DEBT, GOVERNANCE AND THE VALUE OF A FIRM

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Abstract

This paper examines the role of debt in affecting the value of a firm in the developing and the developed financial markets. The study uses panel data of 120 companies for the years 2000 to 2003 from the selected financial markets. The paper extends the literature by performing a comprehensive analysis of the relationship between debt and the value of a firm, by using a correct proxy to value a firm. Furthermore, the results are interpreted by taking into account the foundations of the developing and developed markets and different financial theories are ranked on the basis of these results of the study. The findings of the study suggest that higher debt plays a negative role in affecting the value of a firm in the selected markets showing the effect of market imperfections in the developing market. The result supports the second trade off theory and the foundation of the developed financial market. An efficient regulatory authority improves the firm's performance by defending the rights of shareholders and reducing principal and agent conflicts. Similarly, the dual leadership structure, investors' confidence and optimal utilization of assets improve shareholders' value in these markets. The results are valuable to academics and policy makers as these results suggest an optimal capital structure for the firms of the selected financial markets.

Keywords: Corporate Governance, Debt, Firm Performance, Board Size and CEO Duality

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1. Introduction

Debt is an important tool in minimizing the principal (shareholder) and agent (manager) divergences and improving the firms' performance in a financial market (Heinrich, 2002; Abor, 2005). Previous studies have focused on the relationship between the debt and equity structure in affecting the value of a firm, but have overlooked the role of additional factors affecting the nature of this relationship, particularly in a developing financial market. Furthermore, the results of these other studies were not interpreted by taking into account the foundations of developing and developed markets. Finally, the literature lacks a comprehensive study based on a robust data set and a correct proxy to value a firm, to test its relationship with the role of debt in developing and developed financial markets.

The literature concerning the role of debt in affecting firms' performance suggests a mixed relationship between both the variables. Nerlove (1968), Petersen and Rajan (1994) and Hutchinson (1995) find a positive relationship between higher debt and the value of a firm in the financial market. Similarly, Taub (1975) advocates for a positive relationship between the different measures of profitability and the debt to equity ratio. The effective role of debt in corporate governance and hence increasing firm value are also confirmed in the current

studies conducted by Ivashina et al. (2009), Altan and Arkan (2011), and Ben Moussa and Chichti (2011).

On the other hand, Fama and French (1998), Gleason et al. (2000) and Hammes (2003) argue that higher debt deteriorates the value of a firm in financial markets. Similarly, Berger and Patti (2006) in their research conducted on banking sector and Majumdar and Chhibber (1999) in their study related to the DVF relationship pertinent to an emerging market, find that higher debt deteriorates the value of a firm. Sarkar and Sarkar (2008) found that debt cannot play its disciplinary role as a corporate governance instrument. The current study conducted by Sadeghian et al. (2012) confirms further that the debt increase has a negative influence on the company's performance.

In spite of the mixed results in the DVF relationship, an advanced panel threshold regression model conducted by Feng-Li and Tsangyao (2011) shows that, for Taiwan case study, there are two threshold effects between debt ratio and firm value, which are 9.86% and 33.33%. Firm value will increase much higher if the debt ratio is less than 9.86%. The increase will be slower as the debt ratio increases up to 33.33% and finally if the debt ratio is greater than 33.33% there will be no relationship between debt ratio and firm value.

This paper argues that the mixed results in the DVF relationship indicates the limitations of the previous studies as, for example, the studies

conducted by Kyereboah-Coleman and Biekpe (2005) and Chang and Mansor (2005) have tested the relationship between the level of debt and the value of a firm as a control variable in a developing market but have not incorporated the important factors affecting debt and the value of a firm (DVF) relationship. Similarly, Myers and Majluf (1984), Zwiebel (1996), Berglof (1997), Hadlock and James (2002), Suto (2003) and Rashid and Islam (2009) have not performed the study to test the role of debt in combined markets (developing and developed financial markets). This research addresses the above-mentioned gap in the literature and extends the recent paper by Rashid and Islam (2009) by using a correct proxy to value a firm and by performing a comprehensive study to analyze the role of debt in affecting the firm's performance. Based on the panel data of 120 publicly listed companies, this paper depicts that debt plays an unhealthy role in managing the conflicts between shareholders and managers. On the contrary, the external regulatory regime defends the rights of shareholders in the selected markets. Finally, the results for the control variables suggest that dual leadership structure, efficient utilization and investors' confidence lead to the improved value of a firm in these markets. The results of this study are valid, as an additional test of robustness is also performed.

