The Influence of Foreign Ownership on Capital Structure of Non-Financial Firms: Evidence from Istanbul Stock Exchange

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This paper investigates the effects of foreign ownership on firm's capital structure. It is expected that there will be an increase in favor of more leverage with lower cost of debt due to the increased ability of firm's access to new external funds on more favorable terms after Foreign Direct Investment (FDI). The vast amount of studies in corporate governance literature mostly concentrates on the relationship between ownership structure and firm performance. However, this study contributes to the literature by examining the effects of ownership structure (more specifically foreign ownership) on capital structure which has well-proven determinants, such as tangibility or collateral values of assets, size, profitability, growth, earnings volatility, non-debt tax shield, uniqueness and industry classification. In this study, the authors test the determinants of capital structure in a developing country's conjecture with her different market imperfections and information asymmetries by using data of Turkish non-financial firms. A multivariate regression analysis is conducted applying step-wise regression for the model construction by using pooled data set of 143 non-financial firms listed in the Istanbul Stock Exchange (ISE) over the period from 2007 to 2008, consisting of 286 firm-year observations in total. It is found that foreign ownership is significantly negatively related to long-term leverage. The results show that size (sales), tangibility, capital expenditure ratio, profitability and liquidity are also significant determinants of long-term leverage.

Introduction

This study empirically investigates the influence of foreign ownership on market and book leverages of 143 non-financial firms listed on Istanbul Stock Exchange (ISE) over the period from 2007 to 2008. There exists numerous studies explaining the relation between ownership structure and firm performance (Example: Morck *et al.,* 1988; Mc Connel and Servaes, 1990; Jain and Kini, 1994; Holderness *et al.*, 1999; and Himmelberg *et al.,* 1999). But there are relatively limited studies on the relationship between ownership structure and firm's capital structure. The seminal paper by Brailsford *et al.* (2002) provides empirical support on the positive relation between the level of managerial ownership (insiders) and external block ownership and the leverage. Accordingly, the agency relationship between managers and shareholders has the

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potential to influence decision-making process in the firm which in turn potentially affects firm characteristics such as firm value and leverage.

The vast amount of empirical literature on capital structure which are mostly tested for developed markets, provides conventional determinants such as tangibility or collateral values of assets, size, profitability, growth, earnings volatility, non-debt tax shield, uniqueness and industry classification (Titman and Wessels, 1988; Harris and Raviv, 1991; and Frank and Goyal, 2009). There is indeed a gap in literature for testing the observed outcomes in different country settings. Hence, the testing of traditional capital structure variables for a developing country's conjecture with different market imperfections, information asymmetries and ownership structures (institutional and managerial differences) is a promising research area. In this paper, besides traditional capital structure variables, an institutional variable (foreign ownership), an important corporate governance variable, are added and an attempt has been made to explain the influence of foreign ownership on capital structures of ISE listed firms.

With regard to the firms with foreign ownership which have specific financial and business characteristics, theoretical arguments—which are also in line with our expectations—imply that the international diversification of earnings should decrease the variability of cash flows and bankruptcy costs and these, in turn, enable multinational firms to sustain higher leverage than domestic firms. On the other hand, the empirical papers by Fatemi (1988), Burgman (1996), Lee and Kwok (1988) and Chen *et al.* (1997) who examined the US data, find that multinational companies use less leverage than domestic firms. The relation between multinationality and capital structure is still an unresolved puzzle in the literature (Aggarwal and Kyaw, 2010).

In the light of the above discussions on foreign ownership and the factors affecting the capital structure, the primary research question in this study is defined as: Is there any relationship between debt financing and level of foreign ownership?

This paper summarizes the literature review on the relationship between ownership structure and capital structure with special emphasis on multinational firms with international diversification. Then, it presents the empirical modeling and discusses the findings. And finally it concludes.

