Effects of Corporate Governance on Dividend Policy:

An Evidence from Financial Firms listed in the Chinese Stock Markets from 2011 to 2016

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ABSTRACT

The study applied a panel data linear regression model with random and fixed effects to explain the relationship between corporate governance and dividend policy. The goal of this study is to examine the relationship between corporate governance and dividend policy under the financial sector of Chinese Stock Markets. In this regard, a 6-year sample from 2011 to 2016 was included in this study. In addition, final sample size contained 41 firms with total 246 firm-year observations. According to the Agency Cost Theory and the Asymmetric Information Theory, several aspects of contents are included in this study in terms of 3 dividend policy proxies and 12 corporate governance variables. Findings depicted that supervisory interlock phenomenon, board of supervisors' ownership, firm size and profitability had significant positive relationship with dividend policy, however, general meeting times and liquidity had significant negative relationship with dividend policy. In addition, board interlock phenomenon had mixed relationships with dividend policy, when distinctive proxies of dividend policy were applied. Therefore, findings interpreted that agency cost and poor governance mechanism existed. Moreover, Chinese financial firms should not only take advantage of interlock resources from interlock directors and supervisors, but also take care of underestimated performance from interlock directors and supervisors due to insufficient efforts on boards. Dividend signals of Chinese financial firms are more likely to be influenced by firm characteristics, so those firms should keep focusing improvements on firm size, profitability and liquidity.

Keywords: Dividend Policy, Corporate Governance, Chinese Stock Markets, Panel data, Financial Sector

1. Introduction

Most of the firms have dividend policy, and a dividend policy is the fundamental corporate financial decision, since it significantly influences the strategy of balancing internal reinvestment and external distribution. A firm will have more internal resources for long-term reinvestment, while reducing returns to shareholders in shorter term, if it decides to lower dividends. Inversely, a firm will generate more returns to shareholders, if it increases it's dividends. Although dividend policy is important for most of the firms, it is considered to be a puzzle. A discussion on dividend policy was launched by Miller and Modigliani in 1961, there has been a massive of discussions on analyzing the dividend puzzle around the world. For instance, the Agency Cost Theory and the Asymmetric

Information Theory were discussed by researchers such as Easterbrook (1984), Jensen (1986), Porta *et al.* (2000) Benartzi *et al.* (1997), DeAngelo *et al.* (1996), and Chowdhury *et al.* (2014).

Asymmetric Information Theory suggests that insiders (managers) always have more information than outsiders (shareholders). In order to overcome this information inequality, a signal must be conveyed through a carrier of dividends. Benartzi *et al.* (1997) stated that information content (signal) should be related to firm's performance and characteristics. However, DeAngelo *et al.* (1996) argued that information content on corporate governance was also delivered through the signal, which was supported by Chowdhury *et al.* (2014). Agency Cost Theory proposes that the agency cost occurs when agent's interests conflicts with the principal's interests. Common conflicts occur through ways that agents (managers) make use of corporate profits to benefit for themselves rather than shareholders. Agency cost may contribute to problems on corporate governance, for example overinvestment (Jensen, 1986), risk-aversion preference (Easterbrook, 1984) and shareholders protection (Porta *et al.*, 2000).

Jensen (1986) stated that managers always have chance to spend free cash flow to push their firms' size grow beyond the optimal size in exchange of a high compensation. Easterbrook (1984) explained that managers utilize free cash flow to invest in low-return projects for risk deception purpose, but the investments conflict with investors who prefer high-return projects. Shamsabadi *et al.* (2016) stated that free cash flow is negatively related with dividend payout. Moreover, Porta *et al.* (2000) proposed that two types of models which link dividend and corporate governance. The "outcome" model explains that dividends are an outcome of an effective system. When the legal protection not exists or in low level, internal control (corporate governance) should be consolidated by the firm itself. Concluding the first model, better internal protection leads to higher cash dividends for outsiders. The second "substitute" or "reputation" model explains that dividends are a substitute for legal protection, because a firm must establish or maintain a reputation to raise external funds from outsiders. The second model conducts that worse protection leads to the higher cash dividends. Elmagrhi *et al.* (2017) found that a poor corporate governance leads to a high dividend due to the reputation maintenance and establishment.

