

## Corporate governance and financing decisions by Saudi companies

Ali AlNodel<sup>1</sup>, Khaled Hussainey<sup>2</sup>

(1. College of Economy and Administration, Qassim University, Burydah 51412, Al-Qassim, Saudi Arabia;

2. Accounting & Finance Division, Stirling Management School, Stirling University, Stirling FK9 4LA, United Kingdom)

**Abstract:** This paper aims to contribute to the corporate governance literature in emerging economies by examining the effect of some corporate governance mechanisms on financing decisions in Saudi Arabian listed companies. A multiple regression model is used to examine the association between financing decisions and corporate governance mechanisms for a sample of 37 listed Saudi companies. In particular, we examine the effect of board size, ownership concentration and corporate governance reporting on the debt-to-equity ratio. Corporate governance reporting is measured by the content analysis approach. After controlling for companies' profitability and their growth opportunities, we found that both board size and ownership concentration are positively associated with debt-to-equity ratio. We limit our analysis to a small sample of firms that use the internet to communicate corporate governance information between October 2005 and January 2006. The findings suggest that managers are likely to choose higher financial leverage when they have stronger corporate governance (large number of directors on the board and higher ownership concentration). However, we did not find any statistical association between corporate governance disclosure and debt-to-equity ratio. This suggests that firm's asymmetric information is not an important driver of the financing decision of Saudi Arabian companies. This might be due to the nature of the Saudi business environment. We strongly believe that this paper provides a novel contribution to the existing literature as we are the first to examine this issue in Saudi Arabia.

**Key words:** corporate governance; financing decisions; emerging economies; Saudi Arabia

### 1. Introduction

This paper aims to contribute to the corporate governance literature by examining the effect of corporate governance characteristics on financing decisions in Saudi Arabian listed companies. In particular, it examines the effect of board size, ownership concentration and corporate governance reporting on the debt-to-equity ratio. The investigation of these research issues in Saudi business environment could extend prior research and give different explanations to those carried out in more developed countries.

Research related to determinant of corporate capital structure is a well established part of the accounting and finance research. Modigliani & Miller (1958) is the first to study this area of research. They also provided another study in the same area of research after modifying some assumptions such as relaxing the perfect market assumptions and considering corporate tax into their models (Miller & Modigliani, 1963). In their later study, they suggested that firm value will be enhanced if the level of debt increases because interest rate is a tax deductible and

---

Ali AlNodel, Ph.D., lecturer of accounting, College of Economy and Administration, Qassim University; research fields: corporate governance, information disclosure, earnings management and financial fraud.

Khaled Hussainey, Ph.D., senior lecturer of accounting, Accounting & Finance Division, Stirling Management School, Stirling University; research fields: information disclosure, corporate governance, capital structure, dividend policy and earnings management.

consequently companies would enjoy debt tax shield when funding their activities by long-term debt.

Further accounting and finance research studies were more expressive. Those researches were concentrated on examining some determinants of corporate capital structure. For example, the association between board size and capital structure decisions have been suggested by a number of empirical studies (for example, Mehran, 1992; Berger, Ofek & Yermack, 1997; Wiwattanakantang, 1999; Wen, Rwegasira & Bilderbeek, 2002; Du & Dai, 2005; Abor & Biekpe, 2005; Al-Najjar & Hussainey, 2010a, 2010b). Another determinant of capital structure decision which received significant attention is the ownership concentration (for example, Wiwattanakantang, 1999; Al-Najjar & Hussainey, 2010a, 2010b). More recently, number of studies have, also, investigated the association between asymmetric information and corporate decisions (for example, Li & Zhao, 2008; Bharath, Pasquariello & WU, 2009).

The results of these research studies suggest that firm value will be enhanced if the level of debt increases, board size and ownership concentration are associated with capital structure decisions and firms with higher levels of information asymmetric are more likely to use debt in financing their activities than equity.

Unfortunately, the results of these research studies cannot be generalized for number of reasons. First, these results provided mixed evidence. For example, Mehran (1992), Berger, et al. (1997), and Abor & Biekpe (2005) found a significant negative association between the size of the board of directors and debt-to-equity ratios, while Jensen (1986) found a positive association between higher debt ratios and larger board size. Further, other researchers found that there is no significant association between board size and debt-to-equity ratios (i.e., Wiwattanakantang, 1999; Wen, et al., 2002; Al-Najjar & Hussainey, 2010a, 2010b).