Literature Review

The capital structure or how the firm's investments are financed is still one of the most controversial issues in finance. Since the Modigliani and Miller's landmark paper (1958) which argues that capital structure is irrelevant in determining the firm's value and performance under perfect market conditions with limitless arbitrage opportunities, a number of theories have been developed to explain whether one form of optimal capital structure or financing policy exists, taking into consideration the imperfections in the capital markets such as agency costs, taxes and information asymmetries.

The trade off theory, originally developed by Kraus and Litzenberg (1973) and Scott (1976) claims that a firm decides on its capital structure by choosing its debt and equity by balancing the costs (bankruptcy costs) and benefits (tax shield) of debt. Kim and Sorensen (1986),

Lasfer (1995) and Graham (2000), empirically test the trade-off theory and provide evidence that the optimal level of debt realizes at the point where the marginal cost of obtaining debt is equal to the marginal benefit derived from obtaining the same amount of debt.

More dynamic versions of the revised trade off theory take into account the agency relationship among managers, shareholders and debt holders. Jensen and Meckling (1976) and Jensen (1986) emphasize that the costs of debt also include agency conflicts between shareholders and debt holders (such as the possibility of rejecting positive Net Present Value (NPV) generating projects) and the benefits of debt also include the reduction of free cash flow problem due to increased monitoring. Accordingly, capital structure and ownership structure are closely linked in explaining how the shareholders with different interests in the firm form their asset acquisition behavior to influence the corporate behavior, and the trade-off between two types of agency costs (equity and debt) determines the optimal debt-equity ratio.

Alternatively, the pecking order theory developed by Myers and Majlup (1984) and later tested by Shyam and Myers (1999) and Fama and French (2002), asserts that firms finance new investments first with retained earnings, then successively with safe debt, risky debt and as a final resort, equity. This theory deals with the transaction costs associated with new equity issues and the asymmetric information between managers and shareholders which means that the former has superior information about the firm's risks and prospective earnings and this leads to adverse selection problem for shareholders. In contrast to trade off theory, there is no optimal capital structure; instead, there is a hierarchy of securities to be used in the financing of new projects. But, this is different from Modigliani and Miller's irrelevancy of financing policy theory which also contends that there is no optimal capital. In contrast to the agency theory of free cash flow, Myers and Majlup (1984) assert that as free cash flow (cash earnings minus investment outlays) increases, debt level of a firm decreases with the controlling effect for investment opportunities and financing costs.

Foreign Ownership as a Factor Affecting Capital Structure in Multinational Companies

Shareholder ownership concentration and ownership types define ownership structure of a firm which is reflected in a firm's genetic algorithm via built-in governance system. Based on the differences in characteristics of ownership structure of a firm, firms shape their board of directors' composition accordingly. As a result of board of directors' formation, strategies and policies of a firm are being shaped. One of the important characteristics of the nature of the ownership structure formations, especially increasing trend in foreign direct investments in the developing countries, is foreign ownership. Foreign owners by nature are exposed to more risks compared to domestic owners. Additional risks born by foreign owners are country risk, currency risk, business risk caused by double or sometimes triple taxation and higher managerial cultural distances. Foreign owners tend to minimize or at least control their risks involved in their foreign direct investment by changing or at least influencing the governance system of the firms they have stake on. In order to be able to take measures for their risks, they prefer to have a controlling or at least influencing power on the board of directors.

Foreign owners not only bring their capital to the firm they have invested in but also the know-how, technology, new markets, new distribution channels, ability to reach new capital markets and creditors. From the perspective of a capital structure, we expect that foreign owners not only contribute to the shareholders' equity but also help them to acquire more and cheaper credits via new credit lines from new creditors resulting, presumably more shareholders' equity, more debt, less interest expense.

