Does the Dividend Policy Matter in Stocks Prices in Economic Recession? Evidence from Karachi Stock Exchange

Shahid Iqbal
Faisal Abbas
Bilal Aziz*

Abstract

The focus of this paper is to find the relationship between dividend policy and stocks prices during economic recession based on Karachi Stock Exchange in Pakistan. As investment in stocks is a crucial part of the portfolio of Islamic finance institutions, this study is significant with regard to promoting Islamic capital market in the country. The data on dividends were collected for the period 2001 – 2014 dividing in three economic phases: 1st phase from 2001 – 2006 (before economic recession), 2nd from 2007 – 2009 (the recession period) and 3rd from 2010 – 2014 (after economic recession). Secondary data were collected from balance sheet analysis, Karachi stock exchange and the 'Business Recorder'. Market prices of selected corporations stocks was used as dependant variables while Dividend payout ratio (DPOR), Dividend yield (DY), Earning per share (EPS), Size, Leverage (LVRG) and Assets growth (AG) were taken as explanatory variables. The results showed that in period of 2001 – 2006 (before economic recession) EPS, Size and AG were found significant and had positive impact on market price (MP), while LVRG and DY were found significant but had negative association with market prices(MP). During economic recession period (2007 – 2009), DPOR, EPS and LVRG were found significant and had positive impact on market price (MP) whereas DY and SIZE found significant having negative relationship with market price (MP). In the period 2010 – 2014 (after economic recession) DPOR and Size were found significant and had positive impact on market price (MP), while DY had significant negative relationship with market price.

Keywords: Stocks prices, Economic recession, Dividend payout ratio, Dividend yield, Dividend policy.

KAUJIE Classification: L41
JEL Classification: G35

---

* **Shahid Iqbal**, the corresponding author, is PhD (Finance) scholar from the University of Lahore (UoL); currently serving at Sialkot campus of the University of Gujrat, Pakistan; Email: mahershahid89@yahoo.com; **Faisal Abbas** is also PhD (Finance) scholar from the UoL; **Dr. Bilal Aziz** is Assistant Professor, FMS, University of Engineering and Technology, Lahore.

1. Introduction

Primary purpose of this research is to investigate whether the behavior of dividend policy and market prices before economic recession, during economic recession and after economic recession in developing economy like Pakistan is similar or different. Due to globalization, major crumble of developed economies affected the developing economies. The impact of recession period (2007 – 2009) can be examined by using economic indicators like Gross Domestic Product (GDP), inflation rate and interest rate. Idrees Khawaja et al. (2010) drew conclusions in their study that the recession affected economic indicators in Pakistan. GDP growth was decreased significantly during recession period. The other factors like energy shortage and political instability also affected the economic conditions of Pakistan in economic recession period. The results of study supported the economic theory that open economies were affected from global economic recession.

There are many empirical studies found in literature that provide different insights about share prices movements and dividend policy of corporations as supported by Allen and Rachim, (1996). Schumpeter (1953) concludes that boom and bust are unavoidable part of every market economy.

In corporate finance especially in developed economies, a plenty of work has been done by renowned researchers to watch the movement of stock prices and their reasons to fluctuate in market. They found that dividend policy has great impact on stocks price movements. Researchers like Gordon (1963) found positive relationship between dividend distribution and movement of stock prices whereas Baskin (1989) found negative relationship between stock prices and dividend yield. Rozeff (1982) also provides evidence in his research regarding stock price movements and dividend payments in normal situation of economy whereas Nobel Prize holders Farma (1991) and Farma and French (1992) explained different relevant factors which influence stock prices in market like dividends, net profits, investments and industrial outputs etc.

The residual theory of dividend suggests that residual earnings should be distributed as dividends to the shareholders. There are numerous factors which have direct influence on shares price volatility like time span, rate of return, arbitrage activities, abnormal earnings, payment of dividend and other information about corporations. The previous studies extensively explored the normal condition of economies, but little attention is paid to investigate dividend policy and movements of stock prices in economic recession period especially in developing economies like Pakistan.

