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D. Sarsenova[1], Z. Aigel[1]
[1]Suleyman Demirel University, Kaskelen, Kazakhstan

CAPITAL STRUCTURE AND FIRM PROFITABILITY: ANALYSIS OF LISTED FIRMS IN KAZAKHSTAN

Abstract. Decisions regarding to capital structure is essential one since firm's profitability affected by such decision. This study is vital for financial managers to understand an effect of Capital Structure on Profitability. The paper was aimed to examine relationship between Capital Structure and Profitability of listed firms in Kazakhstan over five years' period from 2013 to 2017. Secondary data such as audited financial statements were used from randomly selected fifty listed companies in Kazakhstan. Regression analysis, specifically, generalized method of moments (GMM) estimator has been employed in order to analyze an impact of capital structure on firm's performance. The findings of this study revealed that a significant negative relationship between total debt ratio and profitability of Kazakhstani listed firms.

Key words: capital structure, profitability, total debt ratio, leverage.

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Андатпа. Капитал құрылымына қатысты шешімдер маңызды болып табылады, өйткені фирманың табыстылығы осы шешімдерге бағынышты. Бұл зерттеу қаржы менеджерлеріне капитал құрылымының пайдалылығына әсерін түсіну үшін өте маңызды. Баяндама 2013-2017 жылдар аралығындағы кезеңде бес жыл ішінде Қазақстандағы листигтік компаниялардың капитал құрылымы мен кірістілігі арасындағы қатынасты зерттеуге бағытталған. Аудиторлық қаржылық есебі сияқты қайталама деректер Қазақстандағы елу компаниядан кездейсоқ түрде қолданылды. Капитал құрылымын фирманың өнімділігіне әсерін талдау үшін регрессиялық талдау, атап айтқанда, жалпыланған әдіс-сәттер (ЖӘС) бағалау атқарымы ретінде пайдаланылды. Зерттеудің қорытындысы Қазақстандық листингтік компаниялардыңжалпы берешек коэффициенті менкірістілігі арасындағы елеулі теріс қатынасты анықтады.

Түйінді сөздер: капитал құрылымы, кірістілік, жалпы берешек коэффициенті, леверидж.

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Аннотация. Решения, касающиеся структуры капитала, имеют важное значение, поскольку прибыльность фирмы зависит от такого решения. Это исследование важно для финансовых менеджеров, чтобы

понять влияние структуры капитала на прибыльность. Целью данного исследования является изучение взаимосвязи между структурой капитала и прибыльностьюкомпаний, котирующихся на бирже в Казахстане за пятилетний период с 2013 по 2017 год. Вторичные данные, такие как аудированная финансовая отчетность, использовались от случайно выбранных пятидесяти листинговых компаний в Казахстане. Регрессионный анализ, в частности, оценка обобщенного метода моментов (ОММ) использовался для анализа влияния структуры капитала на результаты деятельности фирмы. Результаты этого исследования показали, что существенная отрицательная взаимосвязь между коэффициентом общей задолжности и прибыльностью казахстанских листинговых компаний.

Ключевые слова: структура капитала, рентабельность, коэффициент общей задолженности, леверидж.

Introduction

Nowadays in competitive and changing economic environment world, financial decision is crucial in day to day performance efficiency and operations of a firm. Business's financial decision influences most of all activities in a company. In the sphere of corporate finance, capital structure (CS) is the most arguable subject for individuals in academic field and practitioners [1]. Essentially, CS is the combination of debt and equity financing that is used in order to finance its operations [2]. The notion is referred as mix of equity and debt which make firm's total capital [3]. In general, a firm can choose among many types of CS whether to employ a high amount of debt or low level of debt financing [4]. CS decision is important one because firm performance is strongly affected by that decision [3]. Furthermore, the decision is very vital because of the need to maximize their returns as well as it influences on the firm's value. Besides that, solution adapted regarding to CS decision assist companies to adjust under competitive and changing environment. Thus, companies need to set appropriate strategy in order to have accurate combination of equity and debt to finance its assets. However, apart from investment decisions, CS decisions perform another decision. Hereby, it is essential because of the involving a vast amount of finance and has firm's implication in long run [5]. In addition, CS provide financial information to the management and users on how firm's strategic decision creating its value [4].