There is a different corporate governance in practice with two-tier board system in China. The two-tier board system highlights board of supervisors to employ supervision function. The United States of America relies on audit committees provide supervision function. However, the audit committee system is incomplete in China, which leads to a composited board of supervisors. Generally, shareholders of a firm applying two-tier board system can elect directors and supervisors through general meetings, and both parties have corresponding responsibility towards shareholders. Directors have duties not only on the strategic formation, but also on the recruitment of managers. Supervisors have monitoring duties to supervise management and board of directors.

The Shenzhen Stock Exchange (SZSE) and the Shanghai Stock Exchange (SSE) are the two main stock markets in China, and there were collectively 3,407 listed firms in A-shares with total capitalization of 53,431 Billion RMB at end of 2016 year. A-shares are common stock issued by the domestic companies in China for domestic institutions, organizations or individuals (excluding Taiwan, Hong Kong and Macao) to trade in RMB. In 2011, Chinese listed firms distributed cash dividends with 1.92% dividend yield ratio, but the dividend yield ratio

dropped to 1.40% in 2016. It is crucial to examine dividend policy in financial sector, because it is the second largest sectors based on market capitalization in China Stock Markets by the end of 2016.

In most of the earlier studies, the impact of ownership structure, board characteristics and board of directors' performance on dividend policy was explained by some researchers. Besides, most of Chinese studies applied firm characteristics and concentrated on non-financial sectors. For instance, McGuinness *et al.* (2015) explained that gender diversity in board characteristics has no relationship with dividend policy in China, while Saeed and Sameer (2017) argued that higher gender diversity leads to lower dividend policy with non-financial firms in China. Gao and Song (2007) reported that board of directors' ownership has negative relationship with agency cost in China, but board of supervisors' ownership has no relationship with agency cost. Zhang and Jin (2010) suggested that liquidity has positive relationship with dividend payout in China. Sharma (2011) suggested that interlock phenomenon has negative effect on dividend policy among S&P 1500 index firms. Elmagrhi *et al.* (2017) and McGuinness *et al.* (2015) suggested that larger firm size is associated with higher dividend payout. Shamsabadi *et al.* (2016) and Sharma (2011) stated that profitability has positive relationship with dividend payout.

2. Objectives of the study

The aims of this study are to identify whether corporate governance variables have significant relationships with dividend policy under financial firms listed in Chinese Stock Markets.

3. Materials and methods

A panel data linear regression with fixed effects and random effects is applied to overcome unobserved effect. Panel data allows the researcher to use observations by obtaining the same variables from the cross-sectional sample combining with two or more different periods. Three research models are showed as below:

Model one:

$$
\begin{aligned}
\text{DPS}_{it} = {} & \beta_0 + \beta_1 \text{b\_size}_{it} + \beta_2 \text{b\_edu}_{it} + \beta_3 \text{b\_gen}_{it} + \beta_4 \text{b\_inter}_{it} + \beta_5 \text{s\_size}_{it} + \beta_6 \text{s\_edu}_{it} + \\
& \beta_7 \text{s\_gen}_{it} + \beta_8 \text{s\_inter}_{it} + \beta_9 \text{d\_state}_{it} + \beta_{10} \text{d\_board}_{it} + \beta_{11} \text{d\_super}_{it} + \beta_{12} \text{meet}_{it} + \\
& \beta_{13} \text{Ln\_ta}_{it} + \beta_{14} \text{ROA}_{it} + \beta_{15} \text{FCF}_{it} + \sum_{t=1}^{T-1} \theta_t D_t + \sum_{i=1}^{N} \epsilon_i + u_{it}
\end{aligned}
$$