A second reason for the difficulty behind generalizing the results of these research studies is that the majority of them were carried out in most developed countries such as U.S. and European continental. More precisely, in developing countries the conclusions of this line of research are likely to be challenged due to the business environmental differences between those of developed and those of developing countries. In another words, in a different business environment such those of the Middle Eastern countries, there are significant environmental factors that may affect corporate capital structure decisions. Hove (1986 & 1990) asserted the importance of political, economical, and social systems on corporate decisions.

Third reason for the difficulty of generalizing the evidence of prior research examining determinants of corporate capital structure is that there are very limited numbers of studies that have examined determinants of capital structure in developing countries and even fewer such studies may be found in the Middle East countries, leaving significant doubt about the applicability of these evidence in the business environment of Middle East countries

Accordingly, a natural area of extending the lines of the accounting and finance research related to determinant of corporate capital structure decisions is to explore other drivers of corporate capital structure decisions and to consider suggested drivers within a different business environment.

In the present paper, we aim to examine the degree to which corporate governance affect the financing decisions of Saudi Arabian listed companies. We focus only on three corporate governance mechanisms. These are board size, ownership concentration and corporate governance reporting. The main reasons for concentrating on these issues are the possibility of making comparison with other studies because these are the most studied issues in the literature, the availability of data regarding these issues<sup>1</sup>, and the importance of advising regulators whom are more concern about these issues in the process of regulating corporate governance in Saudi Arabia.

---

<sup>1</sup> Cost of capital is an important factor in corporate capital structure decisions; however data for capital structure was not available.

To help us in focusing on a group of firms that report corporate governance information on their websites, we utilised a sample of 37 companies listed in Saudi Stock Market in January 2006. This was based on a recent paper by Hussainey & AlNodel (2008) who collected their sample from Saudi listed companies' websites between October 2005 and January 2006 representing a total number of 77 companies listed in the Saudi Stock Exchange at that time.

We found that both board size and ownership concentration are positively associated with the debt-to-equity ratio. However, we did not find a significant association between corporate governance reporting and the debt-to-equity ratio. The findings seem to suggest that managers are likely to choose higher financial leverage when they have stronger corporate governance (large number of directors on the board and higher ownership concentration). However, firm's asymmetric information seems to be not a driver of the financing decision of Saudi Arabian companies.

A possible explanation is that decisions related to capital structure are affected by the Islamic view of financing which prohibits interests and in turn to the public view who disrespects such practice. This is enhanced by the weakness of the business reporting practice in Saudi Arabia which could provide pave for a different mean of getting information by parties related to loan agreements.

The results of this paper may be of use to the Saudi Arabian Capital Market Authority (SACMA, thereafter) who issued a guidance in 2006 that recommends all listed companies to disclose corporate governance information to the public. This would help SACMA to explore the attitude of companies to voluntarily report corporate governance rather than being enforced to do so.

The paper proceeds as follows. Section 2 reviews prior research on the determinants of corporate capital structure. In Section 3, a description of the Saudi business environment is provided. Sections 4 and 5 discuss the development of the research hypotheses and the research model. Section 6 is the data description. The main regression results are presented in Section 7. Section 8 concludes and suggests areas for future research.

## 2. Literature review

Although the relationship between corporate governance and capital structure has been the subject for an extensive research in developed countries<sup>2</sup>, a limited research has been carried out to investigate the issue in business environment of developing countries.

The association between board size and capital structure decisions has been well established in prior accounting and finance research. In particular, Mehran (1992), Berger, et al. (1997), Wiwattanakantang (1999), Wen, et al. (2002), Du and Dai (2005), Abor & Biekpe (2005) and Al-Najjar & Hussainey (2010a, 2010b) examined the association between board size and corporate capital structure decision, but the results are mixed.

