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# A STUDY ON THE CAPITAL STRUCTURE OF THE TURKISH REAL SECTOR FIRMS

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**Abstract**

This paper analyses the capital structure of Turkish real sector firms listed on the Istanbul Stock Exchange (ISE) and stresses on their financial decision making process. The results are obtained from the answers given to the questionnaire by financial executives of the firms. The current capital structure of the firms and their association with the growth opportunities are cross-examined by referring to data from ISE database. The results suggest that the firms avoid using long term debt and they prefer shorter maturity for corporate debt. An expected negative relationship between debt usage and growth opportunities is not found for the firms. Most of the firms confirm that, they set a target capital structure for future and they follow it systematically when they finance investments. Furthermore, majority of firms in the sample emphasize that they plan to increase the portion of long term debt in their target capital structure and this is validated after controlling the financial tables of the firms for the next year.

**Keywords**: Capital structure, target capital structure, growth opportunities

## Türk Reel Sektör Firmalarinin Sermaye Yapisi Üzerine Bir Çalisma

**Özet**

Bu çalisma, Istanbul Menkul Kiymetler Borsasi (IMKB)' nda islem görmekte olan Türk reel sektör firmalarinin sermaye yapisini analiz etmekte olup, ayni zamanda bu firmalarin finansal karar alma süreçlerini incelemektedir. Sonuçlar, sözkonusu firmalarin finansman yöneticilerinin anket sorularina verdikleri cevaplarla olusturulmustur. Ayrica, bu firmalarin mevcut sermaye yapilarinin büyüme firsatlari ile olan iliskisi IMKB veritabanina dayanarak incelenmistir. Sonuçlar, firmalarin uzun vadeli borç kullanimindan kaçinmakta olup kisa vadeli borcu tercih ettiklerini göstermektedir. Büyüme firsatlari ile borç kullanimi arasinda beklenen negatif yönlü iliski tespit edilememistir. Firmalarin çogunlugu gelecege yönelik bir sermaye yapisi hedeflemekte ve yatirimlarinin finansmaninda sözkonusu hedeflerini sistematik olarak takip etmekte olduklarini onaylamaktadirlar. Firmalar, hedefledikleri sermaye yapilarinda uzun vadeli borç kullanimlarinin payini arttirmayi planladiklarini belirtmektedirler ve sözkonusu bulgu firmalarin bir sonraki yila ait finansal tablolari incelenerek dogrulanmistir.

**Anahtar Kelimeler**: Sermaye yapisi, hedeflenen sermaye yapisi, büyüme firsatlari

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## 1. Introduction

Capital Structure has attracted intense debate and scholarly attention in the financial management arena over the past 5 years. Therefore, actual financial-decision making process of firms on their capital structure has become an important concern. The right decision making on capital structure is a crucial factor on behalf of firms since a wrong decision leads eventually to financial distress and bankruptcy.

This paper aims to investigate the capital structure of Turkish real sector firms through highlighting their financial decision making process. Previous studies mostly investigated this issue through applying econometric techniques to data derived from the financial statements of firms. This study follows a different approach by using a detailed questionnaire. In this way, the study is a field study and has the opportunity to gather more information from the market directly and avoids relying heavily on financial statements. This is one of the few papers that obtained information about the current and the target capital structure of Turkish real sector firms through a questionnaire rather than econometric analyses. This finding is verified after checking the financial tables of the firms for the next year.

Capital Structure has many facets however the discussion in this paper focuses on the choice of Turkish real sector firms between debt and equity and the targeted capital structure of the firms. Our results also reflect the preference of firms regarding the maturity structure of corporate debt. Basing on the current literature that reports the negative association between growth opportunities and debt level, this relationship is also investigated for the Turkish real sector firms.

The basic findings resulting from the analysis are; according to the answers given by the financial executives of the firms, Turkish real sector firms tend to avoid long term debt in their capital structure, which is also verified by the data obtained from their financial statements. When the cause of this avoidance is searched, it is seen that Turkish real sector firms prefer short term debt to long term debt. However the negative relationship between usage of debt and growth opportunities is not confirmed for the firms. Most of the firms corroborate that they set a target capital structure for future and consider it systematically while financing investments. Interestingly, the firms state that they plan to increase the portion of long term debt in their target capital structure, which is verified after controlling the financial tables of the firms for the next year.

