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**DOES DEBT AFFECT FIRM FINANCIAL PERFORMANCE?  
THE ROLE OF DEBT ON CORPORATE GOVERNANCE IN  
INDONESIA<sup>\*)</sup>**

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**DOES DEBT AFFECT FIRM FINANCIAL PERFORMANCE?  
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**Abstract**

This research addresses main question of the conditions of debt-constraint expropriation and debt-facilitate expropriation, and the difference between those conditions on type of group ownership (group or no group-affiliate). Agency theory predicts that debt is bonding and monitoring mechanism for managers' perquisites action. Expropriation of minority shareholders by majority shareholders hurts good corporate governance practices. The expropriation also hurts debtholders value. The research argues that the use of debt will minimize the expropriation level and maintain certain control to managers and majority shareholders, on behalf of minority shareholders and debtholders. The problem of majority versus minority and debtholders spreads widely in Indonesia. This research conducts analytical and statistical methods to examine the roles of debt policy as mechanism of good corporate governance practices in Indonesia. This research argues that debt has difference effect on financial performance based on certain debt characteristic. Two characteristics of debt are debt-constraint expropriation (DCE) and debt-facilitate expropriation (DFE). Different types of ownership, which are group and no group-affiliate, are also examined to support the main issues of DCE and DFE. The result will be useful for economic policy makers; firms level policy makers, investors, academician, and researchers in the area of finance, social science, and humanities. The research tests the main question with four hypotheses that test using ordinary least squares (OLS) regression and Wald test for coefficient test. The result shows support for differences in effect on debt to performance for DCE (positive effect) and DFE (negative effect). On DCE, no group-affiliate firms have higher positive effect of debt on performance than group-affiliate firms are. However, on DFE due to risk reduction mechanism, group-affiliate firms have less negative effect of debt on performance than no group-affiliate firms are.

Keyword: *constraint, facilitate, debt, performance, agency, group*

## **1. INTRODUCTION**

The role of debt in corporate governance depends on how governance is exercised, i.e., on the structure of corporate ownership and control. Default on corporate debt might not affect the professional manager's net worth, but would certainly devastate his reputation and career. This would not be a concern for the controlling shareholder of a corporate group, who employs himself or herself as top manager and can borrow through a group affiliate from a group bank. Consequently, debt could constraint the expropriation of dispersed shareholders by professional managers, as in the U.S., yet it could facilitate the expropriation of minority shareholders by the controlling shareholders of the corporate groups that dominate the business scene in Indonesia.

This research is considering the ownership, control and debt of all listed corporations with credible accounting data of the firms listed in Indonesia. This research argues that capital market in Indonesia is ineffective and more vulnerable to expropriation as well as more levered. The condition is giving the controlling shareholder more expropriations of the resources without direct control from debtholders.

Indonesian firms have a controlling block of shares held by major shareholder. The condition supports the argument that the key agency problem is between the controlling (majority) and minority shareholders. The controlling shareholder often exerts control through a pyramid structure. Controlling shareholders have control rights in firms in excess of their control right, and they also participate in management (La Porta, Silanes, and Shleifer, 1999). Wolfenzon

(1998) argues that pyramids should be also more common in countries with poor shareholders protection. Mahadwartha (2004) tested the entrenchment and alignment hypothesis for internal institutional ownership<sup>1</sup> in Indonesia and found that alignment mechanism is higher for high internal institutional ownership firm.

In their pioneering analysis of the agency problem between professional managers and dispersed shareholders, Jensen and Meckling (1976) argued that debt constrains managerial expropriation by imposing fixed obligations on corporate cash flow. Jensen (1986, and 1989) further examined this argument in the context of free cash flow, debt, and leveraged buyouts. Jensen argues that free cash flow, debt, and leverage buyout forced managers to disgorge their corporations' free cash flow, replacing equity with debt.<sup>2</sup>

Other constraint for debt to impose on managerial expropriation in the U.S. is the role of managers' reputation in the labor market (Fama and Jensen, 1983a, 1983b). Although the manager is not personally liable for his corporation's debts, default would trigger winding-up proceedings that would force him to search for re-employment, just when his reputation had been crippled. However, debt could play a different role in corporate governance if managers whose reputation and career are not tied specifically to the corporation liable for the leverage made the key decisions.

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<sup>1</sup> Internal institutional ownership is term introduced by Mahadwartha (2004) to describe the uniqueness of ownership in Indonesia. Internal institutional ownership is ownership held by regular business institution, and not by financial firms.

<sup>2</sup> Easterbrook (1984) argues that debt forces managers to be accountable to the external capital market. Lang et al (1996) document that debt curtails investment by firms with poor prospects, and that leverage increases when growth opportunities are less (see also Kim and Sorenson (1986), Titman and Wessels (1988)). Maloney et al (1993) document that leverage improves managerial decision making on key issues like acquisitions.

In contrast to the US firms, Indonesian firms have a controlling block of shares held by major shareholder. The condition supports the argument that the key agency problem is between the controlling (majority) and minority shareholders. The controlling shareholder often exerts control through a pyramid structure. Controlling shareholders have control rights in firms in excess of their control right, and they also participate in management (La Porta, Silanes, and Shleifer, 1999).

Wolfenzon (1998) argues that pyramids should be also more common in countries with poor shareholders protection. Mahadwartha (2004) argued that firm with high internal institution will better control for managers perquisites and hopefully protect debtholders interest. However, the main question focuses on the interest of majority shareholders and minority shareholders. Internal institutional ownership is usually representation of majority shareholders or founder shareholders.

