STATES OF NATURE AND INDICATORS OF MANAGER'S CORRUPTION IN INDONESIA

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ABSTRACT

This research investigates private sector corruption. The research focuses on a firm's life cycle as it relates to corruption. Free cash flows to dividends and leverage are used as indicators of private sector corruption. The research examines Non-financial firms listed on the Indonesia Stock Exchange from 1994 to 2006 including 1,680 observation years. Six hypotheses are tested using the Generalized Methods of Moments and Wald tests. The results demonstrate that leverage policy is a major indicator of firm micro level corruption while dividend policy is not. The results show maturity stage firms have the highest corruption levels and declining stage firms have the lowest levels.

JEL: G3; G30; G38

KEYWORDS: Growth, maturity, star, decline, free cash flow, dividend, leverage, corruption

INTRODUCTION

Agency theory argues that dividend and debt are powerful mechanisms to control agency conflicts. This research examines the corruption of managers as it relates to stages of development of non-financial industry firms in Indonesia. Development stages are categorized into four quadrants, as shown in Figure 1. This research argues that development stage has different effects on managers' corruption activities.

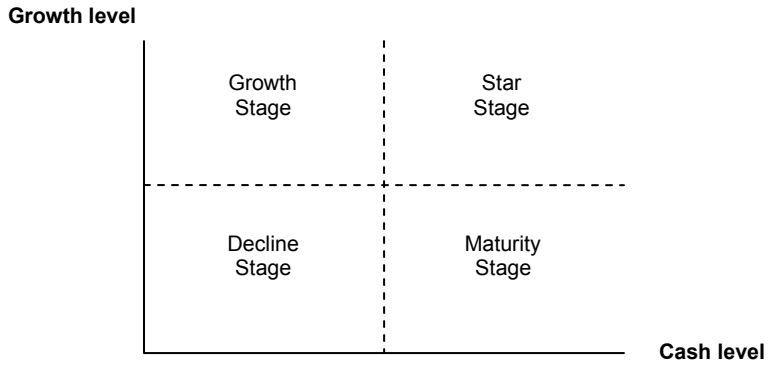
Managers of growth stage firms have less control over and levels of free cash flow. The condition arises from higher future investment opportunities for growth stage firms. Managers of maturity stage firms have greater control over and levels of free cash flows implying lower future investment opportunities. As a result, they can use free cash flows for their own interests. A firm with low growth and low cash flow enters the declining stage. Managers of declining firms have limited opportunities to use cash flow for their own interest. Firms with high growth and high cash flow are in the star stage and have sufficient investment opportunities to invest, and sufficient cash to finance the investment. However, the managers have more opportunities to use the cash flow for their interests than managers of declining firms.

Dickinson (2007) supported the use of cash flow to categorize a firm's state of nature. Dickinson (2007) showed cash flow patterns provide a parsimonious, but robust, indicator of firm life cycle stage that is free from distributional assumptions inherent when using a univariate or composite measure. Mahadwartha (2007b) fails to support that the managers will be obedient and truthful in using firm's cash flow. Mahadwartha (2007b) showed that dividend as shareholders' bonding mechanism for managers' pre-requisites fails and is insignificant in reducing managers' pre-requisites. The results suggest that the corruption at the firm level becomes severe when the dividend is an ineffective bonding mechanism. Another bonding mechanism is debt level. This research will strengthen Mahadwartha's (2007b) research results and examine the relationships of the dividend and debt as bonding on the cash flow. This research tests those mechanisms using four states of nature on Figure 1.

This research investigates corruption hypotheses on manager's action at it relates to four states of nature. Tests of corruptions levels as it relates to the effectiveness of dividend and debt as bonding and monitoring mechanisms. Specifically, the research problems are as follows: a) Do growth stage firms

have lower corruption levels than star stage firms? b) Do growth stage firms have lower corruption levels than maturity stage firms? c) Do growth stage firms have higher corruption levels than declining stage firms? d) Do star stage firms have lower corruption level than maturity stage firm? e) Do star stage firms have higher corruption levels than declining stage firms? f) Do maturity stage firms have higher corruption levels than declining stage firm? The hypotheses describe the differences between firms based on their life stage. Growth stage firms have high growth levels but lower cash and seek debt to finance their investments. Growth-stage firms have low dividend levels because they utilize their cash for investment rather than paying their shareholders.

Figure 1: Quadrant of Firm's State of Nature



Note: Growth stage is firms with high growth and low cash, Decline stage is firms with low growth and low cash, Maturity stage is firms with low growth high cash and Star stage is firms with high growth and high cash. Therefore, this research used the classification of stages based on growth level and cash level.

This research is the first to explicitly test manager corruption in Indonesia. It argues that corruption in Indonesia, especially in business sectors, is severe and elements of the corruption occur at the firm level. Furthermore, this study classifies firms based on growth and cash levels. The classification provides information on the effects of lifecycle stage on manager corruption. This research argues that debt and dividend are indicators of the manager corruption. Dividends and debt serve as bonding mechanisms and can be used to control agency problems. However governance and agency theory research seldom examine those policies as indicators of the managers corruption.

This research provides several contributions to the literature related to investors, regulators and shareholders. Investors and existing shareholders should watch carefully for the manager corruption and its effect on cash flow. They should maintain dividend and debt policies that bond and monitor manager actions. If dividend and debt are not effective control mechanisms, more aggressive governance mechanisms must be implemented, such as hiring forensic accountants and embittering auditing activities. Regulators are concerned about investor protections. This research provides regulators with information on manager corruption as it relates to firm life stage as well as the extent to which dividend policy and debt policy mitigates these problems.

The remainder of this research organized as follows. The literature review and hypotheses development section examines the previous literature on micro level corruption, and agency theory. The research methods section examines the statistical methods used in this research. Result and discussion section and conclusion section discuss and explore the result, and summarize the primary findings.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Cases of corruption reported by the media tend involve a private sector citizen or corporation that promises to pay a a politician or a public official in order to obtain an advantage or avoid a disadvantage. Because of the harm it does to economic efficiency and growth, and because of its social, political and ethical consequences, public sector corruption has been widely studied. It is also a subject of legal regulations designed to prevent and punish it. It seems reasonable to assume that private firms will be more efficient in protecting its own interests, and so corruption of this kind will be less likely to occur in the private sector. For example, it assumed that the owners and managers of companies would take the necessary measures to prevent employees from acting in ways that are likely to harm the organization.

Likewise, there must be fewer incentives for this type of behavior in the private sector when there is effective competition and in which the market penalizes inefficient behavior. Some argue that economic, social and ethical impacts of micro level corruption must necessarily be less than that of macro level corruption involving politicians or public officials, because of the nature of the implied incentives.

ASEAN countries are developing countries characterized by high economic growth, low labor costs and fluctuating inflation rates. Indonesia has the same characteristics as other ASEAN countries. Indonesia was ranked 134 with score 2.4 along with Ethiopia (133), and Papua New Guinea (135) in the 2006 Transparency International Corruption Perception Index (www.transparency.org) . Indonesia clearly has high levels of corruption. This research assumes that the agency conflict in Indonesia represents firm level corruption (support by Stulz in http://www.nber.org/reporter/fall05/stulz.html).

