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INSIDER TRADING
INDIAN BUSINESS ORGANIZATIONS

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PURPOSE

THERE is little research on the Insider trading due to organic and inorganic growth of the organizations taking place across the globe. This paper is attempted to study the amount of special knowledge insider posses as well as people might earn from special knowledge at the time of merger and the intermediaries involved. Although it is difficult to blame any individual or organization on the charges of insider trading in the absence of legal judgment. This paper is an attempt to position India with regard to insider trading in a global environment. The paper had attempted to explain the role of Securities and Exchange Board of India (SEBI), Securities Appellate Tribunal (SAT) and High Courts and Completion Commission of India (CCI) during the merger process of two big Pharmaceutical Indian Business organization and reason for abnormal gains in a flat market and possibility of insider trading.

***Design/Methodology/Approach:**. This study is to identify the factors responsible for rise in prices of shares of companies before and after the announcement of merger of listed Parma Company with another Nifty Parma company. The focus of this study is to establish the relationship for rise in prices of shares of companies before and after the announcement of merger of top listed Parma Company with another Nifty company. The data used in this study is of health care CNX Pharmacy as independent variable and Company involved in the merger over the period (-10+10) from the date of event by using event based regression method. The attempt of this study is to identify the basis of trading that took place near the event of merger.*

***Findings:** There are abnormal returns associated with the announcement of pharmacy merger in India. The returns are to the tune of 387 % in Company B and approximately 58% for Company A. The abnormal gains in flat market give rise to suspicion that insider trading might be reason for such abnormal gains due to merger of Two Indian Business Organizations.*

***Research Limitations/Implications:** This study has no meaning in the absence of regularity mechanism. Indian legal system took action against small companies and broker such as Harshad Mehta, who died in jail or Ketan Pareek, another broker. The SEBI has not taken any legal action against any big corporate on the charge of insider trading in India. On the other side USA has taken lot of step in this direction and provided leadership on insider trading.*

***Practical Implications:** This study is one of the few systematic empirical researches in the scientific paradigm, being carried out on insider trading in India. There are few research works on insider trading and literature on insider trading is limited. This study is a modest attempt to create awareness on this issue.*

***Key Words:** Insider Trading, SEBI.*

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Introduction

There is no longer much debate about the inefficacy of insider trading. In the wake of many scandals, consensus seems to rest firmly on the side of those who believe it to be unethical and illegal. The academic debate on insider trading can be examined on legal, ethical and economic grounds. Singh et al. (1999, 2000, 2001, 2002 and 2007) conducted a number of studies on values of professionals. In India, insider trading is banned by Securities and Exchange Board of India (SEBI), the regulator of Indian stock market. Everybody is aware of share trading based on real information and ultimately reflect the actual status of company, instead of based on rumors and hypothesis. The assumption of stock market is based on fair and efficient market.(Lekkas, 1998)

In a globalised world, movement of the share prices will be accelerated and so will be the resolution of wealth transfers in order to boost the market effectiveness. The concept of free and efficient market is violated by insider traders when market is regulated by the holders of inside information. Free competition provides the best economic results; the insider trading will not make the market efficient. This means insider trading is economically inefficient and may damage the reputation of stock market and particular stock. The information is the basis or root of stock market functioning. Insider trading leads to loss of investor's trust in the market and make it less efficient. There is no doubt that most important asset of any stock market is it's creditability and transparency. Insider trader while dealing with adjustment between prices and risk at times forget that credibility is simply not adjustable; either you have it or not.

Singh (2010) characterized Indian scenario by the historical rigidities arising largely out of centralized planning. Our decision making is influenced among other factors posing more a constraint rather than a facilitator. The practice of protecting Indian industries for over four decades after independence through protective tariffs and quotas have led to lack of global competitiveness both in terms of quality of products and services and price. Corporate governance system of U.S.A., U.K., Canada, Australia, and other Common Wealth countries including India to large extent can be categorized as Anglo-Saxsan model. This model is based upon efficient capital market with substantial degree of liquidity and depth (Fernando, 2006).

