Determinants of Capital Structure: The Case of Turkish Hotels from Tourism Industry

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ABSTRACT

The aim of this study is to determine, investigate and describe the determinants of capital structure in the five major hotels, acting in the Tourism Industry of Turkey, over the period of 1998-2010.

Different capital structure theories were probed with a view to establishing valid propositions concerning the determinants of capital structure of Turkish Hotels.

The results have shown that size of the hotels, tangibility of their assets, risk level and non-debt tax shields can be considered as the major determinants of capital structure of hotels in Turkey. We found that the Trade-off theory seems to explain the choice of capital structure more appropriately, compared to other theories.

Keywords: capital structure, determinants of capital structure, trade-off theory.

ÖZ

Bu çalışmanın amacı Türkiye turizm endüstrisinde faaliyet gösteren en büyük beş hotelin sermaye yapısı belirleyicilerini 1998-2010 yılları arasında incelemektir.

Türk hotellerinin sermaye yapısı belirleyicileriyle ilgili geçerli önermeler elde etmek amacıyla çeşitli sermaye yapısı teorileri incelenmiştir.

Yapılan analizler sonucunda Türkiye'de faaliyet gösteren hotellerin sermaye yapısı belirleyicileri hotel büyüklüğü, maddi varlıklar, risk seviyesi ve borç dışı vergi kalkanı olarak belirlenmiştir. Bulduğumuz sonuçlara göre dengeleme teorisi diğer teorilere kıyasla sermaye yapısını daha açık bir şekilde açıklamaktadır.

Anahtar Kelimeler: sermaye yapısı, sermaye yapısı belirleyicileri, dengeleme teorisi.

To My Fathers In Heaven And Earth

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I owe quit a lot to my parents who allowed me to travel all the way from Iran and supported me all throughout my studies. I would like to dedicate this study to them as an indication of their significance in this study as well as in my life.

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Chapter 1

INTRODUCTION

1.1 Background

In today's economic world no one can deny the significant role of corporations. They act as the heart of economies in order to develop financial activities and to increase its speed. In addition, development of corporations is an important issue, economies should focus on which can result in expansion of productions for countries and reduction of poverty in the related economies. It also will result in providing government a significant supply of tax revenue. (Prasad et al., 2001).

Financing decision for new investments seems to be one of the most important issues corporations struggling with. Variable alternatives could be put in to action by managers, fall into three main choices: First, using remained earnings of the firm from previous years. Secondly, using of debt instruments and finally issuing new shares. According to La Porta et al. (1999), the three instruments of capital structure which mentioned above, can show the structure of ownership in corporations as: the first and the last elements (remained earnings and equity issuing) show the ownership of shareholders while the second one (debt instrument) represents the ownership by debt holders.

As it mentioned above, it is vital to identify the capital structure policies. These policies can be taken in to account both in Micro level and in Micro level. Policies in Micro level such as future developing plans of the firm or corporate governance while such policies in Macro level include interest rates and regulations of countries and capital markets. This fact should be mentioned that countries divergent by different capital structure, tax and bankruptcy regulations. These differences does not include just economically but also socially and culturally.

Overall, the economic players should determine the suitable mixture of capital structure because of its vital impact on corporate behavior. Abor (2005) posits that the choice of capital structure is one of the key challenges that many firms face as decisions on capital structure have the ability to impact on the financial performance of the firms.

As mentioned, corporations have an array of capital structure alternatives. Due to lack of an acceptable agreement on a particular theory, decision on appropriate blend of variables on capital structure still remained unsolved. Although, a variety of studies on capital structure selection especially on developed countries has been done, todays, in corporate finance world, no one can answer this question that "what mix of debt and equity can help corporations in achieving optimal capital structure?" Furthermore, more controversies are created recently because of the relationship between capital structure on one hand and the value of the firm and the cost of capital on the other hand. The outcome of such studies are different capital structure theories such as trade-off theory, also known as TOT, introduced by Modigliani and Miller (1963), pecking order theory, also known as POT, introduced by Myers and

Majluf (1984) and agency cost theory, also known as ACT, introduced by Jensen and Meckling (1976).

1.2 Tourism and Hotel Industry in Turkey

Over two recent decades, Turkey has played a very successful role in attracting tourists into this country. In fact, the main reason that Tourism Industry has been chosen to be investigated in this study is due to the importance of this industry in today's economy of Turkey. For instance, in 2009, this industry was responsible for 10.2 % of GDP, and also it generated 7.2% of the total employment. It seems that the government tries to strongly support tourism industry in Turkey which increases the need of researches on this special field.

1.3 Aim and Contribution of the Study

The aim of this study is to look into the debate on the determinants that significantly affect firm' capital structure, which has raised a lot of discussions among experts in corporate finance world. The research uses the information of Turkish corporation firms over the period 1998-2010. The research also tries to investigate the impact of chosen capital structure on corporate performance of these Turkish hotels. This study also tries to create a brief overview on capital structure theories specially which are more related to Turkish corporate world.

It should be added that maximizing the value of the stack holder's shares is the ultimate goal of any corporation firm. This goal won't be reached unless the managers associate capital resources optimally. Therefor the research's findings are expected to guide corporate managers in order to making decision on optimal mixture of capital structure in future.

1.4 Objective of the Study

This research examines all the significant variables affecting capital structure in European corporations. It is aimed also to emphasize previous researches focused on the same topic. This study also gives an idea on the relevant influence of capital structure decisions on corporate performance of the European firms as well as determining the level of dependence of such firms on capital resources.

1.5 Research Questions

The research proclaims two main questions that need to be answered. These questions include:

1. What factors determine the capital structure decisions in the hotel sectors in Turkish tourism industry?
2. What is the impact of capital structure decisions on the performance of such hotels?

It is expected that the results of this study would be able to answer these questions and can lead to open the ways for further researches in future.

1.6 Definition of Terms

Terms which appear most often in the study include: capital structure, optimum capital structure, and leverage.

Capital structure term refers to any mixture of capital structure including debt, equity or any other capital sources are used by managers in order to finance their long term investments (Brigham and Ehrhardt, 2002).

Optimal Capital Structure represents the most appropriate debt to equity ratio which leads to maximum value for the firm (Myers, 2002).

Leverage refers to the level of dependence of corporations to debt. In other words, the more corporations use debt in structuring their capital, the more is the financing leverage (Brealey et al., 2001).

1.7 Thesis Structure

This research is structured in to five main parts as follow:

The first chapter introduces the subject of study and also tries to represent the importance of capital structuring in today's corporate world. It provides some key questions should be answered through the research and which can be assumed as the basis of conclusion (chapter five).

Chapter two includes the review of literature. It also investigates some other theories which are related to the subject of this study. In addition it aims to provide briefly various researches has been done previously on variables and determinants of capital structure.

The third chapter explains the methodology which is going to be used, as well as describing related data, variables and instruments used to carrying out the results.

Chapter four employs the determined methodology of third chapter and provides empirical results.

The last chapter, chapter five, includes conclusion based on data and analyses of previous chapters. It is aimed also to provide some empirical recommendations and highlighting areas which need further researches.