Manager control of firm resources enable micro level corruption in firms. Micro level corruption is more devastating than macro level corruption. Micro level corruption has an effect on macroeconomic performance. Clarke and Xu (2002) showed that bribery in utility companies (usually state owned companies) is more severe than in private firms. However, private firms have higher corruption (non-bribery activities) for personal economics agendas. Argandona (2003) argued media and government notice private-corruption (micro level) less than public-corruption.

Previous empirical research suggests that corruption might result in the misallocation of talent to occupations with large opportunities for rent seeking (Baumol, 1990; Murphy et al., 1991). This might bias bureaucrats towards purchases on which it is easier to collect bribes (Shleifer and Vishny, 1993) or might affect income distribution adversely (Rose-Ackerman, 1978). Recent empirical studies found corruption hampers growth, reduces income and increases inequality (Mauro, 1995; Myrdal, 1968; Li et al., 2000; Bardhan, 1997). Inequality-raising effects are not observed for high corruption levels because income levels are likely to be low for most people, resulting in low levels of income inequality (Li et al., 2000). Other studies found corruption reduces investment (Mauro, 1995), increases size of the unofficial economy (Friedman et al., 2000; and Murphy et al., 1993), and is associated with lower levels of human capital, urbanization, financial depth and foreign trade (Li et al., 2000). Other studies of corruption include Alam (1990), Ades and Di Tella (1997), Bliss and Di Tella (1997), Fisman (2001), Johnson et al. (1988), Johnson et al. (1997), Li (1999), and Mookherjee and Png (1995).

Corruption can prevail owing to two alternative circumstances. First, people with a fraud mentality are highly likely to be corrupt. Second, people may without fraud mentalities may be encouraged by corruption opportunities. Hence, control mechanisms need to reduce agency conflicts, which in turn will minimize the corruption problem.

Corruption is a moral hazard action that occurs when managers' mentality is low and degraded. A pre-requisite is non-moral hazard action because the action occurs when the managers have a chance and power to fulfill their self-interest behavior. Agency theory argues that pre-requisite actions transfer firm

wealth to managers' personal wealth, and eventually deteriorate firm value. Self-interested between – party behavior support mechanisms to control agency conflicts. Agency theory has at least three assumptions: (i) normal or competitive markets; (ii) the nexus of contract is the principal-agent relationship between owners and managers; and (iii) optimal capital structure requires limited debt. Corruption and perquisites deteriorate firm value and harm shareholders' wealth. The theoretical framework tends to suggest that public enterprises are inefficient because there is a lack of capital market discipline. Principal-agent theory (Jensen and Meckling, 1976) is widely used to explain why closely held firms have better economic performance than do publicly owned firms. Because of the lack of market monitoring managers attempt to pursue their own interests at the expense of enterprises' interests in publicly owned firms.

Law enforcement plays major role in minimizing agency conflicts of corruption and perquisites. Indonesia has low levels of law enforcement and protection. Regulations and policies from government and regulators force managers to conduct honest and transparent business practices. Governance mechanisms are major issues in Indonesia. Tandelilin et al. (2005) showed that regulation obedience increases firm performance.

Researchers tend to have little information about actual cases of micro level corruption and aggregate data on the phenomenon (the forms it takes, how it wide spreads, and its costs). There would seem to be little doubt that unethical or ethically questionable practices are commonplace among purchasing managers (Forker and Janson, 1990). Wood (1995) conducted a survey among purchasing managers in the United Kingdom and concluded that the most widespread dubious practices were gifts (82%), invitations to shows (27%), misuses of the bidder information (27%) and offers of trips and holidays (18%).

Several factors support the emergence of private sector corruption. First, progress made in the fight against public sector corruption has shed light on the importance of private sector corruption. This is reflected in international relations, specifically in the ratification of the OECD Convention and the modification of many countries' legislation to make bribery of foreign politicians or public officials a punishable offence. Second, the intensification of competition in many markets appears to have led to a proliferation of corrupt practices to the detriment of economic efficiency and justice in trading relations. This similar phenomenon has made companies more aware of the ways in which private sector bribery and corruption reduce competition. Third, the removal of many former trade barriers has created a need for a level playing field, in which there can be no room for corrupt practices. Fourth, the privatization of many publicly owned companies has shifted public sector problems to the private sector. In fact, the distinction between public and private sector corruption is increasingly irrelevant.

Fifth, liberalization and deregulation in many countries in transition economies have shown very clearly, what conditions the institutional, legal and moral fabric of a society must satisfy in order for the market economy and democracy to take root. Sixth, marketing practices have become more professional, highlighting problems deriving from certain corrupt practices. Seventh, for long periods, the moral awareness of society in general has been stultified, allowing corrupt practices to flourish. The effect of these practices is that society itself has started to demand stricter standards of morality in business.

Fan, Rui and Zhao (2006) used event study methodologies to test the accusation of several China firm top managers for corruption and bribery. They studied firm financing decisions based on managers' court punishment. The result showed that firms whose managers are convicted as corruptors had a decreasing debt rate in the post penalty announcement period. Fan, Rui and Zhao (2006) suggested that the level of debt would decrease because China's debt policy depends on banking sectors rather than capital markets and depends less on equity offering.

In an economy plagued by corruption, firms are likely to finance with more debt as opposed to equity. This may be the case for two reasons. First, debt provides a higher degree of monitoring ability and enforcement by investors (Smith and Warner, 1979) than an open-ended equity claim, which provides little protection from expropriation by managers or bureaucrats. Second, it may be easier for a corrupt bureaucrat to channel funds in the form of loans to his connected firms through a bank he controls (La Porta et al., 2002; Sapienza, 2004), rather than through the equity market that is more difficult to influence.

Mahadwartha and Hartono (2002) used seemingly unrelated regression to test the balancing of agency theory and substitution effects of agency control mechanisms. They tested debt policy, dividend policy, institutional ownership and managerial ownership as control mechanisms of the agency conflict. They used 1995-2002 data on Indonesian listed firms to test their contentions. The result support the balancing of agency conflict, and suggest that agency conflicts are more severe in crisis periods than in normal periods.

Moreover, Mahadwartha (2003) showed that the dividend and debt have negative and significant relationships with managerial ownership. Managerial ownership is a mechanism to control managers' pre-requisites (and hopefully corruption) with an option to acquire a firms share through stock options or direct reward systems. Managers that have ownership in a firm will act as agents and principals. This ownership scheme will reduce the agency conflict between the agents and principals. Meanwhile, debt acts as a bonding and monitoring mechanism. Firms are more concerned obout costs to control agency conflicts, and will be reluctant to use two or more control mechanisms if one is already effective.

Ismiyanti and Hanafi (2004) replicated Jensen et al. (1992), combined with Chen, and Steiner (1999) to test the balancing of the agency theory, risk emergence from it, bonding and monitoring mechanisms of the debt and dividends. The study supports the balancing of agency theory. The findings partially support the bonding of the dividends, support the bonding and monitoring of debt policy, and failed to support non-linear relationship risks with dividends and debt.

