WHAT ABOUT THE DEBT GOVERNANCE STRUCTURE AND STOCKHOLDERS' INTERESTS IN TRANSITION MARKET? PERSPECTIVES FROM EGYPT

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Abstract

This study examines the relationship between debt governance structure at three levels (high, medium and low) and firm's performance in the stock market. The debt structure classifies debt into short-term debt and long-term debt at each debt level. The results indicate that in the high debt firms, the short-term debt helps improve the PE ratio. As for the medium debt firms, the results show also that the short-term debt helps improve the market value added. The results of the low debt firms are similar to those of the high debt firms indicating that the short-term debt can be used to improve the PE ratio. The regression characteristics show that with the exception of medium debt in the PE equation, the explanatory power for the other performance measures are relatively high which indicates a relatively high degree of association between both types of debt with the MB and MVA respectively. The overall results show that (1) debt governance structure in Egypt is characterized by the dominance of short-term debt, (2) the latter can be used to improve the firm's performance in the stock market, which shows that the association of interests between short-term debtholders and stockholders is highly likely, and (3) the negative relationships of long-term debt indicate to the presence of an agency problems between long-term debtholders and stockholders. The contribution of this paper is that it shows the extent to which either type of debt can be used to address the debtholder-stockholders agency relationships.

Keywords: Agency Relationship, Debt Structure, Stock Market Performance, Egypt

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Introduction

The literature on corporate governance in conjunction with corporate finance deal with debt and equity as alternative governance structures. The relative dependence on each comes about with the formation of explicit or implicit contracts that delineates the benefits and resources available to the suppliers of finance. The benefits available represent the property rights due to their claims over the return stream from assets while the resources available is in the form of their control rights over managerial decisions. The financing structures of debt and equity can be compared with respect to the characteristics of control and property rights (Kochhar, 1997). The debt instrument carried with it fixed rules and covenants that usually monitor the lending process such as the repayment schedule (principal and interest) plus an obligation to the firm to meet liquidity tests to ensure that the lender's investment is not jeopardized. These characteristics imply that debt has strong property rights, making it similar to the market exchange mechanism (Williamson, 1991a,b). On the other hand, equity owners are the residual claimants over the cash flow from asset earnings and asset liquidation. That is, they obtain the cash flows that are left after paying off the debt claims which means that equityholders have weaker property rights similar to hierarchical control. (Williamson, 1991a,b).

This paper hypothesizes the view that the residual claims call for converging interests between debtholders and stockholders. An agency problem arises when the residual earnings are zero. In this case, stockholders are not in any better off position than the debtholders. The convergence of interest is highly likely to happen when the stockholders end up with residual earnings equal to or greater than the average in the market. The two sources of financing, then, will be complementary rather than competing with each other with the use of debt adds to the stockholders value. It is clear, then, that it is up to the use of debt. The proper use of debt can safeguard the stockholders-debtholders convergence of interests.

This argument is supported by recent view of capital structure decisions as a strategic decisions. That is, the choice of capital structure is less a matter of predefined alternatives and more a search for alternatives in a complex and uncertain environment (Simerly and Li, 2000). In a world of relatively high asymmetric information, debt financing is accompanied by some benefits. Myers and Majluf (1984) show that, because management has superior information, external finance is costly. Moreover, they argue that this adverse selection problem is minimized by the issuance of the "safest" security, i.e., the security whose pricing is least sensitive to the manager's private information. Thus highly rated debt with a fairly certain payoff stream is issued before equity. Debt is particularly easy to value where there is abundant collateral, so that investors need only concern themselves with the value of the collateral and not with the valuation of the entire firm, as equity investors would need to.

Several other articles model the costs and benefits of debt contract. The benefit is usually the reduction in the agency cost such as preventing the manager from investing in negative NPV projects, or forcing him to sell assets that are worth more in alternative use. The main costs of debts are that firms may be prevented from undertaking good projects because debt covenants keep them from raising additional funds, or else they may be forced by creditors to liquidate when it is not efficient to do so. Stulz (1990), Harris and Raviv (1990), Diamond (1991) and Hart and Moore (1995) present some of the main models incorporating these ideas, whereas Lang et al., (1996) present evidence indicating that leverage indeed curtails investment by firms with poor prospects. It is worth to note that the literature review in this paper focuses primarily on debtholders-stockholders interest in developed markets. The reason is that the global economic transition of developing countries is characterized by a clear tendency towards capitalist markets in developed countries. This offers an opportunity to examine the extent to which debtholders-stockholders relations in developed markets can offer lessons to learn in transition markets. The empirical results in this paper show that extent.

Why debtholders-stockholders interests in transition market?

The relationship between the two sources of financing is specially important in transition markets for certain reasons. First, information asymmetry between suppliers of finance in transition market is relatively higher than in developed markets. This requires the examination of the extent to which the stock market participant appreciate the debt financing, therefore, its possible role in mitigating the information asymmetry. Second, transition/ developing market are generally characterized as less efficient than those of developed markets. Considering that debt financing is a firm-level decisions, the effects of debt decisions on firm's performance in the stock market is highly likely to affect the stock market efficiency positively. Third, generally, market incompleteness in transition markets posits debt financing, especially bank financing, as a major financing source. This requires the examination of the extent to which banks can work on supporting the stockholders' interests in these markets and especially in an economic transitional stage. It is worth to note that bank financing is the dominant financing source in Egypt.

The paper is organized as follows. Section II discusses the many studies that show a significant association between the interests of debtholders and stockholders. Section III describe the variables examined the paper. Section IV describes the data and the methodology. Section V discusses the results. Section VI concludes.

I. The Association between Debtholders-Stockholders Interests: Lessons from Developed Markets

The literature on corporate governance is rich of numerous studies on the agency relationships focusing more frequently on the stockholders-managers possible conflicts. The most two cited works on the agency relationships are Jensen and Meckling (1976) and Jensen (1986)TP. In the EBSCO research database, Jensen and Meckling (1976) was cited 1797 times and Jensen (1986) was cited 625 times for the period since each work has appeared to May 2005. This is according to the statistics of the EBSCO research database PT in which they use the agency framework to analyze the effects of conflicts of interest among stockholders, managers and debtholders on the investment and financing decisions of the firm. Jensen (1986) discusses the lenders' governance role that if the firm fails to meet debt obligations, the lenders can take steps to terminate the employment of the managers. This implies that to the extent that managers are concerned with the debtholders' claims, and that managers are agents to stockholders, their (managers) financing decisions must be adapted to meet the interests of debtholders and stockholders as well. In this sense, firm's managers can truly play a custodian role to protect the rights of both stockholders and debtholders. Cable (1985), for example, finds a significant, positive relationship between the degree of bank involvement in a firm and its financial performance. As a result, bank involvement supposedly improves the profitability of firms. There has also been a growing literature that focuses on firm's growth as a determinant that causes a stockholder-debtholder agency relationship to arise. The agency theory tells that equity-controlled firms have a tendency to invest suboptimally to expropriate wealth from bondholders and the cost associated with this agency relationship is likely to be higher for growing firms. Accordingly, firm's expected future growth should be negatively related to long-term debt levels. This negative relationship has been reached by Kim & Sorensen (1986), Harris & Raviv (1991) and Ghosh et al. (2000) suggesting that when firms are expecting high future growth, they (firms) use greater amount of equity financing. However, Myers (1977) indicates that this agency problem is mitigated when the firm issues short-term rather than long-term debt. Jensen & Meckling (1976), Smith & Warner (1979) and Green (1984) add one more dimension to the agency problem arguing that the agency costs will be reduced if firms issue convertible debt. These studies provide a general evidence that the interests of stockholders and debtholders are reachable and convergable. The literature on corporate governance characterize debt financing with the privilege of specific control rights. This is due to the fact that debt is a contract in which a borrower gets some funds from the lender, and promises to make a prespecified stream of future payments to the lender. In addition, the borrower typically promises not to violate a range of covenants such as maintaining the value of the assets inside the firm (Smith and Warner, 1979). This implies that the control rights adhere to lenders can eventually protect stockholders value under the condition that the lenders would intervene on the right time well before the firm's stockholders lose the value of their stocks. Here, the possibility of an association of interests between the debtholders and stockholders is highly likely.

The benefits of Landers' intervention are discussed in Gale and Hellwig (1985). They consider models in which the borrower can abscond with the profits of the firm. However, if the lender is not repaid, he has the right to investigate the books of the firm, and grab its cash before the borrower can steal it. Thus failure to repay triggers the transfer of control over the assets from the borrower to the lender. It is obvious that these rights protect the stockholders' interests at early stages on insolvency and business troubles. Therefore, Gale and Hellwig (1985) show that the optimal contract that minimizes the expected investigation costs is a debt contract.

