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The Effect of Earnings Management on Dividend Policy in Pakistan

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Abstract

The aim of this study was to find out the impact of earnings management on dividend policy of oil and gas companies listed at the Karachi stock exchange. The study uses annual data of oil and gas companies for the period from 2008 to 2015. The dependent and independent variables are dividend policy and earnings management and the three control variables are leverage, return on equity and firm size. Modified cross sectional Jones model (1995) was used for calculating discretionary accruals which has been used as proxy for earnings management whereas measurement of dividend policy has been proxy by dividend payout. The findings from regression analysis indicate that earnings management has insignificant relationship with dividend policy of selected firms in Pakistan. Financial crisis in the world and economic decline period are the main reasons of this relationship. In the decline period the firms try to increase manipulation in earnings as a result the company starts reducing dividend payments. It is concluded that there are some other factors that may influence the pattern of dividend payment in the firms.

Keywords: Earnings management; dividend policy; leverage; discretionary accruals; regression

■1.0 INTRODUCTION

Earnings management and dividend policy is among the popular topic for research and discussion. In modern businesses, it is the responsibility of corporate managers to make important and appropriate decisions about the finance of the corporation. From all the decisions, the two most important decisions that requires manager concentration are the firm earnings management and dividend policy. According to Baker and Powell (1999) when a firm pay dividend, it reflects good financial health of a company. Moghri and Galogah (2013) proposed that it is the responsibility of managers to decide how much profit is given in the form of dividend and how many is reinvested in the company in the form of retained profit. However Miller and Modigliani (1961) argued that the value of the firm cannot be increased by changing dividend policy of the firm by using the assumption of efficient capital market. Though perfect capital market do not exist in reality, literature provides many theories e.g. agency theory, clientele theory, birds-in-hand theory and signaling theory that shows dividend increases the value of equity and thus investors are more concerned towards dividend paying firms.

Shah, Yuan, and Zafar (2010) investigated that dividends are paid out of the net earnings of a firm and managers are more interested in maximizing the earnings. One view is that dividends can be used as a predictor of earnings whereas another view is that earnings can also be used as a predictor of dividends. As both of these concepts are interrelated thus both determine each other's value. This helps to understand why managers of a firm are more interested in maximizing the firm's earnings. Earnings are the most important item to signal how much firm is involved in value adding activities. Aurangzeb and Dilawer (2012) defined earnings as the profit which the company or business gets by making investment in different sectors or stocks, by using the concept of diversification when required. Earnings can be negative or positive. Sometimes companies take cash from reserves accounts in order to make their earnings positive and used different methods to have leveled earnings. This presents the idea of earnings management and there are several definitions of earnings management. Moghri and Galogah (2013) defined earnings management as conscious actions taken by management to achieve specific objectives in the framework of accounting procedures. Likewise Haider, Ali and Sadiq (2012) defined earnings management as manipulation or control of company's financial income. If there are no investment opportunities available then it is the duty of management to distribute those funds as dividend.

This study has two key objectives: (i) to investigate the existence of earnings management in Pakistani oil and gas companies, (ii) to analyze the impact of earnings management on dividend policy.

■2.0 LITERATURE REVIEW

Haider et al. (2012) examined the effects of earnings management on dividend policy; the study selected listed firms in Pakistan during the periods of 2005 to 2009. The study applied modified Jones model to estimate the discretionary accruals, which was used as proxy for earnings management. The results from the regression analysis revealed that relationship exists between earnings management and dividend policy but the coefficient shows weak relation. In the similar context, Aurangzeb and Dilawer (2012) studied the impact of earnings management on dividend policy. The study used a multivariate regression technique and the adjusted Jones model (Dechow, Sloan and Sweeney, 1995) on a sample of textile firms listed on the Karachi stock exchange during the time period of 1966-2008. The result revealed a significant negative relationship between earnings management and dividend policy. Similarly, Savov (2006) examined relationship between investment, earning management and dividend payment. The study applies Jones (1991) model to measure earnings management for a sample of German companies for the time period of 1982 to 2003. Their result showed that earnings management and investment are positively related. However dividend payment has negative relationship with earnings. Moreover, Monsuru and Adetunji (2014) applied the ordinary least square method and investigated the relationship between dividend policy and earnings management. Firm size, return on equity and financial leverage were used as control variables. Data were sourced from annual report and account of the year, 2012, from the selected firms in Nigeria. The study found that earnings management has negative relationship with dividend policy of a firm and it is not significant in the determination of dividend payout of every firm. It was therefore concluded that this relationship could be as a result of effective corporate governance mechanisms put in place. If managers increase discretionary accruals of company, dividend percentage will not increase, even not significant in the determination of dividend policy particularly in Nigeria.

In contrary to the findings above, Moghri and Galogah (2013) investigated the effect of earnings management on dividend policy. The study utilized data from 140 firms listed in Tehran stock exchange over the period of 2006 to 2011. In this study, to determine the appropriate method for estimating the regression model and testing the main research hypothesis. F-Limer test and Hausman test was applied for choosing between fixed effects and random effect model. The fixed effects model was chosen to estimate the model. Test results of the main research hypothesis have shown that there is positive and significant relationship between earnings management and dividend policy. These results indicate that with increasing in discretionary accruals of companies, their dividends percentage will increase.

