



The impact of dividend policy on firm performance under high or low leverage; evidence from Pakistan

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Abstract

This study aims to find out the impact of dividend policy on firm performance under high or low debt for all the non-financial sector companies listed on Karachi Stock Exchange. This study has utilized the secondary data published by State Bank of Pakistan in the shape of Balance Sheet Analysis of non-financial sector for the period of 2006 to 2001 with the sample size consisting of 122 companies. Panel data models have been applied to examine the impact of dividend policy on firm performance in the presence of high or low leverage. Mainly it has focused on using two performance measures i.e. Tobin's Q and Return on Equity both as dependent variables while the control variable includes the firm size and growth with debt as the moderating variable. Breusch and Pagan Lagrangian multiplier test for random effects suggested that OLS is better than fixed effect. It is found that the dividend payout ratio has got significant positive relationship with Tobin's Q and ROA when there is both less and high debt. In addition, there is no moderating effect of debt on the relationship between dividend payout ratio and firm performance of all the nonfinancial firms listed in KSE.

ARTICLE INFORMATION

Received: 25 October 2015
Revised: 25 November 2018
Accepted: 25 December 2018

DOI:

<http://dx.doi.org/10.31580/jmi.v8i1.48>

Keywords: Firm Performance, LM Test, Dividend Policy, KSE, Debt.

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Introduction

Dividend policies guide the financial rewards of the shareholders which are attractive when policies are supportive and compatible for shareholders interests, employers and employees financial benefits. Thus the impacts of dividend policies effectively play their roles for the financial results and financial development of all stakeholders which are reflective in the performance of the firms. Dividend policies are guiding dividend structure of the firm in financial matter. Dividend policies are continued towards incremental outcomes. Thus research based outcomes proved dividend policies influential in financial periods (Wang et al., 2011). Dividend policies are contributively dividend payout rates and responsive fair in quick responses for increasing support and positive changes in developing firms and developing economies. In addition the dividend payout ratios signify the role for the firm performance in emerging markets (Glen et al., 1995).

The impact of firm dividend policy is found related with firm ownership and firm productive outcomes. Therefore the role of dividend policy is supportive in the activities of the firm to operate well and recognize it in the financial environment. Dividend policy declares an attractive pathway for effective financial outcomes. Thus to invest in the firm for capital structure the contribution of dividend policy is seen as good indicator towards financial decision (DeAngelo and DeAngelo, 2006).

One of the major roles of dividend policy can be attracting potential and actual investors. In finance one of the mandatory requirements to operate the firm effectively and efficiently in different times and realistically addressed and applicative manner is the dividend policies that contributively influence the firms' performance. Dividend policy

plays effective and efficient role to raise the resources and compatibility to operate significantly in the changing financial markets (Baker and Wurgler, 2004).

Firms are the compositions of diversified resources, policies, structures and systems that aims to maximize the profitability and sustainable and worthy ways to survive in the markets. There are different financial approaches followed for the monitoring of the operational structure in both short and long runs. The role of realistic and rational financial practices are additive towards the betterment of the firms. Firms are facing different types of uncertain events, financial crunches, resources devaluation and depreciations and losses of securities in the financial markets, but true and transparent financial practices are supportive to respond in realistic and resource oriented manner for the uplift of the firm as well as securities. Therefore financial practices possess a value and are found additive for incremental financial outcomes in form of financial performance (Denis and Osobov, 2008).

Fama and French (2001) the proportion of firms paying cash dividends falls from 66.5% in 1978 to 20.8% in 1999, due in part to the changing characteristics of publicly traded firms. Fed by new listings, the population of publicly traded firms tilts increasingly toward small firms with low profitability and strong growth opportunities features typical of the firms to pay the dividends. Apart from this the firms are less likely to pay the dividends.

The outcome model explains that dividends are paid in less amount due to the discouragement of insiders in the corporate. Secondly from the substitute model is explaining the insider's effects which are interested to issue equity for the future in form of dividends. Therefore these models predict stronger minority of shareholder rights which are associated with higher dividend payouts and second



model predicts the opposite effects. Thus dividend policy plays an important role to influence the firm performance and shareholders roles for the effective and better results (LaPorta et al., 2000).

The role of debt is sound and effective from financial policy point of view when shareholders are not considered in primarily for their decisions to raise the capital in form of cash of the firm. In addition it is further proved that financial policies influence investment decisions to retain capital and attract financially sound investors in current and future times (Stultz, 1990).

Khan (2012) conducted a research study on 36 engineering firms in Pakistan through Pooled Ordinary Least Square regression for time period from 2003 to 2009, and reported that, financial leverage has a negative significant relationship with firm performance. The financial leverage measured by short term debt to total assets and total debt to total assets and firm performance measured by return on assets, gross profit margin and Tobin's Q. While the return on equity was representing the relationship between financial leverage and firm performance, the assets size found with insignificant relationship with the performance of the firm. Engineering firms in Pakistan are highly dependent on short term debts for their financial requirements and firms performance.

Frank and Goyal (2003) proposed that capital structure is those working practices which design and define the business activities to improve in the changing times. The financial matters reflects the impact of liquidity on the firms leverage and found productive investments in productive capital structure orientations which in turn support the financial bond of the firm and thus liquidity influences the firms' solvency.

Zoppa and McMahon (2002) empirically proved that firm's capital structure defines capital structure behaviour of the firms and establishes strong basis for the financial development when it is seen with productive outcomes. There are few main factors established for capital structure and their influential impact on liquidity. These are as retained earnings and reinvested profits, trade credit, bonds and debentures, equity based financing and the capital of the ventures. These factors in firms' financial activities are producing significant impact on the leverage structure of the firm.

