

Dividend Policy as a Signaling Mechanism under Different Market Conditions: Evidence from the Casablanca Stock Exchange

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Abstract

Does the signaling value of dividend policy depend on market conditions? Do investors respond to dividend policy differently in different periods? This study answers these questions by using a sample of firms from the Casablanca Stock Exchange during the period between 2003 and 2007. We find a significantly negative relationship between dividend payout ratio and stock price volatility during the stable growth period. We also show a significantly positive relationship between dividend payout ratio and stock returns during the same period. However, this relationship turns insignificant during the high growth period. One of the reasons for our results may be that investors pay lesser attention to the signaling value of dividends during the periods when they are earning higher returns on their investments.

Keywords: Stock Price Volatility, Stock Returns, Corporate Governance, Dividend Policy

1. Introduction

Prior literature characterizes emerging markets by inadequacies in corporate governance mechanisms – both at the firm- and the country-level (Claessens and Fan, 2002; Khwaja and Mian, 2006). Johnson et al. (2000) document that improper corporate governance mechanisms exacerbate transparency problems and allow insiders, i.e. controlling shareholders, to expropriate resources out of firms in emerging stock markets. Firms with high amount of retained earnings are obvious candidates for any expropriation by insiders. Agency theory suggests that, in the absence of proper corporate governance mechanisms, outside investors would prefer firms with high dividends because of the fear that insiders might divert retained earnings to unprofitable opportunities (Easterbrook, 1984; Jensen 1986). This strand of literature assumes that dividend policy is one of the mechanisms that can reduce agency costs by decreasing the amount of cash available with the management. Therefore, firms can use dividend

policy as a signaling device to establish their reputation as firms with lower agency problems and as firms who impart decent treatment of outside investors (Easterbook, 1984).

One of the implications of lower agency problems associated with high dividend payments is that it should lower the riskiness of firms. Allen and Rachim (1996), while studying the relationship between dividend policy and the stock price volatility, show that higher dividend payouts are associated with lower stock price volatility. If high dividend payments signal lower agency problems, we should also expect higher dividend payouts to be associated with better stock price performance. Gompers et al. (2003) document superior stock price performance of firms with lower agency problems relative to firms with higher agency problems. In this paper, we aim to study whether the arguments put forward in the prior literature regarding the signaling value of dividend policy hold across different growth periods, i.e. stable growth period and high growth period. If the arguments hold true, we should expect reduction in volatility and increase in returns in both growth period. It is important to mention that, to the best of our knowledge, there is no study that documents signaling value of dividend policy across different growth periods. Our study is similar in spirit to Salminen and Martikainen (2008) who study the short time price effect of dividend announcements during a boom and a recession period. They show that investors seem to give more value to dividend announcements during the recession than during the boom.

In this paper, we differentiate our sample period between stable growth period and high growth period and test whether the relationship between dividend policy and stock price volatility and the relationship between dividend policy and stock returns during each period. Using a comprehensive dataset of dividend payout ratio, stock price volatility, and stock returns from the Casablanca Stock Exchange, we find that stock price volatility and dividend payouts are negatively related to each other, while stock returns and dividend payouts are positively related to each other during the stable growth period, i.e. between 2003 and 2005. Our results show a decline in stock price volatility by 0.364 units for each unit increase in payout ratio and an increase of 0.449 units in stock returns for 1 unit increase in payout ratio. However, our results show that the relationship between dividend policy and stock price volatility and the relationship between dividend policy and stock returns breaks down during the high growth period, i.e. between 2006 and 2007. We show no significant relationship between dividend policy and stock price volatility and the relationship between dividend policy and stock returns. Our results are similar to Salminen and Martikainen (2008) who show that signalling value of dividends is less during the high growth period. One of the reasons for our results may be the fact that investors ignore governance problems of firms during the high growth period (Rajan and Zingales, 1998). Prior literature suggests that as long as investors earn expected return on their investment, they care less about governance mechanisms (Shleifer and Vishny, 1997; Mitton, 2002). Rajan and Zingales (1998), while studying East Asian firms, show that investors ignored weaknesses of East Asian firms during the period when the region was doing economically well. They, further, document that as the expected return on investment fell, investors became conscious about governance mechanisms. Consistent with their arguments, our results show that investors care more about dividend policy in period with stable growth relative to period with high growth.

