CAPITAL UNIVERSITY OF SCIENCE AND TECHNOLOGY, ISLAMABAD

Stock market reaction to dividend announcement: evidence from KMI 30 Pakistan

by

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A thesis submitted in partial fulfillment for the degree of Master of Science

in the

Faculty of Management & Social Sciences
Department of Management Sciences

2018

This thesis is dedicated to my parents.

CAPITAL UNIVERSITY OF SCIENCE & TECHNOLOGY
ISLAMABAD

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MMS153017

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Acknowledgements

First of all I would like to thanks **Almighty Allah** who gave me courage to complete this thesis. I would like to express my sincere thanks to a number of people who have made the completion of this thesis possible. I am extremely grateful to all of them.

I wish to thank my supervisor **Zia ul Islam**, Faculty of Management & Social Sciences, Capital University of Science & Technology, Islamabad, Pakistan, who have provided invaluable instruction, mentorship and encouragement throughout the thesis journey.

I wish to show my deep gratitude to my friends **Basharat Hussain Shah** and **Muhammad Kamran**. Their persistent encouragement and moral support has made the difference in helping me persevere towards the completion of this journey.

Finally, I pay my deep regard to my beloved Parents whose care, love, devotion and prayers have made me able to achieve this goal. May Allah bless them all.

Abstract

This study examines the impact of dividend announcement on stock return for KMI 30 Index for the period of 2012 to 2016. This study uses event methodology to examine the impact of dividend announcement on stock return reaction. 31 days window period is taken, 15 days after and 15 days before the announcement of the dividend date. 0 day is taken as the dividend announcement day. In this study Abnormal return, average abnormal return (AAR) and cumulative average abnormal return (CAAR) are calculated. The findings of this study indicate insignificant impact of after the dividend announcement on stock return of KMI 30 index companies. The average abnormal return (AAR) and average cumulative abnormal return (CAAR) found insignificant showing that dividend announcement has no effect on stock return. This empirical study proves the MM irrelevance dividend hypothesis.

Keywords: Dividend announcements, Average abnormal return, cumulative average abnormal return, KMI 30 Index.

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Chapter 1

Introduction

1.1 Background of the Study

The major goal of corporations is to enhance the wealth of shareholders through effective decisions. The firm management not only consider what to do with firms generated profit but also consider the impacts of their decision on firm's stock price (Bishop et al., 2000). So, firm's management distribute cash dividend to shareholders according to proportion of equity owned by shareholder. Cash dividend provides income flow to shareholder but also increases the opportunity of reinvestment to shareholders. Therefore, the dividend announcement is most common and most understood action of corporation (Grooves, 2008). Therefore, the announcement of dividend payout considers most important announcement because this announcement not only provide the cash flow to shareholders but also highlight the firm's management performance and current and future action planes. The dividend policy depends on company life cycle stage. Grooves, (2008) argue that company adopted different dividend policy as per stage of life cycle.

Therefore, Uddin and Chaudhary (2003) argue that the pattern of dividend payout is differed from company to company and also effect of dividend payout ratio on stock.Hence, some companies announce interim half year dividend and some final or full year cash dividend. The dividend payout ratio or pattern of paying dividend may differ as per corporate culture other industrial attitudes of country

to country (Uddin and Chaudhary 2003).Hence, companies adopt dividend policy as per there life cycle which suit on it. So, this study explores the impact of dividend announcement on firm's stock return listed in KMI 30 index in Pakistani context.

Where a Question raised why companies pay dividend either face the dual taxation? This domain had a warm discussion in past financial studies. According to Black (1976) dividend is puzzle. In this context many theories and empirical studies try to solve the dividend puzzle over the few decades. Therefore, the previous literature indicated mixed evidence between the relationship of announcement of dividend and stock price of firms. Many of them found the positive and significant impact of dividend announcement on firm's stock price and i.e. Gordon (1959), Stevens and Jose (1992).And other empirical research found the negative association between dividend announcement and firms stock price like (Brealey and Myers, 1991, Black 1976).

"Miller and Modigliani (1961)",Developed the dividend irrelevance theory which established argument that dividend payout does not add value to company stock. On the other hand, Daniels, Shin and Lee (1997) emphasis on stock market efficiency and documented that if maker have no private information then dividend announcement has potential to effect (increase and decrease) the company stock price. The other theorist Lintner (1956) established "dividend signaling hypothesis", or "information content of dividend hypothesis" further developed by "Fama, Jensen and Roll (1969) and John and Williams (1987)".

According to Daniels, Shin and Lee (1997) if market is efficient the stock price may or may not by effect by the dividend announcement. In addition to the volume and price information more widely available and price sensitive information that is accurate and timely transactions.Therefore, strong form market refers to market price reflect all private and public information.

So, thatincrease and decrease of stock price occur only the arrival of new information and in perfect market condition stock price may or may not factual with dividend announcement (Fama, 1970).

Therefore, in a semi-strong efficient market, where most of the information is incorporated into the prices, the stock performance value of the same, since the most commonly accepted best measure of the estimate of whether or not companies are creating value for its shareholders (Brealey and Myers, 1991). So that, while company decrease the dividend on its stock, stock attracts the investor who are less in interested in investing activities. It indicates that the price of the stock will be reduced. There is a very rapid response to the unlimited changes in the market, so an unlimited drop signal can also cause you to go down the stock price. When dividend increase, stock makes investors more interested. And also increase the demand of company stock therefore growing demand will cause the seller to increase the value to gain more profits. Generally, more dividend payment considers a good indicator of the company's health.

In addition, many empirical studies prove that efficient firms face better performance than inadequate companies and it will be reflected in market prices of stock. Many event studies analyze returns on stock to determine the effect of a specific dividend announcement event on firm stock prices. Therefore, maximum event studies show that prices of stocks change before the announcement of a specific event.

1.2 Supporting theories:

The existing corporate history, shows that managers appreciate the consistence dividend policy and high dividend payments.Because government bonds paid stable and regular coupon. So, investor prefer government bonds. Therefore, corporate manager realized that investors preferred government bonds over corporate stock. So that stable and high dividend payment become a major factor during the first half of the 19th century" (Frankfurter and Wood, 1997). Therefore,as financial markets became more and more efficient, it was believed that the dividend payout policy will be increasingly irrelevance for the investors. However, the dividend policy also become important tool to measure the firm's performance.

The Question is Why dividend policy remain core part of literature? In this context the Three major contradictory theories of dividend were established. first argument state that high and stable dividend payments appreciate the stock value. And second argument state that opposite effect of dividend payment on stock price. The third argument refused the both argument and state irrelevance impact of dividend payment on stock value. These all views are embodied into three major dividend theories. The argument with high dividend payment appreciate the share value of firm (so-called 'bird-in-the- hand' theory), and second argument with less dividend payment enhance the share value of firm (so called the tax-preference argument). And third argument called dividend irrelevance hypothesis. The literature of dividend policy is not bounded into only these three approaches.

So, there are many other approaches that also further enhances the complexity of dividend puzzle. But only some of these arguments include in this study which are more popular like, irrelevance hypothesis, signaling theory, client impact, and agency cost theory. Dividend Irrelevance (MM) Theory:

Dividend irrelevance theory established by Miller and Modigliani's (1961) and also known as M&M. they refused the argument of higher and stable dividend increased the firm stock value. However, M&M established a new chapter in finance in 1960's. Under perfect market assumptions Miller and Modigliani's (1961) argue that higher dividend policy is irrelevance to firm stock value. Therefore, dividend payment did not affect investor wealth. Because the owner/shareholder value is not improved by the investment decision nether by distribution of generated income to shareholder. Therefore, in M&M's world, dividends announcement is irrelevant to stock value.

According to Miller and Modeling (1961) investors can influence their return on stock without stock competitiveness. It means that there is no effect on the stock prices of dividend announcement. Furthermore, they documented that investors should independ on company's decision whether pay dividend or not. Hence investors can generate cash income from their share stocks, regardless companies pay cash dividend or not. After the M&M (1961) argument many empirical studies were conducted and found irrelevance association of dividend announcement

on stock price i.e. (Miller and Scholes 1978, 1982, Hess 1981 Miller 1986 and Bernstein 1996).

1.3 Bird- In-The-Hand Hypothesis:

The Bird-in-Hand hypothesis developed by Lintner (1962) and late Bhattacharyya (1979) give name and also prove that hypothesis. The bird in hand theory argue that investor prefer dividend today rather than wait for the capital gain in future. According to Gordon (1959, 1963), Lintner (1962) dividend payout pattern increase the firm and shareholder value. Therefore, in real world financial markets are inefficient and based on asymmetric information and market environment is uncertain. Hence, investors favor "bird in the hand" rather than "into the bush" means investor prefer current cash dividend over reinvestment or capital gain. Hussainey, Mgbame, & Chijoke-Mgbame, (2011) documented uncertainty is major reason for preference dividend over the capital gain and also want to score their investment. In addition, high payment of dividend increases the firm value.

Many empirical studies examine the effect of dividend announcement on stock value. Al-Malkawi (2010) Argue that pervious literature provides less evidence in favor of bird-in-hand theory. But the other hand Bhattacharya (1979) argue that depending on the investment behavior, unlimited payments are not limited to the argument just "birds in hand". It states that investors favor the today dividend on stock because utility from the series of unlimited (small profits) is better than a large investment profit in future (Shefrin and Statman 1984). According to these authors, another explanation is linked to the possibility of psychologically objectionable overwhelming possibilities that are for investors, because they do sell nonpaying dividend stock (Al-Malkawi 2010).

Therefore, Ball et al. (1979) analyzed the dividend effect on firm stock value in Australian context for the observation period of 1960 to 1969 and found the positive effect of dividend on stock value. Baker, Farrelly and Edelman (1985) also reported the positive effect of dividend on stock price. So that dividend announcement enhances the firm stock price and also improve the firm value (Partington

1985). According to Baker and Powell (1999) dividend policy have positive effect on stock price and cost of capital. Hameed and Ashraf (2006) also documented the positive relationship between dividend announcement and stock price. In addition, dividend announcement increases the price of specific firm stock (Haijra at el, 2007).

1.4 Clientele Effects of Dividends Hypothesis

M&M (1961) notified the already existing dividend clientele effect hypothesis. It may effect dividend payout in some conditions. They derived that the market imperfections have an effect on portfolio choices of individuals like transaction costs and differential tax rates to prefer different mixes.

