CHAPTER ONE

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INTRODUCTION

1.1. PROBLEM

Due to separation of ownership from control in corporate form of organisation coupled with market inefficiencies, the management may seek to maximise its own wealth instead of shareholders', possibly an antithesis of classical theory of firm which posits the maximisation of owners' wealth. This has given rise to a conflict in corporate governance necessiating greater corporate accountability on the part of the managers or shareholders seeking to monitor the management through stock markets. Though few management can afford to mismanage yet, in real life, hubris has its own role in perceiving the future benefits from strategic moves such as takeovers. In addition to this the stock market is also supposed to ensure efficient management of firms, but this very role has been the subject of debate in the context of hostile deals in India, America and Britain. Owing to the reasons that the shareholders have gained next to nothing from the hostile deals except reflecting empire building by management especially when the perceived synergy move turns out to be a strategic mistake. This calls for a study to empirically examine the effects of takeover decisions on shareholders' wealth expounding the myth of hubris. It seems to have two fold ramifications - one relating to the market efficiency, and other concerning the strategic moves resorted

to by the management. However, an efficient market is expected to restrain the management from such digression by activating takeover mechanism. This in turn will call for the diagnosis of the consistency of the semi-strong form of market efficiency during the takeover. The other dimension relates to the strategic moves resorted to by the management. What are the dominant underlying forces that motivate the managers to resort to this phenomenon? This has been an interesting but unexplored domain in corporate finance. Hence, the present study seeks to discern the motivations for and strategic issues involved in corporate takeover along with owners' wealth maximisation hypothesis.

1.2. RATIONALE OF THE STUDY

Takeover attempt is the result of an active interaction between the **agents** other than the existing management and the **principals** (the shareholders) of public limited companies in or outside the market for corporate control. This interaction may either facilitate or restrict the transfer of corporate control from one agent to another resulting in profit or loss to principals depending on the degree of efficiency of market.

There has been an unresolved controversy regarding the impact of takeovers on the wealth of shareholders of participating firms and the efficiency of the market for corporate control. On one extreme, it is believed that takeover increases the wealth of the shareholders of the participating firms, and

therefore, the takeovers maximise the wealth of the shareholders. On the contrary, it is believed that the takeovers are resorted to by the managers to maximise their own utilities exploiting the existing imperfections in the capital markets, and therefore, lead to reduction in the wealth of shareholders of participating firms.

Though several studies have been made using the U.S. and the U.K. data, the results regarding the takeover gains to shareholders of the target, bidder or both have been inconclusive (Roll, 1986). In India, there is no substantial empirical evidence available to justify or refute whether takeovers are in the interest of shareholders or not. The absence of empirical investigation justifies the inquiry into various dimensions of corporate takeovers. This assumes added significance in the context of liberalisation and globalisation of economy which is aimed at prizing the managerial efficiency at transnational scale.

1.3. REVIEW OF LITERATURE

Competing hypotheses have been propounded to explain the takeover decisions and to assess the market efficiency. Penrose (1959), Williamson (1964, 1970), Marris (1964), Reid (1968), Mueller (1969), and Firth (1980) reported that takeover decisions are managerial utilities maximizers. While in contrast, Manne (1965), Fama (1976), Mandelkar (1978) and Malatesta (1983) argued that these decisions are consistent with improved management hypothesis. Supplementing it

further, Jensen and Ruback (1983), Asquith (1983), and Bradley, Desai and Kim (1983) reported that these decisions were value maximizers and upheld synergy hypothesis. What follows in this section is the classified review of studies concerning the wealth maximisation of shareholders of target and bidder in both the successful and unsuccessful takeovers in the context of changing facets of theory of firm.

1.3.1. Theory of Firm and Separation of Ownership from Control

Classical theory of firm considers the profit motive as a prime mover in free enterprise system and an impetus behind the "Invisible Hand" in allocating the available surplus (Smith, 1776). It rests on the basic premise concerning human behaviour that individuals act out of the self-interest which drive them to manage the firm in such a way that will maximise the profits. Cyert (1988) noted that the firm, in its interaction with the perfectly competitive market apply this criterion in managing its business and thus to maximise its owners' profit.