Singh (2005) found that Indian economy shifted from the regulated market till 1991 to being replaced to a great extent by the liberal market system after the liberalization of Indian economy. The new Indian economic environment was primarily marked by the freeing of shackles for entrepreneurship and economic growth 1991 onwards. SEBI through SEBI Act 1992, regulates the stock exchange, stock brokers, share transfer agents, merchant bankers, portfolio managers and other market intermediaries, collective investment schemes, secondary and primary markets. SEBI prohibits fraudulent and unfair trade practices and regulates substantial acquisition of shares and takeovers and mergers.

Securities Appellate Tribunal (2012) described insider is or was connected with the company or is deemed to have been connected with information. "Price sensitive information" means any information which relates directly or indirectly to a company and which if published is likely to materially affect the price of securities of company. Amalgamation, mergers or takeovers shall deem to be price sensitive.

Insider Trading in India

By year 1990, Mehta became a prominent name in the Indian stock market. He started buying shares heavily. The shares of India's foremost cement manufacturer Associated Cement Company (ACC) attracted him the most and the scamster is known to have taken the price of the cement company from 200 to 9000 (approx.) in the stock market – implying a 4400% rise in its price. Harshad Mehta scam was first after the liberalization of economy but before the automation of stock exchange in India.

This led to abolition of badla system and later on automation of stock market and digitalization of shares. These common clients i.e., Damayanti Group adjacent to the office of Harshad Mehta office at Nariman Point, who's entire decision making was done by Harshad Mehta built up unusually large positions in these scrip's i.e. in the scrip of Sterlite, BPL and Videocon resulting in distortion of the market equilibrium and creation of artificial market in these scrip's. The profits earned by Damyanti Group as a result of increase in hawala prices over successive settlements were utilised for making further purchases both at BSE and NSE in cash segment, payment of margins, building up further positions in carry forward etc. The delivery of shares received was also utilised for raising finances by doing share badla. It was found that Damayanti Group/Harshad Mehta acting through a set of brokers built up large concentrated positions in the scrip. This position was around 40% of the total positions in Sterlite.

SEBI prohibited Sterlite Industries from accessing the capital market for a period of 2 years from passing of this order. SEBI initiated action against Sterlite Industries through their directors namely Shri Anil Aggarwal, Shri Tarun Jain and Shri Shanshikant.

The Securities Appellate Tribunal (SAT, 2002) set aside the Securities and Exchange Board of India's (SEBI) order prohibiting Sterlite Industries (India) Ltd (SIL) from accessing the capital market for two years and no action was taken against BPL and Videocon.

The hardest hit was the innocent individual investors who had trusted in the government and its regulators and other agencies to ensure the integrity of the market. The panic run on the bourses continued and the Bombay Stock Exchange (BSE) President Anand Rathi's (Rathi) resignation added to the downfall. Hundreds of investors were driven to the brink of bankruptcy. Ketan Parekh got training from Harshad Mehta in 1992 was found guilty in scam in 2001was debarred from trading in the Indian stock exchanges till 2017 and sentenced to two years jail in 2008.

Aiyer (2003) member of Joint Parliamentary Council (JPC) constituted by the parliament in its report on Ketan Parekh scam in 2001 on the stock markets found crashed in stock market in India during March-April 2001. It took over two years for the stock markets to recover from its aftermath. At a height of the 1999-2000 boom, the Sensex had crossed the high watermark of 6000. By April 12, 2001 the Sensex had tumbled to 800 points below its early March level and a huge number of skeletons have started tumbling out of the cupboard.