Chapter 2

LITERATURE REVIEW

2.1 Introduction

For every financial organization especially corporations, capital structure decisions have been always considered as vital issues managers always struggle with. This issue seems to be more significant when we look into the main and ultimate goal of corporations as maximizing the wealth of shareholders. Today's financial markets are so competitive that a poor judgment on mixture of debt and equity could leads to financial distress or may results in bankruptcy eventually.

In today's world, the critical need to finding out the appropriate mixture of debt and equity in order to achieve the optimal capital structure has led to creating various theories. Though, today the lack of one comprehensive and universal theory that can be able to cover all aspects of expert's needs is obvious. Sheikh and Wang (2011) state that this could be realized because of the fact that most of capital structure theories differ in their concentrations. Sheikh & Wang (2011) noted that despite the exist differences, these theories still help in providing an understanding of the funding behavior of the firms.

This section of the study represents variable theories associated with capital structure.

Capital structure refers to any mixture of debt and equity financial firms choose to finance their investments. Bos and Fetherston (1993) describe capital structure as total debt to total assets both at book value. This ratio has impact on profitability and riskiness of investments. Jaffe et al., (1996) state that capital structure sources include debt instrument, common shares and preferred stocks. They represent capital structure as any proportion of usage of long term resources of funds by firms. In other words, they believe that corporations can choose any mixture of debt and equity according to their needs and market situation. Firms can also change the debt to equity ratio in a way that they can either issue new shares to recover their debts or they can use debt resources to buy back their issued stocks in market. The firms can take to account different financial policies or may change their previous ones in order to reach the optimal capital structure which can maximizes stack holders wealth and minimizes the cost of capital.

2.2 Theories of Capital Structure

Myers (2002) states that different capital structure theories mainly focus on the financing strategies helping managers to choose the optimal mixture of capital structure. These strategies include certain type of firms that operates in distinct institutional environments. These theories are credible because of two main reasons. First, they highlight the differences in total debt ratio and secondly due to the reason that the costs and benefits of implementation of each theory can clearly be observed.

It should be noted that there is no comprehensive and universal capital structure theory which can cover all aspects of decision making. However, there are some conditional theories which can be distinguished by their focus on the factors influence capital structure decisions. These factors are numerous but some of them

can be considered as tax, institutional regulation, agency costs and market situation. In addition these factors vary widely from one firm to another one.

It is tried to mention and explain significant related theories which are expected to help understanding the concept of capital structure better.

2.2.1 The Modigliani-Miller Value-Irrelevance Propositions

Modigliani and Miller's study focuses on invalidating the traditional theory of capital structure which focuses on the minimum overall corporation's return that can meet the needs of all shareholders (weighted average cost of capital). The main idea in traditional theory is that financing new investments by equity will be more expensive compared with debt. According to TV, optimal leverage can be reached when firm's value is in the highest point and weighted average cost of capital is in minimum. Because increasing continuously in firm's debt will result in increasing in probability of default and bankruptcy.

Modigliani and Miller took in to account some unrealistic assumptions of a perfect capital market. Myers (2002) explains that this is required so that the risk involved in every security issued by the firm can be matched in capital markets by purchase of another existing security or portfolio, or by a dynamic trading strategy. The MM theory also provides three propositions which take to account three factors include the firm’s value, the behavior of the cost of equity, and the cut-off rate for additional investment.

The first proposition claims that the firm's market value is not depended on type of financing or in other words capital structure. As a result, cost of capital is

independent as well. Under this proposition, financial leverage or gearing is irrelevant and it does not matter whether debt is short or long-term, callable or call-protected, straight or convertible, in dollars or euros, or some mixture of all of these or other types (Myers, 2002).

MM's Proposition II states that the rate of return required by shareholders increases linearly as the firm's debt-equity ratio increases (Prasad et al, 2001). In fact second proposition explains why there is no trickery in financial leverage. In other words, when managers aim to replace costly equity with debt the result would not be a reduction in cost of capital.

Finally, the last proposition states that among variable alternatives only that investment will be chosen that its return is equal to shareholder's needs.

Overall, there are two main differences between TV and MM theory. First, while cost of capital and firm value are not dependent to type of capital structure under MM theory, they are linked under TV. Secondly, according to MM's second proposition in order to maximizing shareholder's return, firms should attain to hundred percent debt levels. This proposition cannot be implemented in real world because a hundred percent financed firm is almost bankrupt. In fact, proposition two aims to show that at low levels of debt, the cost of equity increases faster under MM than TV, while at higher levels of debt, the risk of default and the cost of equity increases faster under TV than under MM's proposition.

While MM theory considers a perfect capital market, in real world there are numerous imperfections such as tax and financial distress which has significant impacts on markets. Other theories of capital structure try to focus on such factors. Although assumptions of MM theory are not realistic and there are lots of criticisms on it, this theory provided a base for further corporate finance theories. In fact the process of development of MM theory resulted in three significant new capital structure theories: trade-off theories, pecking order and agency theory.

2.2.2 Trade-Off Theory (TOT)

Trade-off theory focuses on debt instrument in the way that it maintains that different types of capital structure chosen by firms is resulted by trading-off between benefits and costs of debt. Factors can affect trading-off between benefits and costs can be mentioned as agency costs, tax benefits and bankruptcy costs (Oztekin, 2009). The theory therefore explains moderate and cautious borrowing.

Sheikh & Wang (2011) states that firm's usage of debt instrument is limited. They believe that firms make borrowing until they reach the point at which tax saving resulted by any additional dollar in their debts is equal to entire costs created by rising of probability of financial distress. To explain this equability we should consider two main facts. First, interest expenses are deducted from taxable profits. In other words, the larger the amount of debts the larger is the amount of interest expenses, the larger is tax shelter and the lower is taxable profit. Because of this negative relation between interest expenses and taxable profits, some financial firms use debt as an instrument for taking the benefits of tax shields. The second fact should be taken to account is that there is a positive relation between interest expenses and the level of firm's distress in the way that, the higher is the amount of

interest expenses the higher would be the probability of firm's financial distress due to the reason that firms with higher level of debt are more potential to fall short in repayment of their obligations. According to trade-off theory these two facts mentioned above should be in compromise.

Myers (1984) represents that there is a planned target point of debt for every corporation in which trade-off theory is implemented. Accordingly, that firm's performance should be in a way to reach that point. According to Myers research, corporations have two strategies to balance the costs and benefits of debts. By the first strategy which is called static TOT, the costs and benefits of target debt are balanced in a single period of time while in second type of TOT, which is called Dynamic TOT, cost and benefit adjustment might be done over time. It should be added that structure of target leverage may not be completely clarified (Frank & Goyal, 2009).

Smith & Watts (1992), suggest the relation between firm's future investment opportunities and todays borrowings in the way that the more future investments are profitable the less firms issue debt today. This idea can be supported by the fact that the firms issue risky debts today would have lower level of incentive to invest in larger more profitable investments in future.

Raviv (1991) has tried to represents the factors that could highlight debt access of different firms. This research states that it seems that small financial institutions with more intangible assets has less access to debt resources compared with large firm with high level of tangible assets. In addition, it seems that common financial firms

have more tendencies to borrow compared with profitable companies with higher levels of investment opportunities.