Mahadwartha (2004) tested entrenchment and convergence hypothesis between managers and internal institutional ownerships. The study used Indonesian listed firms as samples, in 1994 until 2002 period of analysis, and generalized methods of moment statistical analysis. The result supported the convergence hypothesis that managers would efficiently operate with internal institutional ownership that monitored and bonded their behavior. Firms with high internal institutional ownership will have higher values than those with low internal institutional ownerships. The result also suggested that the free cash flow has high contribution on the agency conflict through pre-requisites.

Mahadwartha (2007b) tested managers of Indonesian firms regarding their pre-requisites actions on dividend. The study showed that the managers tend to expropriate shareholders and debt holders wealth. Managers usually collaborated with shareholders in expropriate debt holders wealth. The free cash flow used as source of pre-requisites and suggested the less protected Indonesian debt holders. High level of free cash flow will decrease the level of dividend payment as bonding mechanisms in agency theory (Mahadwartha and Hartono, 2002; Ismiyanti and Hanafi, 2004; Mahadwartha, 2004; Mahadwartha, 2007a; and Mahadwartha and Ismiyanti, 2007).

Mahadwartha (2007a) showed that during the crisis, Indonesian managers have more power to expropriate firm wealth because they have less investment opportunities. However, shareholder bonding through dividend increases, and effectively controls manager pre-requisites. Mahadwartha and Ismiyanti (2007) divided firms into low and high growth and confirmed that managers in high growth firms are more sensitive to free cash flow. Nonetheless, the studies described above ignore the life stage of the firm. The studies are also not concerned with corruption of managers using free cash flow. Meanwhile,

this research focuses on the quadrant of growth, maturity, star and decline condition and corruption of managers using free cash flow.

Firms in the star stage will have high growth levels and sufficient cash to finance those investment opportunities. Meanwhile, profitable investments will provide cash that is directly subject to manager authorization. The authorization will eventually provide the manager a chance to expropriate firm cash flow for his own interests. Managers of firms in the growth stage have lower chances to expropriate free cash flow because their cash is used to finance growth associated with investment opportunities.

H_1: Firms in Growth Stage will have lower corruption than those in Star Stage.

Firms in the maturity stage will have low growth and high cash flow. Maturity stage firms suffer from expropriation of cash flow because they lack investment opportunities. The corruption worsens when the debt and dividend levels are lower or there is no bonding or monitoring mechanism of manager actions. This research argues that maturity stage firms have higher corruption levels than growth stage firms. Maturity firms have sufficient cash flow to expropriate because they lack investment opportunities.

H_2: Firms in Growth Stage will have lower corruption than those in Maturity Stage.

Declining stage firms have low growth and low cash flow. The managers of declining firms will have less opportunity to expropriate cash flow. If firms have high debt and dividend levels, those firms have debt financed dividends that mostly reduce debt holders wealth. If declining firms have high debt levels but low dividend levels, those firms have debt expropriation by managers that also reduce debt holder's wealth. Manager corruption in declining firms do not harm shareholders directly, but indirectly affect shareholder wealth through deflated firm value.

H_3: Growth stage firms will have higher corruption than declining stage firms.

The similarity between star stage firms and maturity firms is that they have high cash levels. However, the opportunity to expropriate cash flow is low in star stage firms because they have high growth to finance with the cash flow. Meanwhile, firms in maturity stage have low growth levels, and if the relationships of cash flows to dividend and debt are negative, the corruption level is severe.

H_4: Star stage firms will have lower corruption than those in the maturity stage.

Declining firms have the lowest corruption level because they lack cash and investment opportunities. Managers of declining firms work to increase shareholders wealth even if they expropriate debt holders in the process. Compared to star and maturity stage firms, declining firms have lower manager corruption levels.

H_5: Firms in star stage will have higher corruption than those in declining stage.
H_6: Firms in maturity stage will have lower corruption those in declining stage.

Table 1 shows the hypotheses summary containing quadrants of decline, growth, star and maturity firms. Each hypothesis will be tested using Wald test described later in research methods.

Table 1: Summary of Hypotheses on Corruption Level Differences

H_A	State of Nature		State of Nature
H_1	Growth Stage	<	Star Stage
H_2	Growth Stage	<	Maturity Stage
H_3	Growth Stage	>	Decline Stage
H_4	Star Stage	<	Maturity Stage
H_5	Star Stage	>	Decline Stage
H_6	Maturity Stage	>	Decline Stage

Table 1 shows the summary of six hypotheses based on firm's state of nature. The < (>) sign shows left column have lower (higher) corruption level than the right column.

RESEARCH METHODS

This research uses several statistical methods. The data sample is taken from non-financial firms listed on the Indonesian stock exchange. For inclusion in the sample, firms must have completed financial reports. The period of analysis extends from 1994 until 2006. This research divides the sample into quadrants based on growth and cash flow levels. Asset growth and cash level from net cash flow both using 1994 until 2006 year observations proxy growth.

This study uses three control variables for dividend and leverage. The control variable for dividends is return on equity. Return on equity indicates the minimum return that the shareholders should receive from their investment. It should provide shareholders sufficient gain to cover their investment and offer a risk reward. Dividends are a part of that return. Therefore, the shareholders focus on the return on equity. Reilly (1997) found that dividend growth mainly affects the aggregate return on equity (ROE). Thus, Reilly (1997) supported the basic argument that ROE as return for shareholders will affect yields from dividend.

Return on asset is the return from asset utilization. Managers have an obligation to support asset utilization activities, such as investment in real assets, day-to-day operation, inventory management, receivable management, etc. Debt holders as a contributor of financing have their own pretension to maximize. Therefore, their return depends on the asset utilization mechanism. Piot and Missonier-Piera (2007) found the associations between costs of debt and return on assets. Their findings support the argument that debt holders will more likely depend on asset utilization mechanisms (ROA) in their debt analysis decision.

The last control variable is a crisis dummy that controls the impacts of crisis period in 1997. Crisis period financial data have different behaviors than in normal periods. Several researches that used Indonesian firm financial data found that crisis has significant impacts on financial policy (Mahadwartha, 2004; and Ismiyanti and Hanafi, 2004).