Following the introduction, the paper is further structured as follows. Section 2 presents the literature review which is followed by the hypothesis development in Section 3. Section 4 describes the methodology for the model. Similarly, Section 5 discusses the econometric results for the study. Section 6 presents the explanation of the results and finally, Section 7 concludes the paper.

2. Literature review

2.1 Corporate governance

Corporate governance in the literature is defined as the mechanism used to protect the interests and rights of shareholders in the market (Gompers et al., 2003). The concept of corporate governance is also related to the fair returns on the investment made by the shareholders, because they are the providers of capital (funds) to organizations as defined by Shleifer and Vishny (1997). Similarly, a corporate governance framework defends the rights of different stakeholders which include management, customers, suppliers, creditors and other associated parties related to the operations of a firm (Dallas, 2004; Black et al., 2006).

Financial markets can be divided into two types: developing and developed markets. These markets are categorized on the basis of the sophistication of the financial instruments used in these countries. The developing financial market uses less sophisticated instruments compared to the developed market. These instruments are used to manage risk by hedging the investors' portfolios, ultimately improving the returns for shareholders in the financial market (Hunt and Terry, 2005). Shareholders in a developed market earn higher returns due to the developed instruments used in this market.

The literature related to corporate governance suggests that different mechanisms of corporate governance incorporate democratic (investor friendly) provisions in both developing and developed financial markets (Black, 2001; Black et al., 2003). The instruments of corporate governance mechanisms include shareholders, managers, board, executive management, suppliers, customers, regulatory authorities and judiciary as argued by Morin and Jarrell (2001) and Dittmar et al. (2003).

The two important types of corporate governance mechanisms include external and internal corporate governance instruments. The latter refers to the internal corporate governance regime and includes board, size of board, mix in the board, leadership structure of a firm (CEO duality) and the role of debt in financial markets (Nam and Nam, 2004). These instruments can improve the level of corporate governance as argued by Gompers et al. (2003) and Bebchuk et al. (2004). On the other hand, the former are the external regulators in the financial market and include a regulatory authority, judiciary, central bank and a securities and investment commission (Ahunwan, 2003).

2.2 Theories about capital structure

Debt has an important role in affecting the value of a firm. There are different theories related to this. The first school of thought in this regard is the Modigliani and Miller hypothesis (1958, 1963). This theory suggests that capital structure or the debt equity mix does not affect the shareholders' value significantly. Modigliani and Miller hypothesis further suggests that a firm operates in a perfect market as there is no interest rate, agency cost of debt and the cost of financial distress which makes the debt and equity structure irrelevant in the market.

The second theory, which deals with the role of capital structure, discusses the trade-off that exists between the advantages and disadvantages of debt. This is the trade-off theory and suggests that financial benefits of debt are offset by the disadvantages such as the agency cost of debt and the cost of financial distress (Copeland et al., 2005). The theory further suggests that the benefits of debt, such as reduction in the individual's tax payment, are offset by the additional amount of tax paid by the corporation.

Another theory relevant to the role of capital structure is the second trade-off theory and suggests that benefits of debt such as minimizing the amount paid by an individual is equalized by the cost of bankruptcy and the agency cost between creditors and managers in the market.

Finally, the theory relevant to the role of capital structure in affecting the value of a firm is the pecking order theory. This theory ranks the methods or modes of financing available to the firm on the basis of the cost related to the execution of an individual option of financing. The theory suggests that the firm will use the cheapest source of financing on a priority basis, which makes internal equity a highly preferable source (Brealey and Myers, 2000). The second option of raising funds is by issuing debt. Finally, the firm can acquire finances by using the option of an external equity. The theory further suggests that issuance of debt conveys a positive signal to investors as they realize that the management of a firm invests in healthy projects. Furthermore, it also shows that the firm has higher investment opportunities compared to internally generated finances. The management of a firm meets this short fall by issuing additional debt.