Few studies showed no relationship between dividend policy and earnings management. For example, Shah *et al.* ((2007) analysed the impact of earnings management on dividend policy of Pakistan and China. The study utilized data from listed firms of Pakistan over the period of 2003 to 2007 and 2001 to 2007 from listed firms of China. The result revealed no evidence that discretionary accruals influence dividend policy in both economies. Accordingly, Arif *et al.* (2011) investigated no relationship between earnings management and dividend policy on a sample of 86 companies listed on Karachi stock exchange Pakistan for the time period of 2004 to 2009. The discretionary accrual that is calculated by adjusted Jones model is used as an indicator for earnings management whereas; dividend policy is measured by dividend payout ratio. In addition, the study found that smaller firms pay more dividends than larger firms. This study indicates that managers are not involved in dividend policy decision and there may be some other motivations behind earnings management. The results are compatible with the works of Khanna and Khanna (2010) and Farsio, Geary, and Moser, (2004).

All of the findings from the previous studies indicated that earnings management and dividend payout are positively, as well as, negatively related. Also few studies found no relationship between the said variables. However, Miller and Kevin (1985) and Ambarish and Williams (1987) analysed that strong corporate governance practices reduced the chances of earnings management in a country. Sometimes earnings management was needed to maintain the dividend payout ratio of the firm as it was considered a signal of future growth perspectives of a firm in market. Therefore, the objective of this study is to investigate the impact of earnings management on dividend payout by using data of listed oil and gas firms on Karachi stock exchange.

■3.0 DATA AND METHODOLOGY

The study was based primarily on the secondary data collected from the companies anual reports on their websites. A sample of 104 firms are collected from all oil and gas sector companies listed on the Karachi Stock Exchange. The period of study was from FY 2008 to FY 2015. The study have excluded financial companies because their capital structure and profit are different. For the purpose of this study, we have hypothesized that:

H_0= Earnings management has no impact on dividend policy.
H_1= Earnings management has impact on dividend policy.

Table 1 provides the description of the variables used in the study for the purpose of analyzing the relationship between dividend policy and earnings management.

Table 1 Variables of the study

Variable Name	Abbreviation	Formula
Dependent Variable		
Dividend Payout	DP	Dividend paid/ Net profit after taxes
Independent Variable		
Earnings Management	EM	Represented by discretionary accruals and is calculated by Modified Jones Model (1995)
Control Variables		
Firm Size	SIZE	Natural logarithm of total assets
Return on Equity	ROE	Net profit/ Shareholder's equity
Leverage	LEV	Total debt/ Total assets

Earnings Management Estimation

Discretionary accruals has been used as a proxy for earnings management. Discretionary accruals are calculated as the difference between total accruals and non discretionary accruals. There are two methods for calculating discretionary accruals.

- Balance sheet approach
- Cash flow approach

Modified Jones Model [1995] has been applied to data to determine earnings managemnet. This research study used the cash flow approach. The first step in this case is to find out the total accruals which are calculated as follows:

$$\mathbf{TAt = NIt - OCFt}$$

TAt = Total accruals in year t
NIt = Net income or profit in year t
OCFt = Net operating cash flow in year t

After calculating total accruals using the following equation, we estimate the coefficientsby using this equation:

$$\mathbf{TAit / Ait\text{-}1 = \alpha 0 + \alpha i\ [1/Ait\text{-}1] + \beta 1\ [(\Delta REVit - \Delta RECit)/Ait\text{-}1] + \beta 2\ [PPEit/Ait\text{-}1] + \varepsilon it}$$

In this equation:
TAit = Total accruals of firm i in year t scaled by lagged total assets
Ait_{-1} = Total assets of firm i in year t-1.
ΔREVit = Change in net sales of firm i in year t.
ΔRECit = Change in accounts receivable of firm i in year t.
PPEit = Gross value of property, machinery and equipment of firm i in year t.
εit = Error of model for firm i in year t.
β1 and β2 = Estimated coefficients of the Modified Jones Model

The estimated coefficients calculated by using the above equation were put in the next equation in order to calculate the non discretionary accruals (NDA). The nondiscretionary accruals can be calculated by using the following equation.

$$\mathbf{NDA\ t = \alpha 1\ [1/At\text{-}1] + \alpha 2\ [(\Delta\ Revenue - \Delta\ Receivable)/At\text{-}1] + \alpha 3\ [PPE/At\text{-}1]}$$

And finally, discretionary accrual (DA) have been calculated by the following equation and is considered as an indicator for earnings management:

$$\mathbf{DAt = TAt - NDAt}$$

The Model used to Test the Research Hypothesis

To test the hypothesis, multiple regression analysis has been used in order to predict an outcome from several predictors. Method of least squares has been used to establish the line that best bescribes the data collected.

$$\mathbf{DPit = \alpha 0 + \beta 1\ (DAit) + \beta 2\ (SIZEit) + \beta 3\ (ROEit) + \beta 4\ (LEVit) + \varepsilon it}$$

In this model:
DPit = Dividend payout ratio of firm i in year t.
DAit = Discretionary accruals as a proxy of earnings management of firm i in year t.
SIZEit = Size of firm i in year t.
ROEit = Return on equity of firm i in year t.
LEVit = Financial leverage of firm i in year t.
εit = The error term for firm i in year t.
α0 = Constant coefficient (the intercept) and β1 to β4 =coefficients of the independent and control variables.