Capital structure does influence businesses from international structure to external structural financing. The organizational or business internal structures are represented in form of retaining earnings to support businesses in financial needs and others. While the external structure requirements are found in form debt is financing and equity financing. These both are productive for the firm operational and financial needs to survive and remain insolvent (Aghaee and Shakeri, 2010).

There are dividend theories that have been presented by academicians (Stulz, 2000; Pandey, 2003; DeAngelo et al., 2006). The theories depict dividends as either relevant or irrelevant in taking financial decision.

Theoretical evidence

Dividend irrelevance theory

Dividend irrelevancy theory presented by Miller and Modigliani in 1958 depicts that the dividend policy has no effect on the price of the stock. MM argued that value of firm depends on the income produced by the assets and it doesn't depend on how the dividend is distributed. MM theory was based on ideal assumptions of a perfect capital market. They assumed that there will be;

- (1) No differences between taxes on dividends and capital gains
- (2) No brokerage cost
- (3) All investors will be provided with same information

These were all unrealistic assumption and were not true (Miller and Modigliani, 1961).

Bird in hand theory

The bird in hand theory depicts that investors like dividends and they believe that the dividend of the firm in hands is of more worth than the future value of the dividend. As higher current dividend reduces uncertainty about future cash flows, a high payout ratio will reduce the cost of capital, and hence increase share value so by giving

high dividend the value of the firm can be increased (Gordon,1963; Lintner, 1962).

Tax preference theory

According to this theory low dividend payout ratios lowers the cost of capital and increases the stock price and thus increases the firm value. This argument is based on the assumption that dividends are taxed at higher rates than capital gains. In addition, dividends are taxed immediately, while taxes on capital gains are deferred until the stock is actually sold. These tax advantages of capital gains over dividends made the investors to prefer companies that retain most of their earnings rather than pay them out as dividends, and are willing to pay low tax. Therefore, a low dividend payout ratio will lower the cost of equity and increases the stock price.

Significance of the study

Firms are supportively working for the benefits of the stakeholders, they are integrated well when they are rewarded and compensated. Therefore among them the role of the shareholders is motivational and value added to respond to the financial wellbeing of the firm and shareholders. The dividend policies supportively also attract actual and potential shareholders for the value development of the firm. In response these valuable applicative policies are effectively reflecting the value of the firm. Thus the dividend policies are additive for the firms towards the performance of the firms. Therefore the research study has been worthy to examine empirically the impact of the dividend policy on the performance of the firms which are attractive for the investors. Secondly, debt has been used as a moderating variable and it is hypothesized that debt can affect this relationship one way or the other way. This study has been first of its nature covering all the non financial firms listed on Karachi Stock Exchange (KSE) of Pakistan as several sectoral studies have been done by Imran, (2011); Javid and Ahmad, (2009); Imran et al., (2013).

Problem statement

Dividend policies are playing very effective roles to announce dividends, maintain dividends and motivate the value of the shareholders. Thus the impact of the dividend policy is contributively active in the firms' financial operations. The shareholders are paid with what remains after paying the interest on debts and the taxes. The role of debt is sound and effective from financial policy point of view when shareholders are not considered in primarily for their decisions to raise the capital in form of cash of the firm. In addition, financial policies influence investment decisions to retain capital and attract financially sound investors in current and future times. This research is supportive and will be first of its nature to understand regressively the role of the firms' dividend policy and its relationship with performance of the firm and whether debt can affect this relationship in either way.

Research question

To check whether there is impact of dividend policy on the firm performance and how this relationship is affected by debt policy.

Objectives of the study

This study focused on the following main objectives;
To know the impact of dividend policy on firm performance.
To know the impact of dividend policy on high leveraged firms and low leveraged firms' performance.
To suggest recommendations.

Hypothesis

Ho (a): The firm dividend policy has no significant impact on the firm performance.

H1 (a): The firm dividend policy has significant impact on the firm performance.

Ho (b): The firm dividend policy has no significant impact on the low leveraged firms' performance.



H2 (b): The firm dividend policy has significant impact on the low leveraged firms' performance.

Ho (c): The firm dividend policy has no significant impact on the high leveraged firms' performance.

H3 (c): The firm dividend policy has significant impact on the high leveraged firms' performance.

Review of literature

Dividend policies are effective when they are supportively working and influentially monitored from time to time. The realistic outcomes of the dividend policies that it shapes define and guide a proper guide line to pay the dividend once the firms earns and afford to release dividends. These are indicating that the firms are in good and sound financial position which means that firm is in positive performance. Therefore research based outcome proved that firms dividend policies are substantially influence firm performance and in future new potential shareholders are inclined towards the firm (Bhattacharya, 1979).

Dividends are used to influence the shareholders financial decision towards the firms which are also associative with agency costs in business. In response to the financial outcome and business affiliation it is strongly supportive to maintain compatible policies for the value development and firm betterment (Easterbrook, 1984 and Jensen, 1986).

Research study examined the impact of firms' dividend policies on firms' capital structure. It is found that firms operate well when they have established good basis for the financial outcome and decision making. Therefore effectively and financially recognized firms are required to establish dividend policies that are supportive capital structures and as a results firm performance are recognizable with satisfactory results (Ang et al., 1997).

Time series data examined that firms' performance influences stakeholders' value which in turn to support the firm for longer outcomes and prominent position. Therefore the impacts of the dividend policy are worthy and realistic to promote the firm for productive outcomes (Gugler, 2003).

