

**ACQUISITIONS IN INDIAN COMPANIES – ITS IMPACT
ON COMPANIES' PERFORMANCE AND STOCK PRICE**

Thesis

**Submitted to the Punjab Agricultural University
in partial fulfilment of the requirements
for the degree of**

**MASTER OF BUSINESS ADMINISTRATION
in
FINANCIAL MANAGEMENT
(Minor Subject : Economics)**

DUPLICATE

By

Nipun Jain

(L-2002-BS-11-MBA)

**Department of Business Management
College of Basic Sciences and Humanities
PUNJAB AGRICULTURAL UNIVERSITY
LUDHIANA - 141 004**

2004

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2004

Gift

CERTIFICATE I

This is to certify that the thesis entitled, "Acquisitions in Indian companies – Its impact on companies' performance and stock price" submitted for the degree of Master of Business Administration in the subject of Financial Management (Minor subject: Economics) of the Punjab Agricultural University, Ludhiana is a bonafide research work carried out by Nipun Jain (L-2002-BS-11-MBA) under my supervision and that no part of this thesis has been submitted for any other degree.

The assistance and help received during the course of investigation have been fully acknowledged.

Thesis

Dr. S.K. Singh
Head of the Department

Dr. Parshant Singh
Dean Post-Graduate Studies

Y.P. Sachdeva

(Dr. Y.P. Sachdeva)
21/8/04

Major Advisor

Associate Professor

Dept. of Business Management

Punjab Agricultural University

Ludhiana-141004.

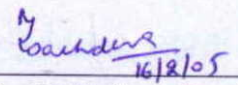
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CERTIFICATE II

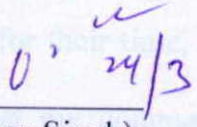
This is to certify that the thesis entitled, "Acquisitions in Indian companies – Its impact on companies' performance and stock price" submitted by Nipun Jain (L-2002-BS-11-MBA) to the Punjab Agricultural University, Ludhiana, in partial fulfillment of the requirements for the degree of Master of Business Administration in the subject of Financial Management (Minor subject: Economics) has been approved by the Student's Advisory Committee alongwith head of department after an oral examination on the same.



(Dr. S.K.Singla)
Head of the Department



(Dr. Y. P. Sachdeva)
Major Advisor



(Dr. Darshan Singh)
Dean Post-Graduate Studies

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NIPUN JAIN

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Name of the student and Admission No. : Nipun Jain
L-2002-BS-11-MBA

Major Subject : Financial Management

Minor Subject : Economics

Name and Designation Of Major Advisor : Dr. Y.P. Sachdeva
Associate Professor of Business Management

Degree to be Awarded : M.B.A.

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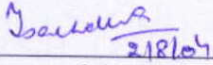
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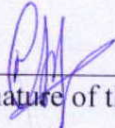
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ABSTRACT

The researcher has tried to find the impact of acquisition on the acquired companies' performance and stock price. Ratios have been calculated to measure the financial performance of the acquired companies from the period of 1998 to 2003. Analysis of ratios shows that acquisition has a positive impact on the financial performance of the acquired companies. Also post acquisition average share price for the acquired companies has been calculated and compared with pre acquisition average share price for one year. The results show that the impact of acquisition is favorable on the stock price of the acquired company and stock markets view process of acquisition as a beneficial process for the acquired company.

Keywords: Acquisition, financial performance, share price, stock markets.


Signature of the Major Advisor


Signature of the Student

CONTENTS

Chapter	Topic	Page
I	INTRODUCTION	1
II	REVIEW OF LITERATURE	8
III	RESEARCH METHODOLOGY	17
IV	RESULTS AND DISCUSSIONS	26
V	SUMMARY	52
	REFERENCES	
	APPENDIX	

CHAPTER – I

INTRODUCTION

Any business firm has a prime objective which is to have a profitable growth. This growth can be achieved internally or externally. Internal growth can be achieved either through the process of introducing or developing new products or by expanding or enlarging the capacity of existing products. External growth can be achieved externally by acquisitions of existing business firms. Also acquisition aims towards business restructuring and increasing competitiveness and shareholder value via increased efficiency. This acquisition may take any of the forms *i.e.* Absorption, Amalgamation, Merger, Takeover *etc.* Although the legal procedure involved in these are different, in view of the perspective of economic consideration these terms are used interchangeably.

An *acquisition* may be defined as an act of acquiring effective control by one company over assets of other company. It is a purchase by one company, of a substantial part of the assets or securities of another, normally for the purpose of restructuring the operations of the acquired entity. The purchase may be of a division of the target company, or of all or a substantial part of target's voting shares.

According to Substantial Acquisition of Shares and Takeovers Regulation, 1997, when an acquirer takes over the control of the "target company", it is termed as acquisition. The target company is a listed company *i.e.* its shares are listed on any stock exchange and its shares are acquired or its management control is taken over by an acquirer. By an acquirer we mean persons acting in concert (PAC) *i.e.* any individual/company/any other legal entity which intends to acquire the company.

Acquisition has different forms. Some of the broadly categorized forms are:-

- Absorption: This type of acquisition involves fusion of acquired company into to the acquiring company. After the acquisition the acquired company loses its individual identity and its stock is no longer traded in the stock exchange.
- Tender Offer: Tender offer involves making a public offer for acquiring the shares of the target company with a view to acquire management control in that company.
- Asset Acquisition: Asset acquisition involves buying the assets of another company. These assets may be tangible assets like a manufacturing unit or intangible assets like brands.

Acquisition depends upon the purpose for which the target company is acquired. A company will seek to acquire the other company only when it has arrived at its own development plan to expand its operation. Based on the reasons why companies acquire other companies, acquisition can be divided into three categories:

1. Horizontal Acquisition: When a company acquires another company dealing in similar lines of activity, it is called horizontal acquisition. The purpose of horizontal acquisition is elimination or reduction in competition, putting an end to price cutting, etc.
2. Vertical Acquisition: When a company acquires another company which is 'upstream' from it or is 'downstream' then vertical acquisition occurs. In the case of 'upstream type of acquisition' it extends to the suppliers of raw material and in the case of 'downstream' type of acquisition it extends to those companies that sell eventually to the consumer. The purpose of such acquisition is to lower buying cost of materials, to lower distribution costs, to have assured supplies and market.

3. Conglomerate Acquisition: In market contrast, conglomerate acquisition is a type of combination, in which a company established in one industry acquires a company in another unrelated industry. Such acquisition enhances the overall stability of the acquiring company and creates balance in the company's total portfolio of diverse products and production processes and thereby reduces the risk of instability in the firm's cash flows.

The concept of mergers and acquisitions in itself is very complex and involves lot of regulatory guidelines. It would be difficult to understand the issues involved in acquisitions if regulatory issues are not understood properly in detail. Some of the important regulatory issues are as follows:

- The basic regulatory issues involve making a public announcement in newspapers by acquirer primarily disclosing his intention to acquire shares of target company from existing shareholders by means of an open offer. The public announcement is made to ensure that the shareholders of the target company are aware of an exit opportunity available to them.
- Regulatory environment also makes sure that the acquisition process does not result in undue concentration of market power in the hands of acquiring company. Any such act which may result in monopoly situation, can be blocked by regulatory authority.
- Appointment of the Merchant Banker for offer process is also mandatory. The merchant banker is required to ensure that all the relevant parameters are taken in to consideration while determining the offer price.
- Once the offer is made, it can not be withdrawn except if statutory approval required has been refused.

Mode of acquisition is also very important area which the shareholders of both the acquiring as well as acquired company should considering before giving their approval to the acquisition process. There are broadly three different modes

1. All cash payment.
2. Exchanging stocks with the acquired company.
3. Both cash as well as stock.

The choice of mode depends of following factors:

Overvaluation: If the acquiring firm's stock is overvalued relative to the acquired company's stock, paying in stock can be less costly than paying in cash.

Taxes: From the point of view of the shareholders of the acquired firm, cash compensation is a taxable transaction whereas stock compensation is not.

Sharing the risks and rewards If cash compensation is paid, shareholders of the acquired company neither bear the risks nor enjoy the rewards of the acquisition. On the other hand, if stock compensation is paid, shareholders of the acquired company partake in the risks as well as the reward of acquisition.

The significance of acquisitions has undergone immense change, post liberalization. India has witnessed a storm of acquisitions in recent years. The Finance Act, 1999 clarified many issues relating to Business Reorganizations thereby facilitating and making business restructuring tax neutral. Some of the leading sectors that have contributed significantly to acquisition activity are services, pharmaceuticals, automobiles, electronics, power, oil and gas.