■4.0 MAIN RESULTS

Table 2 shows the result of descriptive statistics of selected companies. Mean values for DP, DA, Size, ROE and LEV are 0.30, 0.01, 17.42, 0.13 and 0.17 respectively. The value of standard deviation is large for the control variable size i.e. 1.53. Whereas, DA has lowest value of 0.12 as compared to other variables. The minimum value of DP is -0.42 and the maximum value is 1.33. Alternatively, minimum value of DA is -0.43 and the maximum value is 0.33 which show fluctuation in the data.

Table 2 Descriptive statistics

	Minimum	Maximum	Mean	Std. Deviation
DP	-0.42	1.33	0.30	0.37
DA	-0.43	0.33	0.01	0.12
Size	13.47	20.13	17.42	1.53
ROE	-4.24	3.99	0.13	0.78
LEV	0.00	8.04	0.71	0.79

In order to check for multi collinearity among variables, correlation test was performed. Results from table 3 indicate that in Pakistan oil and gas sector companies data, there is no multi colinearity amongst selected variables.

Table 3 Correlation

	DA	DP	SIZE	ROE	LEV
DA	1				
DP	-0.017	1			
SIZE	0.086	0.021	1		
ROE	0.041	0.134	0.103	1	
LEV	-0.099	-0.237	-0.291	-0.047	1

Regression Analysis

Table 4 shows the cross sectional regression result for each of the selected years from 2008 to 2015. Regression results from 2008 to 2015 indicate that discretionary accruals and dividend payout have insignificant relationship. However it's coefficient moves in negative direction in the years 2008, 2009, 2010, 2012 and 2015 and is in positive direction in the years 2011,2013 and 2014. As the discretionary accruals is insignificantly related with dividend payout this leads to the acceptance of null hypothesis.

Whereas for control variables regression estimates are given from 2008 to 2015. Size is insignificantly negative related with dividend payout in the years from 2012 to 2015 and insignificantly positively related in the years from 2008 to 2011. For return on equity, insignificant negative coefficient are observed in the years 2008 and 2009, for other selected years the coefficients are significant positive. Leverage have positive coefficient only for the year 2008 and negative for all other years.

Table 4 Cross-sectional regression results

Year		Constant	DA	Size	ROE	LEV	Adj R^2	F-Value
2008	Sig.	0.033 (-0.968)	-0.561 (0.078)***	0.033 (0.496)	-0.076 (0.685)	0.604 (0.35)	0.458	3.537
2009	Sig.	0.408 (0.833)	-0.261 (0.743)	0.008 (0.943)	-0.030 (0.806)	-0.262 (0.313)	0.180	0.541
2010	Sig.	0.444 (0.829)	-0.297 (0.894)	0.015 (0.851)	0.055 (0.687)	-0.424 (0.369)	0.191	0.518
2011	Sig.	-0.700 (0.451)	0.577 (0.434)	0.053 (0.318)	0.231 (0.26)	-0.014 (0.736)	0.071	1.243
2012	Sig.	1.568 (0.193)	-0.904 (0.461)	-0.035 (0.603)	0.040 (0.685)	-1.012 (0.027)**	0.302	2.300
2013	Sig.	2.317 (0.056)***	0.620 (0.471)	-0.077 (0.226)	0.924 (0.151)	-1.422 (0.004)*	0.538	4.500
2014	Sig.	6.453 (0.023)**	0.69 (0.667)	-0.299 (0.036)**	0.169 (0.596)	-1.137 (0.144)	0.431	3.272
2015	Sig.	0.89 (0.716)	-1.695 (0.546)	-0.007 (0.958)	0.035 (0.807)	-0.601 (0.331)	0.175	0.553

Note: *, **, *** significant at 1%, 5%, and 10% respectively.

■5.0 CONCLUSION

Based on the results, it is concluded that earnings management do not have any impact on dividend policy of oil and gas companies listed in Karachi stock exchange in Pakistan. The positive value of cefficient of discretionary accruals during some selected period have shown that there has been earnings management but not for the purpose of dividend announcement or dividend avoidance. There could be a number of other intentions behind earnings management. Like it is used for resolving the agency problem between owner and managers in order to get maximum benefits. It is called as opportunistic use of earnings management. Therefore manager's decisions are influenced by self interest behavior according to the conclusion of agency theory. This is in conformity with the literature that shows various factors as determinants of dividend payout and earnings management are not among those determinants. Return on equity has shown significant positive relationship with dividend payout which implies that profitable companies seem to payout larger amount of dividends. There is a little evidence that size affects the dividend policy in a significant manner. The scope of the study can be extended to a larger sample and a longer time period. Panel data analysis can also be used to get more reliable results.

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