Dividends are good explanations of the effective factor to be communicated to the shareholders for the needs fulfilment and retention. Good dividends are effectively communicated and initiated through effective dividend policies. They are valuing both the firm and shareholders in financial years (Allen and Michaely, 2003). Dividend policies are increasingly supportive for the value of the shareholders of the small firms when they are considering the returns of the shareholders (DeAngelo et al., 2000). Firms are relative with the firms dividend policy and it alter in optimize forms from time to time to maintain the value of the firms. Theory establishes strong financial guidelines that firms dividend policies define dividend to the shareholders and their association with the firms. Thus in the early years the firms pay less dividends and later it increases to pay higher dividends. The reason to support the capital structure in the early years and then it progressively contributes as the time passes (Fama and French 2001; Grullon, et al., 2002). In addition as the internal funds of the firm increases the opportunities are availed that are indicating a positive outcome of the firms' performance.

Dividend policies rightly influence the balance between firms' debt and equity claimants. The investors' shareholders are demanding and the role of the managers effective to maintain a compatible condition towards the growth and satisfactory condition of the stakeholders. Firms important consent is to remain effective through dividend policy and reflect strong fully to the market. Dividend policy is found alternate for the weak creditor to minimize the agency cost of the debt of the firm. Thus dividend policy is contributively in firm's performance and investor's attraction for the financial solutions (Allen et al., 2000; Brav et al., 2005).

A research study conducted in Hong Kong between 1995-1998 to examine empirically the impact of the dividend policy on the firm performance, the time series date studied and proved. The main outcomes are that dividend policy was positively related to the firm performance, but up to little extent these results were found in the

small firms, as the firm's size increases the firm's financial position through firm performance and its support through dividend payout ratio reflect effectively (Chen et al., 2005; Himmelberg et al., 1999).

A Research work proved that dividend policy define firm dividend pay in country of US, Canada, UK, Germany, France and Japan the propensity of dividend pay is higher which positively influence firms performance. The research empirical evidence were taken series data from 1994 to 2002. Dividend pay with higher payment position influences positively the firm's performance in form more profitable position and other effective outcomes. The firms which are outside of this domain are evidently proved with less profitable position and low growth level as well low dividend pay. Therefore the impact of dividend payout ratio is positive and higher towards the resultant position (Deni, 2008).

Japanese firms were examined for increase number of foreign investments and dividend policy. It is found that higher level of foreign investments influence the firm dividend policy which in turn influences firm performance. Thus there are positive relationship between foreign investment and dividend policy and as well as firm performance (Baba, 2009; Aredy et al., 2008)

The firm dividend policy based on certain evidences proved its role dynamic and related to behavioural theory. These evidences proved that managers are stimulating due to the role of the firm dividends. The impact of the dividends policies reflects influential roles on the current and future dividends changes, financial variables like investments, economic earnings and firm performance. In addition the research study proved that dividend policy reflects a positional impact on dividend payouts and return on capital which are reflecting the firm performance and therefore the role of dividend policy in the firms are supportive and distinctive from different perspectives (Cyert et al., 1996).

Optimal dividend policy reflects important factor the relation proved with optimal dividend problem with non linear risk factors reflects, that firm dividend policy associates important role in risk assessment. Factors are incorporated that include the presence of debts, fixed transaction costs and the proportionate taxes. Under these conditions it is proved that the impact of optimal dividend policy possess nonlinear risk factors which are effecting the value of the firm (Menga et al., 2013).

A research study conducted on 309 firms its found that dividend policy influences the financial operational positions. It is revealed that firms are more likely effective with moderating from debts factors. As debts are the second factors of the capital development. Firms are behaving in similar ways to attract the investors through dividend policies and creditors. Although dividend policies are not majorly stick to this situation in these firms, the effect is found moderate (Baker and Smith, 2006).

Research study found in multinational firm of large and diversified firms, it is proved that higher debt capacity influence by dividend policy in these large and diversified multinational firms. It is further proved that multinational firms have more significant impact comparatively than domestic and national companies. The debts retain an important role in the business operations and therefore its supportive considers it for the financial decision in business of these firms (Aggarwal and Kyaw, 2010).

It is found that companies which are existing in the proportional electoral countries are found with lower dividends and correlation between dividend policies with firms growth is potential and effective. While the others who are not existing in these regions are found with the opposite effects, among them relationship with debts ratio is non observable. It is documented further that electoral system in these countries are also regressed in relationship with political and economical factors. In last and conclusively it is proved that the given system affects the dividends to be paid and payments structure that are relative with debts of the firms (Choy et al., 2011).

Research study proved the factors which are determining the dividend payout and dividend decisions in the banking in found effective for the value of the banks. This means that dividend announcements of on issued shares increases the value of earnings per shares, capital ratio and bank size. In addition it is further proved that cash which is going



out from the banks is negatively associated with it. Therefore dividend policies which reflect dividend payout play a positive role for banks in showing their position attractive for investors and earnings per share in the market (Imran et al., 2013).

Banks are playing supportive roles for the financial intermediaries in Pakistani financial market for financial prosperity and development. The research study proved no strong impact dividend policy on firm performance and earnings per shares and so this behavioural finance behaviour is proved non related (Imran 2011; Eriotis 2005 and Javid and Ahmad, 2009). The research study proved dividend behaviour reflects clearly that there is an influential impact of dividend policy on firm financial decision. These findings are proved in the banking sector which is supportive to be get into considerations for effective financial practices (Kim and Jang, 2010).