As debt contracts are characterized in the literature as incomplete, Aghion and Bolton (1992) use incomplete contract theory to characterize debt as an instrument whose holders take control of the firm in a bad states of the world. They show that if the managerial benefits of control are higher in good states of the world, then it may be efficient for managers to have control of assets in good states, and for creditors to have it in bad states. This also shows that the interests of both debtholders and stockholders can be associated to each other. Because the rights of creditors are clearer, and violations of those rights are easier to verify in courts, the existing literature describe debt as providing better protection to outside investors than equity. However the focus on large investors sheds new light on the relative powers of debt and equity. This is true considering that the dominant form of lending around the world is bank lending. Banks are usually large investors, who gain numerous control rights in the firm at the time of, or even before, default. For example, the main bank, as in Germany, can often take physical control of the firm's bank account - which resides at that very bank - if it misses a payment, thereby assuring fairly complete control of the firm by the bank without much involvement of the courts. This control is often guaranteed by direct equity ownership in the firm (OECD, 1995). Thus, the corporate governance system in Germany ensures that debtholders' interests and stockholders' interests are complementary to each other and banks, as debtholders, are able to protect their interests in the firm as well as the stockholders' interests. Unlike equity, debt in a peculiar way may be tougher when it is not concentrated. If a borrower defaults on debt held by a large number of creditors, renegotiating with these creditors may be extremely difficult, and the borrower might be forced into bankruptcy (Bolton and Scharfstein, 1996). In contrast, it may be easier to renegotiate with a bank. The difficulty of renegotiation, and the power of dispersed creditors, might explain why public debt is an extremely uncommon financing instrument, used only in a few developed countries, and even there much less than bank debt. Triantis (1994) and Bowers (1999) argue on a theory of free cash flow that when the lender is given either a security interest in assets of the borrower or some other form of priority rights, these features constrain the ability of the managers to liquidate non-cash assets which acts for the stockholders' interests as well. Considering the inevitable information asymmetry between firm's insiders and outsiders, banks can play a significant informational role lessen the agencyasymmetry based problems. For example, the most recent study by Iacobucci and Winter (2005) con clude that in both hidden-information theories, asset securitization is driven by the propensity of the market to allocate assets to investors who are best informed about asset values. In this case, on a loan arrangements, banks are better informed about asset securitization than other investors. Therefore, as far as banks are concerned with the firm's assets value and securitization, it achieves and protects the stockholders' interest as well. Levmore (1982) shows the informational effects between debtholders and stockholders arguing that the failure of a firm to pay a dividend to preferred shareholders and enforcement by secured creditors communicates valuable information to common shareholders. The informational role is supported as well by the findings reached by James (1987) that stock prices reacted positively to announcements of bank debt-financing arrangements, while they fell upon announcement of other credit arrangements, notably public straight-debt offerings and privately placed debt. Lummer and McConnell (1989) extended James's study to distinguish between the effects of announcements by banks of new and revised loan arrangements. They found out that most of the positive effects on share prices were due to favorable announcements of revisions of existing financing arrangements. Lummer and McConnell concluded that the benefits to shareholders is derived from the bank's access to private information acquired during its relationship with the borrower rather than its advantage in screening the borrower at the time of the initial financing. Triantis and Daniels (1995) present a foundation to a theory of debt as an interactive corporate governance mechanism. They argue that debt is a potent and flexible governance instrument and that banks are effective governance players. One advantage is that by lending to a number of different firms in the same industry, banks develop a broadly based benchmark against which to evaluate the performance of each borrower. Other stakeholders benefit not only from the ability of banks to deter and detect managerial slack by monitoring, but also from the actions (exit and/or voice) taken by banks following the detection of slack (Hirschmann, 1970). Scott (1986) was the first to present a corporate governance mechanism based on relational financing (banks) for owner-operated firms in which the financers take broad security interests in order to enhance their leverage over their borrower decisions. PT Banks' loans play a significant role in the possible agency problem between debtholders and stockholders. That is, in the economic model of the corporation, financial agency problems exist because managers (as agents of stockholders) have incentives to make decisions that transfer wealth from debtholders to stockholders. In this case, the exit rights of debtholders deter this type of borrower misbehavior. Whereas dispersed shareholders may be unable to discipline management effectively through their voting rights, a bank with a large enough investments will have sufficient incentive to intervene effectively (Teger, 1980; Whyte, 1986). Nevertheless, Triantis and Daniels (1995) argue that a bank that detects managerial slack will not always choose to exit and use the threat of exit as a lever to intervene in the firm's decisions. This means that, as far as the bank is able to correct the slack, it goes to the best interests of the firm's stockholder as well since firm's bankruptcy comes against the stockholders' interests. That is, bank's intervention many help reach a debtholders-stockholders congruence of interests. Triantis and Daniels (1995) argue that the bankruptcy law in the U.S. restricts the lender's ability to exit after the borrower has become insolvent. Therefore, the voidable preference rule encourages timely monitoring and pre-insolvency action by threatening to reverse any attempt to exit after the debtor has become insolvent. This implicitly ensures that the interests of debtholders and stockholders are highly likely to converge since the debtholders can the borrower's fall of market value. The bank's exit may prompt some existing shareholders for whom exit is difficult to intervene in the management of the firm. Levmore (1982) argues that secured creditors that monitor their collateralized assets can provide signals about the financial stability of the firm to its outside shareholders. These signals may work to the benefit of the firm's shareholders since Booth (1992) provides empirical evidence that the cost of bank loans is lower when there is a public trading of shares in the borrowing firm.

Jensen (1989) refers to debt as a powerful agent for change because, if managers can not meet their interest obligations out of the firm's cash flow, they are forced to rethink their strategy and structure. Debt's power of change to the benefits of stockholders is supported in the literature. Gilson (1990) concludes that financial distress is accompanied by an increase in the proportion of common stocks held by blockholders. It is here assumed that they intervene to correct firm's financial health. Altman (1991) discusses the potentials that a group of investors can be specialized in lending to troubles firms and purchasing distressed debt securities. Ofek (1993) provides further support to the association between the interest of debtholders and stockholders that highly levered firms respond earlier to declines in firm value. In this sense, banks can provide a viable communication link to stockholders when firms' management has a discretionary disclosure attitudes. Verrecchia (1983) provides support that managerial discretion in disclosure is a function of disclosure cost. For example, a bank may use its threat of exit or its voice not only to redress slack, but also to obtain a favorable renegotiation of the lending terms.

In sum, the literature above mentioned includes many studies that show a considerable degree of association of interests between debtholders and stockholders. In an economic environment generally characterized by global converginism, the question that arises is the extent to such association could exist in transitional markets setting. The results in the empirical part of this paper using data from Egypt stock market provide insights into an answer to that question.

III. Research Variables & Proxies. Dependent variable

This paper utilizes two types of dependent variables as it runs into two stages. First: the paper attempts to examine those determinants of debt structure that are relevant to transitional market settings. This is due to the well-know understanding that the literature on determinants of capital structure has evolved and been examined and tested using data about developed markets mostly the U.S. This requires to take into account that the financial institutions and infrastructure in developed markets differ from those in transitional markets. Therefore, the search for determinants of capital structure in transitional markets requires an examination of those determinants of capital structure that are relevant to transitional market settings. In so doing, the first dependent variable is firm's debt ratio which is split into its two common parts; long-term debt and short-term debt. Both parts of debt are measured in book value. The debt ratio is measured in book rather than market value. Two studies have presented theoretical and empirical justification for the use of book value. Myers (1977) argues that the debt book value is related to the value of assets in place. Taggart (1977) finds that there is very little to choose between the book and market value formulations.

Second: This paper explores the possible association between firms' debt structure and firms' performance in the stock market. The latter is the dependent which is measured by three measures of stock market performance; Market-to-Book Ratio (t MB)TP MB = market value per share ÷ book value per share PT, Percentage of Market Value Added (t MVA%)TP. MVA% = (Market value of outstanding shares- book value of equity) ÷ book value of equity PT, and Price/Earnings Ratio (t PE ∆)TP. PE = price per share ÷ earnings per share. Each of the three dependents is to measure firm's adjustment to a target value; therefore it is measured as the changes in Market-to- Book Ratio (1 - t MB), Percentage of Market Value Added (1 - t MVA%), and Price/Earnings Ratio (1 - t PE ∆). The three measures present comprehensive perspective regarding firm's performance in the stock market in the literature of corporate finance and investments. The market-to-book ratio is a measure of shareholder value. The market value added is a measure of investments added value, and the price-earnings ratio is a measure of value (commonly as an indicator of overvalued and undervalued stocks).

