DIVIDEND BASED EARNINGS MANAGEMENT: EMPIRICAL EVIDENCE FROM PAKISTAN

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The thesis entitled "DIVIDEND BASED EARNINGS MANAGEMENT: EMPIRICAL EVIDENCE FROM PAKISTAN" submitted by Mr. Mian Rehman Uddin in partial fulfillment of M.S degree in Management Sciences with specialization in Finance, has been completed under my guidance and supervision. I am satisfied with the quality of student's research work and allow him to submit this thesis for further process as per IIU rules & regulations.

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IN THE NAME OF
ALLAH, THE MOST MERCIFUL AND BENEFICIENT

Dedication

"To my father Mian Riaz Uddin, my mother and to my brothers Mian Nouman & Mian Farhan, for their un-conditional love, prayers, and support to make my dreams come true."

ABSTRACT

The purpose of this study was to find a relationship between dividend policy and earnings management practices after controlling for size, leverage, and return on equity. 286 non-financial dividend paying firms that are listed on the Karachi stock exchange were analyzed from the period of 2001 to 2008. Discretionary accruals that represent earnings management were calculated using the Modified Cross Sectional Jones model whereas dividend payout was taken as proxy in order to measure the dividend policy. Data was collected from the Balance Sheet Analysis of Pakistan. Data was converted into panel form and the relationship between dividend policy and earnings management was explored using the common effect model, the fixed effect model, the random effect model. Hausman specification test was then applied in order to find the more efficient model among common, fixed, and random effect model. Based on the results generated by Common effect model, it was found that there exists a positive relationship between dividend policy and earnings management.

Keywords: Earnings management, Dividend Policy

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DECLARATION

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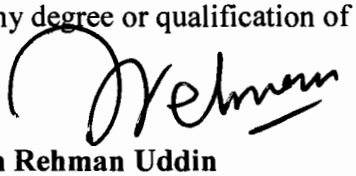

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Mian Rehman Uddin

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ABBREVIATIONS

EM	Earnings Management
DA	Discretionary Accruals
ROE	Return on Equity
LEVERG	Leverage Ratio
NYSE	New York Stock Exchange
CFO	Chief Financial Officer
FEM	Fixed Effect Model
REM	Random Effect Model
CEM	Common Effect Model
DPR	Dividend Payout Ratio
BSA	Balance Sheet Analysis
NDA	Non Discretionary Accruals
TA	Total Accruals
CFA	Cash Flow Approach
IPO	Initial Public Offering

Chapter No. 1

Introduction

1.1. Introduction

The primary objective of listed firms is said to be maximization of stockholders' wealth, which is attained through generating profits for the stockholders (Van Horne & Wachowicz, 2005). That may be the reason why stockholders pay more and more attention to the reported income of firms. Income of firms is surely important, but what firms do with that income carries equal importance.

When firms generate profits, they face two issues: whether to distribute a portion of these profits among the stockholders or to retain the profits and invest them in those areas where growth opportunities can be created. Based on this criterion, some firms prefer not to distribute profits among the stockholders while some firms share out a major portion of their profits as dividends. Most but not all, firms that do not pay dividend to their stockholders are growth oriented as they reinvest the generated profits in order to stimulate the growth of the firm. These firms are generally referred to as growth firms. The growth firms prefer to retain the earnings because they believe that with the help of their investment strategies they can appreciate the stock price that will ultimately generate greater returns for the stockholders. Supporters of this view also propose that when firms return earnings to their stockholders in the form of dividends, they may be running out of good ideas that might be useful for the future of the firm. Hence, when firms decide to retain the profits, this decision is equivalent to a decision of not paying dividends to the stockholders (Turnovsky, 1967).

Tax is another widely talked about justification which supports retention of earnings over distribution of profits among stockholders. The amount of money received by the stockholders is taxed while retained earnings are not subjected to any sort of tax. That is, when profits are

distributed among the stockholders, they pay income tax on the amount of money received as dividend. It should be kept in mind that the source from where dividends actually originate (profits) is already being taxed. It clearly indicates that dividends suffer from double taxation. On the contrary, firms do not pay any taxes on the amount of earnings that have been retained. Also the personal tax rate on the amount of money received as dividend is greater than that on capital gains, therefore this might be an incentive to retain the earnings and not distribute dividend among the stockholders.

Furthermore, suppose that firms allow for the payment of dividend, and in the meantime there exists a complimentary investment opportunity, then money paid out in the form of dividend will be replaced with funds that are generated through external sources. And when firms acquire funds from these external sources, they will have to bear the floatation costs. The floatation costs provide incentives for firms to retain the earnings as compare to dividend payments. Because for every dollar that is being paid to the stockholders in the form of dividend, firms will be left with less than a dollar after outside financing, due to the floatation costs (Van Horne & Wachowicz, 2005).

In spite of stock price appreciation, tax penalty, and other costs associated with dividends, a large number of firms around the world continue to share out a major portion of their earnings as dividends. If dividend is indeed less advantageous than retained earnings, then why do these firms pay out dividends to their stockholders? Why do these firms choose not to pay dividends to the stockholders and increase their retained earnings? In response, Feldstein & Green (1983) clarified the fact that if all the firms prefer not to pay dividends to their stockholders and keep on increasing retained earnings; this practice would elevate the collective level of investment which in turn will depress the rate of return on capital. Prior literature provides evidence that dividend

carries greater importance to the stockholders even after it is being taxed (Auerbach, 1979; Bradford, 1979). This can also be clarified from the fact that conservative investors look for income payable securities to provide a stable stream of cash flows and opportunities for capital appreciation. Firms that furnish their stockholders with periodic dividends have always been a primary allocation in a well-balanced income oriented portfolio. The investors are more interested in value with a consistent stream of income; the prospect for growth carries a lesser preference. When a firm pays dividends, it indicates that it is a stable and mature company and has a reliable stream of revenue. Hence, dividends can act as tools that signal the quality of the firm to the stockholders. So when a firm pays more and more taxable dividends to their stockholders, it is signaling a higher quality of the firm to its stockholders (Bhattacharya, 1979). That is the reason why dividends are considered to be the best signals managers give to the market and are hence highly trustworthy because cash has to be paid out.

Firms that pay dividends on a regular basis supplement the satisfaction of the stockholders as they are being rewarded for their investment. Also, paying dividend tends to increase the market value of the firms (Raaballe and Bechmann, 2002), that is the reason why most investors invest in firms that pay dividends regularly. If we compare the performance of a dividend paying stock and a non dividend paying stock, the attractiveness of the dividend becomes even more apparent. Firms that pay dividends provide a return to the shareholders regardless of the stock market conditions and the price variations. This can be a reason why the demand for dividend paying stocks is relatively stronger during a recession and in periods of market volatility; thus dividend paying firms may act as a hedge.

As far as Pakistan is concerned, large number of firms prefer to pay dividends to their stockholders, as compared to retained earnings. According to Balance Sheet Analysis of joint

stock companies listed on Karachi stock exchange, there are a total of 435 non-financial firms out of which 313 firms paid dividend to their stockholders from time to time. On the other hand, only 122 firms do not distribute the generated profit among the shareholders, these firms have a preference to retain their profits. It is obvious that the number of dividend paying firms is far greater than those firms that retain their earnings. Because of the ups and downs in Pakistan's stock market, a stock that pay dividend to the stockholders might be more attractive to the investors as compared to the stock that do not pay dividends. That is because when stock market goes down, stockholders will still make money in the form of dividends. When investors buy the stock of company that pay dividend, they are not just buying the company's stock; they are buying a constant stream of income that is in the form of dividend. Therefore, if due to market conditions the market price of a stock may falls to half its value, the income provided in the form of dividend will be protected. It simply means that Pakistani stockholders prefer to be paid in the form of dividends as compared to retained earnings (Qayyum et al. 2008). Hence, these investors expect the firms to pay smooth streams of dividends.

Because of the aforesaid importance of the dividends and the smooth stream of dividends expected by equity holders in Pakistan, firms may use certain measures to meet the expected level of dividend. Earnings management being one of the most important accounting tools may be used by managers for smoothening the dividends. Earnings management can be viewed as intentional misstatement of earnings which lead to bottom line numbers that would have been different in the absence of any exploitation. When managers make decisions not for strategic reasons, but only to change the earnings, one can deem that to be earnings management (Mohanram, 2003). Earnings management is said to be a strategy used by the management of a company to deliberately manipulate the company's earnings so that the figure must match a

predetermined target. This practice is carried out for the purpose of income smoothing. Earnings management do not always means the upward manipulation of the earnings, there can be a number of times when firms consciously misreport the earnings downwards. This is more likely to happen when the firms are far more above their targets.

According to Ronen & Yaari (2008), earnings management practices are completely legal and allowed by the accounting standards as long as these practices are undertaken within the boundaries of compliance. Earnings management practices that are undertaken outside the boundary of compliance are simply referred to as fraudulent. Based on a number of definitions, Ronen & Yaari (2008) have done the classification of earnings management as; white, black, and gray earnings management. White earnings management is said to be advantageous and 1.it enhances the transparency of financial reports, black earnings management is considered to be extremely harmful as it involves absolute misrepresentation and deception. The gray earnings management however, is considered to be acceptable as it is the manipulation of financial reports within the boundaries of compliance which could either be opportunistic or efficient. It means that earnings management practices undertaken by managers are either opportunistic or undertaken because they enhance their efficiency.

