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Automobile Stocks dancing to the tune of dividend news: A Decadal Study.

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Abstract

In 1980's Indian Government had started promoting Automobile industry allowing foreign direct investment and other such liberalized norms for its growth and prosperity. Suzuki and Toyota of Japan and Hyundai of South Korea were allowed to invest in Indian Automobile market leading to its development. By the end of 20th century, there were 12 large automobile companies set up in India which were the result global companies' investment. This sector has gradually evolved as a significant contributor in economic development of the nation.

The events like mergers/acquisitions, bonus announcement, stock split etc. may affect prices of stocks in a market. However, dividend announcement may be regarded as the most signaling event which can be discounted by stock prices. A decadal study from 2001-10 has been attempted in the present paper based on Capital Asset Pricing Model. The Paired Sample t-test, Wilcoxon Signed Rank test and Sign test have been used as statistical tools. The study found a significant effect of dividend announcement on the abnormal stock returns of Automobile industry in India.

Keywords: *CARs, Beta, CAPM, Risk-free rates, Market rate of return.*

1. INTRODUCTION

1.1 Automobile Industry in India

The Indian automobile market is one of the largest markets in the world. India's passenger car and commercial vehicle manufacturing industry is the sixth largest in the world. The industry grew between 16-18% throughout the course of 2011-12 selling around three million units. In 2010, Indian had beaten Thailand in exporting passenger cars and became Asia's third largest exporter of these cars.

In 1980's Indian Government had started promoting this industry allowing foreign direct investment and other such liberalized norms for its growth and prosperity. Suzuki and Toyota of Japan and Hyundai of South Korea were allowed to invest in Indian Automobile market leading to its development. By the end of 20th century, there were 12 large automobile companies set up in India which were the result global companies' investment.

Thus, Indian Automobile market has gradually evolved as an established industry. There is still a huge amount of potential in this industry in direct manufacturing and spare parts segments. The present paper has singled out Automobile sector of India to locate the effect of events on the stocks of this industry.

1.2 What Drives Stock Prices?

As per the economic concept the price is set to be determined by the demand and supply forces. But, it may be very difficult to relate it with share prices in the stock market. Apart from demand and supply forces, there may be lot of reasons for determining the price of a company's stock. The important ones are mentioned here in this segment.

1.2.1 Fundamental Factors

The first and foremost reason for a person to block his funds in a security may be earnings. There may be earnings announcements which may have short term effects on the stock returns. The positive news about the company may give rise to prices and vice versa. Similarly, there may be dividend announcements taking place in between the financial year or at the end. This news is generally taken as "good news" about the stock by the investors.

1.2.2 Economic Factors

The announcement of financial budget may create noise at the stock market because it will include the policy decisions about many industries like agriculture, telecom, information technology etc. Similarly, the announcement of increase/decrease in bank rate, repo rate, liquidity rates etc. may have a direct influence on Banking and other related industries stocks. The liberalization in licensing of a particular industry may bring star like performance in its stocks indicating growth and prosperity for its investors.

1.2.3 Market sentiments

Market sentiments precisely mean investor's psychology in stock markets. Indian investors may invest as per their love towards a particular industry or they may choose auspicious days to invest. They may even believe a broker blindly and not perform any kind of technical analysis themselves before investing. They may take management

change as positive/negative news depending on their liking for those management personnel. Indian investors may also be called emotional. They act as per their own discretion by using market information as an indicator for good or bad news.

Thus, these factors combined together may affect stock prices.

1.3 Dividend Announcements

Dividend announcement is one of the most significant factors that may affect stock prices. This event is a strong indicator of company's fundamentals. It also denotes company's concern for its shareholders to provide them with regular returns. The event may also signify company's future opportunities and plans for growth. Dividends directly point out the earnings of a concern as it will be able to distribute only when it has surplus profits. The announcement of dividend is generally considered as positive news by all investors and thus it may significantly impact stock returns. The stock prices may react when it takes place. The normal returns which are generated by a particular stock may temporarily be abnormal due to dividend effect. The events other than dividend announcement may also impact stock returns of companies. But, the chances of dividend blowing the whistle in the market may be much more as it directly reflects the interest of shareholders i.e. returns.