Our results may have implication for investors trading in the Casablanca Stock Exchange. Since investors value less risky or better governed firms more than others, they may use high payout ratios as a signal for lower risk and better governance. However, our results suggest that this relationship might breakdown during the periods of high growth.

The remainder of the paper will proceed as follows: Section 2 briefly discusses motivation and background for this study. Section 3 discusses the data used in this study. Section 4 presents assessment of the relationship between dividend policy and the stock price volatility. Section 5 documents robustness of our results and the paper concludes with Section 6.

2. Motivation and Background

Prior literature characterizes emerging markets with weak corporate governance mechanisms. Balasubramanian et al. (2008), for example, argue that conventional corporate governance mechanisms are weak in emerging markets. They document that the largest shareholder is often the board chairman in these markets and almost 35% of firms do not disclose information on their websites. In another related study, Claessens and Fan (2002) document that conventional corporate governance mechanisms (i.e. takeovers and boards of directors) are not strong in emerging markets. Lack of proper governance mechanisms has resulted in lower levels of information disclosure in emerging markets. Leuz et al. (2003) document that managers and insiders do not disclose the true underlying economic conditions of their firms in these markets. This leaves individual/naive investors with an impossible task of assessing the true value of firms. One of the ways through which this information asymmetry can be resolved is by inferring information from the dividend policy of firms. Prior literature considers dividend policy as an important mechanism via which firms can reduce information asymmetries. This strand of literature argues that high dividend payouts alleviate agency conflicts through the reduction of free cash flow available to managers (Grossman and Hart, 1980). Therefore, high payout ratios are associated with better firm performance – high returns and lower volatility (Amidu, 2007; Nishat and Irfan, 2004). However, whether this relationship between payout ratios and firm performance holds in different market conditions is still debatable. The following section will document our arguments regarding the relationship between dividend policy and stock price volatility and the relationship between dividend policy and stock returns during the stable growth and the high growth periods.

2.1. Dividend Policy as a Signaling Mechanism During the Stable Growth Period

Emerging markets are associated with weak corporate governance mechanisms (Balasubramanian et al., 2008). Prior literature considers weak enforcement of investor protection laws, presence of family control, ineffectiveness of regulatory authorities, and lax implementation of anti-director rights as some of the main reasons behind inadequacies in corporate governance mechanisms in emerging markets (Claessens and Fan, 2002; Leuz et al., 2003). One of the consequences of ineffective corporate governance mechanisms is that firms may have to develop their reputation as better governed firms to attract outside investors. Paying high dividends is one such mechanism that can enable them to develop their reputation as firms with lower agency problems. Prior literature suggests that the need for the use of dividend policy as a reputation device – signaling mechanism – is stronger in emerging markets where corporate governance mechanisms are weak. Sawicki (2009) shows that firms with weak corporate governance mechanisms tend to pay high dividends in emerging stock markets – probably to improve or build their reputation.

Agency theory suggests that outside investors have a preference for dividends because of the fear that insiders might misuse cash retained within firm (Easterbook, 1984; Jensen, 1986). That is to say, dividends payments reduce agency costs, provide more near term cash flows, and motivate managers to distribute cash rather than investing at below cost of capital or wasting it on unprofitable investments (Allen and Rachim, 1996). Prior literature argues that dividends can be used as a substitute for governance mechanism as they can signal reduction in agency problems. La Porta et al. (2000), for example, document that dividend policy can be used by firms to convince outside investors that they will not be expropriated. They argue that firms operating in relatively poor governance environment make dividend payments because they need an alternate means of establishing a reputation for acting in the interests of outside investors. High dividend payments signal to outside investors that there is less cash at the expense of management to expropriate on unprofitable opportunities. Moreover, incentive to maintain reputation, because of future requirements to raise cash, also signals to outside investors that firm is less prone to expropriation.

