

CORPORATE GOVERNANCE IN INDONESIAN BANKING INDUSTRY

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ABSTRACT

The Indonesian banking sector has recently suffered from bad debt and liquidity problems. The Indonesian banking crisis that has occurred since 1997 has impoverished bank's performance and reduced shareholder wealth. The deterioration of bank performance with respect to bank as an intermediation agent also affects the wealth of stakeholders, especially depositors. Agency problems cause severe effects on bank performance. This research examines agency theory arguments in the banking industry by analyzing the effect on the firm specific variables, managerial stock ownership, leverage, and dividend yield. Agency costs are proxied by earnings volatility, manager's portfolio diversification losses, bank size, and standard deviation of bank equity returns. This is among the first research to examine the determination of financial policy variables based on agency theory perspectives in the banking industry. This research examines the largest 133 Indonesian banks during the period of 2000-2004. This study suggests that bank size and a measure of the manager's portfolio diversification opportunity set affect the bank's level of managerial stock ownership, leverage, and dividends.

JEL: F23, G21

KEYWORDS: bank, agency conflict, ownership, leverage, dividend

INTRODUCTION

Several studies have examined corporate leverage and dividend policy to determine the effect of agency costs on managerial decisions. Agency costs arise from the conflict of interests among corporate managers, stockholders, and bondholders. To control agency costs, corporate managers make decisions on the appropriate mixture of outside debt and equity financing, dividend policy, and their own common stock holdings. For instance, as the debt-to-equity ratio increases, so will their own common stock holdings since the likelihood of need for additional equity falls. In general, it has been argued that leverage reduces agency costs associated with outside equity (Jensen and Meckling, 1976). Managerial stock ownership and dividends also reduce equity agency costs by lowering the boundary between owners and managers (Jensen and Meckling, 1976; Rozeff, 1982; Easterbrook, 1984).

Other agency studies in banking have focused on the expense-preference behavior of banks. For instance, Hannan (1979) and Hannan and Mavinga (1980) regress bank expenses on a set of factors which are proxies for agency effects. Their studies examine agency issues in the banking industry by analyzing the leverage and dividend policy of those firms. The technique follows Crutchley and Hansen (1989) who develops this methodology using manufacturing companies.

The banking industry provides a unique setting to examine the presence of agency costs due to the existence of public regulation. As regulation increases, less than perfectly competitive market exist and non-profit-maximizing behavior is expected. Agency problem in the banking industry is indeed more complicated, and it becomes more apparent in the case of state-owned banks. Ownership is the first determinant of agency problems in the banking industry in which principal and agents cannot be clearly defined. Theoretically, state-owned banks are owned by Indonesian people. The societies as a whole (principals) cannot manage the country themselves, but they entrust and authorize a ruling government

(agent) to manage the country, including the banks, on their behalf. The government then appoints professionals (agents) to preside over the banks. Hence, the principal-agent relationship is so lukewarm that moral hazard may be committed by the agents. Furthermore, the diffusion of ownership within large commercial banks makes the banking industry an ideal setting for agency theory testing. Indeed, the diffusion of ownership increases the cost of monitoring managerial activities and it might lead to higher agency costs. Besides the ownership problem, the banks find another agency problem. They raise money from society (creditors) in the form of deposits. The creditors in this case are indeed lacking in monitoring the owners (principals) and bankers (agents), thereby increasing the possibility of moral hazard.

Another factor that distinguishes the banking industry from the others is the existence of deposit insurance. With this safety net in place, bankers may increase their risk exposure and vary the capital structure mix accordingly. Prior deposit insurance systems created a moral hazard problem since all banks used to pay the same and flat insurance premium, regardless of the riskiness of their operations. Current risk-based premium form of deposit insurance has decreased, but yet to eliminate, this dilemma. Risky banks may use insured deposits to make higher risk investments than they otherwise may have made. Banks have an incentive to increase financial risk by issuing insured deposits to achieve higher-yield investments. Albeit its significant impact, the deposit insurance system is unfortunately not our focus in this research such that only a few explanations will be further discussed. We suggest that this particular issue is of importance to subsequent researchers on this realm to be taken into account.

