

STUDY ON THE INDEPENDENCE OF STOCK PRICES IN THE DOMESTIC MARKETS

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Abstract

Price Behavior in Domestic Markets efficiency so far has noted the contradictory evidence on behavior of stock returns and prices in the domestic stock markets. A majority of studies favors the stock market efficiency while the occasional references of studies reporting inefficiency were also experienced. The prominent studies conducted by Fama (1985), Chaudhary (2001), Belgaumi (2018), Mittal (2018), Cootner (1982), Gupta (1985), Rao (1971), Sharma (1987), and Malik (2000) have supported the stock market efficiency in the weak form. While the studies conducted by the Ranganathan and Subramanian (1983), Poshakwale (2006), Gupta and Gupta (2007) and Gupta (1987) have generated contrary evidences. The debate in academic literature in this context has now settled to acknowledge the widespread prevalence of market efficiency in stock markets in its weak form all over the world. However, as pointed out earlier, disturbances in the form of fads, bubbles and noise trading cannot be ruled out completely even today.

Key words: Markets efficiency, stock, occasional, bubbles and noise.

Introduction

Despite all its success, one vital organizational weakness of the primary market in India could be identified as the obstacle in floating of small issues. It is in part at least has been constituted by the institutional obstacles and also to the operational obstacles inherent in the form of prohibitive cost. An urgent requirement of the market was the introduction of a method of flotation to raise capital at a reasonable cost. The development of institutional facility for the placement of securities was called for to overcome this lacuna. Also, there has been a lack of genuine investment demand for new issues as a result a larger number of IPOs have devolved on the underwriters because of tardy public response. Hence, there had been a need to lay more stress on the creation of institutional demand for industrial securities. This has underlined the need for encouraging the growth of a diversified structure of mutual funds and has also led to the regulations governing investments by institutional investors such as LIC, GIC, pension and provident funds.

In India, initially new issue market was regulated by the Controller of Capital Issues (CCIs) under the provisions of Capital Issues (Central) Act, 1947 and the subsequent exemption orders and rules made thereunder. With the repeal of this Act and consequent abolition of the office of CCI in 1992, the protection of interest of investors in securities market and promotion of development and regulation of market became the responsibility of the SEBI. To tone up the

operations of new issues in the country, it has put in place rigorous measures. These cover both major intermediaries as well as market activities for regulation of new capital issues. As a result, a significant organizational development in the Indian primary market has taken place to promote the following intermediaries:

- i) Merchant Bankers/Lead Managers
- ii) Underwriters
- iii) Bankers to an Issue
- iv) Brokers to the Issue
- v) Registrars and Share Transfer Agents to an issue.
- vi) Debenture Trustees
- vii) Portfolio Managers

Capital Issues in Foreign Markets

The first twenty years of independence were marked by caution in welcoming the foreign capital. A restrictive and selective approach characterized the next fifteen years, while increasing relaxation, liberalization and receptivity to the foreign capital was experienced during the 1980s. The period after 2001 can be called the days of eager welcome, open arm policy, and an increasing thrust towards international integration and globalization³. Indian corporate, uptill now were restraining themselves to the domestic market at high cost for financing have now come to realize that a host of investors, particularly in Europe, Asia and America, can be roped in for mobilizing funds at cheaper cost of capital. Due to the industrial revolution and large volume of business, Indian corporates needed large volume of funds⁴. But Indian Capital market is insufficient to meet their requirements of funds at lower cost. Thus, Indian companies have found their way to global capital markets for meeting their resource requirements.

Review of Literature

Agarwal (2001) studied market efficiency to analyse the behaviour of dividends and stock prices of the automobile companies. The study was based on Lintner's model for the period, 1966 - 1986. It has been found that the current dividend behaviour is explained by the current level of net profits. Results of least square method supported adaptive expectations hypothesis and not that the rational expectation that share prices were moving slowly and smoothly on the basis of current profits and the dividends paid in the last years. It concluded that dividends and share prices were closely related with each other but the causation was seen in a way that past dividends were found explaining the current share prices and not vice-versa.