Acquisitions lead to change in corporate control. The market for corporate control can dramatically alter the setting in which business firms compete. In an idealized world, this market is a positive thing for shareholders and for the economy as a whole. Assets,

people, and products may be transferred to more productive uses. By loosening control over these resources, high-value employment is possible.

Once acquired, the two companies combined value should be sum of the values of the parts plus any synergy that might be involved.

$$V_{ab} = V_a + V_b + \text{synergy}$$

where V_{ab} = value of company post acquisition

V_a = value of company A pre acquisition

V_b = value of company B pre acquisition

Synergy = economies realized in the merger through increased revenues and/or cost reductions

The maximum price that company A should pay for company B is $V_{ab} - V_b$. Apart from the arithmetic of valuation, the effect of any change in risk (usually a reduction) on the required rate of return should also be taken into consideration.

As discussed earlier different companies have different reasons for acquisition. These reasons are broadly classified into following.

Economies of Scale: These economies of scale arise because of more intensive utilization of production capacities, distribution networks, engineering services research and development facilities, etc. Economies of scale are most prominent in case of horizontal acquisitions where scope for intensive utilization is greater.

Complementary Resources: If two firms have complementary resources, it may make sense for them to merge. For example, a small firm with an innovative product may need the engineering capability and marketing reach of a big firm. With the merger of the two firms it may be possible to successfully manufacture and market the innovative product.

Tax shields: When a firm with accumulated losses and/or unabsorbed depreciation is acquired by a profit-making firm, tax shields are utilized better. The firm with accumulated losses and/or unabsorbed depreciation may not be able to derive tax advantages for a long time. However, when it merges with profit-making firm, its accumulated losses and/or unabsorbed depreciation can be set off against the profit of the profit-making firm and tax benefits can be quickly realized.

Utilization of surplus Funds. A firm in a mature industry may generate a lot of cash but may not have opportunities for profitable investment. Such a firm ought to distribute generous dividends and even buy back shares, if the same is possible. However, most managements have a tendency to make further investments, even though they may not be profitable. In such a situation, an acquisition of another firm involving cash compensation often represents a more efficient utilization of surplus funds.

At the end of the day, if the inorganic growth model through acquisitions is able to improve the shareholders value for both acquired as well as acquiring firm then the acquisition is successful other wise it may create lose – lose situation for both the firms.

1.1 Research Problem

The recent years have witnessed major changes in the corporate world. The period after liberalization process has been marked by rapid changes in the modes of growth by companies. More companies are looking at acquisition as an alternative way to achieve growth in shorter time. Substantial Acquisition of Shares and Takeovers Regulation, 1997 and Finance Act 1999 has given a big boost to market for mergers and acquisitions. Indian corporate has become more aggressive towards acquisition, which involves not only acquiring domestic firms but international firms as well. Most of the empirical studies on

the acquisitions show that financial performance as well as stock price of the company is affected by the acquisition.

Against this backdrop, there is need for further study in this important area of financial management. There is a greater need for analyzing the effect of acquisition on the financial performance and stock price of the acquired company. With this study it could be understood that

- What is the value addition done to the acquired company by acquirer of the company? This value addition is measured in terms of financial performance.
- How does the shareholders and the stock markets react to acquisition of a particular company?

1.2 Objectives of the study

The objectives of present research are:

1. To study the impact of acquisition on the acquired company's performance.
2. To study the impact of acquisition on the stock price of the acquired company.

CHAPTER – II

REVIEW OF LITERATURE

In this chapter, an attempt has been made to present in brief, a review of related studies carried out in India and abroad to have a proper perspective of the subject. It gives a brief view of the findings of other researchers.

Klein (1986) in his research examined differences in announcement day effects among firms engaged in voluntary sell-offs. He found that an initial sell-off announcement results in a significant positive excess return, not all divestiture announcements are accompanied by positive price movements. Also a positive relation was found between the relative size of the sell-off and the announcement day return. The timing of price disclosure is also very important.

Travlos (1987) provided a direct confirmation of a differential-return relationship across different methods of payment of bidding firms announcing takeover bids. The results on the pure stock exchange bidding firms show that their stockholders experience significant losses at the announcement of the takeover proposal. This means that financing a takeover through exchange of common stock conveys the negative information that the bidding firm is overvalued.

Fishman (1989) found that acquisition bid through securities has the advantage of inducing target management to make an efficient accept/reject decision but cash has the advantage of serving, in equilibrium, to “preempt” competition by signaling a high valuation for the target. Also target shareholders must realize any capital gain from a cash offer immediately, whereas a capital gain from a securities

offer can be deferred until the securities are sold. Thus, for a given after-tax reservation price, target shareholders require a higher premium to sell their shares for cash. Also, while tax considerations may help in understanding the choice of medium of exchange, they do not provide complete explanation.

Kaplan (1989) in his research estimated the value of tax benefits in 76 management buyouts of public companies completed in a specified period. The estimated value depended on the rate, buyout debt is repaid and the tax rate applied to the interest deductions. The results of his research indicated that tax benefits are an important source of the wealth gains in management buyout transactions. The speed of debt repayment and the strong relationship between total tax deductions and the premium paid are consistent with tax benefits being an important source of the wealth gains in management buyouts.

Ahimud, Lev and Travlos (1990) in their research showed that corporate insiders who value control will prefer financing investments by cash or debt rather than by issuing new stock which dilutes their holding and increases the risk of losing control. In corporate acquisitions, the larger the managerial ownership fraction of the acquiring firm the more likely the use of cash financing. Abnormal returns associated with stock financing are mainly in acquisitions made by firms with low managerial ownership.

McWilliams (1990) in his research suggested that managers can increase control of voting rights by adopting antitakeover amendments that reduce the voting power of outside shareholders. He also found the relation between managerial share ownership, the type of antitakeover amendments proposed, and the stock price reaction to the amendment proposal. He observed a significant positive effect at

announcement for a firm having low levels of managerial share ownership (ten percent or less), which was significantly larger than negative effects observed at higher levels of share ownership.

Morck, Shleifer and Vishny (1990) in their research proved that managerial objectives may drive acquisitions that reduce bidding firms' value. They cited at least two reasons why bidding firms' managers might overpay in acquisition, thereby truly reducing the wealth of their shareholders. The two reasons are:

1. Managers of bidding firms are infected by hubris, and so overpay for targets because they overestimate their own ability to run them.
2. Managers of the bidding firms pursue personal objectives rather than maximization of shareholder value.

To the extent that acquisitions serve these objectives, managers of bidding firms are willing to pay more for targets than they are worth to bidding firms' shareholders.

Stulz, Walking and Song (1990) showed evidence that distribution of target ownership is related to the division of the takeover gain between the target and the bidder for successful tender offers. For multiple-bidder offers, the target's gain increases with target managerial ownership and decreases with institutional ownership. Further, institutional ownership of the target decreases the target's gain for the whole sample. Their research also showed that gain to a value-weighted portfolio of the bidder and the target does not depend on the distribution of target ownership.

Brown and Ryngaert (1991) developed a model in which the mode of acquisition conveys the information concerning the value of the bidder. Their

research findings based on this model are that the low valuation bidders choose an offer including at least fifty percent stock and high valuation bidders make cash offers. High valuation bidders offer cash to avoid issuing undervalued stock, and low valuation bidders offer stock to avoid the capital gains penalty. They demonstrated that bidders with unfavorable private information about their equity value choose offers containing some stock to avoid the capital gains tax consequences of cash offers.

Harris and Ravenscraft (1991) in their research work on cross-border acquisitions, came up with three findings.

- First, cross-border takeovers are more frequent in research and development intensive industries. Also in most of the transactions the buyer and seller are in related industries.
- Second, targets of foreign buyers have significantly higher wealth gains than do targets of U.S. firms.
- Third, while the cross-border effect on wealth gains cannot be explained easily by industry and tax variables, it is positively related to the weakness of the U.S. dollar, indicating a significant role of exchange rate movements in foreign direct investment.

Martin and McConnell (1991) stated that the turnover rate for the top managers of target firms in tender offer-takeovers significantly increases following the completion of the takeover and that prior to takeover these firms were underperforming in comparison with other firms in their industry as well as other target firms which had no post-takeover change in the top executive. Takeover market plays an important role in disciplining top corporate executives and aligning their

incentives with stockholders' interests. They further conclude that regardless of the motivation, on average, tender offer-takeovers create value for the shareholders of the involved firms.

Kaplan and Weisbach (1992) found that acquirer returns and total (acquirer and target) returns at the acquisition announcement are significantly lower for unsuccessful divestitures than for successful divestitures and acquisitions not divested. Although diversifying acquisitions are almost four times more likely to be divested than related acquisitions, they did not find any strong evidence that diversifying acquisitions are less successful than related ones.

