Asymmetric Information and Dividend Policy in Emerging Markets: Empirical Evidences from Iran

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Abstract

Purpose-this study investigates the effect of asymmetric information on dividend policy in listed companies in Tehran Stock Exchange.

Methodology-four main hypothesis have designed by theoretical framework, and tested on 111 listed companies in Tehran stock exchange during 2003 to 2007. The statistic analysis had done by malt- variable regression analysis.

Findings-the study findings show that there is a meaningful and reverse relationship between asymmetric information and dividend policy. Some other findings show there is a meaningful relationship between dividend policy and return on stock but there is no meaningful relationship between dividend policy with firm size and book value to market value of equity ratio.

Practical implementation-the finding of the study could be helpful for university students and users of financial information and other financial analysts in capital market.

Keywords: Asymmetric information, Dividend policy, Capital market, Signalling theory

1. Introduction

Corporate dividend policy has captured the interest of economists of this century and over the recent decades has been the subject of intensive theoretical modeling and empirical examination. Further, several factors may affect to corporate dividend policy, which one of the most important factor is asymmetric information. This paper study this issue that how asymmetric information can has effect on dividend policy by testing the relationship between asymmetric information and dividend policy. Dividend policy has been complicated problem for financial economist. Modigliani & Miller (1961) observed dividend policy has no effect on stock values in efficient markets. However, observations state that stock price can be increased when the suggestion for payment of dividend comes up and the dividend policy is important after other information. Some studies have various suggestions for impalement specific dividend policy. The dividend signal theory is one of the most famous theories between them. Upon The signaling model Bhattacharya (1979), Williams & John (1985), Rock & Miller (1985), managers know more about the real value of the firm than investors and they direct the information in the market for dividend policy. Thus, this model suggests a direct relationship between asymmetric information and dividend. Under the dividend signaling hypothesis, dividend initiations and omissions are generally considered to be important events. When a firm initiates a dividend payment, it creates a benchmark against which investors can clearly measure subsequent performance. This can be viewed in contrast to reported earnings, which are widely regarded as being subject to management is widely regarded as being subject to

management. Many researches have done about signalling theory for profit dividing. Maybe this study is the first one in Iran that tests signalling model on asymmetric information and dividend policy. Private information represents information about firm value that has not been incorporated into the firm's stock price. Hasbrouck's (1991) characterization of private information as "essentially prior knowledge of public information" indicates that timing differences account for much of the distinction between private and public information. Information asymmetry in the stock market occurs when one or more investors possess private information about the firm's value while other investors are uninformed. This dichotomy of information among investors is consistent with Admati and Pfleiderer (1988), Diamond and Verrecchia (1991), Easley and O'Hara (1992), Glosten and Milgrom (1985), Kim and Verrecchia (2001), Kyle (1985), and McNichols and Trueman (1994), among others. The level of information asymmetry can be characterized by the risk of trading with a privately-informed investor.   A firm's choice of disclosure quality-which it can define as the precision, timeliness, and quantity of information provided-affects this information risk by altering the distribution of public and private information among investors.

Disclosure quality is related to information risk because it affects the incentives to search for private information. Higher disclosure quality reduces the incentives to search for private information by reducing the expected benefits from obtaining private information. Diamond (1985), Hakansson (1977), and Verrecchia (1982) examine settings where public and private information are substitutes for each other.   In these settings, increased public disclosures by firms generally reduce the incentives to collect costly private information. These findings suggest that higher disclosure quality leads to less private information being produced. In such a condition asymmetry of information may damage shareholders' confidence about company dividend policy, which more convincing argument in favour of dividends is the signalling hypothesis, which is associated with propositions put forward in Bhattacharya (1979), Miller and Rock (1985), John and Williams (1985), and others.

The signalling hypothesis can explain the preference for dividends over stock repurchases in spite of the tax advantage of the latter. Particularly, as suggested in Jagannathan, Stephens and Weisbach (2000), Guay and Harford (2000) and DeAngelo, DeAngelo and Skinner (2000) among others, the regular dividend signal an ongoing commitment to pay out cash. This signal is consistent with Lintner (1956) observation that managers are typically reluctant to decrease dividend levels. If changes in the levels of dividend release information to the market, then firms can reduce price volatility and influence share prices by paying dividends.   However, it is only unexpected changes which have an informative value and which can thus impact prices.   Therefore, the value of the signal depends on the level of information asymmetries in the market. For example, in developing countries where capital markets are typically less efficient and where information is not as reliable as in more sophisticated markets, the signalling function of dividend may be more important.