Conclusion

It can be concluded from the literature review that some researchers are of the view that dividend policy play positive and influential role in any firm's performance. However, few others also reported a negative relationship among them. It suggests that our results might come one or the other way. Debt retains an important role in business operation and it may or may not influence on the relation ship between dividend policy and firm performance. The purpose of this research has been to find out whether dividend policy has a positive or negative effect on any firms performance including the role of debt as a moderating variable as well. Many researches have been conducted in different developed and underdeveloped countries since then. In Pakistan most of the studies shows that individual sectors has been focussed for such topic. Secondly, no updated study on this topic is available in Pakistan. Thirdly, many studies have taken only accounting or marketing based performance variables while this study has focused on using both the performance measures.

Research methodology

Use of appropriate methods plays an important role in conducting any research activity. This Chapter presents materials and methods used in the given research study. It includes universe of the study, Sample size, data collection and sources of data, econometric model, theoretical framework and dependent and independent variables. All these methods have been illustrated in the following sections.

Universe of the study

This study has checked for the impact of dividend policy on the performance of the firm with debt as a moderating variable through panel data regression model. The study uses two imperative policy variables the dividend policy and the debt policy to describe performance of the firm through ROA and Tobin's Q. This study has taken all the 695 non-financial firms years 2006 to 2011 listed on Karachi Stock Exchange (KSE). At the time of data collection year 2012 data was not published by the State Bank of Pakistan, therefore this study was limited to years 2006 to 2011.

Sample size

From the population the sample size consisted of 122 companies for the years 2006 to 2011 has selected based on the following criteria.

- Firms having financial data available
- Firms who have no negative equity
- Firms belonging to non-financial sector
- Firms that are not owned by government
- Excluding de-listed firms

The debt as moderating variable is measured through median values as it is the most valuable and efficient measure among the averages like mean, median and mode because it does not take the outliers and negative values into account. The moderating effect of debt is checked for higher and lower median values of leverage.

Data collection and sources of data

The data used was of secondary nature and has been collected from the balance sheet analysis of State Bank of Pakistan (SBP) and business recorder website.

Econometric model

The study used panel data regression analysis by using the data of all 122 firms listed on KSE for the years 2006 to 2011. This study has checked for the impact of dividend policy on the performance of the firm with debt as a moderating variable. The study uses two imperative policy variables the dividend policy and the debt policy (moderating variable) to describe performance of the firm through proxies ROA and Tobin's Q. The control variables consist of growth, size.

The models are presented as follows;

High Leverage

$$FP_{i,t}(Q) = \beta_0 + \beta_1 DIVP_{i,t} + \beta_2 GROWTH_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 TDA_{i,t} + \epsilon_{i,t}$$

$$FP_{i,t}(ROA) = \beta_0 + \beta_1 DIVP_{i,t} + \beta_2 GROWTH_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 TDA_{i,t} + \epsilon_{i,t}$$

Less Leverage

$$FP_{i,t}(Q) = \beta_0 + \beta_1 DIVP_{i,t} + \beta_2 GROWTH_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 TDA_{i,t} + \epsilon_{i,t}$$

$$FP_{i,t}(ROA) = \beta_0 + \beta_1 DIVP_{i,t} + \beta_2 GROWTH_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 TDA_{i,t} + \epsilon_{i,t}$$

The regression equation was estimated four times, for those companies having debt value above the median value and for those companies having debt value below the median value.

Theoretical framework

The dividend policies play important role in the performance of the firm. The related work as debt, dividend policy and firm performance was first initiated by Modigliani and Miller (1958, 1961). Jensen and Meckling (1976) worked for the role debt in relationship to firm performance in their famous agency theory. This study was planned to utilize both variables for the measurement of firm performance as dependent variables i.e. the accounting based firm performance measured through return on assets (ROA) and the market based firm performance, measured through Tobin's Q. Accounting based and market based are mostly used to assess the business performance. Accounting based performance tells us about historical aspect or past performance of companies. Markets based captures the expected future firm performance. While the independent variables include dividend policy with debt as a moderating variable and the control variables include growth, size of the firm.

The following variables under study were measured in Pakistani rupees and are explained as follows;

Variables

Dependent variables

Firm Performance

Firm performance (FP) has been taken as dependent variable and is measured through two proxies. One was market based called as Tobin's Q and the second one was accounting based measure called as return on assets.

Tobin's Q was calculated through formula (Book value of Debt + Market value of Equity) / Book value of Debt + Book value of Equity)

Return on assets was calculated as net income divided by total assets.

Independent variables

Dividend policy

Dividend policy (DVIP) has been measured through dividend payout ratio.

Debt/Leverage

Debt (TDA) has been measured through total debt to total assets.

Control variables

Size



The control variables include size (SIZE) and was calculated by taking log of total assets.

Growth

Variable growth (GROWTH) was measured through geometric mean of annual percentage increase in assets.

This research study has been an attempt to test that whether Pakistani firms are in favour of making dividend policy that is either supporting the payment of dividends to the shareholders or retaining this amount for future investment and also how it affects the firm performance. The moderating role of debt has been checked to see whether introducing high or low debt, the firms' performance has been affected or it remained the same.

Moreover, there are numbers of variables which can also play important role in sorting out the relationship between dividend policy and firm performance which are not taken for this study. The reasons are due to time shortage, time consuming in data collection, capacity of understandings of the researcher, lack of literature etc among others. These variables can be profitability of the firm, liquidity of the firm, diversification of the firm, opportunity costs, asset tangibility, taxes, return on equity, ownership structure, board size, board composition, capital structure etc (Ahmad, 2008; Bhattacharya, 1980; Fama and French, 2002; Lien and Li, 2013).

Results and discussion

This chapter analytically and conclusively explains the empirical findings for research objectives. The descriptive statistics and the correlation matrix along with the regression tests are applied to assess the firm performance. Regression analysis is used to examine the impact of independent variables on dependent variable which is applied two times for Tobin's Q and Return on Assets (ROA) once when the debt value is less than the median value and secondly, when the debt value is higher than the median value.