Shinde (1995) cautions about unrestricted mergers and acquisitions in Indian economy as counter productive if encouraged beyond a certain point. We should learn from experience of the developed countries. The recent guidelines issued by the Security and Exchange Board of India (SEBI) are expected to ensure a level playing field for all the concerned parties and protect the interest of the small shareholders.

In a paper presented at a seminar held at Chennai (Madras) Subramanian (1996) evaluated the strategies for merger and acquisition. According to him, to grow in liberalized economy each organization has to:-

- a) Identify its core competence
- b) Re – engineer the business processes around the core competence.
- c) Re – organize into process centers and appoint process owner.
- d) Assess the value system and ascertain its position in it.
- e) Explore the possibilities of joint ventures and M&A which strengthen the entire value system.

- f) Spin – off potential divisions whose core competence lies in an unrelated areas, as a separate company.

Thus in future, the strategies for successful M&A will have far more important objective than maximizing the wealth of the shareholders, namely increasing the efficiency of the entire value system benefiting the ultimate customer.

Pattnayak (1998) showed that leveraged buy out is different from an ordinary acquisition in a way that it refers to transformation of a public corporation into a privately held firm. He has defined leveraged buy out as the acquisition, financed largely by borrowing of all the stocks or assets of a higher public company by a small group of investors. This exercise aims at generating enormous increase in the market value and value gains for shareholders both who own the firm before the restructuring and who own the firm after restructuring.

Skaria (1998) conducted a study to find the value generation by M&A. He found that M&A may generate additional value worldwide, but not in India. Even 3 years after the transnational parents merger, for peculiar local reasons, their subsidiaries in India has been unable to synchronize their strategies, assimilate culture or derive synergies. That's why global M&A never seems to add value to local shareholders.

Horne (1999) stated that stockholders of the selling company get substantial excess returns if the merger or the tender offer is successful. If it fails, share price falls back to the preoffer level unless, in the case of a tender offer, there is a subsequent bid. But for the acquiring company stockholders, the evidence is mixed.

Vedpurishwar and Prabhu (1999) analyzed the important issues involved in M&A. They classified the global M&A into four waves.

- First wave: 1898 – 1903
- Second wave: 1926 – 1929
- Third wave: 1940 – 1947
- Fourth wave: 1990s

They also examined the reasons for M&A in India i.e.

- Diversification
- Growth through acquisition
- Economies of scale
- Tax advantages
- Regulatory considerations
- Size of business
- Valuation

They emphasize that valuation is a critical issue in M&A. Correct valuation determine whether an M&A succeeds or not. Valuation has different perspectives, viz., Acquirer's perspective, Seller's perspective, Lender's perspective and Investor's perspective.

Maksimovic and Phillips (2001) showed that merger and acquisition on an average result in productivity gains for the assets acquired, and the buyers tend to be relatively more productive firms.

Pandey (2001) found that target firm valuations increase in the run-up to the announcement. However, unlike developed countries, substantial part of these gains are wiped out subsequently indicating that valuation gains associated with takeovers in large part reflect private value of control, expected to be high in Indian context. Given relatively large insiders' shareholdings, takeovers as governance mechanisms

are not likely to be effective and private value of control may be the driver in the market for corporate control.

Pawaskar (2001) through her research found that most of the acquired firms are generally at lower end in terms of size, growth, tax, and liquidity of the industry. The firms, however, performed better than industry in terms of profitability. It is seen that financing synergies and once-and-for all type of growth are significant in these acquisitions. The analysis of the regression to norm shows that there is no increase in the post-merger profits. If no merger had taken place, the post-merger period profitability would have improved. Merger has a negative impact on the profitability. The competitive process is not impeded with merger even when no strong anti-trust laws are present.

Brahma (2003) in his article has thrown some light on the organizational and human related issues involved in merger & acquisitions. He states that more empirical investigation is needed to answer the following questions: Do organizational and human resource problems vary according to the types of mergers and acquisitions? How do these issues affect the financial performance of the acquiring firm? Are there any factors like experience of the acquirer, degree of integration and relative size of firms, which may influence over the organizational and human resource issues and performance of acquiring firm? Answers to above questions will definitely provide managers with guidance in future decisions.

Banerjee (2003) in his article stated the modalities for disinvestments of the public enterprises. These modalities are: Trade Sale – Strategic Sale – Stable Shareholders – Offer of shares. According to him out of the above modalities strategic sale has got greater importance and multiple dimensions in the recent past.

In the strategic sale of a company, the transaction has two elements. These elements are:

- (a) Transfer of block of shares to a Strategic Partner.
- (b) Transfer of management control to the Strategic partner.

Disinvestment of shares through the open market route, gets lesser value per share and even the management remains with the Government. As a result the company is denied the private sector dynamism and also the infusion of funds that the private management would have brought into the company.

It is clear that different researchers have different views regarding acquisition, its effects and other acquisition related areas. The objective of present study is to provide further findings regarding acquisition and its effects on financial performance of the acquired company.

However, it is not possible for a researcher to study the financial performance of all the acquired companies. Therefore the scope of study has been restricted to 20 companies in India, where acquisition has taken place during the period from financial year 1998 to 2001. This period has been specifically selected keeping in view the emergence of liberalisation, privatisation and globalisation (LPG) and Finance Act 1998 which resulted in rapid growth of market for mergers and acquisitions.

Population of study consists of only those companies which have been acquired under the period of 1998 to 2001 and which meet the following criteria:

1. Only those companies have been taken whose stock is listed on Bombay Stock Exchange or NSI (National Stock Exchange).
2. There has been change in control of the company after the acquisition.

CHAPTER III

RESEARCH METHODOLOGY

This chapter describes the research methodology of the study. It includes explanation of the scope of the study, sampling design, collection of data and statistical tools for analysis of data. The limitations of study are also given at the end.

3.1 Scope of study

In view of aforesaid discussion in chapter – 1 and review of literature presented in chapter – 2, an indepth study of overall performance of all the acquired companies during the specified period may generate a wealth of useful data. However, it is not possible for a short term research project, subject to time and resource constraints to study the detailed performance of all the acquired companies. Therefore the scope of study has been restricted to 20 companies in India where acquisition has taken place during the period from financial year 1998 to 2003. Time period has been specifically selected keeping in view, Substantial Acquisition of Shares and Takeovers Regulation, 1997 and Finance Act 1999, which resulted in rapid growth of market for mergers and acquisitions.

Population of study consists of only those companies which have been acquired under the period of 1998 to 2003 and which meet the following criteria:

1. Only those companies have been taken whose stock is listed on BSE(Bombay Stock Exchange) or NSE(National Stock Exchange).
2. There has been change in control of the company after the acquisition.

3. The company has not been delisted or dissolved into another company after acquisition *i.e.* the stock of the company is still traded either on BSE or NSE or both.
4. The share of the company is fairly liquid.

3.2 Research Methodology

Research methodology of any study is very important. It shows how research is conducted under certain circumstances. It includes research design, data collection, tools and techniques of analysis and explanation of various tools used.

3.2.1 Research Design

Keeping in view the objectives of the study, the list of companies has been selected (where acquisition has taken place during financial year 1998 – 2003) as given on SEBI website. In all there were 240 companies, which were acquired during the period but only 30 were able to meet the criteria specified above and out of these 20 were selected at random. The companies were arranged in the ascending order *i.e.* the year and the month in which they were acquired. The brief study of such companies and their acquisition was done.

The detailed analysis of financial performance of selected companies was done.

3.2.2 Data Collection

The data required for the study was secondary in nature. Different sources were used for acquiring. The major sources include website of SEBI (www.sebi.gov.in) for obtaining the names of acquired companies, Bombay Stock Exchange Official Directory and the other sources were internet website

(www.indiainfoline.com), BSE website (www.bseindia.com) was also used for obtaining the stock prices of the selected companies. Different sources had to be used since the publication of the Bombay Stock Exchange Official Directory has been stopped after the year 2000. For the remaining years' data, internet websites were referred to.

3.2.3 Tools and Techniques of Analysis

To study the impact of acquisition on the acquired companies' financial performance, ratio analysis of the acquired companies was done. Data from the balance sheets of the selected companies was taken based on the year in which the acquisition has taken place *i.e.* one year prior to acquisition and one year post acquisition. The year in which the acquisition occurred was taken as neutral. After calculating the various financial ratios, these were compared on the basis of pre and post acquisition. For the second objective, average price of stocks of sample companies have been calculated (for pre and post acquisition) for measuring the average change in stock price post acquisition. These changes are compared with the average change in the values of Sensex during the subsequent period. For comparing the change student's *t*-distribution tests have been applied.

