CHAPTER II
LITERATURE REVIEW

Individual investor's risk and return preferences are being studied for quite a long time, with approaches varying with the passage of time. For the present review, selected literature on the individual investors personality traits and other demographic characteristics, studies on risk/return, disclosure of information and regulation of capital market have been considered.

Lewellen and others\(^1\) (1977) address empirically the matter of the portfolio decision processes of the individual equity investor, using data obtained from a large-scale questionnaire survey of a representative cross-section of such individuals, together with supplementary actual transactions information describing activity in the corresponding trading accounts. The objective of their study was to identify the systematic patterns of investment behaviour exhibited, and to appraise the rationality of those patterns - that is, are they internally consistent and do they fit with the reasonable prior notions with regard to appropriate responses to risk, liquidity and personal tax consideration.

Nicholas J.Gonedes, Nicholas Dopuch and Stephen H.Penman\(^2\) deal with forecast disclosure rules, a topic that has attracted the attention of both the Securities Exchange Commission and the accounting profession. Two


fundamental aspects of a forecast disclosure rule was considered: (i) The extent to which the type of information to be disclosed conveys information pertinent to valuing firms the 'information content issue' and (ii) the extent to which a rule requiring forecast disclosure is consistent with Pareto optimal allocation of resources.

The first issue was discussed by presenting empirical evidence on the information content of income forecasts and the second issue by discussing a variety of pertinent theoretical issues.

Philip L. Cooley\textsuperscript{3} tries to determine for a group of institutional investors their perception of risk as reflected by return - distribution moments. He has used multi-dimensional scaling technique to associate objectively measured return - distribution moments with risk perceived.

A study of 31,095 industrial investors by the Wall Street Journal / NBC\textsuperscript{,}(1986)\textsuperscript{4} revealed that 56% of the participants believed that stock market was controlled by large investors, so small investors did not stand a chance.

Jay Light\textsuperscript{5}(1989)\textsuperscript{5} estimated that individuals have sold 38% of their direct stock holdings over a five year period, accelerating a down trend in force and he estimates that the last share of publicly traded common stock owned by individuals will be sold in the year 2003, if the current trend persists.


Zeikel (1990) confirms the persistence of the trend when he states "the appetite for and appeal of owning individual securities has declined and will continue to do so".

Frank R. Keller (1970) focused on the determinants of security values, shareholder satisfaction and the nature of successful investment practice. He found each decision process to be highly individualised.

Ferber Robert and Nicoria Frances Co (1972) addressed the role of family decision making in financial matters.

Roger E. Potler (1970) found empirical evidence suggesting the same basic factors motivating both professional and non-professional investors. The factors were: desire for income from dividends, rapid growth, quick profits through trading and purposeful investment as a protective outlet for saving.

Lease and others (1974) found the individual investor to be primarily a fundamental analyst who perceives himself to hold a balanced and well diversified portfolio of income and capital appreciation securities. "He invests

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predominantly for the long run, and is prone to use one of the broad based market indices as the benchmark to judge personal investment performance results. He supplements his direct securities purchase activities quite frequently with ownership of mutual fund shares. Of the money he spends the great bulk goes towards subscriptions to standard financial periodicals. Their direct market participation has its origins in consideration of fun as well as profit.

Lease and others (1976) further confirmed market for securities to be segmented, that is, different group of investors concentrate on different groups of assets. "Apparently investors do align themselves with particular investment philosophies and distinct market segments, and apparently that alignment is systematically related to their individual circumstances. The general pattern is one of increasing conservation in investment behaviour and more self reliance in decision making, the older the investor. The short term capital gains diminish in proclaimed importance, more emphasis is placed on dividend income, low reliance on broker advice, more time and money spent on security analysis. The female investor was found to be more conservative, diversified and dividend oriented. The attitudes expressed, line up logically with the behaviour observed and both displayed considerable heterogeneity across the sample.

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Lewellen and others (1977)\textsuperscript{12} found investor's age, income level and sex essentially in that descending order of importance to be unquestionably the characteristics which overrode occupation, marital status, family size and educational background as significant influences in the explanation of differences in investment style and strategy. The last four were found to make occasional modest contribution.

Levellen and others (1978)\textsuperscript{13} found not much evidence to support the notion that dividend tax clientele effect is in fact present. He further (1979)\textsuperscript{14} found evidence suggesting strongly that, there were distinct internally homogenous investment performance sub groups, and scattered suggestions of a link between either personal circumstances or stated investment strategy dimensions and investment performance.

Marshall E. Blume and Irwin Friend (1975)\textsuperscript{15} found suggestions of a mild inverse relationship between the dividend yields on investor portfolios and investor tax brackets. He also found the sources used by investors to finance stock purchase as: 44% financed out of current income: 17% withdrawn from savings 11% from profits of earlier transaction. The most frequently cited reasons for buying stock were: availability of surplus from profits or cash

\textsuperscript{12} Welberr G. Lewellen, R.C. Lease and G.G. Schlarbaum, 1977 op. cit.


resources (18%); expectation of higher return and appreciation (14%) and hedge against inflation (8%).

Marshall E. Blume and Irwin Friend (1978)\textsuperscript{16} found that investors' perception of their rates of return were not strongly related to any socio-economic demographic characteristics; except for age and income. The amount of diversification was positively related to education levels and age even after holding income constant. Age was a lesser factor than education.

Thomas A. Durkin, Gregory F. Elliehausen (1984)\textsuperscript{17} found the stage in life cycle to have less influence on holdings, than income. The survey further confirmed that ownership of every type of asset has an increasing function of income. Holding of liquid assets by age, stage in life cycle, education, occupation, housing status and racial and ethnic group to follow the patterns related to income.

David L. Biehl (1988)\textsuperscript{18} categorised individual investors on the basis of their asset level.


Richard B. Ross (1988)\textsuperscript{19} developed a typology of investors on the basis of demographic data.