Table 4.1: Summary statistics

Variable	Mean	Std. Dev.	Min	Max
Tobin's Q	1.26	0.97	0.13	7.26
ROA	11.75	10.65	-14.38	52.00
DIVIDEND	0.32	0.35	-0.11	2.38
SIZE	15.22	1.58	9.77	19.38
GRWTH	-0.01	0.18	-0.61	0.63
TDTA	0.57	0.26	0.09	2.73

The table 4.1 explains the descriptive statistics of all the variables that have been used in this study. The independent variables are dividend payout ratio, size of the firm, growth of the firm and dependent variable are Tobin's Q and ROA while debt is taken as the moderating variable for the study. The firm performance is measured through Tobin's Q and return on assets. Return on assets, return on equity and profitability-margins are used as firm performance variables (Abor, 2005). Ahmad (2008) empirically tested the relationship of debt policy, dividend policy and firm performance with moderating variable taken as investment opportunities.

It shows that Tobin's Q value is 1.26 which is higher than the standard value of 1.00 which means that firms are possessing better position in the stock exchange market and Karachi Stock Exchange (KSE) Index. Morck et al., (1998) argued that greater value of Tobin's Q means that firm can issue more shares to increase the assets value of the firm by increasing its revenues. It is inferred that if Tobin's Q value is greater than one it means that the profit from the capital investments is found to be greater value than cost of capital investment and thus the firm needs to raise the value of its capital stocks and in addition the Tobin's Q value also reflects the intellectual capital of companies (Dzinkowski, 2000). Similarly higher the Tobin's Q, higher will be the book value (Stewart, 1997).

The value of ROA is found to be 11.75 which indicate that on average basis the companies are generating more income from the invested

money of the shareholders. The value for debt is found to be 0.57 showing that the firms used most of its debt finance in the capital structure. Jensen and Meckling (1976) via agency theory highlighted the problem between shareholders and management. Agency problem can be reduced using debt in the firm capital structure and debt can also used as a tool to assess the performance of the managers in the company

Table 4.2: Correlation matrix

Variables	Tobin's Q	ROA	DIVIDEND	SIZE
GRWTH				
TDTA				
Tobin's Q	1.00			
ROA	0.48	1.00		
DIVIDEND	0.27	0.32	1.00	
SIZE	-0.04	0.22	0.20	1.00
GRWTH	-0.01	0.06	0.09	0.01
1.00				
TDTA	0.02	-0.47	-0.19	-0.13
0.08	1.00			

The table 4.2 explains the correlation matrix of the variables with each others. The correlating value between ROA and Tobin's Q is 0.48 which means they can be used as an alternative measures to assess the firm's performance. Similarly the correlating value between dividend and Tobin's Q is 0.27 which depicts that both have a positive but weak relationship while dividend has got a similar positive and weak relationship with ROA as the correlating value between dividend and ROA is 0.32 as compared to Bhattacharya (1980) and DeAngelo et al., (2002).

The correlation value of the size of the firm and growth of the firm are weakly and negatively associated with Tobin's Q and positively related with ROA. Debt the moderating variable has a correlating value of 0.02 which is very weak but positively related with Tobin's Q, while debt and ROA have correlation value of -0.47 showing that they have strong but negative relationship. According to the research of Miller and Modigliani (1958) using theory of irrelevancy of capital structure, it is stated that in perfect capital market the firm performance is not dependent on its capital structure but later on the researchers found that financial decision in such situation regarding capital mix and modifications possess a significant effect on the performance of the firm (Miller and Modigliani, 1961; Stulz, 1990; Jensen, 1986; and Grossman and Hart, 1986). According to Amjed (2011) capital structure showed a significant and negative association between the firm leverage and performance and significant positive relationship between firm performance and capital structure is supported by the research of Frank and Goyal, 2003; Fama and French (2002); Grullon et al., (2002) and Zoppa and McMahon, 2002.

Khan (2012) studied the engineering sector of Pakistan showed that there is a negative relationship between total debt of the firm and performance of the firm which are measured by ROA and Tobin's Q. Memon et al., (2012) also supported the same results. Siddiqui and Shoaib (2011) in their study used the Tobin's Q as a measure of the performance of the firm and their results revealed that leverage has no effect on performance of the banks.

Before analysis it is checked through different tests whether to use random effect (RE), fixed effect (FE) models or Ordinary Least Square (OLS) (Gujrati and Porter, 1978). Breusch and Pagan Lagrangian multiplier test examines whether pooled OLS is better than random effect (Madala, 2001). Its results showed that the p value is greater than 0.05 which suggest that accept the null hypothesis i.e. OLS is better than RE.

Table 4.3: Impact of dividend policy on tobin's q under high debt

Dependent Variable Tobin's Q		
Tobin's Q	Coef.	T Values
DIV	0.71	5.75
SIZE	-0.01	-0.56
GRWTH	-0.27	-1.29
Cons	1.24	2.90
F-Statistics	11.66	



P-Value (F-Statistics)	0.001
R- squared	0.10

Table 4.3 shows the regression results for measuring the performance of all those firms that have debt value above the median value (0.5929) with dependent variable Tobin's Q. The results shows that dividend policy and Tobin's Q have significant relationship as p-value (0.00) is less than 0.05 with coefficient values equal to 0.71. Hence, the null hypothesis is rejected and the alternative hypothesis is accepted, stating that the dividend policy has impact on the firm performance. This means that when the dividend value increases by one unit the Tobin Q increases by 0.71 units. This significance is also supported by t-value (5.75) which is more than two (02), the rule of thumb. DeAngelo et al., (2002) empirically founded that there is a significant association between decisions to pay dividend and earned equity to total equity ratio while controlling it for the firm size, profitability, leverage, cash balance, growth and dividend history. It is also found that dividend payments also prevent significant agency problems and in such situation the retention of earnings makes the manager to better control and commands the investments.

