

## **The Relationship between Corporate Governance Monitoring Mechanism, Capital Structure and Firm Value**

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## **1.0 INTRODUCTION**

Corporate finance and corporate governance are two important areas that cannot be separated as they are highly interrelated. Corporate finance is a field where businesses apply theories on how to manage themselves, essentially in making decisions on where to find the sources in funding their businesses and how to use those funds effectively, as such they can make profit. Corporation, which is one type of businesses, represents an important framework in any country in this world as it might reflect on the economic condition of a certain country.

Corporate governance has been identified as one of the important tools needed in managing any organization including corporation. Corporate governance has been defined in several ways. This study essentially will use the definition of corporate governance by the Organization for Economic Cooperation & Development (OECD), which defines good corporate governance as the rules and practices that govern the relationship between the managers and shareholders of corporations, as well as stakeholders such as employees and creditors, which contributes to growth and financial stability by underpinning market confidence, financial market integrity and economic efficiency (OECD 2004).

This study examines the complex interaction between the monitoring role of large shareholders, capital structure and firm value. Within a corporate finance framework, the study integrates corporate governance and capital structure theories. Agency theory identifies the role of the monitoring mechanism to reduce agency costs and the conflict between managers and owners. The corporate governance literature identifies numerous monitoring mechanisms including the role of various types of equity blockholders. Hence, this study examines the role of blockholders as monitors. The literature also identifies the role of debt as a monitoring mechanism. Capital structure theory also indicates the potential of the debt/equity mix to maximize the value of the firm. This study therefore seeks to integrate blockholders and capital structure with firm value in an attempt to

extend the literature in this field. Hence, this study attempts to answer the following primary research question:

*Is there a dynamic interrelationship between corporate governance monitoring mechanism, capital structure and firm value?*

The rest of this paper proceeds as follows. Section 2.0 explains the theoretical foundations employ in this study. Reviews on previous studies which are related to the present study are presented in Section 3.0. Section 4.0 discusses on the motivations which drive this study up to the development of the theoretical framework. Research methodology is presented in Section 5.0 and Section 6.0 ends this paper with conclusion.

## **2.0 THEORETICAL FOUNDATIONS OF THE STUDY**

The core theories of this study are theories that dominate the fields to be investigated which are agency theory, free cash flow theory and trade-off theory.

### **2.1 AGENCY THEORY**

This theory has its origins in the early 1930s when Berle & Means (1932) explored the corporate revolution. They revealed that at the early stage, corporations were managed by the founders themselves. As corporations grew, the owners sought external sources of financing. Hence, corporations issued equity. As a result, corporations became owned by external shareholders, where the evolution of separation between owners (ownership) and managers (control) commenced.

There are three types of separation of ownership and control. The first is majority control. This is where some of the shareholders own majority of shares, and the remainder are widely diffused and only hold a portion of the shares. Hence, only the remainder shareholders are separated from control. The second is minority control, where ownership is widely spread. As such, the greater part of ownership is practically without control. The third is management control. There is no

existence of large minority shareholders which results directors or managers responsible in controlling the corporation. The third type of separation of ownership and control is known as quasi-public corporation, which it has been resulted as the increment of owners. This happened because quasi-public corporation get its supply of capital from a group of investors, known as “investing public” (Berle & Means 1967, p. 6). There are two types of investors, which are either as an individual, they invest directly in purchasing the corporation’s stocks or bonds, or invest indirectly by investing in insurance companies, banks and investment trusts, which will invest in corporate securities on behalf of the investors.

The separation of ownership and control has also resulted in divergence of interests between shareholders and the managers. How big or small the divergence might depend on the size of the corporation itself. As a result, managers are now responsible with regard to the shareholders, employees, customers and state. This also has ruined the unity which is known as property. Before the corporate revolution, men (owners) owned and used property by themselves, or in other words, the owners of corporation do not only own the property, but are also responsible in managing it. As such, they were entitled for the profits generated by the property. Hence, they will fully-utilised the property that they have in the corporation in generating profit. In contrast, after the corporate revolution, i.e. in the quasi-public corporation, the owners of the property will not directly used it, but they will still get the profits generated as a result of using the property. Men (managers) who control the property were only entitled to a small portion of the profits. As a result, profits were not the main objective for the owners in encouraging them to efficiently use the property, and corporation now is not operated based on the main objective which is profit maximization, which this situation has been found to contradict with the economic principle. It can be concluded that, this was the time where the owners or shareholders of corporation have started in aiming maximization of their wealth as the main objective to be achieved in the willingness of them in investing in any corporation.

In addition, as Berle assumed corporation is functioning as a state, corporation cannot treat the properties that they are using in their production as theirs, as there are silent owners of those properties, who are the shareholders of the corporation. Shareholders are those people who buy the corporation's shares whom are also known as investors. He argued that property cannot be seen as tangible "things" that normally been viewed before. This is due to the fact that property now is divided into two types which are consumption and productive property. The latter involved the new dimension of how property plays it roles in corporation. Part of the roles is; property will be used by corporation in its production, manufacture, sales, services etc. which will generate return not only to the firm but also to shareholders who invested in the corporation (Berle & Means 1967).