Keeping in view the economic situation in underdeveloped economies like Pakistan, shareholders prefer cash to retained earnings reinvestment in business due to high risk of cash flows in recession period of economy. The dividend irrelevance theory is supported by Miller and Modigliani (M&M). Dividend theories provide real insights about organizations to concerned stakeholders in context of dividend payments which boost and improve trust of shareholders that organization is financially strong. The distribution of dividend also indicates positive signs that earnings of corporations are extremely good.

Dividend policy is an important factor in the decision making of business that is not only for present shareholders of business but also for future financing of the business. Dividend policy is basic policy on which other business decisions depends (Ali et al. 1993). Increase in share price of business is a positive sign for company as it helps in arrangement of required finance. Dividend policy decides that how much is to be paid from total earning and how much funds are to be kept in business for reinvesting (Ross et al. 2002). The market price of the shares is used as a yard stick for checking the growth and profitability of the business. The economic recession consisted of three years from December 2007 to June 2009. The main cause of this recession was default of housing loans in America. The property kept as security was overpriced. The financial institutions invested heavily in the mortgage and suffered losses due to sharp decline in property prices.

The present study is to investigate whether stock prices and payments of dividend during economic recession are affected as compared to pre and post-economic recession.

2. Review of Literature

There are many researchers who have explained the relationship between stock prices movements and dividend payout policies. The findings of a few of them are given in support of under consideration subject. Idrees Khawaja et al. (2010) explained social impact of global recession in context of Pakistan. Results showed that recession affected economic indicators in Pakistan. Inflation and fiscal deficit increased during recession period in Pakistan. The other factors like energy shortage and political instability also affected economic indicators. The results of study supported the economic theory that open economies were affected from economic recession. Dividend policy is basic policy on which other business decisions depend (Ali et al. 1993). Increase in share price of business is a positive sign for company as it helps in arrangement of finance. Dividend policy decides that how much is to be paid from total

earning of the business and how much to be kept in business for reinvesting (Ross et al. 2002). Rozeff (1982) also discussed the relationship between the beta CAPM and the dividend payout ratio. Mahbub-ur-rehman and Nazim-ud-Din (2012) found no relation between dividend policy and stock price supporting irrelevance theory. The market price of the shares is used as a yard stick for checking the growth and profitability of the company.

Mirajul Haq et al. (2008) investigated relationship of growth and unemployment in Pakistan during recession period. The results showed that elasticity of growth and unemployment are higher comparative to that of export to GDP ratio. The empirical results showed that GDP growth decreased by 8.8 percent, while unemployment increased by 6 percent during the recession period. Samira et al. (2013) discussed the effects of dividend policy on the value of stocks in Tehran stock exchange. The results of first model showed that liabilities and permanent earnings were positive and significant with stocks prices. Cash flow and investment also positively and significantly affected stock prices in Tehran security market. The Investment of company was also significant and positive with stock prices. The Liabilities showed significant but negative relationship with stocks values in Tehran.

Zipporah and Moslely (2014) discussed relationship between dividend policy and stocks price volatility in Kenya. Results showed that dividend yield and payout ratio both were insignificant and were negatively related with stocks prices in Nairobi. Firm Size and Growth were also insignificant but positively affected stocks prices there. The debt negatively and insignificantly affected stocks prices in Nairobi. Mahbub-ur-rehman and Nazim-ud-Din (2014) investigated relationship between dividend policy and stocks price volatility in Bangladesh. The results showed that there was a negative and insignificant relationship between dividends and stocks prices in context of Dhaka stock exchange. The study empirically supported dividend irrelevancy with market prices of shares in context of Bangladesh. Lintner (1956), Bhattacharya (1979) and Miller & Rock, (1985) found that dividend announcement is a sign that indicates future concern of business for investors.