This research uses the variables net cash flow (NCF) and total asset growth (AG) to divide firms into growth, star, maturity, and declining stage categories in each year of analysis. Other variables such as dividends (DIV), leverage (LEV), free cash flow (FCF), dummy variables of states of nature and control variables (ROA, ROE, and dummy crisis; DC) composes the regression equation. Net cash flow (NCF) is proxied from differences between operating cash inflows and operating cash outflows.

$$\text{Net Cash Flow} = \text{OCR} - \text{OCO} \quad (1)$$

Asset Growth (AG) is proxied from asset growth through the 1994 to 2006 period. Using asset growth as a substitute reduces the period analysis for statistical tests to 1995 to 2006.

$$Asset\ Growth = \frac{Asset_t - Asset_{t-1}}{Asset_{t-1}} \tag{2}$$

Dividend payout ratio (DIV) is use as proxy for dividend policy. Mahadwartha (2007b) showed that from 1995 until 2002, 42% of Indonesian listed firms paid dividends and 67.3% paid dividend before the 1998 financial crisis.

$$Dividend\ Payout = \frac{Dividend\ Payment}{Net\ Income} \tag{3}$$

This research employs the long-term debt to total asset ratio as proxy for debt (LEV). Ismiyanti and Hanafi (2004) show that when using long-term debt to total assets rather than total debt to total asset, the result is robust and not rejected the balancing of agency theory tested.

$$Debt = \frac{Long\ Term\ Debt}{Total\ Asset} \tag{4}$$

Jensen's (1986) free cash flow (FCF) hypothesis suggests that firms with more growth opportunities have lower free cash flow and; therefore, they need to pay lower dividends to reduce the agency cost of free cash flow. Jensen's free cash flow hypothesis was supported by Rozeff (1982), and Smith and Watts (1992). This study, in a contrary to Jensen (1986), argues negative relationships between free cash flow and dividend payout ratio because of unique agency problems in Indonesian listed firms. This study used Hackel et al. (2000) measurement of FCF with discretionary methods divided by total assets.

$$FCF = \frac{TFCF + DOCO + DCEX}{Total\ Asset} \tag{5}$$

TFCF = (OCR – OCO) – CEX (6)

DOCO = (OCO growth – sales growth)*(0.2 * OCO) (7)

DCEX = (CEX growth –COGS growth)*CEX (8)

$$OCO\ growth = \frac{OCO_t - OCO_{t-1}}{OCO_{t-1}} \tag{9}$$

$$Sales\ growth = \frac{Sales_t - Sales_{t-1}}{Sales_{t-1}} \tag{10}$$

$$CEX\ growth = \frac{CEX_t - CEX_{t-1}}{CEX_{t-1}} \tag{11}$$

$$COGS\ growth = \frac{COGS_t - COGS_{t-1}}{COGS_{t-1}} \tag{12}$$

Where DOCO is the discretionary OCO, DCEX is the discretionary CEX, OCR is the operating cash inflows; OCO is the operating cash outflows; CEX is the capital expenditures; and COGS is the cost of goods sold

This research employs dummy variables as proxies for Growth stage, Star stage, Maturity stage and Declining stage. D_G is dummy variable for Growth stage, D_S for Star stage, D_M for Maturity stage, and D_D for Declining stage. D_i is equal to one to represent each stage on the quadrant. Dummy crisis will divide period of analysis into 2 sub-periods: 1995 to 1999 for $D_C = 0$, and 2000 to 2006 for $D_C = 1$.

Return on equity (ROE) and return on asset (ROA) categorized by profitability ratio. One of the most difficult attributes of a firm to conceptualize and to measure is profitability (Ross et al., 2005: 37). Dummy crisis is DC = 0 for 1994-1998, and DC = 1 for 1999-2006.

$$ROE = \frac{Net\ Income}{Shareholders\ Equity} \tag{13}$$

$$ROA = \frac{Net\ Income}{Total\ Assets} \tag{14}$$

This research employs two major statistical tools to test the hypotheses, i.e., the Generalized Method of Moment (GMM) and Wald test. The GMM estimator belongs to a class of estimators known as M-estimators defined by minimizing some criterion function. GMM is a robust estimator in that it does not require information of the exact distribution of the disturbances. GMM estimation is based upon the assumption that the disturbances in the equations are uncorrelated with a set of instrumental variables. The GMM estimator selects parameter estimates, so that the correlations between the instruments and disturbances are as close to zero as possible, as defined by a criterion function. By choosing the weighting matrix in the criterion function appropriately, GMM is robust for heteroscedasticity and or autocorrelation of unknown form.

The Wald test computes a test statistic based on the unrestricted regression. The Wald statistic measures how close the unrestricted estimates come to satisfying the restrictions under the null hypothesis. If the restrictions are in fact true, the unrestricted estimates should come close to satisfying the restrictions. All estimation magnitude is in absolute terms.

This research tests sensitivity analysis methods with three pairs of equations. The first is the original equation of dividend and debt with free cash flow. The second is the modified equation with dummy quadrant, and the last is a method with interaction of free cash flow with dummy quadrant. The exception is treating D_D as a dummy for the declining period. GMM estimates the variables of the D_D by constant coefficient of regression. Therefore dummy declining D_D is excluded from the equation. GMM repels the equation that have singular matrix between instrumental variables and exogenous variables. Free cash flow is excluded in the third equation to prevent a near singular matrix problem. Meanwhile this research also uses D_D for interaction variables with free cash flow, therefore the dummy decline D_D is only used as an interaction with free cash flow in the third equation.

The first equation tests the effect of free cash flow to dividend with control variable D_C. It is a preliminary test of free cash flow to dividend and leverage, as justification for the next step. The second equation tests free cash flow, dummy quadrant, ROE and ROA as control variables. In the second equation, D_D is represented by α_3 and α_4. In the third equation, which is the main equation, this research tests the interaction between dummy quadrant and free cash flow, along with ROE, ROA and D_C as control variables. However, FCF variable excludes from the equation to isolate the interaction variables of free cash flow from the effect of the main variables free cash flow. The first equation:

$$DIV = \alpha_1 + \beta_{11}FCF + \beta_{12}D_C + \varepsilon_{1i} \tag{17}$$

$$LEV = \alpha_2 + \beta_{21}FCF + \beta_{22}D_C + \varepsilon_{2i} \tag{18}$$

The second equation:

$$DIV = \alpha_3 + \beta_{31}FCF + \beta_{32}D_G + \beta_{33}D_S + \beta_{34}D_M + \beta_{36}D_C + \beta_{37}ROE + \varepsilon_{3i} \tag{19}$$

$$LEV = \alpha_4 + \beta_{41}FCF + \beta_{42}D_G + \beta_{43}D_S + \beta_{44}D_M + \beta_{46}D_C + \beta_{47}ROA + \varepsilon_{4i} \tag{20}$$

The third equation:

$$DIV = \alpha_5 + \beta_{52}D_G + \beta_{53}FCF*D_G + \beta_{54}D_S + \beta_{55}FCF*D_S + \beta_{56}D_M + \beta_{57}FCF*D_M + \beta_{59}FCF*D_D + \beta_{510}D_C + \beta_{511}ROE + \varepsilon_{5i} \quad (21)$$

$$LEV = \alpha_6 + \beta_{62}D_G + \beta_{63}FCF*D_G + \beta_{64}D_S + \beta_{65}FCF*D_S + \beta_{66}D_M + \beta_{67}FCF*D_M + \beta_{69}FCF*D_D + \beta_{610}D_C + \beta_{611}ROA + \varepsilon_{6i} \quad (22)$$

Table 2 shows the Wald coefficient test of hypotheses. Each hypothesis is tested using its interaction and dummy quadrant. The sign of less than or greater than is more on statistical manners rather than mathematical manners. For example, -0.5 is less than 0.2 in mathematical manners, however -0.5 have greater effect on dependent variable than 0.2 in statistical terms.

