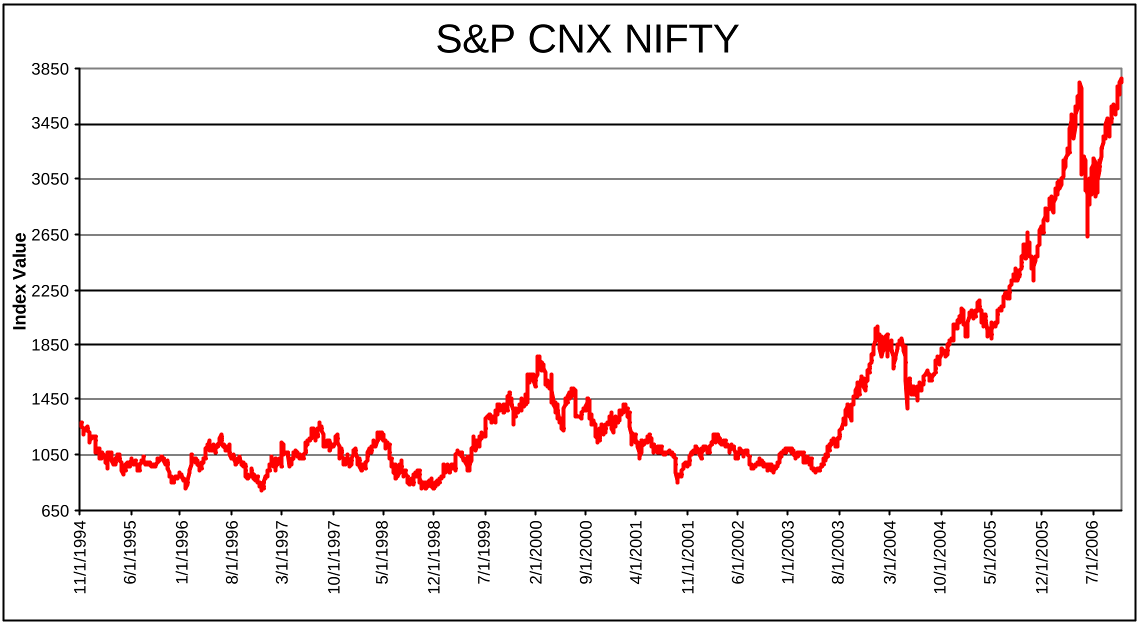
Index maintenance

An index is required to be maintained professionally to ensure that it continues to remain a consistent benchmark of the equity markets. This involves transparent policies for inclusion and exclusion of stocks in the index and for day-to-day tracking and giving effect to corporate actions on individual stocks. At IISL, an Index Policy Committee comprising of eminent professionals from mutual funds, broking houses, financial institutions, academicians etc. formulates policy and guidelines for management of the Indices. An Index Maintenance Sub-Committee, comprising of representatives from NSE, CRISIL, S&P and IISL takes all decisions on addition/ deletion of stocks in any Index and the day to day index maintenance.

On-line computation and dissemination:

The S&P CNX Nifty index is calculated afresh every time a trade takes place in an index stock. Hence, we often see days where there are more than 5,00,000 observations for Nifty. The index data base provides data relating to Open, High, Low, and Close values of index every day, the number of shares traded for each of the index stocks, the sum of value of the stocks traded of each of the index stocks, the sum of the MC of all the stocks in the index etc. Nifty is calculated on-line and disseminated over trading terminals across the country. This is also disseminated on real-time basis to information vendors such as Bloomberg, Reuters etc.

The movement of S&P CNX NIFTY since inception till October 2006 is presented in following Chart:



2.8.3 India Index Services & Products Ltd. (IISL)

IISL is jointly promoted by NSE, the country's leading stock exchange and The Credit Rating and Information Services of India Ltd. (CRISIL), the leading credit rating agency in India. IISL has a licensing and marketing agreement with Standard & Poor's (S&P), the leading index services provider in the world.

S&P CNX Nifty, the most popular and widely used indicator of the stock market in India, is the owned and managed by IISL, which also maintains over 80 indices comprising broad based benchmark indices, sectoral indices and customised indices. The prominent indices provided by IISL include:

Name of the Index	Description
S&P CNX Nifty	50-stock large MC Index
S&P CNX 500	A broad based 500 stock Index
S&P CNX Defty	US $ denominated Index of S&P CNX Nifty
S&P CNX Industry indices	The S&P CNX 500 in classified in 72 industry sectors. Each such sector forms an Index by itself.
CNX Nifty Junior	50-stock Index which comprise the next rung of large and liquid stocks after S&P CNX Nifty
CNX Midcap	A midcap Index of 100 stocks
CNX PSE Index	Public Sector Enterprises Index
CNX MNC Index	Multinational Companies Index
CNX IT Index	Information Technology Index
CNX FMCG Index	Fast Moving Consumer Goods Index
CNX Bank Index	
CNX Energy Index	
CNX Pharma Index	

Solved Examples:

Q. Security A gives a return of 10% with a dispersion of 4%, while security B gives a return of 18% with a dispersion of 6%. Which security is more risky?

(a) Security A
(b) Security B
(c) Both securities are equally risky
(d) Neither of the securities are risky

Correct Answer: Security A (*refer to section 2.1.1*)

Q. The market prices of the security A are Rs. 130 and Rs. 110 at the end of the month and at the end of the last month respectively. What is the total return on the security A for the current month, assuming there is no dividend?

(a) 20% (b) 30%
(c) 18.18% (d) 33%

Correct Answer: (c) 18.18% (*refer to section 2.2.1*)

Q. The standard deviation of two securities “A” and “B” are 15% and 20%, and their correlation coefficient is 0.5. What is the portfolio risk for both the securities, if the investments are made equally?

(a) 15.21%	(b) 15%
(c) 20%	(d) 17.5%

Correct Answer: (a) 15.21% (*refer to section 2.1.4*)

Q. Calculate the expected returns for a company under Capital Asset Pricing Model, assuming that risk free return is 8% p.a., its beta is 1.5 and market return is 20% p.a.

(a) 22%	(b) 26%
(c) 30%	(d) 38%

Correct Answer: (b) 26% (*refer to section of 2.1.3 on Capital Asset Pricing Model*)

Q. If the company pays dividend of Rs. 25 every year and the expected return for the investor is 20%, What is the theoretical value of share of the company?

(a) Rs.125	(b) Rs. 100
(c) Rs. 75	(d) Rs. 250

Correct Answer: (a) Rs.125 (*refer to section 2.2.1*)

Q. Calculate the weighted average cost of capital for a company, if the cost of capital from sources such as equity, preferred stock and debt is 20%, 18% and 15% respectively and being financed with 50% from equity capital, 10% from Preference capital and remaining 40% from Debt capital.

(a) 17.25%	(b) 17.67%
(c) 17.50%	(d) 17.80%

Correct Answer: (d) 17.80% (*refer to section 2.4.4*)

Q. Suppose your annual savings are Rs. 30,000. You opt for pension fund that offers compounded interest rate of 10% annually. How much will your PF account have after 25 years if you are contributing your savings to the PF at the end of every year?

(a) 29,50,412	(b) 3,25,041
(c) 32,50,412	(d) 2,95,041

Correct Answer: (a) 29,50,412 (*refer section 2.7.2*)

Q. Calculate the value 5 years hence of a deposit of Rs. 1,000 made today if the interest rate is 8% (compounded annually).

(a) Rs. 1,400 (b) Rs. 1,469

(c) Rs. 1,000 (d) Rs. 1,040

Correct Answer: (b) Rs. 1,469 (*refer section 2.7.1*)

Q. What is the present value of Rs. 1,000 payable 3 years hence if the interest rate is 9% per annum?

(a) Rs. 715 (b) Rs. 1,295

(c) Rs. 1,000 (d) Rs. 772

Correct Answer: (d) Rs. 772 (*refer to section 2.7.3*)

Q. What is the present value of Rs. 12,000 receivable after 3 years at a discount rate of 10 % under continuous discounting?

(a) Rs. 8889.80 (b) Rs. 12000.90

(c) Rs. 10000.20 (d) Rs. 9880.80

Correct Answer: (a) Rs. 8889.80

Q. Given the covariance between the return on Security A and the return on the Market Portfolio is 14 and beta of the Security A is 0.5, what is the variance of the return on the market portfolio?

(a) 7 (b) 0.036

(c) 28 (d) 5.29

Correct Answer: (c) 28 (refer to section 2.1.2)

CHAPTER 3

RULES AND REGULATIONS

This chapter deals with legislative and regulatory provisions relevant for Securities Market in India.

Legislations

The four main legislations governing the securities market are:(a) the Securities Contracts (Regulation) Act, 1956, preventing undesirable transactions in securities by regulating the business of dealing in securities; (b) the Companies Act, 1956, which is a uniform law relating to companies throughout India; (c) the SEBI Act, 1992 for the protection of interests of investors and for promoting development of and regulating the securities market; and (d) the Depositories Act, 1996 which provides for electronic maintenance and transfer of ownership of dematerialised securities.

Rules and Regulations

The Government has framed rules under the SC(R)A, SEBI Act and the Depositories Act. SEBI has framed regulations under the SEBI Act and the Depositories Act for registration and regulation of all market intermediaries, for prevention of unfair trade practices, insider trading, etc. Under these Acts, Government and SEBI issue notifications, guidelines, and circulars, which need to be complied with by market participants. The self-regulatory organizations (SROs) like stock exchanges have also laid down their rules.

Regulators

The regulators ensure that the market participants behave in a desired manner so that the securities market continue to be a major source of finance for corporates and government and the interest of investors are protected. The responsibility for regulating the securities market is shared by Department of Economic Affairs (DEA), Department of Company Affairs (DCA), Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI) and Securities Appellate Tribunal (SAT).

3.1 SECURITIES CONTRACTS (REGULATION) ACT, 1956

The Securities Contracts (Regulation) Act, 1956 [SC(R)A] provides for direct and indirect control of virtually all aspects of securities trading and the running of stock exchanges and aims to prevent undesirable transactions in securities. It gives Central Government regulatory jurisdiction over (a) stock exchanges through a process of recognition and continued supervision, (b) contracts in securities, and (c) listing of securities on stock exchanges. All the three are discussed subsequently in this section. The SC(R)A, 1956 was enacted to prevent undesirable transactions in securities by regulating the business of dealing therein and by providing for certain other matters connected therewith. This is the principal Act, which governs the trading of securities in India. As a condition of recognition, a stock exchange complies with conditions prescribed by Central Government. Organised trading activity in securities takes place on a recognised stock exchange.

Key definitions:

1. *Recognised Stock Exchange:* 'recognised stock exchange' means a stock exchange which is for the time being recognised by the Central Government under Section 4 of the SC(R)A.

2. *Stock Exchange:* 'Stock Exchange' means any body of individuals, whether incorporated or not, constituted for the purpose of assisting, regulating or controlling the business of buying, selling or dealing in securities.

3. *Securities*: As per Section 2(h), the term 'securities' include:
   (i) shares, scrips, stocks, bonds, debentures, debenture stock or other marketable securities of a like nature in or of any incorporated company or other body corporate, (ii) derivative, (iii) units or any other instrument issued by any collective investment scheme to the investors in such schemes, (iv) Government securities, (v) such other instruments as may be declared by the Central Government to be securities, and (vi) rights or interests in securities.

4. *Derivatives*: As per section 2 (aa), 'Derivative' includes:
   A. a security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security;
   B. a contract which derives its value from the prices, or index of prices, of underlying securities.
   Further, Section 18A provides that notwithstanding anything contained in any other law for the time being in force, contracts in derivative

shall be legal and valid if such contracts are (i) traded on a recognised stock exchange; and (ii) settled on the clearing house of the recognised stock exchange, in accordance with the rules and bye-laws of such stock exchange.

5. *Spot delivery contract*: has been defined in Section 2(i) to mean a contract which provides for-

   (a) actual delivery of securities and the payment of a price therefor either on the same day as the date of the contract or on the next day, the actual periods taken for the despatch of the securities or the remittance of money therefor through the post being excluded from the computation of the period aforesaid if the parties to the contract do not reside in the same town or locality;

   (b) transfer of the securities by the depository from the account of a beneficial owner to the account of another beneficial owner when such securities are dealt with by a depository.'

As mentioned earlier, the SC(R)A, 1956 deals with

1. stock exchanges, through a process of recognition and continued supervision,
2. contracts in securities, and
3. listing of securities on stock exchanges.

Recognition of stock exchanges

By virtue of the provisions of the Act, the business of dealing in securities cannot be carried out without a registration from SEBI. Any Stock Exchange which is desirous of being recognised has to make an application under Section 3 of the Act to SEBI, which is empowered to grant recognition and prescribe conditions. This recognition can be withdrawn in the interest of the trade or public.

SEBI is authorised to call for periodical returns from the recognised Stock Exchanges and make enquiries in relation to their affairs. Every Stock Exchange is obliged to furnish annual reports to SEBI. Recognised Stock Exchanges are allowed to make bylaws for the regulation and control of contracts but subject to the previous approval of SEBI and SEBI has the power to amend the said bylaws. The Central Government and SEBI have the power to supersede the governing body of any recognised stock exchange.

Contracts in Securities

Organised trading activity in securities takes place on a recognised stock exchange. If the Central Government is satisfied, having regard to the nature or the volume of transactions in securities in any State or area, that it is necessary so to do, it may, by notification in the Official Gazette, declare provisions of section 13 to apply to such State or area, and thereupon every contract in such State or area which is entered into after date of the notification otherwise than between members of a recognised stock exchange in such State or area or through or with such member shall be illegal. As per section 13A, a stock exchange may establish 'additional trading floor' (means a trading ring or trading facility offered by a recognised stock exchange outside its area of operation to enable the investors to buy and sell securities through such trading floor under the regulatory framework of the stock exchange) with the prior approval of SEBI in accordance with the terms and conditions stipulated by the said Board.

Listing of Securities

Where securities are listed on the application of any person in any recognised stock exchange, such person should comply with the conditions of the listing agreement with that stock exchange (Section 21).

3.2 SECURITIES CONTRACTS (REGULATION) RULES, 1957

The Central Government has made Securities Contracts (Regulation) Rules, 1957, as required by sub-section (3) of the Section 30 of the Securities Contracts (Regulation)Act, 1956 for carrying out the purposes of that Act.

Contracts between members of recognised stock exchange

All contracts between the members of a recognised stock exchange should be confirmed in writing and should be enforced in accordance with the rules and bye-laws of the stock exchange of which they are members (Rule 9).

Maintenance/Preservation of Books of account and other documents

1. Every member of a recognised stock exchange should maintain and preserve the following books of account and documents for a period of **five** years:
   - (a) Register of transactions (Sauda book).
   - (b) Clients' ledger.
   - (c) General ledger.
   - (d) Journals.
   - (e) Cash book.
   - (f) Bank pass-book.
   - (g) Documents register showing full particulars of shares and securities received and delivered.

2. Every member of a recognised stock exchange should maintain and preserve the following documents for a period of **two** years:

(a) Members' contract books showing details of all contracts entered into by him with other members of the same exchange or counter-foils or duplicates of memos of confirmation issued to such other members.

(b) Counter-foils or duplicates of contract notes issued to clients.

(c) Written consent of clients in respect of contracts entered into as principals. (Rule 15)

3.3 SECURITIES AND EXCHANGE BOARD OF INDIA ACT, 1992

Capital Issues (Control) Act, 1947

The Act had its origin during the war in 1943 when the objective was to channel resources to support the war effort. It was retained with some modifications as a means of controlling the raising of capital by companies and to ensure that national resources were channelled into proper lines, i.e., for desirable purposes to serve goals and priorities of the government, and to protect the interests of investors. Under the Act, any firm wishing to issue securities had to obtain approval from the Central Government, which also determined the amount, type and price of the issue.

As a part of the liberalisation process, the Act was repealed in May 1992 paving way for market determined allocation of resources. With this, Government's control over issues of capital, pricing of the issues, fixing of premia and rates of interest on debentures etc. ceased, and the office which administered the Act was abolished: the market was allowed to allocate resources to competing uses. However, to ensure effective regulation of the market, SEBI Act, 1992 was enacted to establish SEBI with statutory powers for (a) protecting the interests of investors in securities, (b) promoting the development of the securities market, and (c) regulating the securities market.

It can conduct enquiries, audits and inspection of all concerned and adjudicate offences under the Act. It has powers to register and regulate all market intermediaries and also to penalise them in case of violations of the provisions of the Act, Rules and Regulations made thereunder. SEBI has full autonomy and authority to regulate and develop an orderly securities market. Its regulatory jurisdiction extends over companies listed on Stock Exchanges and companies intending to get their securities listed on any recognised stock exchange in the issuance of securities and transfer of securities, in addition to all intermediaries and persons associated with securities market. SEBI can specify the matters to be disclosed and the standards of disclosure required for the protection of investors in respect of issues; can issue directions to all intermediaries and other persons associated with the securities market in the interest of investors or of orderly development of the securities market; and can conduct enquiries, audits and inspection of all concerned and adjudicate offences under the Act. In short, it has been given necessary autonomy and authority to regulate and develop an orderly securities market. All the intermediaries and persons associated with securities market, viz., stock brokers and sub-brokers, underwriters, merchant bankers, bankers to the issue, share transfer agents and registrars to the issue, depositories, depository participants, portfolio managers, debentures trustees, foreign institutional investors, custodians, venture capital funds, mutual funds, collective investments schemes, credit rating agencies, etc., shall be registered with SEBI and shall be governed by the SEBI Regulations pertaining to respective market intermediary.

Constitution of SEBI

The Central Government has constituted a Board by the name of SEBI under Section 3 of SEBI Act. The head office of SEBI is in Mumbai. SEBI may establish offices at other places in India. SEBI consists of the following members, namely:

(a) a Chairman

(b) two members from amongst the officials of the Ministry of the Central Government dealing with Finance and administration of the Companies Act, 1956

(c) one member from amongst the officials of the Reserve Bank

(d) five other members of whom at least three should be the whole-time members

The general superintendence, direction and management of the affairs of SEBI vests in a Board of Members, which exercises all powers and do all acts and things which may be exercised or done by SEBI.

The Chairman and the other members are from amongst the persons of ability, integrity and standing who have shown capacity in dealing with problems relating to securities market or have special knowledge or experience of law, finance, economics, accountancy, administration or in any other discipline which, in the opinion of the Central Government, shall be useful to SEBI.

Functions of SEBI

According to Section 11 of SEBI Act, 1992, SEBI has been obligated to protect the interests of the investors in securities and to promote the development of and to regulate the securities market by such measures as it thinks fit. The measures may provide for:

(a) regulating the business in stock exchanges and any other securities markets;

(b) registering and regulating the working of stock brokers, sub-brokers, share transfer agents, bankers to an issue, trustees of trust deeds, registrars to an issue, merchant bankers, underwriters, portfolio managers, investment advisers and such other intermediaries who may be associated with securities markets in any manner;

(c) registering and regulating the working of the depositories, participants, custodians of securities, foreign institutional investors, credit rating agencies and such other intermediaries as SEBI may, by notification, specify in this behalf;

(d) registering and regulating the working of venture capital funds and collective investment schemes including mutual funds;

(e) promoting and regulating self-regulatory organisations;

(f) prohibiting fraudulent and unfair trade practices relating to securities markets;

(g) promoting investors' education and training of intermediaries of securities markets;

(h) prohibiting insider trading in securities;

(i) regulating substantial acquisition of shares and take-over of companies;

(j) calling for information from, undertaking inspection, conducting inquiries and audits of the stock exchanges, mutual funds, other persons associated with the securities market, intermediaries and self-regulatory organisations in the securities market;

(k) calling for information and record from any bank or any other authority or board or corporation established or constituted by or under any Central, State or Provincial Act in respect of any transaction in securities which is under investigation or inquiry by the Board;

(l) performing such functions and exercising such powers under the provisions of Securities Contracts (Regulation) Act, 1956, as may be delegated to it by the Central Government;

(m) levying fees or other charges for carrying out the purpose of this section;

(n) conducting research for the above purposes;

(o) calling from or furnishing to any such agencies, as may be specified by SEBI, such information as may be considered necessary by it for the efficient discharge of its functions;

(p) performing such other functions as may be prescribed.