3.3 Other corporate governance instruments which increase the value of a firm

In addition to debt, majority shareholders, as an external monitor, can also play an important role in checking the internal corporate governance mechanisms by defending the shareholders rights in the financial markets (Franks and Mayer, 1994; Kaplan and Minton, 1994).

Similarly, an internal mechanism such as the board mix is also important, as it can affect the shareholders' value in the market (Abdullah, 2002; Coles et al., 2008). The composition of the board is vital in reducing the agency cost from the market. The board of directors consists of a combination of inside and outside directors (Wei, 2003). Inside directors are the employees of a firm and have related financial interests with the firm's performance. These directors can pursue their own benefits at the expense of the shareholders (principal). Inside directors also command the flow of important financial and strategic information in affecting the shareholders' value (Stiles and Taylor, 1993). The convergence of interests between shareholders and inside directors can push the insiders to improve the value of a firm in the financial market.

On the contrary, outside (independent) directors are not the employees of a firm and can monitor the organization on an independent basis (Bhagat and Jefferis, 2002). This can improve the shareholders' value, as the chances of expropriation of the minority shareholders are reduced due to their (shareholders) lower level of conflicts with the independent directors. The combination of inside and outside directors can be optimal to improve a firm's performance (Nam and Nam, 2004).

Similar to the board mix, board size is an important corporate governance instrument in affecting shareholders' value (Loderer and Peyer, 2002). There are two schools of thought in this regard.

Zahra and Pearce (1989) and Kyereboah-Coleman and Biekpe (2005) argue that a bigger board is better for the firm's performance, as it provides higher level of strategic, planning and conceptual skills. The larger board also creates value, as it is difficult for the independent CEO (dual leadership) to dominate the rational decisions of a board. There are functional conflicts (healthy divergences) among the members of the board which reduces the agency cost of the firm (Linck et al., 2008).

On the other hand, Mak and Kusnadi (2005) suggest that the bigger board does not add value for the shareholders due to unhealthy conflicts among the board members. Furthermore, the members of a larger board often do not monitor the firm properly and are involved in delayed decision making and free riding. Free riding refers to the phenomena where the board members do not perform their fiduciaries, but depend on the monitoring done by other members of the board. This deteriorates the value of a firm in the financial market (Jensen, 1993).

The management and the board of directors can also force the CEO to work for the benefits of all the shareholders (the minority and the majority), by relating the incentives of the CEO with its performance. The management, including the board, can also give proper remuneration to the CEO when he/she meets both the long and short-term goals of a firm (Bhagat and Jefferis, 2002).

The role of leadership structure is an important component of corporate governance. The two main types of leadership structures include dual and non-dual leadership. Dual structure refers to a single person performing both the tasks of CEO and the chairman (Lam and Lee, 2008). This leads to the dominance of the CEO, hence threatening the independence of the board, as the board members cannot discipline the CEO who is also the chairman of board (Higgs, 2003: 23). On the contrary, non-dual leadership refers to two different individuals holding the job of CEO and chairman. This leads to the independence of decision making by the board, hence safeguarding the shareholders' rights in a market.

In addition to all the instruments above, efficient utilization of assets, as for example proxied by return to total assets is an important aspect of corporate governance, since it creates returns for shareholders and stakeholders. Firms in financial markets should optimally utilize their assets to create shareholders' returns (Capulong et al., 2000). The assets of these firms should not be over and under-utilized by the management to derive private gains from the financial market.
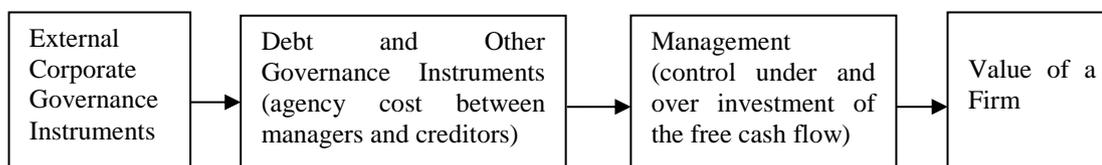
The next section deals with the discussion related to the role of business and management theories. The first theory in this regard is the stewardship theory. This theory suggests that the manager, as an agent, looks after the interests of shareholders (Davis et al., 1997). On the contrary, the second theory is the agency theory and suggests that