Independent Variables

The literature on the determinants of capital structure lends itself to firms' debt structure. The literature is rich of numerous research papers that discus the determinants of capital structure mostly focusing on using the debt ratio as a proxy for capital structure. The relevant literature on the determinants of capital structure provides number of factors that have been examined. It has been realized that the number of factors differs from one study to another. Therefore, this study examines as a comprehensive number of determinants of capital structure as possible. Some determinants could not be included due to the lack of relevant data. Table (1) shows the common determinants of capital structure cited in the relevant literature and the ratios and/or proxies used for the measurement. (Modigliani & Miller, 1963; Bosworth, 1971; Toy et al., 1974; Myers, 1977; Martin & Scott, 1974; Marsh, 1982; Castanias, 1983, Auerbach, 1985; Jensen & Meckling, 1986; Titman & Wessels, 1988; Harris & Raviv, 1991; Homaifar et al., 1994; Lasfer 1995; Gilson, 1997; Ghosh et al., 2000). The Debt ratio (short-term debt and long-term debt) measures the debt structure. The speed of adjusting firm's operating performance is measured by taking into account that the amount of changes in the measure of operating performance in a certain period (t) is affected by the amount of changes in the previous period (t-1). According to the agency theory, we test the hypothesis that "a negative relationship exists between firm's debt and its stock marketperformance." The main proposition in this case is that debt is less costly than equity financing, thus has a positive effect on firm's operating performance. Debt financing, therefore, may help resolve the agency conflicts between firm's managers and other stakeholders.

IV. Data and Methodology. Data

The data used in this paper is extracted form many sources. The data related to firms' income statement and balance sheet are obtained from Kompass Egypt Financial Year Book (Fiani & Partners). The interest rate data is published by the IMF: International Financial Statistics. The data covers seven years 1997-2003. The total number of firms included in the study is 99 firms, which they cover fourteen different non-financial industries. Firms were selected based on two criteria. First, the non-financial firms amongst the 100 actively trading firms in Egypt stock market. Second, the non-financial firms amongst the 100 firms with the highest market value.

Methodology

The first stage is concerned with determining the determinants of capital structure that are relevant to transitional market settings. The general estimating equation (stepwise) in the first stage is as follows.

$$y_{tk} = \alpha_k + \sum_{i=1}^{n} \beta_{ik} X_{itk} + \varepsilon_{tk}$$

where $t = 1,\ldots,5$ $\quad$ k = number of firms in each group

$$y_t = \Delta STDR_t = (STDR_t - STDR_{t-1}) \text{ and } y_t = \Delta LTDR_t = (LTDR_t - LTDR_{t-1})$$

The next stage is concerned with examining the effects of changes in firm's debt structure, and its relevant determinants, on firm's operating performance. The general estimating equation (partial adjustment) in the second stage is as follows.

$$y_{tk} = \alpha_k + \beta_k y_{t-1,k} + \sum_{i=1}^{n} \beta_{ik} X_{itk} + \varepsilon_{tk}$$

where $t = 1,\ldots,5$ $\quad$ k = number of firms in each group

y_t = Measures of firm's performance the stock market.

It is worth to note that, according to the correlation coefficients, the correlation between the hree measures is very low. This ensures that the results are very distinct and the possibility of the overlap is very low as well.

Table 1. List of Determinants of Capital Structure examined in the study. The Δ is measured as 1) - (t - (t) for all variables except for) t DR 1 t * DR (* DR − + = Δ).

There are alternative approaches to calculate the target ratios such as (1) the average over certain number of years; (2) by fitting an autoregressive function; (3) by taking the maximum debt ratio in the past (Marsh, 1982). However, the three approaches result in one estimate for the target ratio which gives the impression that firms look at only one certain estimate (ratio) and plan their capital structure accordingly. The method used in this paper is based on the assumption that the firm changes its target ratio generically, then the ratio a firm could achieve is considered as if it was the target ratio. This point of view takes into account the generic aspects of planning for capital structure changes. According to the literature, floatation costs, firm's size, asset structure and the market conditions change over time which necessitate planning for capital structure generically, and the target ratios are changed accordingly. However, we experimented with the three methods plus our suggested one which utilizes the two ratios (1 t DE + and * DR Δ). The results showed slightly significant increase in the 2 R for our suggested measures.

$$ECTR_t = \frac{\text{Estimated taxable profits} \times \text{Corporate tax rate}}{\text{Pre - tax profits}}$$

$$NDT = OI - i - \frac{T}{CTR}, \text{ where : OI = Operating Income, i = Interest payments, T = Income tax payments}$$

$$CTR = \text{Corporate tax rate}$$

	DCR_t	Debt Coverage Ratio. A proxy for firm's failure
Agency Costs	ER_t	Expense Ratio = Operating expenses scaled by annual sales. [11] A measure of how effectively the firm's management controls operating costs, including excessive prerequisite consumption, and other direct agency costs.
	AUR_t	Assets Utilization Ratio = Annual sales/Total assets. A measure of how effectively the firm's management deploys its assets.
Uniqueness	SES_t	Selling Expenses/Sales. The relationship between specialized products and capital structure.
Industry Classification	IC_t	Dummy variables for types of industries. The industry effects on firm's capital structure.
Size	$LnAssets_t$	The natural logarithm of total assets and sales (Dummy variable). The effects of firm's size on the composition of capital structure.
	$LnSales_t$	
Profitability	ΔEBITDA	Earnings Before Interest, Taxes, and Depreciation over Total Assets.
	ΔOIS	Operating Income over Sales.
	ΔOIA	Operating Income over Total Assets.
	ΔPM	Profit Margin
	ΔROI	Return on Investment
Financial Flexibility	REA_{t+1}	The expected effect of 'Retained Earnings Ratio' as a proxy for the retention rate.
	ΔREA	A measure of the cumulative effect retained earnings, thus the extent of firm's financial flexibility.
Liquidity Position	ΔQR	Quick Ratio.
	ΔWCR	Working Capital Ratio.
	ΔCashR	Cash Ratio.
	ΔCR	Current Ratio.
Interest Rate	IR_t	Interest Rate on bank loans. The relationship between market interest rate and borrowing decisions.
Timing Effect	ΔPE	Price/Earnings Ratio. The relationship between stock prices and equity financing.
Transaction Costs	DPR_t	Dividend Payout Ratio. The effects of transaction costs of debt financing decisions.
Free Cash Flow	FCF_t	Operating free cash flow that shows the excess of cash used for financing.

$$\text{Bankruptcy risk} = \frac{\text{Fixed charges - Earnings before income and tax}}{\sigma \text{ of earnings}}$$

The expenses ratio is not assumed to measure all agency costs as discussed in the literature. Nevertheless, and according to the availability of data, this ratio can be considered a first-order estimate and easy-to-measure indicator of the presence of agency costs at the firm level.

V. Results and Discussion

This section is divided into three subsections. First, the results of the OLS estimates (stepwise) for the determinants of capital structure that are relevant to transitional market settings. These results are reported in table (2). Second, the results of the OLS estimates that show the debt structure, which is dividend into three classes; high, medium and low debt. These results are reported in table (3). Third, the results of the association between the firm's debt structure and firm performance in the stock market. These results are reported in table (4).

First: The Relevant Determinants of Capital Structure to Transition Market Settings

Table (2) shows the stepwise regression coefficients of the determinants of long-term debt and short-term debt. In general, the explanatory power for the shortterm debt equation is relatively higher than for the long-term debt equation. This means that the determinants of capital structure cited in the literature are relatively very associated with short-term debt financing.