It is evident from the past literature (Beneish, 2001; Jiraporn et al. 2008; Burgstahler & Dichev 1997; Barth et al. 1999; Krishnan, 2003; Subramanyam, 1996; Arya et al. 2002) that firms manage their earnings either opportunistically or to improve the informativeness of earnings by communicating information to the stockholders. When managers indulge in earnings management practices to manipulate the reported earnings by avoiding loses and decreases, and try to maintain a pattern of increasing earnings, this will be the opportunistic use of earnings management practices. Furthermore, with the help of positive accruals firms can

opportunistically manage their earnings in excess of cash flows, which would raise the earnings relative to the cash flows. This opportunistic manipulation of earnings might provide incentives for the firms when they are issuing new stocks, as most buyers are guided by earnings they would pay a higher price. Also, apart from issuing new stock, this type of manipulation can be undertaken by firms, when they have the fear of being de-listed (Jian & Wong, 2004). As, this manipulation would help in the upward movement of its stock price and therefore will result in increased market capitalization.

Apart from the opportunistic earnings management, firms may indulge in efficient earnings management to improve the informativeness of earnings by communicating information to the stakeholders. Firms can make use of efficient earnings management to progress the capability of earnings to disclose the economic value (Subramanyam, 1996). As earnings management is represented by the discretionary portion of accruals, and discretionary accruals contain information regarding the future earnings of the firms. Hence, by adopting earnings management practices, firms do convey information about the future earnings. On the other hand, if the earnings management practices are undertaken aggressively, they may destroy the informativess of the reported earnings. However, if these practices are done within the limits of compliance, they will allow the managers to provide firm's inside and private information to the stakeholders. That is because managers might contain information about the future earnings, which may not be reported in the actual earnings of the firm. Hence, when managers use their discretion in the reported earnings, they communicate information to the market which in turn increases the information content of the earnings that are being reported. It clearly means that reported earnings will be far more informative as long as managers have some information that is not contained in the actual earnings, and this can be done with the help of earnings management.

If firms undertake earnings management activities for the purpose of dividend payment, it can be both; opportunistic and efficient earnings management. Earnings management can be opportunistic in the sense that, dividend can only be declared when the firms generate enough profits otherwise; they won't be able to declare the dividend. If firms have cash but not generated enough profits in order to meet the dividend payments, so they can manipulate their profits with the help of earnings management to meet the expected level of dividend. By doing so, the firms will be opportunistically making use of earnings management practices. As according to Skinner (1994), when firms are faced with financial problems and cannot meet the compulsions and claims made by stockholders such as dividends, they can use earnings management techniques to meet the projected level of dividends. Furthermore, when firms use earnings management to payout dividends to the stockholders, they can convey informative signals to the market about their financial stability. But as it is already known that dividend itself is a tool which is used by the firms to signal the quality of the firm to the market, the signals thus created after manipulating the earnings might not be beneficent for the stockholders as it may not convey the actual quality of the firm to market. Hence, earnings management either used opportunistically or efficiently will distort these signals and stockholders would not benefit from them in the long run (Teoh et al. 1998).

1.2. Objectives of the study

- The primary objective of this study is to find a relationship between dividend policy and earnings management.
- Through this study we ought to find whether firms undertake earnings management practices in order to meet the expected level of dividends.

- To find the impact of size, leverage, and return on equity on earnings management.

1.3. Significance of the Study

This study augments the body of knowledge at the academic level. This study fills the gap in earnings management studies as we provide formerly un-recorded proof of the significance of dividend as a driver of earnings management activities in Pakistan. In addition, results generated by this study might help regulators and policymakers to find certain gaps and niches as this study can facilitate them in crafting new and better policies for the future. As according to Companies Ordinance 1984, firms can declare dividends to their stockholders only out of generated profits. By law firms can't distribute dividends, if they incur loss. Earnings management practices on the other hand, may provide loopholes for firms in order to declare dividends. Through this study, regulators can revise the policies regarding the payment of dividends. Prior to the contemporary research, less work is done on the relation between dividend policy and earnings management. This research provides guidance to the professionals so that they can look into new dimensions of the dividend policies in Pakistan.

1.4. Organization of the Study

Chapter 1 contains the Introduction, in chapter 2 we described in detail the work done by scholars and practitioners in the past. 3rd chapter contains data, methodology, and research hypotheses. In Chapter 4 the main empirical results and findings showing how dividends are driving the earnings management behavior are presented. Chapter 5 contains conclusion and future research. And in the last section references are presented.

Chapter No. 2
Literature Review

2.1. Dividend Policy

Corporate finance can be considered as a study which deals with three basic issues; first, in what capital assets the firms can invest their funds? Second, how will the firms raise the funds for their required capital investment projects? And third, what is the fraction of net income that will be dispersed among the shareholders (also known as the dividend policy)? The dividend policy is considered to be the most contentious of the three issues of corporate finance (Omet, 2004). That's the reason many scholars and practitioners (Black, 1976; Feldstein & Green, 1983; Bratton, 2004; Raaballe & Bechmann, 2002; Fama and French, 2001) referred to it as a "Puzzle". When firms generate profits, they can either pay a portion of these profits to the shareholders as dividends or can retain these profits in order to invest them into areas where the firms can create growth opportunities. When firms decide to retain the profits, this decision is equivalent to a decision of not paying dividends to the stockholders (Turnovsky, 1967). Investors are taxed for the amount of money they receive as dividends whereas no concurrent tax liability is implied on the retained earnings. Also, corporate dividends are subject to double taxation: at first the corporate income is taxed, and then taxes are implied on the income that is being received by the shareholders in the form of dividends (Morck and Yeung, 2005). According to Easterbrook (1984) firms pay dividends to their shareholders either when they are in the impression that shareholders can make better use of the money or firms pay dividends when they want to reduce their capital expenditure. Also, firms that are successful do not distribute dividends among their shareholders as internal financing is considered to be less expensive than funds generated through external sources. But on the contrary, Feldstein & Green (1983) argues that in spite of the tax penalty imposed on the dividends, many firms in America and around the world share out a major fraction of their earnings in the form of dividends. It indeed creates a puzzle, why don't

firms eradicate their dividends and use the amount of the dividend distributed among the shareholders to amplify their retained earnings. According to Feldstein & Green (1983) if all the firms retain their earnings and not pay dividends to the shareholders, it would elevate the collective level of investment which in turn will lower the rate of return on capital. Also, dividends are vital for the investors because dividends may provide confidence about the firm's financial well being and also eye-catching for investors who are looking to secure their current income. There is a strikingly different view that shareholders are concerned with receiving their cash flows in the form of dividends or in capital gains, as far as firms don't change its investment policies (Ahmed and Javid, 2009). Gomes (1999) argued that shareholders give strong preference to dividends than the retained earnings. Moreover, if profits are retained, there is a possibility that these profits might be diverted to unprofitable projects which will remunerate firm's insiders or can be used for personal use. That is the reason why stockholders give preference to dividends as compared to retained earnings (Myers, 1996). Also, paying a portion of the earnings to the shareholders as dividends eradicates the capital gains layer of tax and may provide a net wealth advantage to the shareholders rather than a tax penalty as commonly assumed (Collins and Kemsley, 2000). In addition, there has been vast literature which provides evidence that dividend provides more value to the stockholders even after being taxed. It also supports the idea that dividend policy can be used as a tool through which firms communicate information regarding its performance to the market. Most of this literature deals with the fact that dividends communicate information regarding the stock prices and future earnings of the firms. After a survey of CFOs from NYSE, Baker and Powell (1999) found that most respondents believed the fact that distribution of earnings among the stockholders affects the value of the firm, also the respondents showed a very strong support for the signaling rationalization of dividends. It simply

means that dividend can be seen as a tool which can communicate the quality of the firm. A higher value of the company is communicated to the market by paying more and more taxable dividends to the stockholders (Bhattacharya, 1979). Companies with a quality that is below the critical point will not use dividends whereas, companies that have a quality which is above the critical point will pay dividends to their stockholders, and larger dividends will lead to a higher market value of the company (Raaballe and Bechmann, 2002). Dividends alleviate information asymmetry between stockholders and managers by delivering information of firms' future plans (John and Williams, 1985). As Aharony and Swary (1980) stated that information regarding the future prospects of the firm is possessed by the managers. In order to put across this inside information to public, managers may use dividends and earnings as signaling mechanisms. Kane et al. (1984) argued about the effects of earnings and dividends announcement on the stock price. The researchers presented evidence that dividend is considered to be the best way of sending information to the capital markets as compared to earnings, as earnings can easily be manipulated by accounting practices. According to Asquith and Mullins (1983), dividend policy is considered to be the most attractive signaling tool as compared to other announcements through which management can transmit the information regarding the current performance as well as the future prospects of the firm to their stockholders. The authors' stated that as dividends are backed with hard cash, it is considered to be more trustworthy and visible than any other signaling devices used by the firms. In addition, Baker et al. (1985) presented evidence that dividend has a greater effect on the value of share. Miller and Modigliani (1961) have argued, on the other hand, that the dividend policy has nothing to do with the market value of the company. They presented the idea that dividend policy has nothing to do with the market value of the company. It should be kept in mind that ideas related to dividend and value presented by Miller

and Modigliani are bounded by certain assumptions. On the contrary, firms that decreases or even ceases to pay dividends to their stockholders experience a decrease in the share price and in return will incur high costs due to the consequential increase in the cost of issuing new shares (Asquith and Mullins, 1983). This indeed stands true, as the companies that do not pay dividends to their shareholders face a decrease in their share price (Aharony and Swany, 1980). As depicted by Ambarish et al. (1987), there is a positive relationship between stock prices and dividends. The authors' stated that by paying dividends, firms can raise the stock prices. Elfakhani (1998) on the contrary, presented evidence that an increase in dividends does not always result in an increase in the value of the firm. Likewise, a decrease in dividends does not always result in a decrease in the value of firm. Furthermore, the researcher has found that the reaction of the market is stronger to dividend increases as compared to dividend decreases. In their latest research Hussainey and Walker (2008) revealed the fact that dividends do play a vital role in the share price anticipation of earnings. According to the authors, firms that pay dividends exhibit a high level of share price anticipation of earnings than those firms that do not pay dividends to their shareholders. It clearly means that, firms that do not pay dividends may fail to communicate value relevant information to the market. This stands true because when firms do not pay dividends, market may not have a very clear understanding about the firm's future earnings (Hanlon et al. 2007). But according to recent research on dividend policy, there is no relationship between dividend policy and firms' future earnings.