Overall, it seems that high profitability of firms is linked with the level of borrowing. However, Constantinides (2003) believes that this relation can work in opposite manner if managers can exploit valuable interest tax shields, just as the trade-off theory predicts. In this case, high profitability means that firms can make debt more without increasing financial distress and also they have more profits to shield.

2.2.3 Pecking Order Theory (POT)

The packing order theory assumes semi-strong form market efficiency. This theory states that adverse costs of issuing risky shares in order to finance new investments can lead to a preference ranking of financial resources. According to POT theory ranking might be resulted by asymmetric information (manager's information advantage over outside investors) or managerial optimism. In other words, this theory ranks the different preferences of a firm in providing financial sources.

Packing order theory has been seen several times in Myer researches after 1984. According to Myers study, pecking of firm's preferences is categorized into two main parts. First, internal financing is more preferred compared to external financing. Secondly, firms seem to have more tendency of issuing debt instead of issuing shares.

In sense, pecking order theory explains why profitable firms mainly use internal financing while less profitable firms have to use external financing. According to

POT, this could be resulted because the second type of firms, mentioned above, has less access to internal resources in order to finance their new investments.

As mentioned before, in trade-off theory firms borrow until they reach the target point while by pecking order theory firms would use utilize debt or equity financing according to their fund requirements. Frank & Goyal, 2003; Shyam-Sunder & Myers, 1999, support this idea by analyzing the performance of the firms fell short in their financing policies in a period. Therefore they would have changes in their capital structure at the same and the next periods.

In addition, according to POT, firms are exposed to two groups of costs when they are willing to cover their fund requirements through external financing: information asymmetry costs and transaction costs. This can be considered as one of the other reasons why CFOs prefer internal financing instead of external ones.

Donaldson (1961) has established a general pattern to show how firms act when they aim to provide funds by long term instruments.

When firms are expected to invest in a project with a positive NPV, internal financing is preferred compared with external financing.

In the situation when firms face in fund shortage, they prefer to sell off a part of new investment.

When external financing for new investments are inevitable pecking order of alternatives is as follow: Very secured debt, risky debt, convertible bonds or securities, preferred stock and finally common stock.

Cadsby et al. (1998) also critiques the theory only considers a straightforward setting where the only financing option is debt vs. equity, and thus more complicated settings, for instance in cases where the firm chooses between straight and convertible debt.

Finally, it should be added that pecking order theory doesn't provide the factors determining optimal capital structure but enables experts to perceive the concept of financing hierarchy preferences.

2.2.4 Agency Cost Theory (ACT)

In most of corporation management and ownership are separated which can lead to a conflict of interests between two groups. In other words, managers may not act in a way that should lead to maximize the wealth of shareholders. This problem is known as agency problem which can impose corporations some additional costs named agency costs.

Jensen & Meckling (1976), Prasad et al, (2001), state that in real world managers do not act in the interest of owners and they always work for themselves. They continue that most of managers would prefer to control corporations with minimum effort and maximum rewards as possible. In addition managers may associate firm's cash flows to short term projects with early results to increase their reputation instead of investing in long term projects with higher profitability (Masulis, 1988). Moreover,

due to decreasing the probability of bankruptcy managers may avoid to be involved in risky more profitable investments. Finally, managers and shareholders may have different ideas over the firm's operating decisions. Jensen study (1986) represents a classic example of agency problem which is resulted due to manager's complete access to firm's cash flows. The study explains more, that in such a situation managers may be involved in luxury spending therefor the free cash flows would transfer from owner's pocket to manager's without their satisfaction.

Many solutions are represented to limit the impact of agency problems. Jensen (1986) suggests that shareholders can limit free cash flows which are the source of manager's unbeneficial expansion. To achieve this, shareholders can either increase the amount of dividend repayments or increase firm's leverage which can obligate managers to invest in new investments or to use internal cash flows to pay interest expenses. In addition, increasing in leverage can lead to raise the possibility of bankruptcy which can reduce and limit manager's consumption (Jensen 1986) and (Prasad et al, 2001).

The other solution of agency problems suggested by Kensinger & Martins (1986) is to limit manager's decision power. He proffered a situation in which individual partners or shareholders have limited decision power beside managers. This reorganization can reduce manager's decision power regarding dividend/reinvestment choices.

Agency problems does not just limit in confliction between shareholders and managers but among shareholders and debt holders. Two hypotheses are represented

to show the impact that shareholders – bond holders confliction might have on firm value. They are known as the Irrelevance Hypothesis and the Costly Contracting Hypothesis. These hypotheses explains how the confliction between these two groups can be managed and at the end firm value increases.

Krishnaswami et al, (1999) explains the reason. The contracts or covenants cause the reduction in monitoring costs of bond holders which will result in better control and eventually increasing in firm's value. In addition shareholders can have impact on bond holder's benefit flows through investing in investments which are riskier or employing under investment approaches. Myers (1977) indicates that underinvestment can be seen in firms which are in growth phrase and it helps them to find more valuable investing opportunities. As a result, he suggests that such firms use equity instrument as capital financing resource.

Overall, while there are numerous studies and variable theories on capital structure, there is no comprehensive agreement on optimal capital structure (Sheikh & Wang, 2011). As in mentioned at the first of this chapter, the main difference between theories is the point on which they focus more. For instance the TOT mainly focuses on taxes while POT considers the variation of information available for shareholders.

2.3 Determinants of Capital Structure

Capital structure theories which discussed in the first part, aim to determine an optimal capital structure. In this section, the factors determining firm's capital structure are represented. These factors can influence firm's capital structure significantly and can be listed as the age of the firm, the firm size, asset structure, profitability, growth opportunities, firm risk level, taxation and ownership structure.

2.3.1 Profitability

There is a contrast of profitability impact on capital structure among different theories. Though trade-off theory believes that the relation between firm's profitability and usage of leverage is positive, pecking order theory states that this relation is negative.

According to pecking order theory, profitable firms generate more internal cash flows. Therefor they have fewer tendencies to use external leverage. As a result there is a negative relation between profitability and debt ratio from POT's point of view.

On the other hand, trade-off theory confirms that the probability of demanding for external financing in firms with high levels of profits seems to be more due to the reason that such firms aim to protect their returns against taxes. Therefor profitability has a positive impact on debt ratio.

Mouamer (2011) however, writes that most statistical studies indicate that profitability has a significant negative effect on the debt ratio and gave examples of studies from US and Japanese firms, as well as studies for developed and developing countries.

2.3.2 Tangibility of Assets

Assets can be divided into tangible and intangible assets. The first group includes all firms' physical assets such as buildings, inventories, machinery and etc. while intangible assets do not have any physical appearance such as goodwill. Tangible assets can be evaluated by creditors when a firm is seeking for a debt to be used as

collaterals. In fact they are more secured assets compared with intangible assets facing with asymmetric information about their real value.

Rajan & Zingales (1995) indicate that tangibility of the assets of the firm represent the effect of the collateral value of assets on firm's leverage. Almost all of researches believe that there is a positive relationship between the amount of firm's tangible assets and its debt ratio. In fact some experts believe that tangibility can be considered as the most important factor of determining capital structure.