Wallace L. Head (1987)\textsuperscript{20} observes that "Individuals utilise rational investment approaches which are tempered by human nature" based on several observations concerning both the rationality and the human nature of individual clients. He makes a series of other observations which can be summarised as follows:

i. The breadth and depth of the investment decision - making process overwhelms most individual clients. As a result, they tend to depend on advice from people who seem to be reputable and competent and the cost of which seems reasonable compared to its expected benefit.

ii. Most individuals lack the knowledge and data required to make fully informed investment decisions, and they lack the ability to respond in a timely manner to changes in their financial situation.

iii. Most individuals view investments as transactions and they fail to view them as comprising a portfolio or programme.

iv. Many individuals are heavily affected by the context in which investment advice is delivered, but there continues to be a growing


trend towards separating investment advice from investment transactions.

v. Most individuals procrastinate with regard to personal investment decisions for any number of reasons.

vi. Individuals are both risk averse and loss averse.

Ronald W. Kaiser (1987) is of the opinion that for most investors, risk tolerance is a function of loss aversion rather than a function of volatility. He developed an investor personality classification system which focuses on two dimensions of investor personality; whether he is careful or impetuous, confident or anxious. The first deals with how the investor approaches life, whether in his career, health or money. These are important emotional choices one make and they are dictated by how confident one is about some things or how much he tends to worry about them. Based on these two dimensions investors' personalities are classified in five categories

(i) individualistic (confident and careful)
(ii) adventurer (confident and impetuous)
(iii) guardian (confident and anxious)
(iv) celebrity (anxious and impetuous)
(v) straight arrow.

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Adventurer personalities are typically entrepreneurial, strong-willed and difficult to advice because they have their own ideas about what they want to do. The celebrity is a fashion follower who is worried about being left out of the 'hot' investment area. Individualistics are strong - willed and competent but not rash; these are the ideal rational investors what everyone are looking for. Individualists are often contrarian investors who like to do their own research, are thoughtful by nature and like to avoid volatility. Guardians are cautious people who are trying to preserve their wealth. They are not interested in volatility or excitement and are very loyal to their advisers. Straight arrow investors do not fall into any of the personality extremes.

The second element deals with whether the investor is methodical, careful and analytical in his approach to life or whether he is emotional, intuitive and impetuous. These two elements can be thought of as two 'axes' of individual psychology.
He states that many times, risk is just a function of an individual's peculiar perception. In conclusion, he is of the opinion that typical individual investor tends to be very careful, thoughtful, risk-averse or loss-averse people, lacking the confidence or perhaps the time to do it themselves.

Marilyn Mac Gruder Barnewall (1987)\textsuperscript{22} discusses the use of psychographies and the psychological motivation of the affluent investor. The affluent market is basically made up of active and passive investors. Passive investors are defined as those who have acquired their wealth passively, for e.g., by inheritance or by risking the acquired (ancestral) capital rather than risking their own capital to achieve their wealth. Passive investors have a higher need for security than they have tolerance for risk.

Active investors are those individuals who have earned their own wealth in their own lifetimes. They have been actively involved in wealth creation and have risked their own capital in achieving their wealth objectives. Active investors have a higher tolerance for risk than they have a need for security. Related to their high risk tolerance is the fact that active investors prefer to maintain control of their own investments.

Active and passive investors have distinctly different personality traits and have different perceptions of risk. Passive investors are income motivated and will use their income to purchase a consumer lifestyle. They are willing to take risks with less than 50 percent of their investment capital only after their

consumers lifestyle is secured. Active investors will pay a short-term penalty in consumer lifestyle to achieve their financial objectives. They are more concerned with self approval than group approval. They have a strong need to control their own destinies and they do not like investment products that are controlled by others because they perceive investments they cannot control as highly risky.

He also came out with 12 general attitudes towards investing that are common to various occupational groups. For instance, he states that certain groups like corporate executives, lawyers, large regional firms, non surgeons, small business owners who inherited rather than started the business are more concerned with gaining income from relatively secure sources rather than earning profits when profits require individuals to leverage themselves in any way.

William G. Droms (1987) states that the answer to the question of measuring the risk capacity of the individual investor is still not known. But he suggests a three step approach to the problem of dealing with risk management for individuals. The first step, he says, is to carefully define risk for individuals. It is important for individuals to understand that risk cannot be avoided and the real choice is to decide the categories of risk to which he is willing to expose his portfolio and try to understand the return implications of the chosen portfolio. The second step is to make the connection between historical risk and return and the outlook for future risk / return relationship.

The choice of the quality and quantity of risk to which the portfolio will be exposed has very clear implications for the expected rate of return. The third steps deals with bringing risk and return together to make asset allocation decisions for individual investors.

Owen M. Quattlebaum (1987)\(^{24}\) shares his views about the risk capacity of the individual investor. According to him the real individual investor is more fragile and has a much higher risk profile. This rotation of fragility suggests that actual loss potential is a much more relevant notion for individuals. In addition, he suggests that the volatility of the individual's non-investment economic activity (namely, his job) has to be a major consideration. The probability of loss of income from an individual's occupation has important implications for the risk he or she can afford to take with invested assets.

A recent survey of probability choices for individuals focussing on risk and return, reported by Commin and Torsky (1987)\(^{25}\), shows that three-quarters of those surveyed reacted principally to avoid loss. The article concludes that losses loom larger than gains in individual psychology. That is to say, individuals are not risk averse, they are loss averse.

A Michael Lipper and Maureen J. Brisby (1987)\(^{26}\) trace the origin of the securities market to the individuals who owned their own business and created


\(^{25}\) Commin and Torsky. 'Decisions, Decisions'. Discover June 1985 p.22

securities markets to trade or to offer an interest in their business to somebody else. They thus emphasis that the individual investors were the original investors. They totally agree with the view that people are loss averse instead of risk averse. But, it is loss based on their perceptions. One of the real problems in dealing with individual investors seem to be that they do not understand or accept total reinvested return, and one of the very real risks in fixed income securities is that individuals spend the substantial income that they are earning. It is hence important to communicate properly with them about the hard facts.

STUDIES ON RISK

Richard B. Roxs (1988)\(^{27}\) has defined risk as the chance that the investor will not achieve the terminal amount necessary at the time required. Risk, according to him is really not a question of objectivity - for most people, it is an emotional question.

Lisa R. Weirs (1988)\(^{28}\) differentiated between actual risk (based on the investment profile) and perceived risk (based on the individuals comfort level) which may be diametrically opposed to each other. It is essential to reconcile the differences between an individuals actual and perceived risk for establishing appropriate investment objectives.