1.4 Why Decadal Study

The present paper has performed a decadal study to find out the effect of dividend announcement on stock returns of Automobile stocks commonly listed at National Stock Exchange and Bombay Stock Exchange. The study peeped into the decade from 2001-10 to conduct a thorough analysis of dividend news for stocks of this industry. The effect of an event can be clarified with larger time period and more emphasis can be laid on what happened on particular days due to that event. Hence, in this paper we have taken a period which denotes a decade and possibly shall provide a guide to how dividend may affect stock returns of Automobile stocks.

The second segment of the paper shall explain the literary work done with regard to dividend announcement and its effect on stock returns. The next segment shall enlighten the research methodology used for the study. The empirical findings shall be discussed after methodology and the last segment shall conclude the paper.

2. REVIEW OF LITERATURE

Fama Eugene F. et.al (1969) revealed that stock splits are usually preceded by a period during which stock return rates are unusually high on the specific securities under split. Regression has been used as a main tool to find out relation between split, dividend and cumulative mean returns. The evidence shows that the market reacts and absorbs the new information immediately and as a result the effect can be seen in the stock prices. *But, the effect has more weight age from dividend announcement rather than stock split.*

Aharony Joseph and Swarky Itzhak (1980) have tested impact of quarterly dividend and earnings announcement on stockholders return by using daily stock prices of 149 firms from CRSP. The event window surrounding 20 days around the event date reflected that firms which did not change their dividend at all had only normal returns, the firms that had increased the magnitude of dividend and earnings had positive abnormal returns and the firms that had decreased the earnings and dividend had negative abnormal returns.

Miller Merton H. And Scholes Myron S. (1982) have used capital asset pricing model to find out after tax return effects due to dividend yield. The comparative analysis has been made between after tax stock returns and long term capital gains of 178 firms with their stock prices data taken from centre for research in stock prices. Dividend yield has been calculated using regression co-efficient and t-test was applied on the abnormal stock returns calculated using CAPM. The study found that there was no significant difference between returns in after tax dividend yield or long term capital gains.

Asquith Paul and Mullins David W. (1983) examined the effect of initiation of dividend payments on shareholders' wealth for 3 year period following the announcement of dividend. For the purpose of study, 168 firms were taken as a sample from New York Stock Exchange or American Stock Exchange. The dividend initiation in study's relevance meant dividend announced by a firm for the first time in its life or dividend announced after a long period of 10 years. The study found the market to be semi-strong for adjusting itself to the market news of dividends.

Elton Edwin et.al (1983) have studied the impact of dividend yields on security returns using zero beta form of CAPM. The stocks were grouped in portfolios depending on their divided yield forecasts and out of 20 portfolios, 20th portfolio contained zero dividend yields stocks. The study concluded a strong relationship between dividend yields and excess stock returns.

Kane Alex et. all (1984) have documented joint effect of dividend announcement and earnings announcement on abnormal stock returns and found significant interaction between two announcements. Abnormal returns were

calculated using capital asset pricing model followed by computing regression co-efficient to show statistical significance for corroboration effect between two types of announcements.

Eades Kenneth M. (1985) investigated stock market rationality for dividend announcements from 1962-1980 for NYSE. The results with the help of t-test show strong market efficiency for reaction to dividend omission or continuous dividend announcement. Moreover, when the ex-dividend period was controlled there was no lag in market reaction for dividend announcements.

Miller Merton H. and Rock Kevin (1985) found in their study that dividend announcements were accepted as an indicator of future earnings by investors and have shown in their earnings model that managers have more insider information than investors which gives away the assumption in Modigliani and Miller approach that both groups possess same level of information.