3.2.4 Definition/Explanation of various ratios used

1. **Profitability Ratios:** Profitability ratios are used to check the profitability margins of the company. Profitability ratios have been subdivided in to following:

a) **Gross Profit Ratio:** The gross profit margin ratio is defined as:

$$\frac{\text{Gross Profit}}{\text{Net Sales}}$$

Where Net sales = Sales – Excise duty

The ratio shows the profit relative to sales after the direct production costs are deducted. It is used as an indicator of the efficiency of production operation and the relation between production costs and selling price.

b) Net Profit Ratio: The net profit margin ratio is defined as:

$$\frac{\text{Net Profit}}{\text{Net Sales}}$$

This shows the earnings left for share holders as a percentage of net sales. It measures the overall efficiency of production, administration, selling, financing, pricing and tax management. Jointly considered, the gross and net profit margin ratios provide the analyst a tool to identify the sources of business efficiency/inefficiency.

c) Operating Ratio: The operating ratio is defined as:

$$\frac{\text{Net profit} + \text{Depreciation}}{\text{Sales}}$$

This shows the operating profits of the business as compared to sales. Depreciation is added back to net profit as it is a non cash expenditure. So this ratio tells the actual cash profit margins of the company.

d) Return on Investment: This ratio is defined as:

$$\frac{\text{Earning Before Interest and Taxes}}{\text{Total Assets}}$$

This ratio tells us the earning power on shareholders' book investment and is frequently used in comparing two or more firms in an industry.

2. Capital Structure Ratios: These ratios inform about the composition of long term finance of the company *i.e.* debt and equity. The implication of debt and equity on the cost of capital can be understood through capital structure ratios. Capital structure ratios are subdivided into following:

a) Debt – Equity Ratio: The ratio is defined as:

$$\frac{\text{Debt}}{\text{Equity}}$$

The debt – equity ratio indicates the relative contributions of creditors and owners. Depending on the type of the business and the patterns of cash flows the components in debt to equity ratio will vary. Normally the debt component includes all liabilities including current. And the equity component consists of networth and preference capital. The ratio of long-term debt to equity could also be used, but what is important is that consistency should be followed when comparisons are made.

b) Debt – Asset Ratio: The ratio is defined as:

$$\frac{\text{Debt..}}{\text{Assets}}$$

The above ratio measures the extent to which borrowed funds support the firm's assets. It is usually held that lower the debt-asset ratio lesser is the risk for creditors of the firm. Also company can increase its borrowing capacity in the future, if the debt-asset ratio is low.

c) **Interest Coverage Ratio:** This ratio is defined as:

$$\frac{\text{EBIT}}{\text{Interest Expenses}}$$

It is a measure of firm's ability to handle financial burdens, it is also referred as the times interest-coverage ratio. This ratio tells us how many times the firm can cover or meet the interest payments associated with debt. The greater is the interest coverage ratio, the higher is the ability of firm to pay its interests. An increase in interest coverage ratio means either the profitability of the firm has increased or the interest has come down or both.

3. **Growth Ratios:** These are the most common ratios used to measure the financial performance of a company. Following are the different growth ratios:

a) **Sales Growth:** Sales growth is defined as:

$$\frac{\text{Sales of current year} - \text{Sales of previous year}}{\text{Sales of previous year}}$$

This is the basic measure for finding out the growth of the company. High growth in sales shows that the company is growing rapidly.

b) **Assets Growth:** Assets growth is defined as:

$$\frac{\text{Assets of current year} - \text{Assets of previous year}}{\text{Assets of previous year}}$$

An increase in assets is a good sign for any company. A negative growth in assets shows that company's financial position has deteriorated.

4. **Market Share Ratio:** This ratio is good indicator of the performance of stock of a company in the stock markets. Higher the market capitalization, stronger is the position of the company.

a) Market Capitalization: It is defined as:

$$\text{No. of outstanding equity share} * \text{Market price of share}$$

Market capitalization is a good indicator to show how the company is performing in the stock markets. Higher is the market capitalization stronger is the company.

b) Book Value per Share: It is defined as:

$$\frac{\text{Networth (Equity capital + Reserves and Surplus)}}{\text{No. of outstanding equity shares}}$$

Higher is the book value stronger the position of the company. Normally it is presumed that if the book value of share of the company is higher than the market price of share, then the equity share of the company is underpriced and it will increase in the future.

3.2.5 Definition/Explanation of student's *t*-distribution test

Student's *t*-distribution test is also known as *t*-test. For simplification purpose the name *t*-test has been used in the research. *t*-test is widely used to test the significance of various results of small samples. This test is applied on various types of samples. The test which is applied in this research is *test of significance for difference between two means*. In this test, two random samples of sizes n_1 and n_2 are drawn with mean μ_1 and μ_2 and equal standard deviations.

To test the null hypothesis that both the samples have been drawn from the sample population *i.e.* to test

$H_0 : \mu_1 = \mu_2$, the difference is non – significant.

$H_1 : \mu_1 \neq \mu_2$, the difference exists.

Two tail - test is applied here.

If the value of t is greater than the tabulated value of t ($t_{0.10}$ and $t_{0.05}$ in this case) then the difference is significant else difference is non – existent.

3.2.6 Method for measuring the impact of acquisition on the stock of the acquired company

To analyze the stock performance daily prices for acquired companies share (one year prior to acquisition and one year post to acquisition) have been taken. From these share prices, average share prices for selected companies have been calculated. The post acquisition average share prices are compared with pre acquisition share price to check the returns. These returns are then compared with the average return given by stock index (BSE Sensex, in this case) in the same period, to measure if the impact of the acquisition has been positive or negative on the stock price of the company. To validate the changes in returns t-test has been applied at appropriate points.

3.3 Limitations of the study:

Following are the limitations of the research:

1. Due to time constraints, 20 companies have been selected. Hence, findings are suggestive and illustrative and not conclusive.
2. Ratios are calculated on the basis of accounting data, which has its own limitations *e.g.* investments and assets are taken at the book value and not at the market value, so it does not represent the true picture of the company.

3. The study is based on the published data and it has its own limitations.
4. Investment decisions should not be made on the basis of these results as the financial performance of a company depends on other parameter as well.

In this chapter, the secondary data of the selected companies has been analyzed. It consists of two different sections. The first section consists of interpretation of various ratios, their range and distribution of companies within range, overall average of various ratios. The second section contains the range of acquisition on the stock price of the selected companies. The data is summarized as shown in Table 4.1. The documents are taken in random order. The documents are arranged in chronological order in the table in which they were prepared.

Table 4.1 Name and Month of selected companies

S.No.	TARGET COMPANY	ACQUISITION	MONTH
1	KANBHA INDIA LTD.	SAMPINE DA SUT	2007
2	BOMBAY OXYGEN CORPORATION LTD.	KHSEEN GREENFIELD OMRH	2007
3	CLARO INDIA LTD.	KUTTAB PLANTATIONS & RUBBER LTD.	2007
4	ROCKWELL INDIAN LTD.	ALGHANIM VERMORE (MACHINES) CO.	2007
5	FINE DRUGS AND CHEMICALS LTD.	YOUNG LABORATORIES LTD.	2007
6	FORRITS & SPENCER (ASIA) LTD.	YOUTH BESSAUNONKPTVINE GABLI M.VINOTYAN	2007
7	ALBRIGHT & WILSON CHEMICALS INDIA LTD.	IFCO LIMITED	2007
8	SRI VISVING CEMENT LTD.	ICE PROCESSING LIMITED (INDIA) LIMITED (INDIA) RAAR CHABRI (INDIA)	2007

CHAPTER – IV

RESULT AND DISCUSSION

In this chapter, the secondary data of the selected companies has been analyzed. It consists of two different sections which discuss results and interpretation of various ratios, their range and distribution of companies under the range, overall average of various ratios. The second section discusses the impact of acquisition on the share price of the selected companies. The list of companies is shown in Table 4.1. The companies are taken on random basis. The companies were arranged in chronological order *i.e.* the date on which they were acquired.