Moreover, it can be argued that information will eventually be revealed whether or not the dividend signal is sent; hence the dividend impact on prices is only temporary. It is based on the idea of information asymmetries between the different participants in the market and in particular between managers and investors. Under such conditions, the costly payment of dividend is used by managers, to signal information about the firm's prospects to the market.   For example, in John and Williams' (1985) model the firm may be temporarily under-valued when investors have to meet their liquidity needs. If investors sell their holdings when the firm is undervalued, then there is a wealth transfer from old to new shareholders. However, the firm can save losses to existing shareholders by paying dividends. Although investors pay taxes on the dividends, the benefits from holding on to the undervalued firm more than offset these extra tax costs. A poor quality firm would not mimic the dividend behaviour of an undervalued firm because holding-on to over-valued shares does not increase wealth.

This question is asked to lead the study: Does Asymmetric information has effect on dividend policy? Asymmetric information is a main defect in capital market and taking a specific dividend policy is one of the most important decisions in firm. So, the above question is an important. Resent study uses the dividend prediction mistake and dispersion analysis to measure Asymmetric information between managers and investors. Several factors associated with the firm's information environment to be associated with the level of information asymmetry.   The first variable we include is Size.   Previous research indicates that stock prices incorporate information about large firms earlier than information about small firms. Based on the results in Atiase (1985), Bamber (1987), and Diamond and Verrecchia (1991), it may expect a negative association to size. Ayers and Freeman (2001) and Jiambalvo, Rajgopal, and Venkatachalam (2002) find evidence that current returns reflect future earnings to a greater extent when institutional ownership is higher. These findings suggest that sophisticated investors are more actively trading on private information relating to future earnings, and current prices thus reflect future earnings information to a greater extent. While Ayers and Freeman (2001) find that analyst following plays a similar role to institutional ownership, Jiambalvo, Rajgopal and Venkatachalam (2002) find that the analyst following is negatively associated with the extent that prices lead future earnings.   The analysis in Easley, O'Hare and Paperman (1998) suggests that the role of analysts is more complex since the number of analysts cannot simply be used as a proxy for informed trade. They find that analyst following is positively associated with both the amount of informed and uninformed trading; with the net effect that information

asymmetry is negatively associated with analyst following. The amount of private information search activities will be positively associated with the expected benefits of obtaining the information. Boot and Thakor (1993) demonstrate that the incentives for private information acquisition are increasing with a firm's debt-to-assets ratio. This result occurs because, for a given amount of private information about the value of a firm's assets, the expected profits from trading on that information in the equity market increase with the firm's leverage, ceteris paribus. Additionally, Zhang (2001) demonstrates that the endogenously-determined level of private information production increases with the volatility of earnings. When earnings volatility is higher, greater benefits arise from obtaining private information about future earnings.

2. Literature review

The paper studies on this question that how asymmetric information has effect on dividend policy in firms, by testing the relationship between asymmetric information and dividend policy. Dividend has complicated problem for financial statisticians. Modigliani & Miller (1961) proved that dividend policy is unrelated to stock value in efficient market. However Observations state stock price can be increased when the suggestion for distribution of dividend comes up. Some studies have various suggestions for handling profit dividend. The dividend signalling theory is one of the most famous theories between them. The signalling hypothesis is based on the notion of asymmetric information particularly between managers and investors. Under this assumption dividend changes are valuable in that they convey information about the firm's prospects. Indeed, Lintner (1956) observes that managers are more willing to raise rather than reduce dividend levels, and this has been widely interpreted as indicating that dividend decreases are associated with negative signals while dividend increases signal positive news. But what precisely is the nature of the information contained in dividend changes? The risk-information hypothesis claims that dividend increases signal risk reduction. Alternatively, according to the cash flow signalling hypothesis, dividend changes contain information about future cash flows. Another opinion is that dividend changes signal permanent shifts in current earnings. In any event, as noted by Allen and Michaely (1995), regardless of the precise information contained in the dividend signal, hypothesis to be valid.