To illustrate the expropriation, this research shows as follows: If the controlling shareholder owns 100% of corporation X, that owns 60% of corporation Y, that owns 25% of corporation Z, then its ownership rights (O) in Z are  $O=100\% \times 60\% \times 25\% =15\%$ , yet, through its majority control (C) of X and Y, its control rights in Z are  $C=25\%$ , usually enough for effective control. By directing Z to buy goods or assets from X at a premium, the controlling shareholder expropriates 100% - 15% of the premium from Z's other shareholders.

Claessens, Djankov, and Lang 1999a, and 1999b; and La Porta, Silanes, Shleifer, and Vishny, 2000 introduced the measurement of an affiliate's

vulnerability to such an expropriation by the ratio  $O/C$ . The  $O/C$  ratio is controlling shareholder's ownership rights  $O$  (defined as its percentage claim on the affiliate's cash flows) to its control rights  $C$  (calculated by identifying the weakest link in each control chain and linking it to the controlling shareholder, then summing the percentage control rights across these links). A low  $O/C$  ratio indicates that the controlling shareholder has the incentive and the ability to use unfairly-priced transactions to shift cash from the affiliation to affiliates higher up the pyramid, in which it has higher ownership rights.

Within a corporate pyramid, increased indebtedness by an affiliate needs not constraint expropriation by the controlling shareholder because the leverage can be rolled over by group banks, recycled into external loans guaranteed by other affiliates, or reshuffled ahead of auditors to other affiliates by intra-group loans or transfer pricing. Even a default by the affiliate needs not damage the reputation of the manager/controllers if the affiliation is an obscure control webs passing through several layers of the pyramid.

In any case, a manager can shrug off reputation of controlling shareholder who employs himself or herself within the pyramid, in contrast to the severe problems that default would cause a professional manager thrown onto the external manager market tainted by clear responsibility for the defaulting firm. Thus, the higher fixed obligations will not constraint the controlling shareholder more tightly. On the contrary, it could facilitate expropriation of the affiliate by

allowing the controlling shareholder to control more resource without diluting his control stake or assuming more liabilities directly.<sup>3</sup>

Those expropriations can include not only minority shareholders, but also creditors left with uncollectible leverage and tax payers forced to bail out the financial system endangered thereby. This research seeks to distinguish the relationship of debt to firm performance based on the conditions of Debt-Constraint Expropriation (DCE) and Debt-Facilitate Expropriation (DFE), and using the empirical relationships that estimates in each condition of group-affiliate and no group-affiliate firms. Testing the argument requires an assumption that debt on DCE and DFE has different purposes based on firm's interest of using debt. This determines whether debt decisions are dominated by the concerns of informed external suppliers of capital or by the interests of the controlling shareholder.

This research argues that governance mechanisms can reduce default risk by mitigating agency costs and monitoring managerial performance and by reducing information asymmetry between the firm and the lenders. Corporate governance plays a significant role on shareholders, and debtholders protection. Debt as monitoring mechanism on agency conflict (Ismiyanti and Hanafi, 2004) is debtholders representation of interest on firm financial performance. Meanwhile, corporate governance is also concerned with the conflict of majority and minority

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<sup>3</sup> In a U.S. context, Harris and Raviv (1988) and Stulz (1988) argue that controlling shareholders may use leverage to inflate the voting power of their shares, and reduce the discipline of the market for corporate control. Stulz (1988) shows that managers who value control very highly rely primarily on debt financing in order to minimize dilution of their equity stakes in the firm, thus making the firm less vulnerable to hostile takeover.



shareholders, and debt as governance mechanism will reduce the conflict especially on the conditions of debt as constraint expropriation.

Indonesia confirms that capital market institutions are ineffective so that controlling shareholders (i) dominate decisions on debt, at least amongst group-affiliate firm, and (ii) exploit this to increase the debt of firm more vulnerable to expropriation, presumably to acquire more resources to expropriate. Who lends to Indonesia corporations that are more vulnerable to expropriation? Loans could be from “related parties” sharing a controlling shareholder with the borrower. The facts brought the idea to also test the condition of group and no group-affiliate.

### **1.1. Research Problems and Objectives**

As described on the introduction section, this research has several problems to address. The problems include testing debt effect on firm financial performance, and the effect based on debt-constraint and debt-facilitate expropriation, and the issues regarding group and no group-affiliate. Details of research problems are:

- a. Is the effect of debt on firm financial performance positive when debt-constraint expropriation (DCE)?
- b. Is the effect of debt on firm financial performance negative when debt-facilitate expropriation (DFE)?
- c. Is the effect of debt on firm financial performance different between group-affiliate and no group-affiliate, if DCE exist?
- d. Is the effect of debt on firm financial performance different between group-affiliate and no group-affiliate, if DFE exist?

## **1.2. Research Originals**

The arguments and issues in this study are different from previous studies in some points of view. First, previous studies discussing debt as governance mechanism in Indonesian are lack of support on the role of debt as governance mechanism. Ismiyanti and Hanafi (2004); Mahadwartha (2002); and Mahadwartha (2004) focused on the interdependence relationship between financial policies such as debt, dividend, and investment.

This research focuses on several specific conditions that matters on the issues of debt as governance mechanism such as expropriation. Second, while there is a great deal of empirical research on corporate governance, very little of it concerns the behavior of debt as constraint or facilitate expropriation, or the condition that supports such an expropriation. This study attempts to investigate these behaviors in empirical study on Indonesian listed firms.

## **1.3. Research Contributions**

Transparency international published their corruption perception index on 2005, and Indonesia's score is 2.2 (scale of 10). The level of corruptions in Indonesia is very high and in the end will degenerate economic growth. Only Malaysia with score 5.1, and Singapore with 9.4 have better score than other Asian countries. Meanwhile Thailand with 3.8, and Philippines with 2.5 also shows mediocre and high corruption level.

This research will help government, investors and regulators to examine in scientific approach the corporate governance implementation as tools to control firm's level corruptions that could hurt shareholders and investors personal wealth.