Model two:

$$
\begin{aligned}
\text{PAYOUT}_{it} = {} & \beta_0 + \beta_1 \text{b\_size}_{it} + \beta_2 \text{b\_edu}_{it} + \beta_3 \text{b\_gen}_{it} + \beta_4 \text{b\_inter}_{it} + \beta_5 \text{s\_size}_{it} + \beta_6 \text{s\_edu}_{it} + \\
& \beta_7 \text{s\_gen}_{it} + \beta_8 \text{s\_inter}_{it} + \beta_9 \text{d\_state}_{it} + \beta_{10} \text{d\_board}_{it} + \beta_{11} \text{d\_super}_{it} + \beta_{12} \text{meet}_{it} + \\
& \beta_{13} \text{Ln\_ta}_{it} + \beta_{14} \text{ROA}_{it} + \beta_{15} \text{FCF}_{it} + \sum_{t=1}^{T-1} \theta_t D_t + \sum_{i=1}^{N} \epsilon_i + u_{it}
\end{aligned}
$$

Model three:

$$
\begin{aligned}
\text{YIELD}_{it} = {} & \beta_0 + \beta_1 \text{b\_size}_{it} + \beta_2 \text{b\_edu}_{it} + \beta_3 \text{b\_gen}_{it} + \beta_4 \text{b\_inter}_{it} + \beta_5 \text{s\_size}_{it} + \beta_6 \text{s\_edu}_{it} + \\
& \beta_7 \text{s\_gen}_{it} + \beta_8 \text{s\_inter}_{it} + \beta_9 \text{d\_state}_{it} + \beta_{10} \text{d\_board}_{it} + \beta_{11} \text{d\_super}_{it} + \beta_{12} \text{meet}_{it} + \\
& \beta_{13} \text{Ln\_ta}_{it} + \beta_{14} \text{ROA}_{it} + \beta_{15} \text{FCF}_{it} + \sum_{t=1}^{T-1} \theta_t D_t + \sum_{i=1}^{N} \epsilon_i + u_{it}
\end{aligned}
$$

Where, β_0 to β_{15} are regression coefficient for each independent variable; i is the ith firm which is listed on either at the SZSE and SSE; t is the tth time frame from the year 2011 to 2016; T is number of years; N is number of firms; θ_t is regression coefficient for each dummy variable at time t; D_t is the fixed effects variable at time t; ϵ_i is the random effect error at firm i; u_{it} is stochastic error term; details of variables description are displayed in Table 1.

Table 1: Descriptions and Data Source of Variables

Variable	Description	Data Source
DPS	Dividend Per Share (DPS) is measured by a calculation that total dividend amount divided by the total number of outstanding shares.	Thomson Reuters Eikon
PAYOUT	Dividend Payout Ratio (PAYOUT) is measured by a ratio that dividend paid divided by the net earnings of a firm.	Thomson Reuters Eikon
YIELD	Dividend Yield Ratio (YIELD) is measured by a ratio that dividends paid divided by market capitalization amount at the year end.	Thomson Reuters Eikon
b_size	Board Size (b_size) is measured by total number of board of directors	Annual Reports
b_edu	Board Education Level (b_edu) is measured by a ratio that the numbers of directors who hold diploma, master or doctoral degree in board room, divided by the board size.	Annual Reports
b_gen	Board Gender Diversity (b_gen) is measured by a ratio that the number of female directors in board room divided by the board size.	Annual Reports
b_inter	Board Interlock Phenomenon (b_inter) is measured by a percentage that directors who simultaneously take position of directors in multiple firms divided by the board size at certain firm.	Annual Reports
s_size	Supervisory Board Size (s_size) is measured by total number of supervisors.	Annual Reports
s_edu	Supervisory Board Education Level (s_edu) is measured by a ratio that the number of supervisors who hold diploma, master or doctoral degree in supervisory board room, divided by the supervisory board size.	Annual Reports
s_gen	Supervisory Board Gender Diversity (s_gen) is measured by a ratio that the number of female supervisors in supervisory board room, divided by the supervisory board size.	Annual Reports
s_inter	Supervisory Board Interlock Phenomenon (s_inter) is measured by a percentage that number of supervisors who simultaneously take supervisory position in multiple firms divided by the supervisory board size.	Annual Reports
d_state	State Ownership (d_state) is mearsured by a dummy that equals to one if the shares are held directly and indirectly by government, otherwise equals to zero.	Annual Reports
d_board	Board Of Directors' Ownership (d_board) is measure by a dummy that equals to one if the shares are held by board of directors, otherwise equals to zero.	Annual Reports
d_super	Board Of Supervisors' Ownership (d_super) is measured by a dummy that equals to one if the shares are held by the board of supervisors, otherwise equals to zero.	Annual Reports
Meet	Shareholders' General Meeting Times (meet) is measured by total times of general meeting occurred in a certain year.	Annual Reports
ln_ta	Firm Size (ln_ta) is measured by natural logarithm form of total assets at end of the year.	Thomson Reuters Eikon
ROA	Profitability (ROA) is measured by return on asset ratio, which means that "net income" divided by "total assets".	Thomson Reuters Eikon
FCF	Liquidity (FCF) is measured by free cash flow, which means that "net income" plus "depreciation and amortization" minus "changes in working capital", "cash dividends" and "expenditure in fixed assets", divided by "total assets".	Thomson Reuters Eikon