The "information signaling theory", and suggests dividend reduces the asymmetric information by signaling mechanism. On the base of signaling theory Batacharia (1979), Rock and Miller (1985), Williams and John (1985), John and Lang (1971) say: managers know more about the real value of the firm than investors and they direct the information in the market by profit dividing. Thus, this model suggests a plus relationship between an asymmetric information and dividend policy.

Khang & king (2002) tested the relationship between asymmetric information and gained profit by personals during 1982 to 1995 for public corporation that SEC reported their internal exchanges. The examples showed dividend ascertained by personals profit and asymmetric information. Finding indicated firms with high dividend had lower personals profit and asymmetric information. These results found by "free cash flow theory" and "institutional monitoring theory". Generally, the results of study are: 1) dividend level is an important element for personals profit rather than the decision for dividend payment. 2) Institutional monitoring theory is not a suitable dividend policy to explain the relationship between the dividend level and asymmetric information, but free cash flow theory is the best one to explain dividend changes to assertion asymmetric information. At last there are a few evidences for this topic that dividend changes level can be a sign of   asymmetric information reduction (Khang and King, 2002).

Khang & King (2006) showed amount of dividend has a meaningful and negative correlation with efficiency of personals exchanges. Information signal theory doesn't accept the result of this research.

Li & Zhao (2007) researched to figure out how asymmetric information effects on dividend policy. They studied some examples from IBES files during 1983 to 2003. The examples were included the observations of 22413 firms. Measurement was include of profit predict mistake and dispersion of deviations. Last researches showed a positive correlation between predict deviation and asymmetric information. It had been estimated if well use signaling theory for profit dividing, it will be a exact description of reality. Thus, the dividend policy of firms should have a positive and meaningful relationship with mistake and dispersion of profit prediction. The finding states that with permanent of other factors, the firms with more asymmetric information have lower probability for dividend payment, they start to distribution of dividend and increase it, but these firms divide a lower amount of profit for their investors. Likewise, findings show there is a weak and negative relation between recall stock and amount of asymmetric information.

3. Purposes and hypotheses of the study

The main purposes of the study are:

1) Research on the effect of asymmetric information on dividend policy in accepted corporations in Tehran Stock Exchange organization.

2) Ascertain the other effective elements on dividend policies in accepted corporations in Tehran Stock Exchange organization.

The below hypotheses have suggested to arriving to these purpose:

Hypothesis 1: There is a meaningful relationship between dividend policy and asymmetric information in Tehran Stock Exchange organization.

Hypothesis 2: There is a meaningful relationship between dividend policy and equity book value to market value ratio in Tehran Stock Exchange.

Hypothesis 3: There is a meaningful relationship between dividend policy and firm size in Tehran Stock Exchange organization.

Hypothesis 4: There is a meaningful relationship between dividend policy and dividend profitability in Tehran Stock Exchange organization.

3.1 Study variables structures

The relation between dividend policy and asymmetric information will be test by signaling model. Because the asymmetric information effect is quantifiable, the firms with high amount of asymmetric information must have higher dividend. If Signaling theory after controlling all other elements effecting dividend payment still has valid, we can find a positive relationship between asymmetric information and dividend policy. So, signaling theory predicts a strong and positive relationship between asymmetric information.

3.1.1 Measurement of dividend policy

To find out the role of asymmetric information in dividend policy, the study focus on annual profit payment, dividend has higher possibility to have information content. All annual dividends for common stock will be collected after change in amount of issued stock. We have used of DPS/EPS ratio to study about the effect of dividend policy that shows the percent of distributed dividend. In the other word, it shows that the firm distributed how percent of gained profit to investors.

3.1.2 Measurement of asymmetric information

The study uses the predict mistakes and real profit dispersion of firm compared with predicted profit to analyze asymmetric information. Elton, Gruber and Gultekin (1984) showed the largeness of predict mistakes are related to mistake of special factors of the firm. Their finding suggest: predict mistakes are acceptable approximation for amount of asymmetric information.

On the base of research by Li and Zhao (2007), in this study we use predicted profit standard deviation to real profit as a quantity criterion for asymmetric information measurement. The profit predicted mistake is the exact difference between the average predicted profit and real profit. Thus, we need firm that have information about real profit, predicted profit and dividend for examples.