This research examines the effects of four variables: (1) volatility of earnings, (2) bank size, (3) standard deviation of returns, and (4) a measure of manager's portfolio diversification, which are proxies for agency costs, on leverage, dividends, and managerial stock ownership.

Agency Theory

Agency costs arise from the fact that corporate decisions are delegated to agents (managers) who perform on behalf of principals (stockholders/bondholders). As outlined by Barnea, Haugen, and Senbet (1985), some decisions made by agents trying to maximize their own personal welfare may not be in the best interest of principals. For instance, managers may consume excessive amount of perquisites, or managers may sell securities to outsiders at undervalued prices.

According to Crutchley and Hansen (1989), agency theory suggests at least three specific ways to reduce agency costs associated with equity: (1) increasing managerial stock ownership, (2) increasing dividends, and (3) increasing leverage. Ismiyanti and Hanafi (2004) test the interdependence of leverage, dividend, and managerial ownership. They show that bonding and monitoring mechanisms through debt, dividend, and managerial ownership effectively control the agency problem. Their sample is manufacturing companies listed on the Jakarta Stock Exchange.

Managerial Stock Ownership

When managers increase their common stock ownership in the firm, their interests are more closely in accord with the interests of the owners. As managers increase their holdings of common stock of the firm, the probability that managerial decisions are in the best interest of stockholders increases and thus, equity agency costs decline. However, managers may demand higher compensation as their personal wealth becomes less diversified.

Leverage

The use of increased level of debt in the capital structure of firm reduces the need for equity and accordingly reduces the agency costs associated with equity. Again, the increased use of leverage has its costs, in this case in the form of increased agency costs associated with debt (potential conflict between stockholders and bondholders). For instance, stockholders may be encouraged to engage in high risk activities that transfer wealth from bondholders to stockholders.

Dividends

When a firm increases dividend payment, it increases the probability that it will need to raise external equity to finance such increased payment (Easterbrook, 1984; Rozeff, 1982). If external capital is raised, managerial actions will be closely monitored by outsiders (for instance, the SEC, or providers of capital), and managers might perform in the best interest of the stockholders. As in the case of increased managerial stock ownership, the use of this option is not costless since transaction costs are incurred when raising external capital.

In essence, managers choose the most appropriate financial policy mix by evaluating the benefits and costs of common stock ownership, dividend policy, and leverage. The purpose of this research is to examine the financial decisions made by the largest commercial banks, taking into account these agency concerns. The contribution of this research is that it is one of the first studies that examines the determination of financial policy variables, in light of agency concerns in the banking industry.

Predicated upon the aforementioned discussion, nine hypotheses are developed:

H₁: The relationship between earnings volatility and managerial common stock ownership is positive.

H₂: The relationship between the size of bank and managerial common stock ownership is negative.

H₃: The relationship between diversification opportunity set and managerial common stock ownership is positive.

H₄: The relationship between earnings volatility and leverage can be positive and negative.

H₅: The relationship between the size of bank and leverage is positive.

H₆: The relationship between diversification opportunity set and leverage is negative.

H₇: The relationship between earnings volatility and dividends is positive.

H₈: The relationship between the size of bank and dividends is positive.

H₉: The relationship between diversification opportunity set and dividends is negative.

RESEARCH METHOD

Sample used is 134 banks in Indonesia, listed and non-listed banks, whereas period to be observed is from 1999 to 2004, quarterly. In this research, the effect of various proxies for agency costs on the three mentioned bank policies: leverage, dividends, and ownership, will be examined. The equations below try to regress each of those policies on specific bank characteristics:

$$\text{Ownership}_j = \alpha_o + \alpha_1 \text{Earnvol}_j + \alpha_2 \text{Banksize}_j + \alpha_3 \text{Diverse}_j + e_{jo}$$

$$\text{Leverage}_j = \beta_o + \beta_1 \text{Earnvol}_j + \beta_2 \text{Banksize}_j + \beta_3 \text{Diverse}_j + e_{jl}$$

$$\text{Dividend}_j = c_o + c_1 \text{Earnvol}_j + c_2 \text{Banksize}_j + c_3 \text{Diverse}_j + e_{jd}$$