Data descriptions

There were a total 77 firms existed in the financial sector during 2011 to 2016. Four criteria of firms that will be included in the sample. Firstly, firms must have annual reports of each year since the year 2011. Secondly, firms must list in the financial sector before the year 2011. Thirdly, firms must not leave the financial sector during 2011 to 2016. Lastly, firms must not experience any special treatments (for example, operating loss for two or more consecutive years putting firms in the position of delisting). After applying these criteria for all 77 firms, only 41 firms were left in final sample. Therefore, there were a total of 246 firm-year observations in this research. Data of dividend proxies and control variables were collected from "Thomson Reuters Eikon". Data of corporate governance were published in annual reports, and annual reports were downloaded from SSE and SZSE.

4. Results

The general descriptive statistics contains serval calculated values such as Mean, Median, Minimum, Maximum and Standard Deviation. The details of descriptive statistics are displayed in Table 2. In the study, a 10% of significance level was set as rejection criteria for a two-tailed t-test.

Table 2: Descriptive statistic

	Mean	Median	Minimum	Maximum	Std. Deviation
DPS	0.2208	0.1735	0.0000	1.0000	0.1881
PAYOUT	0.3147	0.3000	0.0000	1.4103	0.2420
YIELD	0.0225	0.0158	0.0000	0.0794	0.0190
b_size	12.6463	13.0000	5.0000	19.0000	3.3964
b_edu	0.7488	0.7573	0.2000	1.0000	0.1501
b_gen	0.1270	0.1176	0.0000	0.6000	0.1066
b_inter	0.6327	0.6667	0.0000	1.0000	0.2073
s_size	6.7317	7.0000	3.0000	13.0000	2.6405
s_edu	0.5391	0.5714	0.0000	1.0000	0.2571
s_gen	0.2468	0.2222	0.0000	0.6667	0.1748
s_inter	0.3755	0.3333	0.0000	1.0000	0.2348
d_state	0.8780	1.0000	0.0000	1.0000	0.3279
d_board	0.3333	0.0000	0.0000	1.0000	0.4724
d_super	0.3171	0.0000	0.0000	1.0000	0.4663
meet	3.0285	3.0000	1.0000	8.0000	1.5450
ln_ta	26.4350	26.6997	20.6151	30.8148	2.6631
ROA	0.0283	0.0146	-0.0094	0.4495	0.0437
FCF	-0.0188	0.0131	-0.5029	0.2399	0.1302

Multicollinearity

The Pearson correlation coefficient will be used to detect the multicollinearity. It can be confirmed that there is a high multicollinearity, if the Pearson correlation coefficient is greater than 0.800 (or less than -0.800) and corresponding t-statistics are significant at 10% level. From the Table 3, the highest correlation coefficient was 0.662, which appeared in the correlation between board size (b_size) and supervisory board size (s_size). It can be considered that there is no high positive multicollinearity. The lowest correlation coefficient was -0.468, and it appeared in the correlation between firm assets (ln_ta) and profitability (ROA). Hence, considering there is no high negative multicollinearity. Overall, there are no high correlations apparently among fifteen independent variables.