The invention of corporate form of organisation was the response to cater vast unexploited potential demand for goods and services created by industrial revolutions and World war I and II, specifically, in western economies. It allowed the promoters/ managements to spread the financial risk over a large number of individuals and institutions. Consequently, it led to emergence of new corporate property rights in the form of shares, and the simultaneous market for exchanging

these rights - the market for corporate control- the stock market. These developments have their own multi-dimensional ramifications. Primarily, a disquieting feature of separation of ownership form control as these new owners of corporate property rights are not necessarily those who manage the firm. This led to a situation where managers acquired control of the resources which they did not own. Berle and Means (1933) decried this as violation of basic property rights and lamented that this would breed inefficient utilization of the social resources which is less likely to be monitored effectively due to dispersion of holdings of shares. They warned against development of such form of organisation and suggested that these organisations should be closely monitored by the Government. The problem according to Alchain (1969) was still not the dispersed shareholding as commonly perceived. It was, in his opinion, the reduced ability of the owners to revoke and reassign the power of decision making that may affect their wealth. It has provided an opportunity to the managers to maximise their own utilities than the wealth of shareholders. Such utility maximising behaviours have been variously christened as: empire building (Schumpeter, 1934), sales maximisation (Baumol, 1959), pecuniary and non-pecuniary benefits through unprofitable growth of the firm (Penrose, 1959; Marris, 1964; and Galbraith, 1967), excess staff and extra emoluments (Williamson, 1964), and job security (Fisher and Hall, 1969; and Amihud and Lev, 1981). In order to remedy this type of behaviour, the shareholders are reported to have (i) invoked proxy or takeover mechanism to replace the unwanted

management (Manne, 1965; Alchain and Demsetz, 1972; Ajit Singh, 1971); and (ii) restricted the flow of additional capital to the firm (Solow, 1971).

For invoking these remedies, the market is expected to be reasonably efficient and perfect with respect to symmetrical distribution of relevant information (Stigler, 1967). This is what the managers would not allow to happen since they are the the privileged information holders and decision makers of the firm. The asymmetric distribution of information makes it impossible for the shareholders to enforce the manager-shareholder contract and the distribution of profit in their own interest. Therefore, the managers would also try to suppress the pricing mechanism to maximise their own utilities (Coase, 1937).

1.3.2. **Agency Theory and Corporate Takeover**

In 1970s, the separation of ownership from control problem was rechristened as the principal agent problem. Extending the theory of agency relationship (Wilson, 1969; Berhold, 1971; Ross, 1973; Hekkerman, 1975); Jensen and Meckling, 1976) defines the private corporation as a firm of legal fiction which serves as a nexus for contracting relationship among the various stockholders of the corporation. They argued that the relationship between the shareholders and the managers fit the definition of pure agency relationship. They rehearsed that shareholders are simply an important constituency which claim residual ownership of cash flows of the firm entrusted to the managers of the firm. Agency

relationship is a contract (implicit or explicit) under which shareholders engage some persons as their agents to perform some services with sufficient delegation of power to do so. If both parties to the relationship are utility maximisers, the agent may not act always in the best interest of the principal. The resultant digression on account of this conflict generates agency cost.

In agency theoretical perspective, the competition among the agents to acquire the control over the corporate resources of the target firm acts as an efficient remedy to reduce the agency cost. This competition is carried out in the market for corporate control, which is essentially a securities market. The mechanism which is activated through interaction between the market and the agents to reduce the agency cost is known as takeover mechanism. How this takeover mechanism is activated? What is the nature of interaction between the market and the agents? How the competition among the agents and efficient functioning of the market are related? What is the impact of the takeover process on the wealth of the shareholders of the target and the bidder? These issues are addressed to in the following discussion.

It is quite clear that competing management, if uses only the existing resources of the target more efficiently, it creates value. Given the efficiency of the existing agent, the competing agent by combining the resources of the target with his other resources, may generate more value to the target. In both the cases, there is room for improving the wealth of

shareholders of the target (in the form of reduced agency cost or improvement in value).