In their study, Berle & Means (1967) argued that large corporations are more profitable due to the great increasing in their proportion of wealth and income. They found that corporations increased their wealth by reinvesting its earnings, by raising new capital through the sale of securities in the public markets, and by acquiring control of other corporations through purchase or exchange of securities (p. 42). In that century, they also found that industry by industry has increased its wealth, as what they called as "corporate sway". However, they revealed that most of the corporations have growth through funding their new capital by issuing securities in the public markets. They witnessed that the tendency of the dispersion will be higher when the size of the corporation is larger. Factor that contributed to the increment of the number of stockholders during that time was the ownership offered to customers and employees. As such, dispersion has been seen as a continuous process.

Means statistically revealed that in within thirty-five years, there was an increased in the number of large corporations that have been controlled by management. In contrast, there was a decreased in the corporations which was privately owned or corporations which was controlled by majority shareholders. Hence, he concluded that corporate revolution happened in form of concentration of economic power,

dispersion of stock ownership, and separation of ownership and control (p. xxx). The dispersion of stock ownership has resulted in a change in the wealth character itself, such as the individual and his wealth relationship, the wealth value, and the nature of the property used in the operations of the corporation (Berle & Means 1967). As such, it can be seen that the evolution of separation between owners and managers of corporations not only happened because of the needs in finding the external sources, but also as a result of the ownership that has been widely dispersed. An interesting question can be raised here, that is, if the corporation's external non-managerial ownership is concentrated, will the separation between owners and managers still happen?

Another main argument by Berle is the function of shares or stocks issued by corporation. He realised that stocks which are traded at the stock market are not functioning as capital provider to the corporation any more.<sup>1</sup> This is due to the main functions of those stocks that are traded by investors among themselves. The stocks are now functioning as the liquidity property for those who wanted cash in the future. As such, investors who wanted stocks will buy them, and for those who wanted cash will sell them at the stock market (Berle & Means 1967).

Stocks also have been functioning as a creation of wealth for shareholders who hold them for a longer period of time. For these investors, normally they are expecting to get two types of return which are current income and capital gain. Current income will be in form of dividend payment, and capital gain will be created if the shareholders bought the stocks at a lower price and sell it back at a higher price. These two types of return may increase the shareholders' wealth, which will be the main goal of any shareholder in holding corporation's stocks.

Hence, the initial function of stocks that is supposed to be as one of the capital provider for corporation in funding its operations and growth is being argued. It seems that corporation will get the capital only on the day when it issued the

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<sup>1</sup> The stocks which are directly issued by corporation are not traded in the stock market.

stocks to investors. Even though after this stage, any transaction of the corporation's stocks will not involve any direct cash flow to the corporation, it will still be affected by the performance of the corporation. As stocks have been functioning for wealth creation, investors somehow or rather will still referring to how well the corporation is performing before making decision in buying and holding the corporation's stocks. For example, if the corporation is performing well in a certain financial year, it may pays a good amount of dividend to the shareholders, hence, it will increase the shareholders wealth by increasing the cash holding of the shareholders.

Jensen & Meckling (1976) argued that the separation of ownership and control has resulted in an agency problem as the managers who act as agents<sup>2</sup> might not always act in the best interests of the shareholders or owners, who are the principals of the firm. This might be due to the interests of both parties which are not aligned. Agency problem results an agency costs, which are the costs of the separation of ownership and control. Agency costs has been defined as the sum of the monitoring expenditures by the principal, the bonding expenditures by the agent, and the residual costs; which the latter is the dollar equivalent of the reduction in welfare experienced by the principal due to the divergence of interests between the owners and managers (Jensen & Meckling 1976, p. 308). This agency costs might destroy firm value, which means it might destroy the shareholders wealth as well, as maximization of shareholders wealth will be achieved when the firm value is maximized. Hence, the agency costs are not good to the owners of the firm.

One of the consequences that have risen from this situation was the importance of monitoring mechanisms,<sup>3</sup> so that managers will perform in order to meet the shareholders' objective. Hence, it will reduce the agency problem and as a result

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<sup>2</sup> Previously, Ross (1973) suggested that managers of firm are essentially the agents of shareholders.

<sup>3</sup> The other mechanisms that have been suggested by Jensen & Meckling (1976) are the incentive mechanisms and bonding costs.

firm value will increase. Even though Ross (1973) argued that it might be difficult to monitor the managers, various monitoring mechanisms have been suggested in the literature in reducing the agency problem. It is suggested that there are three ways in monitoring firm managers which are in within the firm, outside the firm and the role play by government regulation in a country. Within the firm relates to mechanisms that the firm has greater discretion over, such as board size and composition as well as compensation.<sup>4</sup> Outside of the firm or the external mechanism, debt or leverage, ownership concentration or large shareholders and corporate takeovers, have been suggested in the literature as the monitoring mechanisms to reduce the agency problem. For the purpose of this study, ownership concentration will be used in representing the monitoring mechanism. Ownership concentration can be categorised as non-managerial owners, institutional shareholders, family-owners and state-owners.