Chaturvedi (2000) examined the behavior of stock prices around the announcement of half-yearly financial results. The behavior has been examined in the pre and post announcement periods in relation to the unexpected earnings, which was defined in two ways i.e., i) sign of the unexpected earnings vis-à-vis

standardized unexpected earnings, and, ii) the P/E ratios. The study pertained to 90 stocks listed on the BSE for January 1990 to March 2006 period. In relation to the sign of unexpected earnings, it has been found that the difference in cumulative abnormal returns between the portfolios with positive and negative unexpected earnings with uniform stationary beta was observed to be significant for the half-years. In relation to the standardized unexpected earnings, it has been found that differences in cumulative abnormal returns between the highest and the lowest risk revealed that the former constantly outperformed the latter except for the second-half of 1993. In relation to P/E ratios, it has been found that the differences in cumulative abnormal returns between the lowest and the highest P/E portfolios were positive for the event window for all half years with the exception of the second-half year of 2018.

Karmakar and Chakraborty (2000) studied stock price behaviour to examine the holiday effect in the Indian Stock Market with the help of the daily closing prices of the Economic Times Index Numbers of Ordinary Share Prices for the study period, January 1981 – December 2018. To measure holiday effect, the author has chosen 9 public holidays and trading days have been classified into four categories such as week days, pre-holidays, intra holidays and post-holidays. In the study it has been found that pre-holiday return was the highest during the whole period as well as for the different sub-periods. On the basis of t-statistics, it has been observed that it is only the pre-holiday return which was significantly different from zero at 1percent level for the whole period as well as for the different sub-period but missed at 5 percent level of significance. In the study, it has also been noted that the higher returns were accompanied by lower risks for pre-holidays but lower returns by higher risks for the post holidays and thus refuted the capital assets pricing model.

Chaturvedi (2000) worked on the share price behaviour to study the investment performance of Indian stocks in relation to P/E ratios in the pre and post announcement periods with the help of 90 stocks listed on the Bombay Stock Exchange that fulfils the conditions of continuous listing and active trading. Pre-announcement period includes 20 trading days prior to the earnings announcement date and post announcement period includes 40 trading days subsequent to the earnings announcement. It means the event window was from (-) 20 days to + 40 days. In the study, it has been found that the differences in cumulative abnormal returns were positive in all the half years except for the second half of 2018 wherein returns were (-)32.16 per cent, hence the proposition that the market was inefficient is not refuted. In other cases of half-years, the difference in cumulative abnormal returns ranges from a minimum of 3.69 per cent in the first half 2001 to a maximum of 48.66 per cent in the first-half of 1993. The persistence of abnormal returns indicate the effectiveness of the strategy of buying stocks with low P/E

ratios and selling with high P/E ratios in a apparent bid to outperform the market. It has also been observed that abnormal returns occur both in pre and post announcement periods but the cumulative abnormal returns for the post announcement period were positive and substantial in the control period +21 days to 40 days. It indicated the rapid adjustment of stock prices to the p/e information, thus indicating information efficient market mechanism.

Shadevan and Thiripalraju (2018) studied price behaviour with monthly observations of money supply and stock prices variables. The study used Granger test which pertains to the measurement of causal relationships between the variables. The study has observed that M_3 (money supply) and sensdex presented absence of any relationship between stock returns and broad money, except the period 1980:5-1987:3. RBI's security price index has exhibited complete inefficiency of the stock market with respect to money supply for the period 1980:5-1987:3. The study concluded that there was a absence of any consistence evidence across various sample periods on the direction of causal relationship between money supply and stock prices.

Material and method

To test the semi strong form of market efficiency, the event study methodology has been used. The study employs Fama, Fisher, Jensen and Roll's (1999) methodology for examining the impact of corporate announcements. For testing the strong form of market efficiency, the alternative portfolios have been constructed on the basis of issue size and market price of stocks on a specific date. To discover whether different portfolios can enable an investor to earn above normal returns, the performance of portfolios so developed has been measured in Sharpe model framework in terms of risk and return.

As pointed out earlier, a majority of studies on the behavior of stock prices and returns have supported the randomness and independence. In other words, serial correlation coefficients were not considered significantly deviated from zero. This has withstood test of time, transcended geographical barriers thus encompassing a variety of securities. These are vividly described in the Chapter II, Review of literature. As pointed out, serial correlation coefficients for weekly prices and returns have been analyzed in the domestic as well as stock markets during study period to comprehend independence in their behavior pattern. Absence of any significant auto-correlation coefficients endorses the independence while significant deviations from the zero stipulate the dependence in stock prices and return with varying time intervals (lags). Thus the discussion on weak form of EMH is divided into three sections:

Deals with the independence of stock prices in the domestic markets.