Empirical Research

Hypotheses Development

In line with the above theoretical arguments, we specifically develop hypotheses. Following Rajan and Zingales (1995), we use two capital structure measures as dependent variables; book leverage and market leverage. Book leverage is defined as the ratio of book value of long-term debt to the sum of book value of long-term debt and book value of equity and market leverage is defined as the ratio of book value of long-term debt to the sum of market value of equity and book value of long-term debt. Long-term debt is a common proxy in the literature and reflects the risk shifting incentives regarding long-term versus short-term investment policy (Molina, 2007). Leverage is positively correlated with firm size in terms of natural logarithm of sales. Large firms have greater debt capacity than small firms because they are less prone to bankruptcy risk (Titman and Wessel, 1988; and Rajan and Zingales, 1995). The profitable firms are expected to have less long-term leverage because they tend to have more retained earnings and need less long-term debt (Friend and Lang, 1988; and Titman and Wessels, 1988). The degree of leverage is expected to have a negative relation with leverage since it reflects the sensitivity of Earnings Before Interest and Tax (*EBIT*) to changes in sales, implying higher business risk and bankruptcy probability (Aggarwal and Kyaw, 2010). The relation between tangibility and leverage is expected to be positive since the firms with higher level of tangible fixed assets are more capable of providing collateral for debt financing (Harris and Raviv, 1990). Capital expenditure ratio is expected to affect leverage positively since the funding deficit of these firms will induce them to find more long-term leverage. Finally, liquidity is expected to affect long-term leverage negatively since accumulated cash and other liquid assets serve as an indicator of internal financing capability (De Jong *et al.*, 2008).

Based on the evidences from the literature, we define and test the following hypothesis:

H_1: There is a positive and significant relationship between the proportion of ownership held by foreign ownership (FRGN) and Book Leverage (BLEV) and Market Leverage (MLEV).

Data Set and Model Specification

The data set of this study is composed of 286 firm-year observations of non-financial firms listed on ISE including the periods 2007 and 2008 and gathered from companys' financial statements and yearbooks of ISE. Selected variables are measured as follows: *BLEV* is defined as a ratio of book value of long-term debt to the summation of book value of long-term debt and book value

of equity while *MLEV* is defined as a ratio of book value of long-term debt to the summation of book value of long-term debt and market value of equity. Foreign Ownership (*FRGN*) is percentage of shares owned by foreign shareholders, size of firm (*SIZE*) is measured by natural logarithm of net sales and profitability measures are selected as Return on Assets (*ROA*). Degree of Operating Leverage (*DOL*) is defined as a ratio of change in *EBIT* to change in net sales. Tangibility (*TNG*) is a ratio of fixed assets to the total assets. Capital Expenditure Ratio (*CAPEX*) is a ratio of capital expenditures to total assets and Liquidity (*LIQ*) is a ratio of current assets to current liabilities.

Methodologically, we estimate the following multivariate regression models, using the data set. We explore the influence of foreign ownership on firm leverage levels (market and book value leverages). Hence, we use foreign ownership as the primary explanatory variable and other variables as control variables. The correlation matrix and descriptive statistics are reported in Tables 1 and 2, respectively.

$$BLEV_{it} = \beta_0 + \beta_1 FRGN_{it} + \beta_2 SIZE_{it} + \beta_3 ROA_{it} + \beta_4 DOL_{it} + \beta_5 TNG_{it} + \beta_6 CAPEX_{it} + \beta_7 LIQ_{it} + \varepsilon_{it} \quad ...(1)$$

$$MLEV_{it} = \beta_0 + \beta_1 FRGN_{it} + \beta_2 SIZE_{it} + \beta_3 ROA_{it} + \beta_4 DOL_{it} + \beta_5 TNG_{it} + \beta_6 CAPEX_{it} + \beta_7 LIQ_{it} + \varepsilon_{it} \quad ...(2)$$