Goergen & Renneboog (2001) argued that if there are insufficient monitoring mechanisms in a firm such as having a diffuse ownership structure (which is the opposite of the ownership concentration structure), it may lead to high managerial discretion which may increase the agency costs. As has been argued in the literature, the level of monitoring is a function of such variables as institutional ownership, block ownership by outsiders, the technology in place to monitor the managers (Bajaj, Chan & Dasgupta 1998) and forecasted profit gain derived from the monitoring (Demsetz & Lehn 1985).

Bajaj et al. (1998) suggested that the monitoring by the blockholders can also control the 'degree of moral hazard', which is defined as a fraction of a firm's residual cash flows which is diverted to perquisite consumption by managers. Previously, Jensen & Meckling (1976) argued that manager's consumption perquisite will reduce firm value. This also relates to the next theory, which is the free cash flow theory.

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<sup>4</sup> This include a fraction of the firm shares offered to the managers, which is one type of ownership concentration known as managers-owners or insider owners. Jensen & Meckling (1976) argued that firm value will decrease as the percentage of manager's ownership reduced.



## 2.2 FREE CASH FLOW THEORY

According to free cash flow theory of capital structure innovated by Jensen (1986), leverage itself can also act as a monitoring mechanism and thereby reduces the agency problem (hence increasing firm value), by reducing the agency costs of free cash flow. There are some consequences derived if firm is employing higher leverage level. Managers of such firm will not be able to invest in non-profitable new projects, as doing so the new projects might not be able to generate cash flows to the firm, hence managers might fail in paying the fixed amount of interest on the debt or the principal when it's due. It also might cause in the inability to generate profit in a certain financial year that may result in failing to pay dividends to firm shareholders.

Furthermore, in employing more leverage, managers are forced to distribute the cash flows, including future cash flows to the debt holders as they are bonded in doing so at a fixed amount and in a specified period of time. If managers fail in fulfilling this obligation, debt holders might take the firm into bankruptcy case. This risk may further motivate managers to decrease their consumption of perks and increase their efficiency (Grossman & Hart 1982). This statement has been supported by Jensen (1986) which states that from the agency view, the higher the degree of moral hazard, the higher the leverage of the firm should be as managers will have to pay for the fixed obligation resulting from the debt. Hence, it will reduce managers' perquisites. Extensive research suggests that debt can act as a self-enforcing governance mechanism; that is, issuing debt holds managers' "feet to the fire" by forcing them to generate cash to meet interest and principle obligations (Gillan 2006, p. 388).

Leverage might not only be able to reduce the agency costs of free cash flow, but also can increase the efficiency of the managers. This is due to the debt market that might function as a more effective capital market monitoring. In addition, in order to obtain the debt financing, managers must show their abilities and efficiencies in managing the firm. Empirically, it has been proven, among others

by Byers, Fields and Fraser (2008) that leverage proxied by bank lenders, can be a substitute monitoring mechanism especially in weak corporate governance firms, but not in the more active merger environments.

In conclusion, this theory suggests that leverage is vital in playing its role as monitoring mechanism. This is due to the higher the leverage level, the higher the probability of bankruptcy, and when this happens, managers might lose their jobs. As such it might motivate managers to work harder in order to avoid this risk by fulfilling the fixed obligation to the debt holders. In addition, as a consequence, it will reduce the managers' perquisites as they will be pressured not to waste the firm cash flows. This also will increase the efficiency of managers in making decisions especially in selecting new profitable projects. All of these consequences will increase the firm value. Hence, these consequences will make the interests of owners and managers aligned. This might be the reason why owners or shareholders prefer high leverage level, which is contradict to managers, as managers want to avoid the consequences derived in employing more leverage. In this situation, ownership concentration can play its role in forcing managers to choose higher leverage level.

### 2.3 TRADE-OFF THEORY

In relation to capital structure the study utilises trade-off theory. The debate on capital structure started with propositions demonstrated by Modigliani and Miller (1958; 1963). At first, in the absence of corporate tax and bankruptcy costs, they concluded that firm value is independent of its capital structure. Later, they came out with other conclusion, in the existence of corporate tax; firm value will increase if the firm increase its leverage. Hence, they argued that the optimal debt level will be met based on the trade off between tax advantage of debt offset by the increased risk in bankruptcy and agency costs of debt. The optimal debt-equity ratio is the point at which firm value is maximized (Jensen 1986, p. 324).

Even though Miller (1977) argued that firm value is independent of its capital structure and there is no optimum debt ratio for any individual firm<sup>5</sup>, Myers (1984) concluded that regardless of which theory holds, the effective tax rate is positively related to the net tax gain of debt, which suggesting the tax advantage of using debt. Theoretically, Stulz (1990) and Harris and Raviv (1990) found that leverage is positively correlated with firm value. It is supported by Berger, Ofek and Yermack (1997) which states that many corporate governance theories came to a conclusion that capital structure can be used to reduce agency costs and as a result increase firm value. It has been empirically proven, among others by Simerly and Li (2000) and Berger and Patti (2006) who found a positive relationship between leverage and firm performance.