The plan of our study after this part follows as; the next section gives summary of findings in previous empirical studies. The third part briefly explains the data and the methodology used for the analyses. The fourth part presents the empirical results on the current capital structure and the target capital structure of the Turkish real sector firms. The final section provides concluding remarks.

## 2. Previous Empirical Studies

Brealey and Myers (2000) define the capital structure as the combination of the different securities that the firm holds. On the other hand, this definition is restricted to the ratio of "long term debt to equity" by Gitman (1997). Therefore, this paper considers the mix of long term debt and equity as the definition of capital structure.

When the scope is narrowed for the maturity structure of debt, Caprio and Demirguc-Kunt state that, macro economic factors are one of the important determinants of debt maturity structure of firms. A number of studies (Miller, 1992; Heymann and Leijonhufvud, 1995; Demirguc-Kunt and Maksimovic, 1999) have shown that, inflation is negatively related to the maturity structure of corporate debt. It is determined in those studies that, long term debt is common in the countries with low inflation whereas long term debt is almost nonexistent for the firms with high inflation. Aarstol (2000) also states that, the rational behavior of creditors causes the maturity structure of debt to decrease with inflation. Mitchell (1987) finds that, the increasing uncertainty about future nominal interest rates causes decline in debt maturity since managers tend to shorten maturity of debt at highly uncertain future rates. Moreover, it is found that, corporate debt in most advanced countries is predominantly long termed while it is overwhelmingly short termed in most developing countries (Booth et al., 2001). Furthermore, Demirguc-Kunt and Maksimovic (1999) underline the importance of a developed financial system for ability to obtain cheaper long term finance to worthy firms. Diamond and Rajan (2000) demonstrate that, short term borrowing is prevalent in countries with a poorly developed institutional environment. Besides, Khanna and Palepu (2000) indicate that, firms in emerging markets, in which Turkey is involved, are less likely to obtain long term debt by issuing bonds through capital markets due to their poor functioning financial markets with limited financial instruments. Apart from financial institutions, legal institutions also exert a significant influence on the firms' choice of debt maturity (La Porta et al., 1998; Rajan and Zingales, 2003). The recent literature on corporate governance supports the idea that, legal protection of investors helps to ease agency problems. Gianetti (2003) explains that, better protection of creditor rights is important for ensuring access to long term debt. La Porta et al. (1998) shows that, countries have disparities in law enforcement and the weakest protection of creditors are for the countries that have French civil law system, in which Turkey is also involved.

Regular Report on Turkey's Progress towards Accession[1] (October, 2004) indicates that, maturity structure of corporate debt for Turkish companies has an important role for their growth and competitiveness. This report emphasizes that Turkish firms still suffer from short maturity of debt and seek to obtain corporate debt with

[1] This report is prepared annually by Commission of European Communities in order to evaluate Turkey's current economic and political situation and progress for fulfilling the Copenhagen Criteria so as to become a member state of European Union

possible longest maturity. Furthermore, this report highlights that the inability to obtain sufficiently long termed debt constitutes a burden for sustainable progress of Turkish companies. Economic and political uncertainties brought by high level of inflation and lack of clarity in future nominal interest rates have been playing a dominant role in Turkish economy for the past decade. These economic conditions were mainly due to government debt usage in very high interest rates so as to meet the budget deficit. Gonenc and Arslan (2003) state that, short term debt structure is dominant in Turkey since the main sources of debt for Turkish real sector firms are banks and the commercial debt policies that they form among themselves, due to their inability to obtain long term debt through capital markets.