the manager, as an agent, does not create value for shareholders, deteriorating the firm's performance (Jensen and Meckling, 1976).

The figure below shows that in the presence of an effective regulatory regime, debt can be used as a powerful tool to reduce the misuse of cash flow and discipline management, which improves the value of a firm in a financial market.

Figure 1. The Relationship between Debt, Governance and the Value of a Firm

| External Corporate Governance Instruments | → | Debt and Other Governance Instruments (agency cost between managers and creditors) | → | Management (control under and over investment of the free cash flow) | → | Value of a Firm |

3. Hypothesis development

Jensen and Meckling (1976) and Jensen (1986) argue that capital structure is of vital importance in affecting the value of a firm. The free cash flow at the discretion of managers is reduced in the indebted firm, because it is utilized as a debt re-installment to the creditor. The free cash flow is usually misused in the forms of under and over investment by the managers in a market. Under investment occurs when managers do not invest in the profitable opportunities, as the creditors share the part of profit from the valuable investments. On the contrary, over investment takes place when managers have incentives to invest in projects due to their related private benefits attached to the success of these projects (Bebchuk et al., 2004). Shareholders pay higher costs in monitoring and disciplining the managers who deteriorates the value of a firm.

As discussed, the role of debt is important in reducing the agency conflicts between managers and shareholders, as the free cash flow problem is resolved. The debt, in combination with other instruments such as majority shareholders, can also improve the value of a firm (Berglof, 1997). The literature suggests that the use of corporate governance instruments resolves the agency conflicts, but an excessive use of a single instrument also creates an additional agency cost in the market. This leads to the need for other instruments, which reduce the marginal cost and improve the marginal benefits of each other to create real value for shareholders. The combination of these instruments is called Edgeworth complements. An instrument is Edgeworth complementary if the marginal benefit of using combined complementary instruments improves by an additional use of each instrument in combination (Heinrich, 2002).

The foundation of the developing financial market suggests that the agency cost between creditors and managers is governed properly compared to the same cost between the managers and shareholders. This suggests that higher debt creates value in developing markets due to a better management of the agency cost between the relevant players of corporate governance (Berglof, 1997). The majority shareholders also act as a better debt monitor in the developing market, due to their higher financial stakes related to the firms' performance, compared to the minority shareholders.

On the contrary, the agency cost between managers and equity holders is handled properly in the developed financial market. This feature of the developed market advocates for the lower level of debt as the shareholding is dispersed in this market. Dispersed shareholding also justifies lower debt, because the majority shareholders as external monitors are absent (Rashid and Islam, 2008). This feature of the developed market restricts higher debt to be used as a better option for the value creation of shareholders.

The level of financial benefits derived by creditors in developing markets can be magnified by linking them with the incentives to management (Heinrich, 2002). This will force management to work for all the stakeholders in these markets. Higher debt in the hybrid system controls the adverse actions of managers as it introduces efficient monitors (blockholders) in the market. On the contrary, greater debt also triggers a bankruptcy risk in the system (Copeland et al., 2005). These advantages and disadvantages should be considered to make optimal financing decisions in the financial market.

The majority shareholders can monitor the firm as they have higher financial interests related to the firms' performance. This related financial interest can also reduce the free riding and wasteful duplication of efforts by all the shareholders. Free riding prevails in dispersed shareholding, when all the shareholders do not keep a check on the management of the firm properly, as most of them prefer not to pay any monitoring cost. Secondly, wasteful duplication of effort occurs in financial markets when the majority of the shareholders waste their efforts in doing the similar job of monitoring as performed by all of them (Diamond, 1984).