Table 4.1 Name and Month of selected companies

S.No.	TARGET COMPANY	ACQUIRER/(S)	Period
1	KANTHAL INDIA LTD	SANDVIK AB LTD.	Apr-98
2	BOMBAY OXYGEN CORPORATION LTD	MESSER GRIESHEIM GMBH	Aug-98
3	CLARO INDIA LTD.	KOTHARI PLANTATIONS & INDUSTRIES LTD.	Dec-98
4	ROCKWOOL (INDIA) LTD.	ALGHANIM INDUSTRIES (MAURITIUS) LTD.	Jan-99
5	FINE DRUGS AND CHEMICALS LTD	VORIN LABORATORIES LTD.	May-99
6	PORRITTS & SPENCER (ASIA) LTD	VOITH BESPANNUNGSTECHNIK GMBH, J M VOITH AG	Sep-99
7	ALBRIGHT & WILSON CHEMICALS INDIA LTD	ISPG LIMITED	Oct-99
8	SRI VISHNU CEMENT LTD	ICL SECURITIES LIMITED, INDIA CEMENTS LIMITED, RAASI CEMENT LIMITED	Dec-99

9	MONOZYME INDIA LTD	MR. SHRINIVAS RAO	Feb-00
10	CHARMINAR BREWERIES LTD	SHAW WALLACE & COMPANY LTD, MAHARASHTRA DISTILLERIES LTD, CRUICHSHANT & COMPANY LTD, ALAKNANDA MANUFACTURING & FINANCE LTD	Feb-00
11	ODYSSEY TECHNOLOGIES LTD	MR & MRS. ROBERT RAJA, RAS KINETRONICS PRIVATE LTD.	Feb-00
12	BSES LTD	RELIANCE INDUSTRIES LTD, RELIANCE POWER VENTURES LTD	Jun-00
13	MCS LTD	SHRI SANTOSH KUMAR RATERIA, SMT SAROJ RATERIA	Feb-01
14	VST INDUSTRIES LTD	RUSSELL CREDIT LTD	Apr-01
15	ADVANCED MICRONIC DEVICES LTD	OPTO CIRCUITS (INDIA) LTD	Jul-01
16	CASTROL INDIA LTD	CASTROL LIMITED, BP AMOCO PLC	Sep-01
17	CMC LTD	TATA SONS LTD	Nov-01
18	FOSECO INDIA LTD	BURMAH CASTROL PLC, BP PLC (PAC)	Nov-01
19	FORBES GOKAK LTD	STERLING INVESTMENT CORPORATION PRIVATE LTD, SHAPOORJI PALLONJI & COMPANY LTD (PAC), CYRUS INVESTMENTS LTD (PAC)	Nov-01
20	INDIAN PETROCHEMICALS CORPORATION LTD	RELIANCE PETROINVESTMENTS LTD, RELIANCE INDUSTRIES LTD, (PAC), RELIANCE VENTURES LTD, RELIANCE CAPITAL LTD (PAC)	Jul-02

4.1 Introduction and analysis of financial performance of selected companies where acquisition has taken place

The financial performance is discussed on the basis of change in various ratios. Each ratio has its own significance. The discussion on various ratios is as follows:

1. Profitability Ratios: Profitability ratios are used to check the profit margins of the company. Profitability ratios tell us whether the operations of the company are profitable or not. These ratios are further subdivided into following:

- a) **Gross Profit Ratio:** This ratio shows the profit relative to sales after the direct production costs are deducted. Gross profit ratio indicates the efficiency of costs in production operations of the company.

Table 4.2 Distribution of change in Gross Profit Ratios of selected firms

Range (in %)	Number of Companies
Greater than -15	1
-15 to -10	0
-10 to -5	2
-5 to 0	6
0 to 5	8
5 to 10	0
10 to 15	1
Greater than 15	2
Total	20

Out of 20 companies 55% showed positive gross profit ratios. 70% of the selected companies were in the range of -5% to 5%. The maximum 40% of the companies were in the range of 0% to 5%. The overall average of the gross profit ratios showed positive results.

Out of sample of 20 companies 2 were in the range of greater than 15%. One of these two companies is Claro India Ltd. (see Appendix I), where change in gross profitability is more than any other company in the sample. The performance of Claro India Ltd. has improved in other ratios too. The reason for this may be that the new acquirer has been able to reduce the cost of production. Also the sales of the company have increased and so economies of scale might have been achieved by Claro India Ltd.

Only one company out of 20 was in the range of change in gross profit ratio of greater -15% (See Appendix I). Rockwool (India) Ltd. showed the maximum negative change in net profit ratio. Reason might be the increase in company's cost of production post acquisition. Also sales of Rockwool (India) Ltd. has come down. Because of decrease in sales diseconomies of scale may have resulted in less gross profitability.

b) Net Profit Ratio: Net profit ratio shows the earnings left for share holders as a percentage of net sales. A positive change in net profitability means the profits of company have increased.

Table 4.3 Distribution of change in Net Profit Ratios of selected firms

Range (in %)	Number of Companies
Greater than -15	1
-15 to -10	0
-10 to -5	1
-5 to 0	7
0 to 5	8
5 to 10	0
10 to 15	0
Greater than 15	3
Total	20

In distribution of change in net profit ratios, a maximum of 75% of companies were in the range of -5% to 5%. Out of total sample, 40% of the companies showed the change in net profitability within the range of 0% to 5%. There are 15% companies which showed the more than 15% change in the net profitability. This shows that financial performance of 3 companies out of sample of 20 has improved a great deal. A total of 55% companies have shown positive change in net profitability. Also the overall average comes out to be positive.

There were 3 companies which showed change in net profitability more than 15%. One of these companies is Fine Drugs and Chemicals Ltd. (see Appendix I) where change in net profitability is substantial. This company also showed a change of more than 15% in gross profitability. Reason for improvement in net profitability may be improvement in cost of production, economies of scale, improved efficiency in the selling and distribution expenses.

Out of the selected sample, Rockwool (India) Ltd. is the only company which was in the range of more than -15% change in net profitability (see

Appendix I). The reasons for this may be reduction in sales, increase cost of production and lack of effort on the part of new management to improve upon the efficiency of the acquired company.

c) Operating Ratio: This ratio shows the operating profits of the business compared to sales. Depreciation is added back to net profit as it is a non cash expenditure. So this ratio tells the actual cash profitability of the company.

Table 4.4 Distribution of change in Operating Ratios of selected firms

Range (in %)	Number of Companies
Greater than -15	↓
-15 to -10	0
-10 to -5	1
-5 to 0	9
0 to 5	5
5 to 10	1
10 to 15	1
Greater than 15	2
Total	20

From the sample of 20 companies, 45% showed positive change while 55% showed negative change in the operating profitability of the company. 70% companies were in the range of -5% to 5%. Although more number of companies showed negative change in operating profitability, still the average profitability has increased.

There are 2 companies which showed change in operating profitability of more than 15% (see Appendix I). One of these companies is Claro India Ltd.

which showed the maximum change in the operating profitability, post acquisition. The reasons behind increase in the operating profitability are reduction in depreciation and interest charges of the company after the acquisition.

The only company where change in operating profitability is more than -15% is Rockwool (India) Ltd. (see Appendix I). Post acquisition the performance of the company has come down on the profitability side. Reason for this includes increase in the cash outflow in the form of increased interest charges.

Table 4.5 Distribution of change in Return on Investment of selected firms

Range (in %)	Number of Companies
Greater than -15	1
-15 to -10	2
-10 to -5	2
-5 to 0	5
0 to 5	4
5 to 10	4
10 to 15	0
Greater than 15	2
Total	20

Out of selected sample, 50% of the companies have shown a positive change in return on investment. 9 out of 20 sample companies, were in the range of -5% to 5%. 10% of the companies have given a change of more than 15%. This shows that new acquirers of these companies have improved the performance of

the acquired companies substantially. Overall average return on investment for the acquired companies is also positive.

Two companies were there in the sample where change in return on investment is more than 15% (see Appendix I). Post acquisition change in return on investment was maximum in case of Foseco India Ltd. The new management of the company has increased the return on investment of the shareholders of the company. The reason includes increase in profitability and reduction in the book value of assets of the company.

Albright & Wilson Chemicals Ltd. is the company which has shown maximum negative change in return on investment (see Appendix I), post acquisition. The reason may be the large investments made by the acquirer after the acquisition and the decline in the profitability of the company. Also the company belongs to the industrial chemical sector and in this sector the return on investment is less than other sectors of the economy.

2. Capital Structure Ratios: These ratios inform about the composition of long term finance of the company *i.e.* debt and equity. The implication of debt and equity on the cost of capital can be understood through capital structure ratios.

Capital structure ratios are subdivided into following:

a) Debt – Equity Ratio: The debt – equity ratio indicates the relative contributions of creditors and owners. Depending upon the type of business and the patterns of cash flows the components in debt to equity vary. A very high debt – equity ratio may prove to be risky for the company. So reduction in debt – equity ratio is assumed to be desirable.