Above arguments regarding the choice of dividend policy lead us to argue that high dividend payments should be associated with lower riskiness and information asymmetry about firms (Allen and Rachim, 1996; Nishat and Irfan, 2004). That is to say, outsiders have less information about firms than

insiders and thereby any credible behavior by insiders, such as dividends payout, may carry information content that can affect outsiders' decision to trade in a certain stock. Miller and Rock (1985) document that dividend announcement provides missing pieces of information about firm and allows the market to estimate its earnings. As a result, investors may have greater confidence in firms with favorable dividend announcements. If investors are more certain in their opinions, they may react less to questionable sources of information and their expectation may not be exposed to irrational influence. As a result, managers may use the dividend policy to alter investors' perception about the riskiness of their firms.

Apart from affecting the riskiness of a firm, payout policy can also impact the stock price performance of a firm. If our arguments regarding the role of dividend policy as a substitute for governance mechanisms are true, we should expect higher payout ratios to be associated with better stock price performance. Gompers et al. (2003) document that a strategy of buying better governed firms and selling poorly governed firms earns abnormal returns of 8.5 percent per year. We argue that this positive relationship between of dividend policy and stock returns is more pronounced in periods characterized by relatively lower growth levels. Salminen and Martikainen (2008) show that abnormal returns of dividend increase announcements are larger during the recession than during the boom.

2.2. Dividend Policy as a Signaling Mechanism During the High Growth Period

Most of the arguments presented above regarding the relationship between dividend policy and agency problems do not take into account the general mood/sentiment prevailing in the market regarding future growth. To the best of our knowledge, the only study that comes close to defining the relationship between the two during periods characterized by different growth rates is by Salminen and Martikainen (2008). In their study, they examine the short-time price effect of dividend announcements during a boom and a recession for the U.S. market during the years between 2000 and 2002 when market was experiencing a downturn and during the years between 2005 and 2007 when the market was experiencing boom. Their results show that abnormal returns of dividend increase announcements are larger during the recession than during the boom, suggesting that investors seem to respond less to dividend increase during the period of boom.

Consistent with the results documented by Salminen and Martikainen (2008), we argue that investors may not respond to dividend policy as much during the period of high growth as during the stable growth. Our hypothesis is consistent with Allen (2006) who reports that regulators and investors pay considerable attention to corporate governance mechanisms only during economic downturns. He adds that when markets are booming, excitement overwhelms such concerns and investor appetite for risk rises. His views are in line with Rajan and Zingales (1998) who show that investors ignore governance problems during the high growth periods. They document that as the expected return on investment fall, investors became conscious about governance mechanisms. Consistent with their arguments, Johnson et al. (2000) show that, during the economic downturns, controlling shareholders have incentives to expropriate resources out of firms. Their arguments is based on the assumption that as the expected return on investment falls, controlling shareholders are tempted to maintain their return on investment at the expense of outside shareholders. A number of examples can be cited in this regards. For example, United Engineers Malaysia bought shares in its parent, Renong Berhad, for an artificially high price. The shares purchased were those held by family members of management of UEM and Renong (Business Week – June 8, 1998). As a result, firms with poor corporate governance suffer more during an economic crisis period (Jae-Seung et al., 2007). They stated that one potential explanation is that controlling shareholders have strong incentives to expropriate minority shareholders during crisis periods. Therefore, investors care more about corporate governance when the return on investment is low than the expected. As a result, we argue that investors care less about the signaling value of dividend payouts during the periods of high growth. Therefore, the relationship between the dividend policy and the stock price volatility and the relationship between dividend policy and stock returns may breakdown during the period of high growth.