This positive relationship is explained by Jenson & Meckling (1976) in the way that issuance of debt by firms can act as an incentive for shareholders to make them to invest in higher risk investments to earn more return in order to recover the interest expenses which are borne by debt holders. Such debts should be secured by firm's assets therefore managers would try to keep or increase firm's tangible assets. In addition a firm with more tangible asset seems to have less leverage risks due to the reason that debt holders have more assurance by having an access to liquid collaterals.

2.3.3 Firm Growth Opportunities

It is assumed hypothetically that firms with higher growth opportunities have more propensities to demand for debts. This positive relation has also been confirmed by Marsh (1982). While recent theories indicate inverse relationship among firm's growth opportunities and its leverage.

Sheikh & Wang (2011), try to explain this negative relationship according to trade-off theory. They explain that due to the reason that growth opportunities represent

some form of intangible assets, firms having growth opportunities is less probable to use debt as financing instrument compared with firms having access to tangible assets.

In addition they interpret negative expected results through agency theory as well. They explain that firms with growth opportunities are more probable to be involved in asset substitution which can transfer wealth from debt holder's side to shareholder's.

Green et al. (2001), try to explain negative relation between growth opportunities and leverage in the way that long-term and short-term debts have been distinguished rarely. He explains further that if firms issue short-term debt the relationship between growth opportunity and leverage is expected to be positive.

Finally it should be added that firm's dividend payout policies can extremely affect its capital structure. In other words, firms with higher dividend payout rate would have less access to internal funds therefor it is more probable to demand for debt in order to finance their growth opportunities.

2.3.4 Risk Level of Firm

According to the related literature, it has been posited that firms with higher level of risk will use less debt leverage. In fact risk profile of the firm is believed to have an important impact on firm's capital structure. The reason can be reached according to DeAngelo & Masulis (1980) research, which indicates that increasing in one unit of firm's debt will lead to increasing the probability of bankruptcy. Therefor due to the reason that firms having higher level of risk, avoid to increase their debt level. They

continue that firms with volatility in their earnings will face to higher cost of debt which can bring them to the position that they can hardly meet their debt service obligations. Frank & Goyal (2003) indicate that in the firms with normal distributed earnings, cost of bankruptcy seems to be lower thus making leverage is unattractive.

On the other hand a few studies believe in the positive relation between firm's risk level and leverage. Klock & Thies (1992), suggest that firms' risk level is related to debt level both in long-run and short-run. They explain that since firms with high business risk are restrained in the extent to which they can secure long-term loan, they therefore have to make up for any inadequacy using short-term debt.

2.3.5 Taxation Benefits

Initially, the important impact of tax benefits on the performance of the firms appeared in MM studies. It is believed that tax can be considered as one of the most significant determinants of capital structure.

Overall, due to the reason that tax shield can be used as one of the instruments helping managers to protect income, it is expected that those firms with higher levels of tax, demand for higher levels of leverage as well. In addition studies indicates that external funding, particularly debt financing, seems not to be attractive for the profitable firms which have extreme access to internal funds (Donaldson, 1961).

In addition, benefit protection cannot be done just through using leverage but through other ways such as depreciations or capital allowances, R&D expenditures and etc. Downs (1993) also posits that the motivation to fund with debt reduces as non-debt tax shields rise. In other words, debt becomes over-shadowed.

Although, profitable firms tend to use debt in order to protect their earnings, this approach also can lead to increase the possibility of bankruptcy (DeAngelo & Masulis, 1980). Prasad et al, (2001) explain further that the marginal tax shield value for low debt levels is positive, mainly because it can be exploited to minimize the firm's total tax liability, while at higher debt levels, the marginal value of debt is negative.

2.3.6 Size of the Firm

According to the fact that large firms are less probable of default, size of the firms is considered as one of the most important determinants of capital structure. Thus, Rajan & Zingales (1995) suggest that due to the reason that larger firm are more diversified and are less probable to bankruptcy; they have more capacity to borrow more. Therefore it seems that there is a positive relationship between firm's size and using of leverage.

Alternatively, there are some other studies suggesting negative association between size and debt leverage. They explain that large firms give out more public information which may lead to restrict their borrowing capacity according to the sensitivity of equity holders to debt level of the firm.

Chapter 3

DATA AND METHODOLOGY

3.1 Introduction

The previous chapter outlined a brief survey on different capital structure theories and their relationship to the determinants of capital structure. In this chapter we will try to introduce the methodology used for this research as well as probing the related variables, samples, models and hypotheses. The instruments used in the study will also be explained and their applications will be discussed. In addition a concise description of the techniques utilized and illustrated in the research will be provided.

3.2 Type and Source of Data

The sample group which is used in this study was drawn from the list of hotels acting in the Tourism Industry of Turkey. In order to collect data, Thomson Reuters' Data Stream is used as the data reference resource. The data used in this research was extracted from the financial statements of these hotels during the years under review 1998-2010.

3.3 Methodology

Econometrically, four steps will be passed through this study. First, a model on which this research is based, will be specified. Secondly, the stationary status of the data will be checked, next the correlation and co-integration analyses will be run and at the last step coefficients of independent variables will be determined with the help of regression analysis.

3.4 Variables for Research

Variables in this study will be grouped into two main parts: First, dependent variables including Total Debt ratio (TD) and Short-term debt ratio (STD). Secondly, independent variables including Tax-benefit ratio, Growth rate of the firms, level of the Risk, Profitability of the firms and Tangibility of their assets. It should be added that all variables are measured in their book values due to the reason that the financial statements are prepared in the book values rather than market values.

The two groups of variables, dependent and explanatory variables, are specified in table 3.1.

It should be noted that short-term debt refers to that kind of debts maturing with in less than one year while long-term debts mature in more than one year.

Table 3.1: Specification of Variables

Variables	Variable Description
Total Debt ratio (TD)	$TD = \frac{\text{Total Debt}}{\text{Total Assets}}$
Tax Benefit	$\text{Tax Benefit} = \frac{\text{Depreciation}}{\text{Total Assets}}$
Growth	$\text{Growth} = \frac{\text{Total Asset (t)} - \text{Total Asset (t}-1)}{\text{Total Asset (t}-1)}$
Risk	$\text{Risk} = \frac{\text{EBIT (t)} - \text{EBIT (t}-1)}{\text{EBIT (t}-1)}$
`Profitability	$\text{Profitability} = \frac{\text{EBIT}}{\text{Total Assets}}$
Tangibility	$\text{Tangibility} = \frac{\text{Fixed Assets}}{\text{TotalAssets}}$
Size	$\text{Size} = \text{Ln(sales)}$

This study provides one main question namely and interprets the capital structure determinants in Turkish hotels.

