Global Journal of Management and Business Research
Volume 13 Issue 2 Version 1.0 Year 2013
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Ownership Structure and Influence: A Multivariate Analysis of the Credit Risk Assessments

By Abdullah Ashuayree Alkhawaldeh
The Hashemite University, Jordan

Abstract - The intention is to examine the determinants of the CRs for Jordanian companies listed in the Amman Stock Exchange (ASE). The analyses which will be used to fulfil this goal are: First, a descriptive analysis that relates to dependent and independent variables, univariate analysis which is related to independent variable descriptive of only one variable, bivariate and correlation analysis (between two variables), parametric and non-parametric tests. Second, multivariate's analyses are undertaken, which are related to all independent variables by using many statistical tools such as untransformed ordinary least squares (U_OLS), transformed ordinary least squares (T_OLS).

Further, as to the application, the current study makes a contribution by investigating some variables relate to company ownership structure, namely, blockholders and governmental ownership, which together are the results reveal that the listings of blockholders and governmental owners of Jordanian companies in the ASE has no impact on CR.

The results in summary confirm that leverage to multivariate analysis is associated negatively at 99% level of confidence with CR. The results of the static CR multivariate models confirm that the study that size, growth opportunity (Tobin's q), and (insider, family, foreign ownership) are very strongly positively at 99 % level of confidence associated with CR. But the percentage of blockholders, institution and governmental owners of Jordanian companies in the ASE are not a critical factor in the Jordanian context, except institution is negatively at 95 % level of confidence for first model.

Keywords : *bockholders ownership, governmental ownership.*

GJMBR Classification : *JEL Code: 900101*

Strictly as per the compliance and regulations of:

Ownership Structure and Influence: A Multivariate Analysis of the Credit Risk Assessments

Abdullah Ashuayree Alkhawaldeh

Abstract - The intention is to examine the determinants of the CRs for Jordanian companies listed in the Amman Stock Exchange (ASE). The analyses which will be used to fulfil this goal are: First, a descriptive analysis that relates to dependent and independent variables, univariate analysis which is related to independent variable descriptive of only one variable, bivariate and correlation analysis (between two variables), parametric and non-parametric tests. Second, multivariate's analyses are undertaken, which are related to all independent variables by using many statistical tools such as untransformed ordinary least squares (U_OLS), transformed ordinary least squares (T_OLS).

Further, as to the application, the current study makes a contribution by investigating some variables relate to company ownership structure, namely, blockholders and governmental ownership, which together are the results reveal that the listings of blockholders and governmental owners of Jordanian companies in the ASE has no impact on CR.

The results in summary confirm that leverage to multivariate analysis is associated negatively at 99% level of confidence with CR. The results of the static CR multivariate models confirm that the study that size, growth opportunity (Tobin's q), and (insider, family, foreign ownership) are very strongly positively at 99 % level of confidence associated with CR. But the percentage of blockholders, institution and governmental owners of Jordanian companies in the ASE are not a critical factor in the Jordanian context, except institution is negatively at 95 % level of confidence for first model.

Keywords : bockholders ownership, governmental ownership.

I. Introduction

According to the current study, the author will depend on secondary data collection, as it is suitable to descriptive and explanatory. The source of this data is the researcher utilise the ASE database. The set of financial information included in the study is taken from firms' financial statements during the period 2005-2007.

Compared with other studies related to investigating ownership structure aspects and the CRs (Bhojraj and Sengupta, 2003; Skaefeet al., 2006), albeit for US firms instead, the criteria for selecting the sample of the study are the JSC (Jordan Securities Commission) database for Jordanian firms is used in order to extract data for their ownership structure attributes. The WVB internal and external scores are used as generously supplied by WVB. Fortunately, for each firm a separate numerical score is also supplied by the rating agency and so, instead of using only an ordered logistic regression model for four categories, I am also able to apply ordinary least squares, which enabled me to capture finer distinctions in the assessments. This is a substantial advantage over many of the previous studies that have been reviewed earlier, for instead of just a couple or several categories, for part of my analysis I utilise hundreds of distinctly separate numerical values for WVB's internal ratings, i.e. those that are not published, as opposed to the published ordinal WVB rating levels, which I also analyse.