A comprehensive analysis on the behavior of stock prices in the domestic stock markets is presented in this section. A comparative behavior pattern is also discussed here with a view to note similarities and differences in market prices of sampled stocks in the two markets. The emphasis, obviously, is on the weak form of stock market efficiency. It essentially intend to discuss pattern in the past price movement to identify any trend to develop profitable investment strategies. Curiously enough, if such profitable trading strategies are developed, stock markets are not supposed to be efficient. Contrarily, when such trading strategies fail to yield abnormal returns, stock markets are considered informational efficient as an obvious endorsement of the weak form of stock market efficiency. However, instances of noise trading, fads and bubbles tend to constrain the weak form of market efficiency.

The documented literature on the market

Price Behavior in Domestic Markets efficiency so far has noted the contradictory evidence on behavior of stock returns and prices in the domestic stock markets. A majority of studies favors the stock market efficiency while the occasional references of studies reporting inefficiency were also experienced. The prominent studies conducted by Fama (1985), Chaudhary (2001), Belgaumi (2018), Mittal (2018), Cootner (1982), Gupta (1985), Rao (1971), Sharma (1987), and Malik (2000) have supported the stock market efficiency in the weak form. While the studies conducted by the Ranganathan and Subramanian (1983), Poshakwale (2006), Gupta and Gupta (2007) and Gupta (1987) have generated contrary evidences. The debate in academic literature in this context has now settled to acknowledge the widespread prevalence of market efficiency in stock markets in its weak form all over the world. However, as pointed out earlier, disturbances in the form of fads, bubbles and noise trading cannot be ruled out completely even today. The information inputs generated in the present study are presented in table 1

It reflects serial correlation coefficients computed for lags 1 to 16 by using the weekly data of 68 sample companies having made the issue to examine the weak form of market efficiency for domestic market. The table depicts that out of 1071 correlation coefficients, 163 (about 15 per cent) were found significant, out of which 66 (about 6 per cent) were significant at 1% level of significance. The table also represents that 552 (about 51.5 per cent) were negative and 485 (about 45 per cent) were positive and remaining 34 (about 3.5 per cent) were zero. The dominance of negative values signals a depressed stock market conditions during the study period. Also it can be had from the table under consideration that 637 (about 59 per cent) have the correlation coefficient values less than the respective probable error. However, certain coefficients were large enough to indicate serial dependence of stock prices at different time lags. The overall insignificance of

auto correlation coefficients points to the efficiency of the domestic markets in weak form.

Conclusion

Thus, the dominance of negative serial correlation points to the dampened stock market conditions during the study period. Curiously, it was noted that number of significant auto correlation values reduces as the time lag widens. World over, the debate in the academic literature in this context has favored at the 16 time lags of weekly duration to examine the independentness stock prices. Fama's instinctive study on the subject coined period 1-4 lags as short-period, 5-9 as intermediate and 9-16 as the long run. Cootner (1982) have noted significant dependence in stock prices for 14th week interval period. Subsequent studies (Fama,1985) have considered the terminating time lags of the intervening duration on 4th, 9th and 16th week lags so sacrosanct as to comment on the efficiency in the short, medium and long run, respectively. However, Poshakanwala (2006) has even identified 1st, 4th, 9th, 10th and 14th week interval in stock prices for serial dependence.

