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An Inquiry into Earning Management Motives: Evidence from Pakistani Distressed and Non-Distressed Firms

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ABSTRACT

This research takes into view the motives that drive opportunistic managers in the Pakistani corporate world to manipulate firm earnings in different financial circumstances by resorting to real (REM) and accrual (AEM) earning management to reap their self-interests. The present study undertakes 188 distressed and 37 non-distressed firms in the sample period of 2010-2017. The summary stats confirm that both in distressed and non-distressed firms' managers resort to REM practices more than AEM. The factors that urge managers to take REM practices in distressed firms i.e., debt covenant restriction, managerial ownership, and tax avoidance needs to be amended in such a way that it demotivates managers for carrying such practices in distressed firms. The factors that influence AEM practices in distressed firms are debt covenant restrictions, institutional ownership, highly valued firms and managerial ownership whereas in non-distressed firm these factors are debt covenant and effective tax rate. In non-distressed firm's motives that urge managers to adopt REM practices is raising additional capital and tax avoidance practices.

Keywords: REM, AEM, Distressed and Non-Distressed Firms, Debt Covenant Restrictions, Tax Avoidance and Institutional Ownership.

1. INTRODUCTION

The recent accounting scandals which have taken the world by storm and shock are scandals involving names such as Adelphia, Enron and WorldCom. The establishment of the Sarbanes--Oxley Act, Sox, in the United States in 2002 was a direct result of these scandals, with the aim of this act being to restore a sense of confidence and transparency in the capital market of the U.S., as well as to provide investors with a greater degree of protection.

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Managers can possibly involve or become a part of earnings management, EM, for their personal gain when there is a split or a communication gap between the owner and the managerial staff (Abdul Rahman & Haneem Mohamed Ali, 2006). Irrespective of gender, CEOs are involved in EM practices for a higher equity based compensation (Kama & Melumad, 2019). This, in return can negatively impact annual reports that play a decisive role for stakeholders. This scenario links up the definition of earnings management and the investigations focused on accounting scandals and large (Cooper, Dacin, & Palmer, 2013) since earnings management is a pure indication of a devious management (M. Jones, 2011).

Countless work and previous literature has proven that there is no shortage of managerial incentives which result in the accrual or real earning management practices in a company under distress and non-distressed. Firms that have strong appetite for EM after Sox act have been imposed, camouflage their EM activities accrual conversion to cash via factoring receivables which are unobservable due to its non-disclosures (Kama & Melumad, 2019). The verdict of the manager to select either one of the methods can be changed with time if need arises or if upon evaluation it seems as though another method could achieve an ulterior motive such as a personal gain or an informational behavior.

It has been observed through the study conducted by (Joosten, 2012) that companies which face a greater degree of financial stress as well more competition within the industry; these usually have increased levels or accrual manipulations. Both of the factors mentioned limit real activities manipulation (A. Y. Zang, 2011). (Li, Lin, & Luo, 2019) also found that proximity of auditor and REM engaged client firm can limit and control REM practices for such firms. According to (Salteh, Valipour, & Zarenji, 2012) AEM practices reduce cost of capital and increase EVA which indicates the financial health to investors, if REM practices are started by managers may lead to a severe blow to EVA which proves too costly for distressed firms in the long term. Light has been shed on this by (Cohen & Zarowin, 2010), found that real activities manipulation exerts influence of more adverse nature on future performance, as compared to the influence accrual earning management. On the other hand, according to (Gunny, 2010), who is of the opinion that real activities manipulation is costly because of the economic

value, is also of the opinion that the profits of applying REM outdo the costs if earnings targets are met. (Graham, Harvey, & Rajgopal, 2005) conducted a survey which revealed that the real earnings manipulation was used by 80 per cent of the managers, with the aim of reporting greater profits rather than AEM. So in case of healthy firms managers can afford to undertake REM activities that may prove beneficial to investors as far as the value of firm is concerned.

There is a lack of evidence as to how managers in Pakistani non-financial firms resort to different practices in presence of distressed firms and non-distressed firms. There is a lack of information about how the motivating factors in such firms allow managers to indulge in personal gain in case of resorting to REM or if these factors benefit shareholders in case of resorting to AEM.

To fortify the corporate domination machinery and expand the brilliance of fiscal journalism, the Security Exchange Commission of Pakistan, (SECP) in Pakistan made it obligatory for organizations to implement a certain code. These codes implemented included the corporate governance 2002 and International Financial Reporting Standard 2005. This allowed Pakistan to become established as a distinctive test case, meaning that it became possible to analyze certain earning management strategies in companies which were classified as distressed and un-distressed. For the purpose of making necessary provisions for such measures, it is important to make a thorough inquiry into circumstances as well as motives, as these are the factors which influence managers into the manipulation of earnings. Such behavior on part of managers may be informative, but mostly it is opportunistic in nature.

It is crucial to gain an understanding whether the motives for earning management in both types of corporations' increase real earning manipulations or accrual manipulations. This is done to determine the accompanying costs.

The major goal of the present study is to seek out how the firms' specific internal motives drive managers in different financial circumstances (distressed and non-distressed) towards the earning management practices both through their own judgment and as well real earning manipulations in non-financial firms of Pakistan.

Most of the large corporations in Pakistan are run by family's and since top

management is dominated by them hardly leaves any reason for not indulging in earning management practices for their ulterior motives and leaving other shareholders as destitute. This study provides an insight into such matter where investors get the information about the motives which instigates managers in indulging in earning management practices. This study can help them to get market information in Pakistan, where stock market noise behavior is proof of its capital market efficiency.