Market to book ratio measures market's expectation about value of investment opportunities and growth of a firm. Because of preference of investors for higher quality projects, an augment in the probability of success of an investment opportunity with a positive net present value (NPV) increases the market to book ratio. Myers (1977) suggests that, firms financed by risky debt pass up some of the valuable investment opportunities which lead to underinvestment. Jung et al. (1996) show that, firms should use equity to finance their growth because such financing diminishes agency costs between shareholders and managers, whereas firms with less growth prospects should use debt due to its disciplinary role (Jensen, 1986; Stulz, 1990). In accord with this, the earlier studies have shown that (Barclay and Smith, 1992; Smith and Watts, 1992; Johnson, 1998; Fama and French, 2002; Hoi and Heibatollah, 2004) firms with more growth options (as proxied by higher market to book ratios) have less debt in their capital structure. Moreover, the other studies (Leland, 1994; Frank and Goyal, 2004; Hovakimian et al., 2004) confirm that, a high market to book ratio is associated with subsequent debt reduction in capital structure. All of these studies find that the more the firms have growth opportunities (the higher the market to book ratio) the lower is the debt in capital structure. One of the main reasons that Rajan and Zingales (1995) point out for this negative relationship is the expectation that, as market to book ratio increases so does the cost of financial distress. By using market to book ratio to measure the market timing opportunities realized by managers, Baker and Wurgler (2002) show that, when market valuation of firms are high (low), they use less (more) debt. However, contradicting to the findings, it should be considered that faster growing firms are more likely to be in the requirement of external funds to finance their positive NPV projects. Pecking order theory is developed by Myers (1984) as a consequence of informational asymmetries existing between insiders of the firm and outsiders (i.e. the capital market). Considering the pecking order theory, since debt is cheaper than equity, firms with high growth opportunities will prefer it to equity, hence a positive relationship between debt and market to book ratio is likely to arise.

Brigham and Houston (2004) define the target capital structure as the "mix of debt, preferred stock and common equity with which the firm plans to raise capital". Ozkan (2001) designates that, firms have target capital structures and they adjust quickly

towards this target ratio when a gap arises. Moreover, De Miguel and Pindado (2001) focus on the dynamics of the capital structure decisions, offering better insight on the adjustment process towards the target debt to equity ratio. Using a logit model, Marsh (1982) states that, companies try to maintain their long term target debt levels, although they deviate from these targets in the short run due to the conditions in capital market. On the contrary, Myers (1984) and Myers and Majluf (1984) show that pecking order model does not predict that firms maintain a target debt ratio and capital structure of firms is simply the cumulative result of the their attempt to mitigate inefficiencies caused by the information asymmetry.

## 3. Data and Methodology

This study is done on Turkish real sector firms that are listed on the Istanbul Stock Exchange (ISE). The data are generated from a detailed questionnaire involving 10 questions however only 4 questions among those are used since they are the relevant ones to the subject area of this paper. Financial firms are excluded in our analyses since their capital structures are influenced by other factors, such as capital adequacy regulations, than non-financial firms. The questionnaire was filled by the financial executives of the firms and sent back during the period between 12.01.2004 and 25.04.2004. The number of questionnaires that were filled and submitted, mainly via e-mail, is 136 out of 285 and this represents a response rate of 47.7 %. The primary reason for not being able to exceed the current respond rate is the no-information-disclose policy of the firms or the time deficiency of the financial executives. The published financial statements of these firms are referred to in order to derive their market to book ratios and verify the validity of their replies to the questionnaire. The relevant data for the years 2003 and 2004 is derived from the Finnet database which contains the financial statements of all listed firms on the ISE. The year 2003 is chosen for the part 4.1 in order to verify the replies regarding the current capital structure of the firms accurately. Furthermore financial tables of the firms for the year 2004[2] is used for the part 4.2 so as to be assured that firms do have a target capital ratio.

## 4. Empirical Results

### 4.1. The Current Capital Structure of Turkish Real Sector Firms

The current capital structure of the firms that replied to the questionnaire is presented in Table 1. It is striking in the results that, the portion of long term debt in the current capital structure (i.e. long-term debt to equity) of more than half of the firms (50.7 %) is less than 10 %. It is also seen that, the ratio of long term debt to equity of the majority of the firms (64.8 %) is less than 20 %. The answers lead us to the conclusion that the long term debt usage of the real sector firms in Turkey is in the very low level in accord with the previously indicated impeding factors.

[2] This aligns with Ozkan (2001) and De Miguel and Pindado (2001) who consider 1 year as a lag for the adjustment to target capital structure.

However, 5 respondents (3.7 % of the sample) expressed that, their capital structure is constituted by more debt than equity, which is seen by their long term debt to equity ratio exceeding 100 %. Although their portion in the whole sample is rather small this result seems to be unusual, since the general trend among the Turkish firms is towards using less long term debt. Thus, these 5 firms need to be isolated and analyzed separately in order to see if this peculiarity of having long term debt to equity ratio exceeding 100 % belongs to a particular sector. The results are presented in Table 2.