Good corporate governance will support the mechanism to control corruptions on the firm level. Indonesia will be prospective and valuable as an investment destination (investment in capital market and foreign direct investment).

Good corporate governance mechanism is essential to help ensure transparency in the conduct of private business. By instigating effective controls and greater transparency in their actions, companies can help address the supply side of corruption, in which money, gifts or other forms of inducement are provided or promised to achieve certain advantages. The results of this research will contribute to improve the understanding about corporate governance practices on debt policy, the behavior of debt on constraint or facilitate of expropriation and the effect of affiliated ownership issues on debt policy. The empirical results would also provide general indicators of corporate governance, which are useful for both regulator and business people in making debt policy decision as well as in providing certain role of debt on group and no group-affiliate.

Investors will find this research very useful to arrange an investment strategy. The result also helps investors to choose between firms with the best good corporate governance practices especially related to debt as constraint of expropriation. Good corporate governance will enhance the quality of investors' investment value; their quality of life and investment activity. Good governance mechanism such as debt-constraint mechanism also refers to better investors' protections, and the effect of better protections will support the mechanism to minimize corruptions in Indonesia.

The rest of this research study is organized as follows. Part 2 outlines literature study of the role of debt on corporate governance mechanism. This section also presents conceptual framework and develops hypotheses. Part 3 describes research method that consists of sample classification and data requirement, measurement variables and analysis technique. Part 4 contains result and discussion.

## **2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

In this section, the research lays out the theoretical arguments motivating the empirical analysis on the effect of debt on financial performance. The argument will be followed by conceptual framework and hypotheses to be tested.

### **2.1. The Role of Debt in the Governance Mechanism**

Debt policy became a substantial issue on corporate finance since Modigliani and Miller (1958) argued on debt irrelevance to firm value. Their rigid assumption brought many research after them that lessen those assumption. Several theory on corporate finance (Agency Theory, Pecking Order Theory, Signaling Theory, etc.) embrace their argument when lessen several Modigliani and Miller assumption. Modigliani and Miller (1963) complete their argument that tax saving mechanism will increase firm value as debt increase. This research based its argument on Modigliani and Miller (1963) and combined with Agency Theory and recent phenomena on corporate governance practices.

Agency Theory argued that debt would bond expropriation on firm value, and lessen agency conflict between managers and shareholders. As Jensen and

Meckling (1976) suggest that agency cost is a trade off model, meaning that if certain agency cost is lower (i.e. agency cost of equity), then other agency cost will rise (i.e. agency cost of debt). As firms more depended on debt as sources of funds, they become more constraint by debt agreement. The agreement was made to constraint managers and shareholders action to expropriate firm wealth for their own interest. Bondholders or debtholders more highly concern on firm ability to repay their obligation. This research calls the situation as debt-constraint expropriation (DCE).

Other contradicting situations also emerge from debt policy. Debt policy brought debtholders to concern on their investment. On the contrary, managers and shareholders also concern on how to shift their business risk to debtholders. As the result of such thought, managers and shareholders could expropriate cash from debt for their own interest and left debtholders bear all the cost. Firm with enough cash flow as internal sources of fund will use debt instead to support their investment opportunity. Debtholders who are willing to support such a behavior argue that they support a prospective firm with reliable investment opportunity, and internal sources. Those debtholders bear the cost if managers and shareholders exploit debtholders spirit, and use their internal cash flow for their own interest. This research suggests that the condition calls debt-facilitate expropriation (DFE).

## **2.2. Group-affiliate and No Group-Affiliate Phenomena**

Ownership structure of firm also will be divided as group and no group-affiliate firm. Group-affiliate firm is a firm with internal institutional ownership

that belongs to the same holding firm (group). No group-affiliate is a stand alone firm with no relation to other firm or holding company. Mahadwartha (2004) introduced the term “internal institutional ownership” to differentiate ownership of institution such as insurance company, mutual fund managers, and other financial services firms, with business institution in non-financial sectors. Indonesian listed firm is known as family firm, because majority of firm belongs to founder’s shareholders who have more than 50% ownership. Their ownership is usually on behalf of business institution instead of personal. The facts support the argument that Indonesian firms (and other developing countries) consist of pyramid structure ownership (La Porta, Lopez-de-Silanes, and Shleifer, 1999).

Pyramid structure is usually consisting of several web-connecting firms that end up on behalf of personal ownership calls “ultimate shareholders”. This research is not focusing on ultimate shareholders phenomena but on web-connecting firm or group and no group-affiliate.

### **2.3. Debt-Constraint Expropriation and Debt-Facilitate Expropriation**

This research argues that the effect of debt on financial performance moderated by debt characteristic on the expropriation of free cash flow. Firm with Debt-Constraint Expropriation (DCE) will have positive magnitude of debt to financial performance, meanwhile firm with Debt-Facilitates Expropriation (DFE) has a negative magnitude. This research based the argument on the assumption that debt-constraint policy has better expropriation control mechanism than debt-facilitate expropriation. This research also argues that corporate governance

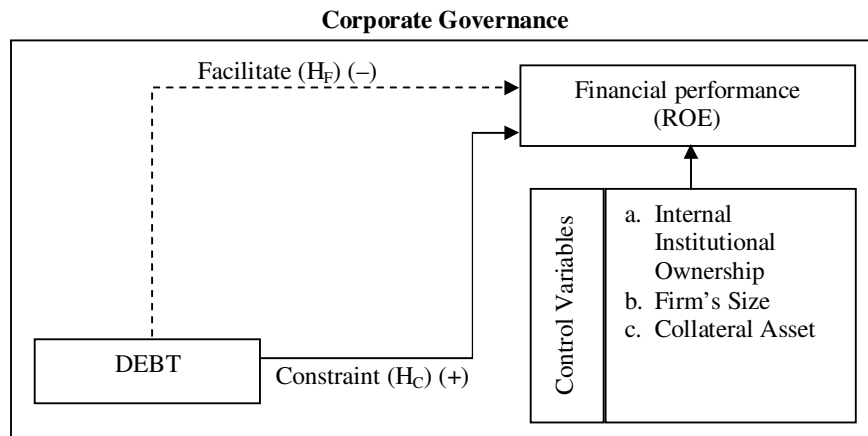
embrace debt as value relevance for shareholders and debtholders as well. The hypotheses for DCE ( $H_C$ ) and DFE ( $H_F$ ) are:

$H_C$ : The effect of debt on financial performance in case of debt-constraint expropriation is positive.