#### 2.4 SUMMARY ON THE THEORETICAL FOUNDATIONS OF THE STUDY

By integrating the three theories discussed in section 2.1 until 2.3 as the foundations of this study, a conceptual framework can be developed as shown in Figure 1. The framework shows the mechanisms suggested in the theories and literatures for reducing the agency problem, with the ultimate objective to increase firm value. The focus of this framework is on the monitoring mechanisms.

### 3.0 LITERATURE REVIEW

This section reviews on previous studies that have been conducted related to the present study. It is divided into four subsections. These subsections review the theory and empirical evidence on the relationship between corporate governance monitoring mechanism and firm value, between corporate governance monitoring mechanism and capital structure, between capital structure and firm value, and between these three variables themselves. The objective of this section is trying to identify the potential gaps on the studies that have been conducted on these three variables after integrating the three theories presented in section 2.0.

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<sup>5</sup> Miller argued that corporate tax saving is been offset by income taxes paid by the individual investors in corporate debt. He also argued that bankruptcy costs and the tax savings are imbalanced.

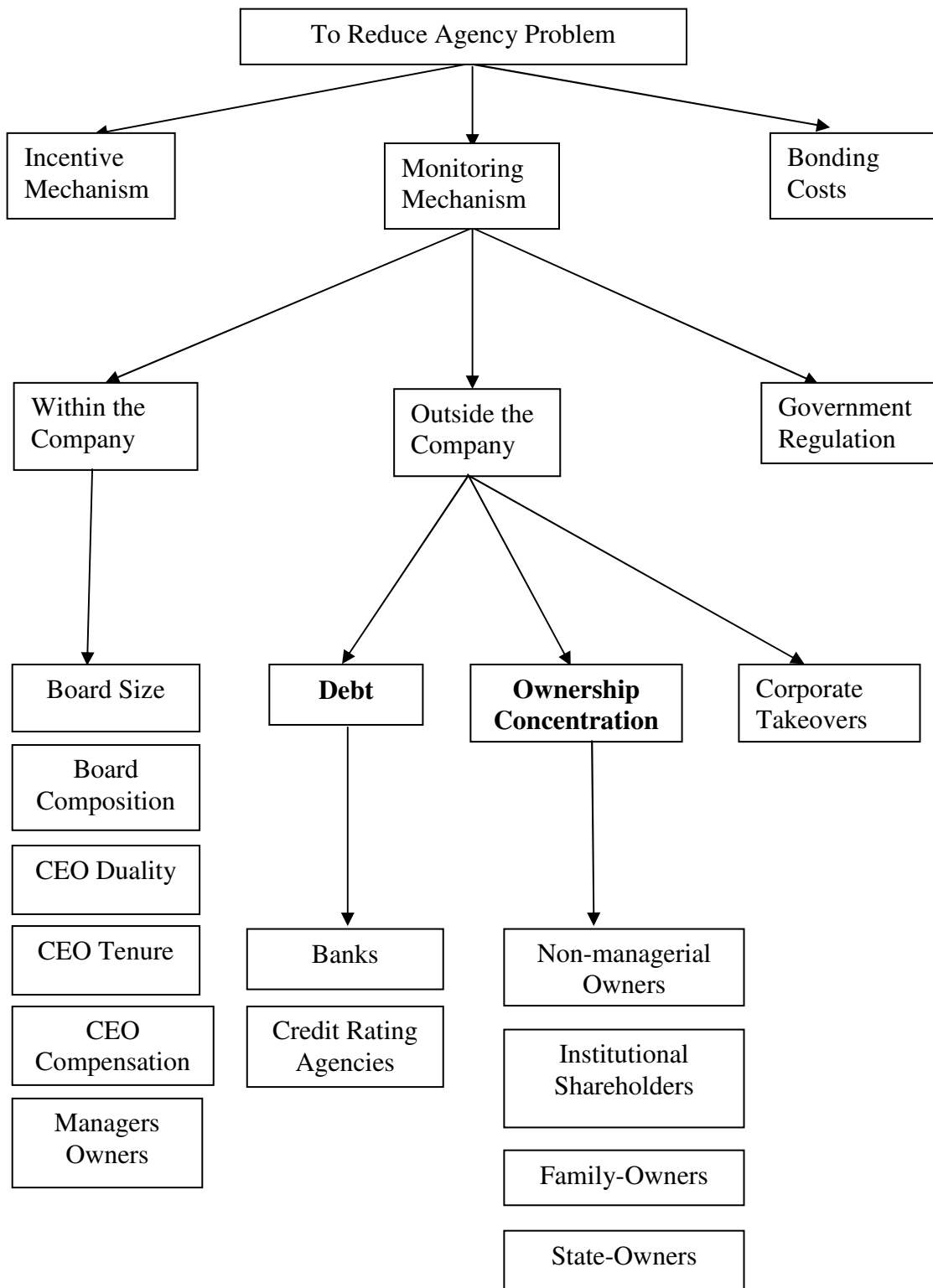


Figure 1 Conceptual Framework

### 3.1 CORPORATE GOVERNANCE MONITORING MECHANISM AND FIRM VALUE

There were mixed results from previous researches pertaining to the relationship between ownership concentration and firm value. Among others, Gedajlovic & Shapiro (1998) found a positive and significant relationship between ownership concentration and performance after taking into consideration the interaction between ownership concentration and diversification, whereas Mehran (1995) found a positive relationship between insider ownership and performance after outside and board monitoring variables have been controlled. Contrary to this, Demsetz & Villalonga (2001) found there is no significant relation between ownership structure and firm performance. This finding supports the study previously done by Demsetz & Lehn (1985) who found no significant relationship between ownership concentration and firm performance.