The scam witnessed involvement of number of banks, corporates and brokers in exploiting every available loophole left gaping open by the government and its regulators and rampant irregularity in all major stock exchanges. The persistent irregularities in all major banks along with nexus between banks, brokers and corporate to subvert the integrity of the market led to Ketan Parekh's scam. The payment crisis on the Calcutta Stock Exchange and the misuse of the Mauritius route for investment in our stock markets was primary reason for this crisis.

An action was taken against Mr. V.K. Kaul on the charges of insider trading against non executive independent director of Ranbaxy Laboratories Ltd. (SEBI Vs V.K. Kaul, 2012).

In another situation the AP High Court had finally cleared the merger despite loan recovery cases against Satyam Computers. The situation at that time was bit different in one respect. Satyam computers Managing director and CEO Mr. Ramlingam Raju was involved in a scam resulting in failure of one of the best organization listed at Nifty and Sensex. SEBI and Indian legal system took action against small companies and broker such as Harshad Mehta, who died in jail or Ketan Pareek, another broker, but no action is taken against any big corporate on the charge of insider trading.

In contrast to India, USA had punished Rajat Gupta, who had served on several high-profile corporate boards as a director during his career in Procter & Gamble, Goldman Saches, Genpact, AMR parent company American Airlines for providing non public information to Raj Rajaratnam, the founder and a Managing General Partner of the hedge fund investment adviser Galleon Management. Rajaratnam, in turn, managed to trade based on the material non-public information. This is one of the biggest insiders trading case in the history of United States and both were found guilty and sent to jail. USA had taken serious action against the Enron promoters who were found guilty of insider trading while running the organisation.

Methodology

This study is to identify the factors responsible for rise in prices of shares of companies before and after the announcement of merger of top listed Pharma Company with another Nifty company. The data used in this study is of health care CNX Pharmacy over the period 2010-14 employed single factor market model regression method.

Event Study Analysis

The Indian organizations find themselves in the midst of consolidation after economic liberalization. The Mergers and Acquisition (M&A) activities in the Indian Banking Sector may be attributed to the lack of available revenue in a declining economy world over and also to the anticipated cost savings that mergers are thought to provide. M & A activities provide for greater efficiency and high productivity. Generally, acquisition announcements of acquiring organizations tend to influence the investors in stock market and investors are likely to react either adversely or favorably based on the information content of the deal (Venkatesan & Govindarajan, 2011).

This section of the research study is an attempt to find out whether any wealth is created for the shareholder of banks involved in merger, acquisition or consolidation in India. Usually Merger and acquisition are well thought strategic action aimed at beating the competition, benefiting from economies of scale and scope, reaching out to new geographies and new market, complimentary resources, and quite often arising out of managerial hubris.

It is understandable that growing M&As activities, would interest bank managements, shareholders, depositors, institutional investors & lenders, regulators, wealth management consultants and fund managers, academicians etc. to know whether such M&As really create any value for the resulting entity. Therefore, any acquisition activity by the banks tends to affect the wealth of their shareholders.

Hypothesis of the Study

In order to test that bank mergers announcement results into shareholder's wealth maximization in the form of abnormal return, the null hypothesis that has been set, is that, there is no abnormal return associated with Pharmacy company mergers in India.

H_o: There are no abnormal returns associated with the announcement of pharmacy merger in India.

H_a: There are abnormal returns associated with the announcement of pharmacy merger in India.

The null hypothesis that there are no abnormal returns associated with the merger announcement needs to be statistically tested.

To observe the wealth maximization of shareholders (of bidding as well as that of target pharmacy) the performance of stock of bidding as well as target pharmacy compaies in the secondary market is studied for abnormal return.

Organisation A

A was established in 1983 and was listed on the stock exchange in 1994. The founding family continues to hold a majority stake in the company. Today A is the second largest and the most profitable pharmaceutical company in India, as well as the largest pharmaceutical company by market capitalisation on the Indian exchanges.