$H_F$ : The effect of debt on financial performance in case of debt-facilitate expropriation is negative.

This research only uses sample with high free cash flow (FCF) to ensure that the sample can be compared between high FCF with high and low debt level. Categorization of DCE and DFE is based on FCF and debt level. Details of measurement are described on methods and analysis section.

The research framework for DCE and DFE conditions is as follows:



**Figure 1. Research Framework for DCE and DFE Conditions**

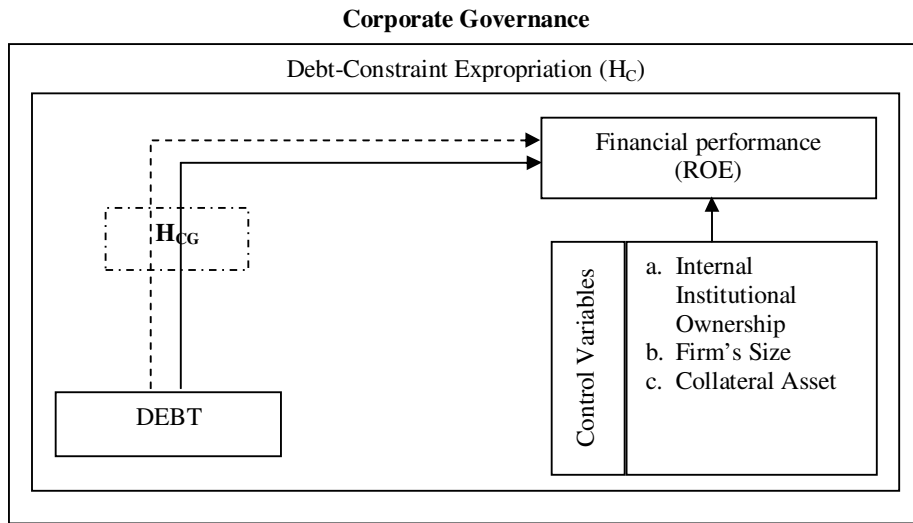
#### **2.4. Group-affiliate and No group-affiliate Hypotheses**

As mentioned above,  $H_C$  hypothesis will test on two different ownership conditions, which are group-affiliate and no group-affiliate. This research argues that DCE's firm with group-affiliate will have less positive effect of debts on

financial performance than no group-affiliate firm. The argument is based on assumption that group-affiliate firm will have higher chance to be expropriated by other firm in the same group, although they have debt to constraint such an expropriation. Meanwhile, no group-affiliate firms are relatively free from expropriation and have debt to constraint such an expropriation. The hypothesis for DCE ( $H_{CG}$ ) on group and no group-affiliate is:

$H_{CG}$ : On DCE condition, the effect of debt on financial performance of group-affiliate firm is positive and lower than no group-affiliate firm.

The research framework for DCE on Group and No group-affiliate is:



**Figure 2. Research Framework for DCE on Group and No group-affiliate**

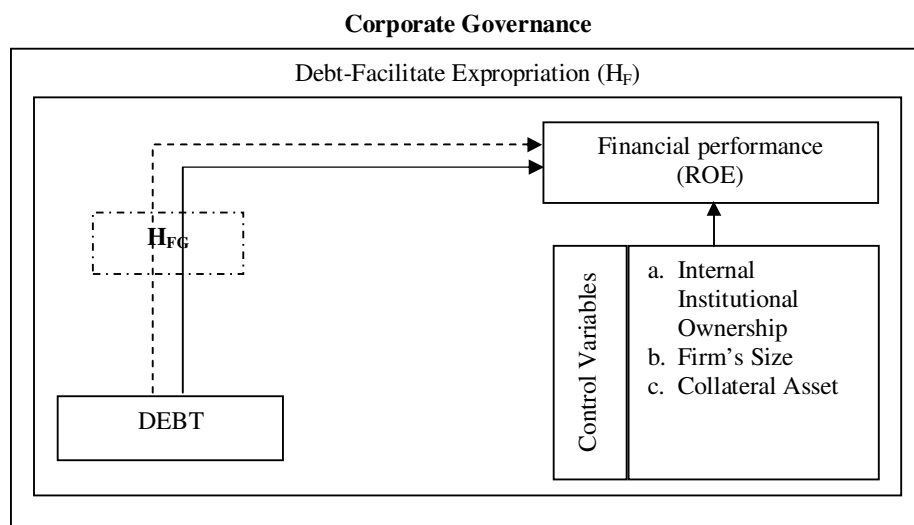
This research argues that DFE will have negative sign on the effect of debt on financial performance. The magnitude of negative effect is higher for group-affiliate than no group-affiliate. The worst condition on DFE becomes severe if the firm is in group-affiliate category, because more chance their resources will expropriate by other parties such as shareholders and managers. Corporate



governance mechanism fails to control such an expropriation because the conditions created to support expropriation on firm resources. The hypothesis of DFE ( $H_{FG}$ ) on group and no group-affiliate is:

$H_{FG}$ : On DFE condition, the effect of debt on financial performance of group-affiliate firm is negative and higher than no group-affiliate firm<sup>4</sup>.