Asquith Paul and Mullins David W. (1986) have studied the impact of dividend announcement, stock re-purchase and issue of new stock on the stock returns of 88 sample firms using average cumulative abnormal returns and initial dividend yield in the model. Cumulative abnormal returns were found to pick up 1% for 12 days after the dividend was announced and this positivity remained in the market for around 90 days at a significant average level of 6%.

Michaely Roni et al. (1995) have compared the reactions on stock returns over 887 omissions and 561 initiations of dividend during 1964-1988. The study discovered that omissions have a deeper impact on the stock returns than initiations. Though the omission effect was found to be negative and the initiation effect was found to be positive when analyzed before and after the respective events.

Pani Upananda (2008) have studied the impact of dividend policy on the stock behavior of 500 Indian companies listed at BSE during 1996-2006. A dividend payout-retention ratio had been used to show the effect on market value of the firm. In addition to payout retention ratio, debt-equity ratio has also been considered to find out whether it affects stock return and in turn market value of the firm or not. Including size of the firm, debt-equity ratio, retention/payout ratio a fixed effect model was constructed to run panel data approach for finding the impact of dividend on the market value of its firm. Dividend retention ratio was observed to have positive impact on stock returns.

Malikarjunappa T. and Manjunatha T. (2010) have examined the effect of dividend announcements on stock prices of 149 companies listed at BSE-200 index in India. An event study methodology has been used to find out before and after effects of dividend announcement on stock price. With the help of student's t-test, the study concluded that semi-strong form of efficiency was no where found significant on the sample during the time period taken in the study.

Taneem Shania and Yuce Ayse (2011) have studied 82 companies in India listed at BSE to find out the effect of divided announcement on stock returns. 37 companies were found to be bad news sample and 45 companies as good news sample in the study. Market model had been used for calculating expected return for two types of analysis with event study methodology. The study concluded with t-test that the abnormal returns were significant for both types of news showing positive reactions of investors for good news sample and negative reaction for bad news sample.

The previous studies on "dividend announcement" for national as well as international stock exchanges indicate that there is a significant impact of this event on stock returns. The magnitude of effect may however vary in different stock markets. Information may be more quickly discounted in NYSE as compare to NSE due to the fact that the former is a more organized and systematic market. But, it can be undoubtedly said for the Indian markets that dividend may affect stock returns. The earlier research studies have explained the effect of dividend announcement on stock returns but special attention has never been given to "Automobile" sector. Thus, this paper tries to explain the signal which dividends may provide to investors for plugging their money in Automobile stocks.

3. RESEARCH METHODOLOGY

When a research methodology is thought of, the research problem has to be kept in mind so that whatever methods are adopted for data collection and sampling fit exactly within the objectives of the study. The present study has focused on secondary data by taking help of websites and publications of relevant authorities. The sample, data, and model applied in the paper have been discussed in this segment.

3.1 Sample

A simple random sampling technique has been used in finalizing the sample for the present paper. The companies list for automobile stocks as per their market capitalization has been taken from www.moneycontrol.com. Initially, 32 companies were picked up for analysis to find out the effect of dividend news on their stock returns. The sample was confined and finalized with the following conditions in mind:

- Companies commonly listed at Bombay Stock Exchange (BSE) and National Stock Exchange (NSE).
- Companies which declared dividend at least seven times in a decade.
- Final dividend only taken into consideration leaving interim behind.