Table 1

Serial Correlation Coefficients for Stock Prices in the Domestic Markets

<i>Stocks</i>	<i>Time Lags</i>																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Arvind Mills	-0.004	0.038	0.063	-	0.116*	0.01	-0.047	0.01	-0.028	0.021	0.006	0.005	-0.018	-0.068	-0.083	0.086	-0.101
Ashoka Leyland	0.164*	0.068	0.043	0.061	-0.067	0.09	-0.051	0.021	-0.008	0.05	0.054	0.120*	-0.044	0.043	-0.07	-0.001	
Bajaj Auto	-0.053	0.181*	-0.024	0.021	-0.075	0.111*	0.073	0.057	-0.001	0.013	0.033	-0.068	-0.055	-0.015	0.028	0.004	
Ballarpur Ind	0.283*	-0.085	0.265*	-0.14	-0.124	0.131	-0.12	-0.097	0.156	-0.224	-0.019	0.016	-0.086	0.126	-0.022	-0.157	
Bombay Dyeing	0.496*	0.013	-0.006	0.011	0.016	-0.012	0.165*	0.359*	0.225*	0.049	0.146	0.26**	-0.13*	-0.054	0.112*	-0.042	
BSES Ltd.	-0.102	0.04	-0.086	-0.091	-0.003	0.016	-0.041	0.063	-0.058	0.014	-0.048	0.041	-0.035	0.124*	-0.022	0.0488	
Century Textiles	0.389*	-0.015	-0.013	0.025	0.013	-0.036	0.029	-0.007	-0.004	0.045	-0.029	-0.004	-0.008	0.016	0.004	-0.088	
CESC	0.233*	0.007	0.158**	0.205*	-0.028	0.029	0.136*	0.068	0.008	0.057	-0.071	0.053	0.012	0.164*	-0.017	0.077	

Stocks	Time Lags															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Core Health	-0.008	0.161*	0.136*	0.215*	0.081	-0.102	-0.106	0.244*	0.014	0.112*	0.001	0.173*	0.165*	-0.019	0.042	0.163*
Crompton Greaves	-0.051	0.001	0.027	-0.058	0.075	0.091	0.147*	-0.068	0.027	0.081	-0.065	0.114	-0.051	0.134*	-0.085	0.028
DCW	-	0.31**	0.138*	0.02	0.175*	0.108*	0.117*	-0.024	0.019	0.146*	0.068	-0.04	-0.011	0.024	0.108*	0.056
Dr. Reddy's	-	0.239*	-0.042	-0.051	-0.001	-0.029	0.117*	-0.08	0.096	-0.1	0.011	-0.065	0	0.144*	-0.029	-0.078
E.I. Hotels	0.194*	0.07	-0.057	-0.013	-0.06	-0.026	0.018	0.016	0.054	0.02	-0.089	0.044	-0.063	-0.044	0.018	-0.024
EID Parry	-	0.227*	-0.099	0.048	-0.031	0.033	0.06	-0.009	0.125*	0.146*	0.063	0.004	-0.02	0.037	-0.026	0.013
Finolex Cables	0.124*	0.08	-0.025	0.043	0.069	-0.05	0.036	-0.063	0.038	0.085	-0.062	0.007	0.021	-0.07	0.053	0.03
Flex Industries	0.151*	0.023	0.012	-0.051	-0.069	-0.068	0.009	0.055	-0.015	0.049	0.063	-0.054	-0.025	-0.033	-0.015	0.08
GE Shipping	-0.099	0.08	-0.058	-0.059	-0.025	0.023	0.041	0.112*	-0.084	0.107*	-0.005	-0.022	-0.063	-0.002	0.032	-0.007
Garden Silk	0.191*	0.179*	0.045	0.144*	-0.012	0.197*	0.039	0.112*	0.057	0.067	-0.036	-0.034	0.09	0.032	0.144*	0.145*

Stocks	Time Lags															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	*					*										
	-															
GNFC	0.167*	-0.015	0.006	-0.073	0.033	-0.032	0.046	0.1	0.01	-0.008	0.02	-0.068	-0.069	0.009	0.003	0.043
	-															
Grasim (New)	-0.031	0.231*	0.007	0.189*	-0.002	0.126*	-0.058	0.2**	0.058	-0.056	0.024	-0.019	0.022	-0.008	-0.065	-0.035
Grasim (Old)	-0.01	0.243*	0.037	0.143*	0.01	-0.095	-0.105	0.211*	0.111*	-0.101	0.011	0.011	0.031	-0.027	-0.085	0.004
	-															
Ambuja	0.49**	-0.002	-0.001	0	-0.006	0.002	0.007	-0.001	0.006	0.001	-0.005	0.005	-0.017	0.016	-0.006	0.006
Himachal	0.348*				-	0.204*		0.208*		0.178*			0.214*			
Futuristic	0.162*	*	-0.087	-0.058	0.131**	*	-0.116	*	-0.06	*	0.011	0.011	*	0.06	0.064	-0.031
Hind Develop	0.061	0.115*	-0.04	-0.02	0.103	0.081	0.161*	0.035	*	0.026	0.027	0.007	0.028	-0.01	0.072	0.027
Hindalco (New)	-0.5**	0.005	0.002	-0.01	0.001	0.003	0	-0.008	0.007	0.006	-0.012	0.009	0.027	-0.043	0.013	-0.003
Hindalco (Old)	-0.072	-0.072	0.08	0.008	0.023	-0.043	0.031	0.037	-0.023	-0.031	0.063	0.037	-0.042	-0.032	0.005	-0.035
	-															
ICICI	0.494*	*	-0.004	0.006	0.001	-0.004	-0.009	0.021	-0.002	-0.018	0.013	-0.003	0.005	-0.021	-0.015	0.014
	-															
ICICI (ADR)	0.563*	0.278	-0.121	-0.048	-0.065	0.119	-0.176	0.097	-0.059	0.027	-	-	-	-	-	-