3. Data and Methodology

3.1 Data and Data Sources

Data were collected from companies listed at Karachi stock exchange. More than 500 companies were listed at Karachi stock exchange but for analysis purpose only 103 companies were selected. Data collected for 14-years period starting from (2001 – 2014) were classified into three

different economic cycles for analysis i.e. from 2001 – 2006 (before economic recession), from 2007 – 2009 (during economic recession) and 2010 – 2014 (after economic recession). The data were collected from the balance sheet analysis of different companies listed with Karachi stock exchange. The data of market price of share (MP) were gathered from website of Karachi stock exchange and the Business Recorder. Data for 2014 were gathered from annual reports of companies for analysis.

3.2 Econometric Model

The model used for analysis consists of one dependant variable and six independent variables. Dividend yield and dividend payout ratio are used to represent dividend policy. Other variables are taken as control variables to test the effect on stock prices.

$$MP_{it}=\alpha+\beta_1 DPOR_{it}+\beta_2 DY_{it}+\beta_3 EPS_{it}+\beta_4 LVRG_{it}+\beta_5 SIZE_{it}+\beta_6 AG_{it}+\epsilon_{it}$$

MP = Market price of the share.
DPOR= Dividend payout ratio
DY = Dividend yield of the company.
EPS = Earnings per share.
LVRG = Leverage of the company.
SIZE = Size of the company.
AG = Asset growth.
ϵ **=** Stochastic variable or error

3.3 Variable Selection, Notations and Measurements:

Variable Name	Variable construction procedure
MP = Market price of the share	Market price is the closing traded price of the stocks in the stock exchange.
DPOR = Dividend payout ratio.	$= \frac{DPS}{EPS}$
DY = Dividend yield	$= \frac{DPS}{Market\ price\ per\ share}$
LVRG = Leverage of the company	$= \frac{Long\ term\ debt}{Common\ equity}$
EPS = Earnings per share	$= \frac{Profit\ after\ tax}{Number\ of\ shares\ outstanding}$
SIZE = Size of the company	= Total assets of the company
AG = Asset Growth of the company	$= \frac{Assets\ of\ the\ current\ period}{Assets\ of\ the\ previos\ period}$

4. Results and Discussion

Table 1 : Descriptive Statistics

	MP	DPOR	DY	EPS	LVRG	SIZE	AG
Mean	4.300	0.948	0.375	2.291	1.454	8.102	1.144
Median	4.180	0.318	0.317	2.332	1.05	8.163	1.088

Descriptive statistics showed the mean and median of MP as (4.30) and (4.18). The DPOR showed mean and median as (.94) and (.31). The variable DY showed mean as (.37) and median as (.31). The EPS showed the mean as (2.29), median (2.33). The variable LVRG showed the mean as (1.45), median as (1.05). The Size variable showed the mean as (8.10) the median as (8.16). The variable AG showed the mean (1.14), the median as (1.08).

Table 2 : Correlation Matrix (2001 – 2014)

	MP	DPOR	DY	LVRG	EPS	SIZE	AG
MP	1						
DPOR	0.590	1					
DY	-0.001	0.274	1				
LVRG	-0.030	-0.060	-0.013	1			
EPS	0.665	0.586	-0.012	-0.031	1		
SIZE	0.170	0.164	-0.033	0.162	0.232	1	
AG	-0.012	-0.024	-0.000	-0.001	-0.010	0.090	1

The correlation matrix shows that correlation of MP and DPOR is (.59); that of DY and MP is (-.001); and that of LVRG and MP of share being (-.03). The correlation of EPS and MP is (.66); while that of Size and MP is (.17). Correlation of AG and MP is (-.001).

Table 3 : Fixed Effect Model (2001- 2006)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.281	0.472	-9.056	0.000
DPOR	0.044	0.031	1.412	0.158
EPS	0.002	0.001	2.234	0.025
LVRG	-0.206	0.038	-5.379	0.000
DY	-0.637	0.056	-11.218	0.000
AG	0.220	0.109	2.007	0.045
SIZE	1.084	0.069	15.593	0.000
Effects Specification				
R-squared	0.845	Prob (F-statistic)		0.000
Adjusted R-squared	0.812			
F-statistic	25.798			

Result in table 3 show the effect of dividend policy before economic recession (2001 – 2006). These results are not matched with results during

economic recession. Adjusted R square is 0.81 showing the extent of variation in dependent variable with independent variables as 81 per cent. The value of F statistics is 25 that showed goodness of fit of model. The value of prob. is (.000) that means the model is significant. The data before economic recession showed that DPOR is insignificant and positive with MP. The impact of EPS on dependant variable is significant and positive. LVRG showed significant and negative relation with MP. DY was insignificant and it negatively affected MP. The AG was positive and significant. The MP significantly and positively moved with Size.