The research framework for DFE on Group and No group-affiliate is:



**Figure 3. Research Framework for DFE on Group and No group-affiliate**

### 3. RESEARCH METHOD

#### 3.1. Data and Sample

Samples are non-financial Indonesian listed firms with period of analysis from 1995 until 2004. This research will explore several statistical test such as linear regression and Wald test. All statistical tests are based on classical statistic assumptions pre-requirement.

<sup>4</sup> The word “higher” means the negative effect of debt to financial performance, i.e. the effect of -5 is higher than -1.

This research eliminates corporations reporting data that are not credible (i.e., negative debt or negative sales) and corporations with missing data on short term debt, long term debt, book or market value of equity, total sales, sales, earning, or income taxes. The ownership structure data on these corporations are taken from Indonesian Capital Market Directory and the network of indirect ownership via other corporations is traced back in order to identify group and no group-affiliate of each firm.

Consolidation forces the assets and liabilities of each subsidiary to be recognized in the accounts of the parent corporation. This can significantly affect the measurement. Rajan and Zingales (1995) noted that, in the year a corporation consolidates its accounts, its debt-to-capital ratio increases, on average, by 5% over the previous year. This suggests that if the sample included a parent corporation with unconsolidated accounts, then this research would typically be under-recording its leverage compared to a similar corporation with consolidated accounts.

This could bias our results, but not in a direction that is easy to predict. To ensure consistency in the reporting of debt, this research eliminates all corporations reporting unconsolidated accounts, as well as corporations that provided no information about whether or not their accounts are consolidated. This elimination biases our empirical results against the conclusion on debt-facilitate expropriation. This is because some eliminated corporations could have been using debt booked to subsidiaries to expropriate, while avoiding account consolidation legitimately or illegitimately.

This research does not take into account debt between listed corporations and unlisted subsidiaries that it controls in the accounting sense, which is eliminated by consolidation; such a debt is not relevant to agency issues since it is hardly likely to constraint the management of the parent corporation, or to facilitate expropriation in view of its transparency in the consolidated accounts. This research also excludes the unlisted subsidiaries of corporations reporting consolidated accounts, these subsidiaries usually have a few block shareholders and thus are not exposed to the agency problems that are our focus. Non-financial companies do not consolidate account with financial firms, so our debt measures include loans from group bank and financial companies.

### **3.2. Variables Description**

#### **3.2.1. DCE and DFE Criteria for Sub-Sample**

This research uses sample with high FCF only. This research divides between high FCF and low FCF using median value of FCF. Then, sample of high FCF will divide between Debt-Constraint Expropriation (DCE), and Debt-Facilitates Expropriation (DFE). This research also uses median value to divide between high and low debt level. Following Table shows categorization for DCE and DCE.

**Table 1. DCE and DFE Criteria**

Samples are divided into two categories based on DCE and DFE criteria. DCE = Debt-Constraint Expropriation, and DFE = Debt-Facilitates Expropriation. The category is mutually exclusive. The criteria align with 1995 to 2004 period of research analysis. Free Cash Flow (FCF) proxies from Hackel, Livnat, and Rai (1996). Debt is adjusted with Total Assets (TA).

<b>FCF</b>	<b>Debt/TA</b>	<b>Category</b>
High FCF	High Debt	DFE
High FCF	Low Debt	DCE

### 3.2.2. Group-Affiliate and No Group-Affiliate

A corporation is a “group-affiliate” if it meets one of the four criteria described below. The criteria are:

- a. It is controlled by shareholder(s) via pyramiding, i.e., indirectly through another corporation in the sample;
- b. It is controlling another corporation in the sample;
- c. It has the same controlling shareholder as at least one other corporation in the sample;
- d. It has controlling shareholder, which is corporation or financial institution that is “widely-held” or no shareholder holds 10% or more of the control rights.<sup>5</sup>

Group affiliate variable uses dummy variable of  $G = 1$  for the corporation in group-affiliate; and  $G = 0$  for no-group affiliate firm. Dummy variable ( $G$ ) will use to establish interaction variable of debt policy. Interaction variable debt and dummy group ( $DG$ ) is used to test  $H_{CG}$  and  $H_{FG}$ .

### 3.2.3. Free Cash Flow

This study used Hackel, Livnat, and Rai (1996) measurement of FCF with discretionary methods divided by total assets.

$$FCF = \frac{TFCF + DOCO + DCEX}{\text{Total Assets}}$$

$$TFCF = (OCR - OCO) - CEX$$

OCR = *operating cash inflows*

OCO = *operating cash outflows*

CEX = *capital expenditures*

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<sup>5</sup> Such corporations have the same incentive and opportunity to manipulate the corporations that they control as the controlling shareholder of a corporate pyramid. The same definition was used in Claessens et al. (1999b). Khanna and Palepu (2000) use a different definition.

$$\begin{aligned} \text{DOCO} &= (\text{OCO growth} - \text{sales growth}) * (0,2 * \text{OCO}) \\ \text{DCEX} &= (\text{CEX growth} - \text{cost of goods sold growth}) * \text{CEX} \\ \text{OCO growth} &= (\text{OCO}_t - \text{OCO}_{t-1}) / \text{OCO}_{t-1} \\ \text{Sales growth} &= (\text{Sales}_t - \text{Sales}_{t-1}) / \text{Sales}_{t-1} \\ \text{CEX growth} &= (\text{CEX}_t - \text{CEX}_{t-1}) / \text{CEX}_{t-1} \\ \text{Cost of goods sold growth (COGS)} &= (\text{COGS}_t - \text{COGS}_{t-1}) / \text{COGS}_{t-1} \end{aligned}$$