3.5 Model Specification

This model is created to assess the determinants of capital structure in Turkey. The model's general form is written as:

$Y_{it} = \alpha + \beta X_{it} + \mu_{it}$ (1)

The above shows the general form of the Ordinary Least Square regression, with the subscript i denoting the cross-sectional dimension and t representing the time-series

dimension. The variable on the left, Yit, represents the dependent variable in the model, which in this case is the firm's debt ratio and short-term debt ratio, while Xit in the model represents the explanatory variable, α is the constant and represents the intercept, and β stands for the coefficients or slope. μit represents a random term and is included to account for regression line errors. In fact the standard error is a measure of uncertainty about the true value of the regression coefficient. The regression model has been modified for this analysis and thus takes the following form: As it mentioned in literature, we considered number of company-specific independent variables which have functional relationship with firm's debt ratio. In other words:

Debt Ratio = f (Tax Benefit, Growth Opportunities, Risk, Profitability, Tangibility, size)

Therefore, this functional relationship should be represented in an equation form in order to be investigated properly. Therefore the model is defined for panel data as below:

$$\text{Debt Ratio}_i = \beta_0 + \beta_1 \text{Growth}_i + \beta_2 \text{Profitability}_i + \beta_3 \text{Risk}_i + \beta_4 \text{Tangiblity}_i + \beta_5 \text{ Tax Benefit}_i + \beta_6 \text{Size}_i + \epsilon_i$$

3.6 hypothesizes

The fallowing hypothesizes are created to be proved or rejected by data analyzing:

Ho: There exists a positive relationship between profitability and debt ratio.

Ho: There exists a positive relationship between growth and debt ratio.

Ho: There exists a positive relationship between size and debt ratio.

Ho: There exists a positive relationship between tangibility and debt ratio.

Ho: There exists a negative relationship between risk and debt ratio.

Ho: There exists a negative relationship between tax-benefit ratio and debt ratio.

3.7 Data Analysis Technique

In this section different analyses are represented that should be implemented to determine if there exists a relationship between different explanatory variables and debt ratio and how these variables can affect it. These analyses are used to test the impact of those variables on the capital structure as well. These tests are explained as blow:

3.7.1 Unit Root Tests of Panel Data

In framework of econometrics, in order to achieve the valid regression, panel data should be probed by unit root tests. So this test can be considered as the first step. In order to implement unit root test, five test types are used:

- Levin, Lin and Chu (2002)
- Breitung (2000)
- Im, Pesaran and Shin (2003)
- Augmented Dickey-Fuller (ADF) test (Dickey and Fuller, 1979)
- Phillips-Perron (PP) test (Phillips and Perron, 1988)
- Hadri (2000)

Null hypothesis can be rejected when calculated t-values exceed critical values and it means that the variable does not have a unit root so is stationary for all test types except Hadri. In fact in this approach we have to accept the null hypothesis which represents that the variable is stationary and means that this variable doesn't have the unit root. The main problem arising with non-stationary variables is that a reasonable overall value cannot be calculated for them and the amount of variance will increase

by time. It is worth noting that in order to run OLS or FMOLS equation estimations, the variables must be non-stationary in the level and be stationary in their first difference. In other words, variables should have unit root in their level.

3.7.2 Correlation Analysis

The validity of model may be influenced negatively by Multi-collinearity as well. When there are correlations among independent variables, model will face this kind of problem. In fact, in the cases that the correlation between explanatory variables is so high, we have to omit one of them in order to reach the appropriate model. It should be added that this relationship can be either positive or negative.

3.7.3 Co-integration Analysis

The next step to estimate a co-integrating regression is to test the integration level of variables. In fact if two or more series are individually integrated, but some linear combination of them has a lower order of integration, then the series are said to be co-integrated. It is worth noting that, in order to implementing co-integration test, the variables must have two main characters. First, they should not have unit root in their level. In other words, the variables should be stationary in their first difference not in their level. And secondly, the variables should be correlated in long run. According to what was mentioned, tangibility, tax-benefit and size are the chosen variables for FMOLS and DOLS regression models. The other variables such as profitability, risk and growth are applied for Random and Fix effect regression models, under whom circumstances there is no need of non-stationary variables.

3.7.4 Regression Models

In order to analyze the variables, different regression models are applied in this study. In fact, through these models the dynamic behaviors of panel data are probed. In other words, because variables represent the different behaviors during different

paths in time, regression models can be used to analyze multivariate panel data. In addition, regression models ability to be so flexible has made them so popular that they are used widely by analysts.

As it mentioned before, Tangibility of assets, non-debt tax shields and size of the firms are the variables which are fit to the initial requirements of fully modified and dynamic OLS models. In addition, Panel Random and Fix Regression EGLS and Pooled OLS Models are run for all variables of the study.

Chapter 4

EMPIRICAL RESULTS AND DISCUSSIONS

This chapter represents the data used for the research as well as descriptive statistics of the related data and different analyzes that should be done on them, which are introduced in the previous chapter. Statistic methods aim to ascertain the impact of different variables on capital structure. This section will start with descriptive statistics of the related data and will be followed by the unit root tests. Then the next section includes co-integration and correlation analyses which will be continued by different Regression analyses. Overall, we will try to analyze the gained data in order to reach the point of revealing results and conclusion.

4.1 Descriptive Statistics

As it is represented in table 4.6 the mean value of debt ratio is 48% which signifies that in overall total assets of the hotels are financed by 53% equity capital and 47% by debt. Moreover, total mean value of tangibility, 0.60076, indicates that on average tangible assets contain 60% of total assets. This amount seems to be higher for other firms since, according to the nature of industry, a high proportion of hotel's assets are intangible assets. The average amount of profitability ratio highlights that the average return of assets has been 3.5% and the average growth rate has been almost 25% over the period. As it has shown, the minimum growth rate has been negative in the market. In addition according to the table, the mean value of tax benefit ratio is only 3.6 percent.

Table 4.1: Descriptive Statistics of all Hotels

	N	Minimum	Maximum	Mean	Std. Deviation
Debt Ratio	65	0	1.408194	0.418009	0.847535
Tangibility	65	0.090110	0.976806	0.600760	0.285565
Profitability	65	-0.520830	0.332240	0.035781	0.142547
Risk	65	-73.83610	13.70159	-1.824490	11.18031
Tax Benefit	65	0.003006	0.180583	0.036645	0.036971
Size	65	0.069187	0.112772	0.093417	0.010377
Growth	65	-0.229900	3.160724	0.245979	0.510931

4.2 Unit Root Tests of Panel Data

As it was mentioned in the previous chapter, panel data should be tested by unit root tests to check if they are stationary or non-stationary. In this research five types of panel unit root test are applied in order to accept or reject null hypothesis: Levin, Lin and Chu (2002), Breitung (2000), Im, Pesaran and Shin (2003), Fisher-type tests using ADF and PP tests and Hadri (2000). In fact the purpose of using these tests is to identify the variable's status. Variable I(1), is a variable that is stationary in the first order of differences. Therefor I(n) is referred to a variable that is not stationary at its framework. In this situation, nth differences should be taken off in order to convert this variable's status to stationary. It is obvious that a variable that is stationary in its frame work is known as I(0).

Null hypothesis can be rejected when calculated t-values exceed the critical values. The null hypothesis for LLC, IPS, Breitung, ADF and PP tests is to have a unit root while for Hidari test null hypothesis means that this variable does not have a unit root so is stationary. Therefore in this test null hypothesis should be accepted. As it mentioned before, the variables should be non-stationary in the level and stationary

in their first difference in order to allow the model to be run for DOLS and FMOLS models. In other words, the probabilities related to the different variables should exceed critical value of 5% at level but not at first difference.