Table 4.6 Distribution of change in Debt-Equity Ratios of selected firms

Range	Number of Companies
Greater than -4.5	2
-4.5 to -3	1
-3 to -1.5	2
-1.5 to 0	5
0 to 1.5	10
1.5 to 3	0
3 to 4.5	0
Greater than 4.5	0
Total	20

50% of the companies showed reduction in debt-equity ratio and 50% showed increase in debt-equity ratio. All 50% companies which showed the increase in debt-equity ratio were in the range of 0 to 1.5, whereas distribution of the companies varied in different ranges (where debt-equity ratio has decreased). The average of debt – equity ratio of all the sample companies taken together was negative.

Two companies which showed reduction of more than -4.5 in debt to equity, one of them is Bombay Oxygen Ltd (see Appendix II). Before acquisition the debt – equity ratio of the company was on its all time high. The new management has done well by reducing the debt – equity ratio. The debt – equity ratio has come down because of infusion of fresh capital and reduction of long term debt of the capital.

CMC Ltd. is the company which showed the greatest increase (see Appendix II) in debt – equity ratio compared to pre acquisition level of debt – equity ratio. The increase of the debt – equity can also prove to be beneficial if the overall cost of capital comes down after the increase in debt – equity. The reason for increase in debt – equity ratio of the company is the increase in non-secured long term loans of the company.

b) Debt – Asset Ratio: Debt to asset ratio measures the extent to which borrower funds support the firm’s assets. Lower the debt – asset ratio, lesser is the risk for creditors of the firm. So, reduction in debt – asset ratio of the company is considered to be beneficial.

Table 4.7 Distribution of change in Debt-Asset Ratios of selected firms

Range	Number of Companies
Greater than -0.45	1
-4.5 to -3.5	1
-0.30 to -0.15	0
-0.15 to 0	9
0 to 0.15	6
0.15 to 0.30	2
0.30 to 0.45	1
Greater than 0.45	0
Total	20

Out of the sample of 20 companies 55% showed a reduction in debt – asset ratio, post acquisition. Total of 75% companies were in the range of -1.5 to 1.5 . Companies, in case of negative change were less distributed compared to companies which showed positive change in debt – asset ratio. Overall average showed a reduction in the debt – asset ratio, post acquisition.

Only company where the reduction in debt – asset ratio was greater than -0.45 is Rockwool (India) Ltd (see Appendix II). New management of the company has successfully reduced the debt position of the company. The debt of the company has been reduced by repaying it.

Claro India Ltd. is the only company within the range of 0.30 to 0.45 (see Appendix II). New management has increased the debt position of the company due to this the debt – asset ratio of the company has gone up. Post acquisition the debt – asset ratio has increased to more than one, which shows that the assets of the company are not sufficient to repay the debt.

c) Interest Coverage Ratio: This ratio tells how many times the firm can cover or meet interest payments associated with debt. An increase in interest coverage ratio is good for the company.

Table 4.8 Distribution of Interest Coverage Ratios for selected companies

Range	Number of Companies
Greater than -15	0
-15 to -10	1
-10 to -5	0
-5 to 0	6
0 to 5	7
5 to 10	0
10 to 15	0
Greater than 15	6
Total	20

Out of 20 companies, 65% have shown an increase in change in interest coverage ratio, post acquisition. A total of 65% companies are in the range of -5 to 5. Out of the sample, 30% of companies showed a change of more than 15. There was only one company which was in the range of -5 to -10. Overall average of the all the companies is positive.

From the total of 6 companies in the range of greater than 15, Odyssey Technologies Ltd. showed the maximum positive change in interest coverage ratio (see Appendix II). There are dual reasons for increase in interest coverage ratio of the company. One is reduction in interest expenses and other is increase in the profits of the company. Both together has resulted in higher change in

interest coverage ratio of the company. Increase in interest coverage ratio is a good sign for the company.

The only company was Albright & Wilson Chemicals Ltd (see Appendix II) where decrease in interest coverage is in the range of -15 to -10. This company is the exact opposite case of Odyssey Technologies Ltd. In Albright & Wilson Chemicals Ltd, the net profits of the company has come down and interest expenses have gone up after the acquisition. But an interest coverage ratio which is less than one means that company is not capable of paying interest on the debt.

3. **Growth Ratios**: These are the most common ratios used to measure the financial performance of a company. Following are the different growth ratios:

a) **Sales Growth Ratio**: This ratio is widely used as a tool to measure how company is growing. A high sales growth means that the company is growing rapidly.

Table 4.9 Distribution of Sales growth of selected firms

Range (in %)	Number of Companies
Greater than -30	1
-30 to -20	1
-20 to -10	3
-10 to 0	3
0 to 10	2
10 to 20	2
20 to 30	3
Greater than 30	5
Total	20

From the total sample, 60% companies showed a positive sales growth and 40% showed a negative growth. 30% companies showed sales growth in the range of greater than 30%. Only one company showed a decrease in more than 30% of sales. The overall average growth in sales is positive.

There are 5 companies in sample of 20 where growth in sales was more than 30% (see Appendix III). Claro India Ltd. is one of these five companies which have shown largest increase in sales post acquisition. This increase clearly shows that the acquirer of the company must have some strategic reason behind the acquisition. The sales of company have increased manifolds which is good for the acquiring as well as acquired company.

The only company where sales have come down more than 30% is Advance Micronic Devices (see Appendix III). Drop in sales to such an extent is a worrying sign for the company. The acquirer has done little in terms of promoting the sales of the company.

b) Asset Growth ratio: This ratio tells about the growth in the assets of the company. A positive asset growth is desirable for any company.

Table 4.10 Distribution of Asset growth of selected firms

Range (in %)	Number of Companies
Greater than -15	4
-15 to -10	1
-10 to -5	2
-5 to 0	1
0 to 5	3
5 to 10	1
10 to 15	1
Greater than 15	7
Total	20

Of all the selected companies 60% have increased their assets, post acquisition. 35% of the companies are in the range of more than 15% asset growth. These companies have significantly impacted the overall average of assets growth.

Out of 7 companies where assets growth is more than 15% (see Appendix III), Odyssey Tech. Ltd. has give shown maximum increase in assets. The reason for this is increase investment in long term and short term assets of the company.

There are 4 companies where growth in assets is more than -15%. Bombay Oxygen Ltd. is one of them where assets have deteriorated more than any other company from the sample (see Appendix III). The reason for decrease in assets is increase in current liabilities and provisions of the company because of this the net current assets of company are negative. These negative net current assets have resulted overall reduction in the assets of the company.

4. Market Share Ratios: These ratios inform about the changes in the stock price of the companies. These ratios are subdivided into following:

a) Market Capitalization: This ratio is good indicator of the performance of stock of a company in the stock markets. Higher the market capitalization, stronger is the position of the company.

Table 4.11 Distribution of Increase in Market Capitalization of selected firms

Range (in Rs. Millions)	Number of Companies
Greater than -150	2
-150 to -100	0
-100 to -50	3
-50 to 0	4
0 to 50	5
50 to 100	1
100 to 150	1
Greater than 150	4
Total	20

From the sample, 55% companies have shown increase in market capitalization. 45% companies are in the range of Rs. -50 Million to Rs. 50 Million. 20% companies are in the range of more than Rs. 150 Million. The overall average increase in market capitalization of selected companies is positive.

From the total of 4 companies where increase in market capitalization is more than Rs. 150 million, the market capitalization of IPCL has increased the most.(see Appendix IV). Although, post acquisition percent change in the market share of the company is not maximum among the companies but the main reason

behind the largest increase in market capitalization is the largest equity base among the those companies which have shown increase in market capitalization.

Two companies showed decrease in market capitalization of more than Rs. 150 million and among these two, Castrol India Ltd. showed a maximum decrease in market capitalization (see Appendix IV), post acquisition. The reason for such huge decrease in market capitalization is the largest equity base among companies which have shown decrease in market capitalization.

b) Book Value per share: It is the accounting value of the share of the company. An increase in book value of the company is a good indicator of the strong financial position of the company.

Table 4.12 Distribution of growth in Book Value Per Share of the selected companies

Range (in Rs.)	Number of Companies
Greater than -12	1
-12 to -8	1
-8 to -4	2
-4 to 0	6
0 to 4	6
4 to 8	0
8 to 12	0
Greater than 150	4
Total	20

Table 4.13 A range of change in Profitability Ratios of selected companies

Equal number of companies are in positive and negative range. 60% are in the range of Rs. -4 to Rs. 4. 20% companies are in the range of more than Rs. 150. These companies have a significant impact on the overall average of the per share book value.

From a total of 4 companies where book value per share has grown greater than Rs. 150, the book value per share of VST industries have grown the (see Appendix IV). The main reason behind this is the two fold increase in the reserves and surpluses of the company.