According to Eriotis (2005) it is found that the Greek firms attempt to distribute their dividend every year on the basis of target payout ratio and this is determined on the basis of distributed earnings and size of the firm. In addition, Stultz et al., (2005) proved that a significant association exists between dividend pay decision and contributed capital mix. It is also supported by the idea that if a firm performs better then the excess cash flows generated are distributed to the shareholders. According to Jensen, (1986); Amidu and Abor, (2006) the free cash flows enable the firm to share cash with firm stockholders and reduce the chance of wasting it on non-profitable projects. Research of Jensen and Meckling (1976); Easterbrook (1984), and Jensen (1986) proved that firm's use of higher debt in their capital structure controls agency problems through forcing managers to payout the excess cash of the firm. Research studies in large multinational companies proved that the firms higher debt capacities improve dividend policy as compared to domestic and national firms and thus this debt is retain for important business operations (Aggarwal and Kyaw, 2010).

The size and growth of the firm have an insignificant relation with Tobin's Q. The value of F-statistics shows that the model is overall good fit, as its value (11.6) is above the standard value of rule of thumb (04). R-Square indicates the variation in the dependent variables due to independent variable is 10.8 % which is not very impressive and this means 89.2 % variation is due to other variables affecting the performance of the firm which is not taken under consideration. This clearly depicts that more research work can be done to sort out other variables affecting this relationship.

Table 4.4: Impact of dividend policy on tobin's q under low debt

Dependent Variable Tobin's Q		
Tobin's Q	Coef.	T Values
DIV	0.89	4.64
SIZE	-0.11	-2.70
GRWTH	0.07	0.19
Cons	2.66	4.28
F-Statistics	8.70	
P-Value (F-Statistics)	0.001	
R- squared	0.08	

Table 4.4 depicts the regression analysis for measuring the performance of all those firms when the debt value is less than the median value (0.5929). The results shows that dividend policy and Tobin's Q have significant relationship as p-value (0.00) is less than 0.05 with coefficient values equal to 0.89. The coefficient value of dividend policy is 0.89 it means that one unit change in dividend policy will result in 0.89 unit increase in the firm's performance as measured through Tobin's Q. The t-value also supports the significant results. The size of the firm has a negative but statistically significant relation with the firm's performance as the p-value (0.00) is less than 0.05 and one unit increase in size will decrease the Tobin's Q by 0.11

units. The relationship between dividend policy and firm performance measured through Tobin's Q is the same (significant) both under high or low debt. Hence, the second alternative hypothesis is rejected which states that debt plays moderating role on the dividend policy and firm performance (Tobin's Q). According to Jensen and Meckling, (1976) and Shleifer and Vishny, (1996), the debt can be used as a controlling mechanism for the managers of the company so as to control managers to not to focus on fancy offices and other fringe benefits but to focus on their performance, else they will face job risk. The situation of ownership of the companies in Pakistan is mostly families' based ownership, which means that if the managers do not perform well, they could face job loss, so the higher debt may not play the controlling role as like in developed countries (Abdullah et al., 2012). The variable growth of firm has insignificant relationship.

Table 4.5: Impact of dividend policy on roa under high debt

Dependent Variable ROA		
ROA	Coef.	T Values
DIV	6.81	4.92
SIZE	1.65	5.25
GRWTH	-8.73	-0.37
Cons	-19.9	-4.19
F-Statistics	25.15	
P-Value (F-Statistics)	0.001	
R- squared	0.20	

Table 4.5 indicates the regression analysis for measuring the performance of all those firms when the leverage value is above the median value (0.5929) for the dependent variable ROA. The p-values (0.00) shows that the relationship between the dividend policy and accounting based firm performance is significant and if there is one unit change in dividend value will increase the ROA by 6.81 units. Hence, the null hypothesis is rejected and the alternative hypothesis is accepted, which states that the dividend policy has impact on the firm performance. According to the research work of Jensen and Meckling (1976), Jensen (1986) and Agarwal and Jayaraman (1994) it is found that funds cost are reduced through dividend payout that in turn results in increase in the cash flows. If the firms regularly pays the dividends then there is less money left to be wasted in negative NPV and thus the performance of the firm is improved. Thus it is very much clear that dividend payout ratio and performance of firm are found positively related to each other. By introducing proper monitoring system one can reduce agency cost and debt cost and improve the cash flow and ultimately improve the firm's performance (Fama and Jensen, 1983; Jensen and Meckling, 1976; Jensen, 1986; Shleifer and Vishney, 1997; La Porta et al., 2000).

Size of the firm has a significant and positive effect on ROA. Growth of the firm has an insignificant relationship with ROA. The value of the F-test is found acceptable. R-Square value explains 20.71% variability in the dependent variable ROA due to independent variables.

Table 6: Impact of dividend policy on roa under low debt

Dependent Variable ROA		
ROA	Coef.	T Values
DIV	7.04	4.03
SIZE	1.35	3.60
GRWTH	1.19	0.33
Cons	-6.97	-1.24
F-Statistics	11.17	
P-Value (F-Statistics)	0.001	
R- squared	0.10	

Table 4.6 portrays the regression results for measuring the performance of all those firms when the debt value is lower than the median value (0.5929) for the dependent variable ROA. The p-values and t-values show that the dividend of the firms shows positive



significant impact on the firm's performance and positive relationship exists between the firm size and ROA. The relationship between dividend policy and firm performance measured through ROA is the same (significant) both under high or low debt. Hence, the second alternative hypothesis is rejected which ROA). It means that the variable debt plays no moderating role for the relationship between dividend policy and ROA. Growth of the firm shows as insignificant relationship with the firm performance ROA.

