The Effect of Changes in The Ownership and Board of Directors of Companies Due to Foreign Direct Investments on the Cost of Debt: Application on BIST Manufacturing

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Abstract

In this study, the effect of changes in the ownership and board structure of companies due to direct foreign investments on the cost of debt is examined. Manufacturing companies in Borsa Istanbul are included within the scope of the research. In this context, 43 companies have foreign shares in the ownership structure are included in the analysis. The data of the companies determined for the research between 2016-2019 were collected. In the research, the effect of foreign partnership shares, and the ratios of foreign members in the boards of directors on firms' cost of debt have been examined. According to the obtained results, a negative relationship is detected between the companies’ foreign ownership share and the cost of debt. In addition, a negative relationship was found between the ratio of foreign board members and the cost of debt of companies too. Accordingly, the increase in the foreign ownership share or the ratio of foreign board members of the companies decreases the cost of debt. Furthermore, a positive relationship is found between the cost of debt and the short-term debt percentage, whereas a negative relationship between the cost of debt and the firm size.

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1. Introduction

Foreign capital is quite essential in countries that have difficulties in financing for investments. Foreign capital can be attracted by the country using factors such as export income and tourism income, as well as investments.

Foreign capital investments can be categorized into two groups as portfolio investments and foreign direct investments (FDI). Portfolio investments consist of short-term securities investments such as stocks, bonds, bills, etc. that foreign companies usually make through the organized stock markets. Since this type of investment, called hot money, is short-term, it has a limited effect on long-term investments. Foreign direct investments involve foreign capital entering the country and operating in that country in a variety of ways, including a joint venture, a merger with a foreign company, or by means of a takeover of an existing company. In this way, the capital entering the country is more permanent and is much more effective in financing long-term investments.

According to IMF and OECD definitions, foreign direct investment is an investment made by a company resident in one economy (direct investor) to a company established in another economy (direct investment company) with the aim of achieving a permanent interest. The term “permanent interest” in the definition refers to the presence of a long-term relationship between the investor and the direct investment companies and the investor company having a say in the management. Besides, in the statement of the IMF on this subject, in order for an investment to be considered as a direct investment, the company must have 10% or more of the shares. This ratio is not a rule, it is used only as a classification criterion in terms of accounting records (Duce, 2003:2). The 10% share is also applied in Turkey in terms of accounting records. Nevertheless, foreign investments made with the aforementioned permanent interest and the authority to have a say in management may sometimes require a ratio of less than 10%. Therefore, this rate is determined as 5% in Borsa Istanbul. Accordingly, an institution or individual holding 5% or higher shares of a company must declare it. Besides, this situation is shown in the ownership structure of the company.

The potential of FDI to contribute to the welfare of host economies greatly attracts the interests of both academics and policymakers. This situation causes FDI to attract more and more attention of both developing and developed economies (Scott-Kennel, 2004:625).

In addition to the effects of foreign direct investments on the country's economies, there are also studies that address the issue at a more micro-analysis level, addressing the strategic choices and performance criteria of companies that make FDI (for example, Tatoglu & Glaister, 1998; Demirbag et al, 2007, 2008, 2009; Ilhan-Nas et al., 2018a; 2018b). Upon the literature is examined, there are also studies examining the effects of corporate governance variables such as ownership structure (Ilhan-Nas et al., 2018b) and board composition (Ilhan-Nas et al., 2018a) on the strategy preferences and financial performances (Okan et al., 2014) of companies. However, in the mentioned literature specifically on the context of multinational enterprises coming to Turkey a study examining the impact on financial indicators like cost of debt of companies' corporate governance mechanisms could not be reached.

In order to contribute to filling this gap in the literature, the effect of foreign partnership share, and the ratio of foreign members in the board of directors on the cost of debt of companies is investigated. It is thought that the research will make important contributions in terms of
practical and theoretical. In theoretical, the determination of the effects of foreign ownership and the ratio of foreign board members on cost of debt which is an effective variable of the financial success of the firm can make an important contribution to the existing corporate governance literature.

The second part of the study includes the related literature, the third part the conceptual framework, the fourth part the data and methodology. Findings and results of the research are included in the fifth and sixth chapters, respectively.

