Mergers and Acquisitions in India : A Semi Strong form Test of Market Efficiency

Shradhanjali Panda
Sr. Lecturer
USBM
Bhubaneswar

Aditya Kumar Mishra
Student
USBM
Bhubaneswar

Jayanta Kumar Padhi
Student
USBM
Bhubaneswar

Abstract

A company may grow its business either by internal expansion or by external expansion. In the case of internal expansion, the company grows gradually over time in the normal course of the business, through acquisition of new assets, replacement of the technologically obsolete equipments and the establishment of new lines of products. But in external expansion, a firm acquires a running business and grows overnight through corporate combinations. These combinations are in the form of mergers, acquisitions, amalgamations and takeovers and have now become important features of corporate restrict.The purpose of this study is to test the semi strong form of market efficiency with respect to merger and acquisition announcements. The semi-strong efficient market hypotheses which test an investor's ability to earn a positive abnormal return on the basis of merger announcements are examined. Specifically, this work focuses on the semi-strong form test in an effort to test the efficiency of merger announcement public information. Evidence here supports semi-strong market efficiency along with a positive signal exhibited by the sample of acquiring firms during the event period.

Introduction

India in recent past is the key position taker in the global map in terms of increased fund-raising and M&A activity. The practice of mergers and acquisitions has attained considerable significance in the contemporary corporate scenario which is broadly used for reorganizing the business entities. Indian industries were exposed to plethora of challenges both nationally and internationally, since the introduction of Indian Economic Reform in 1991. The cut-throat competition in international market compelled the Indian firms to opt for mergers and acquisitions strategies, making it a vital premeditated option. According to Rohit Chatterji , MD, JP Morgan, the key forces driving this trend are the active government privatization program and strong secondary market function . On the Merger and Acquisition front , inbound M&A has been driven by confidence around projected growth rates in the Indian consumer and industrial segments over next 5-10 years , as evidenced by activity in healthcare, consumer and steel.

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The factors responsible for making the merger and acquisition deals favorable in India are:

- Dynamic government policies
- Corporate investments in industry
- Economic stability
- “Ready to Experiment” attitude of Indian industrialists

Sectors like Pharmaceuticals, IT, ITES, Telecommunications, Steel, Construction, etc, have proved their worth in the international scenario and the rising participation of Indian firms in signing M&A deals has further triggered the acquisition activities in India.

Ten Biggest M & A Deals in India

Mergers and acquisitions also referred to as M&A, involve the buying, selling, and combining of companies. The acquiring and target companies feel that by joining they can somehow aid, finance, or help each other within their industry, or sometimes between industries, without having to spend the time and capital to create another unit. Sometimes a company may acquire another company against their will through what is known as a hostile takeover, where they will purchase the majority of outstanding shares of a target company. Firms, after merging, may take the name of the acquiring company, the target company, or just create a new name.

Some companies will merge at the corporate level, but for all other purposes allow the two individuals to continue business as if they were still separate entities. This decision is based on what the managers’ feel will allow them to be the most successful in branding themselves in their respective industry

Following are the lists of some important M&A deals in India

- Tata Steel acquired 100% stake in Corus Group on January 30, 2007. It was an all cash deal which cumulatively amounted to $12.2 billion.
- Vodafone purchased administering interest of 67% owned by Hutch-Essar for a total worth of $11.1 billion on February 11, 2007.
- India Aluminium and copper giant Hindalco Industries purchased Canada-based firm Novelis Inc in February 2007. The total worth of the deal was $6-billion.
- Indian pharma industry registered its first biggest in 2008 M&A deal through the acquisition of Japanese pharmaceutical company Daiichi Sankyo by Indian major Ranbaxy for $4.5 billion.
- The Oil and Natural Gas Corp (ONGC) purchased Imperial Energy Plc in January 2009. The deal amounted to $2.8 billion and was considered as one of the biggest takeovers after 96.8% of London based companies’ shareholders acknowledged the buyout proposal.
- In November 2008 NTT DoCoMo, the Japan based telecom firm acquired 26% stake in Tata Teleservices for USD 2.7 billion.
- India’s financial industry saw the merging of two prominent banks - HDFC Bank and Centurion Bank of Punjab. The deal took place in February 2008 for $2.4 billion.