There is only one company in the range of greater than Rs. 150. Per share book value of IPCL has come down more than any other company in the sample (see Appendix IV). The networth of the company has come down because of this the book value has come down drastically.

4.1.2 Interpretation of averages of ratios

To see the overall performance of selected companies the average of different ratios was calculated. These averages suggest in which direction the financial performance of the companies was moving. The averages were calculated so as to find out whether impact of acquisition on the acquired company is favorable or not. The table of averages is as follows:

Table 4.13 Averages of change in Profitability Ratios of selected companies

Ratio	Average Change in (%)
Gross Profit Ratio	13.36
Net Profit Ratio	29.25
Operating Ratio	21.83
Return on Investment	0.89

From the table we can conclude that overall average profitability of acquired companies has significantly improved on all fronts. The new managements must have put significant efforts in areas of profitability.

Table 4.14 Averages of change in Capital Structure Ratios of selected companies

Ratio	Average Change
Debt – Equity Ratio	-1.65971
Debt - Asset Ratio	-0.01
Interest Coverage Ratio	11.7055

Debt – equity on an average has been reduced by –1.66 per company. Though the change in debt – asset ratio is minimum, interest coverage ratio has improved by 11.71. All these changes in ratios indicate that new acquirers of the companies have taken initiative to improve the capital structure so as to bring down the cost of capital.

Table 4.15 Average of change in Growth Ratios of selected companies

Ratio	Average Change in (%)
Sales Growth	66.71
Asset Growth	21.34

Average sales per company have increased by 66.71%, post acquisition. This is a significant achievement on the part of new acquirer. This shows that the new acquirer may have strategic objective behind acquiring the company i.e. improving upon sales and hence profitability. Assets of acquired companies have also grown on an average of 21.34%.

Table 14.16 Average change in Market Share Ratios of the selected companies

Ratio	Average Change in (Rs.)
Market Capitalization	278.79 million
Book Value per Share	3.57

Post acquisition, the market capitalization of acquired companies has grown by average Rs. 278.78 million per company. This shows that stock markets have seen the acquisition of selected companies as a good thing. Also the book value of acquired companies has grown at average of Rs. 3.57 per share.

4.2 Interpretation of results calculated for post acquisition changes in stock prices of selected companies

In this section the impact of acquisition on the stock price of selected companies has been measured. The results are discussed below.

4.2.1 Analysis of distribution of change in the post acquisition stock prices

The post acquisition average stock price changes have been calculated and results of stock price changes are discussed below.

Table 14.17 Distribution of changes in Stock Price of selected companies

Range (in %)	Number of Companies
Greater than -30	1
-30 to -20	2
-20 to -10	3
-10 to 0	2
0 to 10	4
10 to 20	0
20 to 30	2
Greater than 30	6
Total	20

Out of total sample, 60% of companies showed positive change in the stock price, post acquisition. Only 30% companies were in the range of -10% to 10% change. There is only 1 company where stock price change was more than -30%. And 30% companies showed change of more than 30% in their stock price. The overall impact on the average return of these 30% companies has been very substantial.

From a total of 6 companies where post acquisition change in the stock price has been more than 30%, Fine Drugs and Chemicals Ltd. is the company which showed the maximum change in stock price. So it may be presumed that the investors of the company have viewed the acquisition of the Fine Drugs and Chemicals Ltd., as beneficial for the company. The reasons for such a huge change may include improvement in the financial performance of the company and the small percentage of floating stock. Also pre acquisition the share was trading at an average of Rs. 2.45, so from such a small price any movement in the stock price would result in substantial returns in percentage terms.

Only one company was in the range of greater than -30% i.e. MCS Ltd (see Appendix). Post acquisition stock price of the company has come down by two third. This shows that stock market has viewed acquisition of MCS Ltd., as a harmful process for the company.

To verify whether change average change in stock price of selected company is significant, the returns on stock prices are compared with returns given by BSE Sensex during the same period. It has been found that the post acquisition change in the stocks of the acquired companies fluctuated from the company to company, so for the purpose of validating the post acquisition changes in the stock prices is significant T-test has been applied. The results of T-tests are discussed below.

1. Test for checking the significance of post acquisition change in stock prices of selected companies

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$H_0 : \mu_1 = \mu_2$, post acquisition changes in the stock prices of the selected companies are non – significant.

$H_1 : \mu_1 \neq \mu_2$, post acquisition changes in the stock prices of the selected companies are significant.

Here two – tail test is to be applied.

Table 14.18 Results of T-test calculated for changes in stock price

Variable	Value
t	4.65
Degrees of Freedom	38
$t_{0.05}$	2.02
$t_{0.10}$	1.68

From the table it is clear the value of t (4.65) is much greater than tabulated value of $t_{0.05}$ (2.02) and $t_{0.10}$ (1.68). Thus we can conclude that post acquisition changes in the stock price of selected companies are significant.

2. Test for checking the significance of post acquisition change values of Sensex

$H_0 : \mu_1 = \mu_2$, post acquisition changes in the values of Sensex are non – significant.

$H_1 : \mu_1 \neq \mu_2$, post acquisition changes in the value of Sensex are significant.

Here two – tail test is to be applied.

Table 14.19 Results of T-test calculated for changes in value of Sensex

Variable	Value
t	1.52
Degrees of Freedom	38
$t_{0.05}$	2.02
$t_{0.10}$	1.68

From the table it is clear the value of t (1.52) is lesser than tabulated value of $t_{0.05}$ (2.02) and $t_{0.10}$ (1.68). Thus we can conclude that post acquisition changes in the values of Sensex are non – significant.

3. Test for checking the significance of difference in post acquisition change in stock prices of selected companies and value of Sensex

$H_0 : \mu_1 = \mu_2$, difference in post acquisition changes in the values of stock prices and Sensex are non – significant.

$H_1 : \mu_1 \neq \mu_2$, difference in post acquisition changes in the values of stock prices and Sensex are significant.

Here two – tail test is to be applied.

Table 14.20 Results of T-test calculated for changes in value of Sensex

Variable	Value
t	5.25
Degrees of Freedom	38
$t_{0.05}$	2.02
$t_{0.10}$	1.68

The value of t (5.25) is much greater than tabulated value of $t_{0.05}$ (2.02) and $t_{0.10}$ (1.68). So, this is a statistical conclusion that the difference in the post acquisition change in the value of stocks of selected companies and Sensex is significant.

4.2.2 Comparison of post acquisition average returns given by sample companies and return given by Sensex

Table 14.21 Average returns given by sample companies and returns given by Sensex

	Average Change (in %)
Stock Price of Sample companies	34.20
Sensex	1.08

The average return given by all sample companies is 34.20% compared to average returns given by Sensex (in the subsequent periods). This shows that post acquisition stock prices of sample companies have increased where as

change in value of Sensex is non – significant. It may be presumed that the stock markets consider acquisition as a process which will improve value of company.

CHAPTER 3

SUMMARY

The researcher has tried to find out the relationship between the financial performance as well as change in the stock price of the acquired company. Ratio analysis of the acquired companies has been done to find out about the financial performance of the acquired company. Data has been taken from the data from the balance sheet of acquired companies from the year prior to acquisition and the year after the acquisition. Sample taken was from the year 2007-2008 to 2011-2012.

3.1 Summary of the Findings

Major findings of the research are as follows

1. The findings of the research support a positive impact of acquisition on the acquired company's performance. Although ratio analysis does not provide a clear picture of the financial performance of the acquired company.
2. It has been found that strategies used to improve the financial performance of the acquired company vary from acquired to acquiree. Some companies may focus on profitability others, first focus on improving the operating activities of the acquired company, while some others may look for the improvement in the growth of the acquired company. So, it may be said that different companies provide value to acquired companies in a different manner. However, it may be

CHAPTER V

SUMMARY

The researcher has tried to find out if the acquisition results in change in the financial performance as well as change in the stock price of the acquired company. Ratio analysis of the acquired companies has been done to find out change in the financial performance of the acquired company. Ratio analysis was done by taking the data from the balance sheets of acquired companies one year prior to acquisition and one year after the acquisition. Sample taken was from the year starting from 1998 to year 2003.