2. Literature

Various studies have been conducted to examine the effect of FDI. Those studies can be categorized in two groups such as macro and micro effects. Since our study was conducted at a micro level, the literature review was also conducted in this context. Accordingly, some of the researches on the effects of foreign direct investments on companies on a micro basis are given below.

FDI can be broadly divided into two categories; namely, expansionary and defensive types. While the expansionary type tries to acquire the firm-specific advantage in the host country, the defensive type is in pursuit of an inexpensive labor force in the host country to minimize the cost of production (Chen & Ku, 2000:153). In the study examining these two types of FDI on companies located in Taiwan, it was determined that both types of investments contributed positively to the survival of companies. In addition, while the expansionary type FDI contributed positively to the sales growth of firms, it is determined that defensive type FDI had no effect on sales growth.

Konings (2001) tried to investigate the effects of foreign direct investments on the productivity performance change in domestic firms located in Bulgaria, Romania, and Poland. According to the obtained results, the firms with foreign ownerships only in Poland had better productivity performances than the local firms without foreign partners. In other countries, no such difference was detected. Moreover, a negative effect was detected in Bulgaria and Romania in terms of productivity distribution of FDI to local firms, whereas no effect in Poland.

Oxelheim et al. (2001) examined the subject of ownership, location, and internalization (OLI) in terms of FDI. Accordingly, they stated that the driving force of FDI would have increased even more if the OLI elements were combined with the financing elements of the firm. Also, this study contained the “financial asset advantage” argument of Dunning (1993:150) regarding the “superior knowledge of firms about foreign capital resources and their access to them”. It was stated that multinational corporations had a financial asset advantage due to reasons such as size, efficiency, and information.

Doukas and Lang (2003) concluded that firms were successful in FDI that they made in their basic areas of expertise, but they had unsuccessful results in both the short- and long-run in FDI, which is not related to their basic areas of expertise. Besides, it was concluded that the performances of firms that make geographical diversification with FDI related to their areas of expertise were higher than those who did not.

In the study examining the effect of FDI on firms operating in New Zealand, Scott-Kennel (2004) asserted that the foreign partner with FDI could make a difference in various domains such as product technology, knowledge and experience, management practices, and production technology, and could gain a competitive advantage over its local competitors.
Similarly, it made it easier for the foreign partner that came with FDI to stand out in the competition by accessing to company-specific advantages and resources that were not available to local-based competitors. Furthermore, it was stated that, by courtesy of the foreign partner that came with FDI, the local companies had easier access to resources to which they previously had difficulty in accessing.

Lipsey (2004) stated that foreign investors with FDI could pay more wages than local firms, thus contributed positively to labor wages. The findings also revealed that labor productivity was positively affected. In his study conducted on Lithuanian firms, Javorcik (2004) detected a positive relationship between the increase in the ratio of foreign shares in firms and their productivity. Nonetheless, if the firm was completely foreign, the productivity increase could not be detected. Moreover, no difference was detected on a sectoral basis.

Haskel (2007) found that FDI positively affects the productivity of companies. Accordingly, a 10% increase in the foreign share of the firm caused an increase of 0.5% in its productivity.

Chen (2011) stated that FDI coming to the USA has different effects on the performance of firms. Accordingly, the country group (developed and developing) of the firm making foreign direct investment is important. Accordingly, when FDI was made by a firm in a developed country, the labor efficiency of the firm became 13% higher than the local firms within an average of 3 years. However, when the investment was made by a firm in developing countries, labor productivity change became 26% lower than local firms within an average of four years following the acquisition. It was determined that this situation was realized in a similar way in terms of sales performance. Jean et al. (2011) examined the ethnic bonds and their effects on FDI location and firm performance in the case of Taiwan. The obtained results revealed that the ethnic bonds of senior executives were important in facilitating a firm’s choice of location for foreign direct investment. However, they found that the ethnic bonds did not help improving firm performance in China.

Garcia et al. (2013), in their study examining the FDI effect on Spanish firms, found that FDI negatively affected innovation, whereas increased competition and productivity. Aren et al. (2014) found that the development of the institutional structures of companies positively affected their performance and had an increasing effect on demand for a foreign investor. Doğan and Topal (2016) investigated the effects of the number of foreign members in the board of directors and foreign ownership on financial performance in the BIST manufacturing industry. According to the obtained results, the increase in the number of foreign members in the board of directors and the rate of foreign ownership had positive effects on performance. Ege and Topaloğlu (2017) analyzed the effect of the largest shareholder share, foreign ownership share, free-float rate, total assets, and return on assets on the firm’s financial leverage ratio using the BIST 30 sample. No significant relationship was found as a result of the analysis.