Table 1

***The Current Capital Structure of the Turkish Real Sector Firms***

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| No Long Term Debt | 0 | 0.0 | 0.0 |
| Up to 10 % | 69 | 50.7 | 50.7 |
| 11-20 % | 19 | 14.1 | 64.8 |
| 21-30 % | 15 | 11.0 | 75.8 |
| 31-40 % | 9 | 6.6 | 82.4 |
| 41-50 % | 6 | 4.4 | 86.8 |
| 51-60 % | 4 | 2.9 | 89.7 |
| 61-70 % | 3 | 2.2 | 91.9 |
| 71-80 % | 3 | 2.2 | 94.1 |
| 81-90 % | 2 | 1.5 | 95.6 |
| 91-10 0% | 1 | 0.7 | 96.3 |
| More Than 100 % | 5 | 3.7 | 100.0 |
| Total | 136 | 100 | |

It is shown in Table 2 that the 5 firms that have denoted to have the long term debt to equity ratio more that 100 % belong to five different sectors or industries. Thus, it can be concluded out of these results that, there is not a particular sector or an industry that encourage the debt financing in Turkey.

Table 2

***Main industry or the sectors of the firms that have the current capital structure exceeding 100 %***

| Main industry or the sector of the firm | Number of the firms |
|---|---|
| Automotive | 1 |
| Cement | 1 |
| Chemistry | 1 |
| Foods | 1 |
| Textile and Leather | 1 |
| Total | 5 |

Returning back to the results in Table 1, the firms have mainly denoted that they do not prefer using long term debt. This leads us to look at the firms' published financial statements, which are obtained by the Finnet program, so as to verify the validity of these answers. The data are derived from the balance sheets of the firms for the year 2003. Table 3 presents these results.

Comparison between Table 1 and Table 3 reveals the fact that the answers provided by the financial executives are aligning with the data found in the balance sheets of the firms. Since the majority of firms (64.8 % of the sample) have the capital structure less than 20 %, the long term debt usage of Turkish real sector firms is at a very low level. On the other hand, the results show that there is no firm that does not use any long term debt at all. However this does not change the fact that Turkish real sector firms avoid long term debt by not using it at high levels.

Table 3
***The Current Capital Structure of the Turkish Real Sector Firms based on the Istanbul Stock Exchange (ISE) Database as of 31.12.2003***

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| No Long Term Debt | 0 | 0.0 | 0.0 |
| Up to 10 % | 67 | 49.4 | 49.4 |
| 11-20 % | 21 | 15.4 | 64.8 |
| 21-30 % | 16 | 11.8 | 76.6 |
| 31-40 % | 9 | 6, 6 | 83.2 |
| 41-50 % | 6 | 4.4 | 87.6 |
| 51-60 % | 4 | 2.9 | 90.5 |
| 61-70 % | 3 | 2.2 | 92.7 |
| 71-80 % | 3 | 2.2 | 94.9 |
| 81-90 % | 1 | 0.7 | 95.6 |
| 91-100 % | 1 | 0.7 | 96.3 |
| More Than 100 % | 5[3] | 3.7 | 100.0 |
| Total | 136 | 100 | |

This low level of long term debt usage of Turkish real sector firms leads to the necessity to analyze the short term debt usage of these firms with focusing on the maturity structure of corporate debt. Hence, whether or not the Turkish real sector firms prefer short term debt to long term debt for their debt financing will be clarified. Therefore, Table 4 presents the results of the short term debt usage of the firms in our sample. The data in this table is obtained by the published financial statements in the Finnet database of the Turkish real sector firms which replied the questionnaire.

[3]These firms are the same ones that are presented in Table 1 and Table 2.

The results in Table 2 show that there is not any firm that uses no short term debt at all. Although 40.4 % of the firms in the sample finance their activities with very little short term debt (between 0 % and 20 % of the ratio of short term debt to equity), 30.2 % of the sample uses large amounts of short term debt since their short term debt to equity ratio is more than 50 %. This may indicate that firms prefer short term debt to long term debt financing.