- Tata Motors acquired Jaguar and Land Rover brands from Ford Motor in March 2008. The deal amounted to $2.3 billion.
- 2009 saw the acquisition Asarco LLC by Sterlite Industries Ltd's for $1.8 billion making it ninth biggest-ever M&A agreement involving an Indian company.
- In May 2007, Suzlon Energy obtained the Germany-based wind turbine producer RE Power. The 10th largest in India, the M&A deal amounted to $1.7 billion.

Literature Review

Efficient market emerges when new information is quickly incorporated into the price so that price becomes information. In other words the current market price reflects all available information. Under these conditions the current market price in any financial market could be the best-unbiased estimate of the value of the investment. The semi strong form EMH states that all publicly available information is similarly already incorporated into asset prices. In another word, all publicly available information is fully reflected in a security's current market price..

Baharuddin M Hussin et al (2010) conducted a study focusing on the announcement effect of both dividend and corporate earnings on stock prices in Malaysian Stock Exchange in order to test whether Bursa Malaysia is efficient in semi-strong form. The findings of the study can be divided into three parts. First finding shows higher dividend announcements, on average, earned positive abnormal returns, lower dividend announcements results in negative abnormal returns and unchanged dividend announcements results in earning normal return. The second finding shows both the dividend and earnings announcements have crucial role to play as signals of changes in the future prospects of the firm. The third or last finding reveals that the Malaysian stock market continues to react positively to increasing dividends news after the announcement day. They conclude that the Malaysian stock exchange has not reached its full efficiency level in semi strong form.

Watts (1978), using a sample of US stocks, found a statistically significant return in the quarter of the announcement on earnings, suggesting a clear indication that quarterly earnings reports contain new information. Along with it he also found a statistically significant return in the following quarter and concluded that the existence of those abnormal returns is evidence that the market is inefficient.

Fama et al (1969) considered the most relevant test of semi-strong form of efficiency to conclude that the market is able to respond to public information in a sufficiently rapid manner. If a firm's announcements convey new information to the market regarding its future prospects or if they address uncertainties regarding rumors in circulation prior to the announcement, such unanticipated news will benefit stock prices of the companies affected by the news and lead to changes in stock prices beyond expectation.

Using a random coefficient regression, Dielman (1980) investigated the effects of stock repurchasing on the rates of return on the stock being repurchased. His findings conclude that open market repurchases resulted in no economic significance with the rate of returns for each firm studied being negligible (Dielman, 1980). Stewart (1976) discovered that in the short term, stock prices remain neutral from the effects of the repurchase. His study concludes that the market remains rather inefficient in regards to the stock repurchase and takes several months for the benefits of the repurchase to appear. By studying both open market and tender offer repurchases, Marks (1976) was able to conclude that open market repurchases had no significant price effect on the market and tender offers had a temporary positive price effect for the length of the offer. However, Rosenberg (1976) found that tender offer stock repurchases resulted in a neutral price effect for his sample. Overall, most literature supports the idea that an investor cannot earn an abnormal return from the announcement of a stock repurchase. This study extends previous studies by examining the effects of a sample of 50 stock repurchase announcements on the firms' stock price to determine if an investor is able to earn an abnormal return by acting this type of information.

Objective of the Study

The semi strong form of Efficient Market Hypothesis (EMH) suggests that only information that is not publicly available can benefit investors seeking to earn abnormal returns on investments. All other information is accounted for in the stocks price and, regardless of the amount of fundamental and technical analysis one performs, above normal returns will not be had.

The objective of the study is to test the semi strong form of market efficiency with the announcement of a merger and an acquisition (M&A Deal). The sample of ten important company mergers is taken into consideration. If the Market exhibits the movement similar to the company, then the theory of an Efficient Market would hold true and an investor would not be able to receive an above normal return. But, if the firm exceeds the Market for a certain period of time relative to the announcement date, then the possibility of gaining an above normal return may occur, thus possibly challenging the Efficiency theory.

Data

To test the semi strong form of market efficiency on the announcement of M&A, the sample size of the study is 10 companies. The data is collected taking the public announcement date of M&A as benchmark. 1 year prior to the public announcement date, the closing prices of the shares of the acquiring companies are taken. Then the returns are calculated. Data was collected from the official website of National Stock Exchange i.e. www.nseindia.com and public announcement dates of M&A are collected from the official website of Security and Exchange Board of India (SEBI) i.e. www.sebi.gov.in. So, all data are secondary in nature

Research Methodology

In order to test the level of market efficiency surrounding a sample of Merger and acquisition deal announcements, this study uses the standard event study methodology from the finance literature. As such, the first goal of the event study is to select either a common event with a single event date or a common event with different event dates. For the purpose of this study, a common event with different event dates applies. The common event is the firm's announcement of a merger and acquisition. Since firms make these announcements at random, the dates of the announcements will differ.