There are additional imperfections (inflation, political turmoil, under-resourced and rudimentary regulatory institutions, and expropriation of minority shareholders) in the developing financial market (Ahunwan, 2003). Higher inflation leads to an intense depreciation and a loss of investors' confidence.

Similarly, the political unsteadiness makes the market unstable, leading to the deteriorating performance of a firm. The weak regulatory institutions cannot align the interests of the principal and agent which results in a higher agency cost in the developing market. Finally, the rights of minority shareholders are not safeguarded, as cash flow in the firm is not used in a positive manner in this market. These imperfections affect the strength of individual instruments in the Edgeworth combination to improve the marginal benefits of each other.

The abovementioned discussion related to the role of debt in affecting the value of a firm can be summarized by suggesting that lower debt is beneficial for firms in the developed market due to an absence of majority shareholders as external monitors. Similarly, due to the presence of additional imperfections in the developing market, the higher debt in combination with blockholding is not beneficial to firms of this market. This discussion leads to the following hypothesis.

H1: There is a negative relationship between higher debt and the value of a firm in the selected financial markets.

4. Methodology

The current section consists of the data collection methods, methodology of construction of the variables, econometrics relevant for the study and a multifactor model used to test the relationship among the dependent and independent variables.

4.1 Data collection methods

The data set for sixty companies from each market is collected for the firms listed at Kuala Lumpur and Australian securities exchanges and is secondary in nature. The study used simple random sampling as the sample companies for this study are selected purely on random basis. The data for the study is collected for control variables and external and internal corporate governance instruments. The data for control variables (CEO duality, board size, price to book value ratio and return on total assets) is collected by using an OSIRIS database. The collected data is also crossed-checked with financial information available on the websites of companies listed at respective securities exchanges. The data for the external corporate governance instrument (regulatory authority and judicial efficiency index) is collected from the World Bank and International Monetary Fund websites. Finally, the data set for the internal corporate governance instrument (debt to equity ratio) is collected by using the stock exchanges books in these financial markets.

4.2 Methodology of the variables

The dependent and independent variables used in this study are listed in table 1 and their methodology of construction is as follows. Tobin's Q is used as a dependent variable for the study (Bhagat and Jefferis, 2002; Gompers et al., 2003). The proxy for the dependent variable (Tobin's Q) in this study is calculated by adding market capitalization and total assets. In the second step, the shareholders' fund is subtracted from the added value calculated in the first step. The residual value is divided by the total assets to get the proxy for the Tobin's Q. The calculation for the proxy by using the above-mentioned methodology contributes to the literature as the replacement value of institutional debt does not comprise the formula to calculate the proxy for Tobin's Q. The correct proxy to value a firm used in developing and developed financial markets enables us to find the real relationship between the independent variables and the firms' performance.

The independent variables relevant for the study which are used to test their relationship with the value of a firm are constructed as follows. The internal corporate governance instrument on which the study is based is the debt to equity ratio of firms (Kyereboah-Coleman and Biekpe, 2005). The variable is directly extracted from the balance sheets of the companies listed at the securities exchanges of the selected markets. We expect a negative relationship between the variable and the value of a firm in these markets.

The next independent variable in this study is the role of board size in affecting the firm's performance. The board size in the model for DVF relationship is calculated by counting the number of directors on the board (Kyereboah-Coleman and Biekpe, 2005). We expect a negative relationship between the board size and the value of a firm as we support the agency theory in the selected financial markets.

CEO duality is used in the model for DVF relationship to testify the role of leadership structure in affecting the value of a firm (Haniffa and Cooke, 2000). This variable is measured with the help of a dummy variable. The value of this variable is 1 when a single person holds both the positions of CEO and chairman. On the contrary, the value of the variable is 0 when both the roles (CEO and chairman) are separated i.e performed by two different persons (Kyereboah-Coleman and Biekpe, 2005). We expect a negative relationship between the CEO duality and the value of a firm as a single person holding both the important positions is against the corporate governance principles in the selected markets.