The clientele effect refers to expected behavior of investors after the dividend policy (Pettit 1977). Allen and colleagues (2000) argue that the existing evidence prove that shareholder interested in return after tax but investors are classified (clienteles) as per difference preferences. Some of them are stable income oriented they prefer higher dividend payout. Such a class (clientele) belong to lower income investors (Pettit 1977, Shefrin & Thaller 1988). This class of investors not only like to purchase those stock which pay high dividend yield but also favor the to purchase stock after the dividend announcement (Barber and Odean 2008). According to Scholz (1992) this clientele investors' portfolio mostly consist of low risk stock. And also, mostly involve local company's stocks (Becker et al. 2011). In addition, stable income clientele Institutional investors also prefer to higher dividend yield stocks. The reason of choosing the higher dividend stock is tax advantage to institutional investors (Allen and colleagues 2000).

Therefore, clientele effect some time shareholders become indifferent to dividend announcement (Elton and Gruber 1970). According to D'Souza at al. (2015) dividend announcement (clientele effect) increase the trust of shareholder and also increase the stock price of particular firm. Stack holders, who are not satisfied with the decision of the company's general meeting, in their opinion, purchase companies' sales issues and corporate rights, become shareholders of shares whose

maximum Is a dividend yield policy. Therefore, this theory does not ignore minority rights holders and stabilizes the methods of compatible with different groups of company-owned owners. However, according to client effect impact, for weak experimental support for clientele effects (Bucklek & L. 2009, Grenstein and Michaely 2005, Quiz uc 2015).

1.5 Signaling theory

Lintner (1956) purpose the "information content of dividend hypothesis" or "dividend signaling theory", after thirteen-year latter "Fama, Jensen and Roll (1969) a John and Williams (1987)" father refine this hypothesis. According to Lintner (1956) asymmetric information in capital market shows the imperfection of market. So imperfect, market lead to emergence of signaling hypotheses. The dividend announcement is an effective tool for management to convey the information about company future and also obtain positive response from stock market (Bhattacharya 1979 & Forti and Schiozer 2015).

Kuzucu 2015 argue that high dividend yield announcement a good signal forfirm'sfuture prospective, management and also for persevered investors intentions. In addition, after dividend announcement usually stock price of specific firm grows (Miller and Rock 1985). (Soter et al. 1996) documented that in some circumstance capital market reacts negatively on dividend announcement when it is not connected with firm performance. Many empirical studies, prove that announcement of dividend indicates firm's maturity and firm's volatility and also signal of company profits and growth (Chay and Suh 2008). Moreover, the company management have no interest to share the inside info with stockholder (DeAngelo et al. 2006, Grullon et al. 2002).

1.6 Agency theory

The final critical argument for the reference theory was the basis for the Agency's hypothesis. Management objectives are not always consistent with the interests

of shareholders. Wealth of shareholder may be less important to managers.This behavior of management caused conflicts of interest with shareholders (the so-called agency problem). According to the agency's theory, high returns are associated with external funding and monitoring (Eastbrook 1984). The cost reduction model, developed on the basis of the agency's theory (Rosif 1982), is used to calculate the optimum yield ratio. This is the ratio that reduces transaction costs related to external financing and agency costs.

It is worth mentioning that the theory of the agency has some links with arguments in favor of clientele influence and the signaling theory (Allen et al. 2000). Institutional investors voluntarily invest in controlling the quality of issued securities and thus reduce agency problems. High-quality companies are interested in such monitoring because they provide an opportunity to attract financially strong investors. Given that institutional investors enjoy relative tax advantages and belong to customers who prefer dividends, good quality companies tend to attract those who pay stable and high profits, that is, the use of dividend information content.

1.7 Market Efficiency Theory

It refer to the extant to which market price is reflective of all available information. The theory was presented by Fama in 1970. The gist of the theory lies in the argument that it is the ability of the market to incorporate all available information which provides maximum opportunities to the invsters to buy and sell stocks without influencing the price of the stock. Efficient markets reflect that all available information has been incorporated into prices and hence cannot be beaten by artificial means or other relevant factors.

Market efficiency is not a new concept in management literature. Some remarkable researcher (for instance: Fama, 1969; Fama 1965; Daniel et al. (1997); Kahneman et al., 1982; Fama (1998), Rubenstein 2001; Barberis et al., 1998 etc.) have shown greater interest in the concept. On the other side of the picture, to counter balance the literature, there are also notable empirical studies that contradict

efficient market hypothesis (EMH) (Michaely et al. (1995); Shin Liu & Ziebart (1999); Mehmoudi et al. (2011); Ziadi & Tauni (2012); Lee et al. (1991)). Eugene Fama and Jeffery Rubenstein are the great supporters of EMH and built the foundation of their series of studies on the literature cited above, pin pointed their contradictions and summarized the work by providing suitable recommendations. The Effective Market Theory, as proposed by Fama (1965) recommends three distinct sorts of market proficiency: (i) weak, (ii) semi-strong, and (iii) strong.

The weak type of market proficiency hypothesizes that present stock prices reflect the past information of all sorts. It likewise proposes that stock-value changes are arbitrary and that speculation techniques, in light of past data, can't yield better than expected comes back to the speculator. As such, specialized investigation won't be compensated with better than expected returns. As per Drenska (2011), fundamentalists discover the estimation of the offers through net present esteem (NPV) and other estimation strategies for money streams from the stock. Valuation of the offers in powerless type of market effectiveness is done just based on promptly accessible money related information hence the present offer costs don't reflect reasonable qualities.

The semi-strong form of market proficiency which is also called information efficiency, recommends that stock operators already have the knowledge of fluctuations on prices, they consider these fluctuations and respond them promptly according to the prevailing situations. This suggests principal examination won't be remunerated with better than expected returns for the financial specialist (Fama, 1965). The stock prices in powerless type of market productivity take after an irregular walk pattern, which implies that the present stock price mirror all the accessible data in the market. When any data is made accessible to the people in general, it is in a split second reflecting in the exchanging volumes and the price of the stocks. Brealey and Myers (2006) contended that the best way to beat the market is insider exchanging.

At last, the strong type of market efficiency proposes the stock price mirrors all the information though all the data implies that there is no concealed data from the general population. Along these lines insider-exchanging exercises won't be

compensated as present stock price represent non public information (Reilly and Dark colored, 2008).Inefficiencies can't be misused and the market can't be beaten and out kept with fundamental analysis (Brealey and Myers, 2006).

The main objective of this study is to check the response of stock market on the announcement of dividend. According to MEH, if all information is available to the investor, his expectations would be more rational and he will make buying and selling decisions precisely so the prices of the stock would be more realistic because of timely decision of the investors. In weak efficient markets, information is not available or at least not available timely so they make wrong choices for selling and buying which results in no rational fluctuations of prices of the stock and not based on dividend of the corporations.

In semi-strong markets, information is partially available which result in wrong choices from the investors for buying and selling decisions. Though due to partially available information, deceions are not as blind as in the above case, yet fluctuations in the stock prices is less vigorous.

1.8 Research Problem

Although few studies have based their studies on Pakistan with KSE 100 index but there has been no study conducted on KMI 30 or Islamic stocks. So there is a research gap on this aspect in Pakistan. Hence this study explores the impact of dividend announcement on market stock return between the observation period of 2012 to 2016 for companies listed KMI 30 index in Pakistan.

1.9 Research Questions:

- Does dividend announcement affects stock returns of KMI 30 index companies?

1.10 Research Objective:

- To examine the effect of dividend announcement on stock return of KMI 30 index.

1.11 Significance of the Study

This study examines the impact of dividend announcement on stock return of the KMI 30 index companies. The study covers five calendar years from January 2012 to 2016 December. The previous literature provides a lot of studies on dividend announcement and stock returns, but there is no study in context of KMI 30 index. So this study is an important contribution to literature that describes the behavior of stock returns before and after the dividend announcement for KMI 30 index companies.

Chapter 2

Literature Review

Both empirical and theoretical research models documented the impact of dividend announcement on stock return and market efficiencies. The studies have mixed confirmation of the impact of dividend announcement, been checked in different scenarios world widely. The impact of dividend phenomenon of modern literature, as it has mixed consideration like positive, negative and no effect on stock return. Theoretical and experimental studies have been made and the mixed pattern of results has been developed. The study has shown both positive and negative finding and impact of dividend announcements on stock return. So This chapter focuses on the previous study conducted by various authors regarding the impact of dividend announcement on stock return.

2.1 Dividend announcement and stock return.

Many empirical studies have been made to determine the impact of dividend announcement on stock returns in various context. However, the results of these studies vary from market to market. Event studies can be evaluated before and after the event is reported. In this study, we focused on the return on the KMI 30 share price for the impact of the dividend announcement. Many studies explore the impact of divided announcement on stock return and found different results.

The first study conducted by Fama, Lawrence, Michael, & Richard (1969) toward impact of dividend announcement on stock and Ball & Brown (1968) publish their research work.Using various statistical tools and calculating alpha and beta, investigate the reaction and the occurrence of the dividend announcement effect on stock return. Stocks are said to be effective if prices speed up the announcement, which means that prices quickly settle a dividend notice so that information is accessible to everyone at all times. The previous literature shows no consensus proves on the impact of the dividend announcement on stock prices, but there is mixed empirical evidence. Many studies prove positive impact of dividend announcement on stock. And in some country negative and significant impact and in some country, researcher found indifferent results.

Kang & Diltz (2000) analyse the impact of dividend announcement on stock return 175 firms from 1990 to 1994 and finding of his study indicates positive and significant association with stock return and argue that information flow into the market. Md. Hamid Uddin, (2003) have studied 137 companies that are listed on the Dhaka Stock Exchange and paying dividends, they discovered that investors didn't generate margin on cash dividend announcement and also discovered that 30 days before the dividend announcement, and almost lost 20 percent of stock prices.