Taking the closing prices of the sample acquiring companies, return is calculated using the following formula.

- **Return = (End period price – Beginning period price) / Beginning period price**
- Corresponding index values are also taken and return is calculated for the same time period using the above mentioned formula. Taking the index return as independent variable, a regression was run between index return and share price return to find out the 'â' (beta) value. Then the value of 'á' (alpha) or abnormal return is calculated.

Following table shows the values of both 'á' and 'â' for the sample acquiring companies.

Table 1

Values of 'α' and 'β' of the sample companies

Name of the acquiring company	Name of the target company	Public Announcement Date	Alpha (α)	Beta (β)
Tata Steel	Corus	20th October, 2006	-0.0003	0.577
HDFC Bank	Centirion Bank of Punjab	21st February, 2008	0.0013	0.185
Reliance Industries	Infotel Broadband	11th June, 2010	0.0002	0.381
Suzlon	RE Power	5th November, 2009	0.0057	0.210
ONGC	Imperial Energy	31st December, 2008	0.0042	0.231
Dabur	Fem Care Pharma	16th October,2008	0.0005	0.469
Hindalco	NOVELIS	11th February, 2007	0.0007	0.513
Tata Motors	JLR	4th January, 2008	0.0006	0.555
HCL	Axon	3RD October, 2008	-0.0008	0.243
Mahindra	SsangYong	23rd August, 2010	-0.0010	0.925

- Having calculated the alpha and beta values of the acquiring companies, an event period is created taking the public announcement day as benchmark or day "0". 15 days prior to the public announcement date and 15 days after the date are taken into consideration. So, the event period is of 31 days starts with -15th day and ends with +15th days. These 31 days are referred as event period.
- The Risk-Adjusted method was used to get the normal expected returns. The expected returns "E(R)" for each stock, for each day during the event period (Day -15 to day +15) were calculated using the following formula:

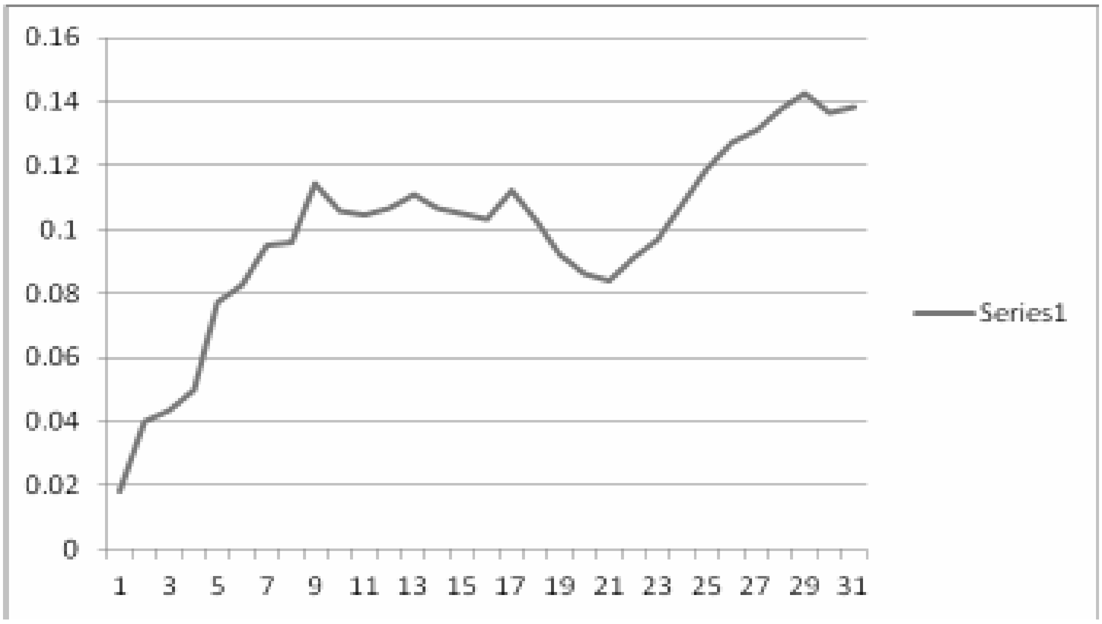
  E(R) = á + â (Rm) (Where "Rm" is the return on the market.)
- Then Excess Return (ER) was calculated using the formula:

  ER = **The Actual Return (R) – Expected Return E(R)**
- Average Excess Returns (AER) were calculated from days -15 to +15 by simply averaging all of the excess returns:

  AER= **sum of the excess returns for day/number of firms (10)**
- Cumulative AER, or CAER, was found by adding the AERs from each day from -15 to +15.