Table 2. Determinants of Long-term Debt and Short-term Debt

Dependents: Long-term Debt Ratio & Short-term Debt Ratio		Debt Ratio: Long-term Debt Ratio $\Delta LTDR_t$	Debt Ratio: Short-term Debt Ratio $\Delta STDR_t$
Independents: Constant		-0.09	-0.33
Target Debt Ratio	DE_{t+1}	0.001 (1.43)	-
Average Industry Leverage	ΔDR_{AVGt}	0.018 (1.29)	-
Structure of Tangible Assets	$FATA_t$	-0.018 (-3.91)***	-
Relative Tax Effects	$\Delta NDTAX_t$	-	0.64 (16.78)***
	$\Delta NDTA_t$	-0.072 (-1.92)*	-
Growth	$CETA_t$	0.0003 (2.21)**	-
	GTA_t	-0.01 (-3.40)***	-
	SG_t	0.003 (2.37)***	-0.005 (-2.44)***
Profitability	$\Delta EBITDA_t$	-0.002 (-2.24)**	-
	ΔPM_t	-	-0.006 (-11.14)***
Financial Flexibility	ΔREA_t	-	-0.066 (-2.97)***
Liquidity Position	ΔWCR_t	-	0.001 (10.26)***
	$\Delta CashR_t$	-0.008 (-2.91)***	-
	ΔCR_t	-	0.0002 (2.13)**
Interest Rate	IR_t	0.76 (2.24)**	2.61 (1.74)*
Industry Type	Textiles, Garments & Consumers Goods	0.005 (1.71)*	-
	Paper, Packaging & Plastics	-	0.009 (1.34)
	Housing & Real Estate	-0.003 (-1.18)	-
	Tourism & Leisure	-0.005 (-2.20)**	0.007 (1.21)
	Utilities & Other Services	0.013 (2.45)***	-
Corporate Size	Small Size	-0.004 (-1.75)*	-
	Medium Size	-0.002 (-1.09)	-
Time Effect	Time Dummy	-	-0.004 (-1.97)**
N		477	484
F statistics		4.81***	115.34***
$\overline{R}^2$		0.11	0.70
D-W test		2.16****	2.33****
Theil Inequality Coefficient			

Note: Stepwise regression coefficients for the long-term and the short-term debt ratios. The dependent variables are the long-term debt ratio (t LTDR Δ) and short-term debt ratio (t STDR Δ). The *t*-statistics are shown between brackets. The two

regression equations are free from multicollinearity (VIF<5). The heteroskedastic effects are corrected using the White's HCSE,
which improves the significance of the OLS estimates.
**** D-W test significant at 2% two-sided level of significance
*** Significant at the level 1%
** Significant at the level 5%
* Significant at the level 10%

This explains a true fact about bank financing in Egypt that the short-term borrowing is referred and in most cases is renewed at multiple points of time that it turns out after few years to be long-term borrowing. This is evidenced since the results also show that many determinants of capital structure are significant determinants of both long-term and short-term debt. Firm's growth, profitability, interest rate and liquidity are shared determinates of both long-term and short-term debt. Some differences are realized that financial flexibility and relative tax effects are significant determinants of short-term debt. In the latter equation, the time dummy has a significant negative coefficient which indicates that the short-term debt is affected by time; as time passes by, short-term debt is decreasing. As for the long-term debt, the results also show some distinct differences that the structure of tangible assets, type of industry and size are significant determinants of long-term debt. It is worth to note that the inverse relationship between firm's tangible assets and long-term debt indicates that fixed assets are not considered a collateral for long-term debt. The explanation is that this could be true only when the long-term debt is originally a short-term debt that has been renewed at several previous periods and that does not requires collaterals. This explanation supports the relatively high association between the determinants of capital structure and short-term debt financing. It is interesting to note that the relevant determinants of capital structure (mostly growth, profitability, interest rate, liquidity and financial flexibility) shown in table (2) are associated with a considerable validity. That is , there is a relatively high similarity with the results of other related studies such as Booth's et al., (2001) study in other ten developing countries and Eldomiaty and Ismail (2005a,b,) in Egyptian firms although the methodology differs from one study to another. The relatively high similarity of the determinants of capital structure between developed and developing countries called Booth et al., (2001) to claim that the theory of capital structure is "portable."T

Second: The Structure of Debt Financing in Egypt

Table (3) shows the results of the OLS estimates for three classes of debt; high, medium and low. This classification aims at showing the extent to which firms depend on either long-term or short-term debt financing or both of them at each debt level. The dependent variables are long-term debt and short-term debt respectively. The analysis utilizes the partial adjustment model where it shows at each debt level the speed of adjusting long-term debt (1 - t LTDR Δ) to a target level (t LTDR Δ), and so does for short-term debt (1 - t STDR Δ).

With the exception of the speed of adjusting long-term debt at low level (-0.027), the other speed of adjustments indicate that firms at each debt level is concerned with adjusting both long-term and short-term debt to a target level since the coefficients speed of adjustment are statistically significant. Number of implications can be drawn from table (3). First, the direction of the adjustment matches considerably the results shown in table (2). For example, at the high and medium debt levels, firms adjust short-term debt negatively (-0.136 and -0.319) to a target level. This supports the results reported in table (2) where the time dummy has a negative coefficient for the short-term debt equation. This implies that short-term debt decreases by time. At the low level, firm depends considerably on short-term debt for financing purposes. Second, compared with long-term debt at each level, firms depend relatively more on long-term debt than on short-term debt. This is an additional evidence of the claim that the maturity of the short-term loans is extended to a long-term basis. This is true since the estimates of the speed of adjusting longterm debt are positive. Third, the speed of adjustment at each debt level supports the second implication. That is, at the high debt level, firms depend relatively higher on long-term debt (0.122), where at the medium debt level, firms depend relatively on less long-term debt (0.052). This indicates that the higher the debt level, the higher the long-term debt in firms capital structure. Fourth, at a cross section debt levels (high, medium, and low) the common determinants of long-term debt are target debt ratio and growth. As for the short-term debt, the common determinants are relative tax effects, profitability and liquidity. Up to this point, it is interesting to note that the results just mentioned in third and fourth match considerably the results in other related studies (Booth et al., 2001 for other ten developing countries) regarding the determinants of capital structure. This adds to the credibility of the results obtained in this study. Fifth, at the low debt level, most of the determinants of long-term and short-term debt are not statistically significant. This could be an expected result since firms that do not depend significantly on debt financing are not expected to be that concerned with either the distinction between both sources of debt or with making borrowing decisions rationally enough to match any of the theory of determinants of capital structure. Sixth, it is worth to note that at the high debt level, the negative estimate of interest rate indicates that firms time the borrowing decision. Nevertheless, the other significant estimates for the short-term debt have positive sign which indicate that firms do not time the borrowing decisions, i.e., borrow when interest rate is high. Seventh, type of industry has a significant effect on long-term debt. Two industries; the textile and Utilities depend relatively on long-term debt. So has the size effect on long-term debt since medium debt firms do not depend on long-term debt.

Table 3. The Structure of Long-term Debt and Short-term Debt

Dependents: Long-term Debt Ratio & Short-term Debt Ratio		Debt Ratio: High Level		Debt Ratio: Medium Level		Debt Ratio: Low Level	
		$\Delta LTDR_t$	$\Delta STDR_t$	$\Delta LTDR_t$	$\Delta STDR_t$	$\Delta LTDR_t$	$\Delta STDR_t$
Independents: Constant		0.11	-0.80	-0.13	0.38	-0.12	-0.16
Long-term Debt Ratio	Speed of adjustment $\Delta LTDR_{t-1}$	0.122 (2.07)**	-	0.052 (1.66)*	-	-0.027 (-0.89)	-
Short-term Debt Ratio	Speed of adjustment $\Delta STDR_{t-1}$	-	-0.136 (-2.38)**	-	-0.319 (-3.62)***	-	0.051 (2.51)***
Target Debt Ratio	DE_{t+1}	0.001 (1.67)*	-	0.006 (3.27)***	-	-0.001 (-0.50)	-
Average Industry Leverage	ΔDR_{AVGt}	0.049 (0.86)	-	0.165 (2.56)***	-	0.002 (0.11)	-
Structure of Tangible Assets	$FATA_t$	-0.030 (-2.17)**	-	0.002 (0.22)	-	-0.015 (-2.19)***	-
Relative Tax Effects	$\Delta NDTAX_t$	-	0.74 (9.51)***	-	-0.247 (-0.78)***	-	0.080 (2.56)***
	$\Delta NDTA_t$	0.009 (0.12)	-	-0.116 (-1.38)	-	-0.038 (-0.75)	-
Growth	$CETA_t$	0.001 (1.43)	-	0.001 (0.10)	-	0.001 (1.82)*	-
	GTA_t	-0.019 (-3.82)***	-	-0.041 (-2.24)**	-	-0.007 (-1.37)	-
	SG_t	0.005 (2.03)**	-0.011 (-1.72)*	0.003 (1.32)	-0.006 (-0.95)***	-0.001 (-1.23)	0.001 (0.41)
Profitability	$\Delta EBITDA_t$	-0.022 (-0.45)	-	0.043 (0.87)***	-	-0.001 (-0.80)	-
	ΔPM_t	-	-0.009 (-7.09)***	-	0.113 (2.77)***	-	0.008 (1.35)
Financial Flexibility	ΔREA_t	-	0.035 (0.50)	-	0.251 (3.72)***	-	-0.002 (-0.19)
Liquidity Position	ΔWCR_t	-	0.001 (6.92)***	-	-0.002 (-1.94)**	-	0.001 (0.25)
	$\Delta CashR_t$	-0.145 (-1.81)*	-	-0.023 (-0.71)	-	-0.001 (-0.13)	-
	ΔCR_t	-	0.074 (1.78)*	-	-0.071 (-3.78)***	-	0.001 (10.95)***
Interest Rate	IR_t	-0.76 (-0.63)***	6.32 (1.76)*	0.903 (0.85)	-2.87 (-1.06)	0.96 (1.81)*	1.22 (1.17)
Industry Type	Textiles, Garments & Consumers Goods	0.034 (2.86)***	-	0.019 (1.58)	-	-0.001 (-0.34)	-
	Paper, Packaging & Plastics	-	-	-	0.008 (0.75)	-	0.003 (0.47)
	Housing & Real Estate	-0.014 (-2.22)**	-	0.011 (0.69)	-	0.003 (1.40)	-
	Tourism & Leisure	-0.007 (-1.19)	0.009 (0.87)	0.001 (0.01)	-0.002 (-0.28)	-	-
	Utilities & Other Services	0.076 (3.15)***	-	-	-	0.011 (2.54)***	-
Corporate Size	Small Size	-0.008 (-1.54)	-	0.001 (0.23)	-	-0.001 (-0.44)	-
	Medium Size	-0.015 (-2.19)**	-	-0.001 (-0.36)	-	0.001 (0.24)	-
Time Effect	Time Dummy	-	-0.012 (-2.25)**	-	0.001 (0.28)	-	-0.001 (-0.67)
N		99	100	157	159	148	138
F statistics		5.49***	99.89***	2.69***	10.77***	3.02***	8.97***
$\bar{R}^2$		0.438	0.91	0.15	0.41	0.18	0.36
D-W test		1.95	2.37	2.29	1.68	1.65	1.80
Theil Inequality Coefficient							