According to Section 11A of SEBI Act, 1992, SEBI may, for the protection of investors,

(a) specify, by regulations,
   (i) the matters relating to issue of capital, transfer of securities and other matters incidental thereto; and
   (ii) the manner in which such matters, shall be disclosed by the companies

(b) by general or special orders,
   (i) prohibit any company from issuing of prospectus, any offer document, or advertisement soliciting money from the public for the issue of securities,
   (ii) specify the conditions subject to which the prospectus, such offer document or advertisement, if not prohibited may be issued. (Section 11A).

Registration of Intermediaries

The intermediaries associated with securities market should buy, sell or deal in securities after obtaining a certificate of registration from SEBI, as required by Section 12:

1) Stock-broker,
2) Sub-broker,
3) Share transfer agent,
4) Banker to an issue,
5) Trustee of trust deed,
6) Registrar to an issue,
7) Merchant banker,
8) Underwriter,
9) Portfolio manager,
10) Investment adviser
11) Depository,
12) Depository participant
13) Custodian of securities,
14) Foreign institutional investor,
15) Credit rating agency,
16) Collective investment schemes,
17) Venture capital funds,
18) Mutual funds, and
19) Any other intermediary associated with the securities market.

Power to adjudicate

(1) For the purpose of adjudging, the Board appoints any of its officer not below the rank of a Division Chief to be an adjudicating officer for

holding an inquiry in the prescribed manner after giving any person concerned a reasonable opportunity of being heard for the purpose of imposing any penalty.

(2) While holding an inquiry the adjudicating officer has the power to summon and enforce the attendance of any person acquainted with the facts and circumstances of the case to give evidence or to produce any document which in the opinion of the adjudicating officer, may be useful for or relevant to the subject matter of the inquiry and if, on such inquiry, he is satisfied that the person has failed to comply with the provisions, he may impose penalty as he thinks fit in accordance with the provisions.

Establishment of Securities Appellate Tribunals

(1) The Central Government by notification, establish one or more Appellate Tribunals to be known as the Securities Appellate Tribunal to exercise the jurisdiction, powers and authority conferred on such Tribunal by or under this Act or any other law for the time being in force.

(2) The Central Government also specifies in the notification referred to in sub-section (1) the matters and places in relation to which the Securities Appellate Tribunal may exercise jurisdiction.

Procedure and powers of the Securities Appellate Tribunal

(1) The Securities Appellate Tribunal is not bound by the procedure laid down by the Code of Civil Procedure, 1908, but shall be guided by the principles of natural justice and, subject to the other provisions of this Act and of any rules, the Securities Appellate Tribunal have powers to regulate their own procedure including the places at which they have their sittings.

(2) The Securities Appellate Tribunal has, for the purposes of discharging their functions under this Act, the same powers as are vested in a civil court under the Code of Civil Procedure, 1908, while trying a suit, in respect of the following matters, namely:
   (a) summoning and enforcing the attendance of any person and examining him on oath;
   (b) requiring the discovery and production of documents;
   (c) receiving evidence on affidavits;
   (d) issuing commissions for the examination of witnesses or documents;
   (e) reviewing its decision;
   (f) dismissing an application for default or deciding it ex-parte;

(g) setting aside any order of dismissal of any application for default or any order passed by it ex-parte;
(h) any other matter which may be prescribed.

(3) Every proceeding before the Securities Appellate Tribunal should be deemed to be a judicial proceeding within the meaning of sections 193 and 228, and for the purposes of section 196, of the Indian Penal Code and the Securities Appellate Tribunal should be deemed to be a civil court for all the purposes of section 195 and Chapter XXVI of the Code of Criminal Procedure, 1973.

3.4 SEBI (STOCK BROKERS & SUB-BROKERS) RULES, 1992

In exercise of the powers conferred by section 29 of SEBI Act, 1992, Central Government has made SEBI (Stock-brokers and Sub-brokers) Rules, 1992.

In terms of Rule 2(e), **"Stock-broker"** means a member of a stock exchange. In terms of Rule 2(f), '**Sub-broker**' means any person not being a member of a stock exchange who acts on behalf of a stock-broker as an agent or otherwise for assisting the investors in buying, selling or dealing in securities through such stock brokers. A stock-broker or sub-broker shall not buy, sell, and deal in securities, unless he holds a certificate granted by SEBI (Rule 3).

Capital Adequacy Norms for Brokers

Each stockbroker is subject to capital adequacy requirements consisting of two components:
(1) Base minimum capital, and
(2) Additional or optional capital related to volume of business.

The amount of base minimum capital varies from exchange to exchange. The form in which the base minimum capital has to be maintained is also stipulated by SEBI. Exchange may stipulate higher levels of base minimum capital at their discretion.

Conditions for grant of certificate to stock-broker (Rule 4)

SEBI grants certificate to a stock-broker subject to the following conditions, namely:
(a) he holds membership of any stock exchange,
(b) he abides by the rules, regulations and bye-laws of the stock exchange or stock exchanges of which he is a member;

(c) in case of any change in the status and constitution, the stock broker obtains prior permission of SEBI to continue to buy, sell or deal in securities in any stock exchange;

(d) he pays the amount of fees for registration in the manner provided in the regulations; and

(e) he takes adequate steps for redressal of grievances of the investors within one month of the date of the receipt of the complaint and keep SEBI informed about the number, nature and other particulars of the complaints received from such investors.

Conditions of grant of certificate to sub-broker (Rule 5)

SEBI grants certificate to a sub-broker subject to the following conditions, namely:

(a) he pays the fees in the manner provided in the regulations,

(b) he takes adequate steps for redressal of grievances of the investors within one month of the date of the receipt of the complaint and keep SEBI informed about the number, nature and other particulars of the complaints received,

(c) in case of any change in the status and constitution, the sub- broker obtains prior permission of SEBI to continue to buy, sell or deal in securities in any stock exchange, and

(d) he is authorised in writing by a stock-broker being a member of a stock exchange for affiliating himself in buying, selling or dealing in securities; provided such stock broker is entitled to buy, sell or deal in securities.

3.5 SEBI (STOCK BROKERS & SUB-BROKERS) REGULATIONS, 1992

In terms of regulation 2 (g), 'small investor' means any investor buying or selling securities on a cash transaction for a market value not exceeding rupees fifty thousand in aggregate on any day as shown in a contract note issued by the stock-brokers.

Registration of Stock Broker

A stock broker applies in the prescribed format for grant of a certificate through the stock exchange or stock exchanges, as the case may be, of which he is admitted as a member. The stock exchange forwards the application form to SEBI as early as possible but not later than thirty days from the date of its receipt.

SEBI takes into account for considering the grant of a certificate all matters relating to buying, selling, or dealing in securities and in particular the following, namely, whether the stock broker:

(a) is eligible to be admitted as a member of a stock exchange,
(b) has the necessary infrastructure like adequate office space, equipment and manpower to effectively discharge his activities,
(c) has any past experience in the business of buying, selling or dealing in securities,
(d) is subjected to disciplinary proceedings under the rules, regulations and bye-laws of a stock exchange with respect to his business as a stock-broker involving either himself or any of his partners, directors or employees, and
(e) is a fit and proper person.

SEBI on being satisfied that the stock-broker is eligible, grants a certificate to the stock-broker and sends intimation to that effect to the stock exchange or stock exchanges, as the case may be. Where an application for grant of a certificate does not fulfill the requirements, SEBI may reject the application after giving a reasonable opportunity of being heard.

<u>Fees by stock brokers</u>

Every applicant eligible for grant of a certificate should pay fees and in such manner as specified in Schedule III; provided that SEBI may on sufficient cause being shown, permit the stock-broker to pay such fees at any time before the expiry of six months from the date on which such fees become due. Where a stock-broker fails to pay the fees, SEBI suspends the registration certificate, whereupon the stock- broker ceases to buy, sell or deal in securities as a stock- broker.

<u>Appointment of Compliance Officer</u>

Every stock broker should appoint a Compliance Officer who will be responsible for monitoring the compliance of the Act, rules and regulations, notifications, guidelines, instructions, etc., issued by SEBI or the Central Government and for redressal of investors' grievances. The compliance officer should immediately and independently report to SEBI any non-compliance observed by him.

<u>Code of conduct</u>

The stock-broker holding a certificate at all times abides by the Code of Conduct as given hereunder:

I. General

a) *Integrity*: A stock-broker, should maintain high standards of integrity, promptitude and fairness in the conduct of all his business.

b) *Exercise of Due Skill and Care*: A stock-broker, should act with due skill, care and diligence in the conduct of all his business.

c) *Manipulation*: A stock-broker should not indulge in manipulative, fraudulent or deceptive transactions or schemes or spread rumours with a view to distorting market equilibrium or making personal gains.

d) *Malpractices*: A stock-broker should not create false market either singly or in concert with others or indulge in any act detrimental to the investors' interest or which leads to interference with the fair and smooth functioning of the market. A stock-broker should not involve himself in excessive speculative business in the market beyond reasonable levels not commensurate with his financial soundness.

e) *Compliance with Statutory Requirements*: A stock-broker should abide by all the provisions of the Act and the rules, regulations issued by the Government, SEBI and the stock exchange from time to time as may be applicable to him.

II. Duty to the investor

a) *Execution of Orders*: A stock-broker, in his dealings with the clients and the general investing public, should faithfully execute the orders for buying and selling of securities at the best available market price and not refuse to deal with a small investor merely on the ground of the volume of business involved. A stock-broker should promptly inform his client about the execution or non-execution of an order, and make prompt payment in respect of securities sold and arrange for prompt delivery of securities purchased by clients.

b) *Issue of Contract Note*: A stock-broker should issue without delay to his client or client of sub-broker a contract note for all transactions in the form specified by the stock exchange.

c) *Breach of Trust* : A stock-broker should not disclose or discuss with any other person or make improper use of the details of personal investments and other information of a confidential nature of the client which he comes to know in his business relationship.

d) *Business and Commission*:

   (i) A stock-broker should not encourage sales or purchases of securities with the sole object of generating brokerage or commission.

   (ii) A stock-broker should not furnish false or misleading quotations or give any other false or misleading advice or information to the clients with a view of inducing him to do business in particular securities and enabling himself to earn brokerage or commission thereby.

e) *Business of Defaulting Clients*: A stock-broker should not deal or transact business knowingly, directly or indirectly or execute an order for a client who has failed to carry out his commitments in relation to securities with another stock-broker.

(f) *Fairness to Clients*: A stock-broker, when dealing with a client, should disclose whether he is acting as a principal or as an agent and should ensure at the same time that no conflict of interest arises between him and the client. In the event of a conflict of interest, he should inform the client accordingly and should not seek to gain a direct or indirect personal advantage from the situation and should not consider clients' interest inferior to his own.

g) *Investment Advice*: A stock-broker should not make a recommendation to any client who might be expected to rely thereon to acquire, dispose of, retain any securities unless he has reasonable grounds for believing that the recommendation is suitable for such a client upon the basis of the facts, if disclosed by such a client as to his own security holdings, financial situation and objectives of such investment. The stock-broker should seek such information from clients, wherever he feels it is appropriate to do so.

h) *Investment Advice in publicly accessible media*:

(i) A stock broker or any of his employees should not render, directly or indirectly, any investment advice about any security in the publicly accessible media, whether real-time or non real-time, unless a disclosure of his interest including the interest of his dependent family members and the employer including their long or short position in the said security has been made, while rendering such advice.

(ii) In case, an employee of the stock broker is rendering such advice, he should also disclose the interest of his dependent family members and the employer including their long or short position in the said security, while rendering such advice.

(i) *Competence of Stock Broker*: A stock-broker should have adequately trained staff and arrangements to render fair, prompt and competent services to his clients.

III. Stock-brokers vis-a-vis other stock-brokers

(a) *Conduct of Dealings:* A stock-broker should co-operate with the other contracting party in comparing unmatched transactions. A stock-broker should not knowingly and willfully deliver documents which constitute bad delivery and should co-operate with other contracting party for prompt replacement of documents which are declared as bad delivery.

(b) *Protection of Clients Interests:* A stock-broker should extend fullest co-operation to other stock-brokers in protecting the interests of his clients regarding their rights to dividends, bonus shares, right shares and any other rights related to such securities.

(c) *Transactions with Stock-Brokers:* A stock-broker should carry out his transactions with other stock-brokers and should comply with his obligations in completing the settlement of transactions with them.

(d) *Advertisement and Publicity:* A stock-broker should not advertise his business publicly unless permitted by the stock exchange.

(e) *Inducement of Clients:* A stock-broker should not resort to unfair means of inducing clients from other stock- brokers.

(f) *False or Misleading Returns:* A stock-broker should not neglect or fail or refuse to submit the required returns and not make any false or misleading statement on any returns required to be submitted to the Board and the stock exchange.

<u>Registration of Sub-Broker</u>

An application by a sub-broker for the grant of a certificate is made in the prescribed format accompanied by a recommendation letter from a stock-broker of a recognised stock exchange with whom he is to be affiliated along with two references including one from his banker. The application form is submitted to the stock exchange of which the stock- broker with whom he is to be affiliated is a member.

The eligibility criteria for registration as a sub-broker are as follows:

(i) in the case of an individual:
- (a) the applicant is not less than 21 years of age,
- (b) the applicant has not been convicted of any offence involving fraud or dishonesty,
- (c) the applicant has atleast passed 12th standard equivalent examination from an institution recognised by the Government, Provided that SEBI may relax the educational qualifications on merits having regard to the applicant's experience.
- (d) the applicant is a fit and proper person.

(ii) In the case of partnership firm or a body corporate the partners or directors, as the case may be, should comply with the following requirements:
- (a) the applicant is not less than 21 years of age,
- (b) the applicant has not been convicted of any offence involving fraud or dishonesty, and
- (c) the applicant has atleast passed 12th standard equivalent examination from an institution recognised by the Government. Provided that SEBI may relax the educational qualifications on merits having regard to the applicant's experience.

The stock exchange on receipt of an application, verifies the information contained therein and certifies that the applicant is eligible for registration. The stock exchange forwards the application form of such applicants who comply with all the requirements specified in the Regulations to SEBI as early as possible, but not later than thirty days from the date of its receipt.

SEBI on being satisfied that the sub-broker is eligible, grants a certificate to the sub-broker and sends intimation to that effect to the stock exchange or stock exchanges as the case may be. SEBI grants a certificate of registration to the appellant subject to the terms and conditions as stated in Rule 5 of SEBI (Stock Brokers and Sub-brokers) Rules, 1992.

Where an application does not fulfill the requirements, SEBI may reject the application after giving a reasonable opportunity of being heard.

The sub-broker shall:

(a) pay the fees as specified in Schedule III;
(b) abide by the code of conduct specified in Schedule II; and
(c) enter into an agreement with the stock-broker for specifying the scope of his authority and responsibilities.
(d) comply with the rules, regulations and bye-laws of the stock exchange
(e) not be affiliated to more than one stock broker of one stock exchange

Code of conduct

The sub-broker at all times abides by the Code of Conduct as given hereunder:

I. General

(a) *Integrity:* A sub-broker, should maintain high standards of integrity, promptitude and fairness in the conduct of all investment business.
(b) *Exercise of Due Skill and Care:* A sub-broker, should act with due skill, care and diligence in the conduct of all investment business.

II. Duty to the Investor

1.(a) *Execution of Orders:* A sub-broker, in his dealings with the clients and the general investing public, should faithfully execute the orders for buying and selling of securities at the best available market price. A sub-broker should promptly inform his client about the execution or non-execution of an order.
(b) A sub-broker should render necessary assistance to his client in obtaining the contract note from the stock broker

2. *Issue of Purchase or Sale Notes:*

(a) A sub-broker should issue promptly to his clients purchase or sale notes for all the transactions entered into by him with his clients.

(b) A sub-broker should issue promptly to his clients scrip-wise split purchase or sale notes and similarly bills and receipts showing the brokerage separately in respect of all transactions in the specified form.

(c) A sub-broker should only split the contract notes client-wise and scrip-wise originally issued to him by the affiliated broker into different denominations.

(d) A sub-broker should not match the purchase and sale orders of his clients and each such order must invariably be routed through a member-broker of the stock exchange with whom he is affiliated.

3. *Breach of Trust:* A sub-broker should not disclose or discuss with any other person or make improper use of the details of personal investments and other information of a confidential nature of the client which he comes to know in his business relationship.

4. *Business and Commission:*

(a) A sub-broker should not encourage sales or purchases of securities with the sole object of generating brokerage or commission.

(b) A sub-broker should not furnish false or misleading quotations or give any other false or misleading advice or information to the clients with a view of inducing him to do business in particular securities and enabling himself to earn brokerage or commission thereby.

(c) A sub-broker should not charge from his clients a commission exceeding one and one-half percent of the value mentioned in the respective sale or purchase notes.

5. *Business of Defaulting Clients:* A sub-broker should not deal or transact business knowingly, directly or indirectly or execute an order for a client who has failed to carry out his commitments in relation to securities and is in default with another broker or sub-broker.

6. *Fairness to Clients:* A sub-broker, when dealing with a client, should disclose that he is acting as an agent ensuring at the same time, that no conflict of interest arises between him and the client. In the event of a conflict of interest, he should inform the client accordingly and should not seek to gain a

direct or indirect personal advantage from the situation and should not consider clients' interest inferior to his own.

7. *Investment Advice:* A sub-broker should not make a recommendation to any client who might be expected to rely thereon to acquire, dispose of, retain any securities unless he has reasonable grounds for believing that the recommendation is suitable for such a client upon the basis of the facts, if disclosed by such a client as to his own security holdings, financial situation and objectives of such investment. The sub-broker should seek such information from clients, wherever they feel it is appropriate to do so.

8. *Investment Advice in publicly accessible media:*

(a) A sub-broker or any of his employees should not render, directly and indirectly any investment advice about any security in the publicly accessible media, whether real-time or non-real-time, unless a disclosure of his interest including his long or short position in the said security has been made, while rendering such advice.

(b) In case, an employee of the sub-broker is rendering such advice, he should also disclose the interest of his dependent family members and the employer including their long or short position in the said security, while rendering such advice.

9. *Competence of Sub-broker:* A sub-broker should have adequately trained staff and arrangements to render fair, prompt and competent services to his clients and continuous compliance with the regulatory system.

III. Sub-Brokers vis-à-vis Stock Brokers

(a) *Conduct of Dealings:* A sub-broker should co-operate with his broker in comparing unmatched transactions. A sub-broker should not knowingly and willfully deliver documents, which constitute bad delivery. A sub-broker should co-operate with other contracting party for prompt replacement of documents, which are declared as bad delivery.

(b) *Protection of Clients Interests:* A sub-broker should extend fullest co-operation to his stock-broker in protecting the interests of their clients regarding their rights to dividends, right or bonus shares or any other rights relatable to such securities.

(c) *Transactions with Brokers:* A sub-broker should not fail to carry out his stock broking transactions with his broker nor should he

fail to meet his business liabilities or show negligence in completing the settlement of transactions with them.

(d) Agreement between sub-broker, client of the sub-broker and main broker: A sub-broker should enter into a tripartite agreement with his client and with the main stock broker specifying the scope of rights and obligations of the stock broker, sub-broker and such client of the sub-broker

(e) *Advertisement and Publicity:* A sub-broker should not advertise his business publicly unless permitted by the stock exchange.