Polat (2018) examined the effects of FDI on the values of firms in developing countries in the context of the Stock Exchange and the Real sector. According to the results, while the effect of FDI on the values of companies in the stock market was positive, it could not be determined on the values in the real sector. Do et al. (2019) examined the relationship between foreign investors and capital structure in the case of Taiwan. According to the results, foreign partners adjusted financial leverage within the optimum capital structure of the firm. This situation
reduced the cost of debt of the firm. The study indicated that foreign ownership had a positive effect on the cost of capital due to borrowing in emerging markets.

3. Conceptual Framework

The results obtained from the above studies indicate that FDI may have different effects in various times, locations, and conditions. The figure illustrating the development of FDI entering Turkey according to the main sectors is given below.

Source: The Central Bank of the Republic of Turkey (CBRT)

**Figure 1. Annual Data of FDIs According to Sectors (million $)**

FDIs entering Turkey, as seen from the figure, have been diminishing over the years. The highest amount of investment is made in the service sector among these main groups. This situation is due to the fact that sub-sectors such as banking and insurance are located in those groups.

The development of the economy in a country is unthinkable without real production. In this context, although the service sector attracts more foreign investors, it can be claimed that the industrial sector is much more important for the development of the country’s economy. Moreover, it can be said that foreign capital entering the industrial sector be more permanent than the service sector. In this context, it was preferred to explicate the effect on the industrial sector in the research study. Sub-sectors and industry groups belonging to the industrial sector and foreign investment amounts for the year 2019 are presented in the table below.
As seen in the table, the manufacturing sub-sector attracts the majority of FDIs into the industrial sector. Therefore, the manufacturing sector is chosen for the analysis. Also, while the industries that attract the majority of FDIs throughout the country are Food, Chemical, and Petroleum products, this situation changes as Chemistry, Metalware, and Food for the companies in the manufacturing sector in the table.

As seen in the above studies, many of them have been conducted to examine the effect of FDI on the country and firm performances. It is seen that these studies mostly concentrated on the factors that affect the performance of the economy (macro) or companies (micro), such as profitability, productivity, employment, wages, market values, technology transfer, and leverage ratios.

Studies conducted to investigate the effect on a macroeconomic basis generally examine the effect of FDI on the systematic functioning of the country economies. Studies on companies are mostly based on the corporate governance of FDIs and its consequences. Therefore, it can be asserted that the firm performance is affected by two risk factors; namely, general and specific. These are systematic risks related to the overall economy (exchange rate, inflation, unemployment, current account deficit, etc.) and non-systematic risk factors stemming from the corporate governance activities of the company.

There is scarcely any possibility to change systematic risk factors due to the corporate governance activities of a single company. Notwithstanding, the fact that many companies concurrently behave in a similar manner may cause a systematic change in risk.

The most important factors affecting the corporate governance practices of companies are ownership structure and board composition. There are many studies in the literature that
investigate the effects of these two factors to the strategic choices and performances of companies (for example, Ballesta & Meca, 2011:389; Bruslerie & Latrous, 2012:111; Roberts & Yuan; 2010:604; Anderson et al., 2004:315; Chen, 2012:3346; Lorca et al., 2011:613; Doğan & Topal, 2016:31; Kılıç, 2014:34; Piot & Piera, 2007:3; İlhan-Nas et al., 2018a; İlhan-Nas et al., 2018b:160; Okan et al., 2014:77).

Firms' ownership structure and board composition can be expected to change due to FDI (also known as foreign ownership). Therefore, it can be claimed that FDI (foreign ownership) be a factor that would affect firm performance.