Note: Regression coefficients (partial adjustment) for the three levels of debt; high medium and low debt ratio. The dependent variables are the long-term debt ratio (t LTDR Δ) and short-term debt ratio (t STDR Δ). The *t*-statistics are shown between brackets. The six regression equations are free from multicollinearity (VIF<5). The heteroskedastic effects are corrected using the White's HCSE, which improves the significance of the OLS estimates.

****D-W test significant at 2% two-sided level of significance
*** Significant at the level 1%
** Significant at the level 5%
* Significant at the level 10%

Third: The Extent of Debtholders-Stockholders Association of Interests in Egypt

This section discusses the extent to which the debt structure, outlined in the previous section and table (3), is relevant to corporate performance. The relevancy is to be considered it terms of the association between debt structure and corporate performance. At this point, the hypothesis to be tested is "the higher the association between debt structure and corporate performance in the stock market, the higher the association of interests between debtholders and stockholders." In addition, within the context of corporate governance mechanisms, the relevant debt structure is to be considered as a debt governance structure since it refers to a driver of corporate performance. Table (4) reports the results of the association between debt structure (short-term and long-term debt and cross sectional for three classes; high, medium and low debt) and corporate performance in the stock market. The latter is measured by three measures; Market-to-Book Ratio (t MB),Percentage of Market Value Added (t MVA%), and Price/Earnings Ratio (t PE Δ).

Table 4. Corporate Debt Governance Structure and Performance

Corporate Market-based Measures	Relevancy of Debt Governance Structure	Corporate Debt Structure					
		High Debt Ratio		Medium Debt Ratio		Low Debt Ratio	
		Short-Term Debt	Long-term Debt	Short-Term Debt	Long-term Debt	Short-Term Debt	Long-term Debt
Market-to-Book Ratio MB_t	Speed of Adjustment MB_{t-1}	0.71 (10.39)***	0.63 (9.56)***	0.76 (19.87)***	0.76 (20.09)***	0.73 (19.26)***	0.73 (19.18)***
	Short-term Debt $\Delta STDR_t$	-1.54 (-1.1)	-	0.15 (0.31)	-	0.07 (0.24)	-
	Long-term Debt $\Delta LTDR_t$	-	-1.92 (-1.61)	-	-0.81 (-2.19)**	-	-0.83 (-1.57)
	Capital Structure Determinants	Tax Effects (-) Growth (+) Profitability (+) Liquidity (-) Industry Type (+)	Target Debt (+) Industry Leverage (-) Growth (+) Profitability (-)	Profitability (+) Financial Flexibility (-) Industry Type (-)	Long-term Debt (-) Industry Leverage (+) Growth (+) Profitability (+) Interest Rate (+) Industry Type (-) Medium Size (+)	Growth (-) Liquidity (-) Interest Rate (+)	Growth (-) Interest Rate (+) Industry Type (+) Small Size (-)
	$\overline{R}^2$	0.76	0.82	0.84	0.86	0.78	0.81
	F statistics	30.17***	25.17***	72.8***	60.7***	56.41***	45.15***
Percentage of Market Value Added $MVA\%_t$	Speed of Adjustment $MVA\%_{t-1}$	0.98 (3240)***	0.98 (2661.2)***	1.08 (677)***	1.09 (147)***	0.92 (19.78)***	0.9 (18.14)***
	Short-term Debt $\Delta STDR_t$	-0.74 (0.18)	-	1.86 (2.52)***	-	0.24 (0.92)	-
	Long-term Debt $\Delta LTDR_t$	-	-1.51 (-1.73)*	-	-1.94 (-2.51)***	-	0.31 (0.68)
	Capital Structure Determinants	Tax Effects (-) Profitability (-) Liquidity (+) Time Effect (+)	Long-term Debt (-) Industry Leverage (-) Tax Effects (-) Growth (-) Industry Type (+)	Short-term Debt (+) Tax Effect (+) Growth (+) Profitability (+) Time Effect (+)	Long-term Debt (-) Industry Type (-)	Profitability (-) Interest Rate (+)	Growth (-) Interest rate (+) Small Size (-) Medium Size (+)
	$\overline{R}^2$	0.99	0.99	0.99	0.98	0.91	0.90
	F statistics	715940***	149663***	38848***	716.1***	2.04***	87.71***
Price/Earnings Ratio ΔPE_t	Speed of Adjustment ΔPE_{t-1}	-1.00 (-209)***	-1.01 (-184)***	-0.33 (-1.76)***	-0.008 (-0.88)	-0.77 (-12.4)***	-0.31 (-5.3)***
	Short-term Debt $\Delta STDR_t$	-71.04 (-1.93)**	-	3.06 (0.11)	-	-7.22 (-1.70)*	-
	Long-term Debt $\Delta LTDR_t$	-	-12.59 (-0.68)	-	-5.85 (-1.48)	-	-2.28 (-0.64)
	Capital Structure Determinants	Short-term Debt (-) Profitability (-) Liquidity (+)	Target Debt Ratio (-) Growth (+) Profitability (+) Liquidity (-) Interest Rates (+) Industry Type (+)	Liquidity (-)	Industry Leverage (+) Industry Type (+)	Short-term Debt (-) Tax Effects (-) Growth (-) Interest Rate (-) Time Effect (+)	Target Debt (-) Tangibility (-) Growth (mixed) Industry Type (mixed) Small Size (-)
	$\overline{R}^2$	0.99	0.99	0.16	0.12	0.80	0.68
	F statistics	2336***	1183.2***	3.38***	2.15***	55.92***	20.02***

Table (4) summarizes the results of the debt relevancy and firm's stock market performance. The detailed results are reported in tables (A, B, and C) in the appendix. A correlation matrix was carried out for the three stock market-based measures. The correlation coefficients are quite small which ensure that there is not overlap between and among the results of each measure. Table (4) shows that for each performance measure, the estimate of the speed of adjustment shows the extent to which either short-term debt or long-term debt (indigenous) and the associated determinants of capital structure (exogenous) help adjust the firm's stock market performance measure to a target level. The results show that all coefficients of the speed of adjustment are statistically significant. This indicates that either the shortterm or the long-term debt and the associated determinates have a substantial influence of the firm's three stock market-based performance measures. As for the high debt firms, the results show that the long-term debt and shortterm debt have negative and statistically significant relationship with market value added and PE ratio (-1.51 and -71.04 respectively). The combined effects of each one and its associated speed of adjustment add insights from this debt structure. As for the market value added, the negative coefficient of long-term debt and the positive speed of adjustment indicate that the less long-term debt, the higher the market value added in a next period. As for the PE ratio, the negative coefficient of short-term debt and the negative speed of adjustment indicate a positive relationship, that is the less the short-term debt, the less the price-earnings in a next period. In this case, the short-term debt could have been used to improve the PE ratio.