Mehran (1992), Berger, et al. (1997) and Abor & Biekpe (2005) reported a significant negative association between the size of the board of directors and debt-to-equity ratios. However, Jensen (1986) revealed a positive association between higher debt ratios and larger board size. Other researchers found that there is no significant association between board size and debt-to-equity ratios (Wiwattanakantang, 1999; Wen, et al., 2002; Al-Najjar &

---

<sup>2</sup> Examples include the UK (for example, Demirag 1998; Ezzamel & Willmott 1993; Vinten 2001; Writer 2001), The Netherlands (Groot, 1998), and Canada (Elloumi & Gueyie, 2001). Other researchers compared the corporate governance practice between developing countries. For instance, Vinten (2000) compared the corporate governance practice between the UK and the US. Another comparative study is Charkham (1994) which found significant differences in the corporate governance practices in five countries: Japan, Britain, France, the United States and Germany.

Hussainey, 2010a, 2010b).

Ownership concentration is considered as one of the key determinants of capital structure decision. Wiwattanakantang (1999) reported that managerial shareholdings have consistent positive influence on family-owned firm leverage. In addition, Al-Najjar & Hussainey (2010a) found that insider ownership is positively and significantly associated with the debt-to-equity ratio. However, Al-Najjar & Hussainey (2010b) did not find the expected significant results.

A relatively recent and growing number of studies have investigated the association between asymmetric information and corporate decisions (see Li & Zhao, 2008 for more details). For example, Bharath, et al. (2009) used a novel information asymmetry index and examined the extent to which information asymmetry is a determinant of capital structure decisions. They found that information asymmetry affects capital structure decisions of US companies. In particular, they found a significant positive association between information asymmetry and debt-to-equity ratio. In other words, their results suggest that firms with higher levels of information asymmetric are more likely to use debt in financing their activities than equity.

On the other hand, other research found that voluntary disclosure is negatively related to asymmetric information. For example, Hussainey, Schleicher & Walker (2003) found higher levels of voluntary disclosure reduce information asymmetry between the firm and investors and hence increase investors' ability to better anticipate future earnings.

Research investigating corporate governance in developing countries is much beyond in considering the impact of issues of corporate governance on corporation capital structure. A review of research investigating issues of corporate governance revealed that most such research approach the issue whether to describe the state of corporate governance from an official perspective or from the perspective of what should the practical applications of its principles be.

For example, Al-Motairy (2003) explored the state of corporate governance practices in Saudi Arabia. He concluded that there is a vital need for: (1) a review of these regulations to reflect the current practices of corporate governance, (2) the issuance of guidance for best practices for management and financial affair in corporations and (3) the establishment of an organization to accelerate the adoption of best practices of corporate governance.

Similarly, Fouzy (2003) evaluated the practices of corporate governance's principles in Egypt. He recognized the development in Egyptian official regulations toward the application of best practices of corporate governance. He then argued that these developments are not met enough by Egyptian companies in their practical applications.

Another example is the study which was carried out by Oyelere & Mohammed (2005) investigating the practices of corporate governance in Oman and how it is being communicated to stakeholders. They recommend enhanced regulation and communication for the Omani stock market to keep pace with the international developments.

Finally, a research paper by the Centre for International Private Enterprise (CIPE, 2003) examined the corporate governance practice in four Middle Eastern countries (Egypt, Jordan, Morocco and Lebanon). It was found that corporate governance practice is approached differently by each country depending on the sophistication of the financial market in each country. The research paper further provided several recommendations to improve the application of the principles of corporate governance in the region as a whole.

The impact of the corporation attitude toward their corporate governance on their financing decisions needs further investigation giving the unique of the Saudi business environment and the mixed results of the accounting and finance research relating to the determinants of corporate capital structure. This is evident by the unique aspects of the business environment of Saudi Arabia which will be discussed in the following paragraph.

### 3. Saudi business environment

This section provides a general description of the environment of the Saudi business practices. The discussion will be directed to the most important environmental factors, as suggested by the literature. The main aspects of the Saudi business practices that will be discussed are the social, economical, and political systems. Also, some highlights will be given to the 1965 Company Law that regulates the practice of Saudi businesses and the guidance of corporate governance issued by SACMA in 2006 which regulates corporate governance reporting.

As a conservative society, a significant number of Saudis are adherent to Islamic values such as avoiding loan interests. This does not mean there is no such type of transactions but to mean that the majority of Saudis do not openly accept such transactions. Saudi society is also characterized by the impact of the personality and power of particular individuals, the role of family and friend relationships over regulations, privilege given to personal relationships over tasks, and the existence of a high level of secrecy (Al-Rumaihi, 1997; AlNodel, 2004).