2. LITERATURE REVIEW

2.1. Debt Covenant Restrictions and Earning Management Practices:

According to the debt covenant hypothesis, violations thereof are expensive and therefore it is in the interest of the managers to make choices so as to avoid default by violations (Watts & Zimmerman, 1986). There exists a nonlinear relationship between debt ratio and EM, (Si, 2019) found that when total debt ratio and the total financial debt ratio exceed 57.14% and 33.33%, respectively, the debt structure investigates manager to trigger earnings, via EM at high pace. Even franchise restaurants with high financial leverage are also involved in EM (Gim, Choi, & Jang, 2019). There is a positive relationship between lower debt covenant slack and ex-post conditional conservatism. Accrual manipulation can therefore be said to become more restricted due to bank monitoring. In a study by (Fields, Gupta, Wilkins, & Zhang, 2018) jarring evidence was found which confirms that firms under refinancing pressure increase income via discretionary accrual during periods of increased short-term debt. A healthier way to combat the possibility of debt covenant restriction violation would be for firms to get engaged in choices leading to increased income (Hemmer & Labro, 2019). Pertaining to the above discussion our hypotheses in context to distressed and non-distressed firms are as follows:

H_{1a}: Tighter the restrictions in distressed firms, higher will be income-increasing accruals.

H_{1b}: Tighter the restrictions in non-distressed firms, higher will be income-increasing accruals.

(Graham et al., 2005) argued that a larger number of financial managers indicate the readiness to employ earnings manipulation through real life activities as compared to accruals for the reason that REM practices are exempted from regulators scrutiny. The Real earnings management was found by (Roychowdhury, 2006) to be higher for firms that have debt in comparison with those that do not. (Hill, Korczak, & Wang, 2019) found that firms avoid credit rate downgrades are engaged in REM which enables such firms to cope up with the unavoidable earnings shocks. (Pittman, 2019) has also confirmed that firms are involved in misstatement due to debt covenant restrictions. Pertaining to the above discussion our hypotheses in context to distressed and non-distressed firms are as follows:

H_{1c}: Tighter the restrictions in distressed firms, higher will be real earning manipulations.

H_{1d}: Tighter the restrictions in non-distressed firms, higher will be real earning manipulations.

2.2. Raise Additional Capital and Earning Management:

Primarily, accounting numbers are used to determine a firm's competence to raise capital via debt and equity, along with cost of capital in relation to its monetary fitness of the said firm, which provides an incentive to CEOs to falsify the financial health of the firm in front of certain stakeholders by manipulating accounting numbers. This could be manipulated due to wealth transfer from new capital providers to current stockholders and subsequently to the CEO. The Earning management was not a tool for misleading investors, but rather just a natural response towards the expectation of upwardly managed earnings by firms around the Seasonal Equity Offerings (Deng, Ong, & Qian, 2018). Looking at a more legal perspective on SEOs, (DuCharme, Malatesta, & Sefcik, 2004) that SEOs that are sued have the highest unusual accruals with a positive relationship between settlement amounts and degree of accruals abnormality. In another study (Bartov & Cohen, 2009) found that firms having negative earnings manipulate reports to show higher profits from asset sales, in turn implying that profits can be useful in cushioning negative earnings. Thus far it can be implied that there is no circumstantial evidence that raising additional capital on real earnings management, whether in

distressed or non-distressed firms, has any real effects. The possible hypotheses surrounding this discussion are as follows:

H_{2a}: Distressed firms raising additional capital, will practice positive income-increasing accruals

H_{2b}: Non-Distressed firms raising additional capital, will practice positive income-increasing accruals

H_{2c}: Distressed firms raising additional capital, will practice positive real activities manipulations.

H_{2d}: Non-Distressed firms raising additional capital, will practice positive real activities manipulations.

2.3. Highly Valued Equity and Earning Management:

(Jensen & Meckling, 1976) puts things into perspective with the idea that when firms are overvalued, it may lead to a phenomenon he terms extreme valuation, which causes managers to make choices detrimental to the firms long term interests. The more overvalued a firm is, the higher are the unrealistic earning targets that it is expected to achieve (Duong & Pescetto, 2019). As such, gradual rise in earnings is inevitable in light of accounting conservatism, due to which there may be a lag in the recognition of increased value. In case that prices truly are high, managers may be forced to employ uphill in EM so to maintain inflated share prices, and however, retention may be temporary. While studying companies involved in the earning management, (Badertscher, 2007) found that as compared to lesser valued, firms that are highly overvalued usually employ a more aggressive approach towards earnings management including but not limited to accruals management, real transaction management, and GAAP violations. On the other hand (Jeong & Choi, 2019) investigated Korean Stock market from 200 to 2015, using 15826 firm year observations they found REM inversely effects the sustenance of earnings and inhibits the cash flows persistence. These practices keep market away from calculating future prospects of earnings from present stock prices. With the aforementioned literature, our hypotheses for distressed and non-distressed firms are as follows:

H_{3a}: Higher the PE value of distressed firms exhibits positive current year discretionary accruals levels.

H_{3b}: Higher the PE value of non-distressed firms exhibits positive current year discretionary accruals levels.

H_{3c}: Higher the PE value of distressed firms exhibits positive current year real activities manipulations levels.

H_{3d}: Higher the PE value of non-distressed firms exhibits positive current year real activities manipulations levels.

2.4. Institutional and Managerial Ownership and Earnings Management:

Once an institutional investor is either deciding to or has decided to invest in a corporation, they must be keen on gathering information about the said corporation. There are two points of views, when analyzing the daunting effects of institutional holdings on EM practices. One is that the power and incentive to moderate the earnings management activities including any and all opportunistic practice displayed by the executives, lie with the institutional investors. Second being that, it is often the short-term returns that interest institutional investors consider more than controlling the activities of managers, as it is more favorable to them to control and sell current stakes rather than improve long term management

(Wang, Lin, Werner, & Chang, 2018). Increasing the ownership stakes of managers in firms may have varying effects which can be studied by using an alignment of interests and entrenchment hypotheses. According to the former hypothesis, managers when awarded higher stakes the conflicts between them and shareholders can be minimized, in turn reducing managers' opportunistic behavior (Jensen & Meckling, 1976).