Theorists such as Fisher (1986)\textsuperscript{29} and Markovitz (1959)\textsuperscript{30} have argued that the variance of returns on an investment should be considered as an investment criterion in addition to the mean or expected return. High variance is typically equated with high risk. Does variance influence the perceived attractiveness of a gamble? Subjects in several psychological experiments have exhibited what seemed to be strong preferences for playing high or low variance gambles.

Studies by Slovic and Liechtenstein (1968)\textsuperscript{31} suggests that the subjects in these experiments were choosing rules such as "minimise possible loss" or "maximise possible gain" rather than having their preferences on variance per se - variance appears to have correlated with the preferences only because it also correlated with the other strategies.

Slovic (1967)\textsuperscript{32} found that perceived risk was not a function of the vagaries of a gamble. Instead, riskiness was more likely to be determined by the probability of loss and the amount of loss.


J.H. Lorie (1996)\textsuperscript{33} is of the view that it is absurd to call a stock risky because it went up much faster than the market in some years and only as fast as in other years, while a security that never varies in price is not risky at all, if variance is used to define risk.

Quattlebaum (1987)\textsuperscript{34} identified that each individual reacts to risk as an individual with his assets. He found that, "most individuals react uneconomically to risk when they are left to their own devices".

According to Wharton survey, (1978)\textsuperscript{35} when purchasing stock, 82 percent of all stock holders, "customarily evaluate the degree of risk involved as well as the amount or percent of profit they expect". The three most commonly used measures of risk were: earnings volatility (45.2%) price volatility (30%) and published Beta co-efficient. (17.3%).

The risk and return possibilities are vertically unconstrained for individuals, thereby clearing a unique investing situation. To the individual investor, there is available the entire risk spectrum of investment assets again from essentially risk free assets such as short term government fixed income securities to riskiest assets such as company stock, option contracts and commodities futures contracts. In addition, the individual can choose from among the entire spectrum of investment strategies. Unlike other investors, he


can invest all his net worth in a portfolio of risky assets plus borrowing on margin and investing that borrowed money in risky assets. The end result is the ability of the individual, by choice of portfolio assets and investment theologies to position himself for higher expected returns and higher risk.

Individuals's risk and return preferences are being studied for quite a long time, with approaches varying with the passage of time.

William G. Droms (1987)\(^{36}\) attempted to bring risk and return together to make asset allocation decisions for individual investors. He developed a Portfolio Allocation Scoring System (PASS) that can be used as a risk - return management approach to asset allocation. PASS attempts to capture in a simple and straight forward manner the two central lessons of modern portfolio theory namely that the risk-return trade-offs does in fact exist, and that investors should diversify to reduce investment risks.

Lipper and Busby (1987)\(^{37}\) developed a questionnaire to help assess the risk tolerance and reward objectives of individuals. They used risk to trace much in the same manner of loss aversion. Their concept of risk tolerance was to build a thermometer that assesses an individual's 'temperature' for risky assets. They attempted to identify a locus of point that assesses how an individual feels about risk. The questionnaire started from being quite risk averse to higher risk tolerance levels.


Gooding (1975)\textsuperscript{38} made an attempt to quantify individual investor's perception of the difference among assets. Logically, for an investor to choose assets in regard to expected risks and returns he must first perceive differences among the assets in at least a risk-return space. He investigated whether investors actually perceive the difference among assets with a two dimensional, risk-return framework. He found that, while investor group's average stock perception were highly related to relevant risk and return measures, significant differences were found between portfolio managers and non-professional investors multidimensional perceptions. Individuals were not completely efficient in their stock perceptions. In his later study (1976)\textsuperscript{39} he further found evidence that individual investors' risk perception correlate very significantly with ex-post measures of risk.

Schlarbaum and others (1978)\textsuperscript{40} found the return - volatility estimates suggesting that the stock portfolios of the individual investor group contained relatively high risk securities. The study implied a greater appetite for risk on the part of individuals in the collection of equities they invest indirectly and one of the rationale for much direct investment may simply be to give vent to the risk preference. He also found that individual investors studied obtained returns commensurate with the award of systematic risk they assured.


In a study by J.B. Wohen and others (1987)\(^{41}\), Gallip Financial Service Monitor showed that most individual investors were neither very aggressive nor very conservative but maintain middle of the road attitude towards risk. Study findings of this nature are highly responsive to the investor’s most recent experience. That is, following periods of poor capital market performance, investor tend to become more conservative. Conversely, they become more risk oriented when returns have been favorable. A study by the New York Stock Exchange showed that 49 percent of stock holders build only one common stock in their portfolio and another 20% only two. 22 % of shareholders studied held between three and seven issues, while only 9% held eight or more. Thus 91% of all the individual investors surveyed had portfolios of less than eight separate issues, making the portfolios subsequently more risky than warranted.

Markese (1985)\(^{42}\) with a random sample of individual investors made an empirical investigation into the relationship of individual investor portfolio decisions and attitude towards such factors as risk, diversification and market efficiency. He found the individual investor having a relatively strong preference for risk, seeking growth rather than income opportunities and perceiving some market ineffectiveness to exit. The relationship of risk preferences and investment electives are rational and support the investor belarcious assumptions underlying financial models.

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INFLUENCE OF INVESTOR'S PERSONAL CHARACTERISTICS ON RISK TAKING

AGE AND RISK TAKING

The theoretical relationship between age and investment in risky assets is not clear. Appealing to arguments similar to the law of large numbers, it is plausible that individuals who have longer horizons should invest more of their wealth in risky assets because the long run average of their portfolio returns will have a lower variance than the average return for individuals with shorter horizons.

Milne (1983) portrayed individuals's risk and return preferences in terms of the stages of their life cycle. He described individuals by the stage of their life time or career where they are currently located.

Fig : 2.2 RISK-RETURN POSITION OF INDIVIDUALS
AT VARIOUS LIFE CYCLE STAGES

* A (Early Career)

B (Mid Career)

C (Late Career)


The first stage is the early career situation. The individual has a very long term horizon with a potentially growing stream of discretionary income: he can undertake high return, high risk capital gain oriented investments. ‘A’ point of Fig.2.2 is the approximate risk return trade off for the early career person. The middle stage is the mid-career individual. A basic investment programme has been established. The time horizon is still relatively long and capital preservation is also important. The investor can continue to undertake high risk high return investments and reap the growth and capital gain benefits therefrom, but may wish to reduce the overall risk exposure involved. This individual is located at point ‘B’ in the figure. The final phase is late career where the individual’s time horizon has diminished and income needs - in terms of size and stability - have risen. The investor's portfolio is typically shifted to significantly lower return, lower risk assets with large dividend or interest components and relatively secure asset values. The investor moves to point ‘C’. However, exactly where each investor fixes his risk-return trade off at various life cycle stages depends on individual circumstances and individual risk taking attitudes. In effect, an individuals' risk tolerance is unique and subject to changes influenced by the investor's wealth position, health, family situation, age and temperament.