Over 72% of A's sales are from markets outside India, primarily in the US. The US is the single largest market, accounting for about 54% turnover; in all, formulations or finished dosage forms, account for 93% of the turnover. Manufacturing is across 26 locations, including plants in the US, Canada, Brazil, Mexico and Israel. In the US, the company markets a large basket of generics, with a strong pipeline awaiting approval from the U.S. Food and Drug Administration (FDA).

The 2014 acquisition of B will make the company the largest pharmacy company in India, the largest Indian pharmacy company in the US, and the 5th largest specialty generic company globally.

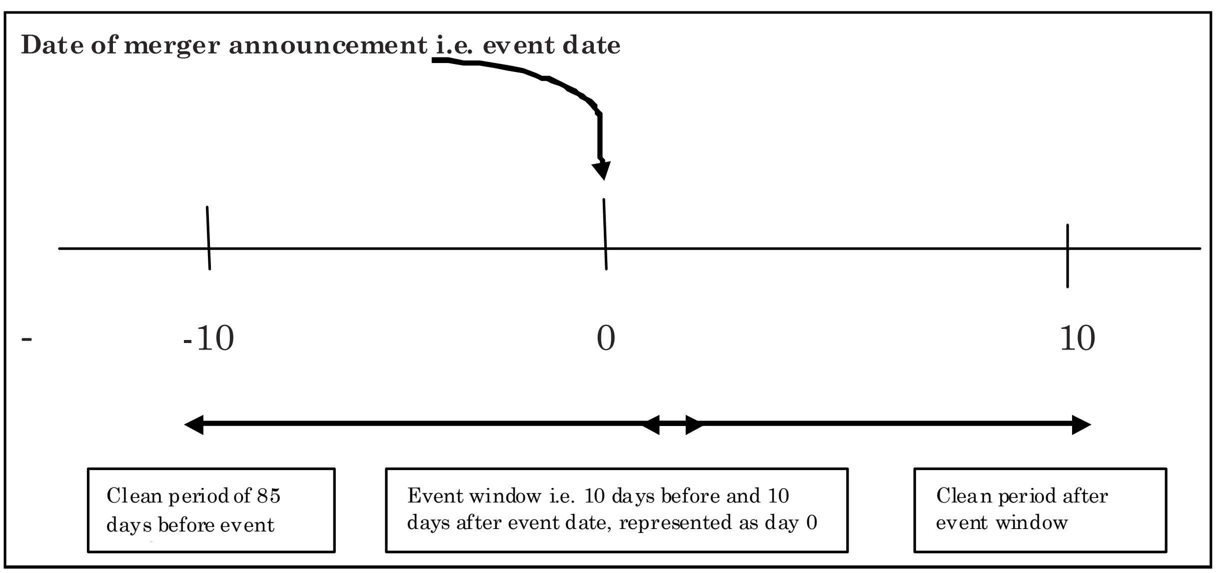
Organisation B
B is an Indian multinational pharmaceutical company incorporated in India in 1961. The company went public in 1973 and Japanese pharmaceutical company acquired a controlling share in 2008. In 2014, largest pharmacy company of India acquired the entire 63.4% share of this company making the conglomerate world's fifth largest specialty generic pharmacy company. Company B exports its products to 125 countries with ground operations in 43 and manufacturing facilities in eight countries.

In 2005, the company's global sales were at US$1,178 million with overseas markets accounting for 75% of global sales (USA: 28%, Europe: 17%, Brazil, Russia, and China: 29%). For the twelve months ending on 31 December 2006, the company's global sales were at US$ 1,300 million.

Event Definition and Date of Announcement
For the purpose of this research, the first date of media announcement of the merger has been taken as the event date (day zero). The first possible date when the news of the merger i.e. April 6 was made public has been used as the event date (day zero).

Window Period and Clean Period Data
The event window for the bidder company as well as for the target company has been taken from -10 days up to the dates of announcement to +10 days after announcement date.