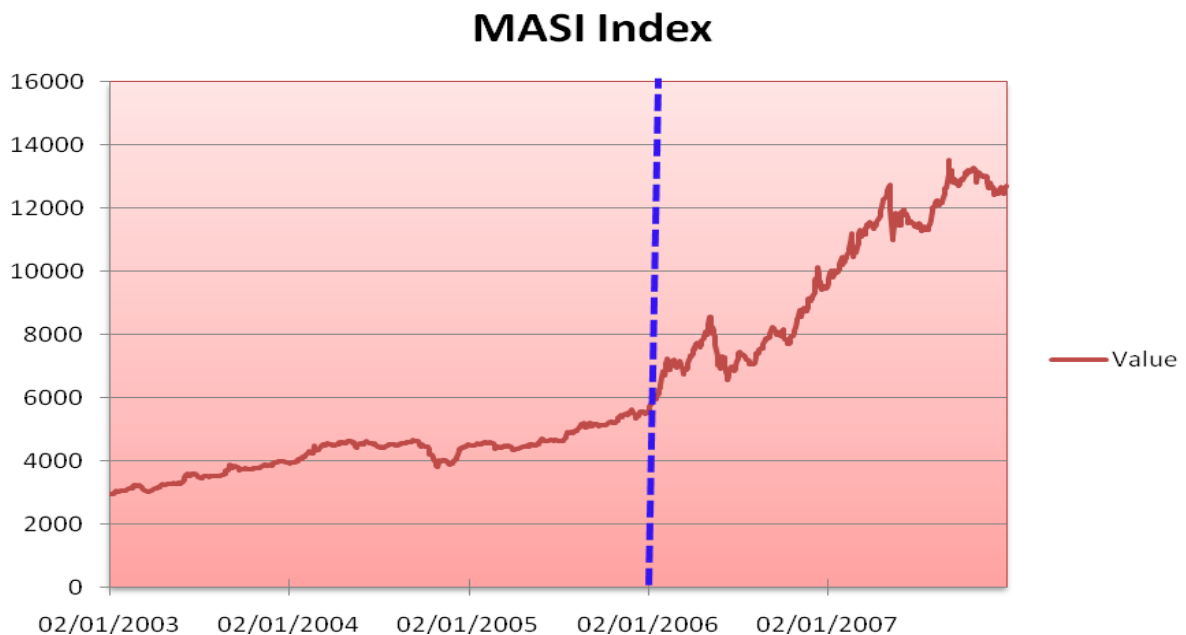
3. Data

In this paper, we focus on the relationship between dividend policy and stock price volatility and the relationship between dividend policy and stock returns in Morocco using a sample of firms from the Casablanca Stock Exchange. The country has implemented considerable governance reforms during the past few years. The reforms resulted in arousing considerable interest from investors in the stock market and enabled the Casablanca Stock Exchange to quadruple during the recent years. However, in spite of such interests from investors, corporate governance mechanisms have remained ineffective. Belkahia (2005), for example, documents that Moroccan firms do not disclose information properly. He mentions that there is no information for investors about the voting rights and that the key executive does not disclose any information regarding their interest in any trade or matter affecting the firms. He also documents the weakness of corporate governance in Morocco by mentioning that appropriate level of minority shareholders' protection is missing in the country. One of the consequences of poor governance mechanisms is that firms may have to use dividend policy as a signaling device to develop their reputation as firms with lower agency problems. The period under study is from January 1, 2003 to December 31, 2007. We will, briefly, discuss the data in the following sub-sections.

3.1. Choice of Stable and High Growth Periods

The choice of time period was driven by the motivation that we should be able to compare the signaling value of dividend policy during the period characterized by relatively stable growth with the period characterized by relatively high growth. For the purpose of this paper, we define the period between 2003 and 2005 as a stable growth period, while the period between 2006 and 2007 is defined as high growth period. The evolution of the Casablanca Stock Exchange index, MASI, during both periods is shown in Figure 1. The figure shows relatively stronger growth of the MASI during the high growth period relative to the stable growth period.

