

A study on relationship between asymmetric information on dividend policies of companies listed in Tehran Stock Exchange

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ABSTRACT

Explaining and the determinants of dividend policy is one of the biggest challenges that have long been the center of attention of accounting and financial researcher and theoreticians. There are many evidences that confirm the effects of dividend and there are a lot of other potential factors whose effects on the dividend policy have not been studied yet. In this study, the effects of four variables including asymmetric information, growth opportunities, cash holding and firm size in payout dividend policy are investigated, simultaneously. The study uses the information of 140 companies listed on Tehran Stock Exchange over the period 2005-2010. In this study, 4 hypotheses are proposed and investigated. There are positive and significant relationships between asymmetric information, growth opportunities, cash holding and company size on one side and payout dividend policy on the other side.

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1. Introduction

Explaining and the determinants of dividend policy is one of the biggest challenges that have long been the center of attention of accounting and financial researcher and theoreticians (Jensen, 1986; Jensen & Meckling, 1976; Myers, 1977; Jensen et al., 1992; Porta et al., 1999). There are many evidences that confirm the effects of dividend and there are a lot of other potential factors whose effects on the dividend policy have not been studied yet (Tang & Jang, 2007). Barclay et al. (1995) state that finance scholars have engaged in extensive theorizing about factors that might be essential in determining a firm's leverage and dividend policies. Al-Malkawi (2007) examined the determinants of corporate dividend policy in Jordan. The study used a firm-level panel data set of all publicly traded firms on the Amman Stock Exchange over the period 1989-2000. The study developed eight research hypotheses, which are implemented to represent the main theories of corporate dividends. They also used a general-to-specific modeling technique to choose between the competing

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hypotheses. They reported that the proportion of stocks held by insiders and state ownership influenced the amount of dividends paid, significantly. Size, age, and profitability of the firm seemed to be determinant factors of corporate dividend policy in Jordan. Baker Wurgler (2004) proposed that the decision to pay dividends could be driven by prevailing investor demand for dividend payers.

According to Baker and Wurgler (2002), firms are more likely to issue equity when their market values are high, compared with book and past market values, and to repurchase equity when their market values were low. Benartzi et al. (1997) explained that many dividend theories indicate that changes in dividends have information content about the future earnings of the firm but their investigation provided limited support for it. Boulton et al. (2012) examined the effect of tax burden on cash distribution based on a sample of Brazilian firms, which were permitted by law to distribute cash to shareholders in two forms of dividends and tax-advantaged interest on equity. They reported that taxes were a primary determinant of Brazilian firms' payout policy decisions, as profitability and payout ratios were associated with the likelihood that a firm pays interest on equity.

Brav et al. (2005) surveyed 384 financial executives and conducted in-depth interviews with an additional 23 to detect the factors that drive dividend and share repurchase decisions. They reported that maintaining the dividend level was on par with investment decisions, while repurchases were made out of the residual cash flow after investment spending. Brockman and Unlu (2011) investigated the agency cost version of the lifecycle theory of dividends by taking advantage of cross-country variations in disclosure environments and confirmed that the lifecycle theory of dividends explains dividend payout patterns around the world. Cao et al. (2011) investigated disproportional ownership structure and pay-performance relationship by looking on some evidence from China's listed firms. Chae et al. (2009) tried to find out how corporate governance has affected payout policy under agency problems and external financing constraints. Chen and Dhiensiri (2009) tried to find determinants of dividend policy by looking into some evidences from New Zealand. Crutchley and Hansen (1989) presented a test of the agency theory of managerial ownership, corporate leverage, and corporate dividends. Denis and Osobov (2008), Easterbrook (1984) and Grullon and Michaely (2002) tried to find out why firms pay dividend.

Guay and Harford (2000) performed an investigation to find out the cash-flow permanence and information content of dividend increases versus repurchases. Gul (1999) discussed government share ownership, investment opportunity set and corporate policy choices in China. Gul (1999), in other investigation, tried to find out more about growth opportunities, capital structure and dividend policies in Japan. Hovakimian et al. (2004) tried to find out about the determinants of target capital structure by looking into some cases associated with dual debt and equity issues. Jagannathan et al. (2000) discussed the financial flexibility and the choice between dividends and stock repurchases. Lopez de Silanes et al. (2000) discussed agency problems and dividend policies around the world. Lintner (1956) performed a comprehensive discussion on distribution of incomes of corporations among dividends, retained earnings, and taxes.

2. The proposed study

In this study, four effects, namely: asymmetric information, growth opportunities, cash holding and companies size in payout dividend policy are investigated, simultaneously. The method of this research is categorized in applied sciences and it is based on observations in order to find the correlation and description between the parameters. The assumption in this research is to consider four mentioned parameters as influential agents on the dividend policy simultaneously and it tests in two models including Panel and Pool regression analysis.

In this study, 4 hypotheses are proposed and investigated as follows,

1. There is a meaningful relationship between asymmetry information and dividend policy.
2. There is a meaningful relationship between growth opportunities and dividend policy.
3. There is a meaningful relationship between cash holding and dividend policy.
4. There is a meaningful relationship between firm size and dividend policy.

The proposed study of this paper considers 140 companies listed on Tehran Stock Exchange over the period of 2005-2010. Table 1 demonstrates some of basic statistics on the sample data.