Table 4: Correlated Random Effects - Hausman Test (2001- 2006)

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	239.010	6	0.000

Hausman test was applied to explain validity of fixed effect model in study. The probability of Hausman test was (.000) showing that fixed effect model was more suitable for appropriate results.

Table 5 : Fixed Effect Model (2007- 2009)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.436	1.313	6.421	0.000
DPOR	0.164	0.045	3.646	0.000
DY	-1.784	0.269	-6.628	0.000
EPS	0.117	0.032	3.586	0.000
LVRG	0.051	0.025	2.060	0.040
SIZE	-0.522	0.166	-3.145	0.001
AG	-0.015	0.138	-0.111	0.911
Effects Specification				
R-squared		0.932	Prob (F-statistic)	0.000
Adjusted R-squared		0.895		
F-statistic		25.291		

Table 5 provides results of data for the period of (2007 – 2009) - during economic recession. The Results of recession period showed that value of adjusted R square is .89 which implies that independent variables explained 89 per cent variations in stock prices. The DPOR during recession showed significant and had positive movement with MP. The DPOR was insignificant and positive before economic recession. The variable DY showed significant and it negatively moved with MP. EPS was also significant and it positively moved with MP. The results of EPS

were matched with that of recession period (2007 – 2009). The LVRG was significant and it positively moved with MP. The result of LVRG was significant and negative with MP in the period before economic recession. The Size was significant and negative with dependant variable during recession period (2007 – 2009) but significantly positive in period before economic recession (2001 – 2006). However, the relationship between AG and Market price was significantly positive.

Table 6: Correlated Random Effects - Hausman Test(2007- 2009)

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	147.955	6	0.000

Hausman (1978) suggested a model called hausman test for choosing appropriate model between fixed and random effect models. The value of probability for this study is less than significance level 5 percent which showed that fixed effect model was suitable for recession period (2007 – 2009).

Table 7: Fixed Effect (2010 – 2014)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.424	0.478	7.164	0.000
DPOR	0.176	0.038	4.555	0.000
DY	-4.800	1.860	-2.575	0.010
EPS	0.013	0.030	0.459	0.646
LVRG	-0.008	0.010	-0.803	0.422
SIZE	0.119	0.056	2.117	0.034
AG	-0.131	0.097	-1.350	0.177
Effects Specification				
R-squared	0.888		Prob (F-statistic)	0.000
Adjusted R-squared	0.854			
F-statistic	26.264			

The results of table 7 showed the effects of dividend policy on stock prices after economic recession (2010 – 2014). The results showed that value of adjusted R square is 85.46 which implies that independent variables explained 85.46 percent variations in stock prices. The DPOR is significant that positively affected MP. The DY was significant and negative with MP after recession period (2010 – 2014). The EPS was insignificant and positively correlated. The results of EPS are not similar to that of period during economic recession (2007 – 2009) in which EPS was significantly positive. The variable LVRG was negatively correlated

and was insignificant with MP. The results of LVRG in recession period (2007 – 2009) were positive and significant. The Size was significant and was positively correlated with MP during the period after recession. The Size showed significant and negative correlation during recession period (2007 – 2009). The AG was insignificant and negatively correlated with stocks prices in market. The AG was insignificant and negatively correlated with stock prices in the market.

Table 8 : Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	79.085	6	0.000

The probability of Hausman test is (.000) which showed that fixed effect model was good for research.