Here the results of these tests are represented for all of the hotels. It should be added that these tests provide three models of analyzing. The first and the most general model, includes trend and drift while the second model has drift but not trend and the last and the most restricted model has none of them. It seems that the results of the "none" model, which contain neither trend nor intercept, can describe our data better. In addition, the amount of lag length which should be used in the tests in order to remove the serial correlation in the residuals is determined automatically by E-views system.

Table 4.2: Unit Root Test of panel data

Variables (level)		LLC	Breitung	IPS	ADF	PP	Hider
Debt to equity							
	τ_T	-2.23*	-1.33*	-0.51	13.86	0.01*	20.03*
	τ_μ	-2.47*	-	-0.96	14.83	10.10	1.83**
	τ	1.60***	-	-	18.64**	16.40***	-
Tax-Benefit							
	τ_T	-10.54*	-2.20*	-2.16*	25.40*	29.78*	9.71*
	τ_μ	-3.39*	-	-1.39***	16.26***	14.71	4.64*
	τ	-0.59	-	-	12.35	12.36	-
Size							
	τ_T	-3.99*	1.51	-0.01	9.54	23.42*	4.08*
	τ_μ	-5.82*	-	-1.38***	19.67**	28.40*	4.53*
	τ	2.50	-	-	1.37	1.18	-
Tangibility							
	τ_T	-7.95*	-0.72	13.07	13.07	20.85**	3.88*
	τ_μ	-5.15*	-	-2.44*	20.07**	20.21**	0.03
	τ	0.64	-	-	07.80	07.57	-

Variables (1th difference)		LLC	Breitung	IPS	ADF	PP	Hider
Debt to equity							
	τ_T	-8.88*	-0.90	-3.28*	35.50*	47.39*	21.87*
	τ_μ	-5.53*	-	-4.46*	36.23*	43.84*	04.86*
	τ	-7.15*	-	-	55.65*	58.05*	-
Tax-Benefit							
	τ_T	-5.30*	-2.56*	-1.07	15.79**	30.58*	16.5*
	τ_μ	-17.81*	-	-9.86*	48.64*	53.21*	4.27*
	τ	-10.42*	-	-	64.80*	59.68*	-
Size							
	τ_T	-3.37*	0.55	-0.15	12.77	15.04	5.56*
	τ_μ	-4.04*	-	-1.74*	17.45**	24***	2.2**
	τ	-4.55*	-	-	33.02*	32.35*	-
Tangibility							
	τ_T	-6.43*	-1.47***	-1.28	22.54**	30.42*	7.07*
	τ_μ	-7.74*	-	-3.86*	30.71*	41.54*	1.27
	τ	-10.23*	-	-	61.53*	63.55*	-

τ_T represents the most general model with a drift and trend; τ_μ is the model with a drift and without trend; τ is the most restricted model without a drift and trend. Optimum lag lengths are selected based on Schwartz Criterion. *, **, *** denotes rejection of the null hypothesis at the 1%, 5% and 10% level respectively. Tests for unit roots have been carried out in E-VIEWS 8.

4.3 Correlation Analysis

In order to test the possible degree of multi-collinearity among variables, correlation analysis should be run. As it is shown in the table, debt-equity ratio is positively correlated with the short-term debt ratio which indicates that, as firms borrow more, they tend to make debt in short terms rather than long-terms. Explanatory variables correlation with independent variables is calculated as well. According to the table, debt ratio is positively related to the size of the firms while short term debt is associated with size in a negative way. The result is acceptable, due to the reason that firms which are greater in size have more capacity to borrow, but they prefer to borrow long-term debts rather than short-term. The negative relationship between tangibility and size on one hand, and debt equity ratio on the other hand, is affected by the nature of the tourism industry in which intangible assets play an important role in the market. In fact, as hotels grow in the market, their intangible assets grow with higher rate compared with tangible assets. Therefore firms with higher levels of intangible assets are greater in size and have more tendencies to borrow. Tax-benefit ratio cannot affect debt equity ratio directly but is affected by tangibility completely positively. In fact firms with higher tangible assets would be imposed by higher depreciation costs which will lead to increase in tax shields.

In addition, according to the information included in the table, tangibility of the firms has negative impact on firm's short-term borrowing. The interpretation of this association is that those firms owning more tangible assets seem to be more reliable for the lenders due to the reason that their assets are more visible and secured. As a result, they are more probable to borrow in the long terms

Table 4.3: Correlation Analysis

	DEBT RATIO	TANGIBLITY	SIZE	TAX_BENEFIT	STD
DEBT RATIO	1				
TANGIBLITY	-0.142163	1			
SIZE	0.181203	-0.105432	1		
TAX_BENEFIT	-0.130947	0.212125	-0.284927	1	
STD	0.204448	-0.342431	-0.111294	0.192064	1

In overall, the magnitude of the correlation coefficients indicates that multi-collinearity is not a potential problem for the regression model and correlation in the study is not indicative of multi-collinearity.

4.4 Co-Integration Analysis

The next step to estimate a co-integrating regression is to test the integration level of variables. In fact if two or more series are individually integrated, but some linear combination of them has a lower order of integration, then the series are said to be co-integrated. Johansen test with Pedroni approach is the chosen co-integration test for this study which allows for more than co-integrating relationship. In addition the test assumes that the co-integration vector is constant during time. It is worth noting that it is possible that the long-run association among variables changes. The basic assumption of co-integration test is that variables must be non-stationary in their level but stationary in their first difference.

The results of co-integration tests for debt-equity ratio and other variables are represented in table4-5.

Table 4.4: Pedroni Residual Co-integration Test

Individual intercept

Alternative hypothesis: common AR coefs. (within-dimension)

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-2.978885	0.9986	-2.120970	0.9830
Panel rho-Statistic	0.603061	0.7268	0.977775	0.8359
Panel PP-Statistic	-28.54243	0.0000	-9.843933	0.0000
Panel ADF-Statistic	-8.037822	0.0000	-5.996675	0.0000

Alternative hypothesis: individual AR coefs. (between-dimension)

	Statistic	Prob.
Group rho-Statistic	2.068839	0.9807
Group PP-Statistic	-11.86297	0.0000
Group ADF-Statistic	-4.647907	0.0000

Individual intercept and individual tend

Alternative hypothesis: common AR coefs. (within-dimension)

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-1.888745	0.9705	-1.038092	0.8504
Panel rho-Statistic	-0.394543	0.3466	-0.106197	0.4577
Panel PP-Statistic	-25.51568	0.0000	-8.453180	0.0000
Panel ADF-Statistic	-7.933287	0.0000	-6.279236	0.0000

Alternative hypothesis: individual AR coefs. (between-dimension)

	Statistic	Prob.
Group rho-Statistic	0.998692	0.8410
Group PP-Statistic	-11.05934	0.0000
Group ADF-Statistic	-5.917328	0.0000

No trend and no intercept

Alternative hypothesis: common AR coefs. (within-dimension)

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-1.236148	0.8918	-0.679881	0.7517
Panel rho-Statistic	-1.325081	0.0926	-0.452554	0.3254
Panel PP-Statistic	-10.68886	0.0000	-4.282510	0.0000
Panel ADF-Statistic	-7.428554	0.0000	-4.099434	0.0000

Alternative hypothesis: individual AR coefs. (between-dimension)

	Statistic	Prob.
Group rho-Statistic	1.099763	0.8643
Group PP-Statistic	-3.348002	0.0004
Group ADF-Statistic	-2.356168	0.0092

4.5 FMOLS Regression Model Estimations

In this section the results of regression model are presented. In order to drive out the results, paneled fully modified least square (FMOLS) is used as regression model and paneled model is considered as grouped estimation. The results support the initial hypothesis and the signs are consistent with the predicted theories. Moreover, the results prove that the variables significantly affect dependent variable and are significant in the critical level of 5%. The results as shown in Tables 4 indicate that 65.2 percent of the total debt criterion variable was accounted for by the model alone.