II. Literature Review

Jensen and Meckling (1976, p.5) define the agency relationship inside the firm as: "A contract under which one or more person (the principal) engages another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent". The agency problem exists here because the agent does not behave perfectly in the interest of the principal. They describe the agency costs as the sum of monitoring costs by the principal, bonding costs by the agent, and the residual loss which is the reduction in the principal welfare as a result of the differences between the agent's and the principal's decisions. Jensen and Meckling (1976) discuss agency costs as the key tool in evaluating alternative designs of principal-agent relations.

Given the existence of the agency problem (Jensen and Meckling 1976), agency theory is used widely in the credit ratings' literature because of information asymmetry between principal (owners) and (agent) managers. This information asymmetry arises between ownership and management because ownership is distanced from a company's operations, yet at the same time they need managers for the company's business according to the management disciplining hypothesis.

The separation between the two parties (owners and managers) creates an agency problem. The managers seem nearly always to be trying to obtain more benefits from the company. Managers make decisions that increase their self-wealth at the owners' account. This conflict between owners and managers gives rise to agency costs, which are the costs of monitoring the management's behavior in relation to firm

Author : Department of Accounting, Faculty of Economics and Administrative Sciences, The Hashemite University, Jordan.
E-mail : alkwaldhh@yahoo.com

output, arising from contracting between these two parties (Watts, 1977).

Given small differences in categorization classes, prediction of CRs is more complex than the prediction of bankruptcy, and tries to quantify the relationship between financial and industry data and CRs. Studies of bond rating prediction models for at least 40 years have been published, attempting to model agency credit ratings using financial ratios, non financial data, and qualitative information. A wide range of different methodologies has been used, which have evolved and become more sophisticated over time. Like the bankruptcy prediction models presented in the last review, CRs predictor models are vital for assessing and monitoring risk, A number of early studies have developed a statistical model based on historic and publicly available information, which helps in predicting the credit rating and chose either a regression-based approach (Pogue and Soldofsky 1969; West 1970) or multivariate analysis (Horrigan, 1966). These studies assess credit rating applying available financial accounting information to both qualitative and quantitative methods, for example, through the use of a number of financial ratios such as net working capital, long-term debt/assets, and net income/total assets to replicate CRs. The relationship between CR and financial and industry data is widely reported in literature studies, and analyzed through categorical dependent variables through appropriate econometric techniques.

Accordingly, Horrigan's (1966) two-step analytical approach was the first and main early study in this area to estimate and determine the characteristics of the bond issuing firms in order to predict their bond rating based on their financial ratios and characteristics of the bond rating. He used ordinary least-squares (OLS) regression on 9 grades of bond ratings with various combinations of variables, from selected accounting data, to predict the ratings of newly issued bonds as well as any changes in bond rating from 1961-1964. He could explain 65% of variation in the dependent variable and found that total assets had the most significant impact on bond ratings. The result of these predictions was correct for 58% of the Moody's rating and for 52% of Standards and Poor's rating. However, since Horrigan's study there are scores of studies that have extended his initial research using more sophisticated statistical techniques, such as logistic regression model.

III. Variables' Measurements

External organisations (e.g. Moody's, Standard and Poor's or Fitch) develop a credit rating for firms so that other interested parties can use these figures to assess a particular firms credit standing. My initial sample is of listed Jordanian firms that were rated by World'Vest Base (WVB) between 2005 and 2007. WVB is selected because of its coverage of Middle Eastern firms. The data for the current study are from these sources: for CRs, the source is World 'Vest Base and for other variables, the sources are the annual reports made available on the ASE. WVB reports of CRs are assigned a credit assessment score and measure the likelihood of a company failing to honour its commitments 12 months following the calculated CRs. A firm is given a numerical score which is then divided into 20 distinct risk groups based on a firm's eight CRs score. The current study draws upon the long-term CRs according to WVB credit risk ratings for using four groups from classes represented by letters arrayed downwards from BB1 (the best rating) to D (payment is in default-bankruptcy), details of which are given in Table 3-1.