After testing for 145 NYSE firms, DeAngelo et al. (1996) found that dividend policy do not help in predicting the firms' future earnings. They presented evidence that dividend signals are unpredictable and with the help of these signals market cannot identify the firms' that has better future earnings. In addition, Benartzi et al. (1997) stated that when firms increase or decrease

dividends, it do not convey information regarding the future earnings of firms and the market does not treat these changes as informative. Hence the authors denied the idea given by previous researchers that there is an upward movement in the prices when firms initiate dividends or when dividends are increased. As there are contradicting views regarding the signaling effects of dividend policy, it still remains a puzzle because it is hard to explain why firms distribute earnings among the stockholders in the form of dividends (Fama and French, 2001).

Another idea which has received greater attention in the literature is that, dividend policy is used to tackle agency problems between outside shareholders and corporate insiders. According to the literature outside shareholders prefer dividends over retained earnings because when earnings are not paid out to the stockholders, it may be used by the insiders for their personal use or can be invested by the insiders in unprofitable projects for the sake of their private benefits (La Porta et al. 2000). Myers (1998) stated that in an organization the required operating assets are entirely or partially financed by the outsiders (shareholders). Hence, these operating assets are completely or somewhat owned by the stockholders and they have the right to liquefy the firm and walk away with their share of the assets or can even avert management from using these assets. If shareholders do walk away, management will lose their part of the cash flow. In order to prevent the shareholders from walking away, insiders can use dividend as a tool. Also, dividend policy can be seen as a tool used to reduce the free cash flow that is used by the managers at their own judgment. As a result, shareholders may prefer dividends over retained earnings (Jensen, 1986). DeAngelo et al. (2004) found that if firms do not pay dividends to their outside investors, their capital structure and assets will ultimately become unsustainable as earnings of successful firms surpass their investment opportunities. In addition the unsustainable capital structure and assets would engender agency problems. The researchers clearly stated that

by paying dividends, firms make their assets and capital structure tenable and also contribute in eliminating the agency problems. By paying out dividends, firms can at least to some extent, solve the agency problems between management and the stockholders (Easterbrook, 1984). In support Michaely and Roberts (2006) argued that, by lessening the amount of cash that is being controlled by the management, dividends make it complex for the management to impound the wealth of shareholders through activities that are not being monitored.

Furthermore, Jensen (1986) stated that when managers increases the share of retained earnings, it provide incentives for the managers to grow their firms ahead of the optimal size. Consequently, managers' power is increased as a result of an increase in the assets under their control. The author stated that these resources may be used by the managers in undertaking negative NPV projects, which reduces the wealth of shareholders. The idea behind undertaking negative NPV projects is that, growth is directly associated with the compensation of the managers. This causes a conflict of interests between shareholders and managers. In order to mitigate this conflict, instead of increasing the share of retained earnings, they should distribute a portion of the free cash flow as dividends. Moreover, John and Knyazeva (2006) supported Jensen and presented evidence that a restriction may be forced on the managers with the help of high level of dividends. The researchers also presented substitute of dividends; in order to impose a constraint on the managers, corporate governance can be used instead. That is because shareholders are unable to monitor the usage of free cash flow by the managers. So in order to avoid the agency problems, firms' should either pay dividends to their shareholders or strengthen the corporate governance practices. As stated by the authors, firms that have strong corporate governance practices avoid paying dividends to their shareholders. It clearly means that payment

of dividend can be used a positive measure through which managers can manage the agency behavior and can also decrease the agency costs (Manos, 2003).

As far as Pakistan is concerned, it was found that 23 % of profits are paid as dividend to the shareholders, the remaining part of the earnings are utilized for the purpose of re-investment, moreover, firms generally start paying dividends to their stockholders after attaining a certain level of growth and in the start, firms concentrate on retained earnings (Mehar, 2003). However, Ahmed and Javid, (2009) presented evidence that in Pakistan there is a somewhat unique pattern of dividend payments as these payments are more responsive to the current earnings of the firms and not to the prior dividend payments. The researchers found that firms that are profitable with a steady stream of earnings easily manage to pay dividends to their stockholders. Kanwer (2003) found that, like in Pakistan dividends are used by the managers to convey information to the market regarding the profitability of the firm. Hence, the signaling effect of dividends stands true for Pakistan as well, as the stock prices of cement, chemical, and fuel & energy sector rose because of higher dividend payments. In addition, there exists a relationship among dividend policy and stock price volatility in Pakistan (Nishat and Irfan, 2003).

2.2. Earnings Management

In today's markets, earnings management is such a subject that has gained critical importance. Nowadays we hear many a times about firms misleading investors through deliberate misstatement of financial reports (Mohanram, 2003). It is very important to understand what earnings management constitutes, how it is measured, why it takes place and what are the motives that drive the firms to engage in earnings management practices.

Earnings management can be considered as the intentional misstatement of earnings which leads to bottom line numbers that would have been different in the absence of any manipulation. Earnings management can be divided into two types; opportunistic earnings management (where managers maximize their value by reporting earnings opportunistically) and efficient earnings management (where managers improve the informativeness of earnings by communicating private information to the stakeholders) (Beneish, 2001; Jiraporn et al. 2008; Siregar & Utama, 2008, Citing Scott, 2000). Due to the fact that there are two types of earnings management we have divided the literature on earnings management into two parts; one that is consistent with the "Opportunistic view" and the other with "Information perspective".

Past literature presents evidence that is consistent with the opportunistic perspective of earnings management practices. According to Burgstahler & Dichev (1997), in order to avoid loses and decreases in the earnings, firms manage the reported earnings. Managers use earnings management as a tool in order to maintain a pattern of increasing earnings. In support, Barth et al. (1999) reported that by maintaining a pattern of earnings increases, firms get certain incentives. They presented evidence that firms with steady patterns of earnings increases have higher price-to-earnings multiples as compared to those firms with a non-consistent pattern. They find that the longer the progression of increased earnings, the larger this premium will be. And when this progression is broken, the premium will be reduced or completely eliminated. In addition, Bartov (1993) depicted that timing of asset sales can be used as a tool by the managers in order to manage the reported earnings opportunistically. In order to manipulate earnings, timing of asset sales can be used as a proficient tool. As it is known that asset sales timing is a manager's choice and the standard of acquisition cost depicts that if there is a change in the market value of an asset between the period of acquisition and sale, it should be recorded in the

event of sale. This prospective provides help to managers in manipulating the reported earnings. The researcher found that income from the sale of asset was considerably higher for firms that exhibited a downturn in the annual earnings, and lower for firms that demonstrated an increase in the earnings. Also, firms may manipulate earnings in order to meet capital market expectations. Teoh et al. (1998) stated that when issuing IPO's, firms may opportunistically manage their earnings in excess of cash flows with the help of positive accruals. It means that by adopting earnings management techniques, issuing firms can report extremely high earnings which in turn raise the reported earnings as compared to cash flows. Mostly, buyers are guided by earnings and are oblivious of the fact that the earnings are overstated by the use accruals; they would pay a higher price. The authors provided evidence that these firms will experience a deprived stock performance in the three years afterwards and the investors will realize that they have paid a greater price. The authors reveals the fact that, greater the magnitude of earnings management at the time of the offer, the larger the price alteration will be. These results are also consistent with their previous study (Earnings management and the underperformance of seasoned equity offerings, 1997) in which they reported that when firms indulge in earnings management practices at the time of IPO's, these firms are faced with poor long run abnormal net income and stock returns. In addition, Jian & Wong (2004) presented evidence of opportunistic transactions in China by adopting earnings management tactics. They found that when firms have the fear of being delisted or when they are issuing new stock, they report peculiarly high levels of sales, hence manipulate the earnings. However when shareholdings are held for a long period of time, investors will be alarmed about the original profitability of the firms and will be precautious about the earnings manipulation, and hence disguise the performance of the firm (McConnell &

Servaes, 1990). Moreover, this opportunistic use of earnings management can be reduced or even eradicated when institutional investors are involved (Bange & De Bondt, 1998).