The division of individual’s portfolios between risky and riskless asset has been the subject of a large volume of theoretical and empirical literature. Although behaviour toward risk is at the heart of modern finance theory, unresolved issues continue. Should an individual maintain a constant portion of his portfolio wealth in risky assets regardless of his age? The answers to this are at best unclear and often contradictory. One side of the argument,
notably economic theory, suggests that given certain assumptions an individual should maintain a constant proportion of risky assets in his portfolio. The other side of the argument is that an individual should decrease his exposure to risk as he ages.

It is these types of arguments that are pervasive in the financial sector. An advisory column in the Wall Street Journal (1993) points out, "Because stocks perform handsomely over long periods, financial advisors usually suggest putting a large chunk of retirement portfolio into the stock market. The more years you have to go until retirement the bigger the chunk should be .... Younger investors may not have much money. But they have one big advantage: time". While the above argument may appear sensible, Samuelson (1969) shows that under the assumptions of time additive and separable utility, identically and independently distributed returns and competitive markets, individuals with constant relative risk aversion should not alter their portfolio as their investment horizon changes.

In contrast, Arrow (1971) argues for theoretical reasons that relative risk aversion increase with wealth. Since wealth increases with age, Arrow's argument suggests that older individuals will invest smaller fraction of their wealth in risky assets as a by-product of the correlation between age and

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wealth. Thus, older individuals should place larger fractions of their portfolios in safe assets as they age.

Samuelson (1987) suggests older individuals rationally reduce their risk exposure because they need to ensure that their savings provide sufficient means to satisfy levels of minimum consumption.

Bodie and others (1992), suggests younger individuals will act in a manner that is consistent with lower risk aversion because, they have more flexibility about their labour-leisure decisions. This flexibility allows young individuals to increase their input to compensate for any losses from holding risky assets. Samuelson (1991) suggests mean reversion in assets return leads to greater risk taking by those who have longer horizons.

Friend and Blume (1975) in a study using 1862 Survey of Financial Characteristics of Consumers found that constant relative risk aversion is a fairly accurate description of investor behaviour, although this conclusion hinges upon the definition of risky and riskless assets. Given the increase in wealth over an individual’s life time, increasing risk aversion suggests that

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older individuals will most likely have higher risk aversion than younger people. They concluded that constant relative risk aversion characterized household behaviour.

Morin and Suarez (1983)\textsuperscript{51} in a cross sectional study of 14,034 Canadian households surveyed in 1969 found evidence of increasing risk aversion with age although the households appear to become less risk averse as their wealth increases. Yoo (1994)\textsuperscript{52} found the pattern exhibited in his study contradicted most of the empirical literature and also to dispute the hypothesis put forth by Bodie et.al. Their models predict that holdings of risky assets should diminish uniformly over an individual’s life time. However, Yoo found that the change is not uniform, moreover individuals appear to increase their investment in risky assets throughout their working life time, and decrease their risk exposure once they retire.

Lewellen and others (1977)\textsuperscript{53} while identifying the systematic patterns of investment behaviour exhibited by individuals found age and expressed risk taking propensities to be inversely related with major shifts taking place at age 55 and beyond.


\textsuperscript{52} Peter.S.Yoo. Age Dependent Portfolio Selection. St. Louis : Federal Reserve Bank of St. Louis 1994).

\textsuperscript{53} W.G.Lewellen et.al. 1977. op.cit. p.309.
RISK TAKING AND PERSONALITY TRAITS

Is willingness to take risk a stable personality trait? An understanding of risk taking propensity as a personality characteristic could prove valuable in the selection of portfolio managers, investment counsellors or brokers. It would also help to understand the individual investor better. Although knowledge of the dynamics of risk taking is still limited, there is one important aspect that has been fairly researched - that dealing with the stability of a person's characteristic - risk taking preferences as he moves from situation to situation. Typically, a subject is tested (1972)\textsuperscript{54} in a variety of risk taking tasks involving problem solving, athletic, social, vocational and pure gambling situations. The results of close to a dozen such studies indicate little correlation, from one setting to another, in a person's preferred level of risk-taking. The majority of evidence argues against the existence of risk taking propensity as a generalised characteristic of individuals. Evidence of the individual's risk taking propensity gleaned from other forms of behaviour is unlikely to predict how he would behave in an investment situation.

McInish (1982)\textsuperscript{55} empirically related a specific personality characteristic, "locus of control" to portfolio risk as measured by beta. Locus of control\textsuperscript{68} (1975) concerns whether an individual sees rewards as contingent upon his own behaviour (internal control) or as the result of luck, chance, fate as under the control of powerful others, or as unpredictable because of the


great complexity of the forces surrounding him (external control). The results indicated that female investors were significantly more external than male investors. Further he found, there appeared to be a slight tendency for high externals to hold more risky stocks. Age, assets and value of common stocks held were found to be significant determinants of risk level.

DISCLOSURE OF INFORMATION

Raffi J. Indjejikian 56 examined how investor ability or sophistication in interpreting accounting information affects firm disclosure decisions. The objective of their study was to determine whether less sophisticated investors prefer the availability of more or better quality information useful for trading in a securities market. Availability of information is established as a result of a management is established as a result of a managerial decision to release information about the value of a firm intended to benefit all investors. If investors benefit from trading without information, then no information is disclosed. In contrast, when information is valuable, it is made available to all investors, who limited by their resources or ability to interpret the information, independently decide how much of the information they are able to use. Both the amount of information as well as the extent to which investors use it is determined ingeniously in equilibrium. For equilibria characterized by the presence of information, changes in the amount of information disclosed in response to changes in the economy are investigation. In particular, it was

found that the amount of information disclosed increases as investors become less sophisticated and decreases as investors prior beliefs about the value of the firm become more diffuse and as price as a source of information becomes less useful.