Upon examining the researches in the literature, different effects are determined both the foreign ownership share and the ratio of foreign members in the board of directors on firm performance. Accordingly, some studies found a positive relationship of foreign ownership in the company with the foreign member of the board of directors and the financial performance of the company (Mishra, 2013:15; Doğan & Topal, 2016:42; Oxlæheim & Randøy; 2003:2389; Choi et al., 2007:941; Tezömez & Göksen, 2006:90); whereas some of them found negative relationships (Masulis et al., 2012:527; Wellalage & Locke, 2012:58), and some studies did not find a relationship at all (Kılıç, 2014:33; Randøy et al., 2006:21; Zeitun & Tian, 2007:21; Shukeri et al., 2012:126). In addition to these in some studies, an inverse U-shaped relationship was detected between the foreign staff on the board of directors and financial performance (Schmid & Dauth, 2014:63; Sueyoshi et al., 2010:732).

On the other hand, according to the results of other studies examining the effects of foreign ownership on the company; Ege and Topaloğlu (2017) stated that the share of foreign ownerships in firms did not have an effect on the leverage of firms, Aren (2014) stated that the firm's developed corporate structure increased foreign demand, and Do et al. (2019) asserted that foreign investors could reduce cost of debt if they were effective in achieving the optimum capital structure of the company.

Dağlı et al. (2013) argued that firms mostly (41%) considered the cost of debt while determining the cost of capital used in investments. Ceylan and Demirci (2017) stated that one of the factors affecting firm performance was the cost of debt. Therefore, the cost of debt can directly affect the company's cost of capital, and thus its performance. Cost of debt, according to the studies conducted on the factors affecting the cost of debt of companies is affected by factors such as ownership structure (Ballesta & Meca, 2011:389); the existence of foreign ownership (Do et al., 2019:5); board independence and board size (Anderson et al., 2004:315); classified boards of directors (Chen, 2012:3346) management ownership, the effective board of directors activities (Lorca et al., 2011:613); the quality of corporate governance, the presence of institutional investors among the company's investors, the quality of the audit process, the appointment of a high-profile auditor (Piot & Piera, 2007:7) and ownership (Roberts & Yuan, 2010:604), and there is generally a negative relationship between them.

Moreover, the members of the board of directors have three duties such as control, service (strategic consultancy), and resource dependence. The control role has been defined as monitoring and supervising directors as agents of the shareholder. The service role is defined as advising the CEO and senior managers on administrative and other managerial concerns, as well as initiating and formulating a strategy more actively. The resource dependence role involves the activity of facilitating the acquisition of resources critical to the success of the
company. Managers who fulfill this role are usually the representatives of certain institutions (Johnson et al., 1996:411).

Foreign partners expect from the staff assigned to the board of directors to perform tasks such as keeping the institution under surveillance on behalf of the company, protecting their investments, harmonizing their objectives with the goals of the local company (Sekeler-Gökşen & Tezölmez, 2007:386).

According to the agency theory, the agency problem occurs between managers and all shareholders. In this context, a similar conflict takes place between the shareholders and those who provide the company with financing resources. This situation affects the cost of debt of the firm (Ballesta & Meca, 2011:389).

Therefore, boards of directors can increase external audits by making effective and correct decisions. This situation may reduce the cost of debt by increasing the harmony between shareholders and managers (Ballesta & Meca, 2011:391). Moreover, stronger corporate governance may result in lower cost of debt due to reduced institutional problems that concern borrowers, improved control possibilities, and minimized information asymmetry (Lorca et al., 2011:617).

Credit institutions have little influence on the management and control structures of companies. Therefore, upon lending, they expect these boards to operate effectively. Factors such as increased independence in the functioning of the boards, reporting quality, appropriate staff selection, and the establishment of effective audit committees are taken into consideration by the creditors. In this context, the cost of debt may be related to the quality of these committees and activities (Plott & Piera, 2007:1; Anderson et al., 2004:341).

Also, from a theoretical point of view, the presence of institutional investors can lower the cost of debt, since companies with a higher proportion of institutional investors would likely have lower agency costs due to better monitoring. According to the incentive hypothesis, institutional investors monitor the management team that actively improves the quality of their investment decisions and the reliability of financial reports.

Therefore, there may be a negative relationship between institutional ownership and the cost of debt due to three reasons (Roberts & Yuan, 2010:605);

- Firms closely monitored by institutions would be more profitable and less risky.
- As institutions exert pressure on companies to produce better quality information, bank oversight becomes less costly.
- Lenders would engage in less monitoring when they believe that corporate owners are effective overseers and transfer these savings to borrowers.