(Eng, Fang, Tian, Yu, & Zhang, 2019) studied US family owned firms are involved in aggressive REM in past crisis period and this happens when institutional context is feeble and is going under evolving state than these family firms manipulate earnings for their self-seeking motives. (Kamran & Shah, 2014) gave evidence of a negative correlation between institutional ownership and the earnings management which agrees with previous literature quoted stating that institutional owners are more interested

in the restriction of executives presenting opportunistic behavior through earnings management activities. (O'Callaghan, Ashton, & Hodgkinson, 2018) suggests that when the managerial ownership is at an intermediary level the incentives to carry put the earnings management is higher, thus proving a nonlinear correlation between the two. It can hence be said that ample evidence, albeit contrasting in some places, is present regarding the correlation of institutional ownership and earnings management. What lacks though, is an evidence that clearly separates this information for non-distressed firms with regards to both accruals and real earnings management.

Consequently, from the discussion our hypotheses in distressed and non-distressed firms are as follows:

H_{4a}: Increasing institutional ownership in distressed firms, negatively effects accrual earnings manipulations in distressed firms.

H_{4b}: Increasing institutional ownership in non-distressed firms, negatively effects accrual earnings manipulations in non-distressed firms.

H_{4c}: Increasing institutional ownership in distressed firms, negatively effects real activities manipulations in distressed firms.

H_{4d}: Increasing institutional ownership in non-distressed firms, negatively effects real activities manipulations in non-distressed firms.

H_{5a}: Increasing Managerial ownership holding has positive effect on accrual earnings manipulations in distressed firms.

H_{5b}: Increasing Managerial ownership holding has positive effect on accrual earnings manipulations in non-distressed firms.

H_{5c}: Increasing Managerial ownership holding has positive effect on real earnings manipulations in distressed firms.

H_{5d}: Increasing Managerial ownership holding has positive effect on real earnings manipulations in non-distressed firms.

2.5. Corporate Tax Avoidance and Earning Management:

The agency theory underlines the correlation between the tax avoidance and the earnings management, by pointing out that an agency relationship exists between managers and shareholders. Here the managers are the agents acting for the shareholders,

whereas the shareholders are the principals that hire managers and grant them the commensurate authority to manage firm productivity (Chen & Chu, 2005). An instance where a manager may act in self-interest, according to (Bergstresser & Philippon, 2006) would be when the finances of a manager would not be personally affected by the increase or decrease in the value of the firm they manage; hence it would encourage them to take the route that leads to their maximum private profitability. Tax avoidance is a complicated technique that requires obscuration of transactions (Desai & Dharmapala, 2006) which can be done by practicing earnings management and further the agenda of opportunistic managers (Goncharov & Zimmermann, 2006). Some argue that tax avoidance can be written off as a mere transference of value from state to shareholder (Desai & Dharmapala, 2006) pertaining to the fact that reduced dividends are a result of taxes, which even though are paid by the company, the burden of them is borne by the shareholders (Amiram, Bauer, & Frank, 2013). Debatably, tax avoidance has many possible risks for the management including but not limited to penalties and loss of reputation (Crocker & Slemrod, 2005). Kaldonski et.al., (2019) found that firms who are ahead in meeting industry benchmarks when involved in REM for their earning manipulation avoids tax aggressiveness due to which they are highly scrutinized by authorities that may affect their REM practices. Another reason for managers avoiding CTA would be conflict of interest, where although CTA has value to the shareholder manager withhold due to no benefit provided to them. We have deduced from the literature that there is a need for researching the impact of CTA on real earnings management also suggested by (Yorke, Amidu, & Agyemin-Boateng, 2016) in the light of distressed and non-distressed firms. Similarly, impacts of CTA on accrual management also require testing within both distressed and non-distressed firms.

As such, our hypotheses in distressed and non-distressed firms are as follows:

H_{6a}: Corporate Tax Avoidance has a positive impact on accrual earnings manipulations in distressed firms.

H_{6b}: Corporate Tax Avoidance has a positive impact on accrual earnings manipulations in non-distressed firms.

H_{6c}: Corporate Tax Avoidance has a positive impact on real activities manipulations in distressed firms.

H_{6d}: Corporate Tax Avoidance has a positive impact on real activities manipulations in non-distressed firms.

3. RESEARCH METHODOLOGY

The companies included in this study are the ones whose data for the selected variables is preserved during the duration of this study. The firm that offers financial services and have missing data for variables under study is omitted. The sample year study is from 2010 to 2017. Due to lags and changes in variables, 2010 and 2011 is sacrificed. So the overall firms selected as final sample are 225 in number for 2012-2017 with total firm year observations of 1350. Further bifurcation into distressed and non-distressed firms divided 225 firms into 37 non-distressed firms and 188 distressed firms. The present study makes use of annual reports of non-financial companies published by state bank of Pakistan in its Balance Sheet Analysis Report annually for the variables used in the study. The major chunk of revenue in Pakistan is generated from export as a tax collection sector. Due to global crises, the entire economies were badly affected. The financial market was directly impacted by these financial crises. Under these circumstances, the investors were reluctant to invest in financial market and shifted their investments to the non-financial sectors. The main reason of the rise in non-financial companies of Pakistan is due to the said shift and thus reason for choosing non-financial firms as a sample.

3.1. Measurements of Distressed and Non-Distressed Firms:

We adapt the distress/non-distress classification of the firm based on Altman Z Score discriminate model, (Altman, 1968), for each firm year in an industry. The model was developed for estimating the level of distress company faces (Muñoz-Izquierdo, 2019) and is widely recognized (Bemmann, 2005). We created a dummy variable for the Z-Score, 0 shows that if the company position is strong it and if 1 position is feeble. The decision criterion for this is cutoff point 1.81, more than that company is considered strong and less or equal to that is considered distressed. Based on this criteria our dummy variable take the value of 0 if its more than 1.81 for non-distressed firms which totals 37 firms for Pakistani non-financial firms and it take a value of 0 if the value of z-score is equal to or less than 1.81 for distressed firms in overall sample. The basic reason for

adapting Altman, 1968 model is that the ‘Z score’ this model is industry specific, as it is formulated for operating manufacturing companies, noted by (Grice & Ingram, 2001).