Diagrammatical description of bidder banks' event window & clean period associated with event date



The clean period data for the bidder as well as for the target companies has been taken as 90 days before the 10-day window period on both sides of event date. Clean period data for the both companies post event window has been purposely avoided as there was lot of noise in the data. As a matter of fact the sampled pair of companies in this paper which were involved in the mergers, were grabbing the newlines due to various observations made by the regulators. This potentially distorts the data and therefore no clean period is considered after the event window period.

The share price data of Company A stock (bidder company), of Company B (target company) and market index data, i.e., CNX Pharmacy cy Index have been taken from the official website of the National Stock Exchange of India Limited (*http://www.nse-india.com*). CNX Pharmacy Index captures the performance of the pharmaceutical sector. The Index comprises of 10 companies listed on National Stock Exchange of India (NSE).

Calculation of Daily Return

Share price data of bidder company as well as of target company involved in merger have been taken for 121 days. This includes event window of 21 days (10 days before and 10 days after event day) and clean period of 90 days before and 10 days after the event window. Later on, data for the last 10 days were dropped due to suspected noise in the data. For the matching period, the Index value points for CNX Pharmacy Index has also been taken.

Daily returns have been calculated for bidder company (Company A) as well as for the target company (Company B), as well as for CNX Pharmacy Index using following:

Formula used for computing daily returns

$(D_n/D_{n-1}) - 1$

Where,

D_n = stock price or market index value, on day *n*

D_{n-1} = stock price or market index value, on day, *n-1*

$(D_n/D_{n-1}) - 1$

Calculation of Abnormal return and CAR using Single Factor Market Model.

The research study has used return on two different market indices, i.e., S&P CNX 500 and S&P CNX NIFTY, to calculate separately the daily abnormal returns using single factor market model and cumulative average abnormal returns.

Estimating CAR Using Single-factor Market Model Based on Return on S&P CNX 500 Index

Market Model assumes that all interrelationships among the returns on individual assets arise from a common market factor, that affects the return on all assets (Fama, Fisher & Jensen et al., 1969). The expected returns on individual assets are generated by the following model: The values of expected return for the window period have been worked out for both sampled companies, using Single Factor Market Model method, calculated for the period, [-100 to -10], i.e., clean period of 90 days before the event window. To use the market model, a clean period is chosen and the market model is estimated by running a regression for the days in this period. The market model is:

$$\hat{R}_{jt} = \alpha_j + \beta_j * R_{mt} + \varepsilon_{jt}$$

Where

$\hat{R}_{jt}$ = Expected Return or predicted return on a stock of company *j* on day *t*

R_{mt} = Return to the market (CNX Pharmacy cy Index) at time *t*.

β_j = Ordinary least squares (OLS) estimate of the coefficient in the market model regression, it measures the sensitivity of stock of company j to the market, this is a measure of market or systematic risk.

α_j = Ordinary least squares (OLS) estimate of the intercept of the market model regression, it measures the mean return over the period not explained by the market.

ε_{jt} = It is a statistical term and $\sum \varepsilon_{jt} = 0$

In the above stated market model the predicted return for a day in the event window is the return given by the market model using estimates of á $_j$ and â $_{j,}$ which have been calculated using regression.

Calculations of Residuals

The daily residual returns (r_{jt}) are estimated for each bidder and target company in a 21-day window under the single-factor market model as follows:

Computation of Residuals

Computation of Abnormal Return

$r_{jt} = R_{jt} - \hat{R}_{jt}$

$r_{jt} = R_{jt} - (\alpha + B * R_{mt})$

Where,

r_{jt} = Abnormal return (*AR*) on stock of company *j*, at time *t*

R_{jt} = Actual return on stock of company *j*, at time *t*

α = Ordinary least squares (OLS) estimate of the intercept of the market model regression

β = Ordinary least squares (OLS) estimate of the coefficient in the market model regression

R_{mt} = Return to the market (CNX Pharmacy cy Index) at time *t*.