Table 3-1 : WVB Ratings and Numerical Scores

WVB Ratings and numerical scores	Comment
(BB category): when DS > 5.25 and DS <= 5.65 then BB1; when DS > 4.95 and DS <= 5.25 then BB2; when DS > 4.75 and DS <= 4.95 then BB3.	Less near-term vulnerability to default than other speculative issues, however, faces ongoing uncertainties or exposure to adverse business, financial or economic conditions which could lead to inadequate capacity to meet timely interest and/or principal payments.
(B category): when DS > 4.5 and DS <= 4.75 then B1; when DS > 4.15 and DS <= 4.5 then B2; when DS > 3.75 and DS <= 4.15 then B3.	Greater vulnerability to default, but currently has the capacity to meet interest and principal repayments. Adverse business, financial or economic conditions will likely impair the capacity or willingness to pay interest and repay principal. B1="Speculative"; B2=" Speculative at best"; B3= "very speculative".
(C category); when DS > 3.2 and DS <= 3.75 then C1; when DS > 2.5 and DS <= 3.2 then C2; when DS > 1.75 and DS <=2.5 then C3.	A current identifiable vulnerability to default and dependent upon favourable business, financial and economic conditions to meet timely payment of interest and repayment of principal. Highly speculative in the event of adverse business, financial or economic conditions, "it is not likely to have the capacity to pay interest and repay principal"=C1; "it is probable the company will not likely have the capacity to pay interest and/or repay principal" =C2; "it is very likely that the company will not have the capacity to pay interest and repay principal" =C3.
(D category): when DS <= 1.75.	Payment is in default, and is technically or actually in bankruptcy.

Source : with adopted http://www.wvb.com/news /company/view/id/200907131.

This section discusses the measurement of the independent variables that determine the CRs. The model contains nine continuous variables namely leverage, Growth opportunities, firm size, blockholders ownership, institution ownership, insiders ownership, government ownership, foreign ownership, family ownership.

The proxy firm-specific explanatory variables are included in the rating models based on a survey of prior research on the determinants of corporate credit ratings variables (e.g., Horrigan, 1966; Kaplan and Urwitz, 1979; Boardman; Lamy and Thompson, 1988; Sengupta 1998; Bhojraj and Sengupta, 2003;Doumpos and Patsiouras 2005; Skafe et al., 2006; and Demirovic and Thomas, 2007). The independent variables were determined by critically reviewing the pertinent literature as outlined in the literature review chapter. Table 3-2 summarises the operationalistion of the independent variables that determine CR.

Table 3- 2 : Measurement of independent variables

Variables	Abbreviation	Description
Leverage	LEV	Total debt divided by total assets.
Growth opportunities	TSQ	Tobin's q
Firm size	SIZE	Natural logarithm of total assets.
Blockholders	BLOCK	% of shareholders who hold 5% or more ownership.
Institution ownership	INST_OWN	% of shares held by institutional investors.
Insider's ownership	INSID_OWN	% of shares held by insiders (managers not directors).
Government ownership	GOV_OWN	% of shareholdings owned by government.
Foreign ownership	FOR_OWN	% of shareholdings owned by foreign.
Family ownership	FAML_OWN	% of shareholdings family owned.

IV. Data Analysis and Statistical Techniques

a) Data Analysis

Determining the nature of the data to be analyzed: the nature of the data either is quantitative or qualitative. Since most of the collected data are numerical, the study will utilize quantitative data analysis in investigating CR in Jordanian listed companies and in testing the relationship between credit rating and corporate characteristics, such as, ownership structure.

Quantifiable data, whose values are measured numerically, this type of data is classified into two sub-types: interval and ratio or continuous and discrete data. If the relative differences between the two data values can be calculated then the data are called ratio data, otherwise they are called interval data. On the other hand, if the data can take any value from the measurement scale they are called continuous data; otherwise, they are called discrete data, when they take only one of a finite number of values from that scale (Saunders, et al., 2007).