On the other hand, there are 4 firms in the sample that have denoted that their short term debt to equity ratios were exceeding 100 %. Each of these firms belongs to different sectors and industries (therefore this feature is not peculiar to a certain sector or an industry) and these firms are different from the firms that have long term debt to equity ratio more than 100 %.[4] Therefore there is not a particular sector or an industry that encourages the short term debt usage.

Table 4
***Ratio of short-term debt to equity of the Turkish Real Sector Firms based on the Istanbul Stock Exchange (ISE) Database***

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| No Short Term Debt | 0 | 0.0 | 0.0 |
| Up to 10 % | 32 | 23.5 | 23.5 |
| 11-20 % | 23 | 16.9 | 40.4 |
| 21-30 % | 15 | 11.0 | 51.4 |
| 31-40 % | 14 | 10.3 | 61.7 |
| 41-50 % | 11 | 8.1 | 69.8 |
| 51-60 % | 9 | 6.6 | 76.4 |
| 61-70 % | 10 | 7.4 | 83.8 |
| 71-80 % | 7 | 5.2 | 89.0 |
| 81-90 % | 6 | 4.4 | 93.4 |
| 91-10 0% | 5 | 3.7 | 97.1 |
| More Than 100 % | 4 | 2.9 | 100.0 |
| Total | 136 | 100 | |

The most interesting conclusion drawn from the above analysis is that the majority of the Turkish real sector firms avoid using long term debt. The main reason for this conclusion can be attributed to the fact that, in the light of the factors explained in

[4] 1 out of the 5 firms in the sample of companies, having long term debt to equity ratio exceeding 100 %, has reported losses for the year 2003. Also, 1 out of the 4 firms, which use more short term debt than equity, has also reported losses for the year 2003. Excluding these firms, with considering them for not being " typical and healthy", do not alter the results.

the Section 2, most of the firms are unable to obtain long term debt through capital markets in Turkey. Therefore they can solely realize their debt financing in the form of short term debt through banks or commercial debt policies that they form among each other. On the other hand, the impact of inflation should also be highlighted for the preference for short term debt to long term debt financing. Despite the ongoing inclination of decrease in the level of inflation in Turkey in 2003, current level of inflation is still relatively higher than most of other developing countries. This high inflation, together with the uncertainty surrounding the future nominal interest rates cause the shortening in the maturity structure of debt borrowing for the Turkish real sector firms.

Regarding previous empirical findings in literature on the negative relationship between growth opportunities and the debt usage of firms, respondents of the questionnaire are further analyzed in order to see if the firms with more growth opportunities (proxied by market to book ratio) have less long term debt / equity ratio. Table 5 presents the results and the market to book ratio in this table is defined as (book value of total assets – book value of equity + market value of equity) / book value of total assets[5]). The data of the firms for market to book ratio is obtained from the Finnet database.

Table 5
***Summary Statistics for market to book ratio of the firms according to their capital structure***

| Capital Structure of firms | Mean | Median |
|---|---|---|
| Up to 10 % | 1.74 | 1.27 |
| 11-20 % | 1.70 | 2.27 |
| 21-30 % | 1.21 | 1.05 |
| 31-40 % | 1.45 | 1.56 |
| 41-50 % | 1.92 | 1.83 |
| 51-60 % | 1.61 | 1.84 |
| 61-70 % | 1.85 | 1.61 |
| 71-80 % | 2.24 | 1.76 |
| 81-90 % | 1.72 | 1.83 |
| 91-100 % | 1.92 | 2.32 |
| More Than 100 % | 2.66 | 2.13 |

Basing on the recent literature, firms having low level of long term debt to equity ratio were expected to have higher market to book ratios relative to the firms having higher long term debt to equity ratio. On the contrary Table 5, in which the

[5] (as applied in Hovakimian et al., 2004)

capital structure of each firms are matched with the mean and median values of their market to book ratios, does not designate such a pattern. This result is in accord with the indication associated with the "pecking order theory". This table shows that the mean and median (except for the median value of 2.27 for the firms that have the long term debt to equity ratio between 11-20 %) values of market to book ratio tend to increase as the long term debt to equity ratio rise. Apparently, high market to book ratios does not reduce the motivation of managers of the high growth firms to issue debt. This unexpectedly positive relationship between growth opportunities and usage of debt for the firms needs a further research for an explanation.