Table 2: Summary of Wald Test

	Hypotheses	Wald Test
H_1:	Firms in Growth Stage will have lower corruption than those in Star Stage.	DIV: $\beta_{52} + \beta_{53} < \beta_{54} + \beta_{55}$ LEV: $\beta_{62} + \beta_{63} < \beta_{64} + \beta_{65}$
H_2:	Firms in Growth Stage will have lower corruption than those in Maturity Stage.	DIV: $\beta_{52} + \beta_{53} < \beta_{56} + \beta_{57}$ LEV: $\beta_{62} + \beta_{63} < \beta_{66} + \beta_{67}$
H_3:	Firms in Growth Stage will have higher corruption than those in Decline Stage.	DIV: $\beta_{52} + \beta_{53} > \alpha_5 + \beta_{59}$ LEV: $\beta_{62} + \beta_{63} > \alpha_6 + \beta_{69}$
H_4:	Firms in Star Stage will have lower corruption than those in Maturity Stage.	DIV: $\beta_{54} + \beta_{55} < \beta_{56} + \beta_{57}$ LEV: $\beta_{64} + \beta_{65} < \beta_{66} + \beta_{67}$
H_5:	Firms in Star Stage will have higher corruption than those in Decline Stage.	DIV: $\beta_{54} + \beta_{55} > \alpha_5 + \beta_{59}$ LEV: $\beta_{64} + \beta_{65} > \alpha_6 + \beta_{69}$
H_6:	Firms in Maturity Stage will have lower corruption than those in Decline Stage.	DIV: $\beta_{56} + \beta_{57} < \alpha_5 + \beta_{59}$ LEV: $\beta_{66} + \beta_{67} < \alpha_6 + \beta_{69}$

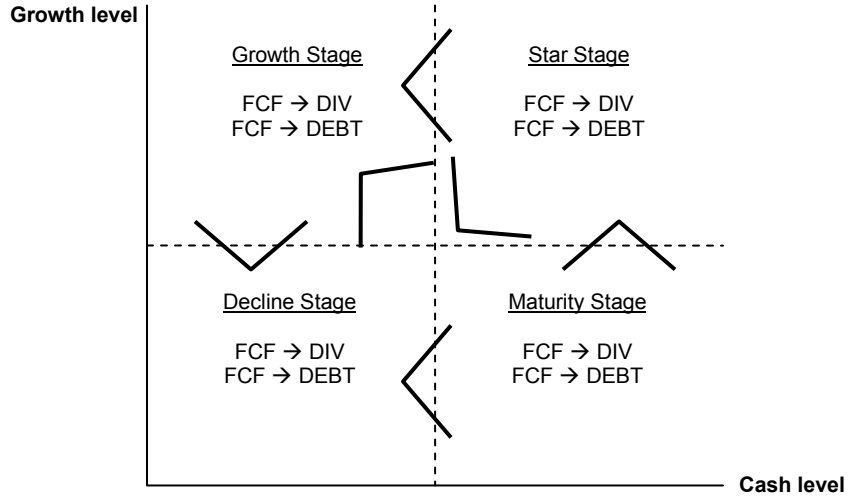
Table 2 shows the summary of Wald Test. The right column shows the coefficient parameter of each variable. Wald test computes a test statistic based on the unrestricted regression. Wald test only uses in equation three, and test difference magnitude of interaction variables free cash flow and dummy quadrant.

The research framework in Figure 2 shows that each quadrant has different relationships with other quadrant based on the corruption. The corruption tests the relationship of free cash flow to dividend and debt. The "<" or ">" symbolizes the magnitude of the effect of each quadrant. The horizontal line represents cash level proxy by net cash flow and the vertical line represents growth level proxy by asset growth.

RESULTS AND DISCUSSION

Descriptive statistics of each main variable of dividend (DIV), leverage (LEV), free cash flow (FCF), return on asset (ROA) and return on equity (ROE) are present in Table 3. The statistics shows that return on assets has a lower mean than other variables along with return on equity, leverage, dividend and free cash flow respectively. Total observations are 1,680 firm's year observation with period analysis 1995 to 2006. As many as 18 firms excluded from the samples due to missing data.

Figure 2: Quadrant of Research Framework



Note: The horizontal line is cash level and the vertical line is growth level. The figure shows the magnitude effect of each stage to each other in the relationship of FCF to dividend and FCF to debt.

Table 3: Descriptive Statistic

Variable	DIV	LEV	FCF	ROA	ROE
Mean	0.26896	0.21627	0.29873	0.01472	0.07495
Std. Dev.	0.87045	0.21630	5.44800	0.13960	3.10241
Observations	1,680	Firm's Year Observation			

Variables are DIV for dividend, LEV for leverage, FCF for free cash flow, ROA for return on assets, and ROE for return on equity. Total observations are 1680 firm's year observation with period analysis 1995 to 2006.

Return on asset has lower standard deviation than leverage, dividend, return on equity, and free cash flow respectively. The preliminary results on descriptive statistics suggest that the free cash flow variable will have higher standard error than other variables. If the hypothesis holds then free cash flow is more likely to be excluded in the third equation. Return on equity, on the other side, has the second highest standard deviation. This suggests that the effect of ROE to leverage is more likely lower than ROE to dividends.

Table 4 shows six panels of the GMM regression result for the first equation of dividend and leverage (Panel 1 and Panel 2), the second equation of dividend and leverage (Panel 3 and Panel 4), and third equation of dividend and leverage (Panel 5 and Panel 6). Panel 1 and Panel 2 contain dividend and leverage as endogenous variables, and free cash flow and dummy crisis as exogenous variables.

The result shows that free cash flows have insignificant effects on dividends and leverage with consistent negative magnitude. High free cash flow reduces the level of dividends and leverage. D_C variable has a significant effect on dividend and leverage. The effect of D_C to dividend is negative, meaning that in the 2000 to 2006 period, firms were less likely to distribute their earnings as dividend payment. Meanwhile, the effect of DC to leverage is positive indicating that the leverage level in the 2000 to 2006 period is higher than in the 1995 to 1999 period.

R^2 for the first equation shows lower magnitude. For Panel 1; the R^2 is 3.101%, higher than Panel 2 of 2.979%. The D_C variable is the main contributor for R^2 whereas free cash flow has less contribution to R^2. The first equation suggests that the effect of free cash flow on dividends and leverage is weak. Therefore, the result support the idea of adding more variables especially the dummy quadrant on the second equation.