In contrast to opportunistic view, there is vast literature that supports the efficient view (Informativeness) of earnings management and reveals the fact that earnings management is not always opportunistic as it may improve the information value of earnings. Jiraporn et al (2008) argued that earnings management may be constructive for both; firms and stakeholders, because it improves the informativeness of earnings by conveying private information to the stakeholders. They found that, earnings management can be used as a useful tool in the reduction of agency cost; firms that participates in earnings management activities at large, suffers a reduced level of agency costs. Also, they depicted that there is a positive relationship between the degree of earnings management and the value of firm. It means that managers indulge in earnings management activities to improve the ability of earnings in order to reveal the economic value, as discretionary accruals contain information about the future earnings (Subramanyam, 1996). In addition, Arya et al. (2003) stated that managers can add value to the earnings with the help of earnings management. It means that managers can increase the informativeness of earnings through earnings management. They also depicted that; earnings management activities undertaken within the limits are advantageous even if it prevents the communication of information. In support, Krishnan (2003) stated that if firms consistently participates in earnings management activities, they can destroy the informativeness of reported earnings. However, if earnings management practices are undertaken within the limits of compliance, it will let the managers to convey firms' inside and private information and by doing so, managers can improve the ability of earnings to disclose the true economic value. As far as the opportunistic view of earnings management is concerned, Krishnan suggested that it can be controlled or

eliminated with the help of corporate governance practices. Furthermore, Sankar & Subramanyam (2001) stated that managers contain private information about the future earnings which is not depicted by the true earnings. It means that when managers make use of their judgment in the reported earnings, they actually send private information to the market and thus supplements the information content of the reported earnings. It also sheds light on the fact that reported earnings will be more informative, as long as manager has some private information that is not contained in the true earnings. In addition, Gul et al. (2003) argued that earnings management is more informative and efficient in firms with high growth opportunities. It means that in firms with growth opportunities, managers will use earnings management for informational purpose and vice versa.

Apart from different viewpoints of earnings management, measurement of earnings management also carries great importance among academicians and practitioners. Earnings management can be achieved by different means such as changes in accounting methods, capital structure, and by the use of accruals (Jones, 1991). Many studies focus on the use of total accruals as the basis of earnings management (DeAngelo, 1986; Healy, 1985). In order to calculate the total accruals, we can either use cash flow statement approach or the balance sheet method (Shah et al. 2009). Actually, earnings management is not represented by the total accruals. Earnings management only takes place when managers manipulate the reported earnings by using their discretion, which is represented by discretionary accruals. Many researchers (DeAngelo, 1986; Healy, 1985; Jones, 1991; Dechow et al. 1995; Shah et al. 2009) discussed the division of total accruals into; Discretionary and Non-discretionary components. However, there are two types of models used to calculate discretionary accruals; Simple models (Which calculate discretionary accruals as total accruals) and sophisticated models (Where

discretionary and non-discretionary components are separated) (Dechow et al. 1995). In the latest earnings management literature, most emphasis is given to the sophisticated models. In order to find the discretionary component, non-discretionary portion of accruals is deducted from the total accruals. The most important step in the calculation of earnings management is the measurement of non-discretionary accruals. In the literature, six models are mostly used to calculate the Non-discretionary portion of total accruals:

1. Healy Model (1985)
2. DeAngelo Model (1986)
3. Jones Model (1991)
4. Modified Jones Model (1995)
5. Beneish Model (1999)
6. Accounting Process Model (2000)

Healy model was presented by Paul Healy in 1985. Healy (1985) tested for earnings management through the comparison of mean total accruals which are calculated by lagged total assets. In his model, Healy divided his sample into three main groups by using a partitioning variable; where one groups contained earnings predicted to be managed upwards, and kept earnings to be managed downwards in the other two groups. Healy then compared the mean total accruals in one group with the mean total accruals in the other two groups. The earnings predicted to be managed upwards was treated as the assessment period, while on the other hand, earnings predicted to be managed downwards represents the event period. Healy then posed that, the mean total accruals of the estimation period (group where earnings were managed upwards) is the measure used to calculate Non-discretionary component of accruals.

Thus, the model to measure non-discretionary accruals is:

$$NDA_{\pi} = \frac{\sum_t TA_t}{T}$$

Another model for the calculation of non-discretionary was presented by DeAngelo in 1986. This model is somewhat identical to Healy Model except, in order to calculate non-discretionary accruals DeAngelo model used only last period's total accruals. The DeAngelo model is:

$$NDA_{\pi} = TA_{\pi-1}$$

Both of these models were highly criticized. Dechow et al. (1995) stated that both Healy and DeAngelo model used total accruals as a proxy of non-discretionary accruals (Both are simple models). Furthermore, Healy predicted that earnings management happens in every period whereas; DeAngelo predicted that discretionary accruals have a mean which is equal to zero. According to Dechow et al. (1995) if non-discretionary accruals do not change and discretionary accruals do have a mean equal to zero in the period of estimation, then there will be no error in the measurement of non-discretionary accruals. However, if the non-discretionary accruals changes from one period to the other period, then both the models will measure the non-discretionary accruals with error. Another criticism was made by Kaplan (1985) in which the author stated that the nature of accruals depicts the level of non-discretionary accruals in response to change in the economic circumstances. If economic circumstances are not depicted

in the non-discretionary accruals model, then the model will detect non-discretionary accruals with error. In Healy model and DeAngelo model, economic circumstances are not accounted, which means that these models calculate the non-discretionary accruals with error.

Jones (1991) incorporated the effect of economic circumstances in her model. Plus, Jones model do not predict that non-discretionary accruals are constant. Jones model is:

$$NDA_{\pi} = \alpha 1(\frac{1}{A_{\pi-1}}) + \alpha 2(\Delta REV_{\pi}) + \alpha 3(PPE_{\pi})$$

Dechow et al. (1995) argued that Jones assumed revenue as non-discretionary, and if earnings are managed with the help of revenues than Jones model will calculate the non-discretionary accruals with error. In response, Dechow et al. (1995) modified the Jones model by incorporating change in receivables. Change in receivables was incorporated because when discretion is exercised over revenues, the original Jones model will measure non-discretionary accruals with error. The modified version of Jones model is:

$$\boldsymbol{NDAt = \alpha 1 \left\{\frac{1}{A_{t-1}}\right\} + \alpha 2 \left\{\frac{\Delta REV_t - \Delta REC_t}{A_{t-1}}\right\} - \alpha 3 \left\{\frac{PPE_t}{A_{t-1}}\right\} + \varepsilon}$$

The only change made is the incorporation of change in receivables in the original Jones model. However, there are certain criticism made on both Jones and the Modified Jones model. Guay et al. (1996) found that Jones and Modified Jones model do not calculate non-discretionary accruals with complete precision. And since the accurateness of the measurement of non-discretionary

accruals through these models is not entirely known, there might be chances that measurement of earnings management will be biased. In addition, Garza Gomez et al. (2000) depicted that Jones model calculate the earnings management with biasness as this model misclassifies the nondiscretionary portion of accruals as discretionary, and sometimes the discretionary accruals are categorized as nondiscretionary accruals. Bernard and Skinner (1996) also argued that if the accruals are misclassified, earnings management will be calculated with a bias. In order to remove this biasness from the measurement of earnings management, the accruals should be properly classified. However, Hensen (1999) argued that one cannot authenticate the absence of biasness in discretionary accrual models in complete sense.

After criticizing the Jones model, Garza Gomez et al. (2000) presented a new model for the measurement of earnings management which is known as Accounting Process Model. The starting point of their model was based on Dechow et al. (1998) Model. There is no strong evidence of the use of accounting process model in contemporary literature. The modified Jones model is preferred by a large number of researchers and academicians.

Literature is evident that there are different sets of motives and incentives for the firms to manipulate their earnings. The motives and incentives for earnings management varies among different types of firms and institutional settings. Sometimes, the reasons for earnings management may closely connected to contractual debt costs and tax rate in different capital markets whereas in some capital markets, issuing equity is a basic aim for earnings management (Othman and Zeghal, 2006).

When there are no market pressures, firms have the motivation to manage their earnings and avoid reporting small losses. On the contrary, in the markets where tax regulation sturdily

influence financial accounting, firms do not avoid reporting losses (Coppens and Peek, 2005; Desai and Dharmapala, 2006). So, it can be perceived that, earnings can be managed based on the tax incentives. Also, managers artificially lessen the reported earnings when government sets up tax increases (Watts and Zimmerman, 1986). It means that through the motives and incentives, managers set the direction of earnings management (upward or downward). As according to Kasanen et al. (1996) when managers want to meet the level of dividends anticipated by the stakeholders, they manage the firm's earnings upward. On the contrary, firms' earnings are managed downward because of tax.

Latridis and Kadorinis (2009) focused on the investigation of motives for the firms that are engaged in earnings management activities. Their findings indicated that firms that are highly levered or has a lower rate of profitability are more likely to induce in earnings management practices. Through earnings management these firms improve their financial numbers. It means that with the help of earnings management, managers exploit firms' profits and value of the stock (Yoon and Kim, 2009; Jiraporn et al., 2008). On the contrary, managers may exercise discretion over earnings to communicate private information to stockholders and the public. And if this is the case, then these practices may not be harmful to the public and the stockholders (Arya et al, 2003). In support, Subramanyam (1996) depicted the fact that managers make use of such discretions in order to improve the capability of the earnings to imitate fundamental value. But, there is evidence in the literature that argues in favor of opportunistic use of earnings management. It is reported that distortions in the reported earnings are being created by the firms, when earnings are managed opportunistically (Healy and Palepu, 1993).