b) Statistical Techniques

Many techniques will be used in the current study. Bivariate analysis is used for each independent variable by using parametric and non parametric tests. According to Cooper and Schindler (2008) and Saunders et al., (2007), parametric tests have some assumptions, which the researcher should be aware of, and include: 'the Pearson product moment correlation coefficient (r), to measure the association between all the dependent variables and the continuous independent variables; the t-test and Levene test, which determine the association between all the dependent variables and any dichotomous independent variables'. The non-parametric test will include: the Spearman's rank correlation which will be performed for the same purpose of Pearson correlation on parametric test. For continuous variables (i.e. firm size, leverage, growth opportunity (Tobin's q), block ownership, institution, insiders, government, family ownership, foreign ownership, correlation coefficients is used. Pearson product-moment correlation (a parametric test) is used when the normality assumption was satisfied, whereas Spearman rank correlation (non-parametric tests) is performed for continuous independent variables, if the assumption of normality is violated.

V. Descriptive Analysis

The sample of this study includes all Jordanian listed companies which have CRs from the WVB agency over the period 2005-2007. According to the population of this study, the percentage of Jordanian firms which have a WVB_CR 85% for 2005, 82%for 2006 and 79% for 2007. The CRs of this agency are spread from a minimum of category D to a maximum of category BB. The percentage of Jordanian firms with CRs scores from BB3 to BB is 9.45%, whilst for firms with CRs from B3 to B it is 10.4%, on the other hand 56.45% have CRs from C3 to C but 23.75% have a D credit rating. The mean for all Jordanian firm CRs is C2. It can be observed that a significant minority has a very low rating.

a) Univariate Descriptive Statistics

Table 5-2 shows summary statistics of the independent continuous variables in the study. The first variable is the size (total assets), that averages (median) total assets 42,802,317 JD (16,399,646 JD). Total assets for the sample range from 473,221 to 42,802317 JD with a high standard deviation of 8.361. Large firms gain from economies of scale and are stronger in facing default risk, enjoy high CRs, have lower risk, are likely to have a good reputation, have more stable future cash flows and face fewer hazards of being liquidated. The average (median) leverage is 31.71% (29.00). Profitable firms are stronger in facing financial distress and continuing in the future than unprofitable firms, and finally the average (median) Tobin's q is 1.60 (1.41). Tobin's q for the sample ranges from 0.039 to 1.61 with a high standard deviation of 0.751.

There is a substantial mean proportion of blockholders at 57%. The institutional mean shareholding is sizeable at 33%. Indeed agency theory states that the higher the proportion of large institutional investors or greater concentrated ownership, the greater the monitoring role of these investors, and therefore the greater the chance for better financial performance. By contrast, mean shareholding by insiders (officers and directors) is only 5%. There is some indication of family ownership with a mean of 13%, as well as foreign ownership at 10%, and a tiny governmental ownership at 2%.

Table 5-1 : Summary statistics of independent continuous variables

Variables	Mean	S.D.	Max.	Min.	Median.
LEV	.32	.23	1.17	.002	29.00
SIZE	42802317	8.36	664791204	473221	16399646
TSQ	1.61	.75	5.83	.039	1.41
BLOCK_OWN	.57	.227	1.000	000	.58
INST_OWN	.33	.271	1.000	000	.26
INSID_OWN	.05	.108	1.000	000	.004
GOV_OWN	.02	.076	.999	000	.000
FAML_OWN	.13	.168	.79	000	.05
FOREN_OWN	.10	.185	.99	000	.000

Note: LEV = leverage, SIZE = company size, TSQ= Tobin's q, BLOCK_OWN = blockholder ownership, INST_OWN = institutional Ownership, INSID_OWN = insider ownership, GOV_OWN = governmental ownership, FAMILY_OWN = family ownership, FOR_OWN = foreign ownership.

Table 5-2 : Bivariate analysis between CR and continuous variables

Variables	Pearson	Spearman
LEV	.031	.049
SIZE	.438***	.702***
TSQ	.119***	.137***
BLOCK_OWN	.025	.016
INST_OWN	.134***	.165***
INSID_OWN	-.072**	-.010
GOV_OWN	.001	.050
FAML_OWN	.018	.060**
FOREN_OWN	.161***	.252***

Note: *** significant at 1% and ** significant at 5%.

Table 5-2 set out the relationship between the CR score and the pre-specified independent variables for testing Pearson product moment correlation and Spearman's rank order correlation coefficients which are significantly correlated with all variables.