Table 4: GMM Regression Result

	Coefficient	t-Statistic	
Panel 1: 1st Equation; Dividend			
α_1	0.3356	11.405	***
β_{11} FCF	-0.0017	-0.813	
β_{12} D_C	-0.1134	-2.708	***
Adjusted R^2		3.101%	
Panel 2: 1st Equation; Leverage			
α_2	0.2000	25.341	***
β_{21} FCF	-0.0004	-0.410	
β_{22} D_C	0.0281	2.653	***
Adjusted R^2		2.979%	
	Coefficient	**t-Statistic**	
Panel 3: 2nd Equation; Dividend			
α_3	0.1760	3.572	***
β_{31} FCF	-0.0013	-0.616	
β_{32} D_G	0.2450	3.988	***
β_{33} D_S	0.1911	3.912	***
β_{34} D_M	0.1366	2.506	**
β_{36} D_C	-0.1020	-2.167	**
β_{37} ROE	0.0016	0.922	
Adjusted R^2		6.090%	
Panel 4: 2nd Equation; Leverage			
α_4	0.2114	16.834	***
β_{41} FCF	-0.00002	-0.023	
β_{42} D_G	-0.0128	-0.850	
β_{43} D_S	-0.0003	-0.021	
β_{44} D_M	0.0095	0.651	
β_{46} D_C	0.0229	1.993	**
β_{47} ROA	-0.1571	-3.651	***
Adjusted R^2		8.711%	
	Coefficient	**t-Statistic**	
Panel 5: 3rd Equation; Dividend			
α_5	0.1776	3.582	***
β_{52} D_G	0.2428	3.933	***
β_{53} FCFG	-0.0010	-0.361	
β_{54} D_S	0.1860	3.762	***
β_{55} FCFS	0.0022	0.503	
β_{56} D_M	0.1329	2.403	**
β_{57} FCFM	-0.0045	-0.503	
β_{59} FCFD	-0.0033	-1.425	*
β_{510} D_C	-0.0995	-2.099	**
β_{511} ROE	0.0016	0.944	
Adjusted R^2		14.168%	
Panel 6: 3rd Equation; Leverage			
α_6	0.2129	16.939	***
β_{62} D_G	-0.0145	-0.959	
β_{63} FCFG	0.0012	1.336	
β_{64} D_S	-0.0008	-0.052	
β_{65} FCFS	-0.0027	-0.495	
β_{66} D_M	0.0059	0.406	
β_{67} FCFM	0.0067	2.005	**
β_{69} FCFD	-0.0034	-4.756	***
β_{610} D_C	0.0232	2.015	**
β_{611} ROA	-0.1624	-3.759	***
Adjusted R^2		10.650%	

****) 1%; **) 5%; and *) 10% significance level*

Endogenous variables are dividend and leverage. Exogenous variables are free cash flow, dummy growth, dummy star, dummy maturities, dummy crisis (DC=0 for 1995-1999; and DC=1 for 2000-2006), return on equity, and variables interaction between dummy and free cash flow.

The second equation of dividend and leverage is divided into two panels, Panel 3 (dividend as an endogenous variable), and Panel 4 (leverage as an endogenous variable). R^2 for Panel 3 is 6.090% and for Panel 4 is 8.711%. There is a significant increase in R^2 between first equation and second equation. However, the R^2 for Panel 3 is higher than Panel 4 although in Panel 4 fewer variables have a significant effect on the endogenous variable. The high R^2 in Panel 4 derives from high t-statistics value that represents the decline quadrant (D_D). This result suggests that the effect of D_D to leverage dominates the effect of the other quadrant to leverage.

The free cash flow variable consistently has an insignificant effect on dividend and leverage. Therefore, this research supports excluding free cash flow from the third equation. The crisis dummy (D_C) is consistent with the result of the first equation and has a significant negative effect on dividend and positive effect on leverage.

All dummy quadrant variables (D_G, D_S, D_M, and α_3 for D_D) have a positive significant magnitude on dividend (Panel 3). Further, the Wald test is conducted on the third regression equation. The positive magnitude of D_G, D_S, D_M and α_3 coefficients on dividend shows that firms in all states of nature will tend to pay dividend. Furthermore, high dividend payment will more likely occur for firms in the growth stage. The result suggests that manager corruption on growth stage firms is lower than other stages.

However, in Panel 4, only α_4 (D_D) has a significant magnitude on leverage. The result suggests that D_D will have high effects on leverage with other variables do not. The negative sign of D_G and D_S suggests that firms in those stages have less leverage than other quadrants. The Wald test examines the hypothesis to prove it more robust and statistically valid. Return on equity has a positive sign but insignificant on dividend (Panel 3). Return on assets has a negative significant effect on leverage (Panel 4). High return on asset decreases the need for leverage. The result suggests that return on asset is derived from asset utilization rather than leverage utilization.

Panel 5 and 6 shows the regression result that includes interaction variables of dummy quadrant and free cash flow. However, the free cash flow variable excluded from the equation. The decision is based on the result of first and second equations that shows free cash flow has an insignificant effect on leverage and dividends.

Dummy quadrant D_G and the interaction variable FCFG have positive and negative effects on dividend respectively, but the interaction effects are insignificant. Dummy quadrant D_S and the interaction variable FCFS have positive signs, but the interaction variable is insignificant. Dummy quadrant D_M and interaction variable FCFM have positive and negative signs respectively, but the interaction variable is insignificant. Dummy quadrant $D_{D,}$ coefficient $\alpha_{5,}$ and the interaction variable FCFD are significantly positive and negative respectively.

Dummy quadrant D_G and the interaction variable FCFG have negative and positive effects to leverage respectively; nevertheless, both variables are insignificant. Dummy quadrant D_S and variable interaction FCFS have negative signs and are insignificant. Dummy quadrant D_M and interaction variable FCFM have positive signs; however, only FCFM is statistically significant. Dummy quadrant D_D that is α_6 and the interaction variable FCFD have positive and negative signs, both are significant.

Return on equity in Panel 5 is consistent with Panel 3, which is positive and insignificant. D_C variable has a significant effect on dividend and leverage, yet the sign is negative for the dividend equation, and positive for the leverage equation. Return on assets in Panel 5 is also consistent with Panel 3, which is negative and has a significant effect on leverage.

The adjusted R^2 is higher in the third equation than in the second and first equations. The R^2 for the dividend equation is 14.168% and for leverage is 10.650%. The GMM statistical analysis in Table 4 is insufficient to test the hypotheses. Therefore, the research uses the Wald test to examine the restrictions among variables stated in the hypotheses.

Table 5: Wald Test: Testing of Hypothesis 1, 2 and 3

H_1: Firms in Growth Stage Will Have Lower Corruption Than Those in Star Stage									
		Growth			**Star**			**Chi-square**	
Sub-equation Dividend									
Hypothesis	β_{52}	+	β_{53}	<	β_{54}	+	β_{55}		
Result	0.2428	+	-0.001		0.186	+	0.0022	0.956	
			0.2418	>	0.1882				
Sub-equation Leverage									
Hypothesis	β_{62}	+	β_{63}	<	β_{64}	+	β_{65}		
Result	-0.0145	+	0.0012		-0.0008	+	-0.0027	0.4018	
			-0.0133	>	-0.0035				
H_2: Firms in Growth Stage Will Have Lower Corruption Than Those in Maturity Stage									
		Growth			**Maturity**			**Chi-square**	
Sub-equation Dividend									
Hypothesis	β_{52}	+	β_{53}	<	β_{56}	+	β_{57}		
Result	0.2428	+	-0.001		0.1329	+	-0.0045	3.4137	*
			0.2418	>	0.1284				
Sub-equation Leverage									
Hypothesis	β_{62}	+	β_{63}	<	β_{66}	+	β_{67}		
Result	-0.0145	+	0.0012		0.0059	+	0.0067	2.7246	*
			-0.0133	>	0.0126				
H_3: Firms in Growth Stage Will Have Higher Corruption Than Those in Decline Stage									
		Growth			**Decline**			**Chi-square**	
Sub-equation Dividend									
Hypothesis	β_{52}	+	β_{53}	>	α_5	+	β_{59}		
Result	0.2428	+	-0.001		0.1776	+	-0.0033	0.4252	
			0.2418	>	0.1743				
Sub-equation Leverage									
Hypothesis	β_{62}	+	β_{63}	>	α_6	+	β_{69}		
Result	-0.0145	+	0.0012		0.2129	+	-0.0034	75.7389	***
			-0.0133	<	0.2095				