If the market is assumed to be efficient then the share price of the target is expected to reflect appropriately the proportionate value of the target. This price provides the competing agent to compare its own valuation ratio with that of market valuation ratio. With the given assumptions, it will be beneficial to the competing agent to activate takeover mechanism if the valuation ratio of the agent (after adjusting the anticipated cost of control to the agent) is higher than that prevailing in the market. If the market value of the target is sufficiently low, then the agent will activate takeover mechanism to acquire the required percentage of shares of the target. This arrangement may take the form of open market purchases, tender offer to existing shareholders, negotiated deal with institutional or major shareholders or proxy contest or a combination thereof.

Once the takeover mechanism is activated publicly or privately, it tends to create abnormal disturbance in the rate of return on security of the target unless it is kept as a closely guarded secret. A typical takeover process preceded by information leakages relating to the entry of competing bidder, varied terms of offer etc. would require the market to immediately adjust the price of the target if it is efficient in its semi-strong form. Given this, the competition among the agents will push up the price to an extent where ideally there will not be any difference between

the valuation ratio of the agent and the valuation ratio of the market. Thus, efficiency of the market would ensure returns to shareholders due to the competition among the agents for corporate control.

If information concerning the takeover is released at one go, the abnormal returns generated over a period of takeover process will not be significantly different from the quantum of abnormal returns generated due to intermittent releases of information over takeover process. This implies that the difference between value of participating firms before and after the takeover process represents wealth loss/gain to shareholders of participating firms due to takeovers.

1.3.3. **Overall Effect of Takeovers**

Review of the overall effects of takeover in 40 empirical studies Jensen and Ruback (1983), concluded that

> "...corporate takeovers generate positive gains, that target firm shareholders benefit, and that bidding firm shareholders do not lose. Moreover, the gains created by corporate takeovers do not appear to come from the creation of market power...it is difficult to find managerial actions related to corporate control that harm shareholders; the exceptions are those actions that eliminate an actual or potential bidder (p.47)."

Halpern (1973), Kummer and Hoffmeister (1978), Bradley, Desai and Kim (1988), Franks and Harris (1989) also reported similar conclusion. Analysing the effects in the form of dollar returns, Malatesta (1983), Varaiya (1985) and Bradley *et al* (1988) reported overall positive abnormal returns from takeovers. While, Firth (1979), Bradley (1980; 1983), Asquith

et al (1983) reported that in long run, takeovers generated overall zero or statistically insignificant positive gains. Analysing further for the form of takeovers, all the empirical studies consistently reported that tender offers generate more abnormal returns than mergers.

1.3.4. **Successful vs Unsuccessful Takeover**

Analysis of the effects of takeovers on the basis of its outcome (success or failure) indicates that successful targets gain significant positive abnormal returns. The evidence for successful bidder is mixed one. Kummer and Hoffmeister (1978), Bradley (1980) and Jensen and Ruback (1983) reported significant positive gains, while Mandelkar (1978) reported no abnormal gains and further Langeteig (1978), Malatesta (1983) and Asquith (1983) reported negative abnormal gains. On failure of takeover attempt, unsuccessful targets while anticipating further offer experienced only marginal drop in abnormal returns relative to positive effect on announcement (Dodd and Ruback, 1977; Bradley, 1980; and DeAngelo and Rice, 1982). However, if they do not receive additional offer, they experienced significant negative abnormal returns, at times even wiping off more than what was gained during pre-event and event period (Kummer and Hoffmeister, 1978; Bradley *et al*, 1983). On the contrary, if the target receive another offer as anticipated, they earn even higher returns (Jensen and Ruback, 1983). The unsuccessful bidder is reported to have experienced negative abnormal returns.

1.3.5. **Friendly vs Hostile Takeovers**

Analysing the effects on the basis of the attitude of the targets, Kummer and Hoffmeister (1978), Warner and Long (1984), Franks, Harris and Mayer (1988), and Franks and Harris (1989) reported that on an average management opposition benefits the shareholders of target. On the contrary, Dodd (1980) observed that managerial resistance to takeovers harms the target shareholders but Haung and Walking (1987) concluded that resisted offers do not earn statistically higher returns than non-resisted ones. Bradley *et al* (1988) and Franks and Harris (1989) reported that bidder earns significantly higher returns from friendly takeovers than from hostile ones.