Thus, a final sample of 22 companies had been derived and thereafter their historical stock prices were collected. The final sample included:

1. Amara Raja Batt
2. Amtek Auto
3. Amtek India
4. Ashok Leyland
5. Bosch
6. Eicher Motors
7. Exide Industries
8. Hi-Tech Gears
9. Jay Bharat Marut
10. Lumax inds
11. Mah and Mah
12. Maruti Suzuki
13. Motherson Sumi
14. Munjal Showa
15. Omax Autos
16. Pricol
17. Rico Auto
18. Sona Koyo Stee
19. Subros
20. Suprajit Eng
21. Tata Motors
22. UCAL Fuel

3.2 Data

Secondary data has been used for the entire research work in the present study. The first and foremost requirement of information for solving the present research problem was that of dividend dates on which companies had announced dividends. This data of announcement dates has been taken from the website of money control and only final dividend have been taken into consideration with an assumption that final dividend incorporates the information of interim dividend for that particular financial year. Ex-dividend dates have been taken as a base because on this particular day investor's record is finalized by the companies for announcing of dividends and reactions can be best explained by the stock holders on that particular day.

The year 2001 had to be skipped due to lesser dividend announcements in this specific year. The stocks taken in the sample as described earlier are commonly listed at BSE and NSE. The data of historical stocks prices however has been taken from the website of NSE as it is more organized and simple for downloading of information. The stock prices of all the sample companies have been taken for the financial years 2002-10 for 251 days including the dividend announcement date. Further, for analyzing it from different angles, it was broken into four different windows; 31, 61, 121 and 251 days to find out the impact before and after dividend announcement.

As the historical data of stock prices have been collected for companies for computing their stock returns further, the historical indices were also needed to compute market rate of return in order to arrive at sector wise market returns to be fitted in the model at a later stage. CNX Nifty's historical values had been collected from the website of NSE from 2002-11 (to complete decade's time period) to calculate market rate of return for automobile stocks.

The model planned for the study required risk free rates to be included as a component for calculating expected returns in the Indian stock market for individual stocks. These rates have been assumed to be the weighted average interest rates on central government securities issued by RBI. This data from 2002-11 has been taken from the handbook of Statistics on Indian economy published by RBI from time to time (www.rbi.org.in).

3.3 Model

There has been variety of models and tests adopted by eminent scholars for the studies of this nature. To name a few, models applied by them are Market Model, FAMA-FRENCH Model, GARCH Model, Capital Asset Pricing Model (CAPM), Sharpe Model, Constant Mean Return Model etc. CAPM was introduced by Jack Treynor (1961, 1962), William Sharpe (1964), John Lintner (1965) and Jan Mossin (1966) independently based on earlier work of Markowitz on diversification and modern portfolio theory. Sharpe, Markowitz & Merton Miller jointly received Nobel Memorial Prize in Economics for this contribution in financial literature. The model is applicable specifically for Indian stock markets to find out expected rate of return on stocks to determine whether the stocks are underpriced or overpriced. It establishes a linear relationship between the expected/required rate of return of a security and its systematic risk or non-diversifiable risk or simply beta (β).

Beta (β) is an important component in CAPM. It may help to know the direction of the stock vis a vis market directions. If β= 1, stock moves similar to market movements, if < 1, stock moves lesser than market movements, if > 1, stock moves higher than market movements.

For individual security, Security Market Line (SML) is used which expresses relationship between systematic risk and expected return. It enables an investor to calculate reward to risk ratio (risk premium/market premium). Risk premium means the difference between market rate of return and risk free rate (Rm-Rf).

CAPM has been used in the present study for finding the expected rate of return E(r) on all stocks. It consists of three main components; risk-free rate (Rf), market rate of return (Rm) and beta values (β).