The final model is as follows:

$$Z = 0.012Y_1 + 0.014Y_2 + 0.033Y_3 + 0.006Y_4 + 0.999Y_5 \dots\dots\dots(I)$$

Where,

Y_1 = ratio of working capital to total assets, Y_2 = ratio of retained earnings to total assets, Y_3 = ratio of earnings before interest and taxes to total assets, Y_4 = ratio of market value equity to book value of total liabilities, Y_5 = ratio of sales to total assets, and Z = overall index

3.2. Dependent Variables and their Measurement

3.2.1. Discretionary Accruals

It is employed as the dependent variable in the current study. Discretionary accrual is estimated by a modified version of (J. J. Jones, 1991) accrual model (Dechow, Sloan, & Sweeney, 1995) as shown in equation II. This method calculates total accruals at first step, followed by separation of discretionary accruals in form of residuals from total accruals using a particular model. By definition, over-all accruals are the difference between cash flows and income scaled by lag of total assets (Kasznik, 1999)

$$TA_{it} = NI_{it} - CFO_{it} \dots\dots\dots(II)$$

Where TA_{it} represents the total accruals of firm, NI_{it} is referred to as the net income of firm, and CFO_{it} is the cash flow from operations.

(Dechow et al., 1995) model is used to calculate discretionary accruals for comparison as well as to determine the heftiness of the results. (Dechow et al., 1995) modify the Jones (1991) model accounting for analyzing executives discretion over incomes generated. Equation (III) represents this model as:

$$\frac{TA_{i,t}}{A_{i,t-1}} = \alpha_1 \left(\frac{1}{A_{i,t-1}} \right) + \alpha_2 \left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} \right) + \alpha_3 \left(\frac{PPE_{i,t}}{A_{i,t-1}} \right) + e_{it} \dots\dots\dots(III)$$

Where TA_{it} is the total accruals of firm i at time t , $A_{i,t-1}$ represents the lagged total assets at time t , ΔREV is change in revenues of firm i at time t , ΔREC is change in account receivables of firm i at time t , and PPE represents property, plant and equipment of firm i at time t . (Dechow et al., 1995) has shown that this model presently is the most

reliable model to evaluate EM in a wide array of firms, as compared to the other naïve accrual models such as the one put forth by (Peltier-Rivest & Swirsky, 2000).

3.2.2. Real Earning Management:

The present study, on the footsteps of (Roychowdhury, 2006), bring three metrics under consideration; 1) The abnormal levels of cash flow from operations (CFO), 2) Discretionary expenses and 3) Production costs to denote the level of manipulation of real activities. (Lanier Jr, 2019)

Normal CFP is expressed as a linear function of sales and change in sales. Further, to evaluate the model under consideration, following cross-sectional regression for each industry and their given year is executed as given in Equation IV:

$$\frac{CFO_{i,t}}{ASSETS_{it-1}} = \alpha_1 \frac{1}{ASSETS_{i,t-1}} + \alpha_2 \frac{SALES_{i,t}}{ASSETS_{i,t-1}} + \alpha_3 \frac{\Delta SALES_{i,t}}{ASSETS_{i,t-1}} + \varepsilon_{i,t} \dots\dots\dots (IV)$$

Where assets $i_{,t-1}$ is lagged total assets, $Sales_{i,t}$ represents the total sales of firm i at time t , and CFO_{it} is the cash flow from operations. Abnormal CFO is calculated as the difference between actual CFO and normal level of CFO calculated using the residuals from equation IV. Production costs are defined as the sum of cost of goods sold (COGS) and change in inventory during the year in consideration. In the present study, COGS is modeled as a linear function of coexistent sales as given in equation V:

$$\frac{COGS_{i,t}}{ASSETS_{it-1}} = \alpha_1 \frac{1}{ASSETS_{i,t-1}} + \alpha_2 \frac{SALES_{i,t}}{ASSETS_{i,t-1}} + \varepsilon_{i,t} \dots\dots\dots (V)$$

In which $assets_{i,t-1}$ is the lagged total assets, $Sales_{i,t}$ are total sales of firm i at time t , and $COGS_{it}$ represents the Cost of Goods Sold.

Next, inventory growth is modelled as a linear function of the coexistent and lagged change in the sales:

$$\frac{\Delta INV_{i,t}}{ASSETS_{it-1}} = \alpha_1 \frac{1}{ASSETS_{i,t-1}} + \alpha_2 \frac{\Delta SALES_{i,t}}{ASSETS_{i,t-1}} + \alpha_3 \frac{\Delta SALES_{i,t-1}}{ASSETS_{i,t-1}} + \varepsilon_{i,t} \dots\dots\dots (VI)$$

Here $asset_{si,t-1}$ lagged total assets, $\Delta Sales_{i,t}$ are change in sales of firm i at time t , $\Delta Sales_{i,t-1}$ are lagged change in sales of firm i , and ΔINV_{it} represents change in inventory of firm.

Using equations (V) and (VI), the normal level of production costs are estimated as follows:

$$\frac{PROD_{i,t}}{ASSETS_{i,t-1}} = \alpha_1 \frac{1}{ASSETS_{i,t-1}} + \alpha_2 \frac{SALES_{i,t}}{ASSETS_{i,t-1}} + \alpha_3 \frac{\Delta SALES_{i,t}}{ASSETS_{i,t-1}} + \alpha_4 \frac{\Delta SALES_{i,t-1}}{ASSETS_{i,t-1}} + \varepsilon_{i,t}$$

.... (VII)

In which assets $_{i,t-1}$ lagged total assets, $\Delta Sales_{i,t}$ are change in sales of firm i at time t, $\Delta Sales_{i,t-1}$ are lagged change in sales of firm i, and $\Delta Prod_{it}$ refers to production cost of firm.

