

CORPORATE GOVERNANCE PRACTICES AND CAPITAL STRUCTURE: A STUDY WITH SPECIAL REFERENCE TO BOARD SIZE, BOARD GENDER, OUTSIDE DIRECTOR AND CEO DUALITY

Monther Soliman Jaradat

Doctoral student, School of Accounting and Finance,
Zhongnan University of Economics and Law, Wuhan, China
montherj1974@hotmail.com

Abstract

This study aims to investigate whether corporate governance variables like: Board size, Board gender, outside director and CEO duality affect the capital structure in Jordanian firms. Study sample includes all listed firms except the financial sector during the period 2009-2013. The data used were collected from the yearly annual reports for all firms included in the audit sample. The final sample includes 645 firm-year observation for 129 firms over the study period. Moreover, the leverage is used to measure the capital structure, the explanatory variable include: Board size, Board gender, outside director and CEO duality. Control variable consists: firm size, profitability, tangibility and returns on assets. Furthermore, the book values are used to measure all study variables because the data collected from the firm's annual reports. Thus, multiple regression analysis is used to test the association between corporate governance and capital structure. The result approves that board size, board diversity and outside director are positively related to the leverage. While, CEO duality has no significant relationship with leverage. The control variable like: Managerial ownership, Profitability and return on Assets are negatively and significantly related to leverage, while, firm size is positively related to the leverage.

Keywords: corporate governance, capital structure, leverage, OLS, Amman stock exchange, Jordan

INTRODUCTION

Corporate governance in Jordan was implemented in 2009, Jordanian corporate governance classified into six scopes: a capital market, government oversight, a legislative framework and disclosure and accounting standards, transparency in privatisation, preservation of property rights, effective supervision of the board of directors and protection of minority rights (Khoury, 2003). All these six scopes are widely inserted in Jordanian company law for the year 1997.

Modigliani and Miller (1958) are the first researchers that generate the capital structure theory. Also, many researchers shared their theory. The capital structure is vital for firm's financial welfare. Different theories exist to explain the capital structure decisions. One of the most famous theories is agency theory. Agency conflict affects capital structure not only because of the conflicts of interest between debt holders and shareholders, but also the conflict between managers, employees, customers, suppliers, also the conflict between minor and major shareholders. This study investigates the associations among corporate governance practices and capital structure, this study relies on agency theory as a clarification for the capital structure decisions, thus, the firms with high level of corporate governance should avoid agency conflicts more than other firms with low level of corporate governance.

Like corporate governance, Leverage has been used to reduce the agency costs also. Agency costs can be reduced by leverage through several ways. First, increase the manager's ownership in the firm (Jensen & Meckling, 1976). By, rise the use of debt financing instead of using equity capital, thus, raising the management, ownership percentage. Second, increase the bankruptcy probability, by using debt more than equity capital, this risk encourages managers to reduce their privilege consumption and raise their efficiency (Grossman & Hart, 1982). Finally, commitment of interest payments caused using of debt helps resolve the free cash flow problem (Jensen, 1986).

Agency theory explains that managers adopt sub-optimal leverage which not maximize shareholder wealth, to what extent the managers can apply sub-optimal leverage should rely on the strength of corporate governance to reduce the agency problems. This study investigates the association among corporate governance practices (Board size, Board gender, outside director and CEO duality) and capital structure measuring it by leverage.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Board size and capital structure

Some of empirical studies show the relationship between corporate governance attributes that affect the financing decision of the firms like board size, outside directors, duality and managerial ownership (Al-Najjar and Hussainey, 2011; Hussainey and Aljifri, 2012; Nadeem and

Zongjun,2011; Panagiotis,2012; Kyereboah-Coleman and Biekpe, 2006).Any success firm needs an effective board that planning and drawing the major strategy for the firm and become as a guideline for all the forum members that finally maximize the shareholders return, many researchers found a negative relationship between board size and leverage (Hamid, Mahdi , Abolfaz and Ali Reza,2011; Berger et al.,1997; Wiwattanakantang ,1999; Brennan, 2006; Boonea et al., 2007. Other researchers found a positive relationship between board size and leverage (Wen et al. 2002) while (Abor 2007; Bokpin and Arko 2009) found a positive relationship between board size and capital structure Kumar (2005) found that's no linear relationship between capital structure and Corporate Governance. This discussion leads to the following hypothesis:

H1: there is a positive association between board size and firm capital structure.