Roychowdhury (2006) depicted that some managers make use of earnings management practices by maneuvering the real activities. By manipulating real activities, they tend to avoid

reporting yearly losses. This view contrasts the past (Arya et al, 2003; Subramanyam, 1996) literature on earnings management. There are some other incentives which drive the managers to participate in earnings management activities. In various settings, many firms pay bonuses to their managers based on the business earnings. In order to increase their bonuses, managers manipulate the earnings (Guidry et al, 1999). Executives that are rewarded with bonuses based on the earnings select the accounting measures that will supplement their compensation. Earnings are managed by the executives in ways (1) most of the accrual policies made by the managers are closely linked to income reporting inducements of their bonus contracts, and (2) alteration in the accounting procedures are connected with either the adoption or amendment of their bonus plan (Healy, 1985). Also, the current value of the bonus payments is being maximized by the managers with the help of earnings manipulation. On the other hand, when managers achieve the expected level of their bonuses, they manipulate the earnings in a downward direction (Holthausen et al, 1995).

In addition, the study of DuCharme et al. (2004) revealed that firms tend to manage their earnings around the stock offers; the accounting accruals are very high for the firms whose offers subsequently attract lawsuits. Also, SEO (Seasoned equity stocks) manage their earnings in the year before a planned issue of seasoned equity stocks. The SEO firms engage themselves in the earnings management activities when their financial performance is poor (Yoon and Miller, 2002). On the contrary, seasoned equity issuers earnings management may not be designed to deceive investors, but may simply imitate the issuers' rationale response to expected market behavior at offering announcements (Shivakumar, 2000). Another view that is consistent with that of Shivakumar is presented by Roosenboom et al. (2003), who stated that firms do not

manage their earnings to mislead the investors. They also found evidence using a sample of 64 Dutch IPOs, that firms do not manage their earnings in the years before initial public offerings.

2.3. Dividend policy and Earnings management

Apart from the aforesaid motives and incentives of earnings management, there are certain other motives which drive the managers to participate in the earnings management practices. Out of these motives and incentives, dividend carries greater importance. Past literature is evident about dividend as a driving force which exerts pressure on the managers in order to participate in earnings management activities. Trueman and Titman (1988) argued that as agents of the shareholders, managers must act in the best interest of the shareholders. The authors stated that, managers may adopt earnings smoothing techniques in order to supplement the shareholders wealth, shareholders wealth can be maximized by undertaking positive NPV projects, paying out dividends, and through capital gains. Kasanen et al. (1996) stated that dividend play an important role in driving the managers to adopt earnings management activities. The authors depicted the fact that in order to meet the expected level of dividends, managers manipulate their earnings in an upward direction. Also, in a study Bowen et al. (1995) argued firms opt for various income increasing tactics when there is an implied contract between firm and the stakeholders.

Furthermore, Skinner (1994) also found evidence that manager's choice of accounting methods totally depend upon the firm's financial difficulties. If firms are in financial distress and cannot meet the obligations and claims made by stockholders such as dividends, they use earnings management techniques to meet the expected levels of dividends. In addition, Fudenberg and Tirole (1995) presented another idea which is known as "Push Down"

phenomenon. According to this phenomenon one motive of earnings management leads automatically to other motives. In their paper, the researchers presented evidence that when managers manipulate firm's earnings, it will automatically pave way for dividend smoothing. Also, Daniel et al. (2008) argued that firms manage their earnings when they fall short/excess of expected dividends. They have also found that, whenever the income of firms is less than anticipated level of dividends, managers manipulate the earnings in an upward direction. A question arises over here, if managers are short of the expected dividend level they manage their earnings in an upward direction; what if the earnings exceed the expected level of dividend? The upward management of earnings is somewhat costly for the managers because of the tax consequences. Hence, tax can also provide incentives for the managers to manipulate the earnings in a downward direction (Kasanen et al, 1996). Moreover, Kasanen et al. (1996) found the evidence that firms that issue shares at higher discounts indulge in earnings management activities. The authors stated that when firms issue shares at superior discounts, they manage their earnings in such a way that, the year at which shares are issued, they report superior earnings in surplus of current dividends as compare to those firms which issue shares at lower discounts. By managing the earnings, they are reinforcing that in order to pay the future dividends; there is abundance of retained earnings to absorb the impact. By doing this the managers are communicating plausible information to the market about the firms' ability to meet any dividend increase. The literature clearly means that, dividend paying firms often use earnings management activities in order to avoid losses; hence they manage their earnings in upward direction.

Hence, it is obvious from the past literature that dividend can act as a motive or as an incentive for the managers to participate in the earnings management activities as manager are

mostly reluctant to cut dividends and are willing to go great lengths to avoid the dividend cuts (Lintner, 1956). In order to avoid the dividend cuts firms may; raise more funds, dismiss current employees, and can even avoid taking positive NPV projects (Bartov et al. 2005). This clarifies the importance of dividends and also proves that because of dividends firms can participate in earnings management practices.

Chapter No. 3

Methodology

3. Methodology

3.1. Sample

The target population of this study contains 435 non financial firms that were listed on Karachi Stock Exchange from the period 2000 to 2008. As the key focus of this study is to find the relationship between dividend policy and earnings management, only those firms were selected as sample for the purpose of this study that fulfilled the following criteria:

1. Firms that paid out dividends to their shareholders from time to time
2. Availability of data

Based on the aforementioned criteria 313 firms were selected because these firms paid dividends to their stockholders, hence fulfilling the 1st criterion. After a tough scrutiny 27 more firms were screened out because of unavailability of data. The final sample of the study that satisfied both the requirements of the study contains 286 non financial firms representing 27 sectors. By setting out the above limitations, we followed the sampling methodology known as convenience sampling. A foremost shortcoming of convenience sampling is said to be that it selects samples on the basis of which researchers can not technically make generalizations about the whole population. In other words, a sample selected through convenience sampling would be inadequately representative of the whole population. To control this problem, we have selected a large sample that is representative enough and generalizeable.

Following table lists the number of firms selected from each sector:

SECTORS	NUMBER OF FIRMS
TEXTILE SPINNING	74
TEXTILE WEAVING	6
TEXTILE COMPOSITE	37
WOOLEN	4
SYNTHETIC and RAYON	9
SUGAR and ALLIED INDUSTRIES	25
CEMENT	12
TOBACCO	3
REFINERY	3
POWER GENERATION and DISTRIBUTION	6
OIL and GAS MARKETING COMPANIES	5
OIL and GAS EXPLORATION COMPANIES	2
ENGINEERING	8
AUTOMOBILE ASSEMBLER	8
AUTOMOBILE PARTS and ACCESSORIES	6
CABLE and ELECTRICAL GOODS	5
TRANSPORT	2
TECHNOLOGY and COMMUNICATION	3
FERTILIZER	4
PHARMACEUTICALS	7
CHEMICALS	13
PAPER and BOARD	6
VANASPATI and ALLIED INDUSTRIES	2
LEATHER and TANNERIES	4
FOOD and PERSONAL CARE-PRUDUCTS	14
GLASS and CERAMICS	6
MISCELLANEOUS	12
TOTAL NUMBER OF FIRMS	**286**

3.2. Data

Data was collected from "BALANCE SHEET ANALYSIS OF JOINT STOCK COMPANIES LISTED ON THE KARACHI STOCK EXCHANGE (BSA)" issued by the STATE BANK OF

PAKISTAN that contains nine years of past financial data from the annual reports of firms that are listed on KSE. Data was collected from the period of 2000 to 2008. Although the final analyses were done from the period of 2001 to 2008, data of the year 2000 was also incorporated in the study in order to find the lag value of various financial inputs.

3.3. Variables and Measurement

The primary objective of this study is to find a relationship between dividend policy and earnings management. To find out this relationship we have taken earnings management as the dependent variable while dividend policy is taken as the explanatory variable, along with a set of controlled variables.

3.3.1. Earnings Management

A number of researchers and academicians have used Accruals as a proxy for the measurement of earnings management. According to the literature, accruals are divided into Discretionary and Non-Discretionary accruals. Jones (1991) separated discretionary accruals from non discretionary accruals when she examined the demand of regulators for the earnings number during import relief investigations. The same approach to detecting earnings management has been examined further by Dechow et al. (1995), Bartov et al. (2000), Dechow and Dichev (2002), Kothari et al. (2005), Ronen & Yaari (2008). The discretionary portion of accruals represents earnings management (Healy, 1985; DeAngelo, 1986; Jones, 1991; Dechow et al.

1995; Shah et al. 2009). According to Modified Cross Sectional Jones Model (1995) discretionary accruals are calculated by deducting nondiscretionary accruals from total accruals.

$$\mathbf{DA_t = TA_t - NDA_t}$$

Where:-
NDA_t is non discretionary accruals in year t
DA_t is discretionary component of accruals in year t
TA_t is total accruals in year t

It means that to find the discretionary portion of accruals, we first have to find the Total Accruals and then the non-discretionary portion of accruals.