Companies with foreign partners are expected to be more productive than other companies (Chen, 2011:219). Also, according to Oxelheim et al (2001), multinational corporations have much wider opportunities in the market they enter with FDI. This situation may have a lowering effect on the cost of capital. Firms do this with the advantages of ownership, location and internalization. In addition, companies with foreign partners have the opportunity to obtain funds from international markets (Forssbæk & Oxelheim, 2011:271). On the other hand, Ulas (2004) in his study of firms in Turkey of determined that the most important contribution of foreign partners was technology transfer. In the examination, it was concluded that the part with information regarding technology, know-how, patents, etc. may be more
dominant in the decisions of the board of directors. This situation suggests that even if the capital share of the foreign partner is low, it can be more effective in the decisions within the board.

In this context, the presence of foreign partners in the ownership structure of the company and the presence of foreign staff in the board of directors may cause these activities to be performed more effectively. This would strengthen corporate governance and reduce the cost of debt of the company as mentioned above.

As a result of the literature review, no study has been found that examines the relationship between firms' foreign ownership rate (foreign ownership) and cost of debt. From this point of view, the aim of the study is to determine the effect of foreign direct investments received by companies or, in other words, foreign ownership shares of companies on the cost of debt.

In this direction, the hypotheses of the research study are determined as follows:

H1: There is a negative relationship between the foreign ownership share and the cost of debt of the company.

H2: There is a negative relationship between the ratio of foreign board members and the cost of debt of the company.

Upon calculating the cost of debt of companies, not only the interest offered but also other expenses (such as commission expenses) incurred due to the borrowing should be included to the cost of debt (Padron et al., 2005:62). Therefore, the cost of debt of the company is calculated as financial expenses/total debts, same as in Padron et al. (2005), Piot & Piera (2007), Lorca et al. (2011), Ballesta & Meca (2011), and Öztürk (2018). Here, the financing expenses are calculated as net financing expenses (financing expenses - financing income) as suggested by Parlakkaya and Çürük (2011).

On the other hand, there may be other variables that can be effective in this relationship structure.

In many studies on this subject, the asset size of companies (Demirhan, 2009:682; Anderson et al., 2004:326; Lorca et al., 2011:617; Piot & Piera, 2007:13), the short-term leverage (Salawu, 2009:124; Mohamad & Saad, 2010:143) and return on equity (Ege & Topaloğlu, 2017:481; Salawu, 2009:124; Mohamad & Saad, 2010:143; Lorca et al., 2011:617) variables can also be effective on this issue.

In this context, the asset size of companies, short-term leverage ratios, and return on equity have been added to the model as control variables. Furthermore, in order to examine the impact in terms of industry, industries have been included as dummy variables.

4. Data and Methodology

4.1. Data

In the research study, the effect of foreign ownership shares of companies on cost of debt is examined. In this context, companies in the manufacturing sector in the Borsa İstanbul (BIST) are chosen as a sample for investigation. Information on the partnership, the board of
directors, and the industry branch of the companies are obtained from the Public Disclosure Platform. Information on financial statements is obtained from the database of Is Investment.

In order to examine the effect of foreign shareholder percentages of companies on cost of debt, first of all, the foreign ownership share of companies, the ratio of foreign board members, and their sub-sectors are collected as of the end of 2016. To examine the effect of this situation, the 2017-2019 average of the financial statements are considered. The reason for this is that the change in the partnership structure can only take effect after a certain period.

There are 174 companies in the BIST manufacturing sector. The number of companies with foreign ownerships among these companies as of the end of 2016 is 43. In determining the total foreign ownership shares, indirect foreign ownership shares are included as well as the direct ownership.

Although the number of companies with foreign ownerships is low \( n = 43 \), it is at a sufficient level for the analysis \( (n>30) \). Also, various control variables are included in the research model. There are a total of 9 industry branches in the manufacturing sector. Nevertheless, due to the low number of companies with foreign ownerships, industries with at least 7 companies are included in the analysis. There are three industry branches in this regard. The variables used in the study are presented in the table below.