5. Conclusion

The relationship of dividend and stock prices has been extensively investigated by renowned researchers in their studies especially in developed economies who explored that dividend payout rate had incredible role to influence stocks prices. To test their claim in present study, dividend payout ratio and dividend yield were used as proxy for dividend policy. As investment in stocks is a crucial part of the portfolio of Islamic finance institutions, this study is significant with regard to promoting Islamic capital market in the country. Three sets of different time periods were used namely before economic recession, during economic recession and post or after economic recession. Results depicted that DPOR was insignificant in the period before economic recession, but significant during recession period.

The study was conducted to explain whether the relationship of dividend policy and market prices was affected during economic recession in Pakistan. The results for the period before economic recession (2001 – 2006) revealed that three variables EPS, Size and AG had significant and positive relationship with market prices; while LVRG and DY were found significant and negative with MP. DPOR was insignificant and positive with MP during this period.

The economic recession period (2007 – 2009) showed the DY and Size as significant and negative while DPOR, EPS and LVRG were found significant and positive with MP. The AG in this period was found insignificant and negative. The period after economic recession (2010 –

2014) showed DPOR and Size as significant and positive with MP. The DY was found significant and negative. The variables LVRG and AG were found insignificant and negative while EPS was insignificant and positive with MP. The results for periods before economic recession, during economic recession and after economic recession were different as DPOR was especially found insignificant with market price before recession, but significant during economic recession which means the investors require more cash due to economic uncertainty. The study thus empirically proved that relationship of dividend policy and stocks prices were affected during economic recession in Pakistan.

References:

Allen, D. E., & Rachim, V. S. (1996). Dividend policy and stock price volatility: Australian evidence. Applied financial economics, 6(2), 175-188.

Alli, K. L., Khan, A. Q., & Ramirez, G. G. (1993). Determinants of corporate dividend policy: A factorial analysis. *Financial Review*, *28*(4), 523-547.

Baskin, J. (1989). Dividend policy and the volatility of common stocks. *The Journal of Portfolio Management*, *15*(3), 19-25.

Bhattacharya, S. (1979). Imperfect information, dividend policy, and "the bird in the hand" fallacy. *Bell journal of economics*, *10*(1), 259-270.

Dickens, R. N., Casey, K. M., & Newman, J. A. (2002). Bank dividend policy: explanatory factors. *Quarterly journal of Business and Economics*, 3-12.

Fama, E. F. (1991). Efficient capital markets: II. *The journal of finance*, *46*(5), 1575-1617.

Fama, E. F., & French, K. R. (1992). The cross-section of expected stock returns. *the Journal of Finance*, *47*(2), 427-465.

Gorden, M. J. (1963). Optimal Investment and Financing Policy. *The Journal of Finance* , 18 (2), 264-272.

Khawaja, I., Mahmood, T., & Qadir, U. (2010). Social Impact of Global Recession on Pakistan. *Pakistan Economic and Social Review*, 261-278.

Knell, M. (2015). Schumpeter, Minsky and the financial instability hypothesis.*Journal of Evolutionary Economics*, *25*(1), 293-310.

Lintner, J. (1956). Distribution of incomes of corporations among dividends, retained earnings, and taxes. *The American Economic Review*, *46*(2), 97-113.

Miller, M. H., & Rock, K. (1985). Dividend policy under asymmetric information. *The Journal of finance*, *40*(4), 1031-1051.

Rozeff, M. S. (1982). Growth, beta and agency costs as determinants of dividend payout ratios. *Journal of financial Research*, *5*(3), 249-259.

Nazim-ud-Din, M. (2014). Impact of Dividends on Stock Price Volatility--Evidence from Some Selected listed Companies in Bangladesh. *Abasyn University Journal of Social Sciences*, *7*(1).

Waithaka, S. M., Ngugi, J. K., & Kirago, P. (2012). Effects of dividend policy on share prices: A case of Companies in Nairobi Securities Exchange. *Prime Journal of Business Administration and Management*

(BAM), *2*(8).

Onsomu, Z. N., & Onchiri, M. O. (2014). The Effect of Dividend Policy on Stock Price Volatility: A Kenyan Perspective. *The International Journal of Business & Management*, *2*(7), 115.