A positive relationship has been found out between firm performance and non-managerial owners (Lins 2003), managers-owners (Balatbat, Taylor & Walter 2004; Gugler, Mueller & Yurtoglu 2008), institutional shareholders (Balatbat et al. 2004; Gugler et al. 2008), and family-owners (Andres 2008). Bajaj et al. (1998) documented that insider ownership and firm value are positively correlated, with a possible 'reverse causality' relationship which runs from performance to ownership. This has been demonstrated by their use of a signaling model. On the other hand, a negative relationship has been found out between firm performance and financial institutions ownership (Gugler et al. 2008), and family-owners in old firms (Morck, Shleifer & Vishny 1988).

In addition, Morck et al. (1988) found a significant non-monotonic relationship when firm performance increased if the insider ownership is less than 5%, decreased in between ownership of 5%-25%, and increased again when the ownership is above 25%. Although McConnell & Servaes (1990) failed to replicate these findings, they found a curvilinear relationship between these two variables, where at a lower percentage of ownership, every 10% increased in

ownership, firm value will increase by 30%. However, at more than 30% of ownership, a negative relationship has been found between insider ownership and firm value.

Endogeneity and causal relationships have been ignored in the studies cited above except for Demsetz & Villalonga (2001) who documented that ownership structure is endogenous, and Gugler et al. (2008) who found that the estimated causal relationship runs from ownership to performance.

### 3.2 CORPORATE GOVERNANCE MONITORING MECHANISM AND CAPITAL STRUCTURE

Mehran (1992) found that insider ownership and leverage have a positive relationship, as ownership helps in aligning the managers' and shareholders' interests, and with the higher leverage, managers' exposure to the equity ownership risk are lesser. By developing a signaling model, Bajaj et al. (1998) documented that insider ownership is positively correlated with leverage level of the firm. Similar to these studies, Driffield, Mahambare & Pal (2007) also found a positive relationship between ownership concentration and leverage in family firms in Indonesia, Malaysia and Thailand. This result suggests that ownership concentration may act as an effective monitoring mechanism.

In contrast, Mehran (1992) also found evidence that if outside monitoring is less effective, managers might also lower the leverage in order to avoid bankruptcy risk. This has been proven previously by Friend & Lang (1988) who found a negative relationship as managers want to ensure the survival of the firm by reducing the leverage level. It is also been supported by Lemmon, Roberts & Zender (2008) who found that the changes in distribution of control that occur at the time of initial public offering (IPO) of firms will not affect the capital structure of the firms.

In an attempt to investigate whether capital structure of any firm is affected by the time factor, Lemmon et al. (2008) documented that firms' future and initial leverage ratios are closely related, as they found that leverage level of firms remain unchanged for over 20 years. Hence, they concluded that leverage varies across firms, not over time.

Hitt, Hoskisson & Harrison (1991) and Jensen (1986) state that the creation of a firm's capital structure can influence the governance structure of the firm. This suggests a reverse causality relationship from capital structure to governance structure. Hence, corporate governance monitoring mechanisms which are part of the governance structure of a firm might also be affected by the capital structure developed by the firm.

### 3.3 CAPITAL STRUCTURE AND FIRM VALUE

Previous research that attempted to determine the relationship between capital structure and firm value revealed mixed results. By using equity capital ratio to proxy for the capital structure, Berger & Patti (2006) found that lower equity capital ratio is associated with higher firm performance. Firm value is documented to have a positive (negative) relationship with leverage for firms in stable environments (dynamics environments) (Simerly & Li 2000), and low-growth firms (high-growth firms) (McConnell & Servaes 1995).

Profitability and market-to-book ratio can also be the proxies for the firm performance as the higher the value of these two variables is associated with a good performance. Among others, Fama & French (2002), Hovakimian, Opler & Titman (2001), Fischer, Heinkel & Zechner (1989), and Leland (1994) found a positive relationship between profitability and leverage. Meanwhile Baker & Wurgler (2002), and Hovakimian, Hovakimian & Tehranian (2004) found a negative relationship between market-to-book ratios on firm leverage.

### 3.4 CORPORATE GOVERNANCE MONITORING MECHANISM, CAPITAL STRUCTURE AND FIRM VALUE

Ownership concentration or large blockholders has been argued of having its own advantages and disadvantages. On the one hand, in firms with ownership concentration of its shareholders structure, the main benefit that will be derived from it is the monitoring function on managers, so that managers of the firms will act accordingly in order to meet shareholders main objective, which is to maximize their wealth, by increasing the firm value. On the other hand, if the ownership is concentrated, they might take advantage of rent expropriation on the minority shareholders. Hence, there might be divergence of interest between large blockholders and minority shareholders that might destroy firm value.