The role of the external corporate governance instrument (regulatory authority efficiency) is measured by regulatory efficiency index (Klapper and Love, 2004). This index is constructed by taking into account the time and cost involved in the settlement of corporate disputes in the judicial system.

Table 1. Variables used for DVF Relationship Model

Variables	Proxied by	Symbol	Expected Sign
Dependent variable			
Value of a firm Tobin's Q	Mkt Cap+ TA- ShF/TA	TQ	
Independent variables			
Return on total assets	Returns generated by all assets of firm	ROTA	Positive
Gearing	Percentage of debt used to finance the firm	Gr	Negative
Size	Number of directors in the board	Log Size	Negative
Duality	Dummy variable: Can take the values between 1 and 0	Duality	Negative
Price to book value ratio	Ratio between price and book value of the assets of a firm	Pb	Positive
Regulatory regime	Procedures involved in the settlement of the disputes	Log Pro	Negative

Notes: *Mkt Cap = Market capitalization.*
TA = Total assets.
Sh F = Shareholders' funds.

The higher value on the index shows more cost and time consumed in a court depicting the inefficiency of a regulatory regime. We expect a negative relationship between the inefficient regulatory authority and the value of a firm.

The next variable used in this study is the return on total assets. The validity of the test related to the relationship between return on total assets and the value of a firm will show the role of allocation and dynamic efficiency in affecting the firms' performance (Chen et al., 2005).

Price to book value ratio in this study is used to test the role of investors' confidence in affecting the shareholders' value in developing and developed financial markets. The positive value will depict that the investors are willing to pay a higher premium for the assets of the organization in the market creating value for the shareholders.

4.3 Econometric testing

Multiple regression analysis is used as a tool for hypothesis testing and to analyze the relationship between corporate governance instruments, control variables and the value of a firm. The general representation of the DVF relationship model is given in the equation below.

$$Y_t = C + \beta_{1t} X_{1t} + \beta_{2t} X_{2t} + \ldots\ldots + \beta_{nt} X_{nt} + U_t \quad (1)$$
where:
Y_t = dependent variable (value of a firm);
C = intercept;
β_t = slope of the independent variables of the model (internal, external and control variables);
X_t = independent variables; and
U_t = error term (residual).

The ordinary least square (OLS) estimation will be used to minimize the error terms of the DVF relationship model. This type of estimation improves the power of the sample regression function to explain

the major portion of the population regression function (Cuthbertson, 1996).

4.4 Multifactor model

The multifactor DVF relationship model is used to analyze the properties of the individual corporate governance mechanism and testify its role in affecting the value of a firm in developing and developed markets.

The multifactor model for this study is shown as follows:

$$Y_t = C + \beta_{1t} X_{1t} + \beta_{2t} X_{2t} + \beta_{3t} \log X_{3t} + \beta_{4t} X_{4t} + \quad (2)$$
$$\beta_{5t} X_{5t} + \beta_6 \log X_{6t} + U_t$$
where.
X_{1t} = CEO duality;
X_{2t} = Gearing ratio;
X_{3t} = Regulatory authority efficiency index;
X_{4t} = Price to book value ratio;
X_{5t} = Return on total assets; and
X_{6t} = Board size

The above-mentioned equation shows the relationship between the value of a firm, corporate governance instruments and control variables in the selected markets.

5. Econometric Results

The discussion relevant for this section deals with the regression analysis and a robustness test. The details of these tests are presented below.

5.1 Multiple regression analysis

As discussed, multiple regression analysis is performed to testify the role of debt in affecting the value of a firm. Models with varying functional forms and alternative specifications are tried and the model with the best functional form and strong diagnostics is

selected for the study. The variables in the selected model are given an appropriate treatment by transforming independent variables (price to book value ratio, return on total assets and shareholders concentration) into percentage form. Similarly, the other independent variables such as the regulatory authority efficiency and board size, are transformed into non linear form by taking the natural logarithm, removing the potential disorder of the OLS assumptions. This treatment is similar to that of Sridharan and Marsinko (1997) and Kyereboah-Coleman and Biekpe (2005), in their studies related to role of corporate governance in the financial market.