Inferential results

There are two estimation techniques for panel data analysis: fixed-effects estimation and random-effects estimation. A Hausman test set a null hypothesis that there is no difference between fixed effects and random effects. Rejection of the null hypothesis suggests that fixed effects are more appropriate to apply, otherwise, a model with random effects is preferred. The result of Hausman test showed that chi-square statistics in Model one were 18.9383 with a p-value of 0.2030. Hence, it is more proper to analyze cross sectional data set with random effects. The results of Hausman test in Model two and Model three (chi-square statistics were 15.3094 and 19.2418) showed similar conclusion for effects selection. However, fixed effects were still applied in time-serial data set, since only six years were included in this study, which results in insufficient degree of freedom for random effects.

The results from Table 4 suggested that Model one has R^2 of 0.3175 with a p-value of 0.0000, Model two has R^2 of 0.1152 with a p-value of 0.0954 and Model three has R^2 of 0.4090 with a p-value of 0.0000. The regression results from Model one indicated that Supervisory Board Interlock Phenomenon (s_inter), Board of Supervisors'' Ownership (d_super), Firm Size (ln_ta) and Profitability (ROA) have significant positive relationships with dividend policy (DPS), however, General Meeting Times (meet) and Liquidity (FCF) have significant negative relationships with dividend policy (DPS). The regression results from Model two indicated that Board Interlock Phenomenon (b_inter) and Profitability (ROA) have significant positive relationships with dividend policy (PAYOUT), however, Liquidity (FCF) has significant negative relationship with dividend policy (PAYOUT). The regression results from Model three indicated that Firm Size (ln_ta) and Profitability (ROA) have significant positive relationships with dividend policy (YIELD), however, Board Interlock Phenomenon (b_inter) and Liquidity (FCF) have significant negative relationships with dividend policy (YIELD). Rest of the variables had insignificant relationships with dividend policy regardless of proxies of dividend policy.

Table 3: Pearson's Correlation for Multicollinearity

	DPS	PAYOUT	YIELD	b_size	b_edu	b_gen	b_inter	s_size	s_edu	s_gen	s_inter	d_state	d_board	d_super	meet	ln_ta	ROA	FCF
DPS	1																	
PAYOUT	.231**	1																
YIELD	.359**	.031	1															
b_size	.389**	-.144*	.479**	1														
b_edu	.041	.085	-.056	.027	1													
b_gen	-.038	-.053	.025	.020	.039	1												
b_inter	.077	.172**	-.292**	-.054	.123	-.106	1											
s_size	.175**	-.079	.370**	.662**	.099	-.043	-.052	1										
s_edu	.308**	-.076	.275**	.362**	.274**	.053	-.210**	.326**	1									
s_gen	-.046	-.037	-.195**	-.164**	-.070	.122	.092	-.131*	-.169*	1								
s_inter	.225**	.008	-.122	.137	.091	-.110	.380**	.113	.168**	.006	1							
d_state	.089	.090	.124	.023	-.119	-.025	.037	.127*	-.078	-.036	-.084	1						
d_board	.194**	-.027	.053	.186**	-.031	-.047	-.083	.134*	.065	.046	.095	-.079	1					
d_super	.333**	-.180**	.214**	.352**	-.047	-.040	-.165**	.086	.091	-.085	-.058	-.120	.500**	1				
meet	-.220**	.074	-.174**	-.245**	.207**	.100	.305**	-.154*	-.103	.039	-.001	.055	-.103	-.183**	1			
ln_ta	.447**	-.148**	.705**	.660**	-.051	-.020	-.132	.446**	.375**	-.198**	-.064	.129*	.132*	.380**	-.204**	1		
ROA	-.111	.070	-.192**	-.385**	-.034	.187**	-.107	-.333**	-.159*	.312**	-.066	-.242**	-.118	-.152*	.047	-.468**	1	
FCF	.177**	-.157**	.217**	.222**	-.047	.039	-.133	.091	.100	.080	-.048	-.124	.118	.254**	-.065	.385**	.110	1

***, **, and * indicate two-tailed statistical significance levels of 1 percent, 5 percent, and 10 percent, respectively.