The daily historical returns for 22 companies from 2002-10 for 251 days have been calculated with the help of following formula:

$$Rits = \frac{Pts - (Pts - 1)}{(Pts - 1)}$$

where, Rits= Historical Daily Stock Return

Pts= Current Closing Stock Price

(Pts-1)= Previous Day Closing Stock Price

The market rate of return has been calculated in two phases. Firstly, the daily market returns were obtained with the help of following formula:

$$Ritm = \frac{Ptm - (Ptm - 1)}{(Ptm - 1)}$$

where, Ritm= Historical Daily Market Return

Ptm= Current Closing Index Value

(Ptm-1)= Previous Day Closing Index Value

Thereafter a simple arithmetic mean per year of the above calculated daily market returns had been treated as market rate of return (Rm) computed with the following formula:

$$Rm = \frac{\sum Ritm}{n}$$

where, Rm= Market Rate of Return

∑Ritm= Sum of Daily Market Returns

n= Number of Traded Days in a Year

Beta is used in CAPM to compute the sensitivity of the stock towards market changes. Therefore, beta has been calculated on yearly basis for all the sample stocks using the following formula:

$$\beta = \frac{CoVar(Rm; Rits)}{Var(Rits)}$$

where, β= Beta Value of the Particular Stock

CoVar(Rm;Rits)= Covariance between Historical Market Rate of Return and Historical Stock Return

Var(Rits)= Variance of the Particular Stock with Historical Stock Return.

The expected returns for individual stocks from 2002-10 have been calculated by applying CAPM as follows:

$$E(r) = Rf + \beta(Rm - Rf)$$

where, E(r)= Expected Return in the Respective Year

Rf= Risk-free rate taken as Interest Rate on Central Government Securities issued by RBI in the Respective Year

β = Beta on the Particular Stock in the Respective Year

Rm= Market Rate of Return in the Respective Year

The above calculated expected returns have been used as a barometer to find out abnormal returns for all stocks.

The stock returns over and above the expected returns are known as abnormal (extra) stock returns. These abnormal returns have been calculated with the help of following formula:

$$ARits = Rits - E(r)$$

where, ARits= Abnormal Return on the Specific Stock in the Respective Year

Rits= Actual Historical Stock Return on the Specific Stock in the Respective Year

E(r)= Expected Return in the Respective Year

The abnormal returns have been further converted into cumulative abnormal returns for applying statistical tests to test the hypotheses as below:

$$CARits = \sum ARits : 1 - 251$$

where, CARits= Cumulative Abnormal Returns for the Respective Stocks per Year

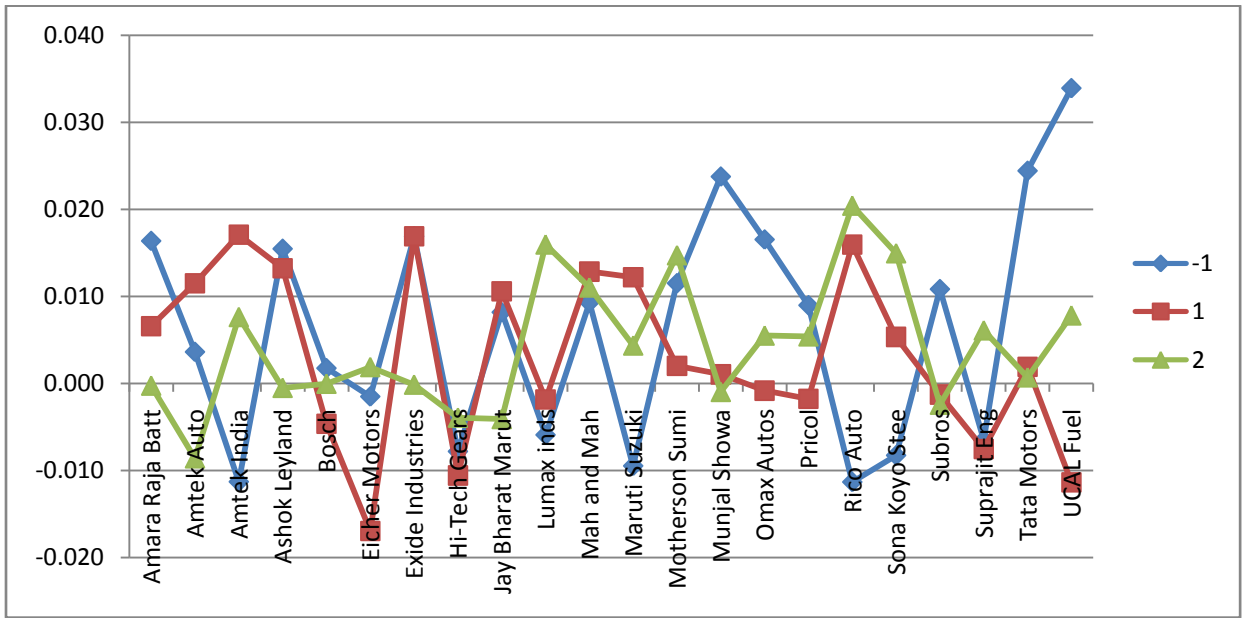
∑ARits= Sum of Abnormal Returns

4. EMPIRICAL RESULTS

Empirical results have been divided into two main segments in this paper; General Analysis and Statistical Analysis. The General analysis discusses the mean and standard deviation of sample stocks and statistical analysis discusses the results for Paired Sample t-test and Wilcoxon Signed Rank test at 5% level of significance.

4.1 General Analysis

A general analysis of Automobile stocks has been taken up for all the 22 stocks included in the sample. It has been done with two angles: risk and return. The returns being indicated by mean average of all stocks before a day and two days of dividend announcement. The risk has been indicated for the whole decade with the help of measure of standard deviation. The following graph explains the returns of stocks from 2001-10 for three days under scrutiny every year and their respective mean average.



Graph 1: Showing Mean Average Returns for before a day, after a day and after two days of dividend announcement.

Subros was the only stock to record positive returns before a day. None of the stocks had positive returns after a day in this sector. Amtek Auto, Ashok Leyland, Jay Bharat Marut and Munjal Showa had positive returns before a day and after a day. Eicher Motors, Lumax Industries and Suprajit Engineering had positive returns after two days. Bosch, Omax Autos, Pricol and UCAL Fuel had positive returns before a day and after two days. Amtek India, Maruti Suzuki, Rico Auto and Sona Koyo Steering had positive returns after a day and after two days. Amara Raja Batteries, Exide Industries, Mahindra & Mahindra, Motherson Sumi and Tata Motors had positive returns for all the three days. Only Hi-Tech Gears was the stock in this sector which had negative returns for all the three days.

Thus, only 1 stock had positive returns before a day, none of them had positive returns after a day, 4 stocks had positive returns before a day and after a day, 3 stocks had positive returns after two days, 4 stocks had positive returns before a day and after two days, 4 stocks had positive returns after a day and after two days, 5 stocks had positive returns for all the three days and only 1 stock had negative returns for all the three days. We may conclude by analyzing their mean average results that maximum positive stock reactions were observed during all the three days taken into consideration.

The next part of the general analysis has been focused on understanding the risk attached to stocks of Automobile industry. The values of standard deviation have been discussed in this context with the help of following table.

Table 1: Showing Standard Deviation of 22 Automobile stocks from 2002-10.