The issue of voluntary disclosure of information by firms with heterogeneous shareholders was examined by Kim. It shows that in a rational expectations setting, better informed shareholders prefer less disclosure than well-informed shareholders. This is due to differences in the adverse risk-showing effect and the beneficial cost-saving effect of disclosure among shareholders with different risk tolerances and information acquisition cost functions.

The social value of public information in a pure exchange economy under different types of markets and utility functions was examined by Jeffery. A model with time-independent utility functions and complete capital markets is a common one in the financial literature. The dissemination of information may affect consumption decisions and, hence, may have social value when either capital markets are incomplete or utility function are time-dependent.

Disclosure of information about firms has been governed by disclosure rules watched by governmental agencies and the accounting profession's self-regulatory bodies. Although no complete and accepted theory justifying

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regulation of firm's information dissemination activities is available, there is an implicit assumption that voluntary mechanisms fail in producing desirable quantities or qualities of information about firms. The issue of a mandatory versus voluntary disclosure system was examined by the Security and Exchange Commission's Advisory Committee on Corporate Disclosure. In their Report (November 1977) they conclude that, "the present system (of required disclosure) should continue and... market forces alone are insufficient to cause all material information to be disclosed."  

Stephen H. Penman assesses the ability of markets to convey information about firms to investors. He addresses two specific issues do earnings forecasts published voluntarily convey information to investors about the firms that publish them and do investors receive forecast information potentially available from all firms? The first issue is referred to as the "information content issue" and the second as "full disclosure issue".

With reference to the information content issue, the results of the $T^2$ best indicate that corporate earnings forecast, on average, possesses information relevant to the valuation of firms and hence to investors' decisions. By explicit conditioning the forecast variable on the annual earnings announcement for the prior year, the tests also indicate there is information available in forecasts.


STUDIES ON REGULATION OF CAPITAL MARKET

The impact of the evolution and development of money and capital markets on the market for real goods and services is similar to the reduction of costs on trade or exchange across space. Unlike the market for real goods and services market for capital and finance are inherently imperfect with problems of high transaction costs and asymmetric information so that incomplete contracts of credit transactions are widely prevalent (Bhatt (1995)\textsuperscript{61}). This is so because the agents or participants in the complex financial transaction are unknown to each other and possibilities of opportunistic behaviour are rampant. A primary pre-condition for effective and smooth functioning of the capital market is therefore trust and confidence among market participants. The general environment is re-inverted by an effective and enforceable regulatory (legal) institutions framework. If the participants - the issuers of equity and buyers of equity had to resort to legal safeguards as a major part of their dealings then the transaction costs would be astronomical. Without enforceable legal sanctions, the degree of risk in financial transactions would be inordinately high, thus the institutional framework of a strong (not rigid) and effective regulatory authority is essential.

Stigler (1964)\textsuperscript{62} kindled academic interest in financial regulation when he questioned the sanctity of the Cohen Report of the Special Study Group of the SEC. The object of Stigler's paper was to study specifically (i) how the


Cohen Report Shows an existing practice to be defective or inadequate and (ii) how do the changes recommended a) improve the situation and b) are in some sense superior to any alternative proposals. In order to reduce cases of fraud and transgression perpetuated by security dealers or their assistants the Cohen Report recommended:

i. That all brokers must be compelled to join self-regulatory agencies like the North American Association of Stock Dealers (NASD).

ii. Entrants should have a good character, persons with a history of involvement in embezzlement, fraud, or theft should be banned from the securities market.

iii. All prospective entrants must pass certain examination and undertake training. Stigler questioned all these suggestions saying, incompetence cannot be justification for barring entry. This point was debated upon by a number of writers and Stigler (1964b) contested them in a rebuttal. These recommendations were based on findings of disciplinary actions taken by SEC. He doubted the veracity of the statistical analysis for more severe screening of new entrants.

Subsequently considerable discussion ensued through out the seventies. The two participants in this discussion were Robbins and Friend. The focus at that point of time being rationale and relevance of regulation. Whether the

government was an appropriate agent for regulating the securities market was also debated.

In the process of its development, capital markets have undergone phases of prosperity, popularity and disruptive shocks and dissolution. Looking back in time, the stock markets have experienced crashes like the Dutch Tulip Mania (1636-67), the South Sea Bubble in England (1720), the Mississippi Bubble in Paris (1719-20), the Share Mania (1860-65) in India, the Wall Street Crash of 1929 and recently the 1987 crash the world over. The likely causes of these events continue to be debated even today.

These events indicate that the securities market are inherently prone to failures and the absence of any mechanism for stability can cause severe hardships to investors and consequently lead to misallocation of resources in the economy. The first tangible step taken by the US Government to prevent recurrence of crashes was the enactment of the Securities Act 1933 and the Securities and Exchange Commission Act of 1934 after the Crash of 1929. These Acts are landmarks in the history of financial regulation. In the course of the evolution of financial literature the rationale and relevance of regulation stand as the corner stone of the entire edifice in this literature.

Stigler suggested that a test for efficiency should be undertaken, to examine whether a proposed policy serves its goal, by observing how investors fared before and after the SEC was given control over the registration of new issues (similar to listing of issues in India). To examine if SEC's regulatory policy has, had any positive effect on the market for securities and its participants, he carried out an empirical exercise. Taking a sample of all new
issues of common stock (excluding preference shares) exceeding $2.5 million listed in the NYSE in 1923-28 prior to enactment of the SEC Act, and new issues of common stock exceeding $5 million in 1949-55 he examined their performance. He used price relatives $p^t/p^0$ deflated by the market index, for both time periods, to measure the absolute difference in their performance. Stigler's findings revealed that variance of the price ratios was much larger in the 1920s than in the later period. This implied that investors fared better in the later period (post-SEC phase). This result was puzzling to him, as he had conveyed that market was adequately efficient by itself, and SEC's role was unwarranted. Stigler abhorred the idea of protecting the innocent but "avaricious" investor. The objective of "increasing the portion of truth" through disclosure requirements appeared to be trivial to him. In fact the exercise revealed that the impact of SEC was positive.

Friend and Herman (1964-71)\textsuperscript{64} observed that the prices of shares issued after the establishment of SEC performed better than those shares which were issued pre-SEC era due to the lower level of volatility. The investor of the shares issued after the SEC were better off than those who invested in the shares before SEC came into existence.