Calculation of CAR

The cumulative abnormal returns (CAR) of merger announcement in a 21-day (-10, +10) window are estimated for bidder company and target company by summation of the abnormal returns (AR_t) in the respective window.

i.e. for bidder and target company,

t=10

CAR = $\sum AR_t$

t=-10

where

CAR = Cumulative abnormal returns of merger announcement

Statistical Significance of Event Returns

In order to test the evidence of insider trading which takes place around mergers announcement, the null hypothesis has been set which states that there is no evidence of insider trading taking place around the event date associated with merger announcement in India. This implies that the null hypothesis suggest that there are no abnormal returns around the merger announcement date, i.e., event date. Thus hypothesis of no abnormal returns following merger announcement needs to be statistically tested.

The statistical significance of cumulative abnormal return (CAR), has been examined using the *t*-statistic, with the help of SPSS software. In the event of the *t*-statistic being significant, it implies that there are abnormal returns associated with the merger announcements in India and hence an evidence for insider trading taking place around the event date.

Results

CAR Around Event Date on Company A Stock

Event Window	CAR around Event Date
(-1,+1)	0.043253395
(-2,+2)	0.089028967
(-5,+5)	0.29096303
(-6,+6)	0.35303951
(-7,+7)	0.42268409
(-8,+8)	0.483340186
(-9,+9)	0.539066395
(-10,+10)	0.58648731

CAR Around Event Date on Company B Stock

Event Window	CAR around Event Date
(-1,+1)	0.788723676
(-2,+2)	1.254742349
(-5,+5)	2.376829449
(-6,+6)	2.710749523
(-7,+7)	3.004797562
(-8,+8)	3.30540639
(-9,+9)	3.603798873
(-10,+10)	3.878142829

The hypothesis that there are abnormal returns associated with the announcement of pharmacy merger in India is found to be true. The returns are to the tune of 387% in Company B and approximately 58% for Company A.

Discussion

The regression equation indicate that Company A acquire Company B will benefit the latter and there is a possibility of insider trading in Company B. There has been growth of 387% rise of returns with in a period of (-10+10) days around the event date. The rise in Company A share has not been so substantial as per the regression done where CNX Pharmacy is independent variable. This shows that before the announcement was made people made abnormal gains. The stock of Company B moved from Rs. 370.70 on Tuesday to Rs. 459.55 on Friday. The deal was announced early on Monday. The rally seen in the Company B shares before the deal announcement, incidentally, stopped near the deal value, signaling the market had a whiff of the valuation. The share exchange ratio for the merger gave an implied value of Rs. 457 apiece to Company B shares.

Sinha, (2014) found substantial spurt in stock price came at a time when the Indian currency had appreciated. Any strength in rupee is seen as negative for Indian drug companies, which earn a substantial part of their revenues from exports, and this includes Company B. This is due to fact that an appreciating rupee will bring down the revenues earned in dollars, or any other major currency but reported in India in rupee terms. The rupee value from 60.32 to a dollar on March 27, appreciated to a four-month high of 59.89 the next day. The hypothesis h2 was found to be true that there are abnormal returns associated with the merger of two pharmacy companies even in adverse currency relationship.

Andhra Pradesh High court ordered a temporary halt to Company A $3.2bn takeover of Company B, along with debt of 800 million$ of company's debt. Indian drug maker complaints about irregular share price movements. The Andhra Pradesh High Court disposed off the stay because India's capital market regulator (SEBI) is investigating the insider trading allegations.

Krishnan (2014) Company A hurdles acquisition of Company B may hit a major hurdle with antitrust body Competition Commission of India (CCI) asking the two companies why a public investigation should not be ordered into the deal because it will result in significant market domination by one company and could affect the prices of essential life saving drugs in Indian market. CCI believe that the deal could be against national interest. This is for the first time CCI has evoked the issue of national interest to ask hard questions of merger in making. CCI after setting conditions of sale of few drugs by Company A and Company B to third party not to have monopolistic conditions in the pharmacy sector.