Furthermore, the OLS assumptions followed by the estimators in the current model are endorsed by giving the white diagonal treatment to the variables as the variance of the error term of the model is unequal. This unequal variance of the error term leads to the existence of the heteroscedasticity (Gujarati, 2003). White diagonal treatment corrected the variance of the error term by transforming the ordinary least square

(OLS) method of estimation into the generalized least square estimation method (GLS) (Maddala, 2001).

The results are also made robust by performing the tests to detect multicollinearity in the model. The results are presented in table 2 and include the tests for variance inflation factors (VIF) for the variables relevant for the selected financial markets. The value (VIF) is calculated by making the independent variables as the dependent variable and calculating the value for the R squared. This calculated R squared is subtracted from one and is lastly divided by one to get the value for the variance inflation factor (Gujarati, 2003). The formula below is used to calculate the value for variance inflation factor.

$$VIF = 1/1 - R^2 \qquad (3)$$

The range of the values for the VIF for the variables varies from 1.06 to 1.35, which shows the absence of the multicollinearity from the model for DVF relationship.

Table 2. Values for Variance Inflation Factor for the Selected Markets

Variables	Variance Inflation Factor
Gearing	1.06
Procedures	1.35
CEO Duality	1.14
Return on Total Assets	1.19
Board Size	1.09
Price to Book Value Ratio	1.16

Table 3. Results of the Model for DVF relationship for the Selected Markets

Variables	Model
Constant	0.54 (3.09)**
Log Board Size	0.20 (1.25)
CEO Duality	0.14 (2.72)**
Gearing	-0.07 (-4.36)**
Price to Book Value Ratio	49.03 (13.56)**
Return on Total Assets	0.93 (1.78)*
Log Procedures	-0.15 (-2.31)**
R-Squared	0.77
Mean Dependent Variable	1.42
F-Statistic	(276.93)**

Notes: The values of the coefficients are in the first row.
Below are the values of T-Statistics in parenthesis.
Total number of observation for combined model= 480.
* Represents the significance of a variable at 10% significance level.
** Represents the significance of a variable at 5% significance level.

5.2 Results of the model

The quantitative form of the estimated model presented in table 3 is explained below.

$$Y_{it} = 0.54 + 0.14 \text{ Duality} - 0.07 \text{ Gr} - 0.15 \text{ Pro} + 49.03 \text{ Pb} + 0.93 \text{ Rota} + 0.20 \text{ Size} \quad (4)$$

(3.09)** (2.72)** (-4.36)** (-2.31)** (13.56)**
(1.78)* (1.25)
$R^2 = 0.77$

In the equation above, the values for the coefficients are in the first row. The values for t-statistics are in the parenthesis below. The single asterisk (*) and double asterisk (**) show that the variable is significant at 10% and 5% level of significance respectively.

The diagnostics of the model show that the value for the R squared is 77%. This value shows that 77% variation in the dependent variable is explained by the independent variables of the model. The 23% variation remains unexplained by these independent variables. The value for the F-statistic is high (276.93)

and is significant depicting that the model is stable and reliable. The mean value for the dependent variable (Tobin's Q) is 1.42, endorsing that firms in the selected markets are healthy and create value for shareholders.

5.3 Robustness test

The robustness test (factor analysis) in this study is performed to confirm the validity of the alternate hypothesis relevant for the model and is presented in table 4 below. The result for the factor analysis shows that price to book value ratio has the highest correlation (loading) with the Tobin's Q (0.87). This result suggests that the higher investors' confidence leads to the improved value of a firm to a greater magnitude. On the other hand, return on total assets has a least correlation with the price to book value ratio (0.33) showing that the optimal utilization of assets does not lead to a significant change in the willingness of the investors' to pay a higher premium in these markets.