Stocks	Time Lags															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Indal	0.023	-0.077	-0.035	0.001	0.092	-0.037	0.015	0.077	0	-0.01	0.01	0.02	-0.1	-0.1	0.109*	-0.028
India Cement	-	0.329*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indian Rayon	-0.072	0.086	-0.036	-0.027	0.109	-0.086	0.002	0.003	0.035	-0.076	0.158*	-0.066	-0.018	-0.089	-0.034	-0.035
Indian Hotel	-	0.437*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INDO Fertilizer	-	0.027	-0.035	0.001	-0.005	-0.021	-0.008	0.048	0.004	-0.022	0.015	-0.031	-0.01	-0.027	0.239*	0.431*
Indo Rama	-0.065	-0.026	-0.052	-0.014	0.178*	0.063	0.067	-0.075	-0.001	-0.102	.007	0.095	-0.04	-0.048	0.123*	-0.113
IPCL	.013	-.081	-.097	.053	.027	.036	-.037	-.052	.137*	.026	.032	-.075	-.008	-.068	.035	.033
Infosys	-0.502	0.046	0.123	-0.109	-0.187	-	-	-	-	-	-	-	-	-	-	-
ITC	-	0.147*	-0.039	0.143*	-0.002	-0.031	-0.07	0.084	0.008	0.035	0.013	-0.07	0.023	0	0.104*	-0.051
Jain Irrigation	-	0.498*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JCT Ltd.	-0.015	-.109*	-.017	.112*	-.007	-.006	.159*	.092	.080	-.062	.095	-.029	-.102	-.072	.130*	.090

Stocks	Time Lags															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
JK Corp.	0.035	0.074	-0.005	0.072	0.096	0.160*	0.063	0.002	0.158*	0.282*	-0.016	-0.033	-0.091	0.071	-0.012	0.125*
Keroram Industries	0.031	-0.084	0.027	-0.049	-0.037	.051	0.112	0.079	0	-0.001	-0.117	0.036	-0.048	0	0.043	0.014
L&T (Old)	-0.077	-0.079	-0.062	-0.045	-0.004	.073	0.054	0.088	-0.042	0.061	-0.038	-0.025	-0.021	0.068	-0.03	0.118*
L&T (New)	0.016	-0.12	0.003	-0.091	-0.001	.118	0.086	0.071	-0.039	0.087	-0.062	-0.071	0.026	0.077	-0.039	0.138*
Mahindra & Mahindra	0.048	0.023	-0.023	-0.052	0.09	.017	0.058	-0.034	-0.025	-0.041	0.074	0.032	-0.019	-0.042	-0.084	-0.03
MTNL	-	0.378*	-0.03	0.065	0.034	.033	0.018	-0.046	0.038	-0.021	-0.05	0.028	-0.1	0.031	-0.051	0.056
NEPC	0.117*	0.043	-0.037	-0.022	-0.051	-0.053	-0.058	0.121*	0.285*	0.184*	0.097	0.007	-0.095	0.013	-0.019	-0.088
Nippon Denra	-0.247	0.045	-0.121	0	0.015	-0.041	-0.091	-0.117	0.166	-0.104	-0.01	-0.044	-0.167	-0.005	-0.052	-0.147
Oriental Hotels	-	0.485*	-0.012	0.013	-0.014	.008	-0.01	-0.004	0.016	0.002	-0.003	-0.003	-0.003	-0.014	0.006	0.017
Ranbaxy Labs	-0.072	-0.014	-0.033	0.036	-0.081	.073	0.104	-0.079	0.085	-0.025	0.134	0.002	-0.018	*	0.078	-0.048
Raymond	0.102	0.058	-0.005	-0.038	-0.044	0.017	0.017	0.004	0.011	0.102	-0.049	-0.031	-0.093	-0.066	-0.052	0.041