### 4.2 Target Capital Structure of Turkish Real Sector Firms

While the first section is investigating the current capital structure of Turkish real sector firms, this section analyses the target capital structure firms that the firms set for future. In this section it is aimed to see if the current capital structure of the firms differs from the one that they want to retain in the future. The replies of the firms given during the period between 12.01.2004 and 25.04.2004 are compared with the financial tables of the firms as of 31.12.2004, in order to verify that firms do have a target capital ratio.

Initially, the firms are asked if they actively set an optimal capital structure as a long term target and the results are exhibited in Table 6. According to the replies of the firms to the questionnaire, 86.8 % of the Turkish real sector firms (118 out of 136) do set a long term target capital structure. This is a remarkable result since it indicates that most of the Turkish real sector firms perceive the issue of the capital structure as a long term perspective and they set long term debt targets.

Table 6
***Does your firm set a target capital structure?***

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Yes | 118 | 86.8 | 86.8 |
| No | 18 | 13.2 | 100.0 |
| Total | 136 | 100 | |

Among those 118 firms, it is intended to see how often they control and adjust their current capital structure to their target capital structure. For this purpose, Table 7 presents the answers given to the question "How often in a year does your firm follow the target capital structure while financing the investments?"

Table 7 shows that, more than half of the (57.7 % of the sample) Turkish real sector firms systematically (almost every 3 months or almost every month) check their capital structure and follow their target when they finance the investments. However

only 9.3 % of the sample of firms (11 firms out of 118) considers their target capital structure when they finance their investment projects. Nevertheless, the remarkable conclusion drawn out of the replies to the questionnaire is that the most of the Turkish real sector firms do take their target capital structure into consideration for their financing decisions.

Table 7
***How often in a year does your firm follow the target capital structure while financing the investments?***

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Never | 0 | 0.0 | 0.0 |
| Once in a year | 4 | 11.8 | 11.8 |
| Twice in a year | 25 | 21.2 | 33.0 |
| Almost every 3 months | 37 | 31.4 | 64.4 |
| Almost every month | 31 | 26.3 | 90.7 |
| Within the analysis of each project | 11 | 9.3 | 100 |
| Total | 118 | 100 | |

The firms are further analyzed for their preference for the percent range as their target capital structure. Thus, the alignment in the inclination for the maturity structure of corporate debt between the current capital structure and the targeted one will be revealed. The results, which were obtained from the 118 firms that confirmed to have a target capital structure, are presented in Table 8

Table 8
***Which capital structure do you set as a target?***

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| No Long Term Debt | 0 | 0.0 | 0.0 |
| Up to 10 % | 37 | 31.4 | 31.4 |
| 11-20 % | 25 | 21.2 | 52.6 |
| 21-30 % | 16 | 13.6 | 66.2 |
| 31-40 % | 12 | 10.2 | 76.4 |
| 41-50 % | 10 | 8.5 | 84.9 |
| 51-60 % | 7 | 5.9 | 90.8 |
| 61-70 % | 3 | 2.5 | 93.3 |
| 71-80 % | 3 | 2.5 | 95.8 |
| 81-90 % | 2 | 1.7 | 97.5 |
| 91-100 % | 1 | 0.8 | 98.3 |
| More Than 100 % | 2 | 1.7 | 100.0 |
| Total | 118 | 100 | |

Table 8 shows that there is not any firm that has a target to use no long term debt in the future at all. The results in this section provide the opportunity to compare the current capital structure and the targeted ones mentioned by the firms. It is seen that again, the majority of the firms target the long term debt to equity ratio to be lower than % 20. However their percentage is 52.6 %, while that percentage was 64.8 % for the current ratio. On the other hand, it should be mentioned that, the percentage of firms that are in the 0 to 10 % capital structure width is 31.4 while it was 50.7 % in Table 1. This shows that, although most of the firms still have shorter maturity of debt, they emphasize that they tend to use more long term debt capital in the future.