This was interpreted as a result consistent with the "theoretical expectation of effects of improved information and a reduction of manipulative activity. Friend and Herman cited Ibbotson's (1973)\textsuperscript{65} findings of post issue


registered underwritten common stocks during 1960-69 over a five year period, which revealed the "Virtual disappearance in the post-SEC period of the inferior performance of new issues". Friend (1979) cited May (1971)\textsuperscript{66} and Martin (1971)\textsuperscript{67} as empirical evidence to support the decision relevance of accounting annual report data for investment decisions. "In our view, this evidence is complementary to evidence provided by existing studies examining various aspects of accounting information utility". "Finally we consider legislation to increase scope and amount of reported data as potentially beneficial to investors based on the ability of current information to explain investor's expectations."\textsuperscript{68} He cites Miller and Scholes (1971)\textsuperscript{69}, Jensen (1972)\textsuperscript{70} and Fama and Macbeth (1973)\textsuperscript{71} to indicate that empirical investigations are consistent with Capital Asset Pricing Theory. That means the beta of an individual stock, if it could be accurately measured was the only relevant measure of its risks.


\textsuperscript{68} Friend Irwin, 1979, op.cit.


Subsequently, Robins and Werner (1964)\textsuperscript{72} wrote on similar lines, emphasizing the need for expanding the SEC's activities, especially in collection of essential market data and revitalizing SEC's staff function.

The eighties were a decade of regulatory reforms with increasing reliance on prudential norms to promote fairness and transparency, and an important role was played by the government in macro economic and allocative regulation for greater stability (Vittas 1992).\textsuperscript{73} This development is due to the realization that asymmetric information is widespread in capital markets and it causes moral hazard, adverse selection and free rider problems leading to market failure. Consequently the role of the regulator is essential, at least to ensure allocative efficiency. In the present day world cross broader capital flows and greater integration with the global economy pose serious challenges to the regulator especially in the emerging markets. The question that needs to be examined is how far the regulatory authorities entrusted with the function of ensuring transparency, as well as smooth and efficient working of the system have attained their objectives. It is reasonable that a capital market may be considered allocatively efficient, if investors are sufficiently conscious and aware of investment opportunities and reflect their confidence in the capital market by diverting their investible funds away from other avenues to the capital market.


Interest in the emerging markets have grown since the nineties as regulatory reforms and liberalization of some developing countries permitted larger cross border capital flows. Kunt (1992) and others studied the growth of the stock market in emerging markets and their risk return ratios (potential) vis-a-vis those of developed countries. In order to earn higher returns many fund managers and pension funds invested in emerging markets. This stimulated greater interest in these markets. What needs to be emphasized is that in spite of greater flow of capital (especially in portfolio funds) into these markets, information levels are not up to the standards of the developed economies. The questions that bother the investor in these markets are: (i) what restrictions exist on capital movement ? (ii) are the information available, reliable ? (iii) do companies publish comprehensive information ? (iv) are accounting standards adequate ? (v) what is the state of investor protection? (vi) does a regulatory commission for issue and exchange of securities exist in the country? Most current literature on emerging markets are concerned with these questions. Kunt and Levine (1995) have examined these questions and prepared an index for institutional and regulatory indicator of stock markets of forty one countries.

Friend (1972) mooted the concept of market efficiency based on the rate at which participants reacted to information and the speed with which

information was transferred. One of the questions raised by Friend was how to distinguish between information and misinformation. In evolving the concept of market efficiency hypothesis Friend (1972) attempted to define "market efficiency" along two basic lines namely allocational efficiency and operational efficiency. Testing for allocational efficiency he cited the empirical work of Friend and Longstreet (1967)\(^7\) where risky new issues are relatively overpriced and were not good long-run investments for risk averse investors. Yet the comparative overpricing of new issues came down after the World War II implying improved allocative efficiency in the market associated with Federal Securities legislation in the 1930s. Their study showed that security analysts made poor forecasts of future anticipated earnings. This finding belied the view of many that the stock market possess a high degree of allocational efficiency. For operational efficiency, regulation had stimulated competition in the new issues market but not in the exchanges (Friend 1969)\(^8\).

The ensuing debate on the efficacy of regulation in the securities market continued when Benston (1973)\(^9\) reiterated Stigler's view that empirical evidence does not support the need for regulation, nor the Securities Act 1933 and Securities and Exchange Act of 1934.


Friend and Westerfield (1975)\textsuperscript{60} argued that Benston's earlier empirical analysis (1963), (1967) and (1969) of cross sectional regression in the changes in stock prices (corrected for market movements) to unexpected announcements of financial variables (net cash flow, operating income, net sales etc.,) in fact supports the beneficial effects of regulation contrary to Benston's opinion. The main focus is disclosure vs nondisclosure.

Friend (1979)\textsuperscript{61} championed the cause for regulation through greater disclosure in the securities market ever since Stigler (1964) questioned the Cohen Report recommendations. He said that there were two basic aims of the original legislation namely, "the protection of investors and the promotion of the broader public interest. The first aim had an equity orientation and the second an economic one". These two aims were to be achieved largely by policies designed to require full disclosure of material facts on securities sold in the primary market and the secondary market so that it would prevent manipulation of securities prices, curb unfair trade practices, maintain orderly and liquid markets, and control excessive use of credit. Friend emphasised that the evidence that fuller disclosure had benefitted the market for new issues to be quite strong.

He pointed out that the stock market can effect the economy in basically two ways (a) by affecting the national income through their influence in aggregate propensities to consume, save and to invest, and (b) given the level


of savings and investment market arrangements can affect the allocation efficiency. He noted that a highly volatile stock market could reduce investment by raising the cost of capital to firms, so a less volatile stock market might stimulate higher levels of investment and reduce business cycles fluctuations. The rudimentary ideas of efficient market hypothesis crystallised through the following questions:

Firstly, can the market in some fashion reflect all available information which leads to a corollary and can information be distinguished from misinformation. Secondly is a market in which prices fully reflect the scanty information available as efficient as a market in which much more information is available and reflected in stock prices. Thirdly is the efficiency of the market "Independent of the cost incurred?" Increased allocational efficiency can be expected from improved disclosure. He believes it would also raise operational efficiency as a result of greater public knowledge concerning underwriting and other transaction costs and the reduction in cost of private expenses of investigation facilitated by the required disclosure.