### 3.2.4. Debt

This research defines debt as the sum of long-term and short-term financial debt divided by total asset. This excludes non-financial liabilities, such as accounts payable, provisions for pensions, deferred taxes, and other provisions for future liabilities.

$$\text{Debt} = \frac{\text{Shortterm Debt} + \text{Longterm Debt}}{\text{Total Assets}}$$

This research adjusts each debt ratios for industry and country effects by subtracting the median of the ratio for sample firm in the same industry. This leads to the corporation's industry-adjusted ratios. This adjustment eliminates biases from the industry-specificity of accounting ratios, and inter-firm differences in the way in which accounting items are treated<sup>6</sup> (La Porta et al., 1997, 1998, 1999, 2000) the effectiveness of the bankruptcy system (Harris and Raviv, 1992; Franks and Torous, 1993); and the tax system (Miller, 1977; King and Fullerton, 1984; Graham, 1996). Thus, this research controls for factors affecting the debt of a specific industry to test whether debt is generally affected by a corporation's vulnerability to expropriation.

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<sup>6</sup> See Rajan and Zingales (1995) for a discussion of these practices, and an analysis of differences in leverage across the G-7 countries.

### 3.2.5. Financial Performance

This research uses return on equity as financial performance proxy. Return on equity is performance indicator that is more on the shareholders side. Shareholders concern on their investment on the firm, which is represented by the return on equity. The equation for return on equity is:

$$ROE = \frac{EAT}{Equity}$$

Where; EAT = earnings after tax; Equity = book value of equity

### 3.3. Control Variables

This research uses three control variables (Internal Institutional Ownership, Firm's Size, and Collateral Asset). The variables are as follows:

- a. **Internal institutional ownership:** Firm with high internal institutional ownership has higher performance than low internal institutional ownership (Mahadwartha, 2004).
- b. **Firm Size:** This is measured by the logarithm of the corporation's total assets,  $\ln(TA)$ . Rajan and Zingales (1995) argue that size could proxy for the probability of default, which is higher for smaller firms. On the other hand, larger, more visible firms suffer less from informational asymmetry, have easier access to equity markets and, therefore, should be less levered, and higher financial performance. Mixed evidence is provided by Hoshi, Scharfstein and Kashyap (1990), Kester (1986), Kim and Sorensen (1986), and Rajan and Zingales (1995).

- c. **Collateral Asset:** Asset tangibility is measured by the ratio of fixed to total assets. Rajan and Zingales (1995) argue that fixed assets are easier to collateralize, and so reduce the agency costs of debt. The reduction of agency cost of debt will increase firm financial performance. However, Berger and Udell (1994) argue that this relationship would be weaker in relationship-oriented economies.

### 3.4. Empirical Models

This research uses one independence variable (Debt; D), one dependence variable (financial performance; FP), three control variables (Internal Institutional Ownership – IIO; Firm’s Size – FS; and Collateral Asset – CA), and categorization between DCE and DFE; and group and no group-affiliate (G). The main equation for DCE and DFE sub-samples are as follows:

$$FP_{iDCE} = \alpha + \beta_{11}D_{iDCE} + \beta_{12}IIO_{iDCE} + \beta_{13}FS_{iDCE} + \beta_{14}CA_{iDCE} + \varepsilon_{iDCE} \quad (1)$$

$$FP_{iDFE} = \alpha + \beta_{21}D_{iDFE} + \beta_{22}IIO_{iDFE} + \beta_{23}FS_{iDFE} + \beta_{24}CA_{iDFE} + \varepsilon_{iDFE} \quad (2)$$

The equation for test DCE and DFE for group and no group-affiliate is:

$$FP_{iDCE} = \alpha + \beta_{31}D_{iDCE} + \beta_{32}IIO_{iDCE} + \beta_{33}FS_{iDCE} + \beta_{34}CA_{iDCE} + \beta_{35}G_{iDCE} + \beta_{36}D_iG_{iDCE} + \varepsilon_{iDCE} \quad (3)$$

$$FP_{iDFE} = \alpha + \beta_{41}D_{iDFE} + \beta_{42}IIO_{iDFE} + \beta_{43}FS_{iDFE} + \beta_{44}CA_{iDFE} + \beta_{45}G_{iDFE} + \beta_{46}D_iG_{iDFE} + \varepsilon_{iDFE} \quad (4)$$

The research uses ordinary least square regression (OLS) with preliminary testing on classic regression assumption. Wald test will uses as coefficient test between group and no group-affiliate on DCE and DFE sub-sample. The hypotheses tests are shows in Table 2.

**Table 2. Hypotheses Testing**

H <sub>C</sub> :	The effect of debt to financial performance when debt-constraint expropriation is positive.	$0 < \beta_{11}$
H <sub>F</sub> :	The effect of debt to financial performance when debt-facilitate expropriation is negative.	$\beta_{21} < 0$
H <sub>CG</sub> :	On DCE condition, the effect of debt to financial performance on group-affiliate firm is positive and lower than no group-affiliate firm.	$0 < \beta_{31}$ $0 < \beta_{31} + \beta_{36}$ $\beta_{31} + \beta_{36} < \beta_{31}$
H <sub>FG</sub> :	On DFE condition, the effect of debt to financial performance on group-affiliate firm is negative and higher than no group-affiliate firm.	$\beta_{41} < 0$ $\beta_{41} + \beta_{46} < 0$ $\beta_{41} + \beta_{46} < \beta_{41}$

#### 4. RESULT AND DISCUSSION

The results are organised as follows. First, the results show descriptive statistics for independent variable (Debt; D), dependent variable (financial performance; FP), control variables (Internal Institutional Ownership – IIO; Firm’s Size – FS; and Collateral Asset – CA), and categorization between DCE and DFE; and group and no group-affiliate (G). Second, this research shows regression results for each of the category. Third section is discussion and suggestion.