India has a poor record booking crime for insider trading, when the corporate are involved. SEBI exercise its powers and prohibited Sterlite Industries from accessing the capital market for a period of 2 years in Harshad Mehta scam. The Securities Appellate Tribunal (SAT, 2002) set aside the SEBI's order prohibiting Sterlite Industries Ltd. to access capital market for two years.

Deepak Shanoy (2014), found that Silverstreet a subsidiary of Company A had bought 60 lakh shares of Company B, in the March quarter. But Company A annulled these shares on the merger as it cannot be issued to Company A, since it's a subsidiary and thereafter no action was taken against Company A, which is listed in Sensex and Nifty.

In USA, director of Goldman Sachs, Rajat Gupta was jailed for two years for insider trading while Rajat losing his appeal paid approximately $13.9 million in civil penalties and ban on serving as public company officer. The $13.9 million civil penalty, equals to three times the profits gained and losses avoided by one time billionaire hedge fund founder Raj Rataratnam. Gupta was found guilty in 2012 by the court of passing illegal tips to Raj Rajaratnam, a co-founder of the Galleon Group LLC hedge fund.

It is too early for insider trading took place or not during the time of announcement of merger of the two big pharmaceutical companies. The amount of shares purchased before the announcement of merger and rise in price of Company B share created a circumstance which only indicates insider trading. United States Vs. Larrabee (2001) for insider trading regarding the issue of relevance of circumstantial evidence. In United States of America Vs. Raj Rajaratnam (2011) has observed as follows have sustained insider trading convictions based on circumstantial evidence in considering such factors as: "(1) access to information; (2) relationship between the tipper and the tippee; (3) timing of contact between the tipper and the tippee; (4) timing of the trades; (5) pattern of the trades; and (6) attempts to conceal either the trades or the relationship between the tipper and the tippee". The above principles are not in conflict with the regulatory framework.

In the mean time National Democratic Alliance (NDA) came to power 2014 and have decided to give more power to SEBI to unearth the financial frauds, especially insider trading by the amendment in SEBI Act in Parliament. This government has will power and also number in Parliament by amending the SEBI act and give power to telephone tapping and use other means as well to maintain transparency in the capital market. Although no substantial action is taken by SEBI to curb insider trading, which was approved by Securities Appellate Tribunal (SAT).

References

Aiyar, M.S. (2003). Stock market scam and UTI imbroglio. *Economic and Political Weekly*, March 8.

Fernando, A.C. (2006). *Corporate Governance: Principles, Policies and Practices,* New Delhi: Pearson Education.

Glass, G.S. (1966). Extensive insider accumulation as an indicator of near term stock price performance, Ph.D. Dissertation, Ohio State University.

Lekkas, P. (1998). Insider trading and the Greek Stock Market. *Business Ethics: A Euopean Review*, *7*(4), 193-199.

Scholes, M.S. (1972). The market for securities: Substitution versus price pressure and the effects of information on share price, *The Journal of Business,* 45(2), 179-211.

SEBI vs Kaul, V.K. (2012). Retrieved from *www.sebi.gov.in/cms/sebi_data/attachdocs/1404282224972.pdf,* accessed on March 2, 2016.

Singh, A.K. (2005). HRD practices and philosophy of management in Indian organizations, *Vikalpa*, *30*(2), 71-80.

Singh, A.K. (2010). A study of HRM practices and organizational culture in selected private sector organizations in India, *Acta Oeconomica Pragensia*, *18*(4), 64-80.

Singh, A.K. and Goel, K.K. (2007). Value based management in select Indian organizations: An empirical study, *The Indian Journal of Commerce, 60*(3), 319-336.

Singh, A.K. (2002). Human development: A holistic perspective for developing transformational leadership from within, *Delhi Business Review: An International Journal of SHTR, 3*(1), 29-45.