Figure 1: Evolution of Casablanca Stock Exchange



3.2. Stock Price Volatility

We follow Pinches and Kinney (1971) to compute the yearly stock price volatility (PV) for a stock. They use the highest price of a stock during the year (HP) and the lowest price of a stock during the same year (LP) to compute yearly stock price volatility for a stock as follows.

$$PV = \frac{HP - LP}{\left(\frac{HP + LP}{2}\right)} \quad (1)$$

Prior literature uses standard deviation of the above measure over a certain number of years as the measure of stock price volatility (Allen and Rachim, 1996; Nishat and Irfan, 2004). We, however, divert away from the prior literature for a number of reasons. For example, quite a few firms in our sample have been listed only during the last two years. It will, therefore, make it impossible to compute standard deviation of the above measure for these firms. Excluding these firms is not an option as it will significantly reduce our sample size. In addition, we could not increase the length of high growth period due to authors' limited access to data required to compute stock price volatility. The data used to compute stock price volatility was obtained from Datastream.

3.3. Market-Adjusted Returns

This paper defines market-adjusted returns (RET) as the difference between stock returns and market returns. Stock prices and market index were used to calculate the market-adjusted returns. We extract the stock price data and the corresponding market index data from Datastream. The stock price data and the market index data are obtained for the first day of the year and the last day of the year to compute the market-adjusted returns for that year.

3.4. Dividend Policy

This paper uses dividend payout ratio (POR) as a proxy for dividend policy. Dividend payout ratio is the percentage of earnings paid as dividends. Prior literature considers dividend policy as an important mechanism via which firms can reduce information asymmetries. This strand of literature argues that high dividend payouts alleviate agency conflicts through the reduction of free cash flow available to managers (Grossman and Hart, 1980). In another related study, Jensen (1986) concludes that high payout ratio can lessen the agency costs by reducing free cash flow that could be expensed on unprofitable projects. This strand of literature argues that paying high dividends reflect managements' good faith and signals the low agency problems. We argue that lower agency problems that result from high dividend payout ratios should translate into better performance – higher market-adjusted returns and lower stock price volatility.

3.5. Control Variables

This paper uses long-term debt to total assets ratio (D/TA), operating earnings to total assets ratio (EBIT/TA), choice of auditors (AUDITOR), asset growth (AGROWTH), and the market value of a firm (SIZE) as control variables. See Appendix-A for the definition of variables. Data for these variables were obtained from Worldscope and Infinancials. Table 1 presents the descriptive statistics of our control variables during our sample period. The table shows that our control variables are approximately constant across both periods. It points towards the homogeneity of our sample across both periods.

Table 1: Descriptive Statistics of Control Variables

	Stable Growth Period		High Growth Period	
	Mean	Standard Deviation	Mean	Standard Deviation
SIZE	8.890	0.726	9.174	0.788
AGROWTH	0.065	0.236	0.032	0.772
D/TA	0.229	0.304	0.261	0.319
EBIT/TA	0.067	0.099	0.083	0.088

Table 2, Panels A and Panel B, document the correlation matrix for independent variables used in our analysis for stable growth period and high growth period respectively. The results show low to moderate levels of correlations between independent variables, thereby allowing us to include all of the variables together in any regression equation. An interesting observation is the significant change in correlation of size with different variables in high growth period relative to stable growth period. It may be because most of the firms listed at the Casablanca Stock Exchange experienced huge increase in their market value in high growth period, irrespective of their fundamentals.

Table 2: Correlation between Independent Variables

Panel A: Correlation between Independent Variables during the Stable Growth Period

	POR	EBIT/TA	AGROWTH	D/TA	SIZE	AUDITOR
POR	1.000					
EBIT/TA	0.417	1.000				
AGROWTH	0.073	0.003	1.000			
D/TA	-0.171	-0.419	-0.006	1.000		
SIZE	0.248	0.351	-0.013	0.058	1.000	
AUDITOR	0.169	0.326	-0.074	-0.118	0.547	1.000

Panel B: Correlation between Independent Variables during the High Growth Period

	POR	EBIT/TA	AGROWTH	D/TA	SIZE	AUDITOR
POR	1.000					
EBIT/TA	0.319	1.000				
AGROWTH	0.013	-0.137	1.000			
D/TA	-0.178	-0.501	0.063	1.000		
SIZE	-0.085	0.095	-0.060	0.177	1.000	
AUDITOR	0.052	-0.030	-0.087	0.055	0.435	1.000