<table>
<thead>
<tr>
<th>Table 2. Variables of the Research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The dependent variable</strong></td>
</tr>
<tr>
<td>Cost of debt (CoD)</td>
</tr>
<tr>
<td><strong>Explanatory variables</strong></td>
</tr>
<tr>
<td>Foreign Ownership Share (FOS)</td>
</tr>
<tr>
<td>Foreign Board Members (FBM)</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
</tr>
<tr>
<td>Short term leverage percentage (STLP)</td>
</tr>
<tr>
<td>Firm size (FS)</td>
</tr>
<tr>
<td>Return of Asset (ROA)</td>
</tr>
<tr>
<td>Return of Equity (ROE)</td>
</tr>
<tr>
<td><strong>Industries Dummy variable</strong></td>
</tr>
<tr>
<td>Industry 1 (ind 1)</td>
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<tr>
<td>Industry 2 (ind 2)</td>
</tr>
<tr>
<td>Industry 3 (ind 3)</td>
</tr>
</tbody>
</table>

\(^2\) According to the current legislation, an ethics committee approval report is not required for the data regarding the companies obtained from the database.
4.2. Methodology

For the research study, it is first examined whether a multicollinearity problem exists among the obtained data. Then, the problematic data are excluded from the analysis. In order to determine the most optimum model for analysis, the backwards technique is chosen from the stepwise OLS regression method.

The equation established to examine the research is as follows;

\[ Y = \beta_0 + \sum_{i=1}^{n} \beta_i x_i + e \quad i = 1,...,8 \]

Here, \( Y \) denotes the cost of debt, \( x_i \) denotes the explanatory variables, \( \beta_0 \) denotes the constant term, \( \beta_i \) denotes the coefficients of the explanatory variables, and \( e \) denotes the error term.

The Pagan Godfrey test is performed to detect the presence of heteroscedasticity problem in the obtained model. Furthermore, the Jarque-Bera normality test is performed to determine the multi normal distribution of the model.

5. Findings

Correlation test results for the determination of multiple linear connection problems are presented in the table below.

<table>
<thead>
<tr>
<th>Correlation</th>
<th>CoD</th>
<th>FOS</th>
<th>FBM</th>
<th>STLP</th>
<th>FS</th>
<th>ROA</th>
<th>ROE</th>
<th>IND 1</th>
<th>IND 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoD</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOS</td>
<td>-0.251599</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FBM</td>
<td>-0.176170</td>
<td>0.451903</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STLP</td>
<td>0.439979</td>
<td>-0.028334</td>
<td>0.132767</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>FS</td>
<td>-0.110393</td>
<td>-0.397223</td>
<td>-0.476105</td>
<td>-0.183243</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>ROA</td>
<td>-0.444763</td>
<td>0.101199</td>
<td>-0.161503</td>
<td>-0.443638</td>
<td>0.034309</td>
<td>1.000000</td>
<td></td>
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<tr>
<td>ROE</td>
<td>-0.254468</td>
<td>0.110686</td>
<td>-0.267483</td>
<td>-0.297908</td>
<td>0.142531</td>
<td>0.846783</td>
<td>1.000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND 1</td>
<td>0.179981</td>
<td>-0.005702</td>
<td>-0.073820</td>
<td>0.066138</td>
<td>0.086159</td>
<td>0.013199</td>
<td>0.089321</td>
<td>1.000000</td>
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</tr>
<tr>
<td>IND 2</td>
<td>-0.180079</td>
<td>-0.016992</td>
<td>-0.065094</td>
<td>0.042320</td>
<td>-0.084049</td>
<td>0.342347</td>
<td>0.339850</td>
<td>-0.322749</td>
<td>1.000000</td>
</tr>
<tr>
<td>IND 3</td>
<td>0.088488</td>
<td>-0.025513</td>
<td>0.053273</td>
<td>-0.011216</td>
<td>0.128257</td>
<td>-0.108567</td>
<td>-0.243519</td>
<td>-0.258535</td>
<td>-0.242740</td>
</tr>
</tbody>
</table>

If there is more than 80% relationship between variables, multicollinearity problem occurs in the model. Upon considering the values given in the table above, a high level of relationship is found among the return on equity and return on assets of companies. Therefore, return on assets variable are excluded from the model.