1.3.6. **Cross Country Studies**

The comparison of the effects of the takeovers across the nations reveals the consistency with the results of U.S. studies. In a comprehensive study of U.K. acquisitions for the period 1955-1985 with 1814 targets and 1058 bidders, Franks and Harris (1989) concluded, in sharp contrast with the results of Firth (1980), that these acquisitions have, on an average, been value creating for shareholders as measured by equity market price around the announcement date. Comparing their results with that of merger bids in the U.S. studies, they noted that

> "Shareholders of targets gain, and bidder shareholders gain or do not lose. Target shareholder gains and merger benefits appear to be higher in revised or contested bids (p.247)."

Mueller (1986) on the basis of cross-country study covering 806 mergers, reported that the bidding firms revealed no increase in expected profit for three years after the merger and

> "...the market appeared to revalue the downward in a fairly continuous manner as more and more information about the merger became available (p.182)."

He further contended that the mergers are

> "...the mechanism for eliminating bad management or for rescuing the failing firms (p.184)."

The survey of literature drives us to the conclusion that in the developed markets the target shareholders are reported to have gained while bidders shareholders did not lose. The impact of the takeovers on Indian corporate shareholders has remained enigmatic.

1.3.7. **Corporate Takeover : A Strategic Decision**

Apart from the controversies about the shareholders' wealth effect there is also an inseparable strategic dimension of corporate takeover. It considers takeover decision as a response by the management to the changing environmental conditions. These responses, at times are unique transformation of deep-rooted psychic forces in the form of justified synergistic strategic motivations. The psychic forces like, an instinct to fight and an urge to acquire power surface in a civilized form (in history they took a form of territorial war) of corporate takeover battle in the market for corporate control. Additionally, fear of being taken over and desire to remain away from obsolescence may

also trigger the takeover decision by the management. To respond to the changing environmental conditions, takeovers provide a faster and a cheaper alternative to change or expand the business *vis-a-vis* building new facilities. Mueller (1986) summarised this argument as

> "Even at a price 25% or more above the pre-takeover market values, however, on going companies can provide a quicker and higher return avenue to growth than to reinvest in one's own (p.205)".

The empirical studies have documented various strategic motives for takeovers. Takeovers are activated to:

(i) attain operational synergies (Halpern, 1973; Lubatkein, 1983), financial synergies, (Lintner, 1971; Chatterjee, 1986); and managerial economies (Mueller, 1986);

(ii) exploit valuation discrepancies (Gort, 1969); and

(iii)eliminate bad management (Manne, 1965).

Takeovers are individual decisions (Roll, 1986). Behind every takeover there is a unique set of motivations of the raider leading to the adoption of specialised strategies and tactics. In America, these motivations and therefore the strategies and tactics to takeover have undergone radical change over a period of time (Slater, 1980). In 1960s, the takeovers were synergy oriented to make two and two equal to five, on the contrary, in 1980s, companies were taken over to decompose the combined entity to get rid of the firms worth more dead than alive. Hence, the raiders during this period were *bust up* artists rather than *synergists*. Varied sets of defensive and offensive tactics have been developed with high degree of innovations and creativity like poison pill, golden

parachute, White Knight etc. This has remained unexplored dimension of corporate takeovers in India.

1.4. OBJECTIVES

The study attempts to inquire into two propositions with respect to takeovers in Indian context. They are :

(i) Whether the decisions of the managers of the public limited companies are consistent with shareholders wealth maximisation.

(ii) Whether the market behaviour is consistent with semi-strong form of its efficiency.

Given these propositions, the study seeks to

(i) measure the wealth impact of takeovers on shareholders of participating firms;

(ii) discern the pattern of market response to takeover events;

(iii) inquire into the strategies by the participating firms in the takeover game;

(iv) portray the role played by the financial institutions and the Government in the takeover process.

1.5. RESEARCH METHODOLOGY

1.5.1. Period of the Study

The study spans from January, 1988 to October, 1991 covering nearly four years. This period was quite remarkable for

Indian corporate scene and stock market on the following accounts. Firstly, the stock market saw a historical boom while entering in the year 1988; secondly, this year heralded further acceleration of liberalisation by relaxation in The Monopolies and Restrictive Trade Practices Act, 1969, Foreign Exchange Regulation Act,1973, Industrial Development and Regulation Act, 1950, constitution of Securities & Exchange Board of India (SEBI) etc., and finally, the Companies (Amendment) Act, 1988 which substantially removed the protection to the existing managements by amending the sections related to transfer of shares, inter corporate investment, and constitution of autonomous body in the form of Company Law Board to decide the cases of transfer of corporate control.