Table 4.5: Regression Model: Panel Fully Modified Least Square (FMOLS)

Variables	Coefficients	significance	t-values
Size	12.73253	0.0119	2.641615
Tangibility	150.1297	0.0001	4.347001
Tax-Benefit	-1815.462	0.0193	-4.442952

R-squared= .7280; Adjusted R2 =33.11; F statistics = 4.859; Standard Error of Estimate = 390

The study shows a significant positive relationship between tangibility of the assets and debt-equity ratio which gives credence to the initial hypothesis. According to Jenson & Meckling (1976), when firms provide funds through borrowing, due to the reason that they will be imposed by more debt costs such as interest costs, they are more motivated to invest in the new investment opportunities to earn more money in

order to recover a portion of their costs. As a result the level of tangible assets will increase in such firms. In addition, these assets can be considered as secured collaterals which can convince lenders to trust and lend them more.

The derived results of the table indicate a positive association among size of the firms and using leverage. As it mentioned before, size of the firms has been considered as one of the most significant determinants of capital structure. In fact Rajan & Zingales (1995) suggest that large firms should borrow more; due to the reason that they are less probable of bankruptcy and therefore have less bankruptcy costs. In addition large firms are more diversified and are less prone to default. As it is shown in the table, this relationship is significant as well.

The negative relationship of tax-benefit and debt-equity ratios, which is significant, is due to the reason that this explanatory variable affects capital structure indirectly, through depreciation costs. In other words, large firms owning more tangible assets will be imposed by more depreciation costs which can provide them with tax shields as well. In fact large firms try to use depreciation costs as an instrument to protect their earnings against taxes. Therefore those firms are less probable to use interest costs in order to protect the returns against taxes and as a result they will borrow less. As it mentioned before, the firms trying to increase interest costs in order to protect their earnings, should be care full of their borrowing capacity to avoid bankruptcy.

4.6 DOLS Regression Model Estimations

The next implied regression model is Panel Dynamic Least Squire (DOLS) with grouped estimation panel method. The results which are represented in table 4 indicate a significant relationship between debt-equity ratio on one hand and the size

and tangibility ratios, on the other hand. In fact size of the firms is significant in the level of 1% and tangibility of assets in the 5% level. According to the table, the tax-benefit ratio cannot influence capital structure significantly.

Table 4.6: Regression Model: Panel Dynamic Least Square (DOLS)

Variables	Coefficients	significance	t-values
Size	69.00793	0.0002	4.125796
Tangibility	188.7862	0.0370	2.162094
Tax-Benefit	5472.279	0.2705	1.118189

R-squared= .477; Adjusted R2 =.628; F statistics = 4.859; Standard Error of Estimate = .1590

As it is shown in the table the relationship between size of the firms and tangibility of their assets remained positive. As the reason was explained before, it seems that large firms owning more tangible assets are more secured in the sight of lenders in order to allocate their fund resources to them. Therefore they have more access to the external funding compared with the smaller firms. In addition, as borrowing costs such as interest costs, increase in the firms, they prefer to increase the level of tangible assets in order to use the benefits of depreciation costs as an instrument to protect firm's earnings.

4.7 Regression Model Estimations for All the variables

In this section the different regression analyses are represented in order to interpret the relationships between variables in panel data. The results are appeared in the next

tables. It is worth noting here that the information in the tables only represents the significant ones.

Table 4.7: Regression Model: Panel EGLS (Cross-section weights)

Variables	Coefficients	significance	t-values
C	0.4697*	0.0056	2.9701
Growth	0.0023	0.8077	0.2454
Risk	-0.0021**	0.0308	-2.2591
Tax-Benefit	-0.4627	0.2157	-1.2629
Profitability	0.3657	0.1011	1.6883
Tangibility	0.1604	0.1605	1.4367

R-squared= .603; Adjusted R2 = .479; F statistics = 4.859; Standard Error of Estimate = .1048

Table 4 shows the equation estimation of the panel data using EGLS as the estimation method. In addition in order to run this model, cross-section fixed effect is handled which allows us to indicate a transformation method for eliminating the effect of cross-section denomination and White cross-section is the chosen method of computing weights. As it is shown in the table, the behavior of the debt equity ratio is dependent to the behavior of the last debt ratio which is shown by the first lag of debt ratio. In addition, the coefficient of the intercept which is shown as C, is significant and positive.

The next variable that should be discussed is profitability which is associated with debt ratio positively, which means that when the hotels are more profitable, they would have more potential of debt financing. In fact the result supports trade-off theory which believes that profitable firms use more debt leverage in order to protect their earnings through tax shields. In addition, we can reject the assumption of pecking-order theory which represents that profitable firms have more access to internal cash flows. Therefore the probability of demanding for external financing is less.

The next determinant of capital structure which is strongly related with debt ratio is risk. The results infer that the relationship between firm's level of risk and usage of debt financing is negative, which is in agreement with hypothesizes stated earlier. That is, the firms struggling with higher levels of risk prefer to avoid from borrowing, which would impose them with more obligations and obviously more risks.

The positive relationship between the growth rate and the debt-equity ratio can be interpreted in the way that the firms with positive rate of growth are more probable to demand for external debts due to the reason that they would face more with new investment opportunities. It should be mentioned again that, growth is expected to have negative relationship with debt ratio under the pecking-order and agency theories.

Tangibility remained insignificant under all kinds of models. This variable is correlated positively with the dependent variable. Almost all of the researches

believe in the same relationship. In fact the firms with higher tangible assets are more secured because their assets are more reliable as collaterals. Therefore the market would have more tendencies to lend to such firms compared with the firms with lack of sufficient assets or owning high levels of intangible assets which are not much reliable.

With respect to tax-benefit ratio the results represent signs reversely. In fact the gained results are in contrast with MM theory which assumes that the firms with higher imposed tax are more probable to use leverage in order to protect their earnings. On the other hand, the negative result can be interpreted in the way that higher levels of taxes for the firms indicate that such firms are more profitable. As a result they have more access to internal funds and they would have fewer tendencies for external financing.

Table 4.9: Regression Model: Panel EGLS (Period random effects)

Variables	Coefficients	significance	t-values
C	0.3746*	0.0016	3.4193
Growth	0.0855	0.5690	0.5748
Risk	0.0051	0.3354	0.9764
Tax-Benefit	-4.5924*	0.0018	-3.3748
Profitability	0.2029	0.7758	0.2869
Tangibility	-0.3270	0.3630	-0.9214

R-squared= .165; Adjusted R2 = .027; F statistics = 1.195; Standard Error of Estimate = 0.08

Table 4 represents the equation estimation of the panel data using EGLS as the estimation method. The main difference between this model and the last one is that, in here random effect is assumed on the period dimension. As it is shown in the table, the behavior of the debt equity ratio assumed dependent to the behavior of the last debt ratio.