Table 4: Fixed and Random Effects Model Regression Results for Panel Sample

Variables	Model one (DPS)			Model two (PAYOUT)			Model three (YIELD)		
	Coef.	t-stat.	Prob.	Coef.	t-stat.	Prob.	Coef.	t-stat.	Prob.
Constant	-0.6540***	-3.0249	0.0028	0.2510	0.0811	0.9354	-0.1380***	-7.5569	0.0000
b_size	0.0083	1.4553	0.1470	-0.0031	-0.3546	0.7232	0.0004	0.9417	0.3473
b_edu	-0.0215	-0.2533	0.8003	0.1294	1.0042	0.3164	0.0008	0.1165	0.9073
b_gen	0.0035	0.0333	0.9735	-0.1466	-0.8880	0.3755	-0.0015	-0.1729	0.8629
b_inter	0.0880	1.2992	0.1952	0.1750*	1.7086	0.0889	-0.0122**	-2.1713	0.0310
s_size	-0.0080	-1.1572	0.2485	-0.0038	-0.3888	0.6978	-4.8E-05	-0.0806	0.9358
s_gen	0.0630	0.9267	0.3551	-0.0834	-0.7931	0.4286	-0.0025	-0.4506	0.6527
s_edu	0.0823	1.5062	0.1334	0.0012	0.0149	0.9882	-0.0004	-0.0971	0.9227
s_inter	0.1215**	2.3281	0.0208	-0.0671	-0.8092	0.4193	0.0051	1.1776	0.2402
Meet	-0.0167**	-2.5721	0.0108	-0.0054	-0.4763	0.6343	0.0002	0.4270	0.6698
Ln_ta	0.0242***	2.8936	0.0042	0.0057	0.4864	0.6272	0.0059***	8.2659	0.0000
ROA	0.5551*	1.7105	0.0886	0.8539*	1.6889	0.0926	0.0951***	3.5510	0.0005
FCF	-0.1918**	-2.2607	0.0247	-0.3138**	-2.1227	0.0349	-0.0125**	-1.8243	0.0694
d_state	0.0510	1.5085	0.1328	0.0538	0.9875	0.3245	0.0039	1.3995	0.1630
d_super	0.0815***	2.6037	0.0098	-0.0732	-1.5167	0.1308	-0.0029	-1.1173	0.2651
d_board	0.0015	0.0532	0.9576	0.0643	1.4694	0.1431	0.0019	0.7974	0.4261
R^2	0.3175	F=5.2328	0.0000	0.1152	F=1.464	0.0954	0.4090	F=7.7871	0.0000

***, **, and * indicate two-tailed statistical significance levels of 1 percent, 5 percent, and 10 percent, respectively.

5. Discussion

From the results of Table 4, board interlock phenomenon (b_inter) not only had a significant positive relationship (0.1750) with dividend policy (PAYOUT), but also had a significant negative relationship (-0.0122) with dividend policy (YIELD). In other words, one percentage increase in board interlock phenomenon leads to an increase of 0.1750 in PAYOUT or a decrease of 0.0122 in YIELD. The results of mixed relationships are explained by external resources and agency costs. Interlock directors who gather enough external resources from other financial firms can form better strategy, since they have extra information from other platforms and these are used to create comparative dividend policy. However, interlock directors may generate agency cost, which results in low dividend policy, because they do not have adequate time and effort on helping every firm to make proper dividend decisions. The positive and negative results are consistent with conclusions from Li *et al.* (2009) and results from Sharma (2011), respectively. Li *et al*. (2009) theoretically explained that interlock directors who gather enough external resources from other corporations have abilities of maintaining operation and forming better strategy, but Sharma (2011) empirically suggested that interlock phenomenon has negative effect on dividend policy.