5.1 Summary of the findings

Major findings of the research are as follows:

1. The findings of the research suggests a positive impact of acquisition, on the acquired company's performance. Although, post acquisition financial performance varies from company to company but there has been significant improvement in the financial performance of the acquired companies.
2. It has been found that strategies used to improve the financial performance of the acquired company, vary from acquirer to acquirer *e.g.* some acquirers increase the profitability, others, first focus on improving the capital structure of the acquired company, while some others may look for the improvement in the sales growth of the acquired company. So it may be said that different acquirers provide value to acquired companies, in a different manner. Acquisition brings in

- efficiencies in different areas of acquired companies *e.g.* improvement in production operations, reduction in costs, better control by new management.
3. Acquisition is also good for the economy. Post acquisition, overall profitability of acquired companies (taken together) increases, which is good for the economy. It reduces the inefficiencies in the acquired companies there by ensuring better utilization of resources of the economy.
 3. Impact of acquisition on the stock price of the acquired companies is positive. Post acquisition, stock price of the acquired company increases. Stock markets view the acquisition as a process which will bring value to the company. A major increase in the prices of the stock of the company has been noticed once they are acquired.
 4. In case of acquired companies, link between financial performance and stock price could not be established. It has been found in some cases that though financial performance of the acquired company has deteriorated, the stock prices of those companies have still increased significantly compared to Sensex.

The market for acquisitions is still in nascent stages, in India. Although the population of acquired companies (during 1998 to 2003) was 240, still only 30 such companies were there which were either listed on Bombay Stock Exchange or National Stock Exchange or both. Also size of the market for acquisitions is quite small. The government and regulatory authorities like SEBI (Securities and Exchange Board of India) should ease the norms for mergers and acquisitions.

5.2 Scope for further research

This was just an exploratory study subject to a variety of limitations pointed out in chapter III. There is need for further research in this important area. Large number of companies should be taken and their financial performance should be measured over a longer period of time. It is also important to study the impact of government policies and other external and internal factors on merger and acquisition. Another important area could be acquisitions and its impact on the organizational structure of acquirer as well as acquired company.

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APPENDIX I

CHANGE IN THE PROFITABILITY RATIOS FOR SELECTED COMPANIES

Sr. No.	Name of the Company	Profitability Ratios			
		Gross Profit Ratio (%)	Net Profit Ratio (%)	Operating Ratio (%)	Return on Investment (%)
1	Albright & Wilson Chem. India Ltd.	-4.04	-4.02	-3.29	-10.98
2	Advance Micronic Devices Ltd.	3.74	1.88	1.93	-0.74
3	Bombay Oxygen Corp. Ltd.	-3.43	-0.58	-0.23	-0.32
4	BSES Ltd.	-9.94	-5.31	-5.14	-5.33
5	Castrol India Ltd.	2.86	-3.73	-3.57	17.32
6	Charminar Breweries Ltd.	-2.15	-2.05	1.44	0.06
7	Claro India Ltd.	238.26	568.32	427.50	5.67
8	CMC Ltd.	1.80	2.10	1.85	-3.08
9	Fine Drugs and Chemicals Ltd.	39.72	34.91	32.64	6.18
10	Forbes Gokak Ltd.	3.13	1.88	2.00	-1.18
11	Foseco India Ltd.	14.55	15.25	14.71	27.67
12	Indian Petro Chemicals Ltd.	-0.65	1.11	-1.71	6.83
13	Kanthal India Ltd.	-6.54	-4.49	-3.64	-9.96
14	MCS Ltd.	-2.42	-1.72	-2.07	-10.45
15	Monozyme India Ltd.	-4.81	1.09	0.90	-1.40
16	Odyssey Technologies Ltd.	3.76	4.92	-1.85	4.71
17	Porritts & Spencer India Ltd.	0.40	0.94	0.42	4.04
18	Rockwool (India) Ltd.	-16.32	-27.28	-25.72	-20.68
19	Shrivishnu Cement Ltd.	4.65	4.62	4.92	2.45
20	VST Industries Ltd.	4.67	-2.91	-1.57	7.09

APPENDIX II

CHANGE IN THE CAPITAL STRUCTURE RATIOS FOR SELECTED COMPANIES

Sr. No.	Name of the Company	Capital Structure Ratios		
		Debt – Equity Ratio	Debt – Asset Ratio	Interest Coverage Ratio
1	Albright & Wilson Chem. India Ltd.	-0.85	-0.06	-12.98
2	Advance Micronic Devices Ltd.	0.61	-0.1	-0.54
3	Bombay Oxygen Corp. Ltd.	-21.09	-0.09	0.45
4	BSES Ltd.	-2.33	-0.09	0.34
5	Castrol India Ltd.	-0.15	-0.04	48.5
6	Charminar Breweries Ltd.	0.59	0.21	-0.17
7	Claro India Ltd.	0.27	0.41	1.51
8	CMC Ltd.	1.14	-0.01	20.42
9	Fine Drugs and Chemicals Ltd.	0.42	0.6	-0.07
10	Forbes Gokak Ltd.	-0.57	0.02	1.1
11	Foseco India Ltd.	-1.27	-0.13	55.14
12	Indian Petro Chemicals Ltd.	-6.22	-0.08	-0.96
13	Kanthal India Ltd.	0.70	0.21	-2.18
14	MCS Ltd.	0.52	0.05	0.32
15	Monozyme India Ltd.	0.03	0.01	0.18
16	Odyssey Technologies Ltd.	0.05	0.04	77.08
17	Porritys & Spencer India Ltd.	-0.30	-0.04	27.33
18	Rockwool (India) Ltd.	-1.66	-0.73	-2.91
19	Shrivishnu Cement Ltd.	1.02	0.06	0.73
20	VST Industries Ltd.	-4.10	-0.44	20.82

APPENDIX III

CHANGE IN THE GROWTH RATIOS FOR SELECTED COMPANIES

Sr. No.	Name of the Company	Growth Ratio	
		Sales Growth (%)	Asset Growth (%)
1	Albright & Wilson Chemicals India Ltd.	-5.35	-6.85
2	Advance Micronic Devices Ltd.	-34.34	75.45
3	Bombay Oxygen Corp. Ltd.	-13.64	-35.10
4	BSES Ltd.	20.12	3.41
5	Castrol India Ltd.	1.04	-15.97
6	Charminar Breweries Ltd.	15.25	82.24
7	Claro India Ltd.	726.04	-15.97
8	CMC Ltd.	11.84	59.69
9	Fine Drugs and Chemicals Ltd.	23.93	1.88
10	Forbes Gokak Ltd.	-8.11	-2.31
11	Foseco India Ltd.	0.32	-9.85
12	Indian Petro Chemicals Ltd.	63.19	-32.18
13	Kanthal India Ltd.	51.39	5.01
14	MCS Ltd.	-16.36	15.60
15	Monozyme India Ltd.	23.14	4.47
16	Odyssey Technologies Ltd.	482.30	234.00
17	Porritts & Spencer India Ltd.	30.46	10.29
18	Rockwool (India) Ltd.	-21.99	29.16
19	Shrivishnu Cement Ltd.	-1.43	34.00
20	VST Industries Ltd.	-13.69	-10.21

APPENDIX IV

CHANGE IN THE MARKET SHARE RATIOS FOR SELECTED COMPANIES

Sr. No.	Name of the Company	Market Capitalization (Rs. million)	Book Value (Rs.)
1	Albright & Wilson Chemicals India Ltd.	21.94	-0.96
2	Advance Micronic Devices Ltd.	0.42	0.21
3	Bombay Oxygen Corp. Ltd.	-1.80	-4.47
4	BSES Ltd.	1,474.80	22.67
5	Castrol India Ltd.	-5,687.45	-3.93
6	Charminar Breweries Ltd.	-14.37	3.54
7	Claro India Ltd.	-5.73	-3.73
8	CMC Ltd.	3,180.44	31.52
9	Fine Drugs and Chemicals Ltd.	48.84	-8.45
10	Forbes Gokak Ltd.	267.13	-0.05
11	Foseco India Ltd.	-11.75	3.96
12	Indian Petro Chemicals Ltd.	3,755.67	-22.29
13	Kanthal India Ltd.	2.65	-4.27
14	MCS Ltd.	-55.22	1.01
15	Monozyme India Ltd.	-3.23	0.41
16	Odyssey Technologies Ltd.	741.15	5.37
17	Porritys & Spencer India Ltd.	-44.36	12.21
18	Rockwool (India) Ltd.	-56.04	2.10
19	Shrivishnu Cement Ltd.	1,063.29	-1.37
20	VST Industries Ltd.	899.49	37.89

VITA

Name of the Students : Nipun Jain
Father's name : Sh. Vijay Jain
Mother's name : Smt. Manju Jain
Nationality : Indian
Date of birth : October 6, 1981
Permanent home address : 435/16, Krishna Nagar, Civil
Lines, Ludhiana

EDUCATION QUALIFICATION

Bachelor degree : B.C.A.
University and year of award : Punjab Technical University,
Jalandhar, 2002
OCPA/Percentage : 80.55%

Master's degree
Title of Master's Thesis : "Acquisitions in Indian
companies – Its impact on
companies' performance and
stock price"
247595

OCPA : 7.1