Gunasekarage & Power (2006) analysed the relationship between long-term economic performance and UK firm's performance, broken down by dividend or profit. And study based on five years after and before the dividend announcement and found positive and significant impact on stock return. Therefore, Dhar & Chhaochharia (2008) used the event methodology and by using the CAPM model they calculate the abnormal return. There empirical finding proves positive and significant impact of dividend on stock return. And 1.8 percent abnormal return recorded after the dividend announcement. Kadioglu (2008) analysed the

88 companies of Istanbul Stock Exchange and consider 330 dividend announcements from 2003 to 2007. And by using the market adjusted model with -5 and +5 calculate the abnormal returns. And found negative and significant impact of dividend on stock return and there finding also indicates that higher divided lead to higher abnormal return and lower dividend leads to lower return.

Jais et al (2009), analyses the effect of dividend announcement on Kuala Lumpur stock exchange. They followed event study methodology, included all listed firms for the period of 2001 to 2005. The event window consists of pre and post 21 to announcement date and estimation window includes -140 days. They found positive and significant impact of dividend announcement on Kuala Lumpur stock exchange stock price. Pichardo, Bacon (2009) explore the impact of dividend announcement on Lehman bankruptcy on 15 different distressed firms. Their study proves negative and significant association between dividend announcement and stock brokered firms return. And also documented that stock continued to drop 24 days.

Akbar & Baig (2010), they have studied the reaction of the announcement of dividends and the efficiency of the market. Their study considered 79 firms that are listed on the Karachi Stock Exchange between the period 2004 to 2007 and have paid dividends in cash. The T-Test (statistical significance) was calculated on the basis of Wilcoxon Signed Rank and the results found abnormal returns insignificant on cash dividends, but in the case of bonus share, the results show statistically significant and positive abnormal returns.Mehndiratta & Gupta (2010) Investigate the impact of dividend announcement on stock return. They considered 15 firms divided announcement and event window consist of 60 days pre and post the announcement date. They found statically insignificant effect of divided announcement on stock return. Parul Bhatia, (2010), explore the relationship of dividend announcements during the 2008 to 2009 financial year based on daily,

monthly, quarterly and annual financial information. their empirical study testified that the price of the shares is determined from the positive significant effect on divided announcement. And they argue that the returns of the shares did not change drastically, but the announcements did affect the prices of the shares, with the significant values of the t test.

Aamir & Shah (2011) also analysed the impact of dividend announcement on stock return.They considered 26 dividend announcements of different companies of non-financial sector of Pakistan stock exchange listed firms for the period of 2004 to 2008. So, they found positive and significant relationship of dividend announcement on stock return of non financial sector of Pakistan stock exchange and prove semi strong market efficiency. Koerniadi & Tourani-Rad (2011) investigate the effect of reporting a deliberate utilization to convey information about future profitability on New Zealand stock market. They found evidence that managers communicate both performance criteria and changes in dividend information. In Indian context Mahadevan & Saravanakumar (2011) explore the dividend announcement impact on NSE listed firms stock prices. They discovered that the investor had not obtained significant returns but obtained good returns after the announcement and investors changed their investment after the announcement. Their study consists of 10 continues divided paying firms for the period of 2009. And event window consists of +4 and -4 days per and post of dividend announcement date.

Mahmood, Fayyaz, & Qayyum (2011), has examined dividend announcements and share repayments of the announcement of Karachi Stock Exchange during the period 2005 to 2009 considering 100 corporate dividend announcement and by using three different market models i.e. Risk adjusted model, Mean and Market model. They found positive and significant stock return after the dividend announcement and reject the irrelevance hypothesis. Miglani (2011) explore the relationship of dividend announcement on Indian firms, they consider 32 announcements for

the period of 2005 to 2010 and used simple OLS estimation technique. They found positive and significant impact of dividend announcement on Indian stock return and argue that investor gain significant positive return after the dividend announcement. Mohanty & Panda (2011) investigate the impact of divided and stock repurchase announcement on Indian stock price. They take 25 dividend announcement wares taken to exam the market reaction after the dividend and stock purchase date. They found positive and significant stock return after the stock buyback announcement and prove semi strong market efficiency.

Salameh & AlBahsh (2011) exams the market efficiency Palestine Stock Exchange by using the event methodology. Their study findings rejected the semi-strong form of market efficiency. Sujith & Halageri (2011) have been studied the bonus share announcements for the period from 1996 to 2011. They have considered the -30 to + 30 days stock prices before the date of announcement to investigate the abnormal return. The finding of study indicates the NIFTY Indian stock market reflect semi strong market efficiency and not perfectly strong. And found sceptically significant and negative relationship of bonus share announcement and stock price reaction.

Sultan Singh & Kumari Sapna (2011) explore the impact of divided announcement and stock return and behaviour of investor during the observation period of 2006 to 2010 on India stock exchange. The study includes 671 observation of BSE group data based and father reduce to 427 observations by taking the only continues divided paying companies announcement. For calculation of average abnormal return event methodology used and for checking the behaviour of market reaction cumulative abnormal return ware calculated. So the finding indicates that average abnormal return statically insignificant to stock price reaction after the announcement date for the period of 2006 to 2010. And average cumulative abnormal return found significantly positive before the announcement dates.

Therefore, Laabas and Bacon (2013) are being traded on stock prices on the New York Stock Exchange, for impact of announcement of dividend growth. The analysis results on samples of 15 randomly selected firms from November 20, 2008 to 26 July 2012 show that firms have increased stock prices before the announcement of dividend increase, so the positive market response Is displayed. He said that there was a positive response to the market because of which the investors had increased profits, indicating that there are future prospects in the future that will bring cashflow. The results support the efficient market theory on the semi-strong strengthening surface as documented by Fama (1970).

Neetu and Shuchi (2010) analyzed the financial data of 15 listed in Indian's National Stock Exchange for the observation period of 30 days after and before the dividend announcement day. And they found the positive impact on Indian's National Stock listed firms stock. In addition, they found significant impact after the dividend announcement but market show insignificant affect before the dividend announcement. Therefore, Muhammad and Syed (2011) investigate the impact of dividend announcement on stock return using different non-financial sector company's data for the period of 2004 to 2008 and they found positive and significant effect of dividend announcement on stock return in KSE 100 index listed companies.

As according to Gordon (1963) and Lintner (1962) dividend the value of firm can be determined by dividend. Walter (1963) in his study also view that dividend impact exists in variation of stock performance. For investigating the impact of dividend announcement and reaction of stock price Pettit (1972) analyzed the 4 year daily financial data of 135 company which are listed in the New York Stock exchange for the observation period of 1964-1968. So, they found dramatically change in market price of stock return after the dividend announcement and market react positively to dividend announcement. The market reacts dramatically toward the dividend announcement and an observable change occur in the pricing of the securities.

However, in contrast to these studies Miller and Modigliani (1961) were in a view that dividend payments has no any impact on shareholder value but it is the tax and other restriction which causes this effect. But in the current era change in dividend policy is caused by market value of securities.

According to Miller and Modigliani (1961) in same assumptions (without tax and any restrictions) the high dividend payment does not affect the shareholder. But in real world there is no such assumptions exist therefore many empirical study prove the change in dividend and dividend announcement affect the shareholder value. The empirical study of Charest (1978) shows statically significant impact of high dividend payment on NYSE listed firms. This study involves 500 firms of NYSE and the observation period of 1947 to 1967. Using abnormal change of dividend announcement and his study prove positive and significant impact of dividend announcement on stock return. And also indicate that the NYSE have less capability to adjust the fully information of dividend announcement in given period.

Sealy & Knight (1987) analyzed the impact of dividend policy and stock price on Johannesburg Stock Exchange. Using the high and low dividend payout ratio for the period of 1973 and found positive and significant relationship between share price and dividend announcement. But the other hand the empirical study of Easton and Sinclair (1989) shows the negative and statistically significant impact on share price after the dividend announcement. Bajaj and Vijh (1995) analyzed the relationship dividend announcement and stock price reaction on low and large price stock. They argue that low price share has grater transactional cost so that due to larger transactional cost investor have low information about activity of management relative to larger price stock holder. And they also documented the positive and significant impact of high dividend payment on stock price reaction. Therefore, Lonie (1996) found insignificant impact of dividend announcement on stock market price. By using event study and interaction tests on 620 UK firms

daily financial data for the time span of 1 year. McCaffrey and Hamill (2000) also explore the reaction of share price after the cash dividend announcement on UK companies. Their study consists of 131 listed and 139 unlisted firms during the 1982 and 1991. They found positive and significant market reaction on cash dividend announcement.

Adolf (2003) investigated the Nigerian market for semi-semi-strong market performance. This study has used a revised market model to investigate the dividend announcement of the Nigerian stock market price. He found that overall return returns (cumulative excess return) positively associated with stock return for after the 30 day of dividend announcement. He concluded that the Nigerian stock market was not an effective reference to the semi-strong shape. Regarding investigating the impact of dividend impact on Dhaka market stock, Uddin & Chaudhary (2003) did not found any evidence about the dividend announcement and return market. The study was based on 137 companies listed on the DSS. And the companies which announced dividend between October 2002 and September 2002. In this period insignificant relation found between dividend announcement and stock price of Dhaka stock exchange listed firms. Hence, dividend policy has positive and significant impact on stock return. The study of Bitok (2004) also prove that the higher dividend payout ratio has positive and significant relationship with value of firm and stock price.

Funke and Matsuda (2006) analyzed the reaction of share price after the macroeconomic variable information over the United States and Germany economy. This empirical study based on 12 German and 27 U.S news of stock return on DAX, Nemax and S & P 500, Nasdaq. By using the E-GARCH model bi-hourly and with daily data. The finding of study indicated asymmetric information and reaction of stock prices to news.

the analysis of Mulwa (2006) indicates insignificant reaction of prices exist after the dividend announcement. The analysis consists of NSE listed firm and 5-year

observation period from 1998 to 2002 based on signaling efficiency of dividend information. The historical financial data obtained from NSE database. Furthermore, the empirical study of Njuru (2007) also prove the abnormal fluctuation after the dividend announcement and documented the positive significant impact of dividend announcement on stock return. Their empirical study involved self-selected events of NSE (dividend stock). The observation period consists of seven years from 1999 to 2005. By using comparison period return approach. And explore the positive and significant impact on share price after the dividend announcement.