##### 4.1. Descriptive Statistic

This research uses pooling data with 1,559 firm-year observations and 158 firms from 1995 until 2002, 148 firms for 2003, and 147 firms for 2004. The period of analysis is 1994 to 2004; however, this research uses growth model of free cash flows, and year 1994 is use to calculate the growth of 1995<sup>7</sup>. Table 3 shows sample between high and low free cash flow, then split of high free cash flow sample into high and low debt to determine two categories of Debt-Constrain Expropriation (DCE) and Debt-Facilitate Expropriation (DFE). Table 3 also

<sup>7</sup> This method subtracts firm-year observations from 1,717 to 1,559.



showed group and non-group affiliated firms among high free cash flow firms. The result suggest that majority of listed firms are group affiliated, therefore vulnerable to expropriation from affiliate firms or owners.

**Table 3. High Free Cash Flow, DCE and DFE, Group and Non-group**

Sample divided into Low free cash flow, and high free cash flow. High free cash flow also divided into DCE and DFE, and group affiliated and non-group affiliated firms.

Variable	Firm Year	%
<b>Low Free Cash Flow</b>	779	49.97%
<b>High Free Cash Flow:</b>	780	50.03%
Debt-Constrain Expropriation (DCE)	390	50%
Debt-Facilitate Expropriation (DFE)	390	50%
<b>Group and Non-group affiliated:</b>		
Group affiliated (G=1)	735	94.23%
Non-group affiliated (G=0)	45	5.77%

Table 4 shows descriptive statistics of Debt-Constraint Expropriation (DCE) and Debt-Facilitate Expropriation (DFE). The table shows that each category has 390 observations. Financial performance variable (ROE) shows the highest negative minimum value for DCE category. Collateral assets for DFE also show the highest value of standard deviation.

**Table 4. Descriptive Statistic**

Descriptive statistic divides into two categories that are Debt-Constraint Expropriation (DCE) and Debt-Facilitate Expropriation (DFE). Debt (D), Firm performance (FP), Internal Institutional Ownership (IIO), Firm's Size (FS), and Collateral Asset (CA).

<b>Debt Constrain Expropriation (DCE)</b>	<b>FP</b>	<b>D</b>	<b>IIO</b>	<b>FS</b>	<b>CA</b>
Mean	0.040	0.041	0.525	26.298	1.950
Median	0.085	0.046	0.592	26.496	0.724
Maximum	2.971	0.075	0.592	28.076	9.445
Minimum	-3.166	0.003	0.000	24.060	0.001
Standard Deviation	0.596	0.020	0.143	0.855	2.300
Observations	390	390	390	390	390
<b>Debt-Facilitate Expropriation (DFE)</b>	<b>FP</b>	<b>D</b>	<b>IIO</b>	<b>FS</b>	<b>CA</b>
Mean	0.142	0.839	0.638	27.565	3.105
Median	0.186	0.403	0.673	27.598	0.263
Maximum	0.187	28.472	0.973	31.444	218.199
Minimum	0.001	0.185	0.000	24.232	0.000
Standard Deviation	0.061	2.084	0.204	1.481	14.781
Observations	390	390	390	390	390

#### 4.2. Regression Result and Wald Test

Table 5 shows regression result for first equation of Debt Constrain Expropriation (DCE). The result shows that only IIO insignificant and other variables significant ranging from alpha 1% to 10%. Coefficient of debt is positive 4.035, which indicates that Hypothesis  $H_C$  hold. Higher debt will increase firm performance.

**Table 5. Regression Result for  $H_C$**

Equation 1 contains of one main independent variable which is Debt and three control variables. The dependent variable is financial performance (FP).

Variable	Coefficient	t-Statistic
Constant	-2.639	-2.780 ***
$\beta_{11}$ DEBT	4.035	2.191 **
$\beta_{12}$ IIO	0.016	0.098
$\beta_{13}$ FS	0.094	2.645 ***
$\beta_{14}$ CA	0.022	1.931 *
R-squared		0.037

Table 6 shows regression result for second equation of Debt-Facilitate Expropriation (DFE). The result shows that FS and CA insignificant and other variables significant ranging from alpha 1% to 10%. Coefficient of debt is positive 0.002, and significant 1%, which indicates that Hypothesis  $H_F$  rejected. Higher debt will increase firm performance.

**Table 6. Regression Result for  $H_F$**

Equation 2 contains of one main independent variable which is Debt and three control variables. The dependent variable is financial performance (FP).

Variable	Coefficient	t-Statistic
Constant	0.171	2.881 ***
$\beta_{21}$ DEBT	0.002	1.856 *
$\beta_{22}$ IIO	-0.022	-1.679 *
$\beta_{23}$ FS	-0.001	-0.272
$\beta_{24}$ CA	0.000	0.687
R-squared		0.012

The research argument of debt-facilitate expropriation when debt level high is not hold. However, the magnitude of debt coefficient of DCE is higher than DFE category. This result suggests that DCE have more positive effect to constraint expropriation rather than DFE category.

Table 7 shows the regression for equation 3, the group and no-group related and the interaction with debt. The result shows that  $H_{CG}$  significantly holds that partially confirm debt have positive effect on performance when debt-constraint expropriation happened. Two more test conducted to test the robustness of the hypothesis. Wald test chooses as coefficient test for  $H_{CG}$ .

**Table 7. Regression Result for  $H_{CG}$**

Equation 3 contains of three main independents variable, which are Debt, dummy group and no-group, and the interaction. The dependent variable is financial performance (ROE).