Table 1: Correlation Matrix of the Variables

Variables	*BLEV*	*MLEV*	*FRGN*	*SIZE*	*ROA*	*DOL*	*TNG*	*CAPEX*	*LIQ*
BLEV	1.00	0.74	–0.09	0.04	–0.02	0.08	0,11	0.07	–0.16
MLEV		1,00	–0.12	0.16	–0.02	0.10	0,28	0.18	–0.16
FRGN			1.00	0.19	0.00	0.02	0,02	0.07	–0.07
SIZE				1.00	0.04	0.02	–0,02	0.27	–0.26
ROA					1.00	0.02	–0,05	–0.02	0.08
DOL						1.00	–0,02	0.02	0.06
TNG							1,00	0.03	0.02
CAPEX								1.00	–0.14
LIQ									1.00

Table 2: Summary Statistics				
Variables	**Mean**	**Std. Dev.**	**Min.**	**Max.**
Capital Structure Variables				
BLEV	0.142	0.013	0.000	2.466
MLEV	0.123	0.008	0.000	0.603
Ownership Variable				
FRGN	0.179	0.017	0.000	0.978
Firm Characteristics				
SIZE	19.134	0.107	13.663	24.138
ROA	0.204	0.044	–1.589	13.156
DOL	–1.010	7.687	–1.385.216	736.686
TNG	0.510	0.011	0.023	0.964
CAPEX	0.064	0.004	0.000	0.333
LIQ	2.469	0.178	0.011	29.952

Empirical Findings

The results of the regressions of H_1 are presented in Table 3. For each model, multivariate regression analyses for the variables and goodness of fit tests for the overall model are performed. The estimated coefficients of the variables, *p*-values of *t*-statistics, adjusted R^2 results and *p*-values of *F*-statistics are all displayed. As a standard rule, *p*-values (probability of failing to reject H_0) which are less than 10% are accepted as a significance level.

All selected independent variables are found to be significant in both the models. Foreign ownership is significantly and negatively related to both the measures of leverages. This significant negative relation reveals that firms with foreign ownerships have less leverage than domestic firms. It seems that foreign owners' contribution to the shareholders' equity reduces the need for external financing. Positive and significant *SIZE* variable supports the assertions in the literature that larger firms tend to have more leverage levels compared to smaller ones. Significant and positive variables of tangibility and capital expenditures provide evidence in favor of increasing capital investments in firms with higher leverage.

Table 3: Capital Structure Determinants		
Independent Variables	**Dependent Variables**	
	BLEV	*MLEV*
Intercept	–0.121	–0.207
	0.241	0.016
FRGN	–0.111	–0.152
	0.046	0.006
SIZE	0.138	0.193
	0.022	0.001
ROA	–0.269	–0.101
	0.000	0.083
DOL	0.192	0.119
	0.000	0.029
TNG	0.191	0.258
	0.001	0.000
CAPEX	0.097	0.106
	0.095	0.067
LIQ	–0.172	–0.164
	0.002	0.004
Observations	286	286
Adjusted R^2	0.181	0.175
F-statistics	0.000	0.000

Note: First paragraph denotes estimated individual coefficients where as the second paragraph denotes probability values (p-values) at 0.1 level of significance.

Conclusion

This study explores the relationship between leverage and foreign ownership. In that respect, market and book value of leverage to capture and compare the effects of different measures of leverage have been selected. In the multivariate regression model, size, profitability, capital investment, degree of operating leverage, and tangibility and liquidity measures as control variables have been included. The pooled data set is gathered for the non-financial firms listed on ISE for 2007 and 2008.

The findings provided by the regression model reveal that there is a significant and negative relationship between leverage and foreign ownership. Increased trends in incoming foreign direct investment are in favor of equity financing instead of debt financing. It seems firms attracting foreign direct investment acquire sufficient internal funding and they do not need more debt financing to fund their capital expenditures compared to domestic firms. Significant and positive coefficients of *CAPEX* and *TNG* provide evidence in favor of increased capital investment for the firms with foreign ownership than domestic ones. Larger firms have significantly higher leverage levels than smaller firms. This is in consistent with the literature.

This paper has not accessed the cost of the debt financing. For a further research idea, it would be helpful to explore whether firms with foreign ownership have lower cost of debt and cost of capital or not?❑

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