To exemplify, the triumph of the Chhabrias in one of the highly controversial hostile takeover attempt (Shaw Wallace & Company Ltd.) signalled the shift in Government's policy to encourage takeovers and its commitment to free transferability of shares in private sector companies. The successful takeover of L&T Ltd. reinforced the expectations that the financial institutions as a major shareholder would not unnecessarily block the change of control in private sector companies. All the above factors indicated 1988 as the year heralding hostile takeovers.

1.5.2. **Sample**

At the first stage, the sample companies are identified through scanning of The Economic Times and Financial Express from January, 1988 to June, 1991 (inclusive of both months). These financial newspapers have wider circulation in the corporate world and the source of public information. The basic condition for the entry of a company in the sample is that it is referred to as target in at least one of the above newspapers during the scanning period. Thus, fifty six companies were selected in this stage. For inclusion of a company in a sample for final analysis, following three conditions are required to be satisfied :

(i) It should be listed on one of the stock exchanges in India. This condition is must for obtaining the share prices.

(ii) It should not be a merger candidate.

(iii) It should not be a sick company referred to Board For Industrial and Financial Reconstruction (BIFR).

Finally, a list of 34 companies representing the sample of the study was made. These sample companies are listed in Appendix 1.1.

1.5.3. **Data Sources**

The data needed for the study relating the financial and managerial background of the companies and daily share price quotations are collected from the following sources :

(i) The Economic Times and Financial Express;

(ii) Business India, Business World;

(iii) The Official Stock Exchange Directories by the Bombay Stock Exchange;

(iv) Monthly Issues of Center for Monitoring Indian Economy (CMIE);

(v) Letter of Offer/Annual reports/Prospectus of selected companies;

(vi) Judgements of Supreme Court in selected companies from All India Reporter (AIR);

(vii) Monthly Bulletins of SEBI; and

(viii)Company News and Notes.

1.6. CONCEPTS

1.6.1. Measures for Estimation

The study uses security rate of return as a base for an analysis instead of absolute security price as suggested by Firth (1977). Normality of the distribution of security rate of return is tested by using (i)Derbin-Wattson test to ensure the absence of auto-correlation; and (ii) Goldfeild-Quandt test to ensure homoscedasticity.

1.6.2. Rate of Return

Rate of return on a security consists of capital appreciation due to changes in the prices, dividend received, and any extra-ordinary benefits during the holding period. Mathematically, it can be expressed as under :

$$R_{it} = \frac{(P_{it} - P_{it-1} + D_{it})}{P_{it-1}} + I \qquad (1.1)$$

Where,

R_{it} = Rate of return on security, i, for time period t;

P_{it} = Price of security, i, for time period t;

P_{it-1} = Price of security, i, for time period t-1;

D_{it} = Dividend income on security, i, for period t;

I = Adjustment for extra ordinary benefits for period t.

Whenever the shareholder receives any extra ordinary benefit in form of rights or bonus, value of such benefits per share is calculated and adjusted in the calculation of rate of return for a given holding period. The value of right benefit for adjustment is calculated as under :

$$I = (P - S)/(N + 1) \qquad (1.2)$$

Where,

I = The value of rights per share;

P = Cum-right per share;

S = Subscription price for getting additional share;

N = Number of shares required to get one additional share.

Similarly, benefits of bonus issues are also adjusted in a given holding period.

The study uses highest daily share prices to calculate the rate of return. This helps to capture the maximum impact of information release or leakage with respect to the event

under study. In the absence of non-normality problem, Brown and Warner (1980) contended that daily data provide more powerful results than monthly or weekly data.

1.6.3. Event Study Methodology and Abnormal Returns

Event study methodology is used to measure the impact of takeovers on shareholders' wealth and to test market efficiency following Fama, Fisher, Jensen and Ruback (1969) and Dodd and Ruback (1977). It aims at assessing the occurrence of abnormal behaviour around the event and provides a framework to measure the observed abnormality.