(f) *Inducement of Clients:* A sub-broker should not resort to unfair means of inducing clients from other stock brokers.

IV. Sub-brokers vis-a-vis Regulatory Authorities

(a) *General Conduct:* A sub-broker should not indulge in dishonourable, disgraceful or disorderly or improper conduct on the stock exchange nor shall he willfully obstruct the business of the stock exchange. He should comply with the rules, bye-laws and regulations of the stock exchange.

(b) *Failure to give Information:* A sub-broker should not neglect or fail or refuse to submit to SEBI or the stock exchange with which he is registered, such books, special returns, correspondence, documents, and papers or any part thereof as may be required.

(c) *False or Misleading Returns:* A sub-broker should not neglect or fail or refuse to submit the required returns and not make any false or misleading statement on any returns required to be submitted to SEBI or the stock exchanges.

(d) *Manipulation:* A sub-broker should not indulge in manipulative, fraudulent or deceptive transactions or schemes or spread rumours with a view to distorting market equilibrium or making personal gains.

(e) *Malpractices:* A sub-broker should not create false market either singly or in concert with others or indulge in any act detrimental to the public interest or which leads to interference with the fair and smooth functions of the market mechanism of the stock exchanges. A sub-broker should not involve himself in excessive speculative business in the market beyond reasonable levels not commensurate with his financial soundness.

3.6 SEBI GUIDELINES ON DISCLOSURE AND INVESTOR PROTECTION (DIP)

Major part of the liberalisation process was the repeal of the Capital Issues (Control) Act, 1947 in May 1992. With this, Government's control over issue of capital, pricing of the issues, fixing of premia and rates of interest on debentures etc. ceased and the market was allowed to allocate resources to competing uses. In the interest of investors, SEBI issued Disclosure and Investor Protection (DIP) guidelines in June 1992. The guidelines contain a substantial body of requirements for issuers/intermediaries, the broad intention being to ensure that all concerned observe high standards of integrity and fair dealing, comply with all the requirements with due skill, diligence and care, and disclose the truth, whole truth and nothing but truth. The guidelines aim to secure fuller disclosure of relevant information about the issuer and the nature of the securities to be issued so that investors can take informed decisions. For example, issuers are required to disclose any material 'risk factors' and give justification for pricing in their prospectus. The guidelines cast a responsibility on the lead managers to issue a due diligence certificate, stating that they have examined the prospectus, they find it in order and that it brings out all the facts and does not contain anything wrong or misleading. Issuers are now required to comply with the guidelines and then access the market. The companies can access the market only if they fulfill minimum eligibility norms such as track record of distributable profits and net worth. In case they do not do so, they can access the market only through book building with minimum offer of 50% to qualified institutional buyers. The norms for continued disclosure by listed companies also improved availability of information. The information technology helped in easy dissemination of information about listed companies and market intermediaries. Equity research and analysis and credit rating improved the quality of information about issues.

SEBI has been issuing clarifications to these guidelines from time to time aiming at streamlining the public issue process. In order to provide a comprehensive coverage of all DIP guidelines, SEBI issued a compendium series in January 2000, known as SEBI (DIP) Guidelines, 2000. The guidelines provide norms relating to eligibility for companies issuing securities, pricing of issues, listing requirements, disclosure norms, lock-in period for promoters' contribution, contents of offer documents, pre-and post-issue obligations, etc. These Guidelines are applicable to all public issues by listed and unlisted companies, all offers for sale and rights issues by listed companies whose equity share capital is listed, except in case of rights issues where the aggregate value of securities offered does not exceed Rs.50 lakh. In case of the rights issue where the aggregate value of the securities offered is less than Rs.50 Lakh, the company shall prepare the letter of offer in accordance with the disclosure requirements specified in these guidelines and file the same with the Board for its information and for being put on the SEBI website. Unless otherwise stated, all provisions in these guidelines are applicable to public issues by unlisted companies and also apply to offers for sale to the public by unlisted companies.

Eligibility Norms for Companies Issuing Securities

The companies issuing securities offered through an offer document, should satisfy the following at the time of filing draft offer document with SEBI and also at the time of filing the final offer document with the Registrar of Companies (ROC)/Designated Stock Exchange:

- A company making a public issue of securities should file a draft prospectus with SEBI, through an eligible Merchant Banker, at least 21 days prior to the filing of prospectus with the Registrar of Companies (RoCs). The filing of the letter of offer with SEBI through an eligible Merchant Banker atleast 21 days prior to the filing of Letter of Offer with Regional Stock Exchange (RSE) is mandatory for a listed company issuing security through a rights issue where the aggregate value of securities, including premium, if any, exceeds Rs.50 lakh.

- A company cannot make an issue if the company has been prohibited from accessing the capital market under any order or direction passed by SEBI.

- A company cannot make a public issue unless it has made an application for listing of those securities with stock exchange(s). The company should also enter into an agreement with the depository before making any public / rights issue or an offer for sale of securities for dematerialisation of its securities already issued or proposed to be issued and also the company should give an option to subscribers/shareholders/investors to receive the security certificates or hold securities in dematerialised form with a depository.

- An unlisted company can make public issue of equity shares or any other security convertible into equity shares, at a later date, only if it meets all the following conditions:

  (a) The company has net tangible assets of at least Rs. 3 crores in each of the preceding 3 full years (of 12 months each), of which not more than 50% is held in monetary assets. **Provided that** if more than 50% of the net tangible assets are held in monetary assets, the company has made firm commitments to deploy such excess monetary assets in its business/project;

(b) The company has a track record of distributable profits in terms of Section 205 of the Companies Act, 1956, for at least three (3) out of immediately preceding five (5) years; **Provided further that** extraordinary items should not be considered for calculating distributable profits in terms of Section 205 of Companies Act, 1956;

(c) The company has a net worth of at least Rs. 1 crore in each of the preceding 3 full years (of 12 months each);

(d) In case the company has changed its name within the last one year, atleast 50% of the revenue for the preceding 1 full year is earned by the company from the activity suggested by the new name; and

(e) The aggregate of the proposed issue and all previous issues made in the same financial year in terms of size (i.e., offer through offer document + firm allotment + promoters' contribution through the offer document), does not exceed five (5) times its pre-issue networth as per the audited balance sheet of the last financial year.)

- Infrastructure companies are exempt from the requirement of eligibility norms if their project has been appraised by a public financial institution or infrastructure development finance corporation or infrastructure leasing and financing services and not less than 5% of the project cost is financed by any of the institutions, jointly or severally, by way of loan and/or subscription to equity or a combination of both. Banks and rights issues of listed companies are also exempt from the eligibility norms.

- For public and rights issues of debt instruments irrespective of their maturities or conversion period, it is mandatory to obtain credit rating from a registered credit rating agency and to disclose the same in the offer document. If the credit rating is obtained from more than one credit rating agency, all the credit ratings, including the rejected ones, need to be disclosed.

Thus the quality of the issue is demonstrated by track record/appraisal by approved financial institutions/credit rating/subscription by Qualified Institutional Buyers.

Pricing of Issues

The companies eligible to make public issue can freely price their equity shares or any security convertible into equity at a later date in cases of public/rights issues by listed companies and public issue by unlisted companies. In addition, eligible infrastructure companies can freely price their equity shares subject to compliance of disclosure norms of SEBI. The public and private sector banks can also freely price their shares subject to approval by RBI. A company may issue shares to applicants in the firm allotment category at higher price than the price at which securities are offered to public. A listed company making a composite issue of capital may issue securities at differential prices in its public and rights issue. Further, an eligible company is free to make public/rights issue in any denomination determined by it in accordance with the Companies Act, 1956 and SEBI norms.

Contribution of Promoters and lock-in

The promoters' contribution in case of public issues by unlisted companies and promoters' shareholding in case of 'offers for sale' should not be less than 20% of the post issue capital. In case of public issues by listed companies, promoters should contribute to the extent of 20% of the proposed issue or should ensure post-issue holding to the extent of 20% of the post-issue capital. For composite issues, the promoters' contribution should either be 20% of the proposed public issue or 20% of the post-issue capital. The promoters should bring in the full amount of the promoters contribution including premium at least one day prior to the issue opening date. The requirement of promoters contribution is not applicable in case of (i) public issue of securities which has been listed on a stock exchange for at least 3 years and has a track record of dividend payment for at least 3 immediate preceding years, (ii) companies where no identifiable promoter or promoter group exists, and (iii) rights issues.

For any issue of capital to the public, the minimum promoter's contribution is locked in for a period of 3 years. If the promoters contribution exceeds the required minimum contribution, such excess is locked in for a period of one year. Securities allotted in firm allotment basis are also locked in for a period of **three years.** The locked-in securities held by promoters may be pledged only with banks or FIs as collateral security for loans granted by such banks or FIs.

Issue of Sweat Equity

The SEBI (Issue of Sweat Equity) Regulations, 2002 have been framed and the main provisions laid down therein for issue of sweat equity are (a) under the new guidelines, the Sweat Equity shares can be issued by a company to its employees and directors as well as promoters, (b) the pricing of the sweat equity shares should be as per the formula prescribed for that of preferential allotment, (c) the sweat equity shares should be locked in for a period of 3 years. In case of a subsequent public issue being made, lock in shall be as per the SEBI (DIP) Guidelines, 2000.

Issue Obligations

Pre- Issue Obligations

The lead merchant banker plays an important role in the pre-issue obligations of the company. He exercises due diligence and satisfies himself about all aspects of offering, veracity and adequacy of disclosures in the offer document. Each company issuing securities has to enter into a Memorandum of Understanding with the lead merchant banker, which specifies their mutual rights, liabilities and obligations relating to the issue. In case of under-subscription of an issue, the lead merchant banker responsible for underwriting arrangements has to invoke underwriting obligations and ensure that the underwriters pay the amount of devolvement. It should ensure the minimum number of collection centres. It should also ensure that the issuer company has entered into an agreement with all the depositories for dematerialization of securities. All the other formalities related to post-issue obligations like, allotment, refund and despatch of certificates are also taken care by the lead merchant banker.

Post - Issue Obligations

The Lead Merchant Banker should ensure the post-issue monitoring reports are submitted as per prescribed formats. These reports should be submitted within 3 working days from the due dates.

The Lead Merchant Banker should actively associate himself with post-issue activities namely, allotment, refund and despatch and should regularly monitor redressal of investor grievances arising therefrom.

The Post-issue lead merchant banker should maintain close co-ordination with the Registrars to the Issue and arrange to depute its officers to the offices of various intermediaries at regular intervals after the closure of the issue to monitor the flow of applications from collecting bank branches, processing of the applications including those accompanied by stockinvest and other matters till the basis of allotment is finalised, despatch security certificates and refund orders completed and securities listed.

The lead merchant banker should ensure that the despatch of share certificates/ refund orders/ and demat credit is completed and the allotment and listing documents submitted to the stock exchanges within 2 working days of finalisation of the basis of allotment.

The post issue lead manager should ensure that all steps for completion of the necessary formalities for listing and commencement of trading at all stock exchanges where the securities are to be listed are taken within 7 working days of finalisation of basis of allotment.

Lead Merchant Banker should ensure payment of interest to the applicants for delayed dispatch of allotment letters, refund orders, etc. as prescribed in the offer document.

Book Building

Book building is a process of offering securities in which bids at various prices from investors through syndicate members are collected. Based on bids, demand for the security is assessed and its price discovered. In case of normal public issue, the price is known in advance to investor and the demand is known at the close of the issue. In case of public issue through book building, demand can be known at the end of everyday but price is known at the close of issue.

An issuer company proposing to issue capital through book building has two options viz., 75% book building route and 100% book building route.

In case of 100% book building route is adopted (a) not more than 50% of net offer to public can be allocated to Qualified Institutional Buyers (b) not less than 15% of the net offer to the public can be allocated to non-institutional investors applying for more than 1000 shares and (c) not less than 35% of the net offer to public can be allocated to retail investors applying for upto 1000 shares.

In case 75% of net public offer is made through book building (a) in the book built portion, not less than 25% of the net offer to the public, should be available for allocation to non Qualified Institutional Buyers and not more than 50% of the net offer to the public should be available for allocation to Qualified Institutional Buyers (b) the balance 25% of the net offer to the public, offered at a price determined through book building, should be available only to retail individual investors who have either not participated or have not received any allocation, in the book built portion. **Provided that** 50% of net offer to public should be mandatorily allotted to the Qualified Institutional Buyers, in case the issuer company is making a public issue under Clause 2.2.2 and 2.3.2 of DIP Guidelines 2000)

Other requirements for book building include: bids remain open for at least 5 days, only electronic bidding is permitted; bids are submitted through syndicate members; bids can be revised; bidding demand is displayed at the end of every day; allotments are made not later than 15 days from the closure of the issue etc.

The DIP guidelines for book building provides that the company should be allowed to disclose the floor price, just prior to the bid opening date, instead of in the Red herring prospectus, which may be done by any means like a public advertisement in newspaper etc. Flexibility should be provided to the issuer company by permitting them to indicate a 20% price band. Issuer may be given the flexibility to revise the price band during the bidding period and the issuers should be allowed to have a closed book building i.e. the book will not be made public. The mandatory requirement of 90% subscription should not be considered with strictness, but the prospectus should disclose the amount of minimum subscription required and sources for meeting the shortfall. The Primary Market Advisory Committee recommended the practice of ‘green-shoe option’ available in markets abroad which is an ‘over allotment’ option granted by the issuer to the underwriter in a public offering. This helps the syndicate member to over allocate the shares to the extent of option available and to consequently purchase additional shares from the issuer at the original offering price in order to cover the over-allotments.

On-line Initial Public Offers (IPO)

A company proposing to issue capital to public through on-line system of the stock exchange has to comply with Section 55 to 68A of the Companies Act, 1956 and SEBI (DIP) Guidelines, 2000. The company is required to enter into an agreement with the stock exchange(s) which have the requisite system for on-line offer of securities. The agreement should cover rights, duties, responsibilities and obligations of the company and the stock exchanges inter-se, with provision for a dispute resolution mechanism between the company and the stock exchange. The issuer company appoints a Registrar to the Issue having electronic connectivity with the stock exchanges. The issuer company can apply for listing of its securities at any exchange through which it offers its securities to public through on-line system, apart from the requirement of listing on the regional stock exchange. The stock exchange appoints brokers for the purpose of accepting applications and placing orders with the company. The lead manager would co-ordinate all the activities amongst various intermediaries connected in the system.

In addition to the above, the DIP guidelines also provide details of the contents of the offer document and advertisement, other requirements for issues of securities, like those under Rule 19(2) (b) of SC(R) Rules, 1957. The guidelines also lay down detailed norms for issue of debt instruments, issue of capital by designated financial institutions and preferential/bonus issues.

3.7 SEBI (PROHIBITION OF INSIDER TRADING) REGULATIONS, 1992

Insider trading is prohibited as per SEBI (Prohibition of Insider Trading) Regulations, 1992. The same was amended in the year 2003.

The Key definitions:

- **'Dealing in securities'** means an act of subscribing, buying, selling or agreeing to subscribe, buy, sell or deal in any securities by any person either as principal or agent.
- **'Insider'** means any person who, is or was connected with the company or is deemed to have been connected with the company, and who is reasonably expected to have access, connection to unpublished price sensitive information in respect of securities of a company, or who has received or has had access to such unpublished price sensitive information;
- A **'connected person'** means any person who-
  - (i) is a director, as defined in clause (13) of section 2 of the Companies Act, 1956 of a company, or is deemed to be a director of that company by virtue of sub-clause (10) of section 307 of that Act; or
  - (ii) occupies the position as an officer or an employee of the company or holds a position involving a professional or business relationship between himself and the company whether temporary or permanent and who may reasonably be expected to have an access to unpublished price sensitive information in relation to that company.
- A **`person is deemed to be a connected person'** if such person-
  - (i) is a company under the same management or group or any subsidiary company thereof within the meaning of sub-section (1B) of section 370, or sub-section (11) of section 372, of the Companies Act, 1956 or sub-clause (g) of section 2 of the Monopolies and Restrictive Trade Practices Act, 1969 as the case may be; or
  - (ii) is an intermediary as specified in section 12 of SEBI Act 1992, investment company, trustee company, asset management company or an employee or director thereof or an official of a stock exchange or of a clearing house or corporation;
  - (iii) is a merchant banker, share transfer agent, registrar to an issue, debenture trustee, broker, portfolio manager, Investment Advisor, sub-broker, Investment Company or an employee thereof, or, is a member of the Board of Trustees of a mutual fund or a member of the Board of Directors of the Asset Management Company of a mutual fund or is an employee thereof who has a fiduciary relationship with the company;
  - (iv) is a member of the Board of Directors, or an employee, of a public financial institution as defined in Section 4A of the Companies Act, 1956; or
  - (v) is an official or an employee of a self regulatory organisation recognised or authorised by the Board of a regulatory body; or
  - (vi) is a relative of any of the aforementioned persons;
  - (vii) is a banker of the company;
  - (viii) relatives of the connected person;

(ix) is a concern, firm, trust, Hindu Undivided Family, company or association of persons wherein any of the connected persons mentioned in sub-clause (i) of clause (c) of this regulation or any of the persons mentioned in sub-clauses (vi), (vii) or (viii) of this clause have more than 10% of the holding or interest.

- **`Price sensitive information'** means any information which relates directly or indirectly to a company and which if published is likely to materially affect the price of securities of company;

  Explanation: The following shall be deemed to be price sensitive information:

  (i) periodical financial results of the company;
  (ii) intended declaration of dividends (both interim and final);
  (iii) issue of securities or buy-back of securities;
  (iv) any major expansion plans or execution of new projects;
  (v) amalgamation, mergers or takeovers;
  (vi) disposal of the whole or substantial part of the undertaking;
  (vii) any significant changes in policies, plans or operations of the company.

- **'Unpublished'** means information which is not published by the company or its agents and is not specific in nature.
  Explanation: Speculative reports in print or electronic media shall not be considered as published information.

<u>Prohibition on dealing, communicating or counselling (Regulation 3)</u>

No insider should:

- either on his own behalf or on behalf of any other person, deal in securities of a company listed on any stock exchange when in possession of any unpublished price sensitive information;
- communicate, counsel or procure, directly or indirectly, any unpublished price sensitive information to any person who while in possession of such unpublished price sensitive information should not deal in securities; Provided that nothing contained above shall be applicable to any communication required in the ordinary course of business or profession or employment or under any law.

Regulation 3A

No company should deal in the securities of another company or associate of that other company while in possession of any unpublished price sensitive information.

Violation of provisions relating to insider trading (Regulation 4)

Any insider, who deals in securities in contravention of the provisions of regulation 3 or 3A shall be guilty of insider trading.

Policy on disclosures and internal procedure for prevention of insider trading:

Chapter IV of the Regulations deals with policy on disclosures and internal procedure for prevention of insider trading. Accordingly, all listed companies and organisations associated with securities markets including:

(a) the intermediaries as mentioned in section 12 of the SEBI Act, 1992, asset management company and trustees of mutual funds;
(b) the self regulatory organisations recognised or authorised by the Board;
(c) the recognised stock exchanges and clearing house or corporations;
(d) the public financial institutions as defined in Section 4A of the Companies Act, 1956; and
(e) the professional firms such as auditors, accountancy firms, law firms, analysts, consultants, etc., assisting or advising listed companies, should frame a code of internal procedures and conduct as near there to the Model Code specified in Schedule I of these Regulations.