Generally, companies concentrate attention to internal financing rather than on external in order to have stability on firms' operations [6]. In a case, when external financing could not be avoided, the firm is highly opting for secured debt financing and firms would issue equity as common stock for last order [7]. Furthermore, tax system has an effect when choosing appropriate level of debts [8]. In a situation when interest on debt is not tax deductible,

companies are in difference whether to employ debt or equity to enhance its operations. Therefore, companies would not choose debt as CS since there is no tax advantage for debt. However, if interest from debt is tax deductible, firm would use debts in order to maximize its returns. Thus, due to tax benefit companies would prefer external financing as debt [4]. On the other hand, usage of huge amount of debts for CS leads to default risk [10]. Default risk is referred to the unpredictability of paying its obligations during specified time frame [9]. From the point of risk, high level of debt ratio overcome all benefits in terms of tax. However, under unfavorable situation, firm might fall into difficult times and earnings before interest and tax (EBIT) is not sufficient to pay for interest charges, after that, main users of financial statement such as shareholders need to overcome that issue and in case of inability to do that, firms might go bankruptcy. Due to this, using too much debt lead to the possibility to be bankrupted [4].

The objectives of this study is to examine the relationship between total debt (TD) and profitability.

Financial performance of s firm is dramatically impact on different factors and among them CP is one of the main factors. Vast amount of studies has been researched to examine any significant relationship (negative, positive or no relation) between performance efficiency and CS and additionally, authors come into different results [11].

Salim&Yardar[11] found that total debt (TD) negatively effect on return on equity (ROE) and these findings in line with [4], [5], [6]. Besides that,Tailab [12] has found negative relationship between non-current liabilities as well as TD. The reason is that the more company uses its external financing as debt leads to lower performance level and means company uses more equity finance.

However, there are studies that found positive relationship between dependent variables such as ROE and independent variables as TD, for instance, [7].

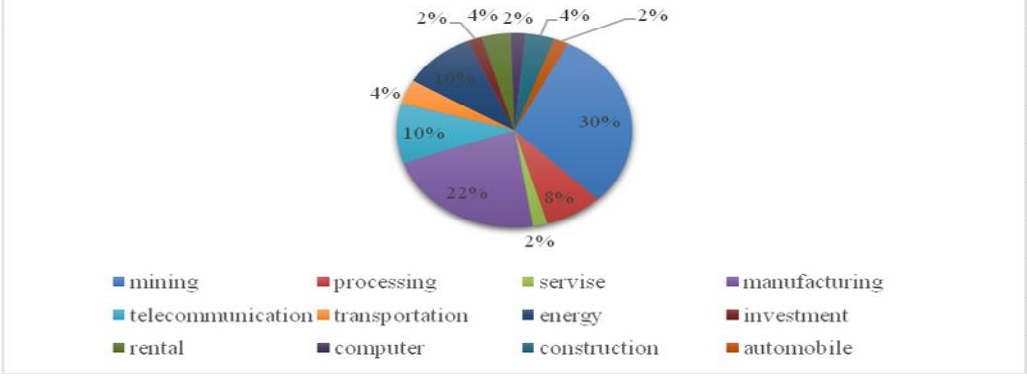
Methodology

The present study used secondary data for the analysis. Secondary data refers to the data that previously has been collected rather than gathered by researcher. Secondary data was obtained from financial reports which made up of statement of profit or loss and statement of financial position of the sample. These data were taken from Kazakhstan Stock Exchange (KASE), firm publications and official websites. Specifically, the financial statement of the observed sample was collected for the period 2013 to 2017.