The results are almost the same as the last model; therefore the interpretation and the impact of different variables are the same as well. The only difference has been made on the coefficient-signs of tangibility and risk ratios. Actually we expect a negative relationship between risk and debt ratio while the achieved result represents that this relationship is positive witch supports Klock & Thies (1992) theory suggesting that when firms face with higher risks and bankruptcy costs, they are forced to borrow more in order to cover their costs. In fact their belief supports the trade-off theory. It is worth noting that the result of previous regression model for risk ratio was more reliable due to the lack of significance in this case.

In addition the negative relationship of our dependent variable and tangibility is surprising and supports Titman & Wessels (1998) which explain that firms with fewer tangible assets may choose higher debt levels in order to halt the tendency of managers to use more than the optimal level of perquisites.

Finally the last regression model which is mostly fit with the data is pooled OLS model. The results appeared in table 4 indicates that they support the previous results of regression models. According to the signs of coefficients, debt-equity ratio is positively related with growth and profitability of the firms while firm's level of risk, their tangibility and tax benefit ratio affect it negatively. According to the achieved results of p-values, growth, probability and tax-benefit ratios are significant at the 1% level. As it mentioned before, tangibility was not important at any level in the different regression models.

Table 4.9: Regression Model: Pooled OLS (Cross-section weights)

Variables	Coefficients	significance	t-values
C	0.3746*	0.0016	3.4193
Growth	0.0855	0.5690	0.5748
Risk	0.0051	0.3354	0.9764
Tax-Benefit	-4.5924*	0.0018	-3.3748
Profitability	0.2029	0.7758	0.2869
Tangibility	-0.3270	0.3630	-0.9214

R-squared= .285; Adjusted R2 = .27; F statistics = 1.195; Standard Error of Estimate = 0.059

Chapter 5

CONCLUSION

This chapter will try to discuss the results which are gained in the previous chapter. This chapter also goes further to provide a possible implication for other hotels. The required data gathered from literature review and 5 chosen hotels and were analyzed by statistical analyses and now they are ready to provide an appropriate basis for the conclusion. It is also aimed to provide some empirical recommendations which can be used by managers of the hotels in the Tourism Industry of Turkey.

5.1 Discussions

This study provides some significant determinants of capital structure and the related investigations on them. The sample is consisted of five large hotels acting in Tourism Industry of Turkey: MAALT Hotel, MARTI Hotel, NNTUR Hotel, METUR Hotel and finally AYCE Hotel. The selected period is from 1998 up to 2010. The selected explanatory variables included: Size of the hotels and the tangibility level of their assets, hotel's level of risk, growth and profitability, and finally their tax shields. The impact of these variables on the capital structure of the mentioned hotels was probed by different analyzes and the main summery of the findings are as below:

The significant positive relationship between the tangible proportion of hotel's assets and their debt ratio reveals the important role of fix assets, as collaterals, in borrowing process. Moreover, the reason can be related to the mentioned hypothesis

which believes that hotels try to finance their tangible assets through borrowing from banks. In other words, the hotels owning more tangible assets tend to borrow more in the market.

The results also indicate that the hotel's capital structure is significantly related to the size of their sales and assets. Accordingly, larger hotels have more tendencies to use debt in order to make funds, while small businesses are always considered as high risk firms which are less acceptable for the banks.

Non-debt tax shield, in this study, shows a negative relationship with leverage which supports the initial hypothesis. It seems that hotels trying to use depreciation costs as an instrument to protect some part of their earnings tend to borrow less compared to others.

With regards to the relationship between growth rate of the hotels and their capital structure, the study showed that there exists a positive relationship among them. It seems that, those Turkish hotels facing new investment opportunities are more probable to borrow from the banks in order to finance their new projects.

In terms of profitability of the hotels and debt ratio, the derived results strength that initial prediction which believes that, the profitable firms try to use more leverage in order to earn more. In fact, such firms have more capacity to generate more profits and also are more reliable in the bank's point of view.

Results from the study generally support the fact that hotel's level of risk is significantly and negatively associated with debt leverage. It is expected that risky firms try to avoid making more risks through borrowing more.

5.2 Recommendations and Policy Implications

The study provides financial managers of hotels in Turkey with some empirical recommendations which can be used in determining the capital structure of such sectors.

First, financial managers should be completely aware of the important role of tangible assets as collaterals in one hand, and as a non-debt tax shield, on the other hand. It seems that hotel's proportion of tangible assets can have a significant impact on banker's point of view. As a result, those firms trying to use more leverage, should try to increase their tangibility of assets. As it mentioned before, tangible assets are more secured and banks can rely on their liquidation value more. The importance of tangibility seems to become more significant when we see that intangible assets have such an important place in the hotel industry, which may leads to ignorance of the importance of tangible assets as a determinant of capital structure by managers.

In addition, it can be recommended to the financial managers aiming to protect hotel's earnings, that tangible assets can provide tax shields through depreciation costs. In fact depreciation costs can provide tax shields with lower risk level compared with interest costs which can be generated by borrowing. It should be strongly recommended to the risk managers that be completely care full of debt capacity of the firm, when they try to use interest costs as a tax-shield in order to avoid the risk of default and probably bankruptcy.

Similarly, increasing the stream of revenue can influence the creditworthiness of the hotel as a borrower. Therefore if the managers are planning to borrow more in the future, first they have to try to optimize the profitability or the firm.

According to the findings, debt financing is associated with risks. As a result, managing the maturity of assets can strongly help financial managers in order to reduce their risk levels. In fact, if managers be able to match the maturity of accounts receivable and payable, they can avoid the risk of liquidity problems and therefore will be able to increase their borrowing capacity.

It should be added that it seems that the profitable hotels with higher growth opportunities, are more probable to use debt leverage. As a result, it is recommended to the managers to probe the current situation of the hotel in order to make it prepared for taking debt strategies in the future and adjust the related regulations. Furthermore, since the hotels are in their maximum value level and managers have been successful to reach the optimal capital structure blend, any changes in the firm should closely be watched in order to prevent it to destroy the optimal balance.

5.3 Shortcomings of Study and Direction of Further Research

All the researches have faced some limitations in both the methodology area and the data collection. The main problem with the data is its availability. Although the related data of five large hotels in Turkey are investigated in this research, the results cannot completely be extended to the whole hotels acting in Tourism Industry. However, the results can strongly support the industry.

The next shortcoming which may come to mind is the number of proxies which are used in this study. Although there are other determinants of capital structure which are not included in this research, it was tried to choose the most significant variables which could be matched with the regression process as well. In fact the field of capital structure is so vast that no singular study can cover all aspects due to the limitation in time and space constrains.

According to the sample group of the study including five hotels, there may be the possibility of further researches in the same industry with a larger sample group in the future. Definitely the results of such studies will be more reliable. However, the chosen sample group in this study seems to be adequate enough.

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