Ownership Equation

Ownership is one of the bank policies analyzed in this study. In the context of banking industry, ownership is such a complicated issue that it potentially creates agency problem. This problem is more apparent for state-owned banks. Theoretically, the owners of state-owned banks are Indonesian citizens. However, it is impossible for the people to manage the banks themselves; hence, they hand over the right to manage the banks to Indonesian government. The government subsequently appoints bankers or professionals to run the banks. Accordingly, Indonesian people as the owners obviously do not have a sufficient chance to monitor and control their agents.

Other agency studies suggest that increased earnings volatility (*Earnvol*) raises bankruptcy costs and increases the agency costs associated with debt. Consequently, a positive relationship between earnings volatility and managerial common stock ownership (*Ownership*) is expected as banks rely more on managerial equity ownership to help reduce those debt-related agency costs. In the case of banks, other factors can affect this expected relationship. For instance, even though higher earnings volatility raises bankruptcy and debt agency costs, bank's managers may not change their stock ownership because of the fact that deposit insurance might offset the effect of potential bankruptcy. As a result, the existence of deposit insurance can inhibit the possible effect of agency costs on some of the financial policy variables of commercial banks. A negative association between *Banksize* and *Ownership* is expected. As the size of the bank increases, the ability of its managers to control a significant proportion of the outstanding shares declines, the liquidity costs (of holding common stock of the bank) increase, and the ability of managerial ownership to reduce agency costs for a large number of shareholders declines.

Previous agency arguments suggest a positive relationship between the managerial common stock ownership (*Ownership*) and the proxy for manager's portfolio diversification opportunity set (*Diverse*). As the losses resulting from holding a less diversified portfolio increase, and the *Diverse* proxy decreases, managers then decrease their holdings of common stock of their own bank.

Leverage Equation

Leverage is another factor creating agency problem in the banking industry. Banks highly count on leverage, such as third-party deposits, to make money, such as lending the funds as loans. In this case, the creditors are the depositors, and they are less likely to be able to control the bankers (agents) with respect to the risk level to which the bankers create profits and values.

Earnings volatility and leverage ratio are expected to be inversely related. As the volatility of earnings increases (*Earnvol*), the bankruptcy costs of the firm increase and less debt (*Leverage*) will be used to reduce the agency costs associated with debt (Friend and Lang 1988). However, with the existence of deposit insurance, banks may be motivated to go for broke and reserve the expected relationship (Herring and Vankudre, 1987).

According to Ang, Chua, and McConnell (1982), as the size of the firm increases, the marginal administrative costs of bankruptcy decline, and the agency costs associated with debt decline. Hence, a positive relationship between *Banksize* and *Leverage* is expected. Crutchley and Hansen (1989) argue that the *Diverse* variable should have a negative effect on *Leverage*. As the managerial losses from holding a less diversified portfolio increase and the *Diverse* measure decreases, the use of leverage will be increased to try to reduce the higher agency costs associated with equity.

Dividend Equation

Some of the previous agency studies do not report a significant relationship between volatility of earnings and common stock dividends. However, Crutchley and Hansen (1989) argue that in order to reduce agency costs caused by an increase in earnings volatility (*Earnvol*), firms could rely on the use of dividends (*Dividend*) since this would trigger an increased monitoring activity by outsiders.

As Hansen (1986, 1989) points out, as the size of the firm increases, flotation costs decline and firms accordingly may utilize dividends more to control the agency costs. Hence, a positive relationship is expected between *Banksize* and *Dividend*. Crutchley and Hansen (1989) argue that the *Diverse* variable should have a negative effect on *Dividend*. As the managerial losses from holding a less diversified portfolio increase and the *Diverse* measure decreases, the use of dividends will increase to try to reduce the higher agency costs associated with equity.

Table 1 depicts the expected impact of the four proxies for agency costs on each of the three bank policies. The table summarizes the explanation for the hypothesized influence of proxies for agency costs on bank policies.