According to the Pearson product moment and spearman rank correlation coefficients, firm size (total assets) and growth opportunity (Tobin's q) are each significantly related to the CR score at 1% level of significance. So, larger firms with better growth opportunities, which may be considered to be an indicator for the firm's creditworthiness, reflect better CRs, which should encourage investors to lend to these firms with confidence in their stability and future growth opportunities.

Also the table above shows the ownership structure variables, including institution and foreign ownership, which are significantly correlated with CR at the 1% significance level for both Pearson's and Spearman's correlation coefficients. Insider ownership is significant at the 5% level of significance (for the Pearson coefficient) and family ownership at the 5% level of significance (for the Spearman coefficient).

VI. Multivariate Analysis

a) The Regression Model

As has been mentioned earlier, the availability of continuous numerical credit scores obtained directly from WVB enables more rigorous statistical testing to be undertaken.

The ordinary least squares (OLS) model of the current study can be illustrated as follow:

$$Y_i = \alpha + \beta_1 X_{1i} + \beta_2 X_{2i} + \ldots + \beta_9 X_{9i} + \varepsilon_i$$

Where:

Y: credit rating (numerical score).

i = number of company.

α = the intercept.

β 1… β 21 = the coefficients of the independent variables.

X1...X21 = the explanatory variables.

ε = the error term.

i. *First Model: Ordinary Least Squares (OLS) Regression*

The first model was run with un-transformed data. The results of this model are explained in the following tables:

Table 6-1 : Untransformed Ordinary Least Squares (U-OLS) model

Variables	Coefficient	t-statistic
LEV	-1.304	-5.310***
SIZE	2.133	17.194***
TSQ	0.207	3.00**
BLOCK_OWN	0.450	-1.434
INST_OWN	-0.604	-2.089**
INSID_OWN	0.142	0.281
GOV_OWN	-1.028	1.45
FAML_OWN	0.802	2.223**
FOREN_OWN	0.627	2.062**
Constant	-13.00	-14.2***
F-Ratio	28.22	
Adjusted R-square	49.8	

Note: *** significant at 1%, ** significant at 5%, * significant at 10%.

ii. *Second Model*

As explained earlier, non-linearity between independent and dependent variables can cause too much positive or negative clustering of residuals. By transforming some variables, typically through log transforms, this potential problem can be much reduced. This model incorporates transformed data for variables-measurement. The results of this model are explained in the following tables:

Table 6-2 : Transformed Ordinary Least Squares (T-OLS) model

Variables	Coefficient	t –statistic
LEV	-1.766	-6.187***
SIZE	2.991	20.963***
TSQ	0.307	3.788***
BLOCK_OWN	-0.116	-0.379
INST_OWN	0.083	1.363
INSID_OWN	2.534	4.224***
GOV_OWN	-0.224	-1.256
FAML_OWN	1.132	2.961***
FOREN_OWN	1.206	3.368***
Constant	-21.00	-22.00***
F-Ratio	41.78	
Adjusted R-square	59.9	

Note: *** significant at 1%, ** significant at 5%, * significant at 10%.

As indicated from Tables 6.1 and 6.2, the adjusted R-squares were around 50% for untransformed data, which improved to around 60% for the transformed data, comparable with previous studies. That (Horrigan 1966; Thomas et al., 1967; and Skaife et al., 2006) had R-squares of 48%, 56%, 60% adjusted R-square of the model of the current study is acceptable.

According to the continues variable, just leverage have a significant relationship at a level of 1% significance, respectively, with CR, respectively. Leverage is important determinants of WVB credit risk assessment in descending order.

Firm size and growth opportunities variables in both models were found to be significant, the findings providing evidence for the influence of these variables on CR, and represent firm size and growth opportunities, which are associated and positively significant at the level 1% of in both models, except at 5% level of significance for growth opportunities in the first model with CR. This implies that firm size and growth opportunities have a role to play in the determination of WVB credit risk assessments.

As to the ownership structure category, four out of six variables were found to have an impact on the CR in one or both models. For the un-transformed first model, institution, family and foreign ownerships bear a significant relationship with CR at the 5% level of significance, while insider, family, and foreign ownership of the transformed (second) model bear a significance relationship with CR at the 1% level of significance.