Dhar and Chhaochharia (2008) empirically investigated the impact of dividend announcement on market price of share in Indian Stock exchange. And documented the significant and positive abnormal stock return after the dividend announcement event. In context of Turkey Eyup (2008) explore the effect of dividend announcement on stock price of Istanbul stock market listed firms. By using the four years data from 2003 to 2007 and 330 announcements of 88 firms. Their finding shows significant and negative average abnormal reaction of share price when companies announce the higher cash dividend. But the other hand, they found the positive and significant impact of cash dividend announcement on stock price after the event day when companies decalear the lower cash dividend ratio. Furthermore, they also indicate negative relationship between cash dividend announcement and market share price and the tax clientele effect. They explain the reason of these results in since of taxes. They argue that since more tax impose on dividend and less on capital gain in Turkish market stockholder preferred more to retain and move to capital gain rather than to pay cash dividend.

The finding of Odhiambo (2009) indicates insignificant relationship between stock price and dividend announcement during the 1998to 2008 on Nairobi stock exchange listed firms. He used the regression analysis and 10 years of observation. Neetu and Shuchi (2010) analyzed the financial data of 15 listed in Indian's National Stock Exchange for the observation period of 30 days after and before the

dividend announcement day. And they found the positive impact on Indian's National Stock listed firms stock. In addition, they found significant impact after the dividend announcement but market shows insignificant affect before the dividend announcement. This empirical study used the event study methodology to explore the relationship between stock price reaction and dividend announcement of 15 listed companies for the event window 30 days before and after the event.

Thiga (2011) investigated the impact of dividend announcement of stock return in Kenya. Their study based on descriptive survey which consist of 4233 population of Saccos in Kenya. And random sample technique used and financial data involved 5 years. The finding of their study shows the positive and significant relationship between cash dividend announcement and stock return. Muhammad and Syed (2011) investigate the impact of dividend announcement on stock return using different non-financial sector company's data for the period of 2004 to 2008 and they found positive and significant effect of dividend announcement on stock return in KSE 100 index listed companies.

Shahid, Muhammad and Abdul (2011) also investigate the effect of dividend announcement on stock price on the Karachi Stock Exchange (KSE) by adopting the mean and risk models. The sample of study consists of 100 dividend announcement and observation time spina was 4 years from 2005 to 2009. Their finding revealed that obtaining result from these adopted model and event study result very similar. The result of study rejects the dividend hypothesis and found the positive and significant impact of dividend announcement on stock price of KSE. In addition, there result second the evidence of agency cost hypotheses. And also indicate the presence of asymmetry information and attributes of insider trading. The empirical investigation of Aamir and Shah (2011) also prove the positive and significant relationship between dividend announcement and stock return in Pakistan. Their study involves 26 announcements of dividend from non-financial sector specifically oil and gas firms. 21 days after and before the dividend announcement and they

also indicate that dividend announcement leads positive impact immediately to announcement.

In the context of Iran Ebrahimi and Chadigani (2011) conducted the research study on earning, dividend and its impact on stock price. They include all companies of Iran and used both cross sectional and panel data. And used panel regression model as an estimation technique. And found significant and positive relationship between dividend announcement and market price of share. In addition, they documented that in some event and in some year stack holder pay more attention to dividend announcement.

Hashemijoo, Andekani and Younesi (2012) investigate impact of dividend pay-out ratio on volatility of share price by using the multiple regression model on Malaysian Stock Market. And sample consists of 84 manufacturing companies and 42 consumer-based product companies. Hence, size, leverage, debt, earning volatility and growth as a control variable. And dividend payout ratio, and dividend policy as in depended variable. There empirical result indicates significant and positive association between higher dividend payout ratio on stock volatility between the period of 2005 to 2010. Another researcher Muigai (2012) explores the relation between stock price reaction and dividend declaration on NES listed banks. For the period of 2007 to 2011 during seven years he select 29 events. By using the event methodology and the event window consist of 91 days. They found no relationship between dividend declaration event and stock price reaction during 2007 to 2011.

On the other hand, Calitus (2013) analyzed the impact of dividend announcement of stock price at NSE listed agricultural firms. The study involved panel data technique and covering the 5-year time spina from 2005 to 2010. And found the statically positive and significant relationship between dividend declaration and stock return. Laabas and Bacon (2013) are being traded on stock prices on the New York Stock Exchange, for impact of announcement of dividend growth.

The analysis results on samples of 15 randomly selected firms from November 20, 2008 to 26 July 2012 show that firms have increased stock prices before the announcement of dividend increase, so the positive market response is displayed. He said that there was a positive response to the market because of which the investors had increased profits, indicating that there are future prospects in the future that will bring cash flow. The results support the efficient market theory on the semi-strong strengthening surface as documented by Fama (1970).

2.2 Market Efficiency

Market efficiency is not a new concept in management literature. Some remarkable researcher (for instance: Fama, 1969; Fama 1965; Daniel et al. (1997); Kahneman et al., 1982; Fama (1998), Rubenstein 2001; Barberis et al., 1998 etc.) have shown greater interest in the concept. On the other side of the picture, to counter balance the literature, there are also notable empirical studies that contradict efficient market hypothesis (EMH) (Michaely et al. (1995); Shin Liu & Ziebart (1999); Mehmoudi et al. (2011); Ziadi & Tauni (2012); Lee et al. (1991)). Eugene Fama and Jeffery Rubenstein are the great supporters of EMH and built the foundation of their series of studies on the literature cited above, pin pointed their contradictions and summarized the work by providing suitable recommendations.

2.2.1 Types of Market Efficiency

The Effective Market Theory, as proposed by Fama (1965) recommends three distinct sorts of market proficiency: (i) weak, (ii) semi-strong, and (iii) strong.

2.2.2 Weak Market Efficiency

The weak type of market proficiency hypothesizes that present stock prices reflect the past information of all sorts. It likewise proposes that stock-value changes are arbitrary and that speculation techniques, in light of past data, can't yield better than expected comes back to the speculator. As such, specialized investigation won't be compensated with better than expected returns. As per Drenska (2011), fundamentalists discover the estimation of the offers through net present esteem (NPV) and other estimation strategies for money streams from the stock. Valuation of the offers in powerless type of market effectiveness is done just based on promptly accessible money related information hence the present offer costs don't reflect reasonable qualities.

2.2.2.1 Semi Strong Market Efficiency

The semi-strong form of market proficiency which is also called information efficiency, recommends that stock operators already have the knowledge of fluctuations on prices, they consider these fluctuations and respond them promptly according to the prevailing situations. This suggests principal examination won't be remunerated with better than expected returns for the financial specialist (Fama, 1965). The stock prices in powerless type of market productivity take after an irregular walk pattern, which implies that the present stock price mirror all the accessible data in the market. When any data is made accessible to the people in general, it is in a split second reflecting in the exchanging volumes and the price of the stocks. Brealey and Myers (2006) contended that the best way to beat the market is insider exchanging.

2.2.2.2 Strong Market Efficiency

At last, the strong type of market efficiency proposes the stock price mirrors all the information though all the data implies that there is no concealed data from

the general population. Along these lines insider-exchanging exercises won't be compensated as present stock price represent non public information (Reilly and Dark colored, 2008).Inefficiencies can't be misused and the market can't be beaten and out kept with fundamental analysis (Brealey and Myers, 2006).

2.2.3 Types of Market Analysis

Market efficiency, be that as it may, does not happen independent from anyone else or even in light of the fact that data is openly and auspicious accessible in the market. As Osei (1998) proposed, it depends incredibly on the interpretational and investigative capacities of securities exchange merchants, the time they have and their eagerness to acquire and spread value touchy data. The investigation of market should be possible in two different ways.

2.2.3.1 Fundamental Analysis

Drenska (2011), in his address, portrays the basic examination of the market as the market where share costs mirror all the data that is pertinent and changes in the costs of offers can't be anticipated.

The crucial investigation, as per Brealey and Myers (2006) should be possible by a nearby examination of: (a) monetary articulations of the organizations, (b) the present administration of the organization and its skills,(c) the possibilities of benefit, and (d) the political, financial, and focused condition that is looked by the organization, and (e) current news identifying with a particular organization or to the market, or any bits of gossip that are identified with the tasks of the organization. It can be gotten from the above data that in crucial investigation, the nuts and bolts of business are worried to evaluate the value of a stock.

In a similar report led by Brealey and Myers in 2006, the creators attest that central examination additionally utilizes different budgetary proportions that are

separated from asset report and salary explanation. These proportions include: (a) Liquidity proportion, (b) Profit for value proportion, (c) Obligation value proportion, and (d) Income per share.

In Drenska's (2011) conclusion, if a man needs to contribute for a medium to long haul period, key examination perhaps a favored technique for him.

2.2.3.2 Technical Analysis

Chalres Dow laid the premise of "Dow Hypothesis". Drenska (2011), in his address, depicts the specialized examination of the market as the market where past offer costs, exchanging volumes, and past patterns and cycles are considered. Future offer costs and market patterns are anticipated based on past patterns and cycles, and offer costs. In any case, it isn't must that the estimate will dependably be right. Thereare five hidden suppositions for Specialized Investigation, as proposed by Drenska (2011). Right off the bat, the market costs of all the offer costs are resolved just through free market activity. Furthermore, unique balanced and unreasonable variables oversee the free market activity and consequently influencing the market costs. Thirdly, if there is little change of any individual security from the general market, they move in patterns. The fourth basic suspicion is that if the vacillations win for long, the request and supply relationship may move. The last and fifth presumption recognized by Drenska (2011) is that the stock cycles as a rule take after a cycle of pinnacle and trough.

There are different difficulties to Specialized Examination of the market as recognized by Brealey and Myers (2006).The above all else challenge in completing the specialized investigation of the market is that of subjective judgment, which is required for all the rest of the principles that take after. Besides, the examples might act naturally achieving. Besides if there is an effective manage, it will win adherents henceforth diminishing the achievement odds of the run the show. The creators additionally express that there can be a few decides that may have

worked previously yet it isn't mandatory that they will work later on also. In conclusion there is a test to the essential supposition of specialized examination, which accept that there is a pattern taken after by the market costs, while this fundamental presumption of specialized investigation is as opposed to the effective market speculation where the observational examinations demonstrate that there is no pattern followed in showcase stock costs in EMH.

2.3 Inconsistencies and Counter Argument Regarding EMH

Oddities are observational fantasies that are conflicting with the kept up speculations of advantage evaluating conduct showing market wastefulness (Rubinstein, 2001) while Fama (1998) stated, peculiarities are chance outcomes however EMH still holds.