As for the medium debt firms, the results show that both types of debt help adjust the market value added to a target level since the coefficient of the speed of adjustment of each type of debt (1.08 and 1.09 respectively) is positive and statistically significant. It is clear that the positive coefficient of short-term debt (1.86) indicates that this type of debt helps improve the firm's market value added, while the negative coefficient of long-term debt (-1.94) affects the market value added negatively. This shows that the long-term debt is perceived negatively by the stockholders which means that an agency problem exists here between the debtholders and stockholders. As for the low debt firms, short-term debt only has a negative and significant coefficients (-7.22) with the PE ratio. As in the case of high debt levels, the negative coefficient of short-term debt and the negative speed of adjustment (-0.77) indicate a positive relationship, that is the less the short-term debt, the less the price-earnings in a next period. In this case, the short-term debt could be used to improve the PE ratio.

It is worth to note that, with the exception of medium debt in the PE equation, the explanatory power (R^2) for the other performance measures are relatively high which indicates a relatively high degree of association between both types of debt with the MB and MVA respectively. That is, the changes in either types of debt and the associated determinants of debt (exogenous variables) have a substantial effects on firms' stock market performance. As for the effects of determinants of capital structure, the results in table (4) show that certain determinants are common among three performance measures. These determinants are firm's growth, profitability, liquidity, interest rate, industry type and size. The coefficients of each present mixed results which indicate that the stock market participants have divergent attitudes toward these determinants. For example, growth and profitability are expected to have a positive relationship while the results show few negative coefficients. In most of the cases, the coefficient of interest rate is positive indicating the firm's do not time the borrowing decisions.

The results also show that the firm specifics (industry type and size) have significant effects. Size has a persisting effect especially in the low debt firms in which small size firms have a significant effects on the three stock market-based performance measures. The negative coefficients show that the small size firms are associated with low levels of the stock market measures. That is, the stock market participants appreciate negatively small firms.

VI. Conclusion

This study examines one dimension of the agency relationship between debtholders and stockholders. The focus is on the extent to which the debt governance structure is associated with firm's performance in the stock market. The results indicate that in the high debt firms, the less long-term debt, the higher the market value added and the less the short-term debt, the less the PE ratio. This means that the short-term debt can be used to improve the PE ratio. As for the medium debt firms, the results show also that the short-term debt helps improve the market value added. The results of the low debt firms are similar to those of the high debt firms indicating that the shortterm debt can be used to improve the PE ratio. The regression characteristics show that with the exception of medium debt in the PE equation, the explanatory power (R^2) for the other performance measures are relatively high which indicates a relatively high degree of association between both types of debt with the MB and MVA respectively.

The overall conclusion is that (1) debt governance structure in Egypt is characterized by the dominance of short-term debt, (2) the latter can be used to improve the firm's performance in the stock market, which shows that the association of interests between debtholders and stockholders is highly likely, and (3) the negative relationships of long-term debt indicate to the presence of an agency problems between debtholders and stockholders. A further research on this path using measures of debtholders' interests can be pursued to examine the extent to which the use of short-term debt can mitigate the agency problems between debtholders and stockholders.

References

1. Altman, Edward I. 1991. Distresses Securities: Analyzing and Evaluating Market Potential and Investment Risk.
2. Auerbach, Alan. J. 1985. Real determinants of corporate leverage. NBER, no. 616, Chicago: University of Chicago Press, pp.301-322.
3. Booth, James R. 1992. Contract Costs, Bank Loans, and the Cross-Monitoring Hypothesis. Journal of Financial Economics, 31: 25- 41.
4. Booth, L., Aivazian, V., Demirguc-Kunt, A., and Maksimovic, V. 2001. Capital Structure in Developing Countries. Journal of Finance, 56: 87-130.
5. Bosworth, B. 1971. Patterns of corporate external financing. Brookings Papers on Economic Activity, 2: 253-279.
6. Bowers, James W. 1999. Security Interests, Creditors' Priorities and Bankruptcy. Working Paper, Louisiana State University Law Centre: 90-128
7. Cable, J. 1985. Capital market information and industrial performance: The role of West German banks. The Economic Journal, 95: 118-132.
8. Castanias, Richard. 1983. Bankruptcy risk and optimal capital structure. Journal of Finance, 38: 1617-1635.
9. Diamond, Douglas W.. 1991. Debt maturity structures and liquidity risk. Quarterly Journal of Economics 106 : 1027-1054.
10. Eldomiaty, T. and Ismail, M. 2005a. Bayesian Identification of the Predictors for Capital Structure in Egypt. Advances and Applications in Statistics, 5: 1-20.
11. ________________________. 2005b. A Bayesian Approach for Testing the Debt Signaling Hypothesis in Transitional Market: Perspectives from Egypt.
12. Advances in Quantitative Analysis in Finance and Accounting, Forthcoming Fiani & Partners. Kompass Egypt. Financial Year Book Cairo: Fiani & Partners.
13. Ghosh, A., Cai, F. and Li, W. 2000. The Determinants of Capital Structure. American Business Review,18: 129-132.
14. Gilson, Stuart C. 1990. Bankruptcy, Boards, Banks, and Blockholders. Journal of Financial Economics, 27: 355-387.
15. ______________. 1997. Transaction costs and capital structure choice: Evidence from financially distress firms. Journal of Finance, 52: 111-133.
16. Green, Richard. 1984. Investment Incentives, Debt and Warrants. Journal of Financial Economics, 13: 115-135.
17. Harris, M. and Raviv, A. 1990. Capital structure and the informational role of debt. Journal of Finance 45 : 321-350.
18. ___________________.1991. The theory of capital structure. Journal of Finance, 46: 297-355.
19. Hart, O. and Moore, J. 1995, 'Debt and seniority: An analysis of the role of hard claims in constraining management.' American Economic Review, 85: 567-585.
20. Hirschmann, A. 1970. Exit, Voice and Loyalty. Cambridge: Harvard University Press.
21. Iacobucci, Edward M. and Winter, Ralph A. 2005. Asset Securitization and Asymmetric Information. Journal of Legal Studies, 34: 161-206.
22. James, Christopher. 1987. Some Evidence on the Uniqueness of Bank Loans. Journal of Financial Economics, 19: 217-235.
23. Jensen M. and Meckling, W. 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. Journal of Financial Economics, 3: 305-360
24. Jensen, Michael C. 1986. Agency Costs of Free Cash Flow, Corporate Finance and Takeovers. American Economic Review, 76: 323-329.
   ______________. 1991. Eclipse of the Public Corporation. McKinsey Quarterly, 1: 117-145.
26. Kim, W. S. and E. H. Sorensen. 1986. Evidence on the impact of the agency costs of debt on corporate debt policy. Journal of Financial and Quantitative Analysis, 21: 131-144.
27. Kochhar, R. 1997. Strategic Assets, Capital Structure, and Firm Performance. Journal of Financial and Strategic Decisions, 103: 23-36.
28. Lang, L., Ofek, E. and Stulz, R. 1996. Leverage, investment, and firm growth. Journal of Financial Economics 40: 3-30.
29. Lasfer, M. A. 1995. Agency costs, Taxes and Debt. European Financial Management, 1: 265-285.
30. Levmore, S. 1982. Monitors and Freeriders in Commercial and Corporate Settings. Yale Law Journal, 92: 49-83.
31. Lummer, Scott L. and McConnell, John J. 1989. Further Evidence on the Bank Lending Process and the Capital-Market Response to Bank Loan Agreements. Journal of Financial Economics, 99: 99-122.
32. Marsh, P. 1982. The Choice Between Equity and Debt: An Empirical Study. Journal of Finance, 37: 121-144.
33. Martin, John. D. and David F. Scott, Jr. 1974. A Discriminant Analysis of the Corporate Debt-Equity Decision. Financial Management, 3: 71-79.
34. Modigliani, Franco and Merton H. Miller. 1963. Corporate income taxes and the cost of capital:

A correction. American Economic Review, 53: 433-443.
35. Myers, Stewart C. 1977. Determinants of Corporate Borrowing. Journal of Financial Economics,5: 147-175.
36. Ofek, E. 1993. Capital Structure and Firm Response to Poor Performance. Journal of Financial Economics, 34: 3-30.
37. Scott, Robert E. 1986. A Relational Theory of Secured Financing. Columbia Law Review, 86: 901-977.
38. Simerly, Roy L and Li, M. 2000. Environmental Dynamism, Capital Structure and Performance: Theoretical Integration and Empirical Test. Strategic Management Journal, 21: 31-49.
39. Smith, Clifford W. and Warner, Jerold B. 1979. Bankruptcy, Secured Debt, and Optimal Capital Structure: Comments. Journal of Finance, 34: 247-251.
40. Stulz, René. 1990. Managerial discretion and optimal financing policies. Journal of Financial Economics 26 : 3-27.
41. Teger, Allan I . 1980. Too much invested to quit: The psychology of the escalation of conflicts. New York: Pergamon.
42. Taggart Jr., Robert A. 1977. A model of corporate financing decisions. Journal of Finance, 32:1467-1484.
43. Titman, S. and Wessels, R. 1988. The determinants of capital structure choice. Journal of Finance, 43: 1-19.
44. Toy, N., A. Stonehill, L. Remmers, R. Wright, and T. Beekhuisen. 1974. A comparative international study of growth, profitability, and risk as determinants of corporate debt ratios in the manufacturing sector. Journal of Financial and Quantitative Analysis, 9: 875-886.
45. Triantis, George G. and Daniels, Ronald J. 1995. The Role of Dent in Interactive Corporate Governance. California Law Review, 83: 1073-1113.
46. Triantis, George G. 1994. A Free-Cash-Flow Theory of Secured Debt and Creditors Priorities. Virginia Law Review, 80: 2155-2168.
47. Verrecchia, Robert E. 1983. Discretionary Disclosure. Journal of Accounting and Economics, 5 179
48. Whyte, Glen. 1986. Escalating Commitment to a Course of Action: A Reinterpretation. Academy of Management Review, 11: 311-322.
49. Williamson, Oliver E. 1991a. Strategizing, Economizing, and Economic Organization. Strategic Management Journal, 12: 75-94.
50. __________________. 1991b. Comparative Economic Organization: The Analysis of Discrete Structural Alternatives. Administrative Science Quarterly, 36: 269-296.

Appendix

Table (A)
Debt Governance Structure and Performance for the High Debt Firms

Dependents: Long-term Debt Ratio		Short-term Debt			Long-term Debt		
		MB_t	$MVA\%_t$	ΔPE_t	MB_t	$MVA\%_t$	ΔPE_t
Independents: Constant		2.32	-1.15	-190.3	-3.59	3.83	-321.2
Market-to-book	Speed of adjustment MB_{t-1}	0.71 (10.39)***	-	-	0.63 (9.56)***	-	-
Market Value Added (%)	Speed of adjustment $MVA\%_{t-1}$	-	0.98 (3240)***	-	-	0.98 (2661.2)***	-
Price-Earnings Ratio	Speed of adjustment ΔPE_{t-1}	-	-	-1.00 (-209)***	-	-	-1.01 (-184)***
Short-term Debt Ratio	$\Delta STDR_t$	-1.54 (-1.1)	-0.74 (0.18)	-71.04 (-1.93)**	-	-	-
Long-term Debt Ratio	$\Delta LTDR_t$	-	-	-	-1.92 (-1.61)	-1.51 (-1.73)*	-12.59 (-0.68)
Target Debt Ratio	DE_{t+1}	-	-	-	0.03 (1.99)**	-0.004 (-0.26)	-1.12 (-2.6)***
Average Industry Leverage	ΔDR_{AVGt}	-	-	-	-4.81 (-2.31)**	-4.44 (-1.69)*	104.9 (1.55)
Structure of Tangible Assets	$FATA_t$	-	-	-	0.22 (0.81)	0.33 (0.86)	-4.69 (-0.39)
Relative Tax Effects	$\Delta NDTAX_t$	-3.80 (-2.08)**	-9.56 (-2.38)***	25.96 (0.30)	-	-	-
Relative Tax Effects	$\Delta NDTA_t$	-	-	-	-0.48 (-0.34)	-8.88 (-1.80)*	-28.7 (-0.65)
Growth	$CETA_t$	-	-	-	0.01 (1.18)	-0.001 (-0.18)	0.005 (0.01)
	GTA_t	-	-	-	0.3 (1.66)*	-2.4 (-9.56)***	32.1 (1.67)*
	SG_t	0.18 (2.13)**	0.04 (0.71)	-2.66 (-0.97)	0.18 (2.18)**	0.09 (1.03)	-3.31 (-1.37)
Profitability	$\Delta EBITDA_t$	-	-	-	-3.79 (-2.02)**	-1.68 (-1.27)	84.01 (1.90)*
	ΔPM_t	0.03 (1.96)**	-0.08 (-11.51)***	-0.61 (-2.22)**	-	-	-
Financial Flexibility	ΔREA_t	-1.79 (-1.59)	-0.08 (-0.30)	5.13 (0.52)	-	-	-
Liquidity Position	ΔWCR_t	-0.004 (-1.95)**	0.01 (21.27)***	0.09 (2.62)***	-	-	-
	$\Delta CashR_t$	-	-	-	3.56 (1.42)	-0.60 (-0.34)	-109.2 (-1.82)*
	ΔCR_t	-0.44 (-0.85)	0.66 (2.46)***	26.1 (1.89)**	-	-	-

Table A continued

Interest Rate	IR_t	-16.33 (-0.34)	6.61 (0.22)	1438 (1.29)	26.36 (0.91)	-30.73 (-0.93)	2440.3 (1.96)*
Industry Type	Textiles, Garments & Consumers Goods	-	-	-	-0.44 (-0.53)	-0.57 (-1.21)	-7.12 (-0.44)
	Housing & Real Estate	-	-	-	-0.11 (-0.4)	0.4 (1.67)*	12.5 (2.01)**
	Tourism & Leisure	0.13 (0.66)***	-0.001 (-0.01)	-1.22 (-0.34)	0.24 (1.11)	0.27 (1.36)	3.60 (0.49)
	Utilities & Other Services	-	-	-	0.10 (0.31)	-0.11 (-0.36)	8.55 (0.46)
Corporate Size	Small Size	-	-	-	0.12 (0.72)	0.16 (1.04)	-2.86 (-0.56)
	Medium Size	-	-	-	-0.23 (-1.26)	0.01 (0.07)	1.92 (0.32)
Time Effect	Time Dummy	-0.001 (-0.01)	0.06 (1.71)*	-0.13 (-0.09)	-	-	-
N		98	82	92	96	84	96
F statistics		30.17***	715940***	2336***	25.17***	149663***	1183.2***
$\overline{R}^2$		0.76	0.99	0.99	0.82	0.99	0.99
D-W test		1.51****	2.51****	1.83****	1.71****	1.79****	2.55****

Note: Regression coefficients (partial adjustment) for Corporate stock market performance. The dependent variables are measures of Corporate stock market. The *t*-statistics are shown between brackets. The six regression equations are free from multicollinearity (VIF<5). The heteroskedastic effects are corrected using the White's HCSE, which improves the significance of the OLS estimates.

**** D-W test significant at 2% two-sided level of significance

*** Significant at the level 1%

** Significant at the level 5%

* Significant at the level 10%

Table (B)