After going through the past literature, we have found two methods to calculate total accruals:

1. Cash flow statement Approach
2. Balance Sheet Approach

We found that many researchers prefer the cash flow statement approach in the calculation of the total accruals as compared to balance sheet approach. Hribar and Collins (2002) argued that in some circumstances, balance sheet approach is inferior to the cash flow statement approach. In this study, we have computed the total accruals using the cash flow statement approach.

Cash Flow Statement approach

Total accruals will be calculated by using the cash flow statement approach which is denoted by the following equation:

$$TA_t = N.I_t - CFO_t$$

Where: TA_t is total accruals in year t
$N.I_t$ is net income in year t
CFO_t is the cash flows from operating activities in year t

According to the views of different researchers, earnings management cannot be represented by total accruals but denotes only that portion of total accruals where discretion is possible, that is known as discretionary accruals.

After calculating the total accruals, we calculated the non-discretionary accruals. Non-discretionary accruals are calculated using the Modified Cross Sectional Jones Model (1995). According to the past literature, models like Healy (1985), DeAngelo Model (1986), Jones Model (1991), Beneish Model (1999), and AP Model (2000) are also used to calculate the non-discretionary accruals. Many researchers prefer the Modified Jones Model (1995) to calculate the non-discretionary accruals, which is why in this study we have also used the Modified Jones Model. The modified Jones model is denoted as:

$$NDAt = \alpha 1 \left\{\frac{1}{A_{t-1}}\right\} + \alpha 2 \left\{\frac{\Delta REV_t - \Delta REC_t}{A_{t-1}}\right\} + \alpha 3 \left\{\frac{PPE_t}{A_{t-1}}\right\} + \varepsilon$$

Where: TA_t is total accruals in year t scaled by lagged total assets
ΔREV is revenues in year t less revenue in year t-1
PPE_t is gross property plant and equipment at the end of year t
ΔREC_t is net receivables in year t less net receivable in year t-1. All of the variables have been scaled by lagged total assets.
At-1 is total assets at the end of year t-1.
$\alpha 1, \alpha 2, \alpha 3$ are firm specific parameters.
ε is the residual, which represents the firm specific discretionary portion of total accruals.

As we know that discretionary accruals are equal to the difference between discretionary accruals and non discretionary accruals, thus by subtracting the non-discretionary accruals from the total accruals using the aforesaid DA model, we calculated the discretionary accruals.

3.3.2. Dividend Policy

Dividend payout ratio has been taken as proxy (Kato et al. 2002; Grullon et al. 2002; Wang et al. 1993; Lambert et al. 1989; Holder et al. 1998) in order to calculate dividend policy. The dividend payout ratio is denoted as the percentage of earnings that is being paid out to the shareholders in the form of dividends. With the help of dividend payout ratio, we can find how well a firm's earnings can support the dividend payments that are being made to the shareholders.

Dividend Payout ratio is calculated as:

$$DPR = \frac{Dividend\ per\ share}{Earnings\ per\ share}$$

3.3.3. Controlled Variables

According to the literature (Roychowdhury, 2006; Peasnell et al. 2000; Lee and Choi, 2002; Kim et al. 2003; Chen et al. 2003) there are certain other variables that have a significant impact on earnings management and could also affect the outcome of our study. In order to avoid bias in

our results, we have controlled the effect of these variables. The variables that are to be controlled in this study are:

- Size of the firm
- Leverage
- Return on equity (ROE)

3.3.3.1. Size of the firm

Prior literature (Douglas, 1987; Kim et al. 2003; Burgstahler & Dichev, 1997) provides substantial evidence that size of the firm has a noteworthy impact on earnings management practices. So, in this study we have controlled the effects of size of the firm.

In order to calculate the size of firm we took natural log of Total Assets (Krishnan, 2003).

$$Size\ of\ the\ firm = \ln(Total\ Assets)$$

3.3.3.2. Leverage

Bartov et al. (2000) suggested that omitting the variables that are correlated with earnings management will surely cause a somber problem. They recognized financial leverage as one of the variable that must be controlled while addressing the earnings management studies.

Leverage is calculated as:

$$Leverage = \frac{Total\ Liabilities}{Total\ Assets}$$

3.3.3.3 Return on Equity

Another variable which is to be controlled in this study is Return on equity as there is a significant relationship between ROE and earnings management (Chen & Yuan, 2001; Jian & Wong, 2004; Chen et al. 2003).

ROE is calculated as:

$$ROE = \frac{Net\ Income}{Shareholder's\ Equity}$$

3.4. Analytical Model

3.4.1. Panel data analysis

In order to test for the relationship between earning management and dividend policy, we have used the panel estimation technique. As suggested by Baltagi (2008), there are various reasons for using panel data techniques. By using panel data techniques, we can control individual heterogeneity as it is recommended by the panel data that individual units are heterogeneous. Cross sectional and time series data do not control for such homogeneity and there might be a

risk of getting biased results. Furthermore, in panel data analysis the data is more informative and there is less collinearity between variables. Also there are more degrees of freedom and there is more efficiency than in time series and cross sectional data. In addition, Wooldridge (2001) stated that through panel data we can look into dynamic relationships that cannot be observed with time series or cross sectional data.

The basic analytical model used in this study is

$$EM_{it} = \alpha 0 + \beta 1[DPR_{it}] + \beta 2[Size_{it}] + \beta 3[Levr_{it}] + \beta 4[ROE_{it}] + \varepsilon_{it}$$

Where: EM_{it} represents earnings management of firm i in year t
DPRit is the dividend payout ratio of firm i in year t
$Size_{it}$ is the size of i firm in year t
$Levr_{it}$ represents leverage of i firm in year t
ROEit is the return on equity of I firm in year t
□it is the error term in year t

3.5. Descriptive Statistics

Descriptive statistics represent the mean, standard deviation, minimum value, and maximum value. In this study the number of observations for each variable are 2288 for the period of 2001 to 2008.

3.6. Correlation Matrix

Correlation matrix shows the linear association of one variable with other variables. Correlation coefficient basically describes the magnitude and the direction of relationship among variables. There can be positive, negative, or even no correlation among the variables. Correlation among the variables lies between -1 and +1. In this study, we have used the correlation matrix in order to find the linear association between EM, DPR, SIZE, LEVERAGE, and ROE.

3.7. Panel data analytic Models

We have used a number of Panel data analytic models in this study in order to enable a more proficient assessment of the regression parameters. By using these different types of analytic models, we tried to find results that are more consistent and unbiased. The analytic models that are being widely used by the researchers and academicians and also used in this study are:

3.7.1. Common Effect Model

According to Gujrati (2003) common effect model is a type of panel data analytic model in which intercept and slope coefficients are constant. That is the reason why this model is also called as the constant coefficients model. This model has been widely used by (Chung et al. 2001; Dechow & Dichev, 2002; Shah et al. 2009, Shah et al. 2010) many researchers. By using this model we have pooled all of our data and have run an OLS regression model. According to Wooldridge (2001) the common effect model, in order to be valid and unbiased, must not contain

heteroskedasticity. That is why we have tested for heteroskedasticity after running the common effect model because the heteroscedasticity can only be tested after running the OLS regression.

3.7.2. Fixed Effect Model

The relationship between earnings management and dividend policy was also tested using the fixed effect model. Fixed effect model can be considered as an extension of the pooled regression model. In fixed effect model, the slope coefficients are Constant while the intercept are different for individuals (Gujrati, 2003; Baltagi, 2008). The rationale behind using this model is that it removes omitted variables bias (Wooldridge, 2001) by looking into multiple observations about each individual firm. In Conventional OLS regression we may face the problem of unobservable variables which can cause inefficiency or bias in the results; by using fixed effect model we tried to overcome this problem (Ernst, 2001). The equation for the Fixed effect model is:

$$EM_{it} = \alpha 0i + \beta 1[DPR_{it}] + \beta 2[Size_{it}] + \beta 3[Levr_{it}] + \beta 4[ROE_{it}] + \varepsilon_{it}$$

Where: EM_{it} represents earnings management of firm i in year t
DPRit is the dividend payout ratio of firm i in year t
$Size_{it}$ is the size of i firm in year t
$Levr_{it}$ represents leverage of i firm in year t
ROEit is the return on equity of I firm in year t
□it is the error term in year t

3.7.3. Random Effect Model

When we use fixed effect model, there is a fixed value of intercept assigned to each cross sectional unit. On the contrary in the random effect model, the value of intercept is said to be the mean of the overall intercepts of the entire cross sectional units. In addition, the error term in random effect model signifies the divergence of the individual intercepts from the mean value of the overall intercepts (Gujrati, 2003).

In order to find the relationship between dividend policy and earnings management we have used random effect model because although, the fixed effect model can statistically provide reliable results, it cannot be the most efficient model (Wooldridge, 2001). This is reason why we have used the random effect model along with common and fixed effect model.

$$EM_{it} = \alpha 0i + \beta 1[DPR_{it}] + \beta 2[Size_{it}] + \beta 3[Levr_{it}] + \beta 4[ROE_{it}] + \varepsilon_{it}$$

Where,

$$\alpha 0i = \alpha 0 + \beta i$$

3.7.4. Hausman Specification test

As we are using three different panel data analytic models, the basic purpose of using Hausman specification test in this study is to find which model is most efficient and provides the best results as compared to the others. As according to Gujrati (2003) when the sample size is large and the number of time periods is relatively small, fixed effect model and random effect model can be significantly different. Hence, in order to find a more efficient model between fixed and

random, we used the hausman specification test. The Hausman specification test can also be used to compare common effect model with fixed or random (Green, 2009).