Stocks	Time Lags																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Reliance (New)	-0.032	0.088	0.201*	-	0.113*	0.029	-0.11*	-0.002	0.166*	0.151*	0.003	0.13*	0.025	-0.09	0.106*	-0.038	0.105*
Reliance (Old)	-0.038	0.069	0.176*	-	0.121*	0.038	0.121*	0.02	0.184*	0.157*	-0.008	0.144	0.029	0.109*	0.108*	-0.035	0.112*
SBI	-0.104	0.092	-0.105	-0.06	-0.116	0.039	-0.042	0.068	0.06	0.061	0.024	-0.092	0.014	-0.123	0.033	-0.046	
SIEL	0.016	-0.01	0.023	-0.023	-0.018	-0.015	-0.069	0.015	-0.035	0.168*	0.066	-0.058	-0.024	0.033	-0.002	0.005	
SPIC	-0.093	0.06	-0.043	-0.023	-0.05	0.188*	-	0.128*	0.1	-0.031	0.007	-0.003	0.106*	0.125*	0.097	-0.014	-0.018
SAIL	-0.5**	0	0	0	0	0	0	0	-0.003	-0.005	-0.003	-0.001	0.001	0.001	0	-0.002	
Sanghi Polymer	0.501*	0.006	-0.003	0	-0.001	0	-0.001	-0.001	0.002	0	-0.001	-0.001	-0.001	0	-0.001	0.001	
SIV	-0.021	0.033	-0.006	0.095	0.016	-0.037	0.079	0.076	0.068	0.073	0.078	0.080	-0.044	-0.053	0.055	0.034	
Sterlite	-0.104	-0.076	0.141*	-	0.195*	-0.04	-0.022	0.092	-0.056	-0.006	-0.008	0.022	0.052	0.141*	0.022	-0.045	
Tata Electron	0.213*	0.188*	-0.007	-0.028	-0.003	-0.013	0.012	0.023	0.023	0.017	-0.03	-0.038	-0.041	0.003	0.015	-0.055	
Telco (New)	0.04	-0.008	0.024	-0.122	0.038	0.013	-0.014	0.004	0.043	-0.035	-0.043	-0.080	-0.021	-0.121	-0.125	-0.055	

Stocks	Time Lags																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Telco (Old)	-	0.116*	-0.024	0.072	-0.037	0.021	0.018	0.084	0.004	0.086	-0.031	0.019	-0.095	-0.095	-0.056	0.069	-0.031
Tube Investment	-	-0.058	-0.034	-0.08	0.08	-0.003	0.032	0.046	-0.083	0.015	0.052	0.056	0.123*	-0.02	0.043	0.024	0.033
United Phos.	-	0.119*	-0.015	-0.079	0.063	0.061	-0.059	-0.052	0.077	0.051	0.05	0.055	0.118*	0.066	-0.024	-0.03	-0.025
Usha Beltron	-	-0.079	0.015	0.175*	-0.017	0.111*	-0.03	0.062	-0.067	0.017	0.177*	-	-0.12*	-0.103	0.058	-0.036	-0.054
Videocon Int.	-	0.22**	-0.063	-0.053	-0.09	-0.054	0.132*	0.017	0.011	-0.091	-0.08	-	-0.009	0.03	-0.020	-0.051	0.025
VSNL	-	0.303*	0.019	0.097	-0.19*	0.098	0.097	0.141*	-0.093	0.156*	-0.049	0.122	0.003	-0.131	.012	-0.131	0.182*
Wockhardt	-	0.499*	0	0	0	-0.001	0.001	-0.001	0	-0.001	0.002	0	0.001	-0.001	.00	0	-0.001

* Significant at 5 per cent, ** significant at 1 per cent level of significance.

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