The Debt Governance Structure and Performance for the Medium Debt Firms

Dependents: Long-term Debt Ratio		Short-term Debt			Long-term Debt		
		MB_t	$MVA\%_t$	ΔPE_t	MB_t	$MVA\%_t$	ΔPE_t
Independents: Constant		-1.45	-3.79	383.4	-4.81	-39.9	-16.7
Market-to-book	Speed of adjustment MB_{t-1}	0.76 (19.87)***	-	-	0.76 (20.09)***	-	-
Market Value Added (%)	Speed of adjustment $MVA\%_{t-1}$	-	1.08 (677)***	-	-	1.09 (147)***	-
Price-Earnings Ratio	Speed of adjustment ΔPE_{t-1}	-	-	-0.33 (-1.76)*	-	-	-0.008 (-0.88)
Short-term Debt Ratio	$\Delta STDR_t$	0.15 (0.31)	1.86 (2.52)***	3.06 (0.11)	-	-	-
Long-term Debt Ratio	$\Delta LTDR_t$	-	-	-	-0.81 (-2.19)**	-1.94 (-2.51)***	-5.85 (-1.48)
Target Debt Ratio	DE_{t+1}	-	-	-	0.008 (0.38)	0.09 (0.64)	-0.24 (-1.53)
Average Industry Leverage	ΔDR_{AVGt}	-	-	-	1.87 (2.09)**	0.98 (0.36)	15.98 (2.53)***
Structure of Tangible Assets	$FATA_t$	-	-	-	0.14 (0.85)	-0.88 (-0.84)	2.53 (1.6)
Relative Tax Effects	$\Delta NDTAX_t$	2.45 (0.81)	1.09 (0.47)***	95.53 (0.5)	-	-	-
Relative Tax Effects	$\Delta NDTA_t$	-	-	-	0.27 (0.14)	-4.35 (-0.76)	6.62 (0.55)
Growth	$CETA_t$	-	-	-	0.001 (0.31)	-0.001 (-0.18)	0.02 (1.14)
	GTA_t	-	-	-	0.11 (0.66)	1.07 (1.46)	-1.47 (-1.28)
	SG_t	0.03 (0.81)	0.06 (1.68)*	-7.14 (-1.33)	-0.02 (-1.28)	0.01 (0.16)	-0.45 (-1.17)
Profitability	$\Delta EBITDA_t$	-	-	-	3.22 (4.20)***	2.4 (1.46)	-1.10 (-0.2)
	ΔPM_t	0.69 (5.44)***	0.89 (2.15)**	-11.71 (-1.09)	-	-	-
Financial Flexibility	ΔREA_t	-1.01 (-2.12)**	-1.06 (-1.35)	18.34 (0.42)	-	-	-
Liquidity Position	ΔWCR_t	0.002 (0.06)	-0.001 (-0.04)	-0.69 (-0.33)	-	-	-
	$\Delta CashR_t$	-	-	-	0.23 (0.46)	0.15 (0.12)	-5.68 (-1.6)
	ΔCR_t	-0.01 (-0.11)	0.03 (0.28)	-12.43 (-1.74)*	-	-	-
Interest Rate	IR_t	-	-	-	37.1 (2.72)***	290.2 (1.23)	124 (1.16)

Table B continued

Industry Type	Textiles, Garments & Consumers Goods	-	-	-	-0.04 (-0.32)	-0.41 (-0.60)	4.22 (3.44)***
	Paper, Packaging & Plastics	-0.08 (-1.43)	-0.18 (-0.8)	10.59 (0.93)	-	-	-
	Housing & Real Estate	-	-	-	-0.11 (-0.61)	-1.48 (-3.8)***	2.84 (1.51)
	Tourism & Leisure	-0.18 (-2.92)***	0.08 (0.49)	2.46 (0.58)	-0.16 (-1.87)*	0.02 (0.06)	1.23 (1.51)
Corporate Size	Small Size	-	-	-	0.01 (0.21)	1.46 (0.98)	-0.72 (-0.89)
	Medium Size	-	-	-	0.01 (0.26)***	1.29 (0.91)	-0.69 (-1.18)
Time Effect	Time Dummy X45	0.02 (1.01)	0.09 (2.11)**	-0.94 (-0.53)	-	-	-
N		159	140	151	160	135	140
F statistics		72.8***	38848***	3.38***	60.7***	716.1***	2.15***
$\overline{R}^2$		0.84	0.99	0.16	0.86	0.98	0.12
D-W test		2.12****	1.89****	2.41****	2.15****	2.05****	2.17****

Note: Regression coefficients (partial adjustment) for corporate stock market performance. The dependent variables are measures of corporate stock market. The *t*-statistics are shown between brackets. The six regression equations are free from multicollinearity (VIF<5). The heteroskedastic effects are corrected using the White's HCSE, which improves the significance of the OLS estimates.

****D-W test significant at 2% two-sided level of significance

*** Significant at the level 1%

** Significant at the level 5%

* Significant at the level 10%

Table (C)

Debt Governance Structure and Corporate Performance for the Low Debt Firms

Dependents: Long-term Debt Ratio		Short-term Debt			Long-term Debt		
		MB_t	$MVA\%_t$	ΔPE_t	MB_t	$MVA\%_t$	ΔPE_t
Independents: Constant		-8.02	-7.52	74.09	-8.85	-5.74	14.73
Market-to-book	Speed of adjustment MB_{t-1}	0.73 (19.26)***	-	-	0.73 (19.18)***	-	-
Market Value Added (%)	Speed of adjustment $MVA\%_{t-1}$	-	0.92 (19.78)***	-	-	0.9 (18.41)***	-
Price-Earnings Ratio	Speed of adjustment ΔPE_{t-1}	-	-	-0.77 (-12.4)***	-	-	-0.31 (-5.3)***
Short-term Debt Ratio	$\Delta STDR_t$	0.07 (0.24)	0.24 (0.92)	-7.22 (-1.70)*	-	-	-
Long-term Debt Ratio	$\Delta LTDR_t$	-	-	-	-0.83 (-1.57)	0.31 (0.68)	-2.28 (-0.64)
Target Debt Ratio	DE_{t+1}	-	-	-	-0.007 (-0.21)	-0.05 (-1.32)	-1.27 (-3.1)***
Average Industry Leverage	ΔDR_{AVGt}	-	-	-	-0.31 (-0.40)	-0.57 (-0.72)	-10.89 (-1.24)
Structure of Tangible Assets	$FATA_t$	-	-	-	0.09 (0.68)	-0.21 (-1.39)	-4.55 (-2.9)***
Relative Tax Effects	$\Delta NDTAX_t$	0.49 (0.27)	0.20 (0.21)	-16.52 (-2.04)**	-	-	-
Relative Tax Effect	$\Delta NDTA_t$	-	-	-	-1.85 (-0.85)	-0.95 (-0.47)	11.53 (0.24)
Growth	$CETA_t$	-	-	-	-0.008 (-2.26)**	0.001 (0.38)	-0.01 (-0.43)
	GTA_t	-	-	-	-0.33 (-2.24)**	-0.36 (-3.3)***	3.52 (2.5)***
	SG_t	-0.11 (-1.67)*	-0.07 (-1.01)	-4.57 (-3.61)***	-0.07 (-1.94)**	-0.09 (-2.13)**	-5.44 (-5.13)***
Profitability	$\Delta EBITDA_t$	-	-	-	-0.03 (-0.82)	-0.01 (-0.38)	0.15 (0.17)
	ΔPM_t	0.01 (0.07)	-0.28 (-1.88)*	1.06 (0.47)	-	-	-
Financial Flexibility	ΔREA_t	-0.53 (-1.57)	-0.31 (-1.46)	-0.96 (-0.36)	-	-	-
Liquidity Position	ΔWCR_t	-0.009 (-0.26)	-0.007 (-0.19)	-0.33 (-0.64)	-	-	-
	$\Delta CashR_t$	-	-	-	-0.04 (-0.12)	-0.54 (-1.34)	-3.66 (-0.96)
	ΔCR_t	-0.001 (-2.19)**	-0.001 (-0.69)	0.001 (0.27)	-	-	-
Interest Rate	IR_t	60.88 (2.91)***	56.09 (2.88)***	-576.3 (-2.33)**	67.55 (5.1)***	42.93 (2.72)***	-103.1 (-0.69)

Table C continued

Industry Type	Textiles, Garments & Consumers Goods	-	-	-	-0.07 (-0.71)	0.17 (0.95)	0.79 (0.52)
	Paper, Packaging & Plastics	-0.05 (-0.35)	-0.02 (-0.18)	-0.55 (-0.68)	-	-	-
	Housing & Real Estate	-	-	-	0.01 (0.15)	-0.02 (-0.13)	-2.95 (-2.08)**
	Utilities & Other Services	-	-	-	0.21 (1.81)*	0.06 (0.89)	2.47 (2.22)**
Corporate Size	Small Size	-	-	-	-0.24 (-2.77)***	-0.16 (-1.93)**	-1.42 (-1.71)*
	Medium Size	-	-	-	0.01 (0.14)	0.12 (1.69)*	0.71 (0.98)
Time Effect	Time Dummy	0.01 (0.51)	-0.01 (-0.63)	0.77 (2.65)***	-	-	-
N		169	159	152	167	154	147
F statistics		56.41***	152.48***	55.92***	45.15***	87.71***	20.02***
$\overline{R}^2$		0.78	0.91	0.80	0.81	0.90	0.68
D-W test		1.7****	2.04****	1.82****	1.91****	2.31****	1.91****

Note: Regression coefficients (partial adjustment) for corporate stock market performance. The dependent variables are measures of corporate stock market performance. The *t*-statistics are shown between brackets. The six regression equations are free from multicollinearity (VIF<5). The heteroskedastic effects are corrected using the White's HCSE, which improves the significance of the OLS estimates.

**** D-W test significant at 2% two-sided level of significance

*** Significant at the level 1%

** Significant at the level 5%

* Significant at the level 10%