Conduct Fund completes have a tendency to give a few clarifications to inconsistencies in stock value, considering nonsensical practices of speculators. Among these peculiarities which are demonstrative of a wasteful market, under-response and overcompensation are two regular nonsensical behaviors(Shin Liu and Ziebart, 1999).

2.3.1 Contrasting Studies with EMH

While some past examinations do propose that budgetary markets under-respond to a few sorts of data, different investigations give prove showing that money related markets go overboard. These cases challenge the Proficient Market Theory (EMH) as a legitimate model of the evaluating procedure for value securities (Mehmoudi et al. 2009). Michaely et al. (1995) have discovered that irregular return is sure for firms that start profit both previously and post-occasion for a

long time while it is negative for firms that overlook profit both previously and post-occasion for a long time for the organizations of a similar size.

As per Abarbanell and Lehavy (2003), an irregularity can be found in the writing concerning investigator over/under-response to acknowledge of earlier monetary factors, including earlier stock returns, earlier profit changes, and earlier expert conjecture errors.Mahmoudi et al. (2011) contend that clearly data assumes a critical part in effective markets. The effective market theory recommends that in a semi-solid productive market, financial specialists quickly modify their desires regarding future income, after accepting new data. Which thusly are quickly reflected in stock costs. In any case, analysts like Zhang 2008 have furnished proof that is conflicting with this suggestion.

At the point when monetary data is hard to get to or isn't reliably exhibited by organizations, experts are not ready to do their part ideally and productivity endures thus. Such a crumple in proficiency before presenting complete wage articulations existed for certain salary things incorporated into investors equitySmith and Reither, (1996). Then again, the investigation of Lee et al. (1991) recommends that a few financial specialists are either excessively idealistic or excessively cynical, which influence the stock costs. They announce advertise wastefulness if size of a firm affects stock costs.

2.3.2 Studies in Support of EMH

The best supporter of the EMH is Eugene Fama who has directed a few hypothetical and additionally experimental examinations to demonstrate that EMH holds in advertise. A portion of the pertinent parts from the investigations of Fama and different creators have been talked about beneath.

2.4 Determinants of Stock Returns

The price of single share is termed as share price or stock price. The return on stock or shares to the shareholders is referred as stock return. The stock return plays a very important role for the investor decision-making process, while investing in purchasing shares or stocks of the company. However, the stock returns of the company is not only affected by company performance but by too many other fundamental factors. Research documents that only a single factor or variables may bring changes in the yield of stock return in all stock markets. However, these factors vary from market to market but the actual and most important fundamental factors that influence the stock returns are discussed in the study.

2.4.1 Dividends

The most well-known factor explained by corporate actions is the dividend. Dividend is the amount of cash that distributes to shareholders from earning. Companies are not compelled to declare dividend or its amount, however a company would pay interim and a final dividend. According to analysts when company pay more dividends the stock become more attractive to the buyers in the market. This increase demand of shares and the sellers gain more profit by selling shares on high prices. Too many researchers are in the view that dividend declaration is a sign of good financial health for the company. As according to Gordon (1963) and Lintner (1962) dividends determines the firm value in the stock market. 'The bird in hand theory' proposes that investors prefer the current inflows from stocks like dividend.

2.4.2 P/E Ratio

Prior studies documents that price-earnings ratio of firm also affect the stock return. As according to Basu (1977) the stock having high P/E ratio will generate

lower stocks return. In this regard Wilcox (1984) and Rappoport (1986) proposes that stock return variation or changes in stock prices are strongly associated with fundamental factor like payout ratio or P/E ratio. When the price of stock in stock market is lower than the earnings of the firm then the stock become undervalued. In this case the company may have the potential to rises share price in the nearest future. However, if the price of the stock is more than the company earning the stock is overvalued.

2.4.3 Capital Structure

Capital structure of the firm is also to be considered as a fundamental factor of stock price or stock return variations. Sharpe (1964) and Hamada (1972) state that there exists a direct relationship between capital structure and variations in the stock prices. They further argue that firm with high debt generate high return because of high risk. So when high-risk firm generate high return, the upward variation in the stock prices will occur. Thus major studies documents that capital structure affects the variation in stock prices and stock return.

2.4.4 Size

Banz (1981) explore that small size firm have higher stocks return in the stock market as compared to larege size firm. Size of the firm is the historical tendency for the stocks of firms with smaller market capitalizations to outperform the stocks of firms with larger market capitalizations It is one of the factors in the Fama-French three-factor model (1993). Fama and French (1993) argue that size factor affects the variation in stock return and share prices. According to Atiase (1985) there is a negative relation between stock price volatility and size of the firm. When firm size increases the share price decreases.

2.4.5 Interest Rates

Interest rates may also affect the stock price and stock return variations. When a firm borrows funds for business operations on high interest rate, the interest rate influences company profit by increasing cost of debts. The firm earnings when reduced it also affects its dividend payments to shareholders. Due to this share price of the firm may also decreases. According to the study of Al-Qenae, Li and Wearing (2002) macroeconomic factor like inflation and interest rate negatively affect stock prices of the firm in stock market.

2.4.6 Inflation

Fama and Schwert (1977) find a negative relationship between stock returns and inflation. While examining on New York Stock exchange the study proposes that increasing expected or unexpected inflation may decrease the stock return in the market. Al-Qenae, Li and Wearing (2002) found that macroeconomic factor like inflation and interest rate negatively affect stock prices of the firm in stock market. Udegbunam and Eriki (2001) also document a negative relation between stock return and inflation. Actually, in inflation, interest rate rises and consumers buying preferences also decreases that affect stock return.

2.4.7 Exchange Rates

Foreign currency exchange rates also affect the price and valuation of stock in foreign market stocks. As many investors invests in foreign markets shares or multinational firms. Exchange rate change with the change in interest rates and effect the pricing of the securities. According to Yilmaz, Gungor and kaya (1997) there is significant relationship between exchange rate and stock return. The findings of Kwon and Shin (1999) propose a negative impact of exchange rate on stock return.

2.5 Event Study

Different corporate events or other uncertain event also affect the share prices of the firm in the stock markets. These events may include merger, acquisitions, earning announcements, disasters or political and governmental changes. So to measures the effects of these event on stock return event study methodology is uses for which event window is created. Event window is the time frame before and after the event occurrence. Campbell, Lo and MacKinlay (1997) define the event window and event occurrence impact. Firstly the event is defined, what actual it is and how it can affect the stock return. After this a data set is taken before and after the event for which the normal and abnormal return are measured. The major variation from the analysis interprets the event influence on stock returns.

Hypothesis:

On the basis of previous literature and findings of different researchers on stock return and dividend announcements, the following hypotheses are made:

H_0: Dividend announcement has no impact on stock return of KMI 30 index listed companies.

H_1: Dividend announcement has significant impact on stock return of KMI 30 index listed companies.

Chapter 3

Research Methodology

3.1 Introduction

This chapter discusses the methodology for estimation of the model and procedure of research. It consists of research design, target population, sampling procedure, data collection procedures, and data analysis technique. It explains the research model and estimation model that use for data.

3.2 Research Design

This research is descriptive in nature specifically research design involves event study methodology. Campbell, Lo and MacKinlay (1997) define the Event study methodology as "it is a study that is used to investigate significant events that might cause stocks to experience abnormal returns". Hence the event methodology is more effective while investigating the effect of dividend announcement and normal and abnormal returns. In this study the event window involves fifteen (15) days after and before the date of dividend announcement. The population consists of listed companies of KMI 30 index for the observation period of 2012 to 2016.

3.3 Sample & Data Collection:

This section describes the sample size that use for exploring the impact of announcements of dividend on stock returns. In this study comprised of the KMI 30 index listed firm's dividend announcement for the period of 2012 to 2016. The firm financial data and dividend announcement information ware collected from Pakistan stock exchange (PSX) website. For selecting the sample firm, the following criteria have been kept into concentration.

a) Only consider the annual cash dividend announcements

b) In this study only, those firms selected which have financial data and also formal dividend declaration day information.

This study based on secondary data and two different set of financial information. The first set of information consists of stock daily returns and the second set of information dividend announcement dates. Following companies are considered for this study:

Serial No.	**Company Name**
1	Attock Refinery LTd
2	D.G Khan Cement Company limited
3	Engro Fertilizer Limited
4	Fauji Cement Company Limited
5	Lucky Cement Limited
6	Millat Tractors Limited
7	Sui Northern Gas Pipelines Limited
8	Sui Southern Gas Company Limited
9	The Hub Power Company Limited
10	The Searle Company Limited
11	Pakistan Petroleum Limited
12	Nishat Mills Limited
13	Pak Elektron Limited
14	Pakistan Oilfields Ltd
15	packages limited
16	Pioneer Cement Ltd
17	Cherat Cement Company Limited
18	Dawood Hercules Corporation Limited
19	Engro Foods Limited
20	Engro Corporation Limited
21	Ghandhara Industries Limited
22	GlaxoSmithKline Pakistan Limited
23	Honda Atlas Cars (Pakistan) Limited
24	Hascol Petroleum Limited
25	HI-Tech Lubricants Limited
26	The Hub Power Company Limited
27	K-Electric Limited
28	Mari Petroleum Company Limited
29	Maple Leaf Cement Factory Ltd

3.4 Data Analysis

For investigating the effect of dividend announcements on stock prices the estimation window of 165 days and before the dividend announcement date day (0) zero and after the event date event window involved 31 days +15 and -15 days for capturing dividend announcement effect on firm stock returns model adopted (Kadoglu, E., Teleken, N., Ocal, N., & Board, C. M. 2015).

3.4.1 Model

After setting the event window return based method adopted and also mean and adjusted risk technique used for identifying the abnormal return. Therefore, this statistical technique covers all the requirement of this research which needed.