3.1.3 The other effective variable on firm dividend policy

Li and Zhao (2007) to study on asymmetric information also entered the profitability, size and potential growth that have effect on dividend. Current research also for control other effective variables on dividend policy entered size, potential growth (BV/MV ratio) and profitability variables on its model. Forgoing variables are used in research in following manner:

3.1.3.1 Book value to Market value of equity ratio (BE/ME)

At the first the equity and common stock assertion by the information of the last balance sheet, then we calculate the market value of equity ratio by multiplies the last price of common stock in number of issued stock; after that   book value of equity divided to its market value to earn this ratio.

3.1.3.2 Firm size

There are various methods to assertion the firm size. For example, someone uses total assets of the firm. Some times the sell value of the firms is used for firm's size. Like Fama and Franch (2001) in this research, the market values of equity are utilizing as the firm size and it's calculated by multiple the last market price of stock in number of common stock. Because the firm size is very bigger than other variables, we use a logarithm of market equity ratio to bring it near to the other variable size.

3.1.3.3 Profitability

Profitability is being calculated by dividing the common Stock net income for the year ended to "t" to book value of common stock.

3.2 Statistical tool and sample

We use the financial statements information of the accepted corporation in Tehran stock exchange organization during 2003 to 2007 to test the relationship between dividend policy and asymmetric information. The bankrupt firms are

removed from the sample; also the firms with out EPS prediction for these years are removed from the sample. The data of 108 firms are used in the study for analysis.

3.3 Methodology

Because the study tries to find the relation between the asymmetric information and dividend policy variables, so Methodology include a type of correlation and uses a multivariable regression model to analyze the data. The regression model of the study is:

Dividend policy = b0 +b1 AI +b2 firm size +b3 BV/MV +b4 profitability

That AI= Asymmetric Informatio

Because for determining dividend policy was used of the percent relation of the dividend policy, therefore the model is released in following manner:

DPS/EPS = b0 +b1 AI +b2 firm size +b3 BV/MV +b4 profitability

3.3.1 Testing of hypotheses

With due attention to the above results, test of each hypothesis has been done separately.

Test of hypothesis 1

$$H0: \beta1 = 0$$
$$H1: \beta1 \neq 0$$

H1 hypothesis explain that there is a meaningful relationship between dividend policy and asymmetric information.

As the result in table 2, H hypothesis reject on the 0.95 meaningful level (α>p-value, .05> 0.00). In the other hand, there is a meaningful relationship between dividend policy and asymmetric information. Also there is a reverse relationship between dividend policy and asymmetric coefficient with due attention to negative of asymmetric coefficient. Beta standardized coefficient is -0 .431 and shows that 0.431 of change in dividend policy deviation explain by change in asymmetric information.

Test of hypothesis 2

$$H0: \beta2 = 0$$
$$H2: \beta2 \neq 0$$

H2 hypothesis explains there is a meaningful relationship between dividend policy and BV/MV.

As the results in table 2, H hypothesis cannot be rejected on .95 meaningful level (α > p-value, .05> 0.642). In the other hand, there is no relationship between dividend policy and BV/MV.

Test of hypothesis 3

$$H_0: \beta_3 = 0$$
$$H_3: \beta_3 \neq 0$$

H3 hypothesis explains, there is no a meaningful relationship between dividend policy and firm size.

As the results in table 2, H hypothesis cannot be rejected on 0.95 meaningful level (α < p-value, .05< 0.801). In the other hand, there is no relationship between firm size and dividend policy.

Test of hypothesis 4

$$H0: \beta4 = 0$$
$$H4: \beta4 \neq 0$$

H4 hypothesis explains, there is a meaningful relationship between dividend policy and stock profitability.

As the results in table 5, H hypothesis rejected on 0.95 meaningful level (α >p-value, .05> 0.00). In the other hand, there is a meaningful relationship between dividend policy and stock profitability. This relationship is direct with due attention to positive amount of profitability coefficient. Standardized beta coefficient is 0.585 and shows that 0.585 of change in dividend policy deviation explained by change in stock profitability.

4. Finding of the research

The study hypotheses test has done by using multivariable regression analysis. Before the testing the study hypotheses, regression hypotheses related test has done. These hypotheses include:

a) The random variable of mistakes has normal distribution

b) The mistake variances are equal

c) The mistakes are independent

The test showed that above hypotheses are confirmed. Results of the statistic hypotheses tests are in the next table.