4. Methodology

4.1. Dividend Policy and Stock Price Volatility

Prior literature considers dividend payout ratios as an important mechanism that can reduce agency problems in emerging stock markets (La Porta et al., 2000). Therefore, we should expect a negative relationship between dividend payout ratios and stock price volatility. In order to test this hypothesis, we estimate a regression equation with stock price volatility (PV) as dependent variable and dividend payout ratios (POR) – proxy of dividend policy – as independent variable. We also include year dummies (YDUM) and industry dummies (IDUM) in our regression equation. Our basic regression takes the following form:

$$PV = \alpha + \beta_1 (POR) + \sum_{Ind} \beta^{Ind} (IDUM) + \sum_{Yr} \beta^{Yr} (YDUM) + \varepsilon \quad (2)$$

However, there may be concerns that some of the firm-specific characteristics might be driving the results obtained from equation (2). For example, it is possible that bigger firms pay higher dividends than smaller firms and these bigger firms experience lower stock price volatility. In this case, negative relationship obtained between dividend payout ratio and stock price volatility may not be because of the dividend policy, instead it may be because of the size of firm. In order to address these concerns, we re-estimate equation (2) by adding a number of variables that control for the effect of different firm-specific characteristics on stock price volatility. For example, the size of a firm (SIZE) and choice of firm's auditor (AUDITOR) is added to capture the extent of agency problems in a firm. Both of these factors show investor's interest in a stock and credibility of financial statements, respectively. These factors should be negatively related to stock price volatility. In addition, we also add long-term debt to total assets ratio (D/TA). Firms with high leverage should exhibit higher

volatility. We also controlled for firms profitability and its investment behavior by adding operating earnings to total assets ratio (EBIT/TA) and asset growth (AGROWTH), respectively. Inclusion of all of these control variables is motivated by the prior literature (Allen and Rachim, 1996; Nishat and Irfan, 2004). Our modified regression equation takes the following form.

$$PV = \alpha + \beta_1 (POR) + \beta_2 (SIZE) + \beta_3 (AUDITOR) + \beta_4 (D/TA) + \beta_5 (AGROWTH) + \beta_6 (EBIT/TA) + \sum_{Ind} \beta^{Ind} (IDUM) + \sum_{Yr} \beta^{Yr} (YDUM) + \varepsilon \quad (3)$$

Table 3 documents the results obtained from equation (2) and equation (3). The results show a significantly negative relationship between stock price volatility and payout ratio in stable growth period. Our results show a decrease of 0.364 units of stock price volatility for each unit increase in payout ratio. The relationship between stock price volatility and payout ratio is intuitive because managers use payout ratio as a signaling device to provide missing pieces of information about firm and thus lower information asymmetry (Miller and Rock, 1985). Prior literature suggests that outsiders have less information about firms than insiders in the emerging markets. Therefore, any credible behavior (for example dividend payouts) by insiders may carry information content that result in making firm less risky relative to others. For example, high payout ratio may signal to investors that management has less cash at hand to spend at below cost of capital projects or to waste on organizational inefficiencies (Rozeff, 1982; Easterbrook, 1984). Therefore, high payout ratio may help in reducing risk and the volatility.

Our results for high growth period confirm our hypothesis that the relationship between stock price volatility and dividend policy should break down in high growth period. Our results show no relationship between payout ratio and stock price volatility. This result is in accordance with our expectations of lower investor attention on the governance mechanisms and agency problems during periods of high growth. Rajan and Zingales (1998) argue that as long as investors are earning high returns on their investment, they pay less attention on agency problems. Another important observation from Table 3 is that adjusted-R² decrease substantially in high growth period. We show a decrease from almost 16.5% in stable growth period to about 3.9% in high growth period. It shows that the traditional variables used to explain stock price volatility may not be good enough to explain the behavior of stock price volatility during the period of high growth.