In addition, the results of the non-monotonic relationship between insider ownership and firm performance found by Morck et al. (1988) explained as the different behaviour of insider blockholders at different percentage of ownership. The results suggest that if their ownership concentration is less than 5%, the interest of the managers is aligned with the shareholders. Hence, they may make decisions, such as employing higher leverage, which will increase the firm value. Next, when the percentage goes higher than that, the managers will get entrenched and thus they will make decisions that will benefit them most as compared to the other shareholders; including lowering the firm leverage level, even though it will destroy the firm value. Lastly, when the percentage of ownership goes beyond 25%, it results in a positive relationship once more, which it is suggested to follow the convergence-of-interest hypothesis, i.e. market value increases with management ownership.

Leverage and equity ownership also have been suggested as the alternative ways in ensuring managers make good decisions that will maximize firm value. McConnell & Servaes (1995) concluded that ownership structure and capital structure are important determinants and the importance is difference between firms with many and few positive net present value (NPV) projects. Theoretically,



firms which have positive NPV projects will increase their value. Furthermore, wealth effects as proxied by abnormal returns of loan announcements, are more positive for firms with weak corporate governance structures including less insider ownership, which provides evidence of the monitoring role carried out by leverage (Byers et al. 2008).

Driffield et al. (2007) documented that concentration and separation of control from cash flow<sup>6</sup> have positive effects on both leverage and firm value in Indonesia and Korea, but negative effects in Malaysia and Thailand. They also argued that ownership concentration can be an effective monitoring mechanism, which acts to minimise moral hazard problems.

Even though a firm's market value depends on corporate governance structures and disciplinary devices, on theoretical grounds, it is not possible to say which kind of disciplinary device is superior in terms of effectiveness and corporate performance (Moerland 1995).

#### **4.0 DISCUSSION ON THE MOTIVATION OF STUDY**

Any study pertaining to corporate governance by itself cannot be isolated. The isolation needs to be avoided if the study relates to the other fields of finance generally, and with corporate finance in particular.

In the case of investigating the corporate governance monitoring mechanism, it is important to take into consideration the interaction with other governance devices. In this study, the capital structure decision has been chosen, as leverage, may itself act as a monitoring mechanism quite distinct from traditional internal or external controls. The capital structure study is also one of the important areas that are continuously debated in the corporate finance field, especially its relation with firm value.

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<sup>6</sup> Control right is defined as voting right, whereas cash flow right is defined as right to claim for dividend or ownership.

In addition, the problems of endogeneity and causal relationships have always been raised in the discussion of the relationships between two of these variables; between corporate governance and capital structure; between corporate governance and firm value; or between capital structure and firm value. Hence, it is important to empirically investigate the interrelationships between them, as these three variables are highly significant to corporations, and play a pivotal role in corporate decision making.

Existing literatures discussed in section 3.1 until 3.4 provide evidence of the relationships between corporate governance monitoring mechanism and firm value, between corporate governance monitoring mechanism and capital structure, between capital structure and firm value, and the relationship among these three variables. This study attempts to extend knowledge of how these three variables interact. Hence, the major aim of this study is to investigate whether there is a dynamic interrelationship between these three variables. Specific objectives of this study are to: i) investigate whether there is a causal relationship between corporate governance monitoring mechanism and firm value, between corporate governance monitoring mechanism and capital structure, and between capital structure and firm value; by taking into account endogeneity issues; ii) examine the interaction of corporate governance monitoring mechanism and the capital structure decision and its affect to firm value; iii) examine the influence of firm characteristics such as firm size and profitability on this interaction; and iv) investigate the best monitoring mechanism, i.e., either the corporate governance monitoring mechanism itself or the capital structure.

Numerous studies in corporate finance examine the interrelationships between corporate governance, capital structure and firm value. However, most of the existing literature investigates direct relationship among these three variables. If an investigation on the causal relationship is being conducted, it only considers the relationship between two of these variables at a time, ignoring the interaction that might exists between them. As the researcher argues that corporate

governance monitoring mechanisms, capital structure and firm value are interrelated; this study plans to fill the gap by directly investigating the causal relationships between them, by taking into account endogeneity issues. Thus, the proposed study will make an original contribution to the literature as it will comprehensively investigate the interaction between these three variables.

This study has significant practical importance as the findings of this study will empirically and theoretically suggest which one out of these three variables that should be given priority in corporation's policy of decision making and the best monitoring mechanism that should be taken into consideration by corporations. As such, this study considers answering questions that have received important attention in the literature and significant policy consequences.

Corporate governance monitoring mechanisms and capital structure are part of corporate governance structure. Bhagat and Bolton (2008) suggested the endogenous relationship between corporate governance and firm performance that might need an explanation on the causality issue. From the review of past research pertaining to the monitoring role played by equity blockholders, roles of leverage as one of the monitoring mechanisms as well as its affect on firm value, and the impact of the firm value on both variables, there are no extensive studies that have been conducted to investigate the relationships between these three variables at the time. The present study is expected to contribute to the ongoing debate about the endogeneity and causal relationship issues between these three variables. Figure 2 shows the proposed theoretical framework of this study.