Disclosures (Regulation 13)

Disclosure of interest or holding by directors and officers and substantial shareholders in a listed companies:

Initial Disclosure

(1) Any person who holds more than 5% shares or voting rights in any listed company should disclose to the company, in Form A, the number of shares or voting rights held by such person, on becoming such holder, within 4 working days of: (a) the receipt of intimation of allotment of shares; or (b) the acquisition of shares or voting rights, as the case may be.
(2) Any person who is a director or officer of a listed company, should disclose to the company, in Form B, the number of shares or voting rights held by such person, within 4 working days of becoming a director or officer of the company.

Continual Disclosure

(1) Any person who holds more than 5% shares or voting rights in any listed company should disclose to the company, in Form C, the number of shares or voting rights held and change in shareholding or voting rights, even if such change results in shareholding falling below 5%, if there has been change in such holdings from the last disclosure made under sub-regulation (1) or under this sub-regulation; and such change exceeds 2% of total shareholding or voting rights in the company.

(2) Any person who is a director or officer of a listed company, should disclose to the company, in Form D, the total number of shares or voting rights held and change in shareholding or voting rights, if there has been a change in such holdings from the last disclosure made under sub-regulation (2) or under this sub-regulation, and the change exceeds Rupees 5 lakh in value or 25000 shares or 1% of total shareholding or voting rights, whichever is lower.

(3) The disclosure mentioned in sub-regulations (3) and (4) should be made within 4 working days of; (a) the receipt of intimation of allotment of shares, or (b) the acquisition or sale of shares or voting rights, as the case may be.

Disclosure by company to stock exchanges

(1) Every listed company, within five days of receipt, should disclose to all stock exchanges on which the company is listed, the information received under sub-regulations (1), (2),(3) and (4).

<u>Code of Ethics</u>

SEBI has advised stock exchanges to adopt the Code of Ethics for their directors and functionaries. This is aimed at improving the professional and ethical standards in the functioning of exchanges thereby creating better investors confidence in the integrity of the market. Code of Ethics has been discussed in details in section 3.12.

3.8 SEBI (SUBSTANTIAL ACQUISTION OF SHARES AND TAKEOVERS) REGULATIONS, 1997

The Key definitions:

- **'Acquirer'** means any person who, directly or indirectly, acquires or agrees to acquire shares or voting rights in the target company, or acquires or agrees to acquire control over the target company, either by himself or with any person acting in concert with the acquirer;

- **'control'** shall include the right to appoint majority of the directors or to control the management or policy decisions exercisable by a person or persons acting individually or in concert, directly or indirectly, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements or in any other manner;

- **'target company'** means a listed company whose shares or voting rights or control is directly or indirectly acquired or is being acquired;

- A **'person acting in concert'** comprises:

(1) persons who, for a common objective or purpose of substantial acquisition of shares or voting rights or gaining control over the target company, pursuant to an agreement or understanding (formal or informal), directly or indirectly co-operate by acquiring or agreeing to acquire shares or voting rights in the target company or control over the target company.

(2) Without prejudice to the generality of this definition, the following persons will be deemed to be persons acting in concert with other persons in the same category, unless the contrary is established:

(i) a company, its holding company, or subsidiary of such company or company under the same management either individually or together with each other;

(ii) a company with any of its directors, or any person entrusted with the management of the funds of the company;

(iii) directors of companies referred to in sub-clause (i) of clause (2) and their associates;

(iv) mutual fund with sponsor or trustee or asset management company;

(v) foreign institutional investors with sub account(s);

(vi) merchant bankers with their client(s) as acquirer;

(vii) portfolio managers with their client(s) as acquirer;

(viii) venture capital funds with sponsors;

(ix) banks with financial advisers, stock brokers of the acquirer, or any company which is a holding company, subsidiary or relative of the acquirer.

(x) any investment company with any person who has an interest as director, fund manager, trustee, or as a shareholder having not less than 2% of the paid-up capital of that company or with any other investment company in which such person or his associate holds not less than 2% of the paid up capital of the latter company.

Acquisition of 5% and more shares of a company

(1) Any acquirer, who acquires shares or voting rights which (taken together with shares or voting rights, if any, held by him) would entitle him to more than five percent or ten percent or fourteen percent or fifty four percent or seventy four percent shares or voting rights in a company, in any manner whatsoever, should disclose at every stage the aggregate of his shareholding or voting rights in that company to the company and to the stock exchanges where shares of the target company are listed.

(1A) Any acquirer who has acquired shares or voting rights of a company under sub-regulation (1) of regulation 11, should disclose purchase or sale aggregating two percent or more of the share capital of the target company to the target company, and the stock exchanges where shares of the target company are listed within two days of such purchase or sale alongwith the aggregate shareholding after such acquisition or sale.

Continual disclosures

(1) Every person, including a person mentioned in Regulation 6 who holds more than fifteen percent shares or voting rights in any company, should, within 21 days from the financial year ending March 31, make yearly disclosures to the company, in respect of his holdings as on 31st March.

(2) A promoter or every person having control over a company should, within 21 days from the financial year ending March 31, as well as the record date of the company for the purposes of declaration of dividend, disclose the number and percentage of shares or voting rights held by him and by persons acting in concert with him, in that company to the company.

(3) Every company whose shares are listed on a stock exchange, should within 30 days from the financial year ending March 31, as well as the record date of the company for the purposes of declaration of dividend, make yearly disclosures to all the stock exchanges on which the shares of the company are listed, the changes, if any, in respect of the holdings of the persons referred to under sub-regulation (1) and also holdings of promoters or person(s) having control over the company as on 31st March.

(4) Every company whose shares are listed on a stock exchange should maintain a register in the specified format to record the information

received under sub-regulation (3) of Regulation 6, sub-regulation (1) of Regulation 7 and sub-regulation (2) of Regulation 8.

Acquisition of fifteen percent or more of the shares or voting rights of any company

No acquirer should acquire shares or voting rights which (taken together with shares or voting rights, if any, held by him or by persons acting in concert with him), entitle such acquirer to exercise fifteen percent or more of the voting rights in a company, unless such acquirer makes a public announcement to acquire shares of such company in accordance with the Regulations.

Provided that no acquirer should acquire shares or voting rights, through market purchases and preferential allotment pursuant to a resolution passed under section 81 of the Companies Act, 1956 or any other applicable law, which (taken together with shares or voting rights, if any, held by him or by persons acting in concert with him), entitle such acquirer to exercise more than fifty five percent of the voting rights in the company.

Appointment of a Merchant Banker

Before making any public announcement of offer referred to in Regulation 10 or Regulation 11 or Regulation 12, the acquirer should appoint a merchant banker in Category-I holding a certificate of registration granted by the Board, who is not associate of or group of the acquirer or the target company

Timing of the Public Announcement of Offer

(1) The public announcement referred to in Regulation 10 or Regulation 11 should be made by the merchant banker not later than four working days of entering into an agreement for acquisition of shares or voting rights or deciding to acquire shares or voting rights exceeding the respective percentage specified therein:

Provided that in case of disinvestment of a Public Sector Undertaking, the public announcement should be made by the merchant banker not later than 4 working days of the acquirer executing the Share Purchase Agreement or Shareholders Agreement with the Central Government or the State Government as the case may be for the acquisition of shares or voting rights exceeding the percentage of share holding referred to in Regulation 10 or Regulation 11 or the transfer of control over a target Public Sector Undertaking.

(2) In case of an acquirer acquiring securities, including Global Depositories Receipts or American Depository Receipts which, when taken together with the voting rights, if any already held by him or persons acting in concert with him, would entitle him to voting rights, exceeding the percentage specified in Regulation 10 or Regulation 11, the public announcement referred to in sub-regulation (1) should be made not later than four working days before he acquires voting rights on such securities upon conversion, or exercise of option, as the case may be.

(3) The public announcement referred to in Regulation 12 should be made by the merchant banker not later than four working days after any such change or changes are decided to be made as would result in the acquisition of control over the target company by the acquirer.

(4) In case of indirect acquisition or change in control, a public announcement should be made by the acquirer within three months of consummation of such acquisition or change in control or restructuring of the parent or the company holding shares of or control over the target company in India.

<u>Public Announcement of Offer</u>

(1) The public announcement to be made under Regulations 10 or Regulation 11 or Regulation 12 should be made in all editions of one English national daily with wide circulation, one Hindi national daily with wide circulation and a regional language daily with wide circulation at the place where the registered office of the target company is situated and at the place of the stock exchange where the shares of the target company are most frequently traded.

(2) Simultaneously with publication of the public announcement in the newspaper in terms of sub-regulation (1), a copy of the public announcement should be,

- (i) submitted to the Board through the merchant banker,
- (ii) sent to all the stock exchanges on which the shares of the company are listed for being notified on the notice board,
- (iii) sent to the target company at its registered office for being placed before the Board of Directors of the company.

(3) Simultaneous with the submission of the public announcement to the Board, the public announcement should also be sent to all the stock exchanges on which the shares of the company are listed for being notified on the notice board, and to the target company at its registered office for being placed before the board of directors of the Company.

(4) The offer under these Regulations shall be deemed to have been made on the date on which the public announcement has appeared in any of the newspapers referred to in sub-regulation (1).

Submission of Letter of offer to the Board

(1) Within fourteen days from the date of public announcement made under Regulation 10, Regulation 11 or Regulation 12 as the case may be, the acquirer should, through its merchant banker, file with the Board, the draft of the letter of offer, containing disclosures as specified by the Board.

(2) The letter of offer should be despatched to the shareholders not earlier than 21 days from its submission to the Board under sub-regulation (1).

Provided that if, within 21 days from the date of submission of the letter of offer, the Board specifies changes, if any, in the letter of offer, (without being under any obligation to do so) the merchant banker and the acquirer should carry out such changes before the letter of offer is despatched to the shareholders.

Provided further that if the disclosures in the draft letter of offer are inadequate or the Board has received any complaint or has initiated any enquiry or investigation in respect of the public offer, the Board may call for revised letter of offer with or without rescheduling the date of opening or closing of the offer and may offer its comments to the revised letter of offer within seven working days of filing of such revised letter of offer.

(3) The acquirer should, along with the draft letter of offer referred to in sub-regulation (1), pay a fee of Rs. 50,000/- to the Board, either by a banker's cheque or demand draft in favour of the Securities and Exchange Board of India, payable at Mumbai.

Minimum number of shares to be acquired

(1) The public offer made by the acquirer to the shareholders of the target company should be for a minimum twenty per cent of the voting capital of the company.

Provided that where any public offer is made in pursuance of sub-regulation (2) of regulation 11, such public offer should be for such percentage of voting capital of the target company so that the acquisition does not result in the public shareholding in such company being reduced to a level below the limit specified in the Listing

Agreement with the stock exchange for the purpose of listing on continuous basis

(2) Where an acquirer acquires more than fifty five percent (55%) shares or voting rights in the target company through an agreement or memorandum of understanding and the public offer made under regulation 10 or sub-regulation (1) of regulation 11 to acquire minimum percentage of voting capital as specified in sub regulation (1) of regulation 21 results in public shareholding being reduced to a level below the limit specified in the Listing Agreement with the stock exchange for the purpose of listing on continuous basis, the acquirer shall acquire only such number of shares under the agreement or the memorandum of understanding so as to maintain the minimum specified Public shareholding in the target company.

(3) If consequent to the public offer made in pursuance of global arrangement referred to in proviso to sub regulation (2A) of regulation 11, the public shareholding falls to a level below the limit specified in the Listing Agreement with the stock exchange for the purpose of listing on continuous basis, the acquirer shall undertake to raise the level of public shareholding to the levels specified for continuous listing specified in the Listing Agreement with the stock exchange, within a period of twelve months from the date of closure of the public offer, by

(i) issue of new shares by the company in compliance with the provisions of the Companies Act, 1956 and the Securities and Exchange Board of India (Disclosure and Investor Protection) Guidelines, 2000; or
(ii) disinvestment through an offer for sale in compliance with the provisions of the Companies Act, 1956 and the Securities and Exchange Board of India (Disclosure and Investor Protection) Guidelines, 2000, of such number of shares held by him so as to satisfy the listing requirements; or
(iii) sale of his holdings through the stock exchange.

Provided that in case of acquisition of shares or voting rights or control in a target company where the public shareholding is below the limit specified for the purpose of listing on continuous basis in terms of the Listing Agreement with the stock exchange, the acquirer shall undertake to raise the level of public shareholding to the levels specified for continuous listing in terms of the listing conditions specified in the Listing Agreement with the stock exchange, within the period specified under the Listing Agreement.

(4) The letter of offer shall state clearly the option available to the acquirer under sub-regulation (3).

(5) For the purpose of computing the percentage referred to sub-regulation (1) and the voting rights as at the expiration of fifteen days after the closure of the public offer shall be reckoned.

(6) Where the number of shares offered for sale by the shareholders are more than the shares agreed to be acquired by the person making the offer, such person shall, accept the offers received from the shareholders on a proportional basis, in consultation with the merchant banker, taking care to ensure that the basis of acceptance is decided in a fair and equitable manner and does not result in non- marketable lots.

Provided that acquisition of shares from a shareholder shall not be less than the minimum marketable lot or the entire holding if it is less than the marketable lot.

Competitive bid

(1) Any person, other than the acquirer who has made the first public announcement, who is desirous of making any offer, shall, within 21 days of the public announcement of the first offer, make a public announcement of his offer for acquisition of the shares of the same target company.

Explanation: An offer made under sub-regulation (1) shall be deemed to be a competitive bid.

(2) No public announcement for an offer or competitive bid shall be made after 21 days from the date of public announcement of the first offer.

(2A) No public announcement for a competitive bid shall be made after an acquirer has already made the public announcement under the proviso to sub-regulation (1) of Regulation 14 pursuant to entering into a Share Purchase or Shareholders Agreement with the Central Government or the State Government as the case may be], for acquisition of shares or voting rights or control of a Public Sector Undertaking.

(3) Any competitive offer by an acquirer shall be for such number of shares which, when taken together with shares held by him along with persons acting in concert with him, shall be at least equal to the holding of the first bidder including the number of shares for which the present offer by the first bidder has been made.

(4) Upon the public announcement of a competitive bid or bids, the acquirer(s) who had made the public announcement(s) of the earlier

offer(s), shall have the option to make an announcement revising the offer.

Provided that if no such announcement is made within fourteen days of the announcement of the competitive bid(s), the earlier offer(s) on the original terms shall continue to be valid and binding on the acquirer(s) who had made the offer(s) except that the date of closing of the offer shall stand extended to the date of closure of the public offer under the last subsisting competitive bid.

(5) The provisions of these Regulations shall ***mutatis-mutandis*** (with the necessary changes) apply to the competitive bid(s) made under sub-regulation (1).

(6) The acquirers who have made the public announcement of offer(s) including the public announcement of competitive bid(s) shall have the option to make upward revisions in his offer(s), in respect to the price and the number of shares to be acquired, at any time upto seven working days prior to the date of closure of the offer:

Provided that the acquirer shall not have the option to change any other terms and conditions of their offer except the mode of payment following an upward revision in offer.

Provided further that any such upward revision shall be made only upon the acquirer:

(a) making a public announcement in respect of such changes or amendments in all the newspapers in which the original public announcement was made;

(b) simultaneously with the issue of public announcement referred in clause (a), informing the Board, all the stock exchanges on which the shares of the company are listed, and the target company at its registered office;

(c) increasing the value of the escrow account as provided under sub-regulation (9) of Regulation 28.

(7) Where there is a competitive bid, the date of closure of the original bid as also the date of closure of all the subsequent competitive bids shall be the date of closure of public offer under the last subsisting competitive bid and the public offers under all the subsisting bids shall close on the same date.

<u>Obligations on investigation by the Board</u>

(1) It shall be the duty of the acquirer, the seller, the target company, the merchant banker whose affairs are being investigated and of every director, officer and employee thereof, to produce to the investigating

officer such books, securities, accounts, records and other documents in its custody or control and furnish him with such statements and information relating to his activities as the investigating officer may require, within such reasonable period as the investigating officer may specify.

(2) The acquirer, the seller, the target company, the merchant banker and the persons being investigated shall allow the investigating officer to have reasonable access to the premises occupied by him or by any other person on his behalf and also extend reasonable facility for examining any books, records, documents and computer data in the possession of the acquirer, the seller, the target company, the merchant banker or such other person and also provide copies of documents or other materials which, in the opinion of the investigating officer are relevant for the purposes of the investigation.

(3) The investigating officer, in the course of investigation, shall be entitled to examine or to record the statements of any director, officer or employee of the acquirer, the seller, the target company, the merchant banker.

(4) It shall be the duty of every director, officer or employee of the acquirer, the seller, the target company, the merchant banker to give to the investigating officer all assistance in connection with the investigation, which the investigating officer may reasonably require.

Submission of Report to the Board

The investigating officer shall, as soon as possible, on completion of the investigation, submit a report to the Board: Provided that if directed to do so by the Board, he may submit interim reports.

Penalties for non-compliance

(1) Any person violating any provisions of the Regulations shall be liable for action in terms of the Regulations and the Act.

(2) If the acquirer or any person acting in concert with him, fails to carry out the obligations under the Regulations, the entire or part of the sum in the escrow amount shall be liable to be forfeited and the acquirer or such a person shall also be liable for action in terms of the Regulations and the Act.

(3) The board of directors of the target company failing to carry out the obligations under the Regulations shall be liable for action in terms of the Regulations and Act.

(4) The Board may, for failure to carry out the requirements of the Regulations by an intermediary, initiate action for suspension or cancellation of registration of an intermediary holding a certificate of registration under section 12 of the Act.

Provided that no such certificate of registration shall be suspended or cancelled unless the procedure specified in the Regulations applicable to such intermediary is complied with.

(5) For any mis-statement to the shareholders or for concealment of material information required to be disclosed to the shareholders, the acquirers or the directors where the acquirer is a body corporate, the directors of the target company, the merchant banker to the public offer and the merchant banker engaged by the target company for independent advice would be liable for action in terms of the Regulations and the Act.

(6) The penalties referred to in sub-regulation (1) to (5) may include:
- (a) criminal prosecution under section 24 of the Act;
- (b) monetary penalties under section 15 H of the Act;
- (c) directions under the provisions of Section 11B of the Act.
- (d) directions under section 11(4) of the Act;
- (e) cease and desist order in proceedings under section 11D of the Act;
- (f) adjudication proceedings under section 15HB of the Act.

3.9 SEBI (PROHIBITION OF FRAUDULENT AND UNFAIR TRADE PRACTICES RELATING TO SECURITIES MARKETS) REGULATIONS, 2003

The SEBI (Prohibition of Fraudulent and Unfair Trade Practices Relating To Securities Markets) Regulations, 2003 enable SEBI to investigate into cases of market manipulation and fraudulent and unfair trade practices. The regulations specifically prohibit fraudulent dealings, market manipulation, misleading statements to induce sale or purchase of securities, unfair trade practices relating to securities. SEBI can conduct investigation, *suo moto* or upon information received by it, by an investigating officer in respect of conduct and affairs of any person buying, selling, and otherwise dealing in securities. Based on the report of the investigating officer, SEBI can initiate action for suspension or cancellation of registration of an intermediary.

The term ‘fraud’ has been defined by Regulation 2(1)(c). Fraud includes any act, expression, omission or concealment committed whether in a deceitful manner or not by a person or by any other person with his connivance or by his agent while dealing in securities in order to induce another person or his agent to deal in securities, whether or not there is any wrongful gain or avoidance of any loss, and shall also include:

(1) a knowing misrepresentation of the truth or concealment of material fact in order that another person may act to his detriment;
(2) a suggestion, as to a fact, of that which is not true, by one who does not believe it to be true;
(3) an active concealment of a fact by a person having knowledge or belief of the fact;
(4) a promise made without any intention of performing it;
(5) a representation made in a reckless and careless manner whether it be true or false;
(6) deceptive behaviour by a person depriving another of informed consent or full participation,
(7) a false statement made without reasonable ground for believing it to be true
(8) the act of an issuer of securities giving out misinformation that affects the market price of the security, resulting in investors being effectively misled eventhough they did not rely on the statement itself or anything derived from it other than the market price
9) any such act or omission as the law specially declares to be fraudulent; and ‘fraudulent’ shall be construed accordingly.