****) 1% significance level; *) 10% significance level*

Table 5 shows the Wald test of hypothesis 1, 2 and 3. H_1 stated that firms in the growth stage have lower corruption than those in the star stage, where the effect of free cash flow to dividend and leverage is negative. The test shows a positive effect on free cash flow to dividend with values of 0.2418 and 0.1882. Hence, H_1 is rejected. Statistically, firms in the growth stage have the same corruption level as those in the Star stage. Although the Wald test on dividends shows no significant result, mathematically the result suggests that, the firms in star stage have higher corruption level than in the growth stage. Free cash flow has a positive effect on dividends, and less positive one in star stage firms.

Meanwhile, for leverage (sub-equation leverage), the result mathematically shows a higher negative magnitude of growth stage firms than star stage firms (-0.0133 and -0.0035). The result suggests that free cash flow has a negative effect on leverage; thus, growth stage firms have a higher corruption level than Star stage firms. However, both tests are insignificant, and the result is less conclusive.

H_2 stated that firms in growth stage have lower corruption than those in maturity stage, and the effect of free cash flow to dividend and leverage is negative. The Wald test result for hypothesis 2 shows a positive and significant (0.2418 and 0.1284) effect of free cash flow to dividend, and growth stage firms have a higher magnitude than maturity stage. High free cash flow followed by high dividend payment; therefore, a lower effect indicates that the firms in maturity stage have higher corruption levels than those in growth stage. Although the coefficient parameter is positive the corruption level appears in coefficient differences.

Sub-equation leverage shows a negative sign for growth stage firms and a positive one for maturity stage firms (-0.0133 and 0.0126). Both effects have different magnitudes, and the differences are statistically significant. The result indicate a contrary result with sub-equation dividend. Despite the contradiction, leverage has different characteristics than the dividend in controlling management corruption. The result suggests that dividend payment is a more reliable indicator of manager corruption than leverage. Usually, there is another factor influencing leverage, especially for growth stage firms that have high investment opportunities and fewer financing alternatives.

H_3 stated that firms in growth stage have higher corruption level than those in decline stage. Sub-equation dividend shows a positive effect of free cash flow to dividend (0.2418 and 0.1743); however, the Wald test shows insignificant differences among coefficients. The magnitude of coefficient mathematically shows that growth stage firms have higher magnitude than decline stage. However, there is no different effect on free cash flow to dividend between growth and decline stage firms.

Sub-equation leverage shows a negative sign for growth stage (-0.0133) and positive sign for decline stage firms (0.2095). The coefficients are significantly different. Firms in growth stage decrease their leverage if they have high free cash flow, and those in decline stage increase their leverage if they have high free cash flow. The result indicate that Growth stage firms have higher corruption levels than decline stage firms.

Table 6 shows the Wald test result for hypothesis 4, 5 and 6. H_4 stated that firms in star stage would have lower corruption than those in maturity stage. Sub-equation dividend shows a positive sign among star stage and maturity firms (0.1882 and 0.1284); however, the coefficient difference is statistically insignificant. The increasing rate per unit of free cash flow increases leverage by 0.1882 for star stage firms and 0.1284 for maturity stage firms. Mathematically, the coefficient of maturity stage is higher than star stage.

Sub-equation leverage shows a negative coefficient for star stage firms and a positive coefficient for maturity stage firms (-0.0035 and 0.0126). In addition, the coefficient difference is statistically insignificant. Mixed results show that star stage firms decrease leverage if free cash flow increases by one unit. Maturity stage firms increase leverage if the free cash flow increases by one unit.

H_5 stated that firms in star stage would have higher corruption than those in decline stage. Sub-equation dividend shows star stage firms a have higher coefficient than decline stage firms (0.1882 and 0.1743) with Chi-square of 0.024 which is statistically insignificant. The effect of free cash flow to dividend is that there is no difference between star stage and decline firms.

Sub-equation leverage shows that the effect of the free cash flow on the leverage of star stage firms is negative (-0.0035), while for decline stage firms the effect is positive (0.2095). The difference between coefficients is statistically significant. Increasing the rate of free cash flow by one unit will decrease the leverage by -0.0035 for star stage firms, and increase it by 0.2095 for decline stage firms.

H_6 stated that firms in maturity stage would have lower corruption than firms in Decline stage. Sub-equation dividend shows a positive effect of free cash flow toward dividend for both stages. Increasing the rate of free cash flow by one unit will increase dividend by 0.1284 for maturity stage firms and by 0.1743 for decline stage firms. However, the difference of coefficient is statistically insignificant.

Sub-equation leverage shows a positive effect of free cash flow to leverage at 0.0126 and 0.2095 respectively. Decline stage firms have a higher coefficient than maturity stage firms. The difference

between the coefficients is statistically significant at 1% significance level. The result suggests that free cash flow has more power in explaining leverage than dividend in maturity and decline stage firms.

Table 6: Wald Test: Testing of Hypothesis 4, 5, and 6

H_4: Firm in Star Stage Will Have Lower Corruption Than Those in Maturity Stage									
	Star				**Maturity**			**Chi-square**	
Endogenous Variable: Dividend									
Hypothesis	β_{54}	+	β_{55}	<	β_{56}	+	β_{57}		
Result	0.186	+	0.0022		0.1329	+	-0.0045	1.7844	
			0.1882	>	0.1284				
Endogenous Variable: Leverage									
Hypothesis	β_{64}	+	β_{65}	<	β_{66}	+	β_{67}		
Result	-0.0008	+	-0.0027		0.0059	+	0.0067	1.0157	
			-0.0035	<	0.0126				
H_5: Star Stage Will Have Higher Corruption Than Those in Decline Stage									
	Star				**Decline**			**Chi-square**	
Endogenous Variable: Dividend									
Hypothesis	β_{54}	+	β_{55}	>	α_5	+	β_{59}		
Result	0.186	+	0.0022		0.1776	+	-0.0033	0.0244	
			0.1882	>	0.1743				
Endogenous Variable: Leverage									
Hypothesis	β_{64}	+	β_{65}	>	α_6	+	β_{69}		
Result	-0.0008	+	-0.0027		0.2129	+	-0.0034	70.936	***
			-0.0035	<	0.2095				
H_6: Firm In Maturity Stage Will Have Lower Corruption Than Those in Decline Stage									
	Maturity				**Decline**			**Chi-square**	
Endogenous Variable: Dividend									
Hypothesis	β_{56}	+	β_{57}	<	α_5	+	β_{59}		
Result	0.1329	+	-0.0045		0.1776	+	-0.0033	0.2561	
			0.1284	<	0.1743				
Endogenous Variable: Leverage									
Hypothesis	β_{66}	+	β_{67}	<	α_6	+	β_{69}		
Result	0.0059	+	0.0067		0.2129	+	-0.0034	70.1144	***
			0.0126	<	0.2095				

****) 1% significance level*

The discussion section will focus on the effects of free cash flow toward dividend and leverage on each firm stage that shows significant differences. Based on Wald test result, the research will discuss the corruption levels among stages.