VII. Discussion of the Ols Results

As in the previous section, the untransformed and transformed models are used for this analysis. The focus here is on the significance of the variables that influence the CR, discussed according to the different groups of explanatory variables.

Three control variables have been introduced in the current study to examine their impact on CR. As indicated in above section, three variables have been found to have a strong relationship with CR. The reason for finding a potentially significant association between any independent and dependent variables in the multivariate analysis which not appear in the bivariate analysis is due to the possible impact of the combination of other variables in the multivariate analysis (OLS) on the significance of this variable. On the other hand, when a significant association appears in the bivariate analysis which is not in the multivariate analysis, this may be due to the multicollinearity (even if minor) between the independent variables which explain the lack of significance of this variable (Hosain et al., 1994).

Where there are differences between the findings of bivariate and multivariate analyses regarding some variables, the emphasis will be given to the multivariate analysis for the determinants of CR in the Jordanian context by examining groups of variables simultaneously.

Multivariate analyses have supported the influence of leverage on the Jordanian listed companies' CR being significantly negatively related to CR at the 99 per cent level of confidence and as expected, there is a clear inverse relationship between financial risk, as evidenced by the relative debt level, and the firm's CR. Based on the above discussion overall, it can be noticed that the control category of selected variables nevertheless is associated with CR.

It can be seen that all the control variables have a significant impact on CR at the presented levels and mainly at the 99% level of confidence in both bivariate and multivariate analyses.

The results of the bivariate and multivariate analyses reveal a positive relationship between the firm's size and CR. All these results are statistically significant at the 99% level of confidence. The results show that larger the size of the total assets of Jordanian listed companies is an important criterion in determining a higher CR. This supports the signalling theory, which assumes that large firms are stronger when facing bankruptcy and financial distress through the creation of future cash flows to the firm. Thus, there is an incentive for larger companies to attain higher CRs since this should reduce the cost of capital on account of the lower perceived credit risk there. In addition, for most of these large companies the benefits of high CRs should be reflected in the provision of provide future cash flows to all stakeholders, including bondholders.

Tobin's q (TSQ) is a proxy used to measure the growth opportunities. The results of bivariate and multivariate analyses are highly significant, namely, at the 99% level of confidence. Concerning this growth potential variable, both bivariate and multivariate analyses indicate that Jordanian listed companies with higher growth potential generally have higher CRs as reflected in the positive relationship between the firm's CR and growth opportunities. This positive and significant effect gives support to the argument of signalling theory, which is undervalued on plainly unrecorded. Companies with high growth may signal that to their investors to illustrate their high expected performance which should result in their higher future profits, consequently attracting a higher CR. Also, firms with greater growth opportunities might have lower leverage ratios enabling firms to reduce expensive default risk and reduce the risk of expropriation of wealth to shareholders from bondholders. Indeed, the correlation between growth opportunities and leverage is negative (-.074) although the multicollinearity is not an issue for this data-set.

Six different aspects structures of ownership structure are examined in the current study to investigate their impact on CR in the Jordanian context. As indicated in analysis result, multivariate and bivariate analyses report that several ownership structure variables have a strong influence on the Jordanian listed CR. Yet, foreign ownership is the only ownership structure variable that has identical results from both bivariate and multivariate analyses. The statistic results reveal that there is a positive relationship between the foreign ownership of the Jordanian listed companies and CR at a confidence level of 99 %. Bivariate analysis finds this association at level significance of 1%, while untransformed and log transformation models find it at a significance level of 5%, and 1% respectively. This reveals that the existence of foreign ownership of Jordanian listed companies has a strong influence on the level of CR.

Supportive of legitimacy theory, the influence of foreign ownership in Jordanian companies may push firms to seek ways to enhance their CRs as an information tool by providing stakeholders with greater security in the firm's ability to cover future debt through obligations future cash flows to legitimate themselves above rival companies.

The findings of the current study are supported by Aydin et al (2007), who find a significant association between foreign ownership and firm performance. Thus, this role should be more prominent through greater foreign ownership in the Jordanian listed companies.