The abnormal return (AR_{it}) for security, i, for time, t, is defined as the difference between its actual ex-post return (R_{it}) and expected ex-post normal return ($R\tilde{}_{it}$) predicted by specified model on the basis of actual ex-ante returns on the security, i. There are two popular models for generating expected ex-post returns on security: Mean Adjusted Return Model and Market Adjusted Return Model (popularly known as Market Model). The former assumes ex-ante return on security, i remain constant, K_i, and therefore, expected ex-post expected return ($R\tilde{}_{it}$) will also equal to K_i. The abnormal return (AR_{it}) according to this model defined as the difference between actual ex-post return (R_{it}) and constant return K_i. On the contrary, Market Adjustment Return Model does not assume ex-ante returns constant on security but varies with ex-ante returns on market portfolio. The expected ex-post returns on the security are estimated from actual ex-post returns on the market portfolio, on the basis of the

definite relationship between ex-ante returns on the security and market portfolio. The expected ex-post returns thus arrived at are more accurately represent the normal rate of return, if there had been no event. This ex-post normal rate of return then used as a benchmark to identify the abnormality in actual ex-post returns. As Brown and Warner (1980) suggested, if ex-ante relationship is correctly specified, the difference between the actual ex-post return and expected ex-post return represents exactly the impact of the event. This provide more accurate estimate of the impact of the event as ex-post return in this case takes care of the influence of market wide events on return on security. Hence, the study uses Market Adjusted Return Model to generate the expected return across the securities.

The proxy for market portfolio is taken as Bombay Stock Exchange Sensitive Index (1978-79 = 100). Srinivasan (1992) suggested that the use of BSE Sensex or BSE National Index with simple and sophisticated procedures did not make a substantial difference to event study findings. The daily rate of change in BSE Sensex is taken as proxy for rate of return on the market portfolio. Mathematically, the abnormal return on security, i ,for time, t, is expressed as under :

$$R\tilde{}_{it} = a\tilde{}_i + \beta\tilde{}_i * R_{mt} + e\tilde{}_{it} \qquad (1.3)$$

Where,

$R\tilde{}_{it}$ = daily expected return on security, i, for time, t;

R_{mt} = daily expected return on market portfolio for time, t;

$a\tilde{}_i$ = constant term of the model for security, i;

$ß\sim_i$ = regression co-efficient of model for security, i;

$e\sim_{it}$ = error term of the model for security, i, for time t.

The equation (1.3) represents simple regression equation and a~ and ß~ are ordinary least square(OLS) parameters from estimation period. The expected rate of return ($R\sim_{it}$) are predicted from equation (1.3) to calculate abnormal and cumulative returns across the sample companies. Mathematically, it can be expressed as under :

$$AR\sim_{it} = R_{it} - R\sim_{it} \qquad (1.4)$$

$$CAR\sim_{it} = CAR\sim_{it-1} + AR\sim_{it} \qquad (1.5)$$

Where,

$AR\sim_{it}$ = daily abnormal return for security, i, for time, t;

$CAR\sim_{it}$ = daily cumulative abnormal return for security, i, for time, t;

$CAR\sim_{it-1}$ = daily cumulative abnormal return for security, i, for time, t-1;

R_{it} = daily actual return for security, i, for time, t;

$R\sim_{it}$ = daily expected rate of return for security,i, for time, t, derived from equation (1.3).

The reliability of the inference made from the abnormal returns are made on the basis of its statistical significance. This statistical significance is judged by the value of test statistic, *t*, the ratio of mean abnormal (or cumulative abnormal) return to its standard deviation in estimation period. The study uses 0.95 confidence coefficient

i.e., p = 0.95 and therefore at 0.05 level of significance (a = 1 - p = 0.05). Following Brown and Warner (1986), Masaulis (1980) and Dann (1981) the calculation of test statistic is adjusted for time series and cross section dependence. Accordingly, the present study calculates the test statistic for abnormal and cumulative abnormal returns. Mathematically, it is calculated as under :

$$t_{ARt} = AR_t \,/\, S\text{-}(AR) \qquad (1.6)$$

$$S\text{-}(AR) = [\ E\ (AR_t - AR\text{-}\text{-})2 \div 50\ ]^{\frac{1}{2}} \qquad (1.7)$$