In line with the purpose of the study, the stepwise regression analysis method and the backward technique determine that the return on equity is the variable that distorts the model. The regression analysis is performed with the model created in this regard. The HAC standard errors & covariance method is used in the analysis. The obtained results are presented in the table below.
Table 4. Regression Analysis Results

Dependent Variable: Cost of debt
Method: Least Squares
Sample: 1 43
Included observations: 43
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOS</td>
<td>-0.053802</td>
<td>0.025814</td>
<td>-2.084253</td>
<td>0.0445</td>
</tr>
<tr>
<td>FBM</td>
<td>-0.084950</td>
<td>0.038521</td>
<td>-2.205287</td>
<td>0.0341</td>
</tr>
<tr>
<td>STLP</td>
<td>0.200847</td>
<td>0.074595</td>
<td>2.692501</td>
<td>0.0108</td>
</tr>
<tr>
<td>FS</td>
<td>-2.01E-12</td>
<td>6.51E-13</td>
<td>-3.086588</td>
<td>0.0039</td>
</tr>
<tr>
<td>IND 1</td>
<td>0.021834</td>
<td>0.023525</td>
<td>0.928155</td>
<td>0.3597</td>
</tr>
<tr>
<td>IND 2</td>
<td>-0.027443</td>
<td>0.027631</td>
<td>-0.993194</td>
<td>0.3274</td>
</tr>
<tr>
<td>IND 3</td>
<td>0.025423</td>
<td>0.016767</td>
<td>1.516232</td>
<td>0.1384</td>
</tr>
<tr>
<td>C</td>
<td>0.038670</td>
<td>0.038334</td>
<td>1.008763</td>
<td>0.3200</td>
</tr>
</tbody>
</table>

R-squared    0.390342  Mean dependent var  0.050301
Adjusted R-squared 0.268411  S.D. dependent var  0.069956
S.E. of regression 0.059835  Akaike info criterion  -2.628198
Sum squared resid 0.125310  Schwarz criterion  -2.300532
Log likelihood 64.50625  Hannan-Quinn criter.  -2.507365
F-statistic 3.201323  Durbin-Watson stat  2.025374
Prob(F-statistic) 0.009976  Wald F-statistic  5.575628
Prob(Wald F-statistic) 0.000226

Selection Summary

Removed ROE

The whole model is found to be significant at the 1% level with the F value of 3.20132. The adjusted R-squared is 26.84% in the model.

According to the results of the analysis, a negative relationship of the foreign ownership share in companies and foreign board members of directors with cost of debt is detected. In this context, the increase in the foreign share in the ownership structure of the company leads to a decrease in the cost of debt ($\beta=-0.0538; P<.05$). Similarly, the increase in the ratio of foreign members in the company’s board of directors also results in a decrease in cost of debt ($\beta=-0.0849; P<.05$). Accordingly, the $H_1$ and $H_2$ hypotheses are accepted.

Moreover, a positive relationship is found between the cost of debt and the short-term leverage ratio, one of the control variables in the model, whereas a negative relationship with the firm size. According to this result, a rise in the short-term leverage ratio of companies has an increasing effect on cost of debt ($\beta=0.2008; P<.05$). Also, the growth of companies reduces the cost of debt. However, no sectoral relationship is detected.

In order for the obtained analysis results to be consistent, the model should pass several tests. The first of these is that there is no variance problem in the model. The Breusch-Pagan-Godfrey test results in this context are given below.
Table 5. The Breusch-Pagan-Godfrey Test Results

Heteroskedasticity Test: Breusch-Pagan-Godfrey

<table>
<thead>
<tr>
<th></th>
<th>F-statistic</th>
<th>Prob. F(7,35)</th>
<th>Prob. Chi-Square(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>1.699217</td>
<td>0.1413</td>
<td></td>
</tr>
<tr>
<td>Obs*R-squared</td>
<td>10.90669</td>
<td>0.1427</td>
<td></td>
</tr>
<tr>
<td>Scaled explained SS</td>
<td>4.326930</td>
<td>0.7414</td>
<td></td>
</tr>
</tbody>
</table>

As seen from the results in the table, there is no heteroscedasticity problem in the model. Thus, the model is valid. Besides, in order to increase the validity of the analysis results, the model is expected to be normally distributed. The analysis results to determine this situation are presented in the table below.