Table 3: Effect of Dividend Policy (Dividend Payout Ratio) on Stock Price Volatility

	Stable Growth Period		High Growth Period	
	Equation (2)	Equation (3)	Equation (2)	Equation (3)
POR	-0.366***	-0.364***	-0.110	-0.146
SIZE		-0.084*		0.080*
D/TA		-0.057		0.018
AGROWTH		-0.080		-0.032***
EBIT/TA		0.116		0.114
AUDITOR		0.057		-0.036
Constant	0.488***	1.291***	0.640***	-0.324
Industry Dummies	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes
Observations	120	82	93	93
Adjusted-R ²	0.216	0.165	0.039	0.039
F-Value	3.470	2.400	2.950	3.220

4.2. Dividend Policy and Market-Adjusted Returns

We argued earlier that dividend policy serves as a signal for lower agency problems in a firm. Therefore, we should expect a positive relationship between dividend payout ratios and returns. In order to test this relationship, we estimate a regression equation with market-adjusted returns (RET) as

dependent variable and dividend payout ratios (POR) as independent variable. As was done before, we also include year dummies (YDUM) and industry dummies (IDUM) in our regression equation. Our basic regression takes the following form:

$$RET = \alpha + \beta_1(POR) + \sum_{Ind} \beta^{Ind}(IDUM) + \sum_{Yr} \beta^{Yr}(YDUM) + \varepsilon \quad (4)$$

Similar to before, we add a number of variables to control for the effects of firm-specific characteristics on returns. Our regression equation takes the following form after addition of control variables.

$$RET = \alpha + \beta_1(POR) + \beta_2(SIZE) + \beta_3(AUDITOR) + \beta_4(D/TA) + \beta_5(AGROWTH) + \beta_6(EBIT/TA) + \sum_{Ind} \beta^{Ind}(IDUM) + \sum_{Yr} \beta^{Yr}(YDUM) + \varepsilon \quad (5)$$

Table 4 documents the results obtained from equation (4) and equation (5). The results show a significantly positive relationship between market-adjusted returns and payout ratio in stable growth period. Our results show an increase of 0.449 units of market-adjusted returns for each unit increase in payout ratio. The results obtained are consistent with our expectations that investors consider high payout ratios as value relevant and price them in their valuation decisions. As was the case before, the relationship between market-adjusted returns and dividend policy breaks down in high growth period. Our results show no relationship between market-adjusted returns and payout ratio in high growth period. We argue that, during high growth periods, investors usually get high returns on their investments, irrespective of payout ratio. As a result, there should insignificant relationship between returns and payout ratio in high growth periods. It is important to mention here that, contrary to what was observed in Table 3 for stock price volatility, the variables used to explain stock returns retain much of their explanatory power. The adjusted-R² is 60% for equation (3) in stable growth period, while it is 45% for equation (5) in high growth period.

Table 4: Effect of Dividend Policy (Dividend Payout Ratio) on market-adjusted returns

	Stable Growth Period		High Growth Period	
	Equation (4)	Equation (5)	Equation (4)	Equation (5)
POR	-0.448	0.449*	-0.267	-0.075
SIZE		-0.025		0.168***
D/TA		1.571		-0.188**
AGROWTH		0.524**		0.011
EBIT/TA		2.669**		-0.356
AUDITOR		-0.183		-0.152
Constant	-0.008	-2.136*	0.079	-2.506***
Industry Dummies	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes
Observations	119	82	93	93
Adjusted-R ²	0.038	0.593	0.027	0.451
F-Value	1.050	2.950	2.410	7.230

5. Robustness of Results

5.1. Dividend Yield as a Proxy for Dividend Policy

As a first robustness check, we estimate equation (3) and equation (5) by replacing payout ratio (POR) with dividend yield (DY). Allen and Rachim (1996) and Nishat and Irfan (2004) use dividend yield as a proxy for dividend policy. Table 5 documents the results for above analysis. The results for our analysis show that dividend yield does not explain stock price volatility or stock returns in either of the

two periods. Our results are similar in spirit to Allen and Rachim (1996) and Nishat and Irfan (2004) that show no relationship between dividend yield and stock price volatility. Our result suggests that distributing higher proportion of cash to shareholders is more value relevant than distributing high dollar amount as dividends. Therefore, payout ratio may be better representative of the extent of agency problems than dividend yield in emerging markets.