Variable	Coefficient	t-Statistic	
Constant	-2.630	-2.777	***
$\beta_{31}$ DEBT	4.935	2.384	**
$\beta_{32}$ IIO	0.222	0.456	
$\beta_{33}$ FS	0.093	2.612	***
$\beta_{34}$ CA	0.022	1.820	*
$\beta_{35}$ G	-0.098	-0.387	
$\beta_{36}$ DG	-0.651	-0.894	
R-squared		0.040	

Table 8 shows Wald test on  $H_{CG}$  when there is group and no-group condition amongst DCE firms. The effect of debt to performance is positive as predicted. However, the magnitude is lower on group-affiliate firm rather than no group-affiliate. The result also shows that constraint to expropriation more effective on no group-affiliate firm than group-affiliate firms.

This research argues that firm with no group-affiliate will have independency to manage and control their firms. As independency increase, firm

with DCE will be able to use efficient financial resources, especially from debt policy. Group-affiliate firms will have higher chance to expropriate by other firm in the same group, although they have debt to constraint such expropriation.

**Table 8. Wald test of  $H_{CG}$**

Wald is a test for coefficient of regression based on several constraints.

Test Statistic	Value
$0 < \beta_{31}$	4.935
t-statistic	2.384 **
$0 < \beta_{31} + \beta_{36}$	4.284
F-statistic	5.343 **
$\beta_{31} + \beta_{36} < \beta_{31}$	-0.651
F-statistic	0.799

Table 9 and Table 10 show regression result and Wald test of  $H_{FG}$ . The regression result shows that debt policy on facilitated expropriation firms will have negative effect on firm performance. This preliminary result diverges with OLS regression result on Table 6. However, this result concord with the hypothesis  $H_F$  and the first step of Wald test on hypothesis  $H_{FG}$ . The Wald test on hypothesis  $H_{FG}$  comes with three steps (the same as  $H_{CG}$ ).

**Table 9. Regression Result for  $H_{FG}$**

Equation 4 contains of three main independents variable, which are Debt, dummy group and no-group, and the interaction. The dependent variable is financial performance (ROE).

Variable	Coefficient	t-Statistic
Constant	0.1861	3.1081 ***
$\beta_{41}$ DEBT	-0.0186	-6.4003 ***
$\beta_{42}$ IIO	-0.0188	-1.0190
$\beta_{43}$ FS	-0.0004	-0.1856
$\beta_{44}$ CA	0.0002	2.4309 **
$\beta_{45}$ G	-0.0234	-1.6328
$\beta_{46}$ DG	0.0205	7.1809 ***
R-squared		0.0217

Table 10 shows three steps of Wald test on  $H_{FG}$ . The result shows that all three steps confirms with Wald, ranging from 5% to 10% significant level. Debt

of firms that facilitated expropriation and group-affiliate will have negative effect on performance. Higher debt to expropriate will lower firm financial performance.

The result also shows that the effect (magnitude of coefficient) of debt to performance is higher on no group-affiliate firms than group-affiliate firms are. The result diverges from  $H_{FG}$ , which argues that the negative magnitude of debt to performance is higher for group-affiliate than no group-affiliate. This research argues suggest that deviation from hypothesis  $H_{FG}$  result from risk reduction mechanism of diversification.

**Table 10. Wald test of  $H_{FG}$**

Wald is a test for coefficient of regression based on several constraints.

Test Statistic	Value
$\beta_{41} < 0$	-0.0186
t-statistic	-6.4003 ***
$\beta_{41} + \beta_{46} < 0$	0.0019
F-statistic	4.665 **
$\beta_{41} + \beta_{46} < \beta_{41}$	0.0205
F-statistic	51.565 ***

Risk reduction mechanism of diversification resulted from firm with group-affiliate that can reduce their overall risk with diversify business risk amongst within groups. However, the suggestion needs further examination trough in-depth future research.

#### 4.3. Discussion and Suggestion

Research on debt-constraint or facilitated expropriation is the first in-depth research for Indonesian firms, especially firms that listed on Jakarta Stock Exchange. This research proposes the term of debt-constraint expropriation (DCE) and debt-facilitated expropriation (DFE); and verifies and tests issue on expropriation of debt policy. The result shows sufficient evident that constraint

and facilitated expropriation on debt is meaningful with regard to financial performance. Firms on debt-constraint expropriation condition, then debt policy will have positive effect on financial performance. On the contrary, debt-facilitated expropriation condition, then debt policy will have negative effect on financial performance. Expropriation on debt is damaging overall firm value, however will increase personal wealth of agent and principal of the firm.

Further analysis tested the differences of debt-constraint expropriation and debt-facilitate expropriation on no group-affiliate and group-affiliate firms. Group and no group-affiliate represent the power of principal to elaborate the scheme of expropriation and sufficiently harm debtholders value. On debt-constraint expropriation, no group-affiliate firms will have higher positive effect of debt to performance than group-affiliate firms are. This research shows that no group-affiliate firms have independency to manage and control their firms. As independency increase, firm with debt-constraint expropriation will be able to use efficient financial resources, especially from debt policy. Group-affiliate firms will have higher chance to expropriate by other firm in the same group, although they have debt to constraint such expropriation.

On debt-facilitate expropriation, this research shows contradict result. Firms with group-affiliate will have more chance to engage in risk reducing mechanism trough diversification than firm with no group-affiliate. Risk reduction mechanism of diversification resulted from firm with group-affiliate that can reduce their overall risk with diversify business risk amongst within groups.

Debt as bonding and monitoring on corporate governance practices, shows reliable system to reduce expropriation on minority shareholders and even debtholders value. Ownership affiliation also plays a major rule on expropriation of minority shareholders and debtholders. However, group-affiliate ownership has an advantage to diversify their risk of expropriation. This research suggests that no group-affiliate could engage in strategic partner or trade organization to cover their risk of expropriation.

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