Table 1: Expected Impact of Proxies for Agency Costs on Bank Policies

Policies	Agency Cost Proxies		
	Earning Volatility	Bank Size	Diverse
Ownership	H ₁ : Positive	H ₂ : Negative	H ₃ : Positive
Leverage	H ₄ : Negative or Positive	H ₅ : Positive	H ₆ : Negative
Dividends	H ₇ : Positive	H ₈ : Positive	H ₉ : Negative

This table describes the predicted signs of each relationship between the agency cost proxies (Earnings Volatility, Bank Size, and Diverse) and policies (Ownership, Leverage, and Dividends).

Proxies for Agency Costs

To test the existence of agency costs, agency theory suggests that the following four variables should be used: (1) earnings volatility, (2) bank size, (3) manager's diversification losses, and (4) flotation costs. However, since the true measures are unobservable, proxies for the four variables are used.

The standard deviation of return on assets from 1999 to 2004 is used to measure earnings volatility, and is indicated by *Earnvol*.

$$Earnvol_j = Std \left[\frac{Ibda_j}{Assets_j} \right] \tag{1}$$

where: *Ibda* equals income before depreciation, amortization, and *Assets_j* equals total assets. As the volatility of earnings increases, the chance of bankruptcy increases, and firms will use less debt in the capital structure mix. As the costs of using debt increase (decrease), the benefits of using equity as a source of financing would increase (decrease) the proportion of equity. As a result of this shift to equity, banks would be expected to pay more dividends and managers would increase their holdings of common stock in the bank.

The size of bank (*Banksize*) is indicated by ratio of fixed asset to bank's total assets.

$$Banksiz_e_j = \frac{Fixed\ assets_j}{Total\ assets_j} \quad (2)$$

As the size of the bank increases, managers would be expected to hold a smaller percentage of common stock due to a substantial increase in the dollar amount of the required investment. Being faced with such a dramatic increase in the amount of initial purchase, managers would hold a smaller proportion of the common stock outstanding, as the size of the firm increases. In addition, for a given debt level, as the size of the bank's assets grows, the potential for bankruptcy declines, allowing an increase in the mix of debt to equity. Finally, larger banks have greater access to financial markets to raise additional equity funds, leading to lower expected flotation costs for new common stock and being a justification for an increased dividend payout ratio.

The bank's equity risk premium, as defined below, divided by total equity risk, is used as a proxy measure for diversification benefits surrendered by managers investing in a given bank's equity. This variable, *Diverse*, is shown by:

$$Diverse_j = \frac{Equity\ Return_j - R_f}{Equitypersshare_j} \quad (3)$$

where: $EquityReturn_j$ equals to equity return per share (quarterly data) from 1999 to 2004 data, R_f equals risk-free return, $Equitypersshare_j$ equals the equity value per share (quarterly data) over the same six-year period.

The underlying basis for this variable is the portfolio theory, which postulates that as managers increase (decrease) their holdings of a particular firm's equity, certain costs (benefits) should occur. Another variable that relates to agency costs is the flotation costs of issuing common stock. The larger the equity return of the stock, the higher the flotation costs of issuing additional common stock will be, and managers would be expected to pay out less dividend to avoid this outcome. The financial market's overall perception of high volatility as a signal of high risk is the justification for retaining more funds and paying out less of the earnings stream as dividends. Historical flotation costs, if observable, are the preferred measure. However, this variable is not readily available, and is instead proxied by equity return of quarterly data, as defined in Equation (3) and the size of bank (*Banksiz_e_j*), as defined in Equation (2).

Financial Policy Variables

The three financial policy variables are: (1) common stock ownership by management (*Ownership*), (2) the outside leverage ratio (*Leverage*), and (3) the dividends-to-common equity ratio (*Dividend*). Firm's common stock held by officers and directors is obtained using the following values:

$$Ownership_j = \frac{managerial\ ownership}{Totsharesjn} \quad (4)$$

where: $O\&DShares_{jn}$ equals the total number of shares held by officers and directors (*Disclosure*); $Totsharesjn$ equals the total number of shares of common stock outstanding (*Disclosure*).