The regulation prohibits:

a) dealings in securities in a fraudulent manner,
b) market manipulation,
c) misleading statements to induce sale or purchase of securities, and
d) unfair trade practice relating to securities

<u>Prohibition of certain dealings in securities</u>

(i) A person shall not buy, sell or otherwise deal in securities in a fraudulent manner.
(ii) use or employ, in connection with issue, purchase or sale of any security listed or proposed to be listed in a recognized stock exchange, any manipulative or deceptive device or contrivance in contravention of the provisions of the Act or the rules or the regulations made there under;
(iii) employ any device, scheme or artifice to defraud in connection with dealing in or issue of securities which are listed or proposed to be listed on a recognized stock exchange;

(iv) engage in any act, practice, course of business which operates or would operate as fraud or deceit upon any person in connection with any dealing in or issue of securities which are listed or proposed to be listed on a recognized stock exchange in contravention of the provisions of the Act or the rules and the regulations made there under.

<u>Prohibition of manipulative, fraudulent and unfair trade practices</u>

(1) Without prejudice to the provisions of regulation 3, no person shall indulge in a fraudulent or an unfair trade practice in securities.

(2) Dealing in securities shall be deemed to be a fraudulent or an unfair trade practice if it involves fraud and may include all or any of the following, namely:-

- (a) indulging in an act which creates false or misleading appearance of trading in the securities market;
- (b) dealing in a security not intended to effect transfer of beneficial ownership but intended to operate only as a device to inflate, depress or cause fluctuations in the price of such security for wrongful gain or avoidance of loss;
- (c) advancing or agreeing to advance any money to any person thereby inducing any other person to offer to buy any security in any issue only with the intention of securing the minimum subscription to such issue;
- (d) paying, offering or agreeing to pay or offer, directly or indirectly, to any person any money or money's worth for inducing such person for dealing in any security with the object of inflating, depressing, maintaining or causing fluctuation in the price of such security;
- (e) any act or omission amounting to manipulation of the price of a security;
- (f) publishing or causing to publish or reporting or causing to report by a person dealing in securities any information which is not true or which he does not believe to be true prior to or in the course of dealing in securities;
- (g) entering into a transaction in securities without intention of performing it or without intention of change of ownership of such security;
- (h) selling, dealing or pledging of stolen or counterfeit security whether in physical or dematerialized form;
- (i) an intermediary promising a certain price in respect of buying or selling of a security to a client and waiting till a discrepancy arises in the price of such security and retaining the difference in prices as profit for himself;

(j) an intermediary providing his clients with such information relating to a security as cannot be verified by the clients before their dealing in such security;

(k) an advertisement that is misleading or that contains information in a distorted manner and which may influence the decision of the investors;

(l) an intermediary reporting trading transactions to his clients entered into on their behalf in an inflated manner in order to increase his commission and brokerage;

(m) an intermediary not disclosing to his client transactions entered into on his behalf including taking an option position;

(n) circular transactions in respect of a security entered into between intermediaries in order to increase commission to provide a false appearance of trading in such security or to inflate, depress or cause fluctuations in the price of such security;

(o) encouraging the clients by an intermediary to deal in securities solely with the object of enhancing his brokerage or commission.

(p) an intermediary predating or otherwise falsifying records such as contract notes.

(q) an intermediary buying or selling securities in advance of a substantial client order or whereby a futures or option position is taken about an impending transaction in the same or related futures or options contract.

(r) planting false or misleading news which may induce sale or purchase of securities.

3.10 CORPORATE GOVERNANCE

Corporate governance is the acceptance by management of the inalienable rights of shareholders as the true owners of the corporation and of their own role as trustees on behalf of the shareholders. It is about commitment to values, about ethical business conduct and about making a distinction between personal and corporate funds in the management of a company.

In its constant endeavor to improve the standards of corporate governance in India in line with needs of a dynamic market, SEBI constituted a Committee on Corporate Governance under the Chairmanship of Shri N. R. Narayana Murthy, to evaluate the adequacy of existing corporate governance practices and further improve these practices. The issues discussed by the Committee primarily related to audit committees, audit reports, independent directors, related parties, risk management, directorships and director compensation, codes of conduct and financial disclosures. The Committee's recommendations in the final report were selected based on parameters including their relative importance, fairness, accountability, transparency, ease of implementation, verifiability and enforceability.

Corporate Governance in Listed Companies

SEBI, based on the recommendations of the Committee and public comments received on the report, has approved certain amendments in the clause 49 of the Listing Agreement and directed all the companies to comply with the requirements of the clause with effect from January 1, 2006. The new clause 49 is as given below:

I. BOARD OF DIRECTORS:

(A) Composition of the Board

The Board of directors of the company shall have an optimum combination of executive and non-executive directors with not less than fifty percent of the board of directors comprising of non-executive directors. The number of independent directors shall depend on whether the chairman of the board is an executive or a non-executive director. In case of the chairman being an executive director, at least half of the board should comprise of independent directors, else one third of the board should comprise of independent directors.

(B) Non Executive director's compensation and disclosures

Sitting fees paid to non-executive directors as authorized by the Companies Act, 1956 would not require the previous approval of shareholders.

(C) Other provisions as to Board and Committees

(i) The board shall meet at least four times a year, with a maximum gap of four months between any two meetings.

(ii) A director shall not be a member in more than ten committees or act as Chairman of more than five committees across all companies in which he is a director. Furthermore it should be a mandatory annual requirement for every director to inform the company about the committee positions he occupies in other companies and notify changes as and when they take place.

(iii) The Board shall periodically review compliance reports of all laws applicable to the company prepared by the company as well as steps taken by the company to rectify instances of non-compliances.

(D) Code of conduct

It shall be obligatory for the board of a company to lay down the code of conduct for all board members and senior management of a company. This code of conduct shall be posted on the website of the company. All the members of the board and senior management personnel shall affirm compliance with the code on an annual basis. The annual report of the company shall contain a declaration to this effect signed by the CEO.

II. AUDIT COMMITTEE

(A) Qualified and Independent audit committee

The audit committee shall have minimum three directors as members. Two-thirds of the members of audit committee shall be independent directors. All members of audit committee shall be financially literate and at least one member shall have accounting or related financial management expertise. The chairman of the audit committee shall be an independent director. The chairman of the audit committee shall be present at annual general meeting to answer shareholder queries. The audit committee may invite such of the executives, as it considers appropriate (and particularly the head of the finance function) to be present at the meetings of the committee, but on occasions it may also meet without the presence of any executives of the company. The finance director, head of internal audit and a representative of the statutory auditor may be present as invitees for the meetings of the audit committee. The company secretary shall act as the secretary to the company.

(B) Meeting of Audit Committee

The audit committee should meet at least four times in a year and not more than four months shall elapse between two meetings. The quorum shall be either two members or one third of the members of the audit committee whichever is greater, but there should be a minimum of two independent members present.

(C) Powers of the audit committee

The audit committee shall have powers, which should include the following:

(i) to investigate any activity within its term of reference.
(ii) to seek information from any employee.
(iii) to obtain outside legal or other professional advice.
(iv) to secure attendance of outsiders with relevant expertise, if it considers necessary.

(D) Role of Audit Committee

The role of the audit committee shall include the following:

(i) Oversight of the company's financial reporting process and the disclosure of its financial information to ensure that the financial statement is correct, sufficient and credible.

(ii) Recommending to the Board, the appointment, re-appointment and, if required, the replacement or removal of the statutory auditor and the fixation of audit fees.

(iii) Approval of payment to statutory auditors for any other services rendered by the statutory auditors.

(iv) Reviewing, with the management, the annual financial statements before submission to the board for approval, with particular reference to:

   a. Matters required to be included in the Director's Responsibility Statement to be included in the Board's report in terms of clause (2AA) of section 217 of the Companies Act, 1956
   b. Changes, if any, in accounting policies and practices and reasons for the same
   c. Major accounting entries involving estimates based on the exercise of judgment by management
   d. Significant adjustments made in the financial statements arising out of audit findings
   e. Compliance with listing and other legal requirements relating to financial statements
   f. Disclosure of any related party transactions
   g. Qualifications in the draft audit report.

(v) Reviewing, with the management, the quarterly financial statements before submission to the board for approval

(vi) Reviewing, with the management, performance of statutory and internal auditors, adequacy of the internal control systems.

(vii) Reviewing the adequacy of internal audit function, if any, including the structure of the internal audit department, staffing and seniority of the official heading the department, reporting structure coverage and frequency of internal audit.

(viii) Discussion with internal auditors any significant findings and follow up there on.

(ix) Reviewing the findings of any internal investigations by the internal auditors into matters where there is suspected fraud or irregularity or a failure of internal control systems of a material nature and reporting the matter to the board.

(x) Discussion with statutory auditors before the audit commences, about the nature and scope of audit as well as post-audit discussion to ascertain any area of concern.

(xi) To look into the reasons for substantial defaults in the payment to the depositors, debenture holders, shareholders (in case of non payment of declared dividends) and creditors.

(xii) To review the functioning of the Whistle Blower mechanism, in case the same is existing.

(xiii) Carrying out any other function as is mentioned in the terms of reference of the Audit Committee.

(E) Review of information by Audit Committee

The Audit Committee shall mandatorily review the following information:

(i) Management discussion and analysis of financial condition and results of operations;

(ii) Statement of significant related party transactions (as defined by the audit committee), submitted by management;

(iii) Management letters / letters of internal control weaknesses issued by the statutory auditors;

(iv) Internal audit reports relating to internal control weaknesses; and

(v) The appointment, removal and terms of remuneration of the Chief internal auditor shall be subject to review by the Audit Committee

WHISTLE BLOWER POLICY

A whistle blower is an employee or ex-employee who provides information about his or her company which he/she reasonably believes provides evidence of:

a) A violation of law or regulation by the company

b) Financial malpractice

c) A danger to public health or safety

As an internal policy on access to audit committees, personnel who observe an unethical or improper practice should be able to approach the audit committee without necessarily informing their supervisors. Companies shall take measures to ensure that this right of access is communicated to all employees through means of internal circulars etc. the employment and other personnel policies of the company shall contain provisions protecting 'whistle blowers' from unfair termination and other unfair prejudicial employment practices.

III. SUBSIDIARY COMPANIES

(i) At least one independent director on the Board of directors of the holding company shall be a director on the Board of directors of a material non listed Indian subsidiary company.

(ii) The audit committee of the listed holding company shall also review the financial statements, in particular, the investments made by the unlisted subsidiary company.

(iii) The minutes of the board meetings of the unlisted subsidiary company shall be placed at the board meetings of the listed holding company. The management should periodically bring to the attention of the board of directors of the listed holding company, a statement of all significant transactions and arrangements entered into by the unlisted subsidiary company.

IV. DISCLOSURES

(A) Basis of related party transactions

(i) A statement in summary form of transactions with related parties in the ordinary course of business shall be placed periodically before the audit committee.

(ii) Details of material individual transactions with related parties which are not in the normal course of business shall be placed before the audit committee.

(iii) Details of material individual transactions with related parties or others, which are not on an arm's length basis should be placed before the audit committee, together with Management's justification for the same..

(B) Disclosure of Accounting treatment

Where in the preparation of financial statements, a treatment different from that prescribed in an Accounting Standard has been followed, the fact shall be disclosed in the financial statements, together with the management's explanation as to why it believes such alternative treatment is more representative of the true and fair view of the underlying business transaction in the Corporate Governance Report.

(C) Board Disclosures – Risk management

The company shall lay down procedures to inform Board members about the risk assessment and minimization procedures. These procedures shall be periodically reviewed to ensure that executive management controls risk through means of a properly defined framework.

(D) Proceeds from public issues, rights issues, preferential issues etc.

When money is raised through an issue (public issues, rights issues, preferential issues etc.), it shall disclose to the Audit Committee, the uses /

applications of funds by major category (capital expenditure, sales and marketing, working capital, etc), on a quarterly basis as a part of their quarterly declaration of financial results. Further, on an annual basis, the company shall prepare a statement of funds utilized for purposes other than those stated in the offer document/prospectus/notice and place it before the audit committee. Such disclosure shall be made only till such time that the full money raised through the issue has been fully spent. This statement shall be certified by the statutory auditors of the company. The audit committee shall make appropriate recommendations to the Board to take up steps in this matter.

(E) Remuneration of Directors

All pecuniary relationship or transactions of the non-executive directors vis-à-vis the company shall be disclosed in the Annual Report. Further the disclosures on the remuneration of directors shall be made in the section on the corporate governance of the annual report. Non-executive directors shall be required to disclose their shareholding in the listed company in which they are proposed to be appointed as directors, prior to their appointment. These details should be disclosed in the notice to the general meeting called for appointment of such director.

(F) Management

As part of the director's report or as an addition thereto, a Management Discussion and Analysis report should form a part of the Annual Report to the shareholders. Senior management shall make disclosures to the board relating to all material financial and commercial transactions, where they have personal interest, that may have a potential conflict with the interest of the company at large.

(G) Shareholders

In case of the appointment of a new director or re-appointment of a director the shareholders must be provided with information giving a brief resume of the director, nature of his expertise in specific functional areas, and names of companies in which the person also holds the directorship and the membership of Committees of the Board. Information like quarterly results, presentation made by companies to analysts shall be put on company's website, or shall be sent in such a form so as to enable the stock exchange on which the company is listed to put it on its own website. A board committee under the chairmanship of a non-executive director shall be formed to specifically look into the redressal of shareholder and investors complaints like transfer of shares, non receipt of balance sheet, non receipt of declared dividends etc. This committee shall be designated as 'Shareholders/Investors Grievance Committee'. To expedite the process of share transfers, the Board of the company shall delegate the power of share transfer to an officer or a committee or to the registrar and share transfer agents. The delegated authority shall attend to share transfer formalities at least once on a fortnight.

(V) CEO / CFO Certification

The CEO, i.e. the Managing Director or Manager appointed in terms of the Companies Act, 1956 and the CFO i.e. the whole-time Finance Director or any other person heading the finance function discharging that function shall certify to the Board that:

(a) They have reviewed financial statements and the cash flow statement for the year and that to the best of their knowledge and belief:
  - (i) these statements do not contain any materially untrue statement or omit any material fact or contain statements that might be misleading;
  - (ii) these statements together present a true and fair view of the company's affairs and are in compliance with existing accounting standards, applicable laws and regulations.

(b) There are, to the best of their knowledge and belief, no transactions entered into by the company during the year which are fraudulent, illegal or violative of the company's code of conduct.

(c) They accept responsibility for establishing and maintaining internal controls for financial reporting and that they have evaluated the effectiveness of the internal control systems of the company pertaining to financial reporting and they have disclosed to the auditors and the Audit Committee, deficiencies in the design or operation of such internal controls, if any, of which they are aware and the steps they have taken or propose to take to rectify these deficiencies.

(d) They have indicated to the auditors and the Audit committee
  - (i) significant changes in internal control over financial reporting during the year;
  - (ii) significant changes in accounting policies during the year and that the same have been disclosed in the notes to the financial statements; and
  - (iii) instances of significant fraud of which they have become aware and the involvement therein, if any, of the management or an employee having a significant role in the company's internal control system over financial reporting

(VI) REPORT ON CORPORATE GOVERNANCE

There shall be a separate section on Corporate Governance in the Annual Reports of company, with a detailed compliance report on Corporate

Governance. Non-compliance of any mandatory requirement of this clause with reasons thereof and the extent to which the non-mandatory requirements have been adopted should be specifically highlighted. The companies shall submit a quarterly compliance report to the stock exchanges within 15 days from the close of quarter as per the format. The report shall be signed either by the Compliance officer or the CEO of the company.

(VII) COMPLIANCE

The company shall obtain a certificate from either the auditors or practicing company secretaries regarding compliance of conditions of corporate governance as stipulated in this clause and annex the certificate with the director's report, which is sent annually to all the shareholders of the company. The same certificate shall also be sent to stock exchanges along with the annual report filed by the company.

The provisions of the revised Clause 49 shall be implemented as per the schedule of implementation given below:

a) For entities seeking listing for the first time, at the time of seeking in-principle approval for such listing.
b) For existing listed entities which were required to comply with Clause 49 which is being revised i.e. those having a paid up share capital of Rs. 3 crores and above or net worth of Rs. 25 crores or more at any time in the history of the company, by April 1, 2005.

3.11 INVESTIGATION

<u>Power to issue directions</u>

SEBI has the power to issue directions, if after making or causing to be made an enquiry, the Board is satisfied that it is necessary -

(i) in the interest of investors, or orderly development of securities market; or
(ii) to prevent the affairs of any intermediary or other persons referred to in section 12 being conducted in a manner detrimental to the interests of investors or securities market; or
(iii) to secure the proper management of any such intermediary or person, it may issue such directions:
    (a) to any person or class of persons referred to in section 12, or associated with the securities market; or

(b) to any company in respect of matters specified in section 11A as may be appropriate in the interests of investors in securities and the securities market.

Power to order investigation

SEBI has the power to issue directions to investigate, where the board has reasonable ground to believe that (i) the transactions in securities are being dealt with in a manner detrimental to the investors or the securities market; or (ii) any intermediary or any person associated with the securities market has violated any of the provisions of this Act or the rules or the regulations made or directions issued by the Board thereunder.

SEBI may, at any time by order in writing, direct any person (referred as 'Investigating Authority) specified in the order to investigate the affairs of such intermediary or persons associated with the securities market and to report thereon to the Board.

Power of SEBI to make inquiries and inspection

(1) If the Board suspects that any person has violated any provision of the regulations, it may make inquiries with such persons or any other person
(2) The Board may appoint one or more officers to inspect the books and records of insider(s) or any other persons for the purpose.

SEBI's right to investigate

(1) Where the Board, is of prima facie opinion, that it is necessary to investigate and inspect the books of account, other records and documents of an insider or any other person, it may appoint an investigating authority for the said purpose.
(2) The purposes referred to in sub-regulation (1) may be as follows:
    (a) to investigate into the complaints received from investors, intermediaries or any other person on any matter having a bearing on the allegations of insider trading; and
    (b) to investigate suo-moto upon its own knowledge or information in its possession to protect the interest of investors in securities against breach of these regulations.

Procedure for investigation

(1) Before undertaking an investigation under regulation 5 the Board shall give a reasonable notice to insider for that purpose.

(2) Notwithstanding anything contained in sub-regulation (1), where the Board is satisfied that in the interest of investors or in public interest no such notice should be given, it may by an order in writing direct that the investigation be taken up without such notice.

(3) On being empowered by the Board, the investigating authority shall undertake the investigation and inspection of books of accounts and insider an insider or any other person mentioned in clause (i) of sub-section (1) of section 11 of the Act against whom an investigation is being carried out shall be bound to discharge his obligations as provided in regulation 7.

<u>Suspension or cancellation of registration</u>

The Board may, by order, suspend or cancel a certificate of registration in such manner as may be determined by regulations. Provided that no order under this sub-section [section 12(3)] shall be made unless the person concerned has been given a reasonable opportunity of being heard.

<u>Obligations of insider on investigation by the Board</u>

(1) It shall be the duty of every insider, who is being investigated, or any other person mentioned in clause (i) of sub-section (1) of section 11 of the Act to produce to the investigating authority such books, accounts and other documents in his custody or control and furnish the authority with the statements and information relating to the transactions in securities market within such time as the said authority may require.