Supervisory interlock phenomenon (s_inter) had a significant positive relationship (0.1215) with dividend policy (DPS). In other words, one percentage increase in supervisory interlock phenomenon leads to an increase of 0.1215 in DPS. Appropriate dividend policy must be constructed with precise information. Board of supervisors can adjust information through interlock supervisors. When firms have business with each other, agency cost will be reduced and cost of seeking self-interest will increase, since one misleading information will be corrected by shared

information from other firms. In other words, one information from a specific firm will be recognized and confirmed by others through interlock workers, especially interlock supervisors in financial sector. However, the effects of external resources might be reduced, when interlock supervisors hold seats in board of supervisors in many firms, since they may not put adequate effort and time to monitor different boards from distinctive firms simultaneously. The result of supervisory interlock phenomenon is theoretically consistent with Li *et al.* (2009), since Li *et al.* (2009) proposed that external resources are gathered from other firms through interlock workers.

Shareholders' general meeting times (meet) had a significant negative relationship (-0.0167) with dividend policy (DPS), which indicates that "substitute model" of Porta *et al.* (2000) is supported. In other words, one unit increase in frequency of shareholders' general meeting leads to a decrease of 0.0167 in DPS. The "substitute" model suggests that frequent meetings may be considered as a poor corporate governance. If additional shareholders' general meeting is held, which means that some fatal decisions are needed to be made only by the shareholders' discussion. This indicates that board of directors' and board of supervisors' performance are lower than shareholders' expectation. Thus, in order to substitute for poor corporate governance associated with frequent general meetings and build (or maintain) a positive reputation with outsiders, managers may use cash dividends to signal to market that outsiders' interests are protected. Therefore, poor corporate governance which is represented by shareholders' general meeting times affected the dividend policy among listed financial firms in China. Theoretically, the result is consistent with Elmagrhi *et al.* (2017), since Elmagrhi *et al.* (2017) explained that a poor corporate governance leads to a high dividend due to the reputation maintenance and establishment.

Board of supervisors' ownership (d_super) had a significant positive relationship (0.0815) with dividend policy (DPS), which indicates that "outcome model" of Porta *et al.* (2000) is supported. In other words, DPS in state-owned firms higher 0.0815 than DPS in non-state-owned firms. Based on the results, the "outcome model" suggested that internal control and protection are strengthened through incentives that supervisors hold firm's shares. Agency cost which is caused by deviation on supervisory purpose exists, which means poor internal protection for shareholders, thus, requiring strong internal motivations on supervision to tackle overinvestment and risk-aversion problems. In addition, combining the Asymmetric Information Theory and the Agency Cost Theory, the financial firms are likely to deliver a dividend signal with board of supervisors' ownership to persuade outside investors that there is a good protection for outsiders, as supervisors' interests align with shareholders' interests. However, the empirical results of this study conflicts with the results from Gao and Song (2007), the reason might be that Gao and Song (2007) utilized a five-year data of all A-shares firms from 2002 to 2005, but this study only applied financial firms with six years from 2011 to 2016.

Firm size (Ln_ta) had significant positive relationships (0.0242 and 0.0059) with dividend policy (DPS and YIELD), which indicates that one unit increase in firms size leads to 0.0242 increase in DPS or 0.0059 increase in YIELD. This means that large firms have stable operation and generate enough profits to cover investing and operating expenses. The result is consistent with Elmagrhi *et al.* (2017) and McGuinness *et al.* (2015). Profitability (ROA) had significant positive relationships (0.5551, 0.8539 and 0.0951) with dividend policy (DPS, PAYOUT

and YIELD), which indicates that profitability increased by one unit leads to DPS, PAYOUT and YIELD increased by 0.5551, 0.8539 and 0.0951, respectively. This means that dividend is a signal in which the outsiders can use to receive information about firm's current profitability. The result of profitability is consistent with Shamsabadi *et al.* (2016) and Sharma (2011). Liquidity (FCF) had significant negative relationships (-0.1918, -0.3138 and -0.0125) with dividend policy (DPS, PAYOUT and YIELD). This indicates that liquidity increased by one unit results in DPS, PAYOUT and YIELD reduced by 0.1918, 0.3138 and 0.0125, respectively. Besides, the negative relationship indicates that agency cost is evident among financial firms listed in Chinese Stock Markets, since agency cost of overinvestment problems frequently is caused by free cash flow. The result of liquidity is in line with the result from Shamsabadi *et al.* (2016), but contradictory to the result from Zhang and Jin (2010).