Board Gender and capital structure

According to resources dependent theory, directories with diverse experience have the power to attain important resources (Pfeffer, 1972). Furthermore, agency theory reported that the firms acquire more advantages when its own diversity board (Kosnik, 1990). Moreover, the firms have optimal solutions and decision for its strategic decisions when its own diversity board (Eisenhardt and Bourgeois, 1988). Useem (1993) argue that diversity board lead to develop the firm's decision making. Carter (2003) discovers a positive relationship between the board's diversity and performance, he discovers that existence of board diversity lead to the development of understanding the market and improve the method of solving the problems. Rovers (2013) that the firms work effectively when the board of directors contain woman, while the firms without a woman on their board don't work well. Nashii (2007) found a positive relationship among firm's performance and diversity. Adams and Ferreira (2009) discover a positive relationship between diversity and firm's performance. Relying on the previous discussion the following hypothesis are developed:

H2: there is a positive association between board gender and capital structure.

Outside director and Cost of Capital

Agency theory explains that existence of independent outside directors refers to the directors that don't have any deal or relation with the firm, therefore, their control effort contributes to decrease the agency conflict among firm's directories and shareholders. Researchers found a positive relationship between leverage and outside directors (Abor, 2007). Bokpin and Arko (2009) found a positive relationship between board independence and the debt ratio, Kyereboah-Coleman and Biekpe (2006) found a positive relationship between long-term

leverage and total leverage with the proportion of outside directors, but this relationship is statistically insignificant. While, Hamid, Mahdi, Abolfaz and Ali Reza (2011) found that's no significant relationship between 'proportion of outside directors and capital structure. Some researchers found a negative relationship between the proportion of outside directors and the cost of debt Anderson, Mansi and Reeb (2004). Wen et al. (2002) found a negative relationship between outside directors and capital-structure. According to the previous discussion the following hypothesis exist:

H3: there is a positive association between outside directors and capital structure.

CEO duality and capital structure

Usually the CEO has the responsibilities to manage the firm's activity, while the chairman has responsible to deal with the affairs of the board. When a firms CEO also works as chairman on the board of directors then CEO duality appears. Moreover, duality helps the leader to respond faster to external events. Fosberg (2004) found a negative and relationship between CEO duality and the amount of corporate debt. But on the other hand, some researchers found a positive relationship between CEO duality and capital structure. (Nazir et al., 2012); (Milad, Aliakbar, Zohreh, Esmail; 2013); (Gill et al., 2012), while Abor (2007) found a positive relationship between CEO duality and debt ratio. But (Sheikh and Wang, 2012); (Bokpin and Arko, 2009); (Ahmadpour, Jafari and Golmohammadi, 2012) found that no significant relationship between CEO duality with capital structure.

Berger et al. (1997) found a positive relationship between leverage and CEO's direct stock ownership at the same time Mehran (1992) found a positive relationship between managerial ownership and leverage, Bokpin and Arko (2009) found a positive relationship between inside ownership and capital structure. Alternatively, Fosberg found a negative relationship between capital structure and shares held by the CEO, Bathala et al. (1994) found a negative relationship between debt ratio and managerial ownership while Wiwattanakantang (1999) found no significant relationship between CEO's director's ownership with debt-equity choice. According to the previous discussion the following hypothesis exist:

H4: There is a positive association between CEO duality and capital structure.

METHODOLOGY

Sample and Data Collection

This study examines the impact of corporate governance that should be affect the capital structure of all firms listed on an Amman stock exchange except the financial sector during the period 2009-2013. The data used were collected from the yearly annual reports of all firms

included in the study sample. Furthermore, the annual report that was downloaded from Amman stock exchange for all the firms include the financial and nonfinancial reports like: income statement, balance sheet, cash flow, statement of changes in owners' equity and the auditors' report, addition, it includes a corporate governance report. The researcher includes all 140 firms in the sample except the financial firms, because financial firms has its own situation. Nevertheless, the researcher excludes all the observations, 11 firms that did not have a complete record of data related to the sample. The final sample of 645 firm-year observation for 129 firms over the study period.