Table 5: Effect of Dividend Policy (Dividend Yield) on Stock Price Volatility and Market-adjusted Returns

	Price Volatility		Stock Returns	
	Stable Growth Period	High Growth Period	Stable Growth Period	High Growth Period
DY	-0.275	-1.690	-0.188	3.256
SIZE	-0.107*	0.058	-0.029	0.192***
D/TA	-0.100	-0.009	1.587*	-0.171*
AGROWTH	-0.088	-0.038***	0.578**	0.020
EBIT/TA	-0.155	0.101	3.094***	-0.649
AUDITOR	0.038	-0.032	-0.161	-0.172
Constant	1.420***	-0.130	-1.095	-2.868***
Industry Dummies	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes
Observations	82	93	82	93
Adjusted-R ²	0.039	0.037	0.581	0.458
F-Value	1.930	3.270	3.380	6.360

5.2. Inclusion of Dividend Yield and Payout Ratio in a Single Equation

As a second robustness check, we estimate equation (3) and equation (5) by adding payout ratio (POR) with dividend yield (DY) together in one equation. It is important to mention here that both of these variables do not have high correlation with each other. Table 6 documents the results for above analysis.

Table 6: Effect of Dividend Policy (Dividend Payout Ratio and Dividend Yield) on Stock Price Volatility and Market-adjusted Returns

Variables	Price Volatility		Stock Returns	
	Stable Growth Period	High Growth Period	Stable Growth Period	High Growth Period
POR	-0.381***	-0.094	0.517	-0.516
DY	0.219	-0.883	-0.808	7.602*
SIZE	-0.078*	0.070	-0.048	0.255***
D/TA	-0.047	0.006	1.534	-0.086*
AGROWTH	-0.105	-0.035***	0.617**	0.038
EBIT/TA	0.079	0.130	2.804**	-0.490
AUDITOR	0.061	-0.033	-0.199	-0.178
Constant	1.240***	-0.222	-1.003	-3.658**
Industry Dummies	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes
Observations	82	93	82	93
Adjusted-R ²	0.155	0.029	0.590	0.467
F-Value	2.530	3.020	3.190	5.770

The results for our analysis confirm our previous findings of significant relationship between payout ratio and stock price volatility in stable growth period and no relationship between payout ratio and stock price volatility in high growth period. Our results also confirm that there is no relationship between payout ratio and returns in high growth period.

6. Conclusion

This paper documents signaling value of dividend policy across different growth periods, i.e. stable growth period and high growth period. Our results for stable growth period suggest negative relationship between stock price volatility and dividend payout ratios, and positive relationship between market-adjusted returns and dividend payout ratios. We also show that the relationship between dividend policy and stock price volatility and the relationship between dividend policy and market-adjusted returns breaks down during the period of high growth. One of the reasons for our results is the fact that investors ignore governance problems of firms during the high growth period (Rajan and Zingales, 1998). Prior literature suggests that as long as investors earn expected return on their investment, they care less about governance mechanisms and agency problems (Shleifer and Vishny, 1997; Mitton, 2002). Our results may have implication for investors trading in the Casablanca Stock Exchange. Since investors value less risky or better governed firms more than others, they may use high payout ratios as a signal for lower risk and better governance. However, our results suggest that this relationship might not be significant during the periods of high growth.

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Appendix A: Definition of Variables

Variables used in this analysis are defined as follows:

- **SIZE:** The variable was calculated by taking logarithm of total market value of the stock.
- **D/TA:** This variable was calculated as the ratio of the sum of all the long-term debt to total assets.
- **AGROWTH:** The yearly growth rate was calculated by taking the ratio of the change in total assets in a year.
- **EBIT/TA:** The ratio of the operating income to total assets.
- **AUDITOR:** The variable was assigned the value of 1 if the firm was audited by big-4 auditors and 0 otherwise.