Singh, A.K., & Rastogi, L. (2001). Human value added, *Delhi Business Review: An International Journal of SHTR, 2*(1), 21-34.

Singh, A.K., et al. (2000). The wheel of transformation: A model for developing world class organizations, *Delhi Business Review: An International Journal of SHTR, 1*(1), 1-11.

Singh, A.K., Maheshwari, S., & Goel, K.K. (1999). Value based management: An empirical study of top-level managers in India, *Indian Journal of Commerce, Conference Number, 52*(4), 139-147.

Sinha, P. (2014). Dalal street sniffs insider trading over sun-ranbaxy merger. *The Times of India*, Delhi, April 8.

United States vs. Larrabee, 240 F.3d 18, 21-22 (1st Cir. 2001).

Annexure 1

Company B

Date		Return on CNX Pharmacy Index	Cumulative Abnormal Return
24-Mar-14	-10	-0.00606776	0.003984094
25-Mar-14	-9	0.000115548	0.02402235
26-Mar-14	-8	-0.020700013	0.034642796
27-Mar-14	-7	-0.009405395	0.016722084
28-Mar-14	-6	0.009984319	0.057992409
31-Mar-14	-5	-0.000248942	0.05982506
1-Apr-14	-4	0.004075802	0.071867056
2-Apr-14	-3	0.013013118	0.150761874
3-Apr-14	-2	0.010230377	0.193147487
4-Apr-14	-1	0.000337984	0.273334485
7-Apr-14	0	-0.002269467	0.243751992
9-Apr-14	1	0.026043231	0.271637199
10-Apr-14	2	-0.018893421	0.272871187
11-Apr-14	3	0.011075779	0.278780196
15-Apr-14	4	-0.008035356	0.282654884
16-Apr-14	5	-0.002993368	0.27819803
17-Apr-14	6	0.008181893	0.275927665
21-Apr-14	7	-0.002688375	0.277325955
22-Apr-14	8	0.002714561	0.265966032
23-Apr-14	9	0.004104889	0.274370133
25-Apr-14	10	0.001874761	0.270359862
28-Apr-14	11	0.016641007	0.277184463
29-Apr-14	12	-0.001939118	0.284368171
30-Apr-14	13	-0.000801826	0.263648897
2-May-14	14	0.00704321	0.252218488
5-May-14	15	-0.009629707	0.252186073
6-May-14	16	0.001107879	0.248951155
7-May-14	17	-0.002102022	0.258680462
8-May-14	18	-0.002787949	0.254217338
9-May-14	19	-0.004839742	0.243583996
12-May-14	20	-0.008902485	0.23665882

Y= 0.001237968 + 0.742399463	**Actual Return - Expected Return**	
Expected Return on Company B Stock	**Abnormal Return or Residuals**	**Cumulative Abnormal Return**
-0.003266734	0.003984094	0.003984094
0.001323751	0.020038256	0.02402235
-0.014129711	0.010620446	0.034642796
-0.005744593	-0.017920712	0.016722084
0.008650321	0.041270325	0.057992409
0.001053154	0.001832651	0.05982506
0.004263841	0.012041996	0.071867056
0.010898899	0.078894818	0.150761874
0.008832994	0.042385613	0.193147487
0.001488887	0.080186998	0.273334485
-0.000446883	-0.029582493	0.243751992
0.020572449	0.027885207	0.271637199
-0.012788498	0.001233988	0.272871187
0.00946062	0.005909009	0.278780196
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0.006466843	-0.011430409	0.252218488
-0.005911121	-3.24152E-05	0.252186073
0.002060457	-0.003234918	0.248951155
-0.000322572	0.009729307	0.258680462
-0.000831804	-0.004463124	0.254217338
-0.002355054	-0.010633342	0.243583996
-0.005371232	-0.006925176	0.23665882