The economy of Saudi Arabia is an oil-based economy and government exercises strong controls over major economic activities. Since the discovery of oil in 1938, oil revenue represents the biggest contribution to the economy. In 1990s, it accounted for around 35% of nominal GDP, about 75% of government revenues, and 85% of export receipts (Economist Intelligence Unit, 2003). Table 1 presents the country's budgetary revenues, expenditures and net surplus or (deficit) for the last three years.

**Table 1 Saudi Arabia budgetary revenues, expenditures and net surplus or deficit (2005-2007)**

Year	Annual government budgeting ( estimates) Million Saudi Riyals (\$1= 3.75 SR)						
	Total revenues	Oil revenues		Non-oil revenues		Total expenditures	(Deficit)/Surplus
	Amount	Amount	%	Amount	%	Amount	Amount
2005	280,000	220,000	79	60,000	21	280,000	0
2006	390,000	320,000	82	70,000	18	335,000	55,000
2007	400,000	330,000	83	70,000	17	380,000	20,000

Source: SAMA (Saudi Arabian Monetary Agency) annual report (2007).

Similar to most developing countries, Saudi businesses are characterized by the domination of family businesses, the deep involvement of the government in the private sector, and the existence of a number of foreign-owned and controlled companies based on joint venture agreements with domestic companies. Al-Nodel (2004) reported that joint-stock companies represent only 1.14% of the total number, and account for less than 40% of the total capital of the registered businesses.

Since the type of businesses is mostly small to medium size companies, there was an apparent need for more foreign investors and involvement of the government in the private sector to carry some important activities which cannot be carried out or provided by local companies. This has left the country with significant number of foreign-owned and controlled companies based on joint venture agreements with domestic companies and significant involvement of government in some major business activities (Presley, 1984; Aba-Alkhail, 2001).

The political system of Saudi Arabia is a monarchy, headed by the King. Within the political system, there are three legislative bodies, which have the authority to initiate and/or approve policies, regulation or rules: the Council of Ministers, the Consultative Council, and various individual Ministries (Al-Amari, 1989; Al-Rumaihi, 1997).

The legal system of Saudi Arabia is derived from Islamic law (Shariah; Alqur'an Alkareem & Sunna

Alsharifah<sup>3</sup>) and coded laws for a number of specific fields, such as commerce, tax and labour. Al-Amari (1989) reported that Islamic law prevails in legal disputes.

Two of the most important aspects of the Islamic values relating to corporate financing are that Islamic law prohibits loan interests whether giving or taking by individuals or business institutions and obligation of Zakat<sup>4</sup> which should be giving, calculated based on the capital of the business or individual, and given to specific groups as mentioned by Alqur'an Alkareem & Sunna Alsharifah. Taxes duty is imposed on non-Saudi or Gulf States companies operate in Saudi Arabia.

There are some differences between Zakat and Taxes whether on whom to impose, the manner of collection, or calculation. For example, Zakat is based on the wealth of the business with some specific deductions for specific items as indicated by Shariah; Alqur'an Alkareem & Sunna Alsharifah, while tax is based on the net income with some deduction according to the law of taxes.

The 1965 Company Law regulates the practice of businesses in Saudi Arabia. It sets conditions for several aspects of businesses such as legal frameworks through which business companies can be established, the registration requirements, minimum capital to be maintained, number of partners, number of directors, accounts, the annual audit of the accounts, and so on. Shinawi & Crum (1971) asserted that the origin of the 1965 Saudi Company Law goes back to the British Companies Act of 1948. The similarity between the 1965 Saudi Company Law and the UK acts issued in 1948, 1967 and 1976 was also reported by Kahlid (1983).

The reporting requirements which are imposed by the 1965 Company Law represent the only rules that should be observed. It requires the issuance of a balance sheet, a profit and loss account, and a report on the company's operations and financial position every fiscal year. It further stipulates that all corporations and limited liability companies must issue annual financial statements audited by an independent auditor licensed to practice by the Saudi Ministry of Commerce and Industry.