$$AR\text{-}\text{-} = \tfrac{1}{50}\, E\ AR_t \qquad (1.8)$$

$$t_{CARt} = CAR_t \,/\, S\text{-}(CAR) \qquad (1.9)$$

$$S\text{-}(CAR) = [\ E\ (CAR_t - CAR\text{-}\text{-})2 \div 49\ ]^{\frac{1}{2}} \qquad (1.10)$$

$$CAR\text{-}\text{-} = \tfrac{1}{49}\ E\ CAR_t \qquad (1.11)$$

Where,

t_{ARt} = value of test statistic, t, for mean abnormal return across the securities, for day, t;

t_{CARt} = value of test statistic, t, for mean cumulative abnormal return across the securities, for day, t;

AR_t = mean abnormal return across the securities for day, t;

CAR_t = mean abnormal return across the securities for day, t;

S-(AR) = Standard deviation of mean abnormal return for estimation period *i.e.* from -50 to -1 days;

S-(CAR)= Standard deviation of mean cumulative abnormal return for estimation period *i.e.* from -50 to -1 days;

AR-- = Average of mean abnormal return for estimation period.

CAR-- = Average of mean cumulative abnormal return for estimation period.

1.6.4. **Event Date Determination**

Use of event study methodology requires identification of a particular date on which the event occurs. However, in case of takeover, the identification of exact event date poses certain difficulties. The exact event date means the date on which the news about the takeover attempt was released or leaked first time in the market. This maiden news have been normally observed in the form of incomplete and unauthorised information as a rumour spread in the market well before any formal and published announcement. Therefore, effective event date need not coincide with first public announcement date or the date on which the necessary disclosures are made public. To smoothen the takeover process the bidder may be tempted to suppress such disclosures to avoid increase in the cost of the takeover and to smoothen the successful takeover due to the following reasons.

Firstly, the leak of information about the impending takeover increases the price of the target in response to the perceived value of the target under the new management. Secondly, the leakage may induce the demand for the target shares as the market now expect that bidder would be ready to pay higher price for the shares till he gets controlling stake. This normally leads to sharp rise in share prices of target. Thirdly, the leakage may invite competitive bidders for the target which may not only reduce the chances of success but may also hike the price of the target. Fourthly, if disclosures are made in its true spirit, the bidder may be forced to make an offer to the non-controlling shareholders

to purchase their shares at a price which is offered to controlling shareholders in a negotiated deal or as decided by SEBI. This normally makes takeover costlier for the bidder. Finally, in India, the scant regard for rules relating to disclosures, ambiguous framing and loose implementation of them forces or encourages only a few bidders to make relevant disclosures in time and to be fair with non-controlling shareholders.

Due to these reasons the identification of the event date turns out to be a complicated issue. This is affirmed by Jensen and Ruback (1983) who noted that

> "....there is literally no single "event day" only a series of occurrences (disclosures) which increase or decrease the probability of outcome....(p.14)."

Malatesta (1983) found that the published announcement date was essentially an announcement of *fait accompli*. Dilating on the share price movement prior to announcement date Jenson and Ruback (1983) reported that the price adjustment occurs prior to the public announcement date. They cautioned further that

> "The expected price effects will occur on or before the first public announcement of takeover (p.10)."

Keown and Pinkerton (1981) also found that roughly half of the price adjustment occurs prior to the public announcement date. They concluded that

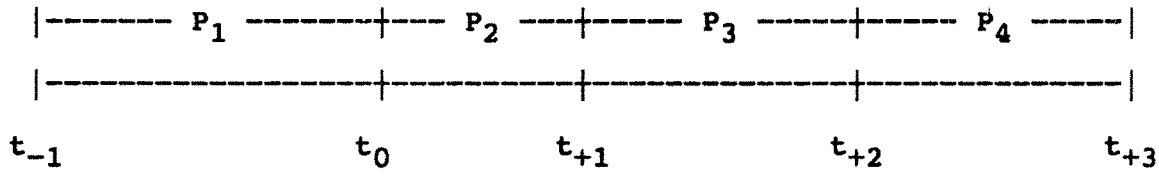
> "...impending merger announcement are poorly held secrets...(p.858)"

In India, it has been observed that an average time between perceptible rise in the share price of the target and first public reporting of takeover attempt is 36 days with standard deviation of 30 on the basis of selected takeover attempts.