Table 6. Normal Distribution Test Results

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Std. Dev</td>
<td>0.05462</td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.14692</td>
<td></td>
</tr>
<tr>
<td>Kurtosis</td>
<td>2.19761</td>
<td></td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>1.30772</td>
<td></td>
</tr>
<tr>
<td>Prob</td>
<td>0.52003</td>
<td></td>
</tr>
</tbody>
</table>

Upon considering the kurtosis, skewness, and the Jarque-Bera analysis results in the table, it is concluded that the model has a normal distribution. According to these results, the regression analysis results obtained above still maintain their validity.

6. Conclusion

There are two types of factors that affect the performance of companies. These include investment and financing decisions. The financing that companies need for their determined investments can generally be obtained from debt or equity items. Both factors have different costs and these costs directly affect the performance of the company.

The study concentrates on the cost of debt among these factors. The cost of debt are usually affected by systematic and unsystematic risk factors. Systematic risks are those that affect the overall market. Therefore, good or bad management of a company does not affect this situation. Nevertheless, unsystematic risks stem from the companies’ own structure and activities. Therefore, it is affected by changes in the corporate structure or management of the company. Thus, a change in the corporate structure or management of the company may affect the cost of debt.

To perform their activities, companies may revert to foreign sources from time to time and can find foreign partners for the company. This situation may cause changes in the corporate structure and management of the company. Therefore, the effect of foreign direct investments hosted by companies on cost of debt is analyzed.

As a result of the analysis, it is determined that the increase in the foreign ownership share of companies has a decreasing effect on the cost of debt. This situation can be explained by the fact that multinational corporations have wider possibilities and thus the opportunity to borrow with lower costs as stated by Oxelheim et al. (2001). Moreover, it is in line with the theses of Lorca (2011) and Roberts and Yuan (2010) who stated that the increase of
institutional investors may reduce the risk of the company, and thus, the cost of capital. Such a result supports the findings of Ballesta and Meca (2011).

In the examination made in the second part of the analysis, a negative relationship was found between the ratio of foreign board members in companies with foreign partnerships and the cost of debt. Accordingly, the increase in the rate of foreign members in the company's board of directors decreases the cost of debt. This situation supports the theory stated by Johnson et al (1996) that "Good management of boards of directors lowers cost of debt as it reduces company risk". In this context, lenders to the company think that the increase in the ratio of foreign board members will positively affect the company's management and audit performance. This situation may cause a decrease in the company's risk and thus the cost of debt.

Also, as a result of the examination, there is a positive relationship between the firm’s short-term debt ratio and the cost of debt. The short-term loans are the first to be repaid by the companies. Therefore, it directly affects the financial risk of the company. Therefore, this result is compatible with the theory. Besides, the firm size is found to have a reducing effect on the cost of debt. This situation can be explained by the reasons such as the better corporate governance of large companies and the lower risk of bankruptcy compared to smaller ones (Demirhan, 2009:682). Moreover, this result is in compliance with the results of many studies in the literature (Anderson et al., 2004; Padron et al., 2005; Piot & Piera, 2007; Roberts & Yuan, 2010; Ata & Ağ, 2010; Lorca et al., 2011; Kılıç, 2014; Öztürk, 2018).

There are quite a few studies conducted on the relationship between the foreign ownership of companies and the cost of debt. Moreover, there has been no study conducted on this issue in Turkey. In this context, it can be claimed that the study would contribute to filling this gap in the literature. Moreover, it can contribute to local company owners, investors, and loan companies who are curious about the effect of foreign ownerships on the possible cost of debt of the company. Consequently, it would also provide a multiplier to academic and administrative (related to the country’s administration) staff who examine the cost of debt of FDIs entering the country.

The most important limitation of the research study involves the low number of companies included in the sample. In this context, although the generalization of the research study conducted with such a low number of companies to all companies across the country may be inconvenient, the results of the study are crucial in terms of providing an overall idea about the subject. Furthermore, the companies in the BIST manufacturing sector are claimed to be the leading companies in the country. The fact that only 43 firms out of such important 172 firms can receive FDIs may also be seen as an indication of the low level of the country in attracting FDIs. Therefore, the low number of companies in the sample is directly proportional to the number of foreign companies or companies with foreign partners in the overall economy. This study can be conducted within the context of other sectors or can be improved by investigating with a larger sample.

References


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