Summary, conclusions and recommendations

This section of the study provides the summary of all the results and analysis regarding the relationship between dividend policy and firm performance with the moderating role of debt. Moreover, on the basis of results drawn from the study, conclusions are reached and some recommendations are made for further improvement and addition to the literature.

Summary

The current study is performed to find out the impact of dividend policy on firm performance under high and low leverage. For this reason the research study focused on the performance measure through Tobin's Q and Return on Assets (ROA) as dependent variables with the size and growth variables taken as control variables and debts of firm is taken as moderating variable for the study. The study uses secondary data sources to obtain the objectives of the study that is collected from the balance sheet analysis of State Bank of Pakistan, business recorder and KSE for the years 2006 to 2011 i.e. for the period of six years. This study implies multiple linear regression analysis to find out the impact of dividend policy on firm performance under high or low leverage. This study has satisfied all the assumptions of liner regression as removing outliers, influential data, multicollenarity, hetreoskedasticity etc.

The results shows that Tobin's Q value is higher than the standard value of 1.00 which means that firms are possessing better position in the stock exchange market. Similarly the correlating value between dividend, Tobin's Q and ROA shows a positive but weak relationship. The results further shows that dividend policy and Tobin's Q have significant relationship under high and low leverage which clarifies that the dividend policy has impact on the firm performance (Tobin's Q). The relationship between dividend policy and firm performance measured through Tobin's Q is the same both under high or low debt which means that the debt plays no moderating role in the relationship.

Moreover, the p-values (0.00) show that the relationship between the dividend policy and accounting based firm performance (ROA) is significant both under high and low leverage, which make clear that the dividend policy has impact on the firm performance (ROA). The relationship between dividend policy and firm performance measured through ROA is the same (significant) both under high or low debt which means that variable debt play no moderating role for the relationship.

Conclusion

The purpose of this research is to examine the impact of dividend policy on the firm's performance under higher or lower leverage. Data of six years i.e. 2006-2011 for 695 firms listed in KSE has been examined in this study. This study implies simple linear regression analysis for the relationship. The results proved that dividend policy has got significant relationship with firm performance measured through Tobin's Q and Return on Assets under both less and high leverage. The results are same both at less and high level of debt, which depicts that there is no moderating effect of debt on the relationship between dividend payout ratio and the firm performance. Finally, there is openness to the financial data of all the sectors whether financial or non-financial and similar study can be done focussing on other variables which has not taken for the analysis in the present study that can add more to the literature and provide useful information for all the stakeholders.

Recommendations

The debt value shows that on average the firms are using 57% debt in their capital structure. The high debt could lead to the fear of take over by the creditors so use of debt in the capital structure should be minimized.

The industries are advised to keep retained earnings for future profitable projects with greater cash-flows and would lead to increased profits.

The government authorities may issue instructions to the concerned quarter i.e. stock exchange, security exchange, Commission of Pakistan to ensure the implementations of time value of money principal if dividend are not declared in time.

Future Implications

When companies are diversified then dividend policy changes so another study can be conducted focussing the idea of diversification.

The R square values and the correlation values are too low which clearly shows that the variables taken for this study have weak relationship and same study can be done by taking variables other than the current one.

This study has focused on the non-financial sector listed on Karachi Stock Exchange, while to elaborate Pakistani market further, a similar study can be done by selecting the financial sector of KSE.

This study has used debt as the moderating variable between the dividend policy and firm performance while other variables such as growth or size etc can also be taken as moderating variables to add further to the literature from Pakistan market.

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Annexure I. List of Companies

S. No	Company Name
1	Artistic Denim Mills Ltd.
2	Ashfaq Textile Mills Ltd.
3	Bhanero Textile Mills Ltd.
4	Blessed Textiles Ltd.
5	Din Textile Mills Ltd.
6	Ellcot Spinning Mills Ltd.
7	Faisal Spinning Mills Ltd.
8	Fateh Textile Mills Ltd.
9	Fazal Cloth Mills Ltd.
10	Fazal Textile Mills Ltd.
11	Gulistan Textile Mills Ltd.
12	Gulshan Spinning Mills Ltd.
13	Hajra Textile Mills Ltd.
14	Indus Dyeing & Manufacturing Co. Ltd.
15	Karim Cotton Mills Ltd.
16	Mahmood Textile Mills Ltd.
17	Masood Textile Mills Ltd.
18	Mubarak Textile Mills Ltd.
19	N.P. Spinning Mills Ltd.
20	Nagina Cotton Mills Ltd.
21	Nazir Cotton Mills Ltd.
22	Nishat (Chunian) Ltd.
23	Nishat Mills Ltd.
24	Paramount Spinning Mills Ltd.
25	Premium Textile Mills Ltd.
26	Quality Textile Mills Ltd.
27	Quetta Textile Mills Ltd.
28	Reliance Cotton Spinning Mills Ltd.
29	Safa Textiles Ltd.
30	Saleem Denim Industries Ltd.
31	Sapphire Fibres Ltd.
32	Sapphire Textile Mills Ltd.
33	Shahtaj Textile Ltd.
34	Sunrays Textile Mills Ltd.
35	Suraj Cotton Mills Ltd.
36	Yousaf Weaving Mills Ltd.
37	Aruj Garment Accessories Ltd.
38	Gul Ahmed Textile Mills Ltd.
39	Liberty Mills Ltd.
40	Al-Abid Silk Mills Ltd.
41	Ibrahim Fibres Ltd.
42	Rupali Polyester Ltd.
43	Al-Abbas Sugar Mills Ltd.
44	Al-Noor Sugar Mills Ltd.
45	Faran Sugar Mills Ltd.
46	Habib - ADM Ltd.(Habib Arkady LTD.)
47	Habib Sugar Mills Ltd.
48	JDW Sugar Mills Ltd.
49	The Thal Industries Corporation Ltd.
50	Clover Pakistan Ltd.
51	Ismail Industries Ltd.
52	Morafco Industries Ltd.
53	Murree Brewery Co. Ltd.
54	National Foods Ltd.
55	Nestle Pakistan Ltd.
56	Punjab Oil Mills Ltd.
57	Rafhan Maize Products Co. Ltd.