(2) The insider or any other person mentioned in clause (i) of sub-section (1) of section 11 of the Act shall allow the investigating authority to have reasonable access to the premises occupied by such insider and also extend reasonable facility for examining any books, records, documents and computer data in his possession of the stock- broker or any other person and also provide copies of documents or other materials which, in the opinion of the investigating authority are relevant.

(3) The investigating authority, in the course of investigation, shall be entitled to examine or record statements of any member, director, partner proprietor and employee of the insider or any other person mentioned in clause (i) of sub-section (1) of section 11 of the Act.

(4) It shall be the duty of every director, proprietor, partner, officer and employee of the insider to give to the investigating authority all assistance in connection with the investigation, which the insider or

any other person mentioned in clause (i) of sub-section (1) of section 11 of the Act may be reasonably expected to give.

Submission of Report to the Board

The investigating authority shall, within reasonable time of the conclusion of the investigation submit an investigation report to the Board.

Communication of Findings, etc.

(1) The Board shall, after consideration of the investigation report communicate the findings to the person suspected to be involved in insider trading or violation of these regulations.

(2) The person to whom such findings has been communicated shall reply to the same within 21 days; and

(3) On receipt of such a reply or explanation, if any, from such person, the Board may take such measures as it deems fit to protect the interests of the investors and in the interests of the securities market and for the due compliance of the provisions of the Act, the Regulations made thereunder including the issue of directions under regulation 11.

Appointment of Auditor

Notwithstanding anything contained in regulation 4A and regulation 5, the Board may appoint a qualified auditor to investigate into the books of account or the affairs of the insider or any other person mentioned in clause (I) of sub-section (1) of section 11 of the Act.

Provided that, the auditor so appointed shall have the same powers of the inspecting authority as stated in regulation 5 and the insider shall have the obligations specified in regulation 7.

Directions by the Board

The Board may without prejudice to its right to initiate criminal prosecution under section 24 or any action under Chapter VIA of the Act, to protect the interests of investors and in the interests of the securities market and for due compliance with the provisions of the Act, Regulations made thereunder issue any or all of the following order, namely: -

(a) directing the insider or such person as mentioned in clause (i) of sub-section (2) of section 11 of the Act not to deal in securities in any particular manner;

(b) prohibiting the insider or such person as mentioned in clause (i) of sub-section (2) of section 11 of the Act from disposing of any of the securities acquired in violation of these Regulations;
(c) restraining the insider to communicate or counsel any person to deal in securities;
(d) declaring the transaction(s) in securities as null and void;
(e) directing the person who acquired the securities in violation of these regulations to deliver the securities back to the seller;

Provided that in case the buyer is not in a position to deliver such securities, the market price prevailing at the time of issuing of such directions or at the time of transactions whichever is higher, shall be paid to the seller.

(f) directing the person who has dealt in securities in violation of these regulations to transfer an amount or proceeds equivalent to the cost price or market price of securities, whichever is higher to the investor protection fund of a Recognised Stock Exchange.

3.12 CODE OF ETHICS

The 'Code of Ethics' for Directors and Functionaries of the Stock Exchanges, is aimed at improving the professional and ethical standards in the functioning of exchanges thereby creating better investor confidence in the integrity of the market.

Objectives and Underlying Principles

The code of ethics for directors and functionaries of the exchange seeks to establish a minimum level of business / professional ethics to be followed by these functionaries, towards establishing a fair and transparent marketplace. The code of ethics is based on the following fundamental principles:

a) Fairness and transparency in dealing with matters relating to the exchange and the investors
b) Compliance with all laws / rules / regulations laid down by regulatory agencies/exchange
c) Exercising due diligence in the performance of duties
d) Avoidance of conflict of interest between self interests of directors / functionaries and interests of exchange and investors

Definitions

1. **Functionaries:** Functionaries of the exchange to whom this code shall be applicable shall be decided by the exchange but shall include all officials of the rank of General Manager and above.

2. **Family:** Family members will include dependent spouse, dependent children, dependent parents.
3. **Securities:** Securities for the purpose of this code shall not include mutual fund units and government securities.

General Standards

Directors and functionaries:

a) should endeavour to promote greater awareness and understanding of ethical responsibilities
b) should observe high standards of commercial honour and just and equitable principles of trade
c) should not use their position to do or get favours from the executive or administrative staff of the exchange, suppliers of the exchange or any listed company of the exchange.
d) should not commit any act which will put the reputation of the exchange in jeopardy

The conduct of Directors and functionaries in business life should be exemplary which will set a standard for other members of the exchange to follow. Also, the directors, committee members and functionaries of the exchange should comply with all rules and regulations applicable to the securities market.

Prohibition on dealings in securities in proprietary account by elected office bearers of the exchange

Elected office bearers (President / Vice President / Treasurer) of the exchange should refrain from proprietary trades in securities, directly or indirectly, during the period of holding office.

Disclosure of dealings in securities by functionaries of the exchange

(i) Functionaries of the exchange should disclose on a periodic basis as determined by the exchange (which could be monthly), all their dealings in securities, directly or indirectly, to the Governing Board / Ethics Committee / designated compliance officer.
(ii) The dealings in securities should also be subject to trading restrictions for securities about which functionaries in the exchange may have non-public price sensitive information. Requirement laid down under SEBI Insider Trading Regulations may be referred in this regard.
(iii) All transactions must be of an investment nature and not speculative in nature. Towards this end, all securities purchased must be held for a minimum period of 60 days before they are sold. However, in specific / exceptional circumstances, sale can be effected anytime by obtaining pre-clearance from the compliance officer or any other designated

authority who will be empowered to waive this condition after recording in writing his satisfaction in this regard.

Disclosure of dealings in securities by directors of the exchange

(i) Directors (other then elected office bearers as per clause 2) of the exchange shall disclose on a periodic basis, as determined by the exchange (which could be monthly), their proprietary trading, directly or indirectly, to the Ethics Committee.

(ii) All Directors should also disclose on a periodic basis as above, the trading conducted by firms/corporate entities in which they hold 20% or more beneficial interest or hold a controlling interest; to the Ethics Committee.

Directors who are Government of India nominees or nominees of Government of India statutory bodies or Financial Institutions and are governed by their own codes shall be exempt from this requirement.

Avoidance of Conflict of Interest

(i) No director of the governing board or member of any committee of the exchange should participate in any decision making / adjudication in respect of any person / matter in which he is in any way, directly or indirectly, concerned or interested.

(ii) Whether there is any conflict of interest or not in a matter, should be decided by the governing board.

Disclosures of beneficial interest:

All Directors and functionaries should disclose to the Governing Board, upon assuming office and during their tenure in office, whenever the following arises,

(i) any fiduciary relationship of self and family members and directorship / partnership of self and family members in any broking outfit,

(ii) shareholding, in cases where the shareholding of the director, directly or through his family exceeds 5% in ay listed company on the exchange or in other entities related to the capital markets,

(iii) any other business interests.

Role of the President / Chairman and Directors in the day to day functioning of the Exchange

(i) The President and directors should not interfere in the day to day functioning of the exchange and shall limit their role to decision making on policy issues and to issues as the Governing Board may decide.

(ii) The President and directors should abstain from influencing the employees of the exchange in conducting their day to day activities.

(iii) President and directors should not be directly involved in the function of appointment and promotion of employees unless specifically so decided by the Governing Board.

Access to Information

(i) Directors should call for information only as part of specific committees or as may be authorized by the Governing Board.

(ii) There should be prescribed channels through which information should move and further there should be audit trail of the same. Any retrieval of confidential documents/information should be properly recorded.

(iii) All such information, especially which is non-public and price sensitive, should be kept confidential and not be used for any personal consideration / gain.

(iv) Any information relating to the business / operations of the exchange, which may come to the knowledge of directors / functionaries during performance of their duties should be held in strict confidence, shall not be divulged to any third party and should not be used in any manner except for the performance of their duties.

Misuse of Position:

Directors / committee members should not use their position to obtain business or any precuniary benefit (as intermediaries like brokers or in any other capacity like professional or consultancies) in the organization for themselves or family members.

Ethics Committee to lay down procedures and designate compliance officer

a) The ethics committee should lay down procedures for the implementation of the code and prescribe reporting formats for the disclosures required under the code.

b) The ethics committee may designate a senior officer of the exchange as compliance officer for executing the requirements laid down by it.

CHAPTER 4
SURVEILLANCE OF MARKET ACTIVITY

4.1 INTRODUCTION

The main objective of surveillance function of a stock exchange is to help maintain a fair and efficient market for securities.

A market can be considered fair if all participants face the same conditions of trading and no entity is in a position to trade on information that is not publicly available. A market can be considered efficient if no single entity or group of entities can influence the price discovery based on available information and / or demand and supply.

To achieve the above objectives, surveillance department of stock exchange monitors securities trading activity on the Exchange. All the securities traded in the Exchange come under the Surveillance. Significant changes in two key market parameters – volatility and liquidity - alert the surveillance department to potential market abuse. Effectiveness of surveillance function depends on its ability to promptly and accurately identify suspicious trading.

Some of the methods of possible market abuse are as under:

- Engaging in a series of transactions that give an impression of activity or price movement in a security.
- Improper transactions in which there is no genuine change in actual ownership of the security.
- Transactions where both buy and sell orders are entered at the same time, with the same price and quantity by different but colluding parties with a view to create apparent activity or influence the price.
- Buying at increasingly higher prices and then the securities are sold in the market, often to retail investors, at inflated prices.
- Increasing the bid for a security to increase its price.
- Buying or selling securities at the close of the market in an effort to alter the closing price of the security.
- Dissemination of false or misleading market information through various media.
- Trading on the basis of un-published price sensitive information.
- Front running.
- Securing control of the demand-side of both the derivative and the underlying markets leading to a dominant position which is then exploited to manipulate the price of the derivative and/or the asset.

4.2 SURVEILLANCE ACTIVITIES

Surveillance function is broadly divided into activities like Online Surveillance, Offline Surveillance and Rumour Verification.

4.2.1 Online Surveillance

For effective surveillance of the securities market a need for a system with a common framework across all the stock exchanges was felt. The objectives of this system, termed as the **Stock Watch System**, are to give suitable indicators for the detection of potential illegal or improper activity to protect investor confidence and the integrity of the securities market and its players.

Databases

The Stock Watch System has standardized information available with all the stock exchanges. This standard information is stored in the form of four databases classified as follows:

a) Issuer Database
b) Securities Database
c) Trading Database
d) Member Database

a) Issuer Database

This database is maintained by the stock exchange and is updated every week. The database contains information about the company whose instruments are traded on the exchange. This information includes the name, address, the line of business, the promoters, share holding pattern, capital history, balance sheet, profit and loss accounts, corporate actions, subsidiary companies etc.

b) Securities Database

This database is maintained by all the exchanges and updated every week. The database contains information about the instruments like shares, preference shares, warrants, and debentures etc, which are traded on the exchange. This information includes the name of the company, the instrument type, floating stock, trading start date, ex-date, no-delivery periods, dates and reasons for suspension of trading, details of fake and forged shares etc.

c) *Trading Database*

This database is maintained by all stock exchanges. It is updated on-line/daily/end of settlement based on the type of information. This information includes price, volume and value relating to the trades, obligations, deliveries and auctions, positions, price bands etc.

d) *Member Database*

This database is maintained by all stock exchanges. The information in this database includes the name and the type of membership, name, address and qualification, details of other exchange's membership, securities in which the member is active, short and bad delivery record, suspension record, investor grievance complains, arbitration cases, sub-brokers with their names and addresses, the turnover details, net worth etc.

Surveillance System

Automated Surveillance system is the tool for monitoring real-time trading activities. The Alert system compares the movements of price and trading volume for each security with the parameters based on preset values. If there is an unusual change in terms of price and/or trading volume for any security, the alert system will generate an alert so that online securities monitoring team will be able to promptly investigate for the reason of that unusual change notice any security with unusual changes in its trading pattern. The main objectives of the system can be summarized below:

- To detect potential abnormal activity – Surveillance System detects on real time basis potential abnormal activity by comparing with historical data. Abnormal activity may be pertaining to abnormality in respect of price, volume etc
- Capture real time data on surveillance system – Instantaneous updation of price and quantity data is provided.
- To generate alerts in case of aberrations – Surveillance system generates alerts across live data based on predefined parameters.

<u>Alerts</u>

Online Real Time Alerts

These alerts are based on the trade related information during the trading hours. The objective of these alerts is to identify any abnormality as soon at it happens. These alerts include intra-day price movement related and abnormal trade quantity or value related alerts.

Online Non real Time Alerts

These alerts are based on the traded related information at the end of the day and the available historical information. The objective of these alerts is to analyze the price, volume and value variations over a period.

Price Variation

It is defined as the variation between the last trade price (LTP_t) and the previous close price (P) of a security expressed as a percentage of the previous close price (P). i.e. Price Variation = $\{(LTPt - P)/ P\} \times 100$

High-Low Variation

It is defined as the variation between the high price (H) and the low price (L) of a security expressed as a percentage of the previous close price (P). i.e. High-Low Variation = $\{(H - L)/ P\} \times 100$

Consecutive Trade Price Variation

It is defined as the variation between the last trade price (LTP_t) and the previous trade price (LTP_{t-1}) of a security expressed as a percentage of the previous trade price (LTP_{t-1}) i.e. Consecutive Trade Price Variation (ΔLTP) = $\{(LTP_t - LTP_{t-1})/ LTP_{t-1}\} \times 100$

Quantity Variation

It is defined as the percentage variation between the total traded quantity Q and the average traded quantity Q_{avg} expressed as a percentage of the average traded quantity.

Quantity Variation = $\{(Q - Q_{avg})/ Q_{avg}\} \times 100$

Quantity Variation Ratio = Q/ Q_{avg}

Daily Average Traded Quantity = Total number of shares traded in the last ‘n’ trading days/n

4.2.2 Off-line Surveillance

Price bands

Price bands refer to the daily price limits parameterized through appropriate program on the trading system, within which the price of a security is allowed to go up or down. Price bands of 20% are applicable on all securities (including debentures, warrants, preference shares etc), other than specifically identified securities. No price bands are applicable on securities on which derivative products are available or securities included in indices on which derivative products are available. In order to prevent members from entering orders at erroneous prices in such securities, the Exchange has fixed operating range of 20% for such securities.

Scrip wise reduction of Price Bands

At NSE, 5% and 10% daily price bands are applied to specified securities which are identified on objective criteria. The circuit filters are reduced in case of illiquid securities or as a price containment measure.

The price bands for the securities in the Limited Physical Market are the same as those applicable for the securities in the Normal Market. For the Auction Market the price band of 20% are applicable.

Market Wide Circuit Breakers

In addition to the above-stated price bands on individual securities, SEBI has decided to implement index based market wide circuit breakers system, w.e.f., July 02, 2001.

The index-based market-wide circuit breaker system applies at 3 stages of the index movement, either way viz. at 10%, 15% and 20%. These circuit breakers when triggered bring about a coordinated trading halt in all equity and equity derivative markets nationwide to provide for a cooling-off period giving buyers and sellers time to assimilate information. The market-wide circuit breakers are triggered by movement of either the NSE S&P CNX Nifty or BSE Sensex, whichever is breached earlier.

- In case of a 10% movement of either of these indices, there would be a one-hour market halt if the movement takes place before 1:00 p.m. In case the movement takes place at or after 1:00 p.m. but before 2:30 p.m. there would be trading halt for ½ hour. In case movement takes place at or after 2:30 p.m. there will be no trading halt at the 10% level and market shall continue trading.
- In case of a 15% movement of either index, there shall be a two-hour halt if the movement takes place before 1 p.m. If the 15% trigger is reached on or after 1:00p.m. but before 2:00 p.m., there shall be a one-hour halt. If the 15% trigger is reached on or after 2:00 p.m. the trading shall halt for remainder of the day.
- In case of a 20% movement of the index, trading shall be halted for the remainder of the day.

These percentages are translated into absolute points of index variations on a quarterly basis. At the end of each quarter, these absolute points of index variations are revised for the applicability for the next quarter. The absolute points are calculated based on closing level of index on the last day of the trading in a quarter and rounded off to the nearest 10 points in case of S&P CNX Nifty.

On May 17, 2004, the index based market wide circuit breaker was triggered at 10:15 (20 minutes after the start of the market) due to 10% movement of S&P CNX Nifty (1400.55, down by 181.85 points), whereby the market was halted for one hour. The index based market wide circuit breaker was again triggered at 11:16 (one minute after the market was restarted) due to 15% movement of S&P CNX Nifty (1302.35, down by 280.05 points), whereby the market was halted for two hours.

Example 1

Suppose the S&P CNX Nifty closed at 1500 on September 30, 2004. On October 13, 2004 the Nifty closed at 1800 points. Thus on October 14^{th} 2004 in a bearish market, when will the circuit breakers be triggered?

Solution

10% of the closing index on the last day of the trading in the previous quarter is 150 points (1500 * 10%). Thus, if from October 1, 2004 to December 31, 2004 if market falls by 150 points on a single day then the Index based circuit breakers will get triggered and the market will be closed.

Thus, first circuit breaker will get triggered at 1650 points (1800-150). The second circuit breaker will be triggered at 1575 points (1800-225 i.e. 1500*15%) and the third circuit breaker will be triggered at 1500 points (1800-300 i.e. 1500*20%).

Example 2

Suppose the index based circuit breaker was first triggered at 1500 points, then its second and third circuit breakers will be triggered at ______ (previous day close of Nifty was 1700 points).

Solution

The first circuit breaker triggers when there is a fall of 10% of closing level of index on the last day of the trading in a previous quarter. Second one at 15% and third at 20%.

First trigger was at fall of 200 points (1700-1500)
200 points was 10%, therefore 15% fall will be 300 points and 20% fall will be 400 points.

So the second circuit breaker will reach at 1400 points (1700-300) and third will reach at 1300 points (1700-400)

<u>Trade for Trade</u>

Trade for trade deals are settled on a trade for trade basis and settlement obligations arise out of every deal. When a security is shifted to trade for trade segment, selling/ buying of shares in that security would result into giving or taking delivery of shares and no intra day or settlement netting off/ square off facility would be permitted. Trading in this segment is available only for the securities:

- which have not established connectivity with both the depositories as per SEBI directive. The list of these securities is notified by SEBI from time to time.
- on account of surveillance action.

Surveillance department of the Exchange, in co-ordination with SEBI and BSE, occasionally transfers securities from rolling settlement to a trade to trade settlement basis as a market surveillance measure. The transfer of securities for trading and settlement on a trade-to-trade basis is purely a market surveillance measure and it should not be construed as an adverse action against the concerned companies. Further, this measure is periodically reviewed depending on the market conditions.

Securities trading in trade for trade segment are subject to a price band of 5%.

4.2.3 Rumour Verification

Leading financial dailies are scrutinized for any price sensitive information pertaining to the companies listed with the Exchange. In case, such news is not intimated to the Exchange and there was impact on the price (of the threshold percentage in price), letters are sent to the companies seeking clarification The reply received from the companies is broadcast to the members, updated on the website and a press release is issued to the effect.

<u>Corporate Information</u>

Corporate announcements by companies listed with the Exchange are broadcast to the Trading Members terminal and updated on our website as and when they are received at the Exchange. The surveillance team analyses the price / quantity movement prior to the above mentioned corporate announcement being made public with a focus on Insider Trading. Such corporate actions include Rights Issue, Bonus Issue, Mergers/Amalgamation, Open Offer, Preferential Issue, and Buyback of Securities.

CHAPTER 5

SURVEILLANCE AND RISK MANAGEMENT

5.1 INTRODUCTION

SEBI has, from time to time, put in place various risk containment measures to address the risks involved in the cash and derivatives market. These measures have successfully and efficaciously addressed the market risks. However, to keep pace with the dynamic state of the markets, risk management systems cannot remain static and has to constantly address the changing risk profile of the market. Further, there were also certain differences observed between the risk management systems in the cash and derivatives market.