Variables

This study uses the leverage to measure the dependent variables (capital structure). The explanatory variables include: (Board size, Board gender, outside director and CEO duality). Moreover, the researcher includes some control variables to the model that may affect the dependent variable (capital structure). Control variable consists: (firm size, profitability, tangibility and returns on assets). The definition of all variables used in this study is listed in table 1. Moreover, definition of study variables is widely used in previous studies in order to compare easier with previous studies. In addition, the book values are used to measure all study variables because the data collected from the firm's annual reports.

Table 1: Definition and Measurement of Variables

Variable	Definition	Measurement
LEV	Leverage ratio	Total liabilities divided by total assets
B.SIZE	Board Size	the number of board members
GEND	Board gender	Proportion of female directors on the board
OUT	Outside directors	the number of outside directors divided by total number of directors
DUAL	CEO duality	if the CEO is also chairman of the board, 0 otherwise 1
SIZE	Size	Natural logarithm of total assets
MOWN	Managerial ownership	Ratio of shares held by CEOs, directors, and their immediate family members to total outstanding shares
PROF	Profitability	Ratio net profit after taxes to total assets
ROA	return on Assets	income before tax and interest to total Assets

Model Specification

To examine the association among dependent variable (capital structure) and the independent variables (corporate governance variables), we use the linear multiple regression analysis. Regression is a suitable tool to analysis this type of research. The following model is estimated

$$LEV_{i,t} = \alpha + B1B.SIZE_{i,t} + B2GEND + B3OUT_{i,t} + B4DUAL_{i,t} + B5SIZE_{i,t} + B6MOWN + B7PROF_{i,t} + B8ROA_{i,t} + \epsilon_{i,t}$$

EMPIRICAL RESULTS AND DISCUSSION

Descriptive Statistics

Table 2 explain a summary of the descriptive analysis of the study variables: dependent and explanatory variables. The mean, standard deviation of the leverage of all the study firms is 31.915 (26.103). This result explains that the total debt represents more than one third of the study firm's capital. Moreover, almost 32% of total assets is financed by debt capital. The mean, standard deviation for the board size is 8.584 (2.123). While, the mean, standard deviation for the gender is 0.219 (0.056). The proportion of outside directors is 23% with standard deviation 0.257. Moreover, more than 50% of the study firms have CEO duality. The mean, standard deviation for the firm size is 41.205 (1.615). Also the mean, standard deviation for managerial ownership is 0.258 (0.221). In addition, the mean, standard deviation for the profitability is 0.0561 (0.126). This indicates that the Jordanian listed firms have comparatively lack profitability in connection to ROA.

Table 2: Descriptive Statistics of Variables

Variables	Observation	Mean	Minimum	Maximum	Std. Deviation
LEV	645	31.915	0.202	227.112	26.103
B-SIZE	645	8.584	4.000	14.000	2.123
GEND	645	0.219	0.000	0.263	0.056
OUT	645	0.230	0.000	0.971	0.257
DUAL	645	0.531	0,000	1.0	0.362
SIZE	645	41.205	19.335	50.552	1.615
MOWN	645	0.258	5.221	0.785	0.221
PROF	645	0.0561	-0.210	0.716	0.126
ROA	645	0.113	- 0.108	0.513	0.202

Multivariate Analysis

Table 3 shows the results of the OLS regression model used in this study. The use of Multivariate hypothesis test is based on the assumption of no significant multicollinearity between the explanatory variables. The (VIFs) are used to examine of mulicolinearity existence for all explanatory variables, table 3 shows that the maximum VIF is 1.521 for board size which is lower than 10. However, the values of the tolerance factor closer to zero and variance inflation factor greater than 10 will show the presence of multi-collinearity in the model used in this study (Belsely, 1991). Therefore, the result supports the lack of presence of Multicollinearity in the research model.