58	S.S. Oil Mills Ltd.	119	Siemens (Pakistan) Engineering Co. Ltd.
59	Shezan International Ltd.	120	Singer Pakistan Ltd.
60	Unilever Pakistan Ltd.	121	Pakistan Hotels Developers Ltd.
61	Abbott Laboratories (Pakistan) Ltd.	122	Shifa International Hospitals Ltd.
62	Biafo Industries Ltd.		
63	Clariant Pakistan Ltd.		
64	Colgate-Palmolive (Pakistan) Ltd.		
65	Dynea Pakistan Ltd.		
66	Engro Corporation Ltd. (Engro Chemical Pakistan Ltd.)		
67	Fauji Fertilizer Bin Qasim Ltd.		
68	Fauji Fertilizer Co. Ltd.		
69	Gatron (Industries) Ltd.		
70	Glaxosmithkline (Pakistan) Ltd.		
71	Highnoon Laboratories Ltd.	Div	
72	ICI Pakistan Ltd.	.044640	.215604
73	Ittehad Chemicals Ltd.	6	2
74	Linde Pakistan Ltd. (Boc Pakistan Ltd.)	Size	-1.69043
75	Sanofi aventis(Aventis Pharma)		7.51655
76	Sitara Chemical Industries Ltd.		5
77	Wah Nobel Chemicals Ltd.	Grwt	-
78	Bata Pakistan Ltd.	h	.456808
79	Goodluck Industries Ltd.	7	6
80	International Industries Ltd.		
81	Pakistan Tobacco Co. Ltd.		
82	Philip Morris (Pakistan) Ltd.		
83	Service Industries Ltd.		
84	Shield Corporation Ltd.(Transpak Corp.)		
85	Thal Ltd. (Thal Jute Mills Ltd.)		
86	Tri-Pack Films Ltd.		
87	Attock Cement Pakistan Ltd.		
88	Fauji Cement Co. Ltd.		
89	Lucky Cement Ltd.		
90	Ghani Glass Ltd.		
91	Al-Ghazi Tractors Ltd.		
92	Atlas Battery Ltd.		
94	Baluchistan Wheels Ltd.		
95	Bela Automotives Ltd.		
96	Bolan Castings Ltd.		
97	Exide Pakistan Ltd.		
98	Indus Motor Co. Ltd.		
99	Millat Tractors Ltd.		
100	Pak Suzuki Motor Co. Ltd.		
101	Kot Addu Power Co. Ltd.		
102	Mari Gas Co. Ltd.		
103	Nishat Chunian Power Ltd.		
104	Oil & Gas Development Co. Ltd. (OGDC)		
105	Sitara Energy Ltd.		
106	Sui Northern Gas Pipelines Ltd.		
107	Sui Southern Gas Co. Ltd.		
108	Netsol Technologies Ltd.		
109	Pak Datacom Ltd.		
110	Pakistan Int. Container Ltd.		
111	Pakistan National Shipping Corporation.		
112	Attock Petroleum Ltd.		
113	National Refinery Ltd.		
114	Pakistan Oilfields Ltd.		
115	Pakistan Paper Products Ltd.		
116	Security Papers Ltd.		
117	Ados Pakistan Ltd.		
118	Pakistan Cables Ltd.		

Annexure II. Results of deciding between Fixed effects, Random effects and OLS Regression

Table for Hausman Test for Fixed Effect and Random Effect Regression Analysis for Dividend Policy and Firm Performance

Coefficients ----				
	(b)	(B)	(b-B) Difference	sqrt(diag(V_b - V_B)) S.E.
Div	-	-	.1709636	.
Size	-1.69043	-	5.826126	1.878298
Grwt	-	-	.1895799	.
h	.456808	.646388		

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\chi^2(3) = (b-B)[(V_b - V_B)^{-1}](b-B) = 7.39$$

Prob > chi2 = 0.0605
(V_b - V_B is not positive definite)

The p value is greater than 0.05 which shows that random effects is a better choice in comparison to fixed effects

Table for Breusch and Pagan Lagrangian Multiplier Test for Random Effects for Dividend Policy and Firm Performance

Estimated results:			
	Var		sd = sqrt(Var)
Tobinsq	2177411		4.666274
E	1.193132		2.092306
U	1103079		3.321263

$$\text{tobinsq}[\text{code.t}] = Xb + u[\text{code.t}] + e[\text{code.t}]$$

Test: Var(u) = 0

$$\chi^2(1) = 2.3$$

Prob > chi2 = 0.1020

Here we failed to reject the null and conclude that random effect is not appropriate. This is, no evidence of significant differences across entities, therefore you can run a simple OLS regression.