Table 1

The summary of basic statistics

Variable	No.	Mean	Standard deviation	Variance	Skewness	Kurtosis	Standard deviation Skewness	Standard deviation Kurtosis
Paid dividend	840	0.15	0.148	0.022	1.671	3.231	19.806	19.172
Asymmetry	840	0.176	0.114	0.013	1.38	2.986	16.352	17.719
Growth	840	2.105	1.801	3.244	3.185	15.382	37.758	91.274
Holding cash	840	0.062	0.071	0.005	3.125	13.019	37.039	77.247
Firm size	840	5.785	0.623	0.388	0.997	1.099	11.817	6.521

The proposed study of this paper considers two independent variables including asymmetry information and growth opportunity and there are two control variables of holding cash and firm size. In order to test different hypotheses based on the data we first need to make sure the data are normally distributed and Table 2 summarizes the necessary tests for this purposes.

Table 2

The summary of testing normality

Variables	No.	Kolmogorov-Smirnov		Shapiro-Wilk		Jarque- Bera	
		Statistics	Sig	Statistics	Sig	Statistics	Sig
Paid dividend	840	0.156	0	0.835	0	748.93	0
Asymmetry	840	0.088	0	0.91	0	572.4336	0
Growth	840	0.16	0	0.718	0	9591.436	0
Firm size	840	0.083	0	0.941	0	179.8605	0
Holding cash	840	0.194	0	0.685	0	7217.297	0

Based on the results of Table 2, we can conclude that none of the independent variables is normally distributed. The other

Table 3

The summary of testing fixed or variable effects using Chaw or Husman tests

F Statistics	Chaw		Chi-Square	Husman	
	Sig.	Result		Sig.	Result
1.220446	0.2975	Equal intercept			
9.935152	0	Slopes are different	39.243901	0	Random effect rejected

Next, we need to make sure that the linear regression can be used between independent variables and dependent variable and there is no auto correlation. Table 4 summarizes the results of our survey.

Table 4

The summary of F-value and Durbin-Watson

Model	Linear relationship		Durbin Watson		Residual	
	F	Sig.	D.W	D.W	J-B	Sig
Null	255.3621	0	0.887359	1.7-2.3	29.84147	0
Corrected	520.7036	0	2.080574	1.7-2.3	10.49817	0.005252

The results of Table 4 confirm that we can use linear regression technique and the corrected model maintains a good value for Durbin-Watson. In addition, Fig. 1 demonstrates the results of our survey.

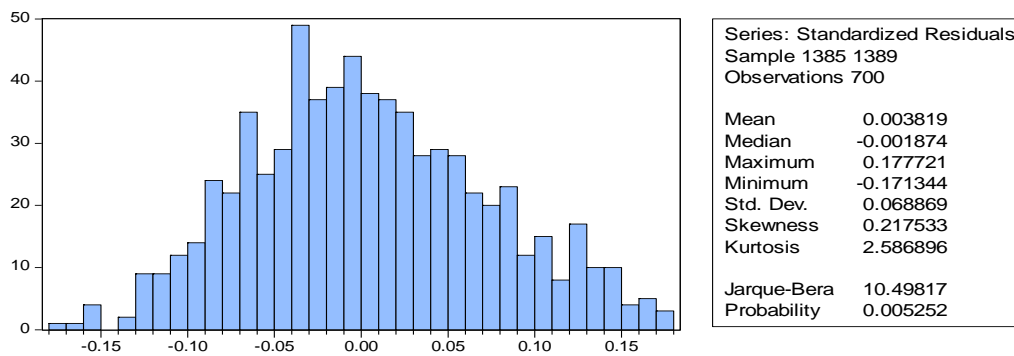


Fig. 1. The results of residuals over the period 2005-2010 (1385-1389 local calendar)

Finally, we present the correlation ratios among independent variables.

Table 5

The summary of correlation ratios among independent variables

Variable	Growth opportunity	Firm size	Asymmetry	Holding cash
Growth opportunity	1	0.019	0.38	0.112
Firm size	0.019	1	0.037	0.039
Asymmetry information	0.38	0.037	1	0.224
Holding cash	0.112	0.039	0.224	1

The results of Table 5 indicate that there are not strong correlations among independent variables. Therefore, we can use all independent variables for the proposed study, simultaneously.

3. The results

Based on applying different tests we are now able to apply linear regression technique and the results are summarized in Table 6 as follows,

Table 6

The results of regression analysis

Variable	Coefficient	Standard deviation	t-student	Sig.
Intercept	-0.114109	0.045552	-2.505004	0.0125
Asymmetry information	0.371206	0.028352	13.09285	0.000
Growth opportunity	0.003308	0.001684	1.963812	0.05
Firm size	0.019497	0.007975	2.444808	0.0147
Holding cash	0.168821	0.030152	5.598984	0.000
AR(1)	0.708243	0.023483	30.15955	0.000

$R^2=0.8577$, $AdjR^2=0.8560$, $F=520.70$, $D.W=2.08$, $S.E.of\ regression=0.069373$, $Sum\ squared\ resid=3.3255$

The results of Table 6 clearly state that there are some positive and meaningful relationship between independent variables and dependent variables and all t-student values are statistically significance.

4. Conclusion

In this paper, we have presented an empirical investigation to study the relationship between four financial figures including asymmetry information, growth opportunity, firm size and holding cash on dividend policy. Using the information of selected firms listed on Tehran Stock Exchange, the study has implemented linear regression technique and the results have indicated that there were some

positive and meaningful relationship between these four variables and dividend policy. The regression technique could describe 86% of the data, which means the model is highly reliable.

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