Similar to stock markets in developing countries, the Saudi stock market is new and small. In 1984, the Royal Decree No. 81230 was issued as an attempt to officially regulate the stock exchange (Abdeen & Dale, 1984; El-Sharkawy, 2006). Under this Royal Decree, the Saudi Arabian Monetary Agency (SAMA) was given actual control over the stock exchange through national commercial banks.

The significant change was in 2003 when the Saudi Arabian Capital Market Authority (SACMA) was established to oversight the exchange of Saudi stocks (Ramady, 2005). This period observed significant increase of the number of listed companies, regulations for the market in general and reporting in specific. Table 2 compares some key numbers of the Saudi stock market between 1996-2005.

For example, in 2006 SACMA issued a draft for reporting requirements of corporate governance for listed companies. The draft provides recommendations of the criteria for the best corporate governance practice that should listed companies counsel. It has covered to some extent the main five principles issued by the Organization for Economic Co-operation and Development (OECD): the rights of shareholders, the equitable treatment of shareholders, the role of stakeholders in corporate governance, disclosure and transparency, the responsibility of the board of directors.

---

<sup>3</sup> Alqur'an Alkareem is the Holly book of Islam and Sunna Alsharifah is the interpretations, speeches and actions of Prophet Mohamed Peace be up on him. Alqur'an Alkareem and Sunna Alsharifah provide the main of Islamic instructions.

<sup>4</sup> Zakat is a financial religious duty and represents the third pillar. Alqur'an Alkareem & Sunna Alsharifah explain to Muslim the compliance with the Zakat duty.

**Table 2 Key figures of Saudi stock market between 1996-2005**

Year	No. of transactions (thousand)	Traded stock (million)	Market value (\$ million )	Index
1996	284	138	46	1,531
1997	460	314	59	1,958
1998	377	295	43	1,413
1999	438	528	61	2,029
2000	498	555	68	2,258
2001	605	692	73	2,430
2002	1,034	1,736	75	2,518
2003	3,763	5,566	157	4,438
2004	13,320	10,298	306	8,206
2005	46,607	12,281	650	16,713

Source: TADAWUL website accessed on 29th September 2006

According to the recommendations of SACMA, listed companies are required to report to SACMA about their compliance with the criteria of corporate governance as issued by SACMA or reasons for incompliance if any. The disclosure contains, for example, the board of directors' functions, responsibilities, formation, committees of board of directors; audit committee; Nomination and Remuneration Committee; Meetings of the Board and Remuneration and Indemnification of Board Members<sup>5</sup>.

Finally, SACMA asserted that the criteria for the best corporate governance practice mostly constitutes the guiding principles for all listed companies unless any other regulations, laws or rules require such requirement.

#### **4. Research hypotheses**

To examine the effect of corporate governance characteristics on financing decisions in Saudi Arabian listed companies, we formulated three research hypotheses: the effect of board size, ownership concentration and corporate governance reporting on the debt-to-equity ratio as following.

##### **(1) Board size hypothesis**

Given that prior research investigating the association between board size and debt-to-equity ratios gave mixed result (see Section 2), we also revisited this research area and examined the association between board size and capital structure for Saudi Arabian companies. We set the following first research hypothesis for the impact of board size on capital structure:

H1: *Ceteris paribus*, there is a relationship between board size and debt-to-equity ratio.

##### **(2) Ownership concentration hypothesis**

Given the results of the prior research are—to some extent-mixed, we also revisited this research area and examined the association between ownership concentration and capital structure for Saudi Arabian companies. We set the following second research hypothesis for the impact of ownership concentration on capital structure:

H2: *Ceteris paribus*, there is a relationship between ownership concentration and debt-to-equity ratio.

##### **(3) Corporate governance reporting**

To examine the role of the information environment on capital structure decision in Saudi Arabian companies,

---

<sup>5</sup> Detailed information about these regulations is discussed in the following articles (SACMA, 2006): Article 9: Disclosure in the Board of Directors' Report; Article 10: Main Functions of the Board of Directors; Article 11: Responsibilities of the Board; Article 12: Formation of the Board; Article 13: Committees of the Board; Article 14: Audit Committee; Article 15: Nomination and Remuneration Committee; Article 16: Meetings of the Board; Article 17: Remuneration and Indemnification of Board Members.

we used a corporate governance voluntary disclosure index as a measure of a firm's information environment and set the following third research hypothesis for the impact of corporate governance reporting on capital structure:

H3: *Ceteris paribus*, there is a relationship between corporate governance reporting and debt-to-equity ratio.