The normal level of discretionary expenses can be represented as a linear function of sales as follows:

$$\frac{Disc\ Exp_{i,t}}{ASSETS_{i,t-1}} = \alpha_1 \frac{1}{ASSETS_{i,t-1}} + \alpha_2 \frac{SALES_{i,t}}{ASSETS_{i,t-1}} + \varepsilon_{i,t} \dots\dots\dots (VIII)$$

Here again assets $_{i,t-1}$ lagged total assets, $Sales_{i,t}$ is sales of firm i at time t, and $Disc\ Exp_{it}$ represents discretionary expenses.

The discretionary expense is modelled as a function of current sales creating a mechanical problem; if firms manage sales upwards to increase reported earnings in a certain year, it will result in significantly lower residuals from running a regression as specified in equation VIII. Therefore, to address this issue, the present study models the discretionary expense as a function of lagged sales and estimates the following model to derive ‘normal’ levels of discretionary expenses as follows:

$$\frac{Disc\ Exp_{i,t}}{ASSETS_{i,t-1}} = \alpha_1 \frac{1}{ASSETS_{i,t-1}} + \alpha_2 \frac{SALES_{i,t-1}}{ASSETS_{i,t-1}} + \varepsilon_{i,t} \dots\dots\dots (IX)$$

Where Assets $_{i,t-1}$ lagged total assets at time t, Lagged Sales $_{i,t-1}$ is sales of firm i, and $Disc\ Exp_{it}$ refers to discretionary expenses.

In the above equations CFO is cash flow from operations in period t (Operating Activities - Net Cash Flow)– (Extraordinary Items and Discontinued Operations); Prod refers to the production costs in period t, and is defined as the sum of COGS (Cost of Goods Sold) and the change in inventories (Inventories - Total); DiscExp represents the discretionary expenditures in period t, defined as the sum of advertising expenses (Advertising Expense), R&D expenses (As long as SG&A is available, advertising expenses and R&D are set to zero if they are missing) and SG&A (Selling, General, and Administrative Expense). The abnormal CFO (R_CFO), abnormal production costs (R_PROD) and abnormal discretionary expenses (R_DISX) are calculated as the

differences between the actual values and the normal levels predicted from equations (IV) (VII) and (VIII). The combined measure used in the present study, RM_PROXY, is calculated as the sum of the above standardized variables, R_CFO, R_PROD and R_DISX. Therefore, the results reported correspond to the single real earnings management proxy (RM_PROXY).

3.3. Independent and Control Variables and their Measurement:

Table 1 presents the variables used in the study along with the methodology used for their measurement.

Table 1: Variables and their Measurement		
Variable	Symbol	Measurement
Debt Covenant Restrictions	Dc	Ratio of long-term debt to total assets. The ratio is capped at 1.00.(Burns & Kedia, 2006)
Raise Additional Capital	Adcap	Debt and equity funds raised 1_{t} = If the sum of new long-term debt plus new equity exceeds 20% of total assets, this dummy variable equals one; zero otherwise as per methodology suggested by (Efendi, Srivastava, & Swanson, 2007)
High Valued Equity	Hve	In order to detect high valued firms we used the P/E ratios methodology suggested by (Houmes & Skantz, 2010). Under this methodology we took only those firms which have positive earnings. The P/E ratio calculated for each firm in each year. In that particular year the firms are divided into five equal quintiles based on P/E ratios. Firm ending up in first and second quintile of P/E ratio was qualified as highly valued firms and assigned the value of one and zero otherwise. The same process was repeated for all years to generate the dummy variable of highly valued firms.
Institutional Ownership	Winown	Fraction of common stock held by institutions (Roodposhti & Chashmi, 2011)
Managerial Ownership	Wmown	Proportion of common stock held by management (Saleh & Ahmed, 2005)
Corporate tax Avoidance	Wetr	According to (Hanlon & Shevlin, 2005), ETR, is defined as ratio of total income tax expense to pre-tax accounting income
Firm size	Wsz	Log of total assets (Roodposhti & Chashmi, 2011)
Return on Assets	Wroa	Ratio of net income to total assets (Bekiris & Doukakis, 2011)
Firm Age	Wage	Change between focal year and year of incorporation
Firm Growth	wsg	Geometric mean of the annual percentage increase in total sales calculated in a rolling window of six years
Volatility	wvolt	Coefficient of the variation in net income in a rolling window of six years
Loss	Loss	Dummy variable = 1 if the firm has accumulated losses in balance sheet and 0 otherwise
Years Effect	y dum	Year dummies that take the value of 1 if firm is present in a particular year and zero otherwise.
Industry Effect	idum	Industry dummies that take value of 1 if firm belongs to a particular industry and zero otherwise.

