

1 Dividend Policy and Share Price Volatility: Evidence from 2 Pakistan

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6

7 **Abstract**

8 The main purpose of this study is to examine the relationship between dividend policy and
9 share price volatility in Pakistani stock market. The cross sectional regression is used to
10 analyze the relationship of share price with dividend yield and payout ratio. The dividend
11 yield and share prices are positively relate but payout ratio is negatively related. This study
12 suggest that dividend policy is effect the share price volatility in Pakistan and this study also
13 proposed that signaling effect is also relevant in determining the share price volatility.

14

15 **Index terms—**

16 **1 INTRODUCTION**

17 Dividend policy remains controversial issue for many years of theoretical and empirical research, considering the
18 one aspect of dividend policy: the link between dividend policy and stock price risk (Allen and Rachim, 1996)
19 and dividend policy is puzzle (Black, 1976). Dividends are irrelevant to a market value of firm in a perfect
20 capital (Miller & Modigliani 1961) and dividend policy is relevant by DeAngelo et al. ??1996). Payment of large
21 dividends reduces risk and influence on stock price ??Gordon, 1963) and is a roadmap for the future earnings
22 (Baskin, 1989). The connection between dividend payout and directorship outside the organization is negative
23 (Al-Najjar, 2009).

24 Rozeff ??1982) and Easterbrook (1984) assumed that payment of dividends motivates the managers to invest
25 at high cost of capital not below and save organizational efficiencies. Some authors have stressed the importance
26 of information content of dividend ??Asquith and Mullin, 1983). Guo (2002) assumed that the investors who
27 make the investment in ordinary shares face the un-diversifiable risk.

28 Kinder ??2002) argue that the volatility of stock prices is dealing with money and investor is interested to know
29 about volatility or risk. To test the significance of the relationship between dividend yield and price volatility
30 using the control variables like size, debt, earning volatility, payout ratio and growth. These variables have a clear
31 and strong effect on stock returns but also influence on dividend yield. For measuring the relationship between
32 dividend policy and share price volatility, cross sectional regression analysis is used. The independent variables
33 are dividend yield and payout ratio are regressed with cross sectional regression analysis.

34 The argument has been whether business results insurance plan has any connection with share price movement.
35 In this context, this research paper is aimed to draw and establish a relationship between dividend policy and
36 share price volatility, with focused on Pakistani stock market i.e. KSE 100 index. The theoretical framework of
37 this research about price volatility is created by Baskin (1989) and Allen and Rachim (1996). The main purpose
38 of this study is to find the role of dividend policy measures i.e. dividend yield and payout ratio on share price
39 changes in the long run which are important for firms as well as investors.

40 **2 II.**

41 **3 LITERATURE REVIEW**

42 Dividend Policy referred to a firm's policy and corporation's choice with regards to pay its shareholders a cash
43 dividend or to retain the portion of earnings for re-investment in the firm. a) Dividend policy and share price

5 A) DEFINITION OF VARIABLES

44 volatility While the MM idea claims that the people are shy of receiving results and cost gratitude, the stock
45 cost is not independent of the results announcement. Due to details information and signalling effect, outcomes
46 may affect the come rear and expose prices (Lintner, 1962; ??ordon, 1959;Williams 1988 ;Asquith and Mullins,
47 1983. The results statement provides information about the flow of resources and allows the market place to
48 calculate the organization's present earnings (Miller and Rock, 1985). Due to reduced value of results the stock
49 options price may even go over industry place value, which is known as the undervaluation that you can buy or
50 overstatement of investor's assessment (Downs, 1991).

51 From the above discussion some questions raised:

52 Should results repayments be managed at the present stage or changed? Would people prefer constant results
53 affiliate payouts, or those that range with earnings? Should results insurance plan give preference to older or
54 newer investors?D March Yasir Habib ? , Zernigah Irshad Kiani ? & Muhammad Arif Khan ?