## 5. Model development

In order to test the above hypotheses, we regress debt-to-equity ratio on some corporate governance characteristics and some control variables. The study will investigate the following model:

$$Lev_{it} = \alpha + \beta' X_{it} + \varepsilon_{it}$$

where:  $Lev_{it}$  is defined as long term debt to equity ratio;  $\alpha$  is the intercept.  $\beta'$  is the slope coefficient estimates of regressors.  $X_{it}$  is the corporate governance variables (and control variables) for firm  $i$  at time  $t$ .

### 5.1 Dependent variable

The dependent variable ( $Lev_{it}$ ) is defined as the long term debt to equity ratio.

### 5.2 Independent variables

We have three independent variables and two control variables. We identified three types of corporate governance variables:

(1) Board size (*BOARD*): This represents the number of executive and non executive directors on the board.

(2) Ownership concentration (*OWNERSHIP*): This represents the total percentage of the company's shares that owned by owners.

(3) Corporate governance reporting (*DISCLOSURE*): This is calculated as the number of sentences that include at least one corporate governance related information.

### 5.3 Control variables

(1) Profitability (*PROF*): We used return on total assets as a measure for firms' profitability.

(2) Growth opportunity (*MB*): We used share price to book value ratio as a measure for firm's growth opportunity.

## 6. Data

Our data collection is based on a recent paper by Hussainey & AlNodel (2008). This helped us to focus on a group of firms that report corporate governance information on their websites. We focused on firms that disclose information through internet because prior research argued that internet reporting is one of the most important sources of voluntary disclosure and this source is more likely to complement published annual reports (Aly, Simon & Hussainey, 2010). Hussainey & AlNodel (2008) collected their sample from Saudi listed companies' websites between October 2005 and January 2006. At that time, the total number of companies listed in the Saudi Stock Market was 77 representing eight sectors: agriculture, services, cement, industrial, banks, electrical, telecommunication and insurance. They used TADAWUL website ([www.tdwl.net](http://www.tdwl.net)) and Google website ([www.google.com](http://www.google.com)) to access every company's website. They deleted some companies from their analysis for a number of reasons. These include 11 firms without websites; one firm with a website under construction and one firm with a restricted website. This reduced their sample to 64 companies. We also further excluded 27 firms because of missing corporate governance and accounting information. This led to a sample of 37 listed firms for the current study.

Data on debt-to-equity ratio, board size, ownership concentration, profitability and price-to-book value ratio were collected from TADAWUL website. Following Hussainey & AlNodel (2008), we used the content analysis



approach to measure the number of sentences that contain corporate governance information. Accordingly, we used the corporate governance disclosure index developed by Hussainey & AlNodel (2008) to analyze the content of every company's website.

## 7. Empirical results

This section discusses the descriptive analysis, the correlation analysis and the empirical results.

Table 3 shows the descriptive analysis (mean, minimum, maximum and the standard deviation). It shows that on average the number of directors on board in Saudi Arabia companies is around 8, with a minimum of 4 members and a maximum of 11 members. Mean ownership concentration is 35.6 and the mean corporate governance disclosure is 5 sentences with a minimum of zero corporate governance sentence and a maximum of 21 corporate governance sentences.

A broad range of variation in financial variables is also evident in our sample. The debt-to-equity ratio ranges from 0 to 97 with a mean of 24.52 and a standard deviation of 32.576. The return on total assets ratio ranges from -37.3 to 71.74 with a mean of 8.8535 and a standard deviation of 13.81767. The share price to book value ratio ranges from 0 to 21 with a mean of 5.03 and a standard deviation of 5.336. On average, our sample covers large firms as the mean firm size is 23240077.81. Finally, our sample covers nine sectors as follows: Banks (9 firms), Chemical (8 firms); Cement (6 firms); Retailers (2); Energy (1 firm); Agriculture (7 firms); Telecommunication (2 firms); Advertising (1 firm) and Insurance (1 firm).