Concluding that based on the mixed results from board interlock phenomenon and the positive results from supervisory interlock phenomenon, Chinese financial firms' dividend policy is influenced by interlock phenomenon at certain level. This leads to a consequence that there are sufficient external resources supported for decision diversification, but there are insufficient effectiveness putted for supervision and decision formation. Besides, poor corporate governance exists among financial firms and influences their dividend decisions, because of the effects of general meeting times and board of supervisors' ownership. Comparing results from corporate governance variables and control variables, all control variables significantly influence dividend policy. According to the Agency Cost Theory, the agency conflicts are most likely to be caused by cash and profits related variables. Based on the Asymmetric Information Theory, signals of these variables are delivered, since most of the time outsiders are concerned about them. Hence, the dividend signals of financial firms listed in Chinese Stock Markets are more likely to be explained by firm characteristics, such as firm size, profitability and liquidity.

Shareholders and strategy makers such as directors, managers and supervisors should not only pay attention on firm size, profitability and liquidity, but also give attention on corporate governance in terms of interlock phenomenon for both boards, general meeting times and board of supervisors' ownership. Firstly, in terms of interlock phenomenon, shareholders should ask firms to provide more clear information on this field and force firms to highlight on annual reports. For instance, separating busy directors and exclusory directors by special notes. Strategy makers should find out an optimal range of interlock phenomenon depending on each director's abilities and working status to match shareholders' tolerance. Secondly, in terms of general meeting times, shareholders can recommend firms to give more channels to vote. Thirdly, in terms of board of supervisors' ownership, strategy makers should give more motivation to supervisors, since supervisory ownership can help firms to statistically increase dividends and enhance internal protection. Finally, dividend should be considered as a courier for solving and delivering asymmetrical information. Strategy makers should combine firm characteristics and corporate governance in order to overcome this information inequity problem.

6. Conclusion

The study applied a panel data linear regression model with random and fixed effects to detect relationship between of corporate governance and dividend policy. Thus, a core objective in this study is to test relationship between corporate governance and dividend policy under the financial sector of Chinese stock markets. The study has a final sample size containing 41 firms with total 246 firm-year observations. Because of the complexities of dividend policy, 3 proxies including dividend per share, dividend payout ratio and dividend yield ratio were applied to represent dividend policy. According to the Agency Cost Theory and the Asymmetric Information Theory, the study contained 12 explanatory variables (such as board size, board education level, board gender diversity, board interlock phenomenon, supervisory board size, supervisory education level, supervisory gender diversity, supervisory interlock phenomenon, general meeting times, state ownership, board of directors' ownership and board of supervisors' ownership) to explain corporate governance in China. In addition, firm size, profitability and liquidity were selected as control variables.

The results of this research depicted that general agency conflicts may be limited in China, but certain agency costs are revealed by governed indicators such as interlock phenomenon on both boards, state ownership and general meeting times. These indicators can lead to changes in dividend policy. Besides, compared the results from corporate governance and the results from firm characteristics, all firm characteristics variables (firm size, profitability and liquidity) significantly influenced dividend policy. This indicates that changes in dividend policy and agency costs are generally contributed to the effects from firm characteristics.

Because this research only focused in financial sector of Chinese domestic market from 2011 to 2016, it is capable to suggest a future study covering whole Chinese market with wider time range. Additional future study can be suggested on the difference of identifying interlock directors between the study from Sharma (2011) and this research. Because Sharma (2011) considered that directors serve four or more companies that can be identified as interlock directors, but this study considered that interlock directors are people who hold directorships in more than one firm. Therefore, based on the differences, the mixed relationships on board interlock phenomenon may contribute to unclear explanations on identifying interlock directors. Directors may have abilities to sever more than one firm and still can effectively take decisions for each firm.

Acknowledgements

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