For calculating the normal expected return for each firm stock through daily share price the following formula is used.

$$\mathbf{R_{it} = (P_{it}-P_{it-1})/P_{it-1})} \qquad \textbf{(i)}$$

Where:

P_{it} refer to closing price of share i *refer to each company* and t *time.*
P_{it-1} is refer to closing price of share i refer to each company and previous t-1 time/day

A same model is used to calculate the market returns. Eq. (ii) is used for this purpose that has calculated the market returns from the index points.

$$\mathbf{R_{m,t} = (MI30_t - MI30_{t-1}) / MI30_{t-1}} \qquad \textbf{(ii)}$$

After calculating normal return, we calculate abnormal daily return (AR). The formula for calculating AR is given as follows:

$$\mathbf{AR_{it} = R_{it} - E(R_{it})} \qquad \textbf{(iii)}$$

AR_{it} refer to daily abnormal return of company for i at time.
$E(R_{it})$refer to daily expected return of i company at time t

The expected return is calculated using the following formula

$$\mathbf{E\ (R_{i,\,t}) = \alpha_i + \beta_i R_{m,\,t} + \varepsilon_I} \qquad \textbf{(iv)}$$

To calculate the daily average abnormal returns (AAR), Eq. (v) is used. The model calculated daily AAR as follows:

$$\boldsymbol{AAR_t = \sum_i^n ABR_{i,t}/_n} \qquad \textbf{(v)}$$

Where: AAR_t= average abnormal returns on a given day t; $ABR_{i,t}$= abnormal returns from a companys stock ion a given day t; n = number of dividends announcement made by the companies.

The final measure used in this study is Commutative Abnormal Average Return (CAAR) which capture the total return of investor from starting period of after and before the dividend announcement date.

$$\boldsymbol{CAAR_t = \sum_{t=t_i}^{t_j} AAR_t} \qquad \textbf{(vi)}$$

Where

CAAR refer to cumulative average abnormal return

t refer to time period of after and before the event day (-15 +15) day.

3.4.2 Test of Significance

For determination of significance for average abnormal return of dividend announcement over the event window -15 to +15 days t- statistic used. For calculation of t-statistics standard deviation of abnormal returns were used. For

significance of the cumulative abnormal returns Brown and Warner (1980) also implemented. The confidence interval level of significance is 5%. And The null hypothesis of this study is Dividend announcement have no effect on firm stock returns.

The decision whether it is significant or not is on the basis that if value of t-stats is higher than 1.96 then it will be significant, otherwise it is insignificant.

Calculation of t-stats

t-stats = AAR/STEYX (1)

t-stats = CAAR/STEYX (2)

Chapter 4

RESULTS AND DISCUSSION

The results were obtained in this study in terms of the event study methodology in which an abnormal return of the company to study the impact of the announcement of dividends on KMI 30 index listed companies. In order to analyze the existence of cumulative abnormal return (CAAR) and abnormal return (AR) on stock price related to dividend announcement date for this purpose, the sample was concentrated in a 15-day event window consisting of 15 days pre / post-dividend announcement event, shown in table 1.

Table1 shows the resulting AARs calculated on using all three return generating methods on the basis of dividend announcement event. The table1 consist of the AARs, (average abnormal return) CAARs, (Cumulative Average Abnormal returns). T statistics and dates with significant level. Therefore, the event window consists of 115 dividends announcements as a sample for the observation period of 2012 to 2016.

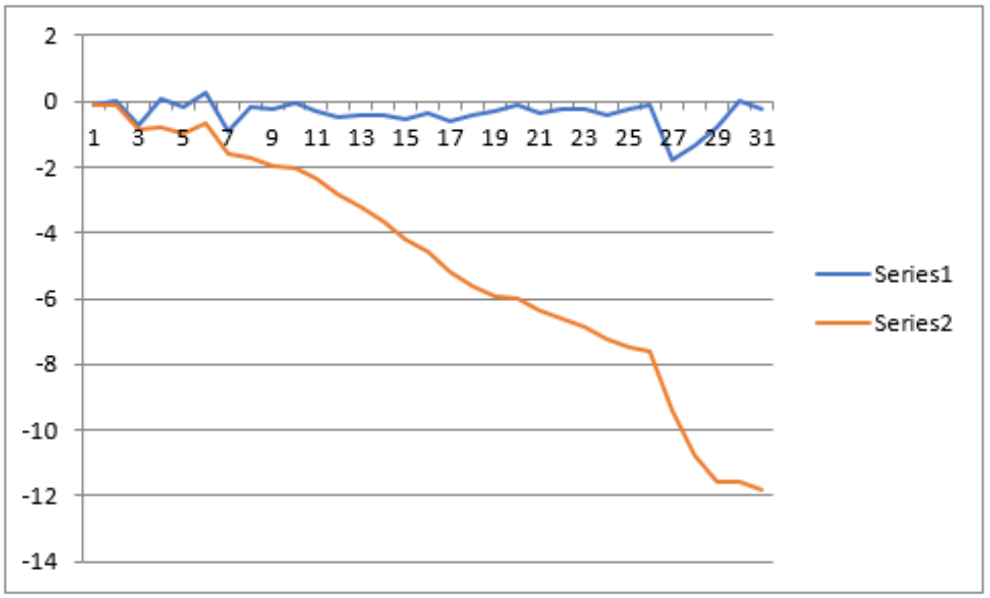
TABLE 4.1: Average Abnormal Returns and Cumulative Average Abnormal returns KMI 30 index

Day Relative to Event	**AAR**	**T-Stat**	**p-value**	**CAAR**	**T-Stat**	**p-value**
-15 day	-.0029367	-0.109368577	1.076205	-.0029	-0.109	1.07621
-14 day	1.4323E-06	5.33E-05	0.999962	-.0029	-0.109	1.07617
-13 day	-.019602	-0.730011518	1.352189	-.0225	-0.839	1.36171
-12 day	.00179506	0.066851107	0.951428	-.0207	-0.772	1.35748
-11 day	-.0050423	-0.187784588	1.127465	-.0258	-0.96	1.35651
-10 day	.00765155	0.284956948	0.788129	-.0181	-0.675	1.34243
-9 day	-.02457	-0.915028206	1.360386	-.0427	-1.59	1.09214
-8 day	-.0040598	-0.151194232	1.103952	-.0468	-1.742	0.98707
-7 day	-.0064126	-0.238816591	1.15894	-.0532	-1.98	0.80933
-6 day	-.0020818	-0.077528485	1.054522	-.0553	-2.058	0.75112
-5 day	-.0080795	-0.300893064	1.194917	-.0633	-2.359	0.53618
-4 day	-.012936	-0.48175925	1.282577	-.0763	-2.841	0.26717
-3 day	-.0107282	-0.399536049	1.246154	-.087	-3.24	0.12951
-2 day	-.0116082	-0.432308222	1.261395	-.0986	-3.672	0.05094
-1 day	-.0150512	-0.560531594	1.311532	-.1137	-4.233	0.01205

Day Relative to Event	**AAR**	**T-Stat**	**p-value**	**CAAR**	**T-Stat**	**p-value**
0 day	-.0091721	-0.34158385	1.216986	-.1228	-4.574	0.0044
1 day	-.0167227	-0.622781923	1.330009	-.1396	-5.197	0.00055
2 day	.0108169	-0.402839522	1.247732	-.1504	-5.6	0.00012
3 day	-.0084076	-0.313112613	1.201676	-.1588	-5.913	3.34E-05
4 day	-.0028482	-0.106073464	1.073983	-.1616	-6.019	2.13E-05
5 day	-.0093451	-0.348025968	1.220362	-.171	-6.367	4.55E-06
6 day	-.0067752	-0.252319066	1.16699	-.1777	-6.62	1.39E-06
7 day	-.0061664	-0.229647054	1.153405	-.1839	-6.849	4.54E-07
8 day	-.0109651	-0.408358491	1.250348	-.1949	-7.258	5.54E-08
9 day	-.0059493	-0.221561402	1.148479	-.2008	-7.479	1.67E-08
10 day	.0029492	-0.109834164	1.076519	-.2038	-7.589	9.08E-09
11 day	-.0487491	-1.815500619	0.932916	-.2525	-9.405	8.90E-14
12 day	-.0371765	-1.384514907	1.215645	-.2897	-10.79	2.13E-18
13 day	-.0208756	-0.777442025	1.357967	-.3106	-11.57	2.70E-21
14 day	1.31E-05	0.000488538	0.99965	-.3106	-11.57	2.71E-21
15 day	-.0063221	-0.235446253	1.156912	-.3169	-11.8	3.26E-22

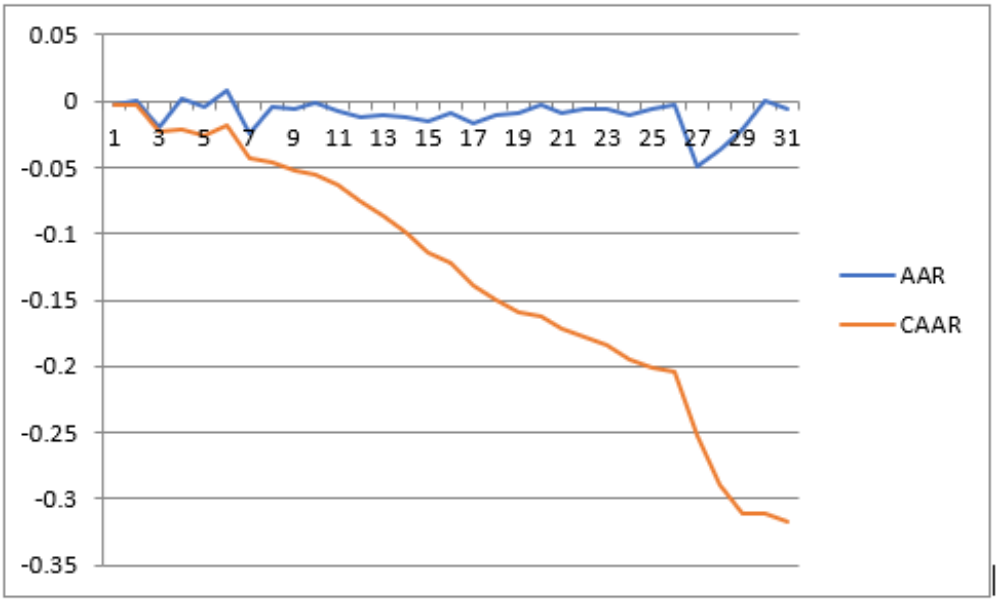
Table 1 represent average abnormal and cumulative average abnormal returns as well as the significance level for the considered time window of -15 days i.e. 15 days before and +15 days i.e. 15 days after the event day for overall KMI 30 index. The results show that the AAR (average abnormal return) statistically insignificant to stock return. Therefore, AAR (average abnormal returns) indicates that events before and after day the dividend announcement event found statistically insignificant. On the other hand, The CAAR (Cumulative Average Abnormal returns) found statistically significant to KMI 30 index stock returns. The results for CAAR (cumulative average abnormal return) prove that seven days before and fifteen days after the event are statistically significant. Furthermore, this study proves the signaling theory and on the bases of above result we accept alternative hypothesis and reject the null hypothesis.