Table 4. Factor Analysis: Results about Highly Correlated Variables in the Models

Variables of Cross-market Analysis	Correlation Coefficient
PB and ROTA	0.33
TQ and AC	0.35
TQ and PB	0.87
MC and CF	0.49
AC and Log Pro	0.34

6. Explanation of the Results

The results of the model relevant for the study are presented in table 3 and their detail is as follows. The result explaining the role of debt in affecting the value of a firm shows that there is a negative relationship between the variable (gearing ratio) and the firms' performance. This confirms our hypothesis (H1) for the study. The result is consistent with the foundation of the outsider system of corporate governance as dispersed shareholding and lower debt reinforce the positive effects of each other. Furthermore, the agency cost between creditors and managers is not handled properly in the selected financial markets. Tunneling (under and over investment of the free cash flow) takes place as the excessive cash flow is not invested in the healthy projects improving the agency cost in the firms of these markets. The detrimental activities of agents limit the constructive role of the majority shareholders to improve the marginal benefits of higher debt in the developing market. The government of the developing market does not make tough regulations to reduce the agency cost of debt and protect the rights of shareholders.

The result is consistent with the findings of Zingales (1995) and Chang and Mansor (2005) as the

majority shareholders do not perform a healthy role of monitoring the debt. Furthermore, the financial advantages of debt in the selected markets are lower compared to the potential disadvantages associated with it. These benefits include the tax shield which minimizes the amount of tax paid to the government at both corporate and individual levels. Similarly, the disadvantages associated with debt include the agency cost between creditors and managers and the cost of financial distress. The result supports the agency theory and the second trade off theory in these markets. On the contrary, the result contradicts the Modigliani and Miller hypothesis (1958, 1963) as debt and equity structure has relevance in the selected markets (Copeland et al., 2005).

There is a positive relationship between the CEO duality and the value of a firm with the value of coefficient as 0.14. The result shows that dual leadership structure creates value for shareholders in developing and developed markets (Haniffa and Cooke, 2000). The implication of the result suggests that debt in the firm disciplines the CEO and makes him a steward working for shareholders. Finally, the representatives of creditors on the board converge the interests of the CEO and shareholders, which also improves the value of a firm in these markets. The

result is consistent with the findings of Brickley et al. (1997).

The role of external corporate governance instrument in affecting the value of a firm is endorsed at a 5% significance level with a value of coefficient of -0.15. The value for coefficient shows that a 1% increase in the regulatory authority inefficiency decreases the value of a firm by 0.15 units. Alternatively, regulatory authority efficiency improves the firms' performance by restraining the majority shareholders and managers from tunneling in the selected financial markets. The agency cost is reduced by protecting the rights of shareholders in these markets as suggested by Nenova (2003).

There is a positive relationship between the price to book value ratio and the value of a firm. The value for the coefficient is 49.03. This shows that higher investors' confidence leads to an intense level of investment in the selected financial markets. The highest coefficient of the variable among all the independent variables reflects its relative importance in the DVF relationship model.

Finally, a positive relationship between the return on total assets and the value of a firm is confirmed at a 10% significance level with the value of coefficient being 0.93. The result shows that the optimal utilization of assets leads to the improvement in the value of a firm as found by Chen et al. (2005) in their studies about corporate governance in the financial market.

7. Conclusion

The current paper has investigated the role of debt in affecting the firms' performance in the developing and developed financial markets. The result shows that debt cannot be used as an effective tool to control the free cash flow and reduce the agency cost between creditors and managers in these markets. In addition, majority shareholders do not govern the agency cost of debt properly. Similarly, the laws concerning the governance of debt do not address the incomplete contracting improving the level of divergence of interests among the different players of corporate governance.

The firms of the selected financial markets should consider alternate options to raise the funds compared to debt financing. Due to additional imperfections in the developing financial market, the conflicts between creditors and managers are not governed properly. The results related to the role of control variables suggest that an efficient regulatory authority, dual leadership structure, investors' confidence and an effective utilization of assets improve the value of a firm in these markets. In future, these factors should be considered by governments of these countries in making corporate governance policies. The limitations of the study suggest that the role of debt in disciplining the principal and agent conflicts in the insider system of corporate governance and under recession or boom in the economy can give us a different nature of the DVF relationship, with a new policy implication.

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