The study has employed panel data which were collected from 50 listed companies of Kazakhstan (Figure 1) for a five years' study period (2013-2017). The present study employed stratified sampling method. Listed firms were screened against several factors: financial service institutions (banks and insurance companies) were deleted from the sample and those companies

which have incomplete annual reports or insufficient data also were excluded from the study.

Figure1. Sample of companies by main activities (in %)



Source: Author

GMM is an efficient test and tool that can reduce and ease endogeneity problem. Endogeneity is the correlation between the parameters or variables with the error term. This test controls the endogeneity problem by employing unobservable shocks in the cross sectional component [14]. The validity of the GMM estimators depends on fulfilling following two necessary conditions. First, the Hansen/Sargan test for instruments validity and the second is the AR (2) for the second order serial correlation in the disturbances.

The Sargan test is performed to explore the over identifying restrictions. This test is measured by Chi- squared ρ value. A strong evidence of the validity of the model is achieved and the Chi square result is not significant. The Sargan test measures the validity of the instruments used in the estimation [14].

The serial correlations AR (2) determine the absence or existence of first and second order serial correlations. First and second order autocorrelation tests of residuals are employed to test the null hypothesis of no serial correlation [14].

Research model

$$ROE\ it = \lambda_0 + \lambda_1 TDR_{it} + \lambda_2 SIZE_{it} + \lambda_3 GROWTH + \acute{\varepsilon}_{it}$$

Where:

λ_0 *is the intercept of the equation*

λ *is regression coefficient*

ROE is return on equity

TDR is total debt ratio

Size is natural logarithm of total assets

Growth is Current Year Sales minus Previous Year Sales divided by Previous Year Sales

i is firm

t is period, 2013-2017

έ is error term

Results and Findings

Descriptive statistics are present on Table 1 that provides summary of measures of dependent, independent and control variables for the sample of the firms. From the analysis, we can observe that listed firms on average finance their total assets by 57% by total debt.

Table 1 Summary of Descriptive statistics

Variable	Obs	Mean	Min	Max
ROE	250	-1,29	-140.02	8.58
TDR	250	0.57	0.01	2.12
Size	250	7.64	5.37	10.38
Growth	250	0.27	-0.99	18.87

Source: Compiled by author, based on results on STATA

Table 2 is presented summary of regression model by using GMM estimator. From analysis, it is seen that TD ratio is statistically significant and negatively relates to ROE. Basically, post diagnostic test is provided and null hypothesis of Arellano-Bond Test for AR2 and Hansen test are supported. Therefore, it is concluded that total debts negatively impact on profitability of listed firms in Kazakhstan.

Table 2 GMM Regression model of ROE and Independent Variables

GMM regression Model						
Number of obs.					250	
Number of groups					50	
ROE	Coef.	Robust Std.Err.	t	p>[t]	[95% Conf.Interval]	
TDR	-3.7313	1.7111	-2.18	0.034**	-7.170002	-0.2927216
Size	0.9669	0.6606	1.46	0.150	-0.360565	2.294522
Growth	0.2813	0.1484	1.90	0.064*	-0.169739	0.5797105
_Constant	-6.6237	5.2715	-1.26	0.215	-17.21743	3.969836
Arellano-Bond Test for AR(2)	Pr>z 0.146					
Hansen test	Prob>Chi (2) 0.311					

NOTE:	*Statistically significant 10% ** Statistically significant 5%

Source: Compiled by author, based on results on STATA

Conclusion

To sum up, CS decision is vital one since profitability and company value is affected by such decision. What's more, such decision is helpful to deal with competitive and changing environment. Thus, this study is essential for companies as well as financial managers. According to our study, from panel data regression analysis results revealed that total debt level negatively affects to profitability of listed firm in Kazakhstan. More company uses debts, lower profitability is.

The sample of this study is not analyzed by sectors, thus, the outcome of the study may not represent results by sectors. Besides that, in order to have deeper analysis, other independent variables should be included. The study didn't take into account macro level such as interest rate or inflation rate.

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