Pertaining to institutional ownership both bivariate and multivariate regression analyses demonstrate on association with CR in the Jordanian context but at different levels of significance; bivariate showing a positive significance at the 99% level of confidence, and a negative significance at the 95% level of confidence for the multivariate analysis, namely, for U_OLS. Institutional ownership can be a threat to creditor's interests as this class of shareholders can expend enormous energy on blocking debt holder benefits. The multivariate (U_OLS) analysis suggests that a lower institutional ownership is beneficial from a creditor's point of view; so there may be an optimum level of institutional ownership which balances the costs and benefits associated with more shareholder control.

Only multivariate analysis reports significant positive relationship between family ownership and CR of the Jordanian listed companies at 95% and 99% confidence levels for each model, respectively. Stewardship theory supports this result, whereby management and family ownership should lead to corporate success (Davis, Schoorman and Donaldson, 1997), as family owners have inside knowledge about their business, which gives them an edge in running their business profitably, as Westhead (2003) explains, they are part of the management and have a vested interest in the company's success, they will act as

stewards to ensure that there is continued success, and will work to solve organizational problems and take on tasks to fulfil business goals.

Thus, higher family ownership firms have better CRs reflecting their firms' ability to create more than sufficient future cash flows to cover debt interest and capital repayments. These findings demonstrate that for Jordanian listed companies there is a key role played by family owners in enhancing the creditworthiness of companies. Also, legitimacy and stakeholder theories can explain this positive relationship. Family ownership may help attain higher CRs to avoid both litigation and reputation costs resulting from lower creditworthiness. Further, these companies are in the public eye and therefore, should enhance their communication with various stakeholders and legitimize themselves by attaining higher CRs. Finally, family ownership may be enforced by different stakeholders to provide a higher CR as evidence of the ability of these firms to cover capital repayments through the generation of future cash flows to mitigate any bad effect otherwise resulting from a reduced need for family owners to press for greater accounting disclosure because of their inside knowledge.

Both bivariate and multivariate regression analyses show disagreement in the results of insider ownership by managers and other corporate officers. Only multivariate analysis reports a strong positive relationship between insider ownership and CR of the Jordanian listed companies at a significant level of 99% confidence. The multivariate findings demonstrate that Jordanian listed companies with a higher proportion of insider ownership can attain a higher CR. On the other hand, bivariate analyses show a negative relationship between insider ownership and CR at the 95% confidence level. These empirical findings may be attributed to both signalling and stewardship theories. A higher proportion of insider ownership of Jordanian companies may attract higher CRs to signal their good performance and secure creditworthiness, which anticipates higher liquidity for these companies and strong future cash flows. According to stewardship theory, higher managerial ownership can help prevent the misuse of shareholders' wealth, due to a convergence in interests between them, supporting a higher CR.

No empirical evidence, based on both bivariate and multivariate analyses, in the current study has been found to support the relationship between CR and either the Jordanian listed company's blockholders or governmental ownership. This means that Jordanian listed companies with a lower proportion of governmental ownership do not necessarily decrease their level of CR. Skaife et al (2006) hypothesized neither a positive or negative effect for blockholders although they reported a negative effect for their sample of US firms. In case of a high proportion of governmental ownership, governmental owners have the authority to access the required information without the need of CR reports. Therefore, Jordanian listed companies with a higher proportion of governmental ownership do not need CRs, as the required information is available internally, and vice versa. Therefore, there will be no conflict between the shareholders and management, which can reduce the agency problem in this case, and hence reduce the level of credit ratings.

VIII. Conclusion

According to the Jordanian government commitment to the WTO, the Jordanian government has commenced a process of comprehensive economic reform. Consequently, Jordanian listed companies are required to attract more investors through achieve higher score of CR.

This paper investigated the relationship between blockholders and governmental owner variables and credit ratings; this relationship has been analyses by nine variables namely, (LEV, SIZE, and Tobin's q, BLOCK-OWN, INST-OWN, INSID-OWN, GOV-OWN, FAML-OWN and FOR-OWN) as independent variable.