Graphical representation of t-stats for AAR and CAAR



The graph also indicates that AAR for stock returns remain insignificant as all t stat values fall between +1.96 and -1.96. on the other hand, t stat values for CAAR are less than -1.96 from 7th day before the event and 15 days after the event, so these show significant relationship between dividend announcement and stock returns.

Graphical representation of AAR and CAAR



The above graph shows that Average abnormal return (AAR) lies below zero at almost all days before and after the event. It indicates that stock earns less than expected return before and after the event day irrespective of the dividend announcement. CAAR also shows downward slope before and after the dividend announcement but it falls more quickly after dividend announcement.

TABLE 4.2: Average Abnormal Returns for the year of 2013-2014 KMI 30 index

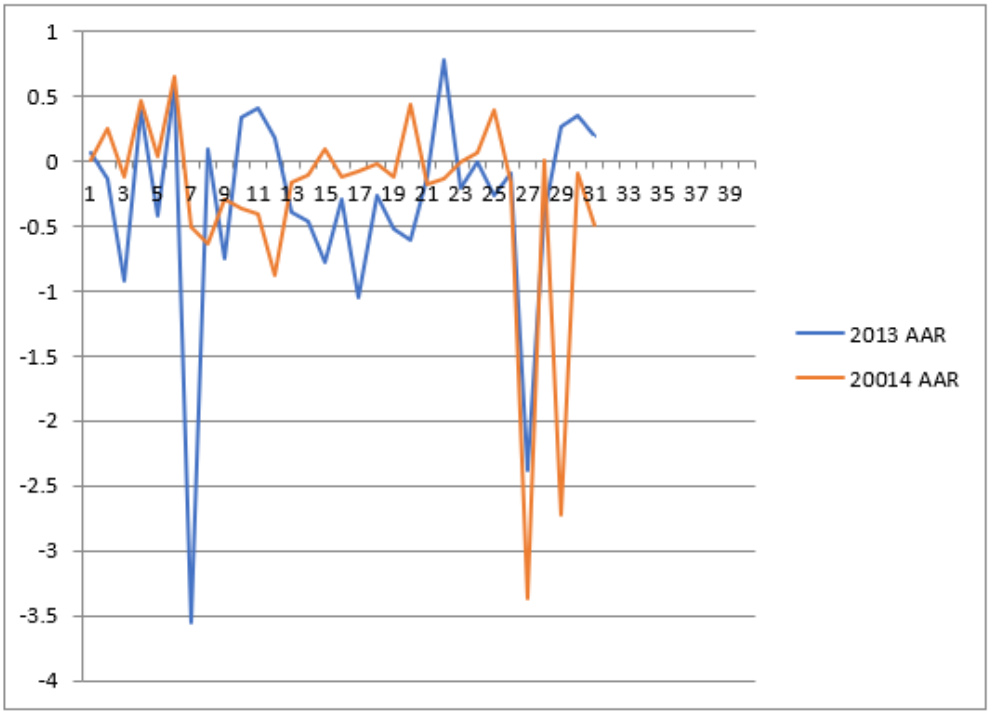
Year	**2013**			**2014**		
Day Relative to Event	**AAR**	**T-Stat**	**p-value**	**AAR**	**T-Stat**	**p-value**
-15 day	.001819866	0.068733869	0.950043495	.00021	0.007	0.99464
-14 day	-.003671069	-0.138651316	1.095724438	.00711	0.253	0.81223
-13 day	-.024452498	-0.92353782	1.359831808	-.0035	-0.125	1.08694
-12 day	.010528118	0.397632809	0.70407017	.01323	0.471	0.65063
-11 day	-.011254492	-0.425066948	1.258108405	.00113	0.04	0.97093
-10 day	.015349446	0.57972784	0.573799092	.01853	0.66	0.51991
-9 day	-.094144828	-3.55572303	0.066529904	-.0144	-0.513	1.29464
-8 day	.002510776	0.094828602	0.930779406	-.0179	-0.639	1.33406
-7 day	-.019880872	-0.750873691	1.355039948	-.0082	-0.291	1.18947
-6 day	.009098259	0.343628962	0.744156732	-.0104	-0.369	1.23122
-5 day	.010943719	0.413329501	0.692513724	-.0113	-0.404	1.24818
-4 day	.004812585	0.181764854	0.865827657	-.0245	-0.872	1.36193
-3 day	-.010191795	-0.384930329	1.239063387	-.0047	-0.168	1.11466
-2 day	-.012210121	-0.461159778	1.274025447	-.0031	-0.112	1.07792
-1 day	-.020556803	-0.776402682	1.357867501	.0026	0.093	0.93238

Year	**2013**			**2014**		
Day Relative to Event	**AAR**	**T-Stat**	**p-value**	**AAR**	**T-Stat**	**p-value**
0 day	-.007835209	-0.295925269	1.192138274	-.0035	-0.125	1.08652
1 day	-.027713488	-1.046701016	1.342753147	-.0021	-0.075	1.05271
2 day	-.006816343	-0.257444071	1.17001431	-.0007	-0.025	1.01763
3 day	-.013953065	-0.526988431	1.299943125	-.0035	-0.124	1.08634
4 day	-.016207277	-0.612126986	1.327131809	.01229	0.438	0.67475
5 day	-.003194796	-0.120663148	1.08378407	-.0052	-0.183	1.12458
6 day	.020559135	0.776490755	0.445942154	-.0036	-0.128	1.08856
7 day	-.005415056	-0.204519371	1.137963053	-.0002	-0.007	1.00507
8 day	-.000124869	-0.004716142	1.003377913	.00196	0.07	0.9494
9 day	-.006797043	-0.256715126	1.169585299	.01127	0.401	0.70145
10 day	-.00258595	-0.097667854	1.06829041	-.0046	-0.165	1.11292
11 day	-.063183931	-2.386371758	0.517888226	-.0948	-3.376	0.09827
12 day	-.010827806	-0.408951615	1.250628063	.00043	0.015	0.98912
13 day	.00716085	0.270455636	0.799038994	-.0766	-2.725	0.32141
14 day	.009243466	0.349113232	0.740065719	-.0024	-0.086	1.06047
15 day	.005218804	0.197107163	0.854287108	-.0139	-0.495	1.28785

To explore the impact of dividend announcement on KMI 30 index stock return. In this study year wise observation analysis performed. The occurrence of average abnormal return (AAR) after the dividend announcement date we concentrated for 31 days event window comprising 15 days prior/ post to dividend announcement and apply same procedure apply in all analysis.

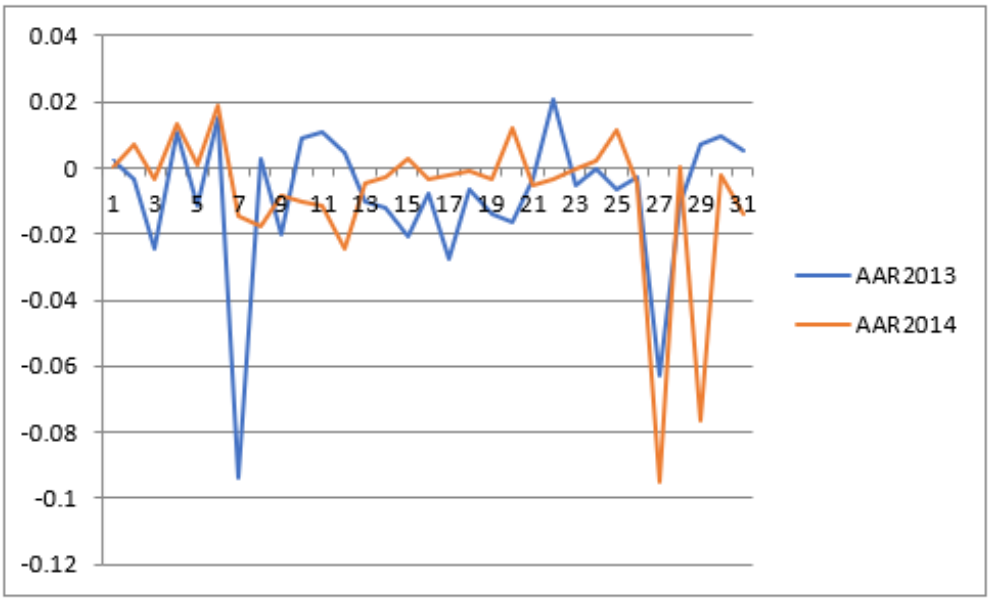
Table 2 represent average abnormal returns and their level of significance on KMI 30 index to considered the 15 days before and after the event day as a time window for the observation period of 2013 and 2014. The above mention results show that the AAR (average abnormal returns) of both year i.e. 2013 and 2014 prior and post found statistically insignificant to the particular event according to from T-stat values.

Graphical representation of t-stats for AAR for 2013 and 2014



The graph shows a comparison of t-values for AAR for 2013 and 2014. In 2013, AAR is significant at day 9 (before event day) and 11^{th} day after event day, and all other values are insignificant. On the other hand, all values before event day are insignificant while it is significant at 11^{th} and 13^{th} day after the event.

GRAPHICAL REPRESENTATION OF AAR FOR PERIOD 2013 AND 2014



The graph shows mixed pattern for AAR for 2013 and 2014. The shape of graph remains same before and after the event day indicating that it remains unaffected of the dividend announcement. However, AAR for 2013 moves in upward direction and remains positive six days before the event day while AAR for 2014 is negative in this period.The graph shows mixed pattern for AAR for 2013 and 2014. The shape of graph remains same before and after the event day indicating that it remains unaffected of the dividend announcement. However, AAR for 2013 moves in upward direction and remains positive six days before the event day while AAR for 2014 is negative in this period.