3.4. Regression Equations:

The following regressions are carried out on both distressed and non-distressed firms:

Impact of Firm Specific Motives on Accrual and Real Earnings Management:

After constructing accrual and real earning management variables, we switch on including all other variables of interest along with control variables in a regression model so as to assess the impact of the firm's specific motives on earning management practices. The following model is adopted from (Kamran & Shah, 2014) who used the below models in equation X and XI for establishing effect of ownership structure and corporate governance on earning management. This model is comprehensive model as it incorporates all important control variables. Also they used this model for Pakistani non-financial firms and finally this model was endorsed by (Prawitt, Smith, & Wood, 2009); (Dhaliwal, Naiker, & Navissi, 2010). The model is as follows:

$$\begin{aligned}
 DAC_{i,t} = & \\
 & \alpha_0 + \beta_1 DA_{i,t} + \beta_2 DEFR_{i,t} + \beta_3 HV_{i,t} + \beta_4 INSTOWN_{i,t} + \beta_5 DIROWN_{it} + \\
 & \beta_6 ETR_{it} + \beta_7 Firm\ Control\ Variable_{it} + \beta_8 Industry\ Effect + \\
 & \beta_9\ years\ effect + \varepsilon_t
 \end{aligned}$$

..... (X)

$$\begin{aligned}
 REM_{i,t} = & \\
 & \alpha_0 + \beta_1 DA_{i,t} + \beta_2 DEFR_{i,t} + \beta_3 HV_{i,t} + \beta_4 INSTOWN_{i,t} + \beta_5 DIROWN_{it} + \\
 & \beta_6 ETR_{it} + \beta_7 Firm\ Control\ Variable_{it} + \beta_8 Industry\ Effect + \\
 & \beta_9\ years\ effect + \varepsilon_t
 \end{aligned}$$

..... (XI)

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics:

The table 2 is a representation of statistical summary reflecting the variables majorly taken due to interest in this study. The variables have been chosen for relevant Pakistani distressed as well as non-distressed non-financial organizations. In the panel A, table 2 shows an outline of statistical summary for distressed while Panel B shows vice versa. The ultimate column sketches p-values of difference in mean of the variables

between distressed and non-distressed firms, under assumption of unequal variance. Overall, our study has 1128 firm year observations for each variable of distressed firms and 222 observations for each variable of non-distressed firms. The mean difference in Accrual Earning Management, REM, is significant and shows that REM practices are more profound in non-distressed firms than in distressed firms. The mean difference for Accrual Earning Management practices, AEM, indicated that non-distressed firms are more into AEM but the mean difference is statistically insignificant. The main fact that is revealed from these stats is that REM practices are more in both types of firms than AEM. This confirms from literature which says that more than 80% of earning management practices which managers resort to is real activities manipulation. In Pakistan managers use REM for their managerial ulterior motives more than AEM and shows that they behave opportunistically in both types of firms in Pakistani non-financial firms. Debt covenants restrictions are more in distressed firm as can be seen via mean difference but the difference is insignificant and healthy firms also get engaged in debt covenant restrictions but comparatively less. The need for capital is more for distressed firms. It makes more efforts to raise additional capital than in non-distressed firms. The mean difference supports this notion. The high P/E ratio for distressed firms as shown by the mean difference suggest that these firms are overvalued firms which proves detrimental for firm's image and effects long term shareholders value in distressed firms. Institutional Ownership is more in distressed firms than in non-distressed firms and this signal to the fact that in presence of institutional ownership agency conflict can be reduced to much extent. However the presence of managerial ownership is more in case of distressed firms than in non-distressed firms, for which the mean difference is insignificant. The last variable of importance is the effective tax rate. This variable is of prime importance as it shows the tax avoidance practices within Pakistani non-financial firms. The significant mean difference shows that managers seek resort to tax avoidance practices more in non-distressed firms rather than in distressed firms. This means that healthy firms in order to delay taxes will seek for tax avoidance practices more as their earnings are more and stable. On the other hand, in distressed firms as earning are fluctuating and such firms are near to bankruptcy, we believe that instead of using tax

avoidance practices they are not even entitled for taxes but it doesn't mean that these Pakistani firms totally ignore tax avoidance practices. The Correlational Matrix for all variables shows that the correlation is less than 50% and there for the problem of Multi-collinearity doesn't exist.

Panel A: Distressed Firms					Panel B: Non-Distressed Firms				Mean Difference (A-B)
	Mean	Sd	Min	Max	Mean	Sd	Min	max	
Rem	0.6918	0.4273	0.0005	2.9043	2.0430	0.7413	0.5340	5.3490	-1.35***
Da	0.0204	0.0114	0.0000	0.0537	0.0161	0.0130	0.0000	0.0484	-0.02
Dc	0.4414	0.4967	0	1	0.1891	0.3925	0	1	0.25
Adcap	0.0966	0.2955	0	1	0.0360	0.1868	0	1	0.06
Hve	0.4290	0.4951	0	1	0.2522	0.4352	0	1	0.17
winown	0.1978	0.2410	0.0011	0.7287	0.1901	0.2440	0.0011	0.7287	0.01
wmown	0.2592	0.2562	0.0000	0.6932	0.2009	0.2435	0.0000	0.6932	0.06
Wetr	0.1791	0.1621	0	0.4712	0.2726	0.1394	0	0.4712	-0.09***
N	1128				222				

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$

4.2. Regression Results for Impact of Firm Specific Motives on AEM and REM in Distressed and Non-Distressed Firms:

A summary of regression results considering the impact of motives behind AEM and REM activities in distressed and non-distressed companies are given in Table 3. There is a positive relation between debt covenant variable in distressed and non-distressed firms and discretionary accruals. Moreover, this relationship is highly significant. On the other hand, a debt covenant restriction in distressed and non-distressed firms have a positive relation with real earning Management. This relation is moderately significant in case of distressed firms and is insignificant as far as non-distressed firms are considered. The obtained results are indicative of the fact that Pakistani firms that deploy default or are distressed are likely to depict income increasing practices through discretionary accruals. In this way, such firms aim to ease the debt covenant restriction which leads credit firms to advance loan or restructure debt covenant agreements for the leniency of such firms. (A. Y. Zang, 2011) has shown that managers tend to use real and discretionary accruals as alternatives and same is being done in Pakistani distressed firms. This confirms H_{1a} and H_{1c} of the present study, which states that distressed firms

with tighter restrictions tend to use income-increasing accruals and real activities manipulations excessively. These findings support the Debt Covenant Hypothesis advanced by Positive Accounting Theory. (Cohen, Dey, & Lys, 2008) has shown that after adoption of the Sarbanes-Oxley Act, real earnings management becomes more prevalent than accrual earnings management. Moreover, (A. Zang, 2007) has shown that switching from accruals earnings management to real earnings management is more prevalent in firms that face greater litigation risk. The mentioned results bring to the suggestion that managers can choose real earnings management as a hideout to avoid debt covenant violations. This brings to the confirmation of H1b and H1d hypothesized in the present study stating that Pakistani non-distressed firms with tighter restrictions practice positive income-increasing accruals and real activities manipulations but prevalent among them is AEM for the reason such firms have less scrutiny and therefore cost of adopting AEM is reduced.