With an objective of aligning and streamlining the risk management framework across the cash and derivatives markets and to consolidate all the existing circulars on risk management for the cash market, the Advisory Committee of Derivatives and Market Risk Management of SEBI (RMG), in its various meetings reviewed the extant provisions relating to margins and risk management framework in the cash market. After detailed deliberations, the RMG has recommended a comprehensive risk management framework for the cash market. The comprehensive risk management framework has been finalised after a due consultative process with the public.

As per SEBI Directive, the Stock Exchanges should put in place the necessary systems to ensure the operationalization of the comprehensive risk management framework and that they have tested the software and removed any glitches in its operation to avoid any problems in the live environment.

Further, the Stock Exchanges, are advised to strengthen their monitoring and surveillance systems and take such timely actions as and when necessary.

5.2 RISK CONTAINMENT MEASURES

A sound risk management system is integral to/pre-requisite for an efficient clearing and settlement system. The National Securities Clearing Corporation Ltd. (NSCCL), a wholly owned subsidiary of NSE, was incorporated in August 1995. It was set up to bring and sustain confidence in clearing and settlement of securities; to promote and maintain, short and consistent settlement cycles; to provide counter-party risk guarantee, and to operate a tight risk containment system. NSCCL commenced clearing operations in April 1996.

NSCCL ensures that trading members' obligations are commensurate with their net worth. In recognition of the fact that market integrity is the essence of any financial market and believing in the philosophy that prevention is better than cure, NSCCL has put in place a comprehensive risk management system which is constantly monitored and upgraded to pre-empt market failures.

Risk containment measures include capital adequacy requirements of members, monitoring of member performance and track record, stringent margin requirements, position limits based on capital, online monitoring of member positions and automatic disablement from trading when limits are breached.

To safeguard the interest of the investors, NSE administers an effective market surveillance system to curb excessive volatility, detect and prevent price manipulation and follows a system of price bands. Further, the exchange maintains strict surveillance over market activities in liquid and volatile securities.

Settlement Process at NSCCL

The settlement process begins as soon as members' obligations are determined through the clearing process. The settlement process revolves around the clearing corporation, which with the help of clearing banks and depositories, with clearing corporation providing a major link between clearing banks and depositories ensures actual movement of funds as well as securities on the prescribed pay-in and pay-out day.

This requires members to bring in their funds/securities to the clearing corporation. The CMs make the securities available in designated accounts with the two depositories (CM pool account in the case of NSDL and designated settlement accounts in the case of CDSL). The depositories move the securities available in the pool accounts to the pool account of the clearing corporation. Likewise CMs with funds obligations make funds available in the designated accounts with clearing banks. The clearing corporation sends electronic instructions to the clearing banks to debit designated CMs' accounts to the extent of payment obligations. The banks process these instructions, debit accounts of CMs and credit accounts of the clearing corporation. This constitutes pay-in of funds and of securities.

After processing for shortages of funds/securities and arranging for movement of funds from surplus banks to deficit banks through RBI clearing, the clearing corporation sends electronic instructions to the depositories/clearing banks to release pay-out of securities/funds. The depositories and clearing banks debit accounts of the Clearing Corporation and credit accounts of CMs. This constitutes pay out of funds and securities.

Settlement is deemed to be complete upon declaration and release of pay-out of funds and securities. The settlement is performed by NSCCL as per well-defined settlement cycle.

5.2.1 Settlement Guarantee Mechanism

NSCCL has adopted the principle of ‘novation’ for settlement of all trades. It is the legal counter-party to the settlement obligations of every member. NSCCL carries out the clearing and settlement of the trades executed in the Equities and Derivatives segments and operates Subsidiary General Ledger (SGL) for settlement of trades in government securities. It assumes the counter-party risk of each member and guarantees financial settlement. It also undertakes settlement of transactions on other stock exchanges like, the Over the Counter Exchange of India.

NSCCL meets all settlement obligations, regardless of member complying with his obligations, without any discretion. Once a member fails on any obligations, NSCCL immediately initiates measures to reduce exposure limits, withhold pay out of securities, square up open positions, disable trading terminal until member’s obligations are fully discharged.

NSCCL assumes the counter party risk of each member and guarantees financial settlement. Counter party risk is guaranteed through a fine tuned risk management system and an innovative method of on-line position monitoring and automatic disablement. A large Settlement Guarantee Fund provides the cushion for any residual risk. In the event of failure of a trading member to meet settlement obligations or committing default, the Fund is utilized to the extent required for successful completion of the settlement. This has eliminated counter party risk of trading on the Exchange. The market has now full confidence that settlements will take place in time and will be completed irrespective of possible default by isolated trading members. The concept of guaranteed settlements has completely changed the way market safety is perceived.

The Settlement Guarantee Fund is an important element in facilitating the settlement process. The Fund operates like a self-insurance mechanism and is funded through the contributions made by trading members, transaction charges, penalty amounts, fines etc. recovered by NSCCL.

A part of the cash deposit and the entire security deposit of every clearing member with the Exchange has been converted into an initial contribution towards the Settlement Guarantee Fund, as indicated below:

Equities Segment

Type of Member	Cash Deposit (Rs. Lakh)	Security Deposit in the form of Bank FDR/ guarantee or securities (Rs. Lakh)
Individual/ partnership firms	6.00	17.50
Corporates	9.00	25.00

Derivative Segment

Type of Member	Cash Deposit (Rs. Lakh)	Security Deposit in the form of Bank FDR/guarantee or securities (Rs. Lakh)
Trading member (contributed by Clearing Member)	2.00	8.00
Clearing Member	25.00	25.00

There is a provision that as and when volumes of business increase, members may be required to make additional contributions allowing the fund to grow alongwith the market volumes.

5.2.2 Asset/Capital Adequacy

The trading members are admitted to the different segments of the Exchange subject to the provision of the Securities Contracts (Regulation) Act, 1956 and the Securities and Exchange Board of India Act, 1992.

At NSE, following are the combinations of market segments available with the respective fees, deposits and networth requirements:

Market Segments and Membership at NSE

(in Rs. Lakh)

Requirements	WDM Seg	CM & FO Segment			CM, WDM and F&O segment			Professional Clearing Membership of	
		CM and Trading Membership of F&O Seg	Additional requirments for Clearing Membership of F&O Seg	Total for CM and Trading & Clearing Membership of F&O Seg	CM,WDM & Trading Membership of F&O Seg	Additional requirements for Clearing Membership of F&O Seg	Total for CM, WDM and Trading & Clearing Membership of F&O Seg	CM or F&O Seg	CM and F&O Seg
Networth	200	100	300*	300*	200	300 **	300**	300	300
Total Interest Free Cash Security Deposit	150	125	25	150	275	25	300	25	34
Collateral Security Deposit	-	25	25	50	25	25	50	25	50

Note:

* Rs. 100 lakh for self-clearing members in F&O segment

** Rs. 200 lakh in case of CM, WDM and trading & self-clearing membership of F&O segment

Capital adequacy requirements from members stipulated by the NSE are substantially in excess of the minimum statutory requirements as also to those stipulated by other stock exchanges. The capital adequacy norms to be followed by members in the equities and derivatives segments are follows:

Equities Segment

Members are required to provide liquid assets which adequately cover various margins & base minimum capital requirements. Liquid assets of the member include their Initial membership deposits including the security deposits. Members may provide additional collateral deposit towards liquid assets, over and above their minimum membership deposit requirements.

The acceptable forms of capital towards liquid assets and the applicable haircuts are listed below:

1. Cash Equivalents: Cash, Bank Fixed Deposits with approved custodians, Bank Guarantees from approved banks, Government Securities with 10% haircut, Units of liquid mutual funds or government securities mutual funds with 10% haircut.

2. Other Liquid assets: (i) Liquid (Group I) Equity Shares in demat form, as specified by NSCCL from time to time deposited with approved Custodians. Haircuts applied are equivalent to the VaR margin for the respective securities (ii) Mutual fund units other than those listed under cash equivalents decided by NSCCL from time to time. Haircut equivalent to the VaR margin for the units computed using the traded price if available, or else, using the NAV of the unit treating it as a liquid security.

Derivatives Segment

Minimum Base Capital

A Clearing Member (CM) is required to meet with the Base Minimum Capital (BMC) requirements prescribed by NSCCL before activation. The CM has also to ensure that BMC is maintained in accordance with the requirements of NSCCL at all points of time, after activation.

Every CM is required to maintain BMC of Rs.50 lakh with NSCCL in the following manner:

(1) Rs. 25 lakh in the form of cash.
(2) Rs.25 lakh in any one form or combination of the following forms: (a) cash (b) fixed deposit receipts with approved custodians (c) Bank

Guarantee from approved banks (d) approved securities in demat form deposited with approved custodians

In addition to the above minimum base capital requirements, every CM is required to maintain BMC of Rs.10 lakh, in respect of every trading member(TM) whose deals such CM undertakes to clear and settle, in the following manner:

(1) Rs. 2 lakh in the form of cash.

(2) Rs.8 lakh in a one form or combination of the following: (a) cash (b) fixed deposit receipts with approved custodians (c) Bank Guarantee from approved banks (d) approved securities in demat form deposited with approved custodians

Any failure on the part of a CM to meet with the BMC requirements at any point of time, will be treated as a violation of the Rules, Bye-Laws and Regulations of NSCCL and would attract disciplinary action inter-alia including, withdrawal of trading facility and/or clearing facility, closing out of outstanding positions etc.

Additional Base Capital

Clearing members may provide additional margin/collateral deposit (additional base capital) to NSCCL and/or may wish to retain deposits and/or such amounts which are receivable from NSCCL, over and above their minimum deposit requirements, towards initial margin and/or other obligations.

Clearing members may submit such deposits in any one form or combination of the following forms: (i) Cash (ii) Fixed Deposit Receipts with approved custodians (iii) Bank Guarantee from approved banks (iv) approved securities in demat form deposited with approved custodians.

Effective Deposits / Liquid Networth

Effective deposits

All collateral deposits made by CMs are segregated into cash component and non-cash component.

For Additional Base Capital, cash component means cash, bank guarantee, fixed deposit receipts, T-bills and dated government securities. Non-cash component shall mean all forms of collateral deposits like deposit of approved demand securities.

At least 50% of the Effective Deposits should be in the form of cash.

Liquid Networth

Liquid Networth is computed by reducing the initial margin payable at any point in time from the effective deposits.

The Liquid Networth maintained by CMs at any point in time should not be less than Rs.50 lakh (referred to as Minimum Liquid Net Worth).

5.2.3 Margins

Equities Segment

As per SEBI directives, the stocks are categorized as follows for imposition of margins:

- The Stocks which have traded atleast 80% of the days for the previous six months shall constitute the Group I (Liquid Securities) and Group II (Less Liquid Securities).
- Out of the scrips identified above, the scrips having mean impact cost of less than or equal to 1% shall be categorized under Group I and the scrips where the impact cost is more than 1, shall be categorized under Group II.
- The remaining stocks shall be classified into Group III (Illiquid Securities).
- The impact cost shall be calculated on the 15th of each month on a rolling basis considering the order book snapshots of the previous six months. On the basis of the impact cost so calculated, the scrips shall move from one group to another group from the 1st of the next month.
- For securities that have been listed for less than six months, the trading frequency and the impact cost shall be computed using the entire trading history of the security.
- For the first month and till the time of monthly review a newly listed security shall be categorised in that Group where the market capitalization of the newly listed security exceeds or equals the market capitalization of 80% of the securities in that particular group. Subsequently, after one month, whenever the next monthly review is carried out, the actual trading frequency and impact cost of the security shall be computed, to determine the liquidity categorization of the security.
- In case any corporate action results in a change in ISIN, then the securities bearing the new ISIN shall be treated as newly listed security for group categorization.

Daily margins payable by members consists of the following:

1. Value at Risk Margin
2. Extreme Loss Margin
3. Mark-To-Market Margin

Daily margin, comprising of the sum of VaR margin, Extreme Loss Margin and mark to market margin is payable.

Value at Risk Margin

VaR Margin is a margin intended to cover the largest loss that can be encountered on 99% of the days (99% Value at Risk). For liquid securities, the margin covers one-day losses while for illiquid securities, it covers three-day losses so as to allow the clearing corporation to liquidate the position over three days. This leads to a scaling factor of square root of three for illiquid securities.

For liquid securities, the VaR margins are based only on the volatility of the security while for other securities, the volatility of the market index is also used in the computation.

Computation of VaR Rate:

VaR is a single number, which encapsulates whole information about the risk in a portfolio. It measures potential loss from an unlikely adverse event in a normal market environment. It involves using historical data on market prices and rates, the current portfolio positions, and models (e.g., option models, bond models) for pricing those positions. These inputs are then combined in different ways, depending on the method, to derive an estimate of a particular percentile of the loss distribution, typically the 99th percentile loss.

The volatility is calculated as follows:

$$(\sigma_t)^2 = \lambda(\sigma_{t-1})^2 + (1-\lambda)(r_t)^2$$

σ^2 = is Variance
σ = standard deviation of daily returns
λ = is Lambda factor
r = Returns of the securities for the day
t = time

λ is a parameter which indicates how rapidly volatility estimate changes. The value of λ is fixed at 0.94 which has been arrived at on the basis of the empirical study done by Prof. J. R. Varma (F&O returns).

The 'return' is defined as the logarithmic return: $r_t = \ln(I_t/I_{t-1})$ where I_t is the index futures price at **time t.**

- **Security sigma** means the volatility of the security computed as at the end of the previous trading day. The volatility is computed as mentioned above
- **Security VaR** means the higher of 7.5% or 3.5 security sigmas.
- **Index sigma** means the daily volatility of the market index (S&P CNX Nifty or BSE Sensex) computed as at the end of the previous trading day.
- Index VaR means the higher of 5% or 3 index sigmas. The higher of the Sensex VaR or Nifty VaR would be used for this purpose.

The VaR Margins are specified as follows for different groups of securities:

Liquidity Categorization	One-Day VaR	Scaling factor for illiquidity	VaR Margin
Liquid Securities (Group I)	Security VaR	1.00	Security VaR
Less Liquid Securities (Group II)	Higher of Security VaR and three times Index VaR	1.73 (square root of 3.00)	Higher of 1.73 times Security VaR and 5.20 times Index VaR
Illiquid Securities (Group III)	Five times Index VaR	1.73 (square root of 3.00)	8.66 times Index VaR

In case of securities in Trade for Trade segment (TFT segment) the VaR rate applicable is 100%.

VaR margin rate for a security constitutes the following:

1. Value at Risk (VaR) based margin, which is arrived at, based on the methods stated above. The index VaR, for the purpose, would be the higher of the daily Index VaR based on S&P CNX NIFTY or BSE SENSEX. The index VaR would be subject to a minimum of 5%.

2. Security specific Margin: NSCCL may stipulate security specific margins for the securities from time to time.

The VaR margin rate computed as mentioned above will be charged on the net outstanding position (buy value-sell value) of the respective clients on the respective securities across all open settlements. There would be no netting off of positions across different settlements. The net position at a client level for a member are arrived at and thereafter, it is grossed across all the clients including proprietary position to arrive at the gross open position.

For example, in case of a member, if client A has a buy position of 1000 in a security and client B has a sell position of 1000 in the same security, the net position of the member in the security would be taken as 2000. The buy position of client A and sell position of client B in the same security would not be netted. It would be summed up to arrive at the member's open position for the purpose of margin calculation.

The VaR margin shall be collected on an upfront basis by adjusting against the total liquid assets of the member at the time of trade.

The VaR margin so collected shall be released on completion of pay-in of the settlement.

Extreme Loss Margin

The Extreme Loss Margin for any security shall be higher of:

1. 5%, or
2. 1.5 times the standard deviation of daily logarithmic returns of the security price in the last six months. This computation shall be done at the end of each month by taking the price data on a rolling basis for the past six months and the resulting value shall be applicable for the next month.

In view of market volatility, SEBI may direct stock exchanges to change the margins from time-to-time in order to ensure market safety and safeguard the interest of investors.

The Extreme Loss Margin shall be collected/ adjusted against the total liquid assets of the member on a real time basis.

The Extreme Loss Margin shall be collected on the gross open position of the member. The gross open position for this purpose would mean the gross of all net positions across all the clients of a member including its proprietary position.

There would be no netting off of positions across different settlements. The Extreme Loss Margin collected shall be released on completion of pay-in of the settlement.

Mark-to-Market Margin

Mark to market loss shall be calculated by marking each transaction in security to the closing price of the security at the end of trading. In case the security has not been traded on a particular day, the latest available closing price at the NSE shall be considered as the closing price. In case the net outstanding position in any security is nil, the difference between the buy and sell values shall be considered as notional loss for the purpose of calculating the mark-to-market margin payable.

MTM Profit/Loss = [(Total Buy Qty X Close price) – Total Buy Value] - [Total Sale Value - (Total Sale Qty X Close price)]

The mark to market margin (MTM) shall be collected from the member before the start of the trading of the next day.

The MTM margin shall also be collected/adjusted from/against the cash/cash equivalent component of the liquid net worth deposited with the Exchange.

Example 1:

A trading member has two clients with the following MTM positions. What will be the MTM for the trading member?

Client	**Security X**		**Security Y**		**Security Z**	
	T-1 Day	T Day	T-1 Day	T Day	T-1 Day	T Day
A	800	300	-500	-1200	0	0
B	1000	500	0	0	-1500	-800

The MTM for the trading member will be -1700.

The MTM margin shall be collected on the gross open position of the member. The gross open position for this purpose would mean the gross of all net positions across all the clients of a member including its proprietary position. For this purpose, the position of a client would be netted across its various securities and the positions of all the clients of a broker would be grossed.

There would be no netting off of the positions and setoff against MTM profits across two rolling settlements i.e. T day and T-1 day. However, for computation of MTM profits/losses for the day, netting or setoff against MTM profits would be permitted.

Example 2:

A trading member has two clients with the following positions. What will be the gross open position for the member in X, Y and Z?

Client	Security	Settlement	Buy Value	Sell Value
Client A	Security X	2005001	1000	1100
	Security Y	2005002	3000	2550
Client B	Security X	2005001	4500	2400
	Security Z	2005002	7000	10450

The gross open position for the member in X, Y & Z will be 2200, 450, 3450 respectively.

In case of Trade for Trade Segment (TFT segment) each trade shall be marked to market based on the closing price of that security.

The MTM margin so collected shall be released on completion of pay-in of the settlement.

Margin Shortfall

In case of any shortfall in margin:

- The members shall not be permitted to trade with immediate effect.
- A penalty of Rs.5000/- will be levied for violation of margin which shall be paid by next day. In case of subsequent violations during the day, penalty shall be increased by Rs.5000/- for each such instance. (For example in case of second violation for the day the penalty levied will be Rs.10000/-, Rs.15000/- for third instances and so on).The penalty will be debited to the clearing account of the member.
- Penal charge of 0.07% per day shall be levied on the amount of margin shortage throughout the period of non-payment.

Exemption from margins:

a) Institutional businesses i.e., transactions done by all institutional investors shall be exempt from margin payments. For this purpose, institutional investors shall include:

- Foreign Institutional Investors registered with SEBI (FII).
- Mutual Funds registered with SEBI (MF).
- Public Financial Institutions as defined under Section 4A of the Companies Act, 1956 (DFI).
- Banks, i.e., a banking company as defined under Section 5(1)(c) of the Banking Regulations Act, 1949 (BNK).

- Insurance companies registered with IRDA (INS).

b) In cases where early pay-in of securities is made prior to the securities pay-in, such positions for which early pay-in (EPI) of securities is made shall be exempt from margins. The EPI would be allocated to clients having net deliverable position, on a random basis. However, members shall ensure to pass on appropriate early pay-in benefit of margin to the relevant clients.