Kane (1986)\textsuperscript{82} examined the problem of technology and regulation in a theoretical framework. Unlike the sixties and the seventies rationale for regulation is not the issue. By now, the stock market's inherent problems of instability, lack of transparency and the havoc it can create in the economy, shattering the confidence of the investors and producers alike, were widely recognised. That the market was not robust enough to allocate resources

optimally due to its weakness was no longer disputed. Hence the role of the
government or a self-regulatory organisation was an accepted reality. The
question that Kane addressed was the regulatory lag in responding to
technological opportunities was longer for governments than self-regulators.
His contention is founded on the Economic Theory of Regulation (ET) which by
the 80s had become well accepted. The ET propounds that the regulators policy
decisions are based on the incentive procured from the regulated, so that
government regulators are reactive while self-regulatory organisations are
proactive. This being due to the critical differences in the objective function
and constraints under which government and private entities work.

In the nineties it is found that the regulatory literature is concentrated
on the regulation of banks and related activities. This could be partly due to
the evolution of universal banks as found in Germany. These banks perform
both banking activity as well as stock booking. Universal banks have large
stakes in the capital market and operating as principals instead of mutual
funds. This trend can have serious repercussions in the financial sector of
countries pursuing universal banking and also effect international capital
flows, unless prudential guidelines and margin requirements are adhered to.

Vittas (1992)\textsuperscript{3} points out major and fundamental changes in the "scope
and orientation of financial regulation". Governments both in developed and
developing countries have embarked on rewriting the "rules of the games" that
govern financial institutions and markets. While in developed countries there
is a growing integration of the banking and securities business culminating in

\textsuperscript{3} Vittas, Dimitri. op.cit
universal banks, developing countries on the other hand are finding state
owned banks facing challenges from a more active securities market and the
evolving of the non-banking financial intermediaries. Whether a financial
system is dominated by universal banks or state owned banks the essential
ingredient that moulds the functioning and efficiency of financial institutions
is the stance of the macro economic policy.

Vittas and Long (1992)\textsuperscript{64} suggested three criteria for evaluating
regulation and structure which are: stability, efficiency and fairness. Key and
Scott (1991)\textsuperscript{65} developed a banking matrix that lists four policy goals of
regulation promoting competitive markets, ensuring safety and soundness,
avoiding systematic risk and providing consumer protection. These are rather
similar to three criteria suggested by Vittas and Long. They noted that the
main rationale for financial regulation is the existence of market failure
arising from externalities, market power and information problems. (Kay and
Vickers 1988)\textsuperscript{66}. But Vittas (1992) emphasised market failure is a necessary
but not sufficient condition for regulation. The other condition is that
regulation can correct market failure in an effective and efficient manner.
Much of the debate alternative theories is about the cost effectiveness rather
than the rationale. He classified financial regulation objectives into six types:
macro economic, allocative, structural, prudential, organisational, and

Regulation : Changing the Rules of the Game, EDI Development Studies World Bank,

\textsuperscript{65} Key, S.J. and Scott, H.S. "International Trade in Banking Services - A conceptual Framework,

protective. In contrast to macro economic and allocative controls, prudential, organisational and protective controls are necessary because problems of imprudence, fraudulence, moral hazard, adverse selection and free rider problems are endemic to financial system. The main policy issue is how to devise effective measures without undermining competition.

INDIAN STUDIES ON INDIVIDUAL INVESTORS

Indian studies on investors were mostly confined to share ownership except very few studies which attempts to look into some other aspects also.

The first attempt in this direction was a survey of ownership of shares in joint stock companies and of government securities made towards the close of 1954 by the Reserve Bank of India (1955). It was found that 91.5% of the share holding was accounted by salaried persons.

RBI conducted another survey in 1962 and it was found that of the total number of assesses deriving income from dividend, 87% of them were individual investors and the balance by others.

The Reserve Bank of India conducted its survey of ownership of shares at the end of 1959, 1965 and 1978. The 1959 study found that the number of individual shareholders accounted for 98.9% of total number of shareholders.

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and in value they held 52.05%. The holdings at 52% in India compared well with 55% reported in UK and 51% in USA. The 1965 survey found the value of individual shareholders' ownership to decline to 45.6%. The study also found that share holdings up to Rs.50,000 of paid up value of ordinary share capital was held mostly by individuals (around 92%) and share holdings exceeding Rs.50,000 were comparatively small and insignificant. The pattern of ownership in favour of large financial institutions, was comparable to the secular trends observed in the studies in U.K. and U.S.A.

The study conducted in 1978 for the first time collected data on occupation-wise classification of individual shareholders. The largest number of shareholders constituting 99.3 percent of the total shareholders and 37.6 percent of the paid-up value of the share holdings were held by individuals. Further, high degree of concentration in the hands of few shareholders was the striking feature of the ownership pattern. Occupation-wise, one-third of the individual share holdings was contributed by professionals and self-employed; salaried and those engaged in the household work, each accounted a little less than one fifth of the total individual holdings.

The survey of senior executives of financial institutions by Hindustan Thompson Associates (1978) found both merchant bankers and financial institutions feeling that the occupation of the investor had little relevance to equity market and agreed that the single most important influence on an investor's decision to be the stock broker.

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A later survey by the same group (1980)\textsuperscript{91} found that portfolio value increases equity acquiring an edge over other forces of investments.

A study conducted by IDBI (1985)\textsuperscript{92} found 43.8 percent of shares to be held by individuals. The 1986 study\textsuperscript{93} found 36 percent of total equity to be held by individuals.

The shareholders' geographical distribution survey conducted by ICICI\textsuperscript{94} (1987) found metropolitan cities to account for 58.7 percent of the country's share holding population, Bombay alone accounting for 35.3 percentage. The study estimated a shareholding population of around 3 million as of 1983-84, the rural share to be regular.