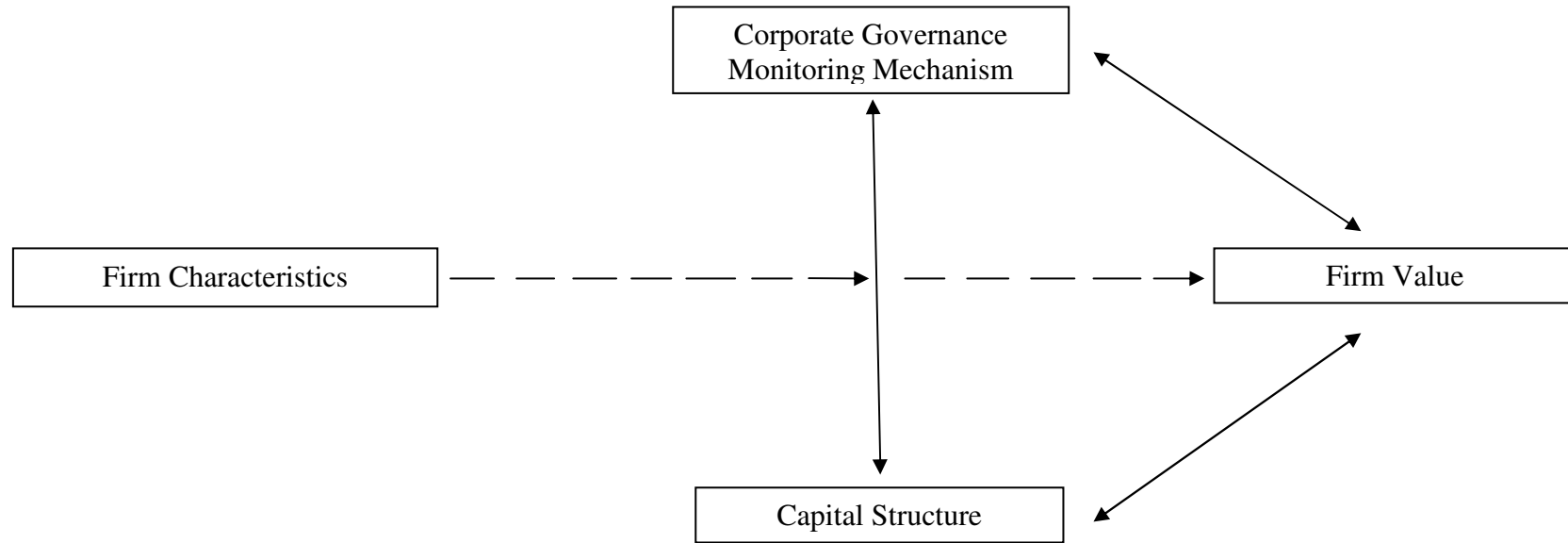


Figure 2 Theoretical Framework

## 5.0 RESEARCH METHODOLOGY

This study is primarily empirical using a quantitative approach. This section presents the samples, years, databases and variables that will be used in this study. Models and tests proposed are also been presented.

### 5.1 DATA

The sampling frame for this study will cover the large 100 non-financial public listed companies on the Australian Stock Exchange from year 1993 to 2008. Data will be collected from relevant databases such as Datastream, Osiris, the Australian Stock Exchange and companies' handbook.

For the ownership concentration, this study will use equity blockholder as a proxy. Equity blockholder is defined as shareholders who hold at least 5% of the firm shares, without taking into consideration on the types of the ownership concentration itself. Leverage can be measured in various ways but at the core is the relationship between a firm's debt capital and its equity capital. Hence, this study will use debt-to-equity ratio which defined as the ratio of long-term debt to total equity, as the proxy for leverage. Firm value is frequently considered as a ratio such as Tobin's Q. There are numerous ways of determining Tobin's Q. This study will use the model by Chung & Pruitt (1994, p. 71) which defined Tobin's Q as follows:

$$\text{Tobin's Q} = \frac{(\text{MVE} + \text{PS} + \text{DEBT})}{\text{TA}}$$

where MVE is the product of a firm's share price and the number of common stock shares outstanding, PS is the liquidating value of the firm's outstanding preferred stock, DEBT is the value of the firm's short-term liabilities net of its short-term assets, plus the book value of the firm's long-term debt, and TA is the book value of the total assets of the firm.

Some of the control variables that have been identified that will be considered for inclusion in this study are firm size (Andres 2008; Bhagat & Bolton 2008; Driffield et al. 2007; Gedajlovic & Shapiro 1998; Jiraporn & Yixin 2008; Lins 2003), R&D intensity (Bhagat & Bolton 2008; Jiraporn & Yixin 2008; Morck et al. 1988), risk (Bhagat & Bolton 2008; Byers et al. 2008; Seetharaman, Swanson & Bin 2001), age of the firm (Andres 2008; Balatbat et al. 2004; Driffield et al. 2007; Morck et al. 1988), growth opportunity (Driffield et al. 2007; Lasfer 2006), and profitability (Byers et al. 2008; Du & Dai 2005; Jiraporn & Yixin 2008; Kim & Limpaphayom 1998; Lasfer 2006). Proxies that will be used for these control variables are log of total assets, R&D expenses to total assets, standard deviation of stock return, dummy variable (1 if firm operates for ten years or more, 0 otherwise), sales growth, and return on assets, respectively.