55 The connection between the results dividend policy of organizations and the movements of their stock options
56 values has been visited at different times by different researchers (Allen and Rachim, 1996;Baskin, 1989). Some
57 theories like information or signaling effect, the bird hand theory, clientele effect etc are used to explain the
58 relationship of dividend policy and share price. b) Theories of dividend policy Dividend policy has been a most
59 debate-able subject in the area of finance and numerous studies on dividend policy has been conducted by many
60 renowned researchers like, Lintner (1956) no taxes or transactional cost (brokerage cost) investors are rational
61 managers act as the best agents of shareholders Investment policy of the firm should be certain In conclusion
62 from the above assumptions that dividend policy is irrelevant.

63 Bird-in-hand theory : ??ordon (1959) and Linter (1962) proposed that investors value of expected dividends
64 more high than expected capital gains. Al-Malkawi (2007) finds that benefits are sought after differently from
65 managed (retained) earnings (capital gains). While this argument has been widely criticized by Miller and
66 Modigliani (1961) and has not received strong empirical support, it has been supported by Gordon and Shapiro
67 (1956), Linter (1962) and Walter ??1963). The main assumptions are:

68 investors have deficient (imperfect) information about the profitability of a firm; that capital gain is realized
69 on the sale of a share; and Dividends as a signal of expected cash flows. Agency cost and the free cash flow theory
70 : Agency cost is the price of the issue of attention that prevails between investors and management (Ross et al.,
71 2003). Miller and Modigliani (1961) assumed that no conflict between managers and shareholders and managers
72 are the best agents of shareholders. Easterbrook (1984) also identified that agency cost does not explain yield
73 predictions about how bond prices react to dividends.

74 Signalling hypothesis : Miller and Modigliani (1961) assumed that investors and managers have perfect
75 information about firm's expected earnings and dividends. Al-Malkawi (2007) asserts that to minimize the
76 gap of information between managers and investors then dividend policy used as a tool.

77 Clientele effects of dividends theories : Clientele effect has two effects as tax effect and transaction effect
78 (Al-Malkawi 2007). He argued that in high tax effect firm would prefer pay low or no dividend. Transaction cost
79 effect operates in two ways, first is that small investors depend on dividend payments and in second clientele
80 effect companies prefers cannot afford the high transaction cost of selling securities.

81 Tax preference theory: Tax preference theory has three tax related reasons for thinking Long term capital
82 gains for tax In case of un-sold stock, capital gains should not be considered for taxation In case of held stock,
83 capital gains should not be considered for taxation III.

84 4 METHODOLOGY

85 The dividend policy and share price volatility relationship has been analyzed by utilizing the cross sectional
86 regression analysis. In regression analysis, the dependent variable share price volatility is regressed against two
87 independent variables dividend yields and payout ratio. The following regression equation is adopted to develop
88 a relationship between share price volatility and dividend policy.

89 Price Volatility= a₁ + a₂ Div-yield + a₃ Payout + e_k

90 The number of factors influences the relationship of share price volatility and dividend policy. Therefore, to
91 control (limit) these problems, the control variables are included in regression equation. The equation is given
92 below: Price Volatility= a₁ + a₂ Div-yield + a₃ Payout + a₄ Size +a₅ Earn-Vol + a₆ Debt +a₇ Growth +e
93 k From expectation results, assumed that dividend yield, payout ratio and size put negative impact on share price
94 volatility but earnings volatility and debt put positive impact on share price volatility. Baskin (1989) assumed
95 that industry pattern also influence on the relationship of share price and dividend policy, so therefore some
96 dummy variables are included in regression equation.

97 Price Volatility= a₁ + a₂ Div-yield + a₃ Payout + a₄ Size +a₅ Earn-Vol + a₆ Debt +a₇ Growth + a₈
98 Dum + e_k Here, a is equation intercept and e standard error term.

99 5 a) Definition of variables

100 Price volatility: Price volatility is a dependent variable. For calculation of price volatility, each year share price
101 is taken from DataStream. The range of share prices for each year calculated and then takes average of highest
102 and lowest share prices. For price volatility, range is divided by average and then raised the second power.

103 D Dividend yield: The dividend yield is calculated as dividend per share is divided by share price for each
104 year.

105 Payout ratio: The payout ratio is calculated as dividend per share is divided by earning per share.

106 Size: Total assets are used as proxy for size Earning volatility: For earning volatility calculation taking the
107 standard deviation of earnings before interest and taxes or operating profit (Dichev and Tang 2009).