Table 9

***Capital Structure of Turkish Real Sector Firms based on the Istanbul Stock Exchange (ISE) Database as of 31.12.2004***

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| No Long Term Debt | 0 | 0.0 | 0.0 |
| Up to 10 % | 32 | 37.12 | 27.12 |
| 11-20 % | 29 | 24.57 | 51.69 |
| 21-30 % | 19 | 16.10 | 67.80 |
| 31-40 % | 14 | 11.86 | 79.66 |
| 41-50 % | 8 | 6.78 | 86.44 |
| 51-60 % | 6 | 5.08 | 91.53 |
| 61-70 % | 3 | 2.54 | 94.07 |
| 71-80 % | 2 | 1.69 | 95.77 |
| 81-90 % | 2 | 1.69 | 97.46 |
| 91-100 % | 1 | 0.84 | 98.3 |
| More Than 100 % | 2 | 1.69 | 100.0 |
| Total | 118 | 100 | |

Table 9 presents the results as of 31.12.2004 derived from the financial statements of firms which confirm to have a target capital structure. When compared with Table 8, we are provided with the evidence that firms have a target capital structure and they do follow it since the results are very close. Besides, the firms in each percentage segment in this table are almost the same as the ones in those of the previous table. The percentage of firms that have debt to equity ratio lower than 20 % is 51.69 while it was 52.6 in Table 8. Moreover, percentage of firms in the 0 to 10 % capital structure width is 27.12 % while it was 31.4 in the previous table. It can be concluded that firms do have a target capital structure and despite remaining in the very low level compared to equity, the portion of long term debt is growing. This conclusion can be explained by the decreasing trend in the current inflation rate and the increasing clarity for the future interest rates in Turkey. Therefore, the firms in our sample are more

optimistic about expanding the length of maturity structure of their corporate debt aligning with the recovery in the economy.

It should also be mentioned that the firms which denote to have target capital structure exceeding 100 % in Table 8, are the same ones verified in Table 9 and they are the two[6] of the five firms that stated to have a current capital structure of more than 100 % in Table 1.

## 5. Conclusions

This paper sheds light on the financial decision making process of the Turkish real sector firms regarding their capital structure. The sample is consisted of 136 firms that are listed on the ISE. This is one of the few papers that obtained information about the capital structure of Turkish real sector firms through a questionnaire rather than econometric analyses.

The initial results concerning the current capital structure of the Turkish real sector firms indicate that the firms tend to use long term debt in a very low level in accord with the factors that impede expanding the length of maturity structure of corporate debt in Turkey. This conclusion is verified by the analysis of the figures on the financial statements of the firms that make up the sample. This study also provides evidence that Turkish real sector firms use shorter maturity of debt and they do prefer short term debt to the long term borrowing. Again, the reason of this preference by the firms is an obligation that is mainly rooted in the inflationary state of Turkey since long term debt is common in countries with low inflation whereas it is almost nonexistent for the firms in countries with high inflation. Besides, also unclearness of interest rates, inadequate financial markets with limited financial instruments and weak legal protection of creditors hinder the availability of long term debt for the Turkish real sector firms.

The inverse relationship between growth opportunities (proxied by market to book ratio) and usage of debt is also investigated in this study. While the current capital ratio and the market to book ratio is matched with each of the firms in the sample, the expected results are not obtained. The firms, which use low level of long term debt, do not necessarily have high level of market to book ratio. Apparently, the debt reduction for the Turkish real sector firms is not associated with subsequent high market to book ratio. The reason of this contrary result needs a further research. On the other hand, faster growing firms are likely to be in need of external funds to finance their positive NPV investment opportunities. Considering the “pecking order theory”, debt will be preferred to external equity and this may lead to a positive relationship between debt and market to book ratio.

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[6] None of the two firms reported losses for the year 2003

This study also highlights the target capital structure that the Turkish real sector firms maintain in the future. First of all, the results are on the contrary to the pecking order model which suggests that firms do not have long term debt targets and they only use debt when their retained earnings are insufficient. Majority of firms, which replied to the questionnaire agree that they set a target capital structure for the future and they follow it systematically while financing the investments. The replies to the questionnaire and their verification through the financial statements of next accounting year suggest that, although the Turkish real sector firms maintain low levels of long term debt in their capital structure for the future, the portion of this long term debt is getting larger. This is likely to be led by the declining trend of inflation in Turkey. Besides, the decreasing uncertainty about future nominal interest is likely to cause the maturity structure of corporate debt to get longer for the target capital structure of Turkish real sector firms that they set for the future.

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