Insert Table 1

Table 1 shows the results of "stepwise static hypothesis test". The best regression model and independent variable that use in regression model can be determined by this test. The results show that just two variables- asymmetric information and stock profitability- are effectible factors on dividend policy that can enter to the model.

Insert Table 2

The results in table 2 explain the cause of expel the book value to market value of equity ratio and firm size variable. In BV/MV case with due attention to the "t" parameter –.466 and significant level was 0.642, the beta coefficient for this variable is not meaningful. Thus, it removed from model.

Insert Table 3

Table 3 shows the correlation after removing the variables that has increased. Durbin Watson parameter is 2086 which shows the model works better with two remaining variables.

Insert Table 4

The results of table 4 are about the test of meaningfully of all the independent variable coefficients. Results show that variable coefficients are meaningful on level of confidence .99, before and after removing variables.

Insert Table 5

Table5 shows the final results of regression model. The above table shows two models of the final model. With due attention to the above results, the final regression equation is: Dividend policy =.620 - .000075 AI +.119 profitability.

5. Conclusion

The study is about the effect of asymmetric information on dividend policy. Analysis based on signaling model. This model explains managers know more about the real value of the firm than investors and they direct the information in the market by profit dividing. Book equity to market equity ratio (BE/ME) variable, firm size variable and stock profitability variable are the control variables. Results of study explain there is a reverse and meaningful relationship between dividend policy and asymmetric information. It mean, increasing the asymmetric information reduce the dividend between investors. Also the contrary of this relationship is right. The results are compatible with signaling model. The results of last studies by Batcheria (1979), Rock, Miller, William and John (1985), John and Long (1991), Khang and King (2002) explain there is a meaningful and positive relationship between dividend policy and asymmetric information, and results of this study has not conformity with them. But it's conformity with study of Lee and Jaho (2007). With due attention to the relationship between dividend policy and asymmetric information, there is a probability that managers and subordinates effect on the policies to increases their profit. Other finding explain that in control variables that have a probability of effect on dividend policies just stock profitability has affect on dividend policies. The firm size variable and BE/ME variable have no affect on profit dividing for common stock holders.

6. Suggestions

With due attention to results, asymmetric information is very important for financial analysts and investors; because there is a probability that managers know more about the real value of the firm than investors and direct the information in the market by profit dividing. If it be a real issue, it could be harmful for investors out of firm.

7. Agenda for future research

Because of the results of this study, and the researches of other countries have shown that there is a relationship between dividend policies and asymmetric information, so we can search on the relationship between asymmetric information in firm and managers and subordinates profit in stock markets in next researches.

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Table 1.

Variables Entered/Removed [a]

Model	Variables Entered	Variables Removed	Method
1	X4_PROF	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	X1_AI	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: Y_PD

Table 2.

Excluded Variables [c]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	X1_AI	-.431[a]	-7.393	.000	-.332	.542
	X2_BV_MV	-.024[a]	-.466	.642	-.022	.807
	X3_FS	-.012[a]	-.253	.801	-.012	.986
2	X2_BV_MV	.075[b]	1.508	.132	.072	.751
	X3_FS	-.062[b]	-1.419	.157	-.067	.963

a. Predictors in the Model: (Constant), X4_PROF

b. Predictors in the Model: (Constant), X4_PROF, X1_AI

c. Dependent Variable: Y_PD

Table 3.

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.293^a	.086	.084	.27544	
2	.432^b	.187	.183	.26011	2.086

a. Predictors: (Constant), X4_PROF

b. Predictors: (Constant), X4_PROF, X1_AI

c. Dependent Variable: Y_PD

Table 4.

ANOVA^c

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.146	1	3.146	41.468	.000^a
	Residual	33.534	442	.076		
	Total	36.680	443			
2	Regression	6.844	2	3.422	50.577	.000^b
	Residual	29.837	441	.068		
	Total	36.680	443			

a. Predictors: (Constant), X4_PROF

b. Predictors: (Constant), X4_PROF, X1_AI

c. Dependent Variable: Y_PD

Table 5.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.655	.017		39.331	.000
	X4_PROF	.059	.009	.293	6.440	.000
2	(Constant)	.620	.016		37.798	.000
	X4_PROF	.119	.012	.585	10.023	.000
	X1_AI	-7.50E-05	.000	-.431	-7.393	.000

a. Dependent Variable: Y_PD