The results of the present study provide evidence for the fact that raising additional capital via debt and equity has positive relationship with discretionary accruals and real earning management practices (i.e., AEM & REM). The impact, however, is insignificant in distressed firms. This relationship confirms our hypothesis H2a and H2c, whereas the non-distressed firms depict a significant impact of raising additional capital only on REM. The impact on the AEM is insignificant but positive. These indications are consistent with the studies reported in literature (Deng et al., 2018). This significant impact with real earning management confirms that in non-distressed firms the managers turn to REM practices for raising additional capital. As these firms are healthy firms, the cost of choosing REM outweighs with the financial health of such firms in the long term. Furthermore, the manager does not choose AEM because of the SEC scrutiny rather this managerial motive enables the managers to choose REM which can save them from any litigation issues. This further confirms our hypothesis H_{2b} and H_{2d}.

As far as the highly valued firms (overvalued) are concerned, they show positive relation on AEM and REM among distressed and non-distressed firms. This confirms our hypothesis H_{3a,b,c,d}. The highly valued distressed firms significantly impact on AEM, however, the rest bares insignificant impact in the case of both distressed and non-

distressed firms. These findings confirm that when the firms fail to show earning growth and cash flow performance is poorly operated; the upward accrual management comes in to play (Burgstahler & Dichev, 1997). A study by (Badertscher, 2007) fosters the fact that firms that are aggressively overvalued opt more hostile earning management practices via accrual management when compared to the less overvalued firms. So results confirm that the Pakistani distressed firms adopt discretionary practices when are overvalued. They can be used easily but are difficult to be detected. Overvalued Pakistani distressed firms have strong incentives to tolerate their overvalued justice. These include increasing manager's welfare with more profitable stock options, or the incentives related to the firm's performance.

As far as institutional ownership in concerned it shows a significant, but inverse relation with AEM practices in firms that are distressed and shows insignificant inverse impacts on REM practices. The findings related to institutional ownership suggests that institution owner's work out their power within distressed firms restraining AEM activities which can be easily explored utilizing strict SEC regulations. This caution, on the part of institutional owners, makes managers of such firms find AEM practices less attractive. This satisfies our H_{4a} and H_{4d} . However, the positive insignificant impact of institutional ownership confirms that some short sighted institutional owners will boost managers to turn to REM practices. However, as evident from results, institutional owners control the distressed firms for earnings management. While the influence of institutional owners are less within non distressed firms. These findings suggest that institutional owners satisfied with the health of non-distressed firms do not exercise their influence on earning management activities. So our H_{4b} and H_{4c} are rejected and confirm that Pakistani institutional owners in distressed firms are unable to detect REM practices and are involved in accrual earning management practices within non-distressed firms. The positive relation between INOWN and AEM suggests that institutions will let managers to use AEM practices within non-distressed firms. This is because AEM is less costly as compared to REM in regard of long term profitability and value of the firm. The argument is the same reason that institutional owners are curbing REM practices within the non-distressed firms as the impact of REM in longer term on profit is more intense.

As far as managerial ownership is concerned with regards to AEM and REM practices, it has been shown that both these variables are positively linked and pose higher impact on each other within distressed firms. In non-distressed firms, the impact on both AEM and REM is insignificant but positive. These results suggest that in case of Pakistani distressed and non-distressed firms the entrenchment hypothesis holds to be true. The results of the present study render this impact of managerial ownership insignificant in non-distressed firms. This implies that managers will not work out their power to manipulate earnings within healthy firms as the earnings of the firm are already healthy and this can bring them in the limelight for stakeholders signaling unfavorable for the managers as well as for the firm as whole. On the other hand, as the earnings are low in distressed firms, they are more involved in earning management practice when their holdings increase to secure the benefits of earning management in form of artificially inflated profits. This confirms hypotheses $H_{5a,b,c,d}$ which states that an increase in managerial shareholding result in an increased ritual of earning management practices by the managers within distressed and non-distressed firms.

The results generated in the present study further suggest that the CTA has a positive relationship with AEM and REM within distressed firms, while in non-distressed firms CTA has a negative effect on AEM and positive on REM. However, this relationship is deemed statistically insignificant in case of AEM in distressed firms. Rest is assured significant. In Pakistan the existence of tax avoidance in the distressed and non-distressed firms therefore mean for managers some personal benefits exist which compels them to such avoiding actions. These practices are more prevalent in non-distressed firms than in distressed firms with a highly significant mean difference as shown in Table 2. The regression analysis further confirms that managers who involve in earnings management practices for avoidance of corporate tax incentives belong to non-distressed firms. On other the hand, managers of non-distressed firms do not revert to AEM practices for the incentive being CTA. This is because AEM practices are strictly inspected by audit authorities and such audit certainty alters managers expectations regarding future tax payments (Ayers, 2019) by exposing them involved in CTA practices leading to a restriction on them to get involved in these activities in future as the

financial health of such firms are good and there are no benefits these practices can render to the firm. Instead, as a disadvantage, exposing such practices will lead to strict regulations from governmental authorities. These results confirm our hypotheses $H_{6a,c,d}$ which, renders CTA to be a possible motive that reinforce earnings management practices within distressed and non-distressed firms. However, H_{6b} is rejected on excuse that in Pakistani non-distressed firms managers going for CTA practices do not use AEM given the chances of scrutiny in AEM increases. Therefore, the managers of such firms use REM for carrying CTA within non-distressed firms.