Derivatives Segment

NSCCL has developed a comprehensive risk containment mechanism for the Futures & Options segment. The most critical component of a risk containment mechanism for NSCCL is the online position monitoring and margining system. The actual margining and position monitoring is done on-line, on an intra-day basis. NSCCL uses the SPAN (Standard Portfolio Analysis of Risk) system for the purpose of margining, which is a portfolio based system.

The objective of SPAN is to identify overall risk in a portfolio of futures and options contracts for each member. The system treats futures and options contracts uniformly, while at the same time recognizing the unique exposures associated with options portfolios like extremely deep out-of-the-money short positions, inter-month risk and inter-commodity risk.

SPAN is used to determine performance bond requirements (margin requirements), its overriding objective is to determine the largest loss that a portfolio might reasonably be expected to suffer from one day to the next day.

SPAN constructs scenarios of probable changes in underlying prices and volatilities in order to identify the largest loss a portfolio might suffer from one day to the next. It then sets the margin requirement at a level sufficient to cover this one-day loss.

Initial Margin

NSCCL collects initial margin up-front for all the open positions of a CM based on the margins computed by NSCCL-SPAN. A CM is in turn required to collect the initial margin from the TMs and his respective clients. Similarly, a TM should collect upfront margins from his clients.

Initial margin requirements are based on 99% value at risk over a one day time horizon. However, in the case of futures contracts (on index or individual securities), where it may not be possible to collect mark to market settlement value, before the commencement of trading on the next day, the initial margin may be computed over a two-day time horizon, applying the appropriate statistical formula. The methodology for computation of Value at Risk percentage is as per the recommendations of SEBI from time to time.

Premium Margin

In addition to Initial Margin, Premium Margin would be charged to members. The premium margin is the client wise margin amount payable for the day and will be required to be paid by the buyer till the premium settlement is complete.

Assignment Margin

Assignment Margin is levied on a CM in addition to SPAN margin and Premium Margin. It is required to be paid on assigned positions of CMs towards Interim and Final Exercise Settlement obligations for option contracts on individual securities and index, till such obligations are fulfilled.

The margin is charged on the Net Exercise Settlement Value payable by a Clearing Member towards Interim and Final Exercise Settlement and is deductible from the effective deposits of the Clearing Member available towards margins.

Assignment margin is released to the CMs for exercise settlement pay-in.

Payment of Margins

The initial margin is payable upfront by Clearing Members. Initial margins can be paid by members in the form of Cash, Bank Guarantee, Fixed Deposit Receipts and approved securities.

Non-fulfillment of either the whole or part of the margin obligations will be treated as a violation of the Rules, Bye-Laws and Regulations of NSCCL and will attract penal charges @ **0.07%** per day of the amount not paid throughout the period of non-payment. In addition NSCCL may at its discretion and without any further notice to the clearing member, initiate other displinary action, inter-alia including, withdrawal of trading facilities and/ or clearing facility, close out of outstanding positions, imposing penalties, collecting appropriate deposits, invoking bank guarantees/ fixed deposit receipts, etc.

Violations

PRISM (Parallel Risk Management System) is the real-time position monitoring and risk management system for the Futures and Options market segment at NSCCL. The risk of each trading and clearing member is monitored on a real-time basis and alerts/disablement messages are generated if the member crosses the set limits.

- Initial Margin Violation
- Exposure Limit Violation
- Trading Memberwise Position Limit Violation
- Client Level Position Limit Violation
- Market Wide Position Limit Violation
- Violation arising out of misutilisation of trading member/ constituent collaterals and/or deposits
- Violation of Exercised Positions

Clearing members, who have violated any requirement and / or limits, may submit a written request to NSCCL to either reduce their open position or, bring in additional cash deposit by way of cash or bank guarantee or FDR or securities.

A penalty of Rs. 5000/- is levied for each violation and is debited to the clearing account of clearing member on the next business day. In respect of violation on more than one occasion on the same day, penalty in case of second and subsequent violation during the day will be increased by Rs.5000/- for each such instance. (For example in case of second violation for the day the penalty leviable will be Rs.10000/-, Rs.15000 for third instance and so on). The penalty is charged to the clearing member irrespective of whether the clearing member brings in margin deposits subsequently.

Where the penalty levied on a clearing member/ trading member relates to a violation of Client-wise Position Limit, the clearing member/ trading member may in turn, recover such amount of penalty from the concerned clients who committed the violation

Market Wide Position Limits for derivative contracts on underlying stocks

At the end of each day the Exchange shall test whether the market wide open interest for any scrip exceeds 95% of the market wide position limit for that scrip. If so, the Exchange shall take note of open position of all client/ TMs as at the end of that day in that scrip, and from next day onwards the client/ TMs shall trade only to decrease their positions through offsetting positions till the normal trading in the scrip is resumed.

The normal trading in the scrip shall be resumed only after the open outstanding position comes down to 80% or below of the market wide position limit.

A facility is available on the trading system to display an alert once the open interest in the futures and options contract in a security exceeds 60% of the market wide position limits specified for such security. Such alerts are presently displayed at time intervals of 10 minutes.

At the end of each day during which the ban on fresh positions is in force for any scrip, when any member or client has increased his existing positions or has created a new position in that scrip the client/ TMs shall be subject to a penalty of 1% of the value of increased position subject to a minimum of Rs.5000 and maximum of Rs.1,00,000. The positions, for this purpose, will be valued at the underlying close price.

The penalty shall be recovered from the clearing member affiliated with such trading members/clients on a T+1 day basis along with pay-in. The amount of penalty shall be informed to the clearing member at the end of the day.

Price Scan Range

To compute worst scenario loss on a portfolio, the price scan range for option on individual securities and futures on individual securities would also be linked to liquidity, measured in terms of impact cost for an order size of Rs 5 lakh calculated on the basis of order book snapshots in the previous six months. Accordingly if the mean value of the impact cost exceeds 1%, the price scanning range would be scaled up by square root of three. This would be in addition to the requirement on account of look ahead period as may be applicable.

The mean impact cost as stipulated by SEBI is calculated on the 15th of each month on a rolling basis considering the order book snap shots of previous six months. If the mean impact cost of a security moves from less than or equal to 1% to more than 1%, the price scan range in such underlying shall be scaled by square root of three and scaling shall be dropped when the impact cost drops to 1% or less. Such changes shall be applicable on all existing open position from the third working day from the 15th of each month.

Position Limits

Clearing Members are subject to the following exposure / position limits in addition to initial margins requirements:

- Exposure Limits
- Trading Memberwise Position Limit
- Client Level Position Limit
- Market Wide Position Limits (for Derivative Contracts on Underlying Stocks)
- Collateral limit for Trading Members

5.2.4 Inspection of Books and Investigation

The Exchange conducts an inspection of the trading members in the capital market segment and futures and options segment of the Exchange as per regulatory requirements every year. **The Exchange also conducts an inspection of trading members in the wholesale debt market segment and clearing members in CM and F&O segment every year.** During the inspection the inspection team verify the compliance of provisions of applicable act, rules, regulations, bye-laws, guidelines and circulars by trading and clearing members. The Exchange initiates necessary disciplinary actions against the trading / clearing members in respect of the violations observed during the course of inspection.

The investigation is based on various alerts, which require further analysis. If further analysis suggests any possible irregular activity, which deviates from the past trends, patterns and/ or concentration of trading at NSE at the member level, a more detailed investigation is undertaken. If the detailed investigation establishes any irregular activity, disciplinary action is initiated against the member. If the investigation suggests suspicious of possible irregular activity across exchange and/ or possible involvement of clients, the same is informed to SEBI.

5.2.5 Penal Charges

<u>Equities Segment</u>

Penal Charges

Penalties are charged to members for: (i) failure to fulfil their funds obligations (ii) failure to fulfil their securities deliverable obligations (iii) Margin Violations (iv) Security Deposit Shortages (v) Other violations in respect of client code modifications, non-confirmation of custodial trades, company objections reported against the members' etc.

Type of Default	Penalty Charges
Shortages in Funds pay-in	0.07% per day
Shortages in security deposit	0.09% per day
Shortages in Securities Pay-in	0.05% per day
Margin violations	0.07% per day. In addition penalty of Rs. 5,000/- for each instance of margin violation and subsequently increased by Rs. 5,000/-

	for every additional instance of violation during the day
Penalty for client code modifications	Based on client codes modified to total orders matched on a daily basis as given below: 1) less than or equal to 1% - NIL 2) greater than 1% but less than 5% - Rs. 500/- per day 3) Greater than 5% but less than or equal to 10% - Rs. 1000/- per day 4) Greater than 10% - Rs. 10,000/- per day
Non-allocation of INST trades, non-confirmation / rejection of custodial trades	0.10% of total value or Rs. 10,000/- whichever is lower for a settlement.
Company Objections Bad & Fake and Company Objections Rectification / Replication of bad and fake delivery in all markets	0.09% per day from the day of non compliance
Wrong claims of dividend, bonus etc.	Rs. 100 per claim
Same set of shares reported twice under objection	10% of value with a minimum of Rs.5000/- per claim
Incorrect undertaking on Form 6-I	10% of value with a minimum of Rs.5000/- per claim
Late withdrawal of company objections	Rs.2 per share with a minimum of Rs.200/-
Non Settlement of trade under TT segment	0.50% of trade value
Cancellation of trade under TT segment	Rs.1000/- per trade per side
Failure to settle within the stipulated time under TT segment	Maximum of Rs.10000/- or Rs.500/- per trade per day, subject to maximum of 2.50 times the value of trade for each side
Failure to report within the stipulated time under TT segment	Maximum of Rs.5000/- or Rs.500/- per trade per day, subject to maximum of 2.50 times the value of trade for each side

Derivatives Segment

Penalties

The following penalty points and penal charges are levied for failure to pay funds/ settlement obligations:

Penal Charges

A penal charge will be levied on the amount in default as per the byelaws relating to failure to meet obligations by any Clearing Member.

Type of Default	Penalty Charge per day	Chargeable to
Overnight settlement shortage of value more than Rs.5 lakh	0.07%	Clearing Member
Overnight settlement shortage of value less than Rs.5 lakh	0.07%	Clearing Member
Violations on account of MTM multiple shortage	0.07%	Clearing Member
Violations on account of Initial Margin shortage	0.07%	Clearing Member / Trading Member
Violations on account of Open Interest by TM	Nil	Trading Member
Shortage of Base Capital of the member	0.09%	Clearing Members
Violations on account of Market wide position limit	Nil	Clearing Members
Client level / sub-account/NRI position limit violation	Nil	Clearing Member
Shortage of Capital cushion	0.07%	Clearing Members

In addition to the above, a penal interest at the rate of 0.09% for each day of default will be levied on the members who fail to pay the penalty imposed on them.

Violations if any by the custodial participants shall be treated in line with those by the trading member and accordingly action shall be initiated against the concerned clearing member.

5.2.6 On-line Monitoring

NSCCL has in place an on-line position monitoring and surveillance system whereby positions of the members is monitored on a real time basis. A system of alerts has been built in so that both the member and NSCCL are alerted when the margins of a member approaches pre-set levels (70%, 85%, 90%, 95% and 100%). The system also allows NSCCL to further check the micro-details of members' positions, if required.

This facilitates NSCCL to take pro-active action. NSCCL has discretion to initiate action suo moto for reducing a member position, if required, more particularly where a member, after NSCCL requiring him to reduce his position fails to close out positions or make additional margin calls.

The on-line surveillance mechanism also generates various alerts/reports on any price/volume movement of securities not in line with past trends/patterns. For this purpose the exchange maintains various databases to generate alerts. Alerts are scrutinized and if necessary taken up for follow up action. Open positions of securities are also analysed. Besides this, rumors in the print media are tracked and where they are price sensitive, companies are contacted for verification. Replies received are informed to the members and the public.

CHAPTER 6

PRELIMINARY ANALYSIS AND INVESTIGATION

6.1 PROCESSING OF ALERTS

Alerts are received from various sources such as the surveillance group, referrals from regulators, complaints from investors / members and referrals from other departments. In all the cases the following data / information pertaining to the security under analysis is collated and studied:

1. Price-volume data over an appropriate period, depending upon the nature of alert.
2. Price-volume data of futures and options contracts, if the security is available for trading in F&O segment
3. Comparative study of price and volume of the security in relation to appropriate index / industry.
4. Security specific corporate actions, information, news, rumors etc during appropriate period.
5. Industry wide news / analysis / financial results / reports etc.

The objective of such analysis of alerts / cases is to find out possibility of manipulation / insider trading, if any. For the purpose, above data / information is analysed to ascertain period and scope of analysis. For the period of analysis, trading members are identified in cash and derivatives markets, in terms of both intra day and delivery trading. Client level data of these trading members is then collated and analysed for patterns which may indicate possibility of trading activity which may not be in accordance with Rules, Byelaws and Regulations of the Exchange. If trading activity points to possible violations, the case is referred for a detailed investigation otherwise no further scrutiny is undertaken. Wherever technical violations are observed during the course of analysis, appropriate action is initiated under the Rules, Byelaws and Regulations of the Exchange and the same is referred to the Disciplinary Action Committee. Rest of the cases are referred to the regulator.

6.2 UNIQUE CLIENT CODE AND THE REQUIREMENTS

Unique client information submitted by trading members is also used during the course of analysis of data / investigation for identifying trading patterns by individual entities / groups.

SEBI, vide various circulars from time to time, has made it mandatory that all trading member assign unique client code to their clients on the basis of unique identification details such as MAPIN / PAN / Passport / Driving license / Voter ID / Ration Card with Bank and depository account number. These unique client code details are to be submitted to the Exchange in the cash segment, latest by the 7th working day of the month following the day on which trade took place for the first time. This norm is applicable only to those clients whose order value is more than 1 lakh. However with effect from January 1, 2007, before placing an order for any client, each trading member will be required to verify, check and upload the PAN number of that client.

For clients in F&O segment it is mandatory on the part of trading member to upload the UCI details before placing orders or latest by the day on which the traded took place. For a Client trading in F&O segment, the trading member is compulsorily required to upload what details of the client. If the trading member fails to upload UCI details, following actions are initiated

1. For Cash Segment – Disablement from the eighth working day of the month following the day on which trade took place for the first time
2. For F&O Segment – Non submission charges of Rs. 100/-per client code per day are levied, subject to a minimum of Rs. 1000/- per week and Disablement from the eighth working day of the month following the day on which trade took place for the first time.

6.3 PREVENTION OF MONEY LAUNDERING ACT, 2002 (PMLA)

With a view to check the money laundering activities, the Government of India, Ministry of Finance, has issued notifications dated July 1, 2005 and December 13, 2005 notifying the Rules under the Prevention of Money Laundering Act (PMLA), 2002. In terms of these Rules, the provisions of PMLA, 2002 came into effect form July 1, 2005. As per the provisions of the Act, every banking company, financial institution (which includes chit fund company, a co-operative bank, a housing finance institution and a non-banking financial company) and intermediary (which includes a stock-broker, sub-broker, share transfer agent, banker to an issue, trustee to a trust deed, registrar to an issue, merchant banker, underwriter, portfolio manager, investment adviser and any other intermediary associated with securities market and registered under section 12 of the Securities and Exchange Board of India Act, 1992) shall have to maintain a record of all the transactions; the nature and value of which has been prescribed in the Rules under the PMLA.

6.4 PMLA: OBLIGATIONS OF INTERMEDIARIES

Section 12 of the PMLA, 2002 puts certain obligations on the financial intermediaries in regard to preservation and reporting of certain transactions, as mentioned below:

6.4.1 Obligation to establish policies and procedures

Senior management of a registered intermediary should be fully committed to establishing appropriate policies and procedures for the prevention of money laundering and terrorist financing and ensuring their effectiveness and compliance with all relevant legal and regulatory requirements.

6.4.2 Monitoring of Suspicious Transactions

Intermediaries should ensure to take appropriate steps to enable suspicious transactions to be recognized and have appropriate procedures for reporting suspicious transactions. A list of circumstances which may be in the nature of suspicious transactions is given below. This list is only illustrative and whether a particular transaction is suspicious or not will depend upon the background, details of the transactions and other facts and circumstances:

1. Clients whose identity verification seems difficult or clients appears not to cooperate
2. Asset management services for clients where the source of the funds is not clear or not in keeping with clients apparent standing /business activity;
3. Clients in high-risk jurisdictions or clients introduced by banks or affiliates or other clients based in high risk jurisdictions;
4. Substantial increases in business without apparent cause;
5. Unusually large cash deposits made by an individual or business;
6. Clients transferring large sums of money to or from overseas locations with instructions for payment in cash;
7. Transfer of investment proceeds to apparently unrelated third parties;

8. Unusual transactions by CSCs and businesses undertaken by shell corporations, offshore banks /financial services, businesses reported to be in the nature of export-import of small items.

6.4.3 Maintenance of records of transactions

All the intermediaries shall put in place a system of maintaining proper record of transactions prescribed under Rule 3, as mentioned below:

1. All cash transactions of the value of more than rupees ten lakh or its equivalent in foreign currency;
2. All series of cash transactions integrally connected to each other which have been valued below rupees ten lakh or its equivalent in foreign currency where such series of transactions have taken place within a month and the aggregate value of such transactions exceeds rupees ten lakh;
3. All cash transactions where forged or counterfeit currency notes or bank notes have been used as genuine and where any forgery of a valuable security has taken place;
4. All suspicious transactions whether or not made in cash and by way of as mentioned in the Rules.

6.4.4 Information to be maintained

Intermediaries are required to maintain and preserve the following information in respect of transactions referred to in Rule 3:

1. The nature of the transactions;
2. The amount of the transaction and the currency in which it was denominated;
3. The date on which the transaction was conducted; and
4. The parties to the transaction.

6.4.5 Maintenance and Preservation of records

1. The records mentioned in Rule 3 have to be maintained and preserved for a period of ten years from the date of cessation of the transactions between the client and intermediary.

2. Intermediaries should formulate and implement the client identification program containing the requirements as laid down in Rule 9 and such other additional requirements that it considers appropriate. The records of the identity of clients have to be maintained and preserved

for a period of ten years from the date of cessation of the transactions between the client and intermediary.

6.4.6 Reporting to Financial Intelligence Unit-India

In terms of the PMLA rules, intermediaries are required to report information relating to cash and suspicious transactions to the Director, Financial Intelligence Unit-India (FIU-IND).

Intermediaries, which are not in a position to immediately file electronic reports, may file manual reports to FIU-IND as per the formats prescribed. While detailed instructions for filing all types of reports are given in the instructions part of the related formats, intermediaries should adhere to the following:

1. The cash transaction report (CTR) (wherever applicable) for each month should be submitted to FIU-IND by 15th of the succeeding month.
2. The Suspicious Transaction Report (STR) should be submitted within 7 days of arriving at a conclusion that any transaction, whether cash or non-cash, or a series of transactions integrally connected are of suspicious nature. The Principal Officer should record his reasons for treating any transaction or a series of transactions as suspicious. It should be ensured that there is no undue delay in arriving at such a conclusion.
3. The Principal Officer will be responsible for timely submission of CTR and STR to FIU-IND;
4. Utmost confidentiality should be maintained in filing of CTR and STR to FIU-IND. The reports may be transmitted by speed/registered post/fax at the notified address.
5. Intermediaries should not put any restrictions on operations in the accounts where an STR has been made. Further, it should be ensured that there is no tipping off to the client at any level.

<u>OTHER MEASURES INITIATED BY THE EXCHANGE</u>

The exchange also continuously updates trading members and investors about the regulatory actions taken by SEBI. The same is available on NSE’s website under the heading “Regulatory Actions”.

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