Findings and Interpretation

Following graph is drawn taking the Cumulative Average Excess Returns (CAER) from -15thday to +15th day of the sample acquiring companies.



The findings show that there definitely is action in the stock price around Day 0. The Semi-Strong Efficiency theory begins to show signs in this event window of 31 days i.e 15 days before and 15 days after the public announcement date of it. The sign here is significant and gives a positive impact. If a larger sample is taken these signs would probably be more obvious. Investors generally will view the announcements as something positive, being that the company will be increasing its market share. Therefore a merger should make a shareholder optimistic about returns.

Conclusions

This study tested the effect of Merger and Acquisition announcements on the stock price's risk adjusted rate of return for a sample of 10 companies. Using standard risk adjusted event study methodology with the market model, the study analyzed 10 M&A announcements along with corresponding market index (Nifty). Alpha and beta values are calculated for calculating Expected Return and then Excess Return (ER) is calculated. Averaging Excess Return, Average Excess Return (AER) can be found and adding all "AER" values, Cumulative Average Excess Return (CAER) for the sample companies are calculated. Appropriate statistical tests of significance were conducted. Graphical picture of the results show a significant positive reaction on the announcement of M&A activity. Findings support efficient market theory at the semi-strong form level as documented by Fama (1970). Merger and Acquisition announcements illicit significant positive stock price reactions at the semi-strong level of market efficiency. Investors treat these announcements as something positive. This is a good sign for the acquiring company as they (investors) assume that in future company is going to increase its market share. So, to conclude we can safely accept the semi strong form of Efficient Market Hypothesis in this research work. More significant result can be analyzed by taking both acquiring and target companies into the study.

References

Dielman, Nantell, and Roger L. Wright. (1980) "Price Effects of Stock Repurchasing: A Random Coefficient Regression Approach." The Journal of Financial and Quantitative Analysis, Vol. 15, No. 1 (March), pp. 175-189.

Dittmar, Amy K. (2000). "Why Do Firms Repurchase Stock?" The Journal of Business (July).

Hussin, M Baharuddin , Ahmed ,D Abdullahi and Ying, C Teoh (July 2010), "Semi-Strong Form Efficiency:Market Reaction to Dividend and Earnings Announcements in Malaysian Stock Exchange" , The IUP Journal of Applied Finance , vol 16 , no 5 , pp 36-60

Fama, E F (1970) , "Efficient Capital Market s: A Review of Theory and Empirical Work" , Journal of Finance , vol. 25 , no. 1 , pp 383-417

Fama, E. F., Fisher L., Jensen M., & Roll R. (1969). "The Adjustment of Stock Prices to New Information." International Economic Review, Volume 10, Number 1 (February), 1-21.

Marks, Kenneth R. (1976). "The Stock Price Performance of Firms Repurchasing Their Own Shares." New York University Bulletin.

Rosenberg, Marvin, and Allen E. Young. (1976). "The Performance of Common Stocks Subsequent to Repurchase by Recent Tender Offers." Quarterly Review of Economics and Business (Spring), 109 -113.

Ross, S. (2008). Corporate Finance (Stephen A. Ross, Randolph W. Westerfield, Jeffery Jaffe.-8th ed.). United States: McGraw-Hill Companies.

Solomon , Lanny.M , Richard J. Vargo and Larry M. Walther. 1989 , Financial Accounting , 2nd Edition , John Wiley.

Stewart, Samuel S. (1976). "Should a Corporation Repurchase Its Own Stock." Journal of Finance, Vol. 31, No. 3 (June), 911 -921.

Thirumalvalavan .P , Sunitha.K , January 2006 , "Share price behavior around buyback and

Dividend announcements in India" , 9th Capital Market Conference Paper , Indian Institutes of Capital Markets.

Watts Rose (1978) , “Systematic Abnormal Returns After Quarterly Earnings Announcements” , Journal of Financial Economics , vol 6 , no 2 & 3 , pp 127-150

Websites

www.economictimes.com

Federal Trade Commission. An Antitrust Primer. Retrieved September 2007, from

http://www.ftc.gov/bc/compguide/antitrst.htm

www.investopedia.org

www.wikipedia.org