For present study, R square is 20% for firm specific motive and AEM and 20.1% for specific motive and REM in case of distressed firms. Whereas R square is 44.2% firm specific motive and AEM and 22.2% for specific motive and REM in case of non-distressed firms. However, as the data contains time series and is cross-sectional, it may be a suitable range in case of Panel data.

Table 3: Regression Results for Motives behind AEM and REM activities in distressed and non-distressed firms

	Panel A		Panel B	
	(Distressed Firm)	(Distressed Firm)	(Non Distressed)	(Non Distressed)
	DA	REM	DA	REM
Dc	0.00717*** (0.000662)	0.0561** (0.0247)	0.0109*** (0.00197)	0.213 (0.132)
Adcap	0.00154 (0.00107)	0.0339 (0.0401)	0.00118 (0.00398)	0.570** (0.266)
Hve	0.00158* (0.000867)	0.00622 (0.0323)	0.00272 (0.00207)	0.205 (0.139)
Winown	-0.00394** (0.00189)	0.101 (0.0705)	0.000300 (0.00463)	-0.227 (0.309)
Wmown	0.00308** (0.00139)	0.200*** (0.0518)	0.000920 (0.00370)	0.0641 (0.247)
Wetr	0.000720 (0.00216)	0.365*** (0.0805)	-0.0149*** (0.00558)	0.737** (0.374)
Intercept	0.0448*** (0.00511)	1.214*** (0.191)	0.0783*** (0.0125)	0.588 (0.839)
Controls	Yes	Yes	Yes	Yes
Year Effect	Yes	Yes	Yes	Yes
Industry Effect	Yes	Yes	Yes	Yes
N	1128	1128	222	222
r ²	0.197	0.201	0.442	0.222

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

5. CONCLUSION

The study found compelling confirmation through the evidence that indicates that distressed firms appear to be involved in both types of earning management practices and factors that motivate managers for carrying these practices are mostly opportunistic. Being distressed, managers are highly motivated to increasing earning management practices to ease the debt restrictions which make them avail more funds from creditors. However, it is seen that in Pakistani distressed firms' managers even resort to REM practices which has negative effects on such firms' value and shareholders are affected in the long term. Another motive that managers intend to consider for accrual earning management practices is its being overvalued. Managers are engaged in AEM practices which keep the investors deluded about the real worth of firm. As managers' ownership increases, managers take advantage of this ownership and increasing influence and indulge in earning management practices via both AEM and REM. One of the findings that is worth mentioning is that increasing Institutional ownership exercises its influence in curtailing such activities, but mostly AEM activities which are easy to detect. But the disappointing thing is that it does not influence REM activities in distressed firms which raise many questions about shareholder protection. Tax avoidance practices in surge REM practices which cannot be detected by governmental organizations. In a nutshell the conclusion states that distressing the firms that appear to be involved in earning management practices, but REM practices are harmful as it affects shareholder and firm value in the long term. As these firms are already in distressed than such firms following REM practices are affected in more harmful way. The study found compelling evidence that non-distressed firms are also involved in earning management practices. In order to see what motivates managers to carry such practices, we conclude that our firm specific factors play less role in motivating managers of non-distressed firms than distressed firms. The factor that compels managers to get indulge in AEM is only debt covenant restrictions and in raising additional capital via REM practices. Whereas tax avoidance practices motivates managers to raise income increasing earning practices via both AEM and REM activities within non-distressed firms. These firms are healthy firms and their

credit worth is worthwhile. So if any manager of such firms is using debt covenants restrictions the motivation behind the earning management practice resort to only AEM practices that do not cost in long term perspective and shareholders can perceive benefit out of such practices as these practices are watched over by the regulatory authorities. Raising capital for further expansion is important in non-distressed firms as these firms are in their healthy expansions and need capital for it so managers being motivated by this factor and getting income increasing through REM activities are fruitful. As we know that healthy firm's earnings in long term overweighs REM practices detriments. Such firms if avoiding tax through both practices are again in favour of shareholders but governmental tax collection agencies are affected negatively. Factors that motivate managers for carrying these both practices in non-distressed firms are mostly informative in nature.

5.1. Recommendations

Corporate Social Responsibility, CSR, spending displays long term bonding with their shareholders and curtail their short term appetite for profit.(Palacios-Manzano, Gras-Gil, & Santos-Jaen, 2019). This signals that CSR spending reflects the quality of earnings and lessens down EM practices. However, the relation between both were found positive which is than effectively moderated by board size and block ownership to control for EM practices. (Buerthey, Sun, Lee, & Hwang, 2019). It is evident from current study by (Mellado & Saona, 2019) who found that institutional investment and effective regulatory system reduces REM.

(Guo, Lu, Ronen, & Ye, 2019) found further that stable and long term sighted institutional investment reduces cost of equity. Foreign institutional investors plays significant role in curtailing EM practices specially in firms, where monitoring is more valuable (Lel, 2019). It is imperative to ensure policy certainty because the current study done by (Yung & Root, 2019) gives evidence of 18 countries from world scope data base by using BBD index (Baker Bloom and Davis policy uncertainty Index) that policy uncertainty is associated positively with EM practices. According to him policy uncertainty harms firm value due to low quality financial reporting.

5.2. Future Directions

In future, research can be carried out in private owned firms for finding what factors motivate managers of such firms for earning management in Pakistan. As one of the study done by (Borralho, Vázquez, & Hernández-Linares, 2019) views such firms to be less involved in EM practices, particularly due to long term earning quality, family name and smaller separation of ownership and control in such firms. Further, a relative study can also be conducted to see how IFRS moderates the relationship of earning management and financial decisions in developed and developing countries. One of the important study that needs to be done in Pakistan is to see how high investors sentiments influence REM which recently been found inverse association between both by (Si, 2019).

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