TABLE 4.3: Average Abnormal Returns For the year of 2015-2016 KMI 30 index

Year				**2015**			**2016**
Day Relative to Event	**AAR**	**T-Stat**	**p-value**	**AAR**	**T-Stat**	**p-value**
-14 day	.001001862	0.033794394	0.97559701	-.005042974	-0.218	1.14633
-13 day	-.039575112	-1.334931684	1.240874404	-.01166598	-0.504	1.29152
-12 day	-.02098445	-0.707839	1.34863041	.005864618	0.254	0.81175
-11 day	-.011906596	-0.401628498	1.247154512	.000826883	0.036	0.97417
-10 day	-.005661576	-0.19097398	1.129478907	.003666891	0.159	0.88326
-9 day	-.00290124	-0.09786345	1.068423242	.001571604	0.068	0.95062
-8 day	-.001051316	-0.035462563	1.025216181	.001336339	0.058	0.95809
-7 day	-.000191074	-0.006445223	1.004614558	.000357427	0.015	0.98888
-6 day	-.001586405	-0.05351198	1.037876564	-.003603675	-0.156	1.10696
-5 day	-.0286843	-0.967567222	1.355665104	-6.36E-05	-0.003	1.00197
-4 day	-.024721122	-0.833882903	1.36155032	-.004376049	-0.189	1.12837
-3 day	-.025841545	-0.871676554	1.361935654	-.002078365	-0.09	1.06298
-2 day	-.027777462	-0.936978125	1.358790906	-.00340163	-0.147	1.10126
-1 day	-.030498925	-1.028777407	1.346281156	-.012670018	-0.548	1.30727

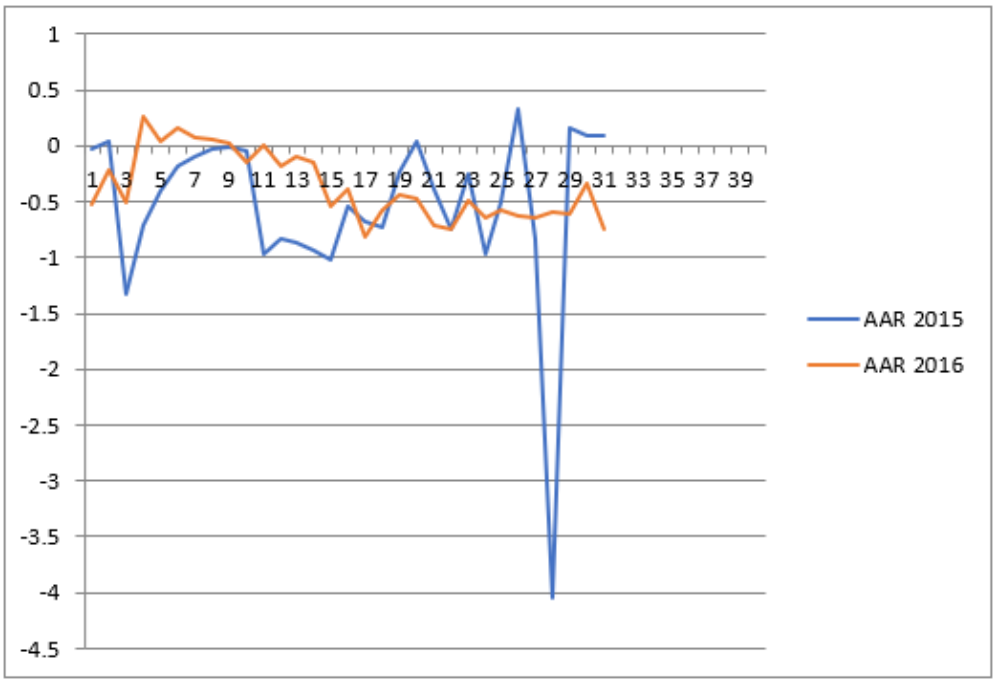
Year			**2015**			**2016**
Day Relative to Event	**AAR**	**T-Stat**	**p-value**	**AAR**	**T-Stat**	**p-value**
0 day	-.0161487	-0.544721437	1.306209132	-.009	-0.388	1.24064
1 day	-.020185443	-0.680887214	1.343576992	-.0187	-0.809	1.36044
2 day	-.021842359	-0.736777618	1.353166753	-.0132	-0.573	1.31548
3 day	-.006749514	-0.227671865	1.1522051	-.0104	-0.448	1.26823
4 day	.001239218	0.041800808	0.969768341	-.0109	-0.473	1.27909
5 day	-.01138393	-0.38399812	1.238604765	-.0166	-0.719	1.35049
6 day	-.022310468	-0.752567702	1.355250155	-.0172	-0.744	1.35413
7 day	-.007376267	-0.248813266	1.164911789	-.0116	-0.499	1.28959
8 day	-.028916942	-0.975414606	1.354694371	-.015	-0.647	1.33614
9 day	-.015009916	-0.506308413	1.29224663	-.0134	-0.579	1.31758
10 day	.010003902	0.337447591	0.748772405	-.0145	-0.628	1.33131
11 day	-.024479107	-0.82571934	1.36125463	-.0149	-0.644	1.3355
12 day	-.120108923	-4.051465682	0.019772192	-.0138	-0.597	1.32278
13 day	.004594315	0.154973565	0.885939126	-.014	-0.607	1.32565
14 day	.002524268	0.085147587	0.937942281	-.0078	-0.335	1.21367
15 day	.002453352	0.082755477	0.939709363	-.0171	-0.741	1.35372

Table 3 represent average abnormal and their significance level of KMI 30 index for the considered time window of 15 days before and after the event day for the year of 2015 and 2016.

The results mention that the average abnormal returns of both year i.e. 2015 and 2016 prior and post was statistically found insignificant to the particular event as evident from T-statistic values.

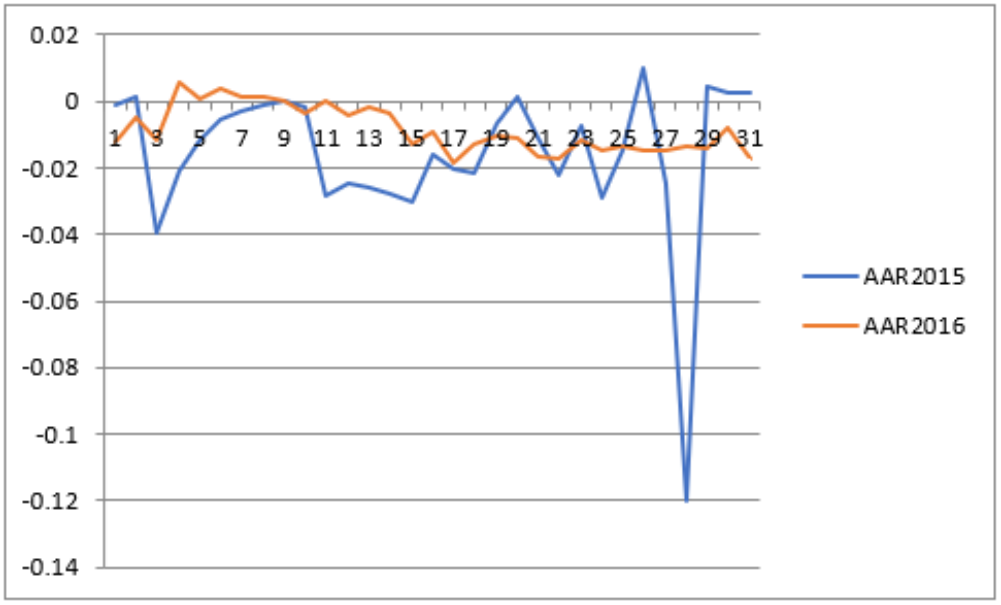
This shows that the market was statistically insignificant response to the stated event. Due to these finding we accept the null hypothesis and reject the alternative hypothesis.

Graphical representation of t-stats for AAR for 2015 and 2016



The graph shows a comparison of t-values for AAR for 2015 and 2016. In 2015, AAR is significant at 12th day after event day, and all other values are insignificant. On the other hand, all values are insignificant in 2015 before and after the event day.

GRAPHICAL REPRESENTATION OF AAR FOR PERIOD 2015 AND 2016



The graph compares AAR for 2015 and 2016. At earlier days of the event window AAR for 2015 is below zero while it is positive in year 2016. Similarly at the last days of event window, AAR for 2015 falls sharply while it remains smooth in year 2016. However both years show no significant change in pattern before and after the event day i.e. the day of dividend announcement.

Chapter 5

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

For analyzing the impact of dividend announcement of KMI 30 index listed firms on stock return the AAR (average abnormal returns) and CAAR (cumulative average abnormal returns) are calculated. The empirical findings of this study show that before and after the dividend announcement AAR (average abnormal return) for expected return has statistically insignificant in Pakistan and also prove dividend irrelevance model (MM). The Average Abnormal Returns calculated in this study reflect that investor value has not increased around dividend announcement date. These results are in line with the finding of Khaskhelly, N., Abro, A. R. P., and Tunio, S. (2018). In addition to this, both AAR and CAAR results are negative in most of the events days. This means that actual return is below the expected return for KMI listed companies showing that KMI 30 index investors may not earn extra abnormal returns.

5.2 Suggestion and Recommendation:

Their market behavior of KMI companies is different from other stock exchanges. From the above results it is suggested that investors should seek information before investing in KMI 30 index companies because dividends announcement showed insignificant behavior to stock returns of these firms. The findings detailed above hold up the applicability of dividend irrelevance theory in Karachi Meezan Index. However it is significant to look further, whether dividend conveys any information about future prospect and earnings of the company.

5.3 Limitation of study:

Because of the limited time constraints and the lack of complete and proper financial information, only KMI 30 index dividend announcement were selected. So that sample that used in this study was relatively small and only considering the KMI 30 index listed companies which is composed of 30 firms. Because many companies of KMI 30 index have not made a dividend announcement systematically. Furthermore, historical data were used, due to changing of macro and micro economic factor and also markets trend, this may not be predicted what happen in future.

Another limitation of this study is only considered the cash dividend announcements, and ignore the bonus issues, stock split and stock purchase.

5.4 Future Directions:

The subsequent studies may be conducted on the other corporate events such as bonus issue, and share splitting.

The future research studies can be conducted at political events and their impact on stock returns. And they may also conduct research on is returns of financial sector is more than Non-financial sector during such kind of events?

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