## 5.2 EMPIRICAL MODELS

Initial investigation of the issue raised in this study will employ basic ordinary least square (OLS) regression which is fairly standard in exploring relationships between two sets of variables such as firm value and leverage, firm value and ownership, and leverage and ownership. This regression will also allow for the potential endogeneity, where generally if the explanatory variables in  $x_i$  are correlated with the equation's error term  $\varepsilon_i$ , these variables are said to be endogenous (Verbeek 2008). This study may also consider in using Hausman test for endogeneity and the Anderson-Rubin test for the joint significance of the set of endogenous variables in the equations system (Bhagat & Bolton 2008).

The OLS regression model can be expanded to include interaction effects of leverage and ownership on firm value. To further investigate the dynamics of the relationships and in order to meet the objectives, this study follows Bhagat and Bolton (2008), which suggest the formulation of a system of simultaneous equations. As such, it will use three-stage least squares (3SLS) approach. 3SLS is a systems estimating procedure that estimates all the identified structural equations together as a set, instead of estimating the structural parameters of each

equation separately. The 3SLS is a full-information method because it utilizes knowledge of all the restrictions in the entire system when estimating the structural parameters (Bhagat & Jefferis 2002, p. 13). Hence, the following system of three simultaneous equations is proposed:

$$\text{Firm Value} = f_1(\text{Equity Blockholders, Leverage, } Z_1, \varepsilon_1) \quad (1a)$$

$$\text{Equity Blockholders} = f_2(\text{Firm Value, Leverage, } Z_2, \varepsilon_2) \quad (1b)$$

$$\text{Leverage} = f_3(\text{Firm Value, Equity Blockholders, } Z_3, \varepsilon_3) \quad (1c)$$

where  $Z_i$  are the control variables vectors and  $\varepsilon_i$  are the residual error terms.

### 5.3 CAUSALITY ANALYSIS

Causality means the direction of influence. Hence, the Granger Causality Test will be conducted. The following pairs of regressions will be tested:

$$OC_t = \sum_{i=1}^n \alpha_i LEV_{t-i} + \sum_{j=1}^n \beta_j OC_{t-j} + u_{1t} \quad (2a)$$

$$LEV_t = \sum_{i=1}^n \lambda_i LEV_{t-i} + \sum_{j=1}^n \delta_j OC_{t-j} + u_{2t} \quad (2b)$$

$$OC_t = \sum_{i=1}^n \alpha_i Q_{t-i} + \sum_{j=1}^n \beta_j OC_{t-j} + u_{1t} \quad (3a)$$

$$Q_t = \sum_{i=1}^n \lambda_i Q_{t-i} + \sum_{j=1}^n \delta_j OC_{t-j} + u_{2t} \quad (3b)$$

$$LEV_t = \sum_{i=1}^n \alpha_i Q_{t-i} + \sum_{j=1}^n \beta_j LEV_{t-j} + u_{1t} \quad (4a)$$

$$Q_t = \sum_{i=1}^n \lambda_i Q_{t-i} + \sum_{j=1}^n \delta_j LEV_{t-j} + u_{2t} \quad (4b)$$

where OC is ownership concentration, LEV is leverage, and Q is firm value.

However, before conducting the Granger Causality Test, the following tests need to be undertaken:

#### 5.3.1 Unit root test

This is to test the stationarity of the variables used as using non-stationarity data in causality tests may lead to spurious causality results. As such, this study will employ the Augmented Dickey-Fuller test or Phillips-Perron test. If any of the variables is found to be non-stationary, the first differences of the variables will be taken in order to make them stationary.

#### 5.3.2 Test for cointegration

The Augmented Engle-Granger test or Cointegrating Regression Durbin-Watson test is proposed in testing for the cointegration of the variables used in this study. In addition, the Akaike or Schwarz information criterion will be used to identify the number of lags for the cointegration test.

## 6.0 CONCLUSION

Corporate governance and corporate finance have been proved to be highly interrelated. Focusing on the monitoring mechanism, capital structure and firm value, this study is contributing to the new knowledge in a number of ways. Firstly, within a study, it will conduct a comprehensive investigation on the relationships between ownership concentration, leverage and firm value by examining the relationship between ownership concentration and leverage, ownership concentration and firm value, and leverage and firm value in Australian context. In addition, it will also investigate on the potential causal relationship between them, after taking into account endogeneity issues. On the practical perspective, it is hope that the findings might suggest which variable(s) that should be given priority in corporation's decision making policy. Secondly, this study will also investigate on the potential interaction that might exist between ownership concentration and leverage. Furthermore, if the interaction does exist between these two variables, this study will analyse its affect to firm value, and



the influence of firm characteristics on this interaction. Finally, theoretically and practically, it is hope that this study might suggest the stronger monitoring mechanism, which is either ownership concentration or leverage.

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