108 Long-term debt (Debt): Debt is the ratio of total debt to total assets for each year and then takes average for
109 all available years.

110 Growth in assets (Growth): The figures of Growth in assets are obtained by taking the ratio of changes in
111 total assets from the beginning of year to end of year.

112 IV.

113 6 RESULTS AND DISCUSSION

114 From table (1), the descriptive statistical analysis provides the values of mean, median, minimum and maximum,
115 and standard deviation of non-financial firms listed in Karachi Stock Exchange 100 index. For meeting the
116 normality of data, it is assumed that stock market prices are following the normal distribution patterns. For
117 measuring the mean volatility, multiplying the normal distribution estimation with a constant which is provided
118 by Parkinson (1980). From Table ??I, regression analysis results showed relationship between share price volatility
119 with dividend yield and payout ratio which are regressed. The regression results showed that relationship of share
120 volatility with dividend yield is positive but relationship of share price volatility with payout ratio is negative.
121 The relationship of share price volatility with other control variables like size, earning volatility is negative but
122 long term debt and growth relate with share price positively. From the regression results, the relationship between
123 dividend and share price volatility is non-significantly positive. This study results is matched with earlier study
conducted by Allen and Rachim (1996) and contradicts with Baskin (1989) study. ^{1 2}

; Miller and Modigliani
(1961); Bhattacharya (1979) and more recently,
DeAngelo et al. (1996), Fama and French (2001), Al-
Malkawi (2007) and Al-Najjar and Hussainey (2009).

Some dividend policy theories are given below.

D Dividend irrelevance theory :

Miller
and

Modigliani (1961)

Figure 1:

1

Variables	Mean	Median	Minimum	Maximum	Standard Deviation
Price Volatility	0.813	0.415	0.000	8.013	1.155
Dividend Yield	0.236	0.044	0.000	6.254	0.705
Earning Volatility	0.046	0.035	0.011	0.495	0.055
Debt	0.225	0.111	0.000	3.047	0.346
Growth	0.066	0.051	-0.285	0.866	0.123
Payout ratio	0.452	0.453	0.000	1.000	0.321
Size	4.666	4.236	0.561	9.441	2.032

Figure 2: Table 1 :

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Variables	Coefficients	Beta	t-statistic value	t-probability
Constant	1.713**	0.000	3.889	0.000
Dividend Yield 0.063		0.039	0.283	0.693
Earning Volatility	-0.296	-0.013	-0.0129	0.899
Debt	0.225	0.071	0.810	0.440

Figure 3: Table 2 :

125 From table III, there is a positive relationship between dividend policy and stock price volatility but this
126 relationship is not significant. These results are more matches with ??llen and Rachim (1989) study results.
127 The Pearson's correlation suggests that payout and share price volatility correlate negatively with each other.
128 The correlation between debt and payout is significantly negative due to less payment of debt. The payout ratio
129 and growth correlate significantly negatively because firms have larger payout ratio. ??II, there is a negative
130 relationship between share price volatility and dividend yield because correlation between them is negative (-
131 0.093).The correlation between share price volatility and payout ratio is significantly negative because lower
132 payout ratio influences the share price negatively. The correlation between earning volatility and payout ratio
133 is significant negative due to the less payment by firms. The correlation between long term debt and payout
134 ratio is significant negative due to the less repayment of debt. The relationship between dividend yield and size
135 is significantly positive because larger firms pay larger amount in shape of dividends. The table III shows the
136 positive correlation between payout ratio and growth because which firms have higher growth in assets make the
137 higher payout ratio.

138 V.

139 .1 CONCLUSION

140 The main objective of this study is to examine the relationship between dividend policy and share price volatility
141 in Pakistan. For this purpose some controlling variables like dividend policy, payout ratio, size, debt and growth
142 are used. The cross sectional regression analysis is used to measure the share price with these controlling variables.
143 The findings of this study are that payout ratio and price volatility is significantly positively related. The size
144 and debt are negatively related with share price volatility. If the findings of this study relates with other earlier
145 studies somehow different that studies because corporate structure of firms in Pakistan is different with other
146 developed countries. This study proposed that dividend yield is better and more important determinant factor
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