Stock↓/Year→	2002	2003	2004	2005	2006	2007	2008	2009	2010
Amara Raja B	0.025	0.028	0.032	0.037	0.034	0.060	0.040	0.037	0.019
Amtek Auto	NA	0.049	0.058	0.032	0.019	0.027	0.049	0.034	0.025
Amtek India	NA	NA	NA	NA	0.023	0.030	0.045	0.034	0.019
Ashok Leyland	0.030	0.026	0.063	0.023	0.028	NA	0.036	0.036	0.022
Bosch	0.021	0.017	0.061	0.014	0.023	0.019	0.029	0.021	0.013
Eicher Motors	0.045	0.028	0.025	0.024	0.036	NA	0.044	0.027	0.028
Exide Industries	0.022	0.040	0.025	0.024	0.062	0.030	0.032	0.031	0.019
Hi-Tech Gears	NA	NA	0.034	0.046	0.035	0.034	0.052	0.046	0.043
JayBharatMarut	NA	0.040	0.034	0.047	0.046	NA	0.052	0.046	0.030
Lumax inds	0.037	0.043	0.037	0.032	0.035	0.018	0.051	0.040	0.030
Mah and Mah	0.026	0.024	0.025	0.036	0.024	0.023	0.040	0.036	0.037
Maruti Suzuki	NA	NA	0.029	0.019	0.026	0.023	0.031	0.025	0.017
MothersonSumi	0.045	0.040	0.040	0.029	0.024	0.032	0.044	0.036	0.021
Munjal Showa	0.029	0.033	0.025	0.025	0.058	0.028	0.035	0.039	0.022
Omax Autos	NA	0.041	0.025	0.026	0.030	0.028	0.034	0.044	0.023
Pricol	0.033	0.026	0.064	0.021	0.028	0.024	0.033	NA	0.038
Rico Auto	0.052	0.035	0.029		0.030	NA	0.040	0.043	0.029
Sona Koyo Stee	NA	NA	NA	0.025	0.043	0.030	0.050	NA	0.028
Subros	NA	NA	NA	NA	0.030	0.057	0.037	0.045	0.035
Suprajit Eng	NA	NA	NA	NA	0.030	0.032	0.054	0.071	0.064
Tata Motors	0.027	0.021	0.028	0.020	0.025	0.022	0.038	0.042	0.024
UCAL Fuel	0.028	0.030	NA	0.026	0.031	0.032	0.033	NA	0.028

If we consider lower risk profile stocks of this sector, Bosch has been the ruler. It had lowest standard deviation for 6 years in the complete decade. The other stocks in this domain were Eicher Motors, Exide, Mahindra and Mahindra, Munjal Showa, Omax, Amtek Auto and Lumax Industries. Suprajit Engineering had the maximum standard deviation for 3 years in the decade, Rico Auto, Pricol, Jay Bharat Marut and Amara Raja Batteries were other stocks having higher risk profiles.

Statistical Analysis

The following hypothesis had been framed for conducting statistical analysis of the data collected for 22 automobile stocks:

H1: There is a significant impact of dividend news on the abnormal returns of sample stocks.

This has been tested with the help of Paired Sample t-test, Wilcoxon Signed Rank test and Sign test in four different event windows at 5% level of significance. The results obtained thereafter have been discussed in the following table:

Table 2: Showing results of Paired Sample t-test and Wilcoxon Signed Rank test.

Stocks	***Significant***	***Not Significant***
Amara Raja Batt	2002,2003,2004,2005,2006,2007,2008,2009,2010	…
Amtek Auto	2003,2004,2005,2006,2007,2008,2009,2010	2002
Amtek India	2006,2007,2008,2009,2010	2002,2003,2004,2005
Ashok Leyland	2002,2003,2004,2005,2006,2008,2009,2010	2007
Bosch	2002,2003,2004,2005,2006,2007,2008,2009,2010	…
Eicher Motors	2002,2003,2004,2005,2006,2008,2009,2010	2007

Exide Industries	2002,2003,2004,2005,2006,2007,2008,2009,2010	…
Hi-Tech Gears	2004,2005,2006,2007,2008,2009,2010	2002,2003
Jay Bharat Marut	2003,2004,2005,2006,2008,2009,2010	2002,2007
Lumax inds	2002,2003,2004,2005,2006,2007,2008,2009,2010	…
Mah and Mah	2002,2003,2004,2005,2006,2007,2008,2009,2010	…
Maruti Suzuki	2004,2005,2006,2007,2008,2009,2010	2002,2003
Motherson Sumi	2002,2003,2004,2005,2006,2007,2008,2009,2010	…
Munjal Showa	2002,2003,2004,2005,2006,2007,2008,2009,2010	…
Omax Autos	2003,2004,2005,2006,2007,2008,2009,2010	2002
Pricol	2002,2003,2004,2005,2006,2007,2008, 2010	2009
Rico Auto	2002,2003,2004,2006,2008,2009,2010	2005,2007
Sona Koyo Stee	2005,2006,2007,2008,2010	2002,2003,2004,2009
Subros	2006,2007,2008,2009,2010	2002,2003,2004,2005
Suprajit Eng	2006,2007,2008,2009,2010	2002,2003,2004,2005
Tata Motors	2002,2003,2004,2005,2006,2007,2008,2009,2010	…
UCAL Fuel	2002,2003,2005,2006,2007,2008,2010	2004,2009