The degree of outside leverage, ratio of outside debt to total outside financing (Jensen and Meckling 1976) is:

$$Leverage = \frac{L_t debt_{jn}}{L_t debt_{jn} + M_{VCSjn}^o} \tag{5}$$

where: $L_t debt_{jn}$ equals total long-term debt, M_{VCSjn}^o equals market value of common stock held by non-managers. A total dividend to the total market value of common stock is found by:

$$Dividend_j = \frac{Comdiv_{jn}}{Tot.shares_{jn} + Mprices_{jn}} \tag{6}$$

where: $Comdiv_{jn}$ equals total common stock cash dividends, and $Mprices_{jn}$ equals year-end closing price of common stock.

RESULTS

This research employs the multiple linear regressions to examine nine hypotheses. Each variable was preliminarily tested to find out whether any violations against classical assumptions prevail. The following table describes the research variables.

Table 2: Descriptive Results

Year	MOWN	Leverage	Dividend	Bank Size	Earnvol	Diverse
Min	0	0	0.0306	0.5338	0.7268	0
Max	0.245	0.9101	0.3769	0.9569	0.856	0.8589
Mean	0.0032	0.7534	0.2183	0.6941	0.618	0.4853
Std	0.0278	0.1768	0.19	0.3073	0.0611	0.2926

Table 2 shows the descriptive statistics of variables observed. We calculate minimum, maximum, mean, and standard deviation values for MOWN, Leverage, Dividends, Bank Size, and Diverse variables.

MOWN variable (managerial ownership) has a maximum value of 24.5% with an average of 0.32%. Bank size variable reaches the lowest minimum score of 95.69% compared to that of Earnings Volatility variable of 72.68% and that of Dividend variable of 3.06%. Bank size has a relatively high standard deviation of 30.73%, followed by the standard deviation of Diverse (29.26%), that of Dividend variable of 19%, that of Leverage variable of 17.68%, that of Earnings Volatility of 6.11%, and that of Managerial Ownership variable of 2.78%.

Table 3 below shows the results of linear regression with three equations in order to examine the nine research hypotheses. The three linear regression equations are tested to find F-statistics. The findings show that R^2 of Managerial Ownership equation is 11.6% while that of Leverage equation is 19.6%, and that of Dividend equation is 13%. The table indicates that the influence of earnings volatility on managerial ownership (H_1) is negative, and has a value of -3.735, which is insignificant. It means that the finding does not fulfill the prediction although the result per se is not significant. Meanwhile, bank size negatively and significantly influences managerial ownership (H_2) with a value of -0.377, thereby corresponding with the prediction. Subsequently, the effect of diversification on managerial ownership (H_3) is negative with a value of -0.121, meaning that the finding does not fit with the prediction although the finding itself is not significant.

The influence of earnings volatility on managerial ownership (H_4) with a value of 0.010 is significant and in line with the prediction. Meanwhile, the effect of bank size on managerial ownership (H_5) has a value

of 0.011 and is significant, which corresponds with the predicted direction. Furthermore, diversification positively influences managerial ownership (H₆) with a value of 0.006. This finding does not fulfill the prediction; nevertheless, the result is not significant.

The influence of earnings volatility on dividend (H₇) with a value of 8.652 is significant and in line with the prediction. However, the effect of bank size on dividend (H₈) with a value of -0,132 does not correspond with the prediction although the result per se is not significant. Eventually, diversification positively influences dividend (H₉) with a value of 0.322. It indicates that the result does not meet the prediction although the result is not significant.