L.C. Gupta again conducted a survey in 1991\textsuperscript{95} enquiring into several aspects of individual investors. Some of the interesting findings of this survey were as follows:

The typical share owner is from the educated middle class households with median income of about Rs.62,000 per annum. Share investment has moved up considerably in the preference scale of educated middle class investors in India. The incidence of share ownership among salaried is slightly

\begin{itemize}
\item \textsuperscript{91} H.T. Association. Ibid.
\item \textsuperscript{92} IDBI Ownership Pattern of Shares and Debentures of IDBI Assisted Companies as the 1982 - Monograph. Bombay : IDBI 1985
\item \textsuperscript{93} Bombay Stock Exchange, 1993, Op.cit pp.11-12.
\item \textsuperscript{95} L.C. Gupta The Indian Share Owners - A Survey. Delhi Manas Publications, 1991.
\end{itemize}
less than that of self-employed. Within the salaried corporate sector employees, employees of banks and financial institutions had the highest incidence. Among self-employed, those in professional practice such as charactered accountants, cost accountants had the highest incidence. The incidence of share ownership increased with the level of education. Rural areas did not contribute to any significant number of share owners.

The insurance policies followed by National Savings Certificates, Bank fixed deposits and provident funds had ownership incidence of above 50 percent and public sector bonds, fixed deposits with government companies had the least incidence.

The investors rated bank fixed deposits and UTI’s schemes to be absolutely safe. The investors perceived corporate debt securities and equity as hardly different in terms of their risk. The survey also revealed that the service provided by companies and stock brokers is rated as dismal. The investors lack knowledge and experience in accounting matters, which can be considered as pre-requisites to make sound analysis of financial decisions. The ability to conceal income was the most appealing feature to a small investor while making his investment. Surprisingly, ‘returns’ does not seem to be the motivating factor for participating in the share market.

During the late 80’s, almost 85 - 90% of the participants in a typical public issue are actually small investors (defined as investors who apply for less than 200 shares (ie) of value of less than Rupees Twenty five
It is needless to emphasis that the country's capital market has expanded largely due to the small investors. As far as the size of the holding is concerned, a RBI study shows that by March 1995 about 17% of the investors account for share holdings which are less than 500 shares each.\(^{97}\)

In a recent public issue for Rs.1.62 crore of equity shares, the total number of applications was about 1,81,000. Of these 1,39,000 (76%) applications were for 100 shares. Another 10% were for 200 shares. In another company where the over-subscription was two and a half times and the total number of applications was much smaller at 54,969, the applications for 100 shares totalled 41,023 (74.63%), for 200 shares 10,714 (19.49%) and for 300 shares 1532 (2.78%). Thus the applications from small investors, (ie) those seeking 100 or 200 shares were 94.12% of the total.\(^{98}\)

Dr. Bhagwati Prasad and Subhas M.S.\(^{99}\) undertook a study in 1990-91 on 'Equity Cult - The Role of a Small Investor. Primary data was collected from small investors in a remote area like Hubli/Dharwar followed by two rounds of discussions held with experts and seasoned investors to understand the typical problems faced by small investors. The study had the following objectives:

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\(^{97}\) RBI Bulletin Feb 1998.

\(^{98}\) Bhagwati Prasad and Subhas M.S. op.cit.


i. Consolidate the small investor demographic profile in a remote place.

ii. Identify the various problems faced by the small investors in both the primary and secondary markets.

iii. To arrive at new modules for both primary and secondary markets.

iv. To collect the small investors feedback to the proposed new system.

The survey showed that many small investors find the services of the stock brokers grossly inadequate. They complain about the delay in executing orders, delay in delivery, delay in getting back the amount and then the unreliability of the brokers in the execution of orders. Investors also complain about the non availability of share application forms at some places whereas the Patel Committee feels that less than one percent of the application forms printed are put to use, the rest being wasted in the process.

The institutional framework existing in our country and it's historical background were studied to examine the evolution of stock markets, and the modes of regulation. The cross country study included USA, UK, Japan, Korea, Indonesia and Malaysia.¹⁰⁴ The regulatory systems of the developed countries and their legislative system have been studied comparison to those of developing emerging markets.

Since 1980s many countries in Latin America and South East Asia have embarked on a process of liberalisation and opening up their economies as a part of their efforts towards accelerating economic growth. Some of the South East Asian countries have experienced phenomenal growth reflecting their economic strength. They realised the need to develop capital markets for equity based finance through mobilising domestic savings and attracting international capital. Governments of these countries which had initiated liberalisation policies succeeded in their efforts to develop the capital markets and attract foreign portfolio funds and foreign direct investments into their country to further their development effort. The success is revealed in the high growth rates of GDP observed in some of these countries like Korea, Indonesia, Taiwan and Malaysia. These newly industrialised countries are known as the emerging markets and their experiences have been studied to draw lessons for India which has been a late starter.

The capital market in India dates back to the early nineteenth century and came into existence with the advent of the East India Company. The market grew sporadically along the tide and ebb of the economic fortunes of the country.

Since independence, stock markets were insulated, and rigidly controlled and regulated by the CCI. With the advent of liberalisation, the capital market underwent major changes. Prior to liberalisation in 1991 the stock markets in India were regulated by a plethora of regulations. However, in 1992 the existing institutions gave way to SEBI and it was given statutory powers.
Gokhran (1996)\textsuperscript{101} made an assessment of the reforms in the capital market in India using conceptual framework on the theory of regulation and new political economy. He used Tobin’s (1984) formal definition of financial market efficiency in terms of information arbitrage efficiency, fundamental valuation efficiency, full insurance efficiency and functional efficiency, where a perfect market does not need regulation. To assess the impact of the reforms, relevant market indicators were seen before and after a particular reform to make an evaluation. The reforms were examined from the following points of view viz., regulatory effectiveness, competitive condition, information, transaction costs and restriction of speculation. In an overall assessment it was indicated that the logical sequence of the reforms was going in the right direction beginning with consolidation of regulatory authority followed by dealing with the forces that cause market failures namely weak competition, asymmetric information and high transaction costs. The down side of the reforms were firstly a lack of fixed term of appointment for the head of SEBI leaving it vulnerable to interest groups. Secondly, persistence of non competitive market structure causing price distortions and misallocation of resources, and thirdly, lax listing requirements allowing easy entry for public issues, the latter needing a revision of listing criteria in major stock exchange.

L.C.Gupta (1996)\textsuperscript{102} makes a critical evaluation of SEBI’s effectiveness as a regulatory authority. His work address broadly four areas a) the progress and problems of assuring fairness to investors, b) the regulatory policy