Table above shows results of Paired Sample t-test and Wilcoxon Signed Rank test from 2002 to 2010. The sample consisted of 22 stocks according to their market capitalization. Amara Raja Batteries, Bosch, Exide Industries, Lumax Industries, Motherson Sumi, Munjal Showa, Tata Motors and Mahindra and Mahindra had significant results throughout the decade due to announcement of dividends. Amtek Auto had significant change in its abnormal returns due to dividend news in all the years except in 2002. Amtek India had significant results in the years 2006, 2007, 2008, 2009, 2010. Ashok Leyland had significant effect on its returns in the complete decade except in 2007. Eicher Motors had significant impact on its abnormal returns in the complete decade except in the year 2007. Hi-Tech Gears and Maruti Suzuki had significant results in all the years due to dividend announcement except in 2002 and 2003. Jay Bharat Marut, except in the years 2002 and 2007 had significant results throughout the decade. Omax Autos, leaving the year 2002 had significant results for all remaining years. Pricol had significant results in all years except in 2009. Rico Auto except in the years 2005 and 2007 had significant results for all remaining years. Sona Koyo Steering had significant results in the years 2005, 2006, 2007, 2008 and 2010. Subros and Suprajit Engineering had significant change in its returns in 2006, 2007, 2008, 2009 and 2010. UCAL Fuel leaving the years 2004 and 2009 had significant results in the complete decade.

The abnormal returns before and after announcement of dividend of 18 stocks were found significant at 5% level of significance in the whole decade taken for research or at least in 9 or 8 years due to dividend news. 4 stocks had an impact in less than 7 years out of the decade (Amtek India, Sona Koyo Steering, Subros and Suprajit Engineering). This industry is growing at a rapid pace if compared with other economies of the world. It is sixth largest in the segment of passenger cars and commercial vehicles manufacturing. However, in spite of its growth at international level, there is dearth of investors in this industry. It may be because automobile companies are nowadays targeting on foreign direct investment for raising funds to increase their international operations. The market efficiency seems to exist for Indian stock markets for this sector as far as dividend as an event is concerned. But, this industry may not the primary choice of Indian investors who are sometimes irrational in making decisions for investment and rely more on brokers and other middlemen's advice. Investor knowledge about the industry and market plays a vital role in stock investment decisions which may be seldom found in India. An Indian investor may be called emotional when he has to make a choice of a stock for plugging his funds.

Conclusion

A strong positive reaction has been demonstrated by the Automobile stocks in Indian stock market due to dividend announcement. The market may be called efficient for this industry as the news of dividend has been well discounted by the stock prices. The before and after effects on stock prices have been found significant throughout the decade (2001-10) when dividends were announced. It may be said for this industry that it has recently emerged as a vibrant sector contributing towards growth of the Indian economy. The prices for complementary products of this industry like petrol and diesel have been consistently rising in the last decade. The sales of passenger cars and

commercial vehicles specifically have increased to a remarkable extent. As a result, the revenue generated by this industry has shown tremendous growth. Therefore, investors have been showing keen interest for investment in this sector. Also, the trading volume has been observed towards an increasing trend since 2001 leading to higher quantum of volatility in prices. But, at the same time investors have been found rational in discounting dividend information for framing investment strategies in this sector.

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