Table 3: Regression Results

Variable	Predicted	Coefficient	
Managerial Ownership			
Constant		-4.083	*
H ₁ Earning Volatility	+	-3.735	
H ₂ Bank Size	-	-0.377	**
H ₃ Diverse	+	-0.121	
F		10.648	***
R ²		11.6%	
Leverage			
Constant		0.927	***
H ₄ Earning Volatility	+	0.010	**
H ₅ Bank Size	+	0.011	**
H ₆ Diverse	-	0.006	
F		7.621	***
R ²		19.6%	
Dividend			
Constant		-2.184	***
H ₇ Earning Volatility	+	8.652	***
H ₈ Bank Size	+	-0.132	
H ₉ Diverse	-	0.322	
F		27.425	***
R ²		13%	

Table 3 shows the empirical findings. For the examination of Managerial Ownership, Bank Size variable indicates a negatively significant relationship. For Leverage, Earnings Volatility and Bank Size show positively significant coefficients. Meanwhile, for Dividends, Earnings Volatility variable yields a positively significant relationship. ***, **, and * indicate significance at the 1, 5 and 10 percent levels respectively.

DISCUSSION

This study documents that most of the hypotheses examined yield findings that are significant and in line with the predicted directions, whereas hypotheses that result in findings that do not meet the prediction are statistically insignificant. Hypothesis 1 proves that earnings volatility does not influence managerial ownership. Practically, in a bank with high earnings volatility, managers will reduce their managerial ownership. It indicates that executives also pay attention to the risk of bank should they invest in the company they are helming.

The examination result of Hypothesis 2 shows that bank size negatively influences managerial ownership, and this finding is evidenced to be statistically significant. The higher the bank size, the higher the incentives for management to decrease their managerial ownership. This evidence shows that the gains from ownership are lower than the managerial compensation earned on account of increased company size.

The test of Hypothesis 3 indicates that the effect of diversification on managerial ownership is negative and not significant. This practically proves that banks with high-risk premium level will render management less willing to hold managerial ownership. The management has a high tendency to avoid banks having high-risk premium since engaging in and owning such banks will directly lead to higher risk assumed. The management's low capability of diversification is the main rationale behind the managerial reluctance to own banks faced with high-risk premium.

The examination of Hypothesis 4 shows that banks with high earnings volatility are inclined to have a high leverage level. This finding substantiates the argument that highly risky banks also employ huge leverage. Hence, banking industry, which is specifically renowned as a high leverage industry, will assume a higher level of risk than will other industries.

Subsequently, the examination finding of Hypothesis 5 describes that the effect of bank size on leverage is positive and significant. This result also enhances the argument that banking industry which typically has big-size companies will be supported by a high leverage level. Accordingly, this finding is also in line with the argument from Hypothesis 4 that the banking industry is an industry anchored by a high debt ratio, which is a common practice.

The result of Hypothesis 6 testing shows that the influence of diversification opportunity set (Diverse) on leverage is practically positive; however, this result is statistically insignificant. This finding may be caused by high-risk premium of banks, as the banking industry is a high-leverage industry.

The examination of Hypothesis 7 shows that earnings volatility has a positive influence on dividend. This causal relationship fits with the prediction, meaning that stockholders will expect high dividends as the compensation for the high risk of banks.

The test of Hypothesis 8 finds that bank size has a significantly negative influence on dividend. It indicates that bank size is only supported by the level of leverage (in line with H₅) such that dividend payment will be low. The majority of cash is utilized for fulfilling the liabilities to pay back leverage such that it does not suffice to pay dividends.

Finally, the finding of Hypothesis 9 testing shows that the level of diversification opportunity set (Diverse) positively and significantly influences dividend. This indicates that a bank having a high-risk premium will distribute high dividends. Stockholders expect a compensation for the high level of risk through high dividend payment. This finding is consistent with the result of Hypothesis 7 testing.

CONCLUSIONS

This paper examines agency relationships in banks. This research finds that banks' high level of risk is mostly contributed by the high level of leverage. High risk premiums must be compensated by high dividend payment. Several hypotheses are indeed insignificant; nevertheless, the evidence from hypotheses testing substantiates each other.

Bank size is influenced by the level of leverage, which then has a positive comparison and direction with banking risk. The banking industry that is typically characterized by high leverage virtually influences the size and risk of banks. The three variables influence each other, and have positive relationships. Subsequent research should examine the simultaneous relationships among leverage, earnings volatility, and dividend. It is suggested that further research include larger sample of data to enhance generalizability of findings in the banking industry, considering that this study's sample only covers the period of 1999-2004.

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