The results in summary confirm that leverage to both models and governmental ownership to multivariate analysis are associated negatively at 99% level of confidence with CR, size, growth opportunity (Tobin's q), foreign ownership, family ownership ad insider ownership are very strongly positively at 99 % level of confidence associated with CR to second model, but there are strongly positively at 95 percentage level of confidence associated with CR to first model except firm size is positively at 99 % to both models, but inside and governmental ownership are not a critical % of confidence for first model.

The results of the static CR multivariate models confirm that the study that institutional ownership is negatively strongly related to CR at 95 % level of confidence, but at 90 % level of confidence for first model, but the percentage of institution ownership is not a critical factor in the Jordanian context.

To summarise, the results reveal that the listings of blockholders and governmental owners of Jordanian companies in the ASE has no impact on CR.

References Références Referencias

1. Ashbaugh- Skaife, H., D. W. Collins and R. LaFond. (2006) "The Effects of Corporate Governance on Firms' Credit Ratings."*Journal of Accounting and Economics* 42: pp. 203-243.
2. Aydin et al. (2007) Foreign Ownership and Firm Performance: Evidence from Turkey. International Research Journal of Finance and Economics.ISSN pp. 1450-2887 Issue 11. http://www.eurojounals.com /finance.htm.

3. Bhojraj, S., Sengupta, P. (2003) Effect of corporate governance on bond ratings and yields: the role of institutional investors and the outside directors. *The Journal of Business* 76, pp. 455–475.
4. Boardman, C., McEnally, R. (1981) Factors affecting seasoned corporate bond prices. *Journal of Financial and Quantitative Analysis,* 16, pp. 207–216.
5. *Cooper, D. R. & Schindler, P. S. (2008) Business Research Methods, Eighth Edition, McGraw-Hill Irwin, London, UK.*
6. *Davidson, S., C. P. Stickney, et al. (1979) Financial Accounting: An Introduction to Concepts, Methods, and Uses. 2nd ed. Illinois, The Dryden Press.*
7. Demirovic, A. and Thomas, d. (2007) The Relevance of Accounting Data in the Measurement of Credit Risk. *The European Journal of Financial* 13(3), pp.253-268.
8. Doumpos, M., and F. Pasiouras. (2005) 'Developing and Testing Models for Replicating Credit Ratings: A Multicriteria Approach', *Computational Economics* Vol. 25(4), pp. 327-34 1.
9. Horrigan, J. (1966) "The Determination of Long-Term Credit Standing with Financial International Ratios. *Journal of Accounting Research* 4: 44-62.
10. Jensen, M. C. and H., M. W. (1976) Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, pp. 305-360.
11. Kaplan, R.S. and Urwitz, G. (1979) Statistical Models of Bond Ratings: A Methodological Inquiry. *Journal of Business*, 52, (2), pp. 231-261.
12. Pogue, T.F. and Soldofsky, R.M. (1969) "What's in a Bond Rating?," Journal of Quantitative Analysis, vol. 4, pp. 201-28.
13. Saunders, M., Lewis, P. and Thornhill, A. (2007) Research Methods for Business Students, Harlow, Financial Times Prentice Hall scaling Approach", European Journal of Finance, Vol. 7, No. 2.
14. Sengupta, P. (1998) corporate disclosure quality and the cost of debt. The Accounting Review, 63, pp. 459-474.
15. Thomsen Steen. and Torben Pedersen. (2000) "Ownership Structure and Economic Performance in the Largest European Companies", *Strategic Management Journal*, 21, pp. 689-705.
16. Thomsen, S. and Pedersen, T. (1997) European patterns of corporate ownership. *Journal of International Business Studies*, 28: pp. 759-778.
17. Watts, R. L. (1977) corporate financial statements, a product of the market and political process. *Australian journal of management*, 2, pp. 53-77.
18. West head, P. (2003) 'Company Performance and Objectives reported by First and Multi-generation Family Companies', Journal of Small Business and Enterprise Development 10 (1), pp. 93 -105.
19. West, Richard R. (1970) "An Alternative Approach Predicting Corporate Bond Rating. Journal of Accounting Research, Spring70, Vol. 8 Issue 1, pp. 118-125, 8p, 3 Charts.