This study examines the relationship between corporate governance variables and dependent variable (capital structure) using OLS regression, table 3 shows the results of the

OLS regression to test all the study hypothesis. Regression test provides enough confidence to explain the model power, we note that the adjusted R^2 is 0.751 which indicate to a good model used in this study. The first hypothesis states that is a positive association between board size and firm capital structure. Table 3 indicates that the board size coefficient is a positive and statistically significant at 1%, which shows a significant positive association between board size and leverage. The regression analysis supports the first hypothesis. The second hypothesis stated that there is a positive relationship among board gender and capital structure. Table 3 appear a positive coefficient of board gender with significant at the 5% level, the regression analysis also supports the second hypothesis. The third hypothesis stated that there is a positive association between outside directors and capital structure. Table 3 indicates that outside directors have a positive significant, but at 10% level, regression analysis supports the third hypothesis. Finally, the fourth hypothesis stated that there is a positive association between CEO duality and capital structure. Table 3 shows that CEO duality is not statistically significant, the regression shows that CEO duality has no significant effect on dependent variable (capital structure). Furthermore, regression don't support the fourth hypothesis. The control variables: Managerial ownership, Profitability and return on Assets are negatively and significantly related to leverage at the (10%, 5%, 10%) level respectively. While firm size is positively significant at 1% level.

Table 3: Multiple Regression Results

Explanatory Variable	Obs.	Coefficients	p-value	Collinearity Statistics VIF
Intercept	645	0.858	0.000	-
B-SIZE	645	0.021	0.006***	1.521
Gender	645	0.012	0.025**	1.082
OUT	645	0.065	0.073*	1.116
DUAL	645	-0.019	0.677	1.168
SIZE	645	0.677	0.000***	1.231
MOWN	645	-0.038	0.083*	1.072
PROF	645	-0.567	0.066**	1.213
ROA	645	-0.285	0.064*	1.022

Table 4: Model Summary

Model	R^2	Adjusted R2	F-statistic	Sig.F	Std. Error of the Estimate
1	0.764	0.751	14.43	0.000	1.039

***indicates significance at 1% level; ** indicates significance at 5% level and * indicates significance at 10% level. The reported p-values are all tow-tailed. All variables are defined in previous sections

CONCLUSIONS AND RECOMMENDATIONS

New theories of capital structure support that corporate governance components is one of the strongest factors that affect the capital structure decisions Modigliani and Miller (1958). Moreover, this study developed four hypothesis to examine the association between corporate governance and capital structure. The researcher used debt ratio to measure the dependent variable (capital structure). Consequently, this study developed four hypothesis in order to examine the association between corporate governance elements and capital structure. This study uses Board Size, Board gender, outside directors and CEO duality as independent variables.

The results of the first hypothesis that has been tested showed a positive association between board size and leverage. The large board members can improve the firms by using external funds. The positive association between board size and capital structure is similar with Pfeffer and Salancick, (1978), and disagree with Berger (1997). The second hypothesis shows a positive association between board gender and leverage, this result agree with a resource dependence theory which indicate that the existence of diversity board give the firms advantages to acquisition external fund Pfeffer, (1972). The third hypothesis shows a positive association between outside directors and leverage. This result means that more independent boards can control management actions, and force it to choose policies that maximize shareholder wealth. Furthermore, existence of independence board help firms to obtain more external funds, and gain tax shield benefit, this positive association between outside directors and leverage is supported by previous Pfeffer (1972) and Abor (2007). Finally, studies, the fourth hypothesis show that the CEO duality has no significant relationship with leverage, Fosber, (2004) found a negative, but insignificant association between CEO duality and leverage, while, Abor and Biekpe, (2007) discover a positive but an insignificant association between CEO duality and leverage.

LIMITATIONS & SCOPE FOR FURTHER RESEARCH

This study bounded by two main limitations. Firstly, the sample includes all Jordanians listed firms except financial firms and banks, the limitation exists because banks have corporate governance separate from other firms. Secondly, this study uses only four variables of corporate governance, there are many variables could be tested. Future studies should include the investigation of board variables and capital structure in the financial sectors and banks, also the study of managerial ownership and capital structure. Moreover, future studies could examine the relationship between managerial ownership and capital structure in the financial sector and banks.

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