The effects of free cash flow to dividend for Growth stage firms are positive and higher than star stage. However, the Wald test shows that there is no difference between coefficients. The effect of free cash flow to leverage shows negative results for growth stage and star stage firms, and the difference among coefficient is not statistically significant. The result fails to reject the null hypothesis and suggests that the effect of free cash flow toward dividend and leverage on firms in growth stage and star stage firms is equal to zero.

The effect of free cash flow to dividend on growth stage and maturity stage firms shows a positive result. The difference between coefficients is also statistically significant. The result indicates that maturity stages firms increase their dividend with lower level than growth stage when their free cash flow increases. Firms in maturity stage will have low growth and high cash flow. Maturity stage firms suffer from expropriation of cash flows because they have a lack of investment opportunity. Meanwhile, the effect of free cash flow to leverage between growth stage and maturity stage firms has a surprising result. Growth stage firms use less leverage if their free cash flow increases and suggest that internal financing is cheaper than using debt as financing resources. Maturity stage firms will use more leverage as their free cash flow increases, and hinder the manager's corruption on free cash flow. The result suggests that dividends are more reliable as corruption control than leverage because dividends directly increase the shareholders wealth and lower the ability of the managers to use free cash flow in their own interests.

Meanwhile, the use of leverage as a control mechanism on managers' corruption is useful in Maturity stage firms because as the effect of free cash flow toward leverage is positive. The managers of Maturity stage firms should depend less on using free cash flow as debt collateral. If they increase leverage as free cash flow increase, managers have a greater chance to expropriate free cash flow for their own interests. Therefore, this research concludes that despite contrary results between dividend and leverage, maturity stage firms have higher corruption levels than growth stage firms. The argument also supported by the findings of Mahadwartha and Ismiyanti (2007) that found the managers in high growth firms are more sensitive to free cash flow than low growth firms. The result also indicates that dividend and leverage are reliable as micro corruption control mechanisms although dividends are more appropriate in maximizing shareholders wealth.

The result of Growth versus decline stage firms shows a support for the hypothesis, especially for sub-equation leverage. Sub-equation dividend is not significant, and leads to the conclusion that the effect of free cash flow toward dividend on growth and decline stages is equal to zero. However, on sub-equation leverage the result reveals strong support for the contention that growth stage firms have higher corruption levels than decline stage firms. The managers of growth stage firms decrease their leverage to increase their chance of expropriating an increasing rate of free cash flow. Leverage is a free cash flow reduction mechanism, so decreasing leverage gives managers sufficient free cash flow to expropriate.

Hypothesis four tests show less supports for the argument that firms in star stage will have lower corruption than that of firms in maturity stage. The difference of the effect of free cash flow to dividend and leverage is statistically insignificant. The result is insufficient to state that star stage firms have lower corruption levels than maturity stage firms. The result fails to reject the null hypothesis and suggests that the effect of free cash flow toward dividend and leverage on firms in star stage and maturity stages equals zero.

The different effect of free cash flow to dividend on star stage and decline stage firms is not significant. Results show less supported for dividends as bonding to free cash flow and suggests that the effect of free cash flow to dividend on star stage and decline stage firms equals zero. However, the results show impressive results on the effect of free cash flow toward leverage. The firms in star stage will lower their leverage as free cash flow increases, and indicate that bonding from leverage hampers the expropriation of free cash flow by managers. Therefore, managers will decrease the leverage levels in order to minimize the obligation to pay debt holders, as free cash flow increases. As for decline stage firms, the increasing rate of free cash flows will immediately be used as debt collateral and increase their chance of convincing debt holders of their ability to pay leverage. This result indicates that star stage firms have higher manager corruption than decline stage firms.

The different effect of free cash flow toward dividends on maturity stage and decline stage firms is not statistically significant. This research fails to reject null hypothesis on sub-equation dividend. Based on dividends as bonding mechanism, this research concludes that there is no effect of free cash flow toward dividends on maturity and decline stage firms. The result on the effect of free cash flow to leverage shows support for the hypothesis. Maturity stage firms will use less leverage than decline stage firms when their free cash flow increases, therefore the managers chances to expropriate the free cash flow for their own interest. Meanwhile, as free cash flow increases, decline stage firms have more convictions to use free cash flow as debt collateral, and convince debt holders to increase their investment to the firms. The managers of decline stage firms will have more resources (magnitude and alternative) to fund their firms as free cash flow increases. The result shows supports for the argument that maturity stage firms have higher corruption levels than decline stage firms.

CONCLUSION

The research objective of this paper is to determine which firm life cycle stage has higher manager corruption. This research tests the hypotheses based on the stages: growth, star, maturity and decline. The research uses Generalized Methods of Moment (GMM) and a combination of Wald Tests to verify the hypotheses.

The results show that dividends are more reliable as corruption control than leverage because of its direct effect on shareholders wealth. Dividends lower the ability of managers to expropriate free cash flow. Leverage as a control mechanism will be useful in maturity stage firms because as the effect of free cash flow toward leverage is positive. The managers of maturity stage firms should depend less on free cash flow as debt collateral. This research concludes that despite contrary results between dividend and leverage, maturity stage firms have higher corruption level than growth stage firms. The results also indicate that dividend and leverage are reliable as private level corruption control mechanism.

The managers of growth stage firms decrease the level of leverage to increase their opportunity to expropriate free cash flow. Meanwhile firms in star stage will lower their leverage as free cash flow increase. Managers of star stage firms will decrease the level of leverage in order to minimize the obligation to pay debt holders. This finding indicates that bonding from leverage hampers the expropriation of free cash flow by managers. Meanwhile, for decline stage firms, the increasing rate of free cash flow will immediately be used as debt collateral to convince debt holders of their ability to pay leverage. This result indicates that star stage firms have higher manager corruption than decline stage firms.

Maturity stage firms use less leverage than decline stage firms when free cash flow increases. Therefore the managers have sufficient opportunities to expropriate free cash flow. Meanwhile, for decline stage firms, as free cash flow increases, they will have more convictions to use free cash flow as debt collateral. The managers of decline stage firms will have more financial resources as free cash flow increases. The research concludes that maturity stage firms have higher corruption level than decline stage firms.

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