Therefore, there is no option but to choose a proxy date for the event date. The event date for each company is determined on the basis of detailed examination of sample cases through graphical analysis of share price behaviour with an intent of identifying the episodic turning points.

1.6.5. **Takeover Process**

Takeover process can be divided into four parts as under, in Fig. 1.1 :



Takeover Process

Fig. 1.1

Where ,

(i) P_1, represents pre-event period, expanding from t_{-1} to t_0, characterised by normal price behaviour;

(ii) P_2, represents the event period expanding from t_0 to t_1, characterised by sharp rise in share price culminating to peak price of takeover process;

(iii) P_3, represents the interim period, expanding from t_1 to t_2, characterised by slow adjustment process according

to nature and result of takeover attempt; and

(iv) P_4, represents the post outcome period, expanding from t_2 to t_3, characterised by decline in share prices tend to settling down to normal behaviour.

The trading days before the event date are designated with minus sign (-) *i.e.* -1,-2,-3,....-50 and trading days after the event date are indicated with plus sign (+) as +1,+2,+3,...+150 days.

1.7. SCOPE OF THE STUDY

The scope of the study is delimited in the following manner :

Firstly, the study assesses only the financial effects of takeover represented by changes in share price of the participating companies. Non-economic effects of takeover process are excluded in the study owing to difficulties in measuring them mathematically.

Secondly, the study uses share price changes as a measure of takeover effect assuming that the current share price reflects all information about the future performance of the companies. The study does not use the absolute measures like profitability, market share etc. because they require longer post-takeover period for their assessment (Singh, 1971).

Thirdly, the study excludes mergers from the takeovers for the reasons that (i) a merger is essentially a mutual

agreement as the bidder is required to get the approval of more than ninety percent of the value of the target shareholders; (ii) merger disallows the assessment of managerial resistance in successful takeover attempts since it doesn't consider the hostility and therefore, negates the "charm of churning" in the takeover process; and finally, (iii) in a merger, bidder and target both disappear on successful culmination and therefore disallowing the assessment of post takeover wealth effects on the target and the bidder separately (Dodd and Ruback, 1977). Thus, inclusion of merger may underestimate the effect of transfer of corporate control.

Fourthly, on Indian corporate scene, it has been observed that often the bidder represents the group of companies or business house instead of one particular listed company. For example, when the Chhabrias or Mallyas attempt to takeover the target, it is difficult to identify them with one bidder company. Therefore, wealth effect of such takeover attempts on the bidder's shareholders would remain blurred. And if taken, it may provide only distorted picture. Therefore, in aggregate analysis the study analyses the targets only. To remove this deficiency, a case study of L&T takeover is analysed to investigate in greater depth to measure the wealth impact of successful and unsuccessful takeover attempts on the shareholders of the target as well as the bidder. Also, Roll (1986) suggested that takeovers are individual decisions which may not be generalised by collective evidences and therefore, should be studied

individually to arrive at more reliable inferences.

1.8. CHAPTER DESIGN

In addition to the chapter on introduction, the study spans over six more chapters. Chapter two provides the backdrop to the study by narrating the rise of managerial capitalism paving the way for market for corporate control. It also presents theoretical framework through takeover model explaining the interaction of retention ratio, valuation ratio and growth rate of the firm in the market.

Chapter three presents the results of analysis of shareholders' wealth maximisation and efficient market hypotheses by empirically examining cumulative abnormal returns around takeover attempts on target firms.

Chapter four investigates the effect of hubris inflicting the management by analysing cumulative abnormal returns around the major events in a case study of Larsen & Toubro Ltd. takeover which was initially successful but later ended as unsuccessful.

Chapter five is a case study of Larsen & Toubro Ltd. It highlights the role played by different market participants in shaping the strategic and tactical decisions of the target and bidder.

Chapter six discusses the pattern underlying the mosaic of

motivations and actions due to the interactions of the managers in the market for corporate control in India.

Last chapter summarises the findings of the study and offers the policy recommendations for making market for corporate control more efficient in India.