When we use Hausman test to compare between two models i.e. fixed effect model and random effect model, it generates the following hypothesis:

H1: Results obtained from fixed effect model are more efficient
H2: Results obtained from random effect model are more efficient

The decision is completely based on the P-value. If the P-value is less than 0.05, it means that results obtained from random effect model are more efficient. But if the P-value is greater than 0.05, the results obtained from fixed effect model would be more efficient. Same is the case, when we compare common effect model with either fixed or random effect model.

In this study the Hausman specification test is being used twice. By using Hausman specification test, we first compared random effect model and fixed effect model. Secondly, we compared the outcome of the first Hausman test with the common effect model.

3.8. Hypothesis of the Study

The primary objective of this study is to find a relationship between dividend policy and earnings management.

Based on this objective the hypotheses of this study are:

H0: There is no significant relationship between dividend policy and earnings management.

H1: There is a significant relationship between dividend policy and earnings management.

Chapter No. 4

Results & Analysis

4. Results and Analysis

4.1. Descriptive Statistics

Table1. Descriptive Statistics

Descriptive Statistics

Variables	Observations	Mean	Std. Dev	Min	Max
EM	2288	990.3816	3421.829	0	56667.78
DPR	2288	0.2537892	0.6918876	-10	12.519
SIZE	2288	7.124163	1.554194	0	12.14
LEVERAGE	2288	0.6339187	0.3389138	0	5.621
ROE	2288	0.0350726	7.319993	-334.203	72.143

Table 1 summarizes the descriptive statistics of the sample firms used in the study. Each variable set contains 2288 observations that represent 286 firms for the period of 2001 to 2008. Earnings management (EM) and size of firm are in Million Rupees whereas Dividend payout (DPR), Leverage, and Return on equity (ROE) are in ratio form which can easily be converted to percentages.

From Table1 it is deduced that average EM practices undertaken by the non financial firms in Pakistan is about 990.3816 million from the period representing 2001 to 2008. The lesser extent to which the firms indulge in earnings management activities is 0 which means no earnings management practices were undertaken, while the maximum amount of earnings management practices done by these firms is 56667.78 million. From these figures we can conclude that the range concerning the extent of earnings management activities done by the firms is quite high

which provides the logical reason for the standard deviation being so high (approximately 3421.829 million).

The mean of DPR is 0.2537892 which is approximately equal to 25.3%, which means that firms paid 25.3% dividend in relation to their earnings per share (EPS). The selected firms paid dividend to their shareholders from time to time, the range of DPR is -10 to 12.14. Here, -10 means that even firms in a particular year had negative EPS but they still paid out dividends to the shareholders and on the other hand, 12.519 depicts that firms paid a very high amount of dividend in relation to their earnings per share. The standard deviation of DPR is 0.69188 which is also high.

The average size of Pakistan non financial firms is about 7.124 million and from the minimum and maximum values we can conclude that these firms vary in respect to size. The standard deviation of size is 1.55 million. The mean value of Leverage is 0.6339 which shows that on average, 63.4% debt is being used in the capital structure of the sampled firms. The range is not high as compared to other variables and based on this logic, the standard deviation of leverage is less than other variables being investigated in this study. The mean value of ROE is 0.035 which is equal to 3.5%. It means that on average, Pakistan firms have not generated enough returns for their shareholders from the period of 2001 to 2008. The minimum value of ROE in the descriptive statistics table is very high in terms of loss as compared to the maximum value. The standard deviation is also very high which depicts that ROE deviated significantly from its mean in the period of 2001 to 2008.

All the variables have high standard deviation, except size of firm with a lower value of standard deviation with respect to its mean value. It means that there is less deviation of size from the average size of the firms

4.2. Correlation Matrix

Table2. Correlation Statistics

Correlation Matrix

Variables	EM	DPR	SIZE	LEVERAGE	ROE
EM	1				
DPR	0.0505	1			
SIZE	0.4445	0.0451	1		
LEVERAGE	-0.0457	-0.1204	-0.1233	1	
ROE	-0.1332	0.0174	-0.0376	-0.0315	1

Table2 describes the correlation matrix which shows the linear association of one variable with other variables. Correlation coefficient basically describes the magnitude and the direction of relationship among variables. From table2 depicts that, EM is positively correlated to DPR and Size of firm. It means that earnings management, dividend payout ratio, and size of firm move in the same direction. Whereas ROE and Leverage is moving in the opposite direction that of EM which means that, an increase in earnings management would decrease leverage and return on equity. DPR is positively correlated with size and ROE, representing that large and profitable firms normally pay high dividends. On the other hand, DPR is negatively correlated with leverage. Size is negatively correlated with leverage and return on equity.

After descriptive statistics and correlation matrix and in order to run the panel data analytic models we converted the cross sectional and time series data into panel data by using the statistical package STATA V.10. The panel data constructed to test for the relationship between explained and the explanatory variables is strongly balanced as the number of years in each cross sectional unit is equal.

4.3. Common Effect Model

Table3. Common effect model

Common effect Model

Variable Description	Coefficients	T Statistics	P-Value
Intercept	-6002.9330	-17.7500	0.0000
DPR	167.0350	1.8000	0.0710
SIZE	967.9782	23.4600	0.0000
LEVERAGE	89.6111	0.4700	0.6380
ROE	-54.6539	-6.2800	0.0000
F Statistics	0.0000		
R-Square	0.2123		
Adjusted R-Square	0.2109		

According to table3, the value of R square is 0.2109 which means independent variables are influencing the dependent variable by 21%. This value is lower because the data is in panel form.

The basic objective of this study is to find a relationship between dividend policy and earnings management. Table 3 depicts that there is no significant relationship between earnings management and DPR after controlling for Size, Leverage, and ROE as the t-value is less than 2. Also, P-value is greater than the value of 0.05. As far as controlled variables are concerned, size and ROE has highly significant relationship with EM as the t-values are much higher than 2 and P value is equal to 0.

The coefficient of size is 967.9782 which shows a positive relationship between size and EM and represents the marginal change in independent variable that would change the dependent variable by 967.9782. Coefficient of ROE is -54.6539 showing a negative relationship between EM and ROE. Also, the coefficient characterizes that marginal increase in ROE would decrease earnings

management by 54.6539. There is an insignificant relationship between earnings management and leverage as the value t is less than 2 and p-value is greater than 0.05.

According to table3, there is an insignificant relationship between dividend policy and earnings management after controlling for size, leverage, and return on equity. These results were derived without controlling the effect of heteroscedasticity. To get a clearer picture, we will test for the presence of heteroscedasticity in the data as its presence might cause the results generated by the common effect model to be biased. In order to test for heteroscedasticity, we have used Breusch-Pagan/Cook Weisberg test. We did not test for heteroscedasticity earlier because the test can only be applied after running the common effect model.

4.4. Breusch-Pagan/Cook Weisberg Test for Heteroscedasticity

After running the common effect model, we applied the Breusch-Pagan/Cook Weisberg test. The Breusch-Pagan/Cook Weisberg test generates the following hypotheses:

H0: Data contain Constant variances

H1: Data contain Non-Constant variances

Table4. Test for Heteroscedasticity

Breusch-Pagan/Cook Weisberg Test for Heteroscedasticity

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of EM

        chi2( 1)      =  4341.39
        Prob > chi2   =     0.0000
```

According to the results generated by Breusch-Pagan/Cook Weisberg test, we accept the alternative hypothesis H1 which indicates the presence of heteroscedasticity in the data, as the P-value is less than 0.05. This indicates that the variances are non-constant.

It is inferred from the heteroscedasticity test that the results generated by the common effect model earlier may be biased. As according to Gujrati (2003), heteroscedasticity causes the results to be inefficient and the inferences made will be of doubtful value. In order to get unbiased results, the heteroscedasticity will be controlled using White's heteroscedasticity-corrected standard errors as suggested by Wooldridge (2001) and Gujrati (2003). The White's heteroscedasticity corrected standard errors are also widely known as the robust standard errors.

4.5. Common Effect Model with Robust Standard Errors

Table5. Common effect model with robust standard errors

Common Effect Model with Robust Standard Errors

Variable Description	Coefficients	T Statistics	P-Value
Intercept	-6002.9330	-9.54	0.0000
DPR	167.0350	2.52	0.0120
SIZE	967.9782	10.57	0.0000
LEVERAGE	89.6111	0.53	0.5930
ROE	-54.6539	-11.75	0.0000
F Statistics	0.0000		
R-Square	0.2123		
Adjusted R-Square	0.2109		

After controlling for heteroscedasticity with robust standard errors, there is a great deal of change in the overall results except for the values of R square, Coefficients, and F-statistics. The results deduced from CEM depict that there is a positive significant relationship between DPR and EM as the t-value is greater than 2 and the P-value is less than 0.05. The coefficient of DPR is 167.035 which mean that, a unit increase in DPR would increase EM by 167.035 units.

Apart from EM and DPR, the relationship between EM and controlled variables Size, Leverage, and ROE is somewhat the same as presented by the previous (Model without robust standard errors) common effect model; EM has a positive significant relationship with size, there is no relationship between EM and Leverage, and the relationship between EM and return on equity is negatively significant.

The results derived from the common effect model with robust standard errors clearly imply that dividend is a significant driver of earnings management activities and in order to meet the expected level of dividends, firms indulge in earnings management practices.

4.6. Fixed Effect Model

After common effect model, we will detect for the relationship between dividend policy and earnings management using fixed effect model. As we already know that there exists heteroscedasticity in the data, we will run the fixed effect model with robust standard errors.

Table6. Fixed Effect Model

Fixed Effect Model

Variable Description	Coefficients	T Statistics	P-Value
Intercept	-4186.5170	-6.45	0.0000
DPR	9.1967	0.30	0.7620
SIZE	672.3541	7.78	0.0000
LEVERAGE	608.9584	3.47	0.001
ROE	-40.6533	-4.28	0.0000
F Statistics	0.0000		
R-Square Overall	0.2046		
Number of Groups	286		
Obs Per Group	8		
Group Variable	COMP		

There are number of ways to run the fixed effect model in the statistical package STATA. The four mostly used ways to run a fixed effect model are:

1. By adding dummy variables for each subject group
2. By De-Meaning the data
3. By using the **areg, absorb** command
4. By using the **xtreg** command with **fe** string

In order to detect for the relationship between DPR and EM with the help of fixed effect model, we have used the **xtreg, fe** command only because **xtreg/fe** allow for the robust standard errors that would not be possible if we had used other methods to run fixed effect model.

The number of groups represents the number of firms, which is 286. The group variable in our case is named as COMP which is short for companies. The overall R square value is approximately 20%. The value of observations per group is 8 as each group contained 8 firm years. The results of fixed effect model are somewhat contradictory to the results derived from the common effect model. As according to fixed effect model, there is no significant relationship between DPR and EM based upon their t-value which is less than 2 and P-value which is greater than 0.05. Also, according to common effect model there is no relationship between EM and Leverage but the fixed effect model depicts that there exists a positive significant relationship between EM and the controlled variable Leverage, as the t-value is greater than 2 and P-value is less than 0.05. Apart from DPR and Leverage, fixed effect model and common effect model shows the same results.

It is inferred from the fixed effect model, that after controlling for Size, Leverage, and Return on equity, there is no significant relationship between dividend policy and earnings management. That is, dividend cannot be considered as a driver for firms to participate in earnings management practices.

4.7. Random Effect Model

Table7. Random Effect Model

Random Effect Model

Variable Description	Coefficients	Z Statistics	P-Value
Intercept	-4915.1980	-6.43	0.0000
DPR	24.7530	0.83	0.4090
SIZE	783.8756	6.65	0.0000
LEVERAGE	498.9491	3.31	0.001
ROE	-41.4348	-4.58	0.0000
F Statistics	0.0000		
R-Square Overall	0.2084		
Number of Groups	286		
Obs Per Group	8		
Group Variable	COMP		

Due to the fact that the data used in this study is heteroscedastic, we have used robust standard errors that will control for heteroscedasticity just like we have used them while detecting the relationship between EM and DPR using common and fixed effect models.

Number of observations are 2288 for each variable. Number of groups represents the sampled firms that are 286. The overall R square is 20% approx. According to the results drawn from random effect model, after controlling for Size, Leverage, and Return on equity, there is no significant relationship among earnings management and dividend policy because the value of z is less than 2 and P-value is greater than 0.05. Random effect model depicts that size and leverage has a positive significant relationship with earnings management. On the other hand, there exists a negative significant relationship among earnings management and return on equity. The results generated by random effect model are consistent to the results generated by fixed

effect model and to an extent, contradicts with the results generated by the common effect model.

4.8. Hausman Specification Test for Fixed and Random Effect Model

In order to choose the most efficient model among fixed effect model and the random effect model, we used the hausman specification test. When we compare fixed effect and random effect model using by using hausman specification test, the following hypotheses are generated:

H1: Results obtained from Fixed effect model are more efficient

H2: Results obtained from Random effect model are more efficient

If the P-value is less than 0.05, the results obtained from random effect model are considered to be more efficient than that obtained from fixed effect model. On the contrary if the P-value is greater than 0.05, it means that results obtained from fixed effect model are efficient than random effect model.

Table8. Hausman Test

Hausman Specification Test (REM Vs FEM)

Variable Description	Coefficients		(RE-FE)	Sqrt S.E
	Random Effect (RE)	Fixed Effect (FE)		
DPR	24.7530	9.1968	15.5562	-
SIZE	783.8756	672.3541	111.5215	80.1101
LEVERAGE	498.9491	608.9584	-110.0093	-
ROE	-41.4348	-40.6533	-0.7815	-
	Test: H0: Difference in coefficients not systematic **Prob>Chi2** = 0.1999			

According to the Hausman specification test, fixed effect model is more efficient than random effect model as the P-value is greater than 0.05. Based on the P-value, we reject H1 that is; obtained from random effect model.

4.9. Hausman Specification Test for Fixed and Common Effect Model

Random effect model being out of the picture, we are now left with two models; Common effect model and Fixed effect model. Now, by using the Hausman specification test we will compare common effect model and fixed effect model.

When we compare common effect and fixed effect model, the Hausman test generates the following hypotheses:

H1: results obtained from fixed effect model are more efficient

H2: results obtained from common effect model are more efficient

Table9. Hausman Test (Cem Vs Fem)

Hausman Specification Test (CEM Vs FEM)

Variable Description	Coefficients		(CE-FE)	Sqrt S.E
	Common Effect (CE)	Fixed Effect (FE)		
DPR	167.0350	9.1968	157.8382	58.9626
SIZE	967.9782	672.3541	295.6241	30.3711
LEVERAGE	89.6111	608.9584	-519.3473	-
ROE	-54.6539	-40.6533	-14.0006	-
	Test: H0: Difference in coefficients not systematic **Prob>Chi2** = 0.0000			

According to the results derived from the Hausman specification test, P-value is less than 0.05. Based on P-value, we reject the null hypothesis; results obtained from fixed effect model which means that, results derived from common effect model are more efficient than the results obtained from fixed effect model.

4.10. Discussion

It clearly means that after controlling for size, leverage, and return on equity, there is a positive significant relationship between dividend policy and earnings management. Based on the results generated by common effect model, we accept our hypothesis that there is a significant relationship between dividend policy and earnings management. It means that in Pakistan, dividend acts as a driver that motivates firms to indulge in earnings management practices.

The findings of this study are consistent with the study of Kasanen et al. (1996) who explored the same relationship in debt dominated markets. They have also found a significant relationship between dividend policy and earnings management. Kasanen et al. (1996) also made predictions about dividend based earnings management in the equity dominated markets but never actually tested for this relationship in equity dominated markets.

In another recent study, Shah et al. (2010) tested for the impact of earnings management on dividend policy in Pakistan and China. According to the findings of their study, earnings management has no impact on dividend policy in Pakistan and China. On the contrary, we have tested for the impact of dividends on earnings management and explored the relationship the other way around, and found that dividends significantly impacts earnings management. Our findings are different from that of Shah et al. (2010) as they have explored the relationship in a complete opposite dimension.

As far as the controlled variables are concerned, the results generated by this study are in accordance with the past literature except for leverage. Latridis and Kadorinis (2009) provided evidence that firms that are levered engage in earnings management practices, but according to the results of this study there is no relationship between leverage and earnings management.

Chapter No. 5

Conclusion

3.8. Conclusion

We explored the relationship between dividend policy and earnings management, and found evidence of dividend driven earnings management practices in Pakistan. It means that there is a significant impact of dividend policy on the earnings management activities. We tested for this relationship after controlling the effects of size, leverage, and return on equity. We found that firms participate in earnings management activities in order to meet the expected level of dividends. It clarifies the fact that with the help of earnings management practices, managers report the profits high enough so that they are able to pay dividends to the stockholders. It clearly means that, dividend payments create incentives for the firms to manage earnings in such a way that they are able to pay dividends to their shareholders. Hence it is proved that if earnings of the firms are low for paying dividends to the stockholders, they use earnings management practices to meet the expected level of dividends.

The primary objective of this study was to find the relationship between dividend policy and earnings management in Pakistan. We tried to find the impact of dividend on the earnings management activities. The fundamental idea behind conducting this research was to test for dividend as an active driver of earnings management practices in Pakistan. Before this contemporary research, Kasanen et al. (1996) explored the same relationship in Finland, which is a debt dominated market. There is less evidence in prior literature regarding testing for the relationship between dividend policy and earnings management in equity dominated markets, except for Shah et al. (2010) who tested for the impact of earnings management on dividend policy.

3.9. Future Research

In this study the relationship between dividend policy and earnings management was explored using data from 286 non-financial companies that represented 27 sectors from Pakistan. To achieve the objective of this study, these 27 sectors were analyzed as a whole. It means that the results generated by this study are not sector-specific as the relationship between dividend policy and EM was not tested in each individual sector. There might be a possibility that if we examine the same relationship using data from individual sectors, it would not generate the same results. This research paves way to future research, as the same relationship can be tested in each individual sector of Pakistan.

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