**Table 3 Descriptive statistics & industry classification**

(a) Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
<i>LEV</i>	37	0	97	24.52	32.576
<i>BOARD</i>	37	4	11	7.89	1.822
<i>OWNERSHIP</i>	36	0.0	82.7	35.550	27.7875
<i>PROF</i>	37	-37.30	41.74	8.8535	13.81767
<i>MB</i>	37	0.00	66.87	9.9181	10.56721
Total assets	37	0	136,950,480	23,240,077.81	3.888E7
<i>DISCLOSURE</i>	37	0	21	5.03	5.336

(b) Industry classification

Sectors	Number of firms
Banks	9
Chemical	8
Cement	6
Retailers	2
Energy	1
Agriculture	7
Telecommunication	2
Advertising	1
Insurance	1

Table 4 shows the correlation analysis. The correlation between each of the independent variables is not too high. The highest correlation found between corporate governance disclosure and share price to book value ratio (*MB*) is 43.5, which is acceptable. This confirms that no multicollinearity problem exists between the independent variables.

**Table 4 Correlation analysis**

		<i>DISCLOSURE</i>	<i>BOARD</i>	<i>OWNERSHIP</i>	<i>LEV</i>	<i>MB</i>	<i>PROF</i>
<i>DISCLOSURE</i>	Pearson Correlation	1.000	0.077	0.246	0.301	0.435**	-0.139
	Sig. (2-tailed)		0.649	0.149	0.070	0.007	0.410
	N	37	37	36	37	37	37
<i>BOARD</i>	Pearson Correlation	0.077	1.000	0.234	0.395*	0.083	0.212
	Sig. (2-tailed)	0.649		0.170	0.016	0.626	0.207
	N	37	37	36	37	37	37
<i>OWNERSHIP</i>	Pearson Correlation	0.246	0.234	1.000	0.504**	0.097	0.064
	Sig. (2-tailed)	0.149	0.170		0.002	0.574	0.711
	N	36	36	36	36	36	36
<i>LEV</i>	Pearson Correlation	0.301	0.395*	0.504**	1.000	0.109	-0.062
	Sig. (2-tailed)	0.070	0.016	0.002		0.520	0.716
	N	37	37	36	37	37	37
<i>MB</i>	Pearson Correlation	0.435**	0.083	0.097	0.109	1.000	-0.019
	Sig. (2-tailed)	0.007	0.626	0.574	0.520		0.910
	N	37	37	36	37	37	37
<i>PROF</i>	Pearson Correlation	-0.139	0.212	0.064	-0.062	-0.019	1.000
	Sig. (2-tailed)	0.410	0.207	0.711	0.716	0.910	
	N	37	37	36	37	37	37

Note: \*\*: Correlation is significant at the 0.01 level (2-tailed); \*: Correlation is significant at the 0.05 level (2-tailed).

Table 5 shows our empirical results. It shows that the coefficient estimate on board size is positive significant with a p-value of 0.059 (see model 4). This is consistent with Jensen (1986) who also found a positive association between higher debt ratios and larger board size. Our finding indicates that larger board size puts Saudi Arabian firms in a good position to finance their activities by using debt. This is consistent with the fact that higher quality of corporate governance improves companies' financial performance (Bhagat & Bolton, 2008) and hence leads increase the ability of the company to obtain debt. Ling & Zheng (2005) provided an explanation for this positive sign. They argued that boards with a large board size are more likely to have a difficulty in getting an agreement because of different and conflict opinions and views. Accordingly, firms with large number of directors on board might not choose equity financing which requires high transaction cost to resolve communication and coordination dilemma. In addition, they argued that directors would choose debt for financing their activities because this source of finance will not dilute the equity of current shareholders and change their current position. This leads us to accept hypothesis 1.

Table 5 also shows that the coefficient estimate on ownership concentration is positive significant with a p-value of 0.005 (see model 4). This result is consistent with Wiwattanakantang (1999), Al-Najjar & Hussainey (2010a). This indicates that when the total percentage of the company's shares is concentrated internally, managers will prefer to use debt to finance their companies' activities. This is because, as mentioned in Ling & Zheng (2005), debt will not dilute the equity of current shareholders and change their current position. This leads us to accept hypothesis 2.

Table 5 Regression analysis

(a) Model summary

Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.617 <sup>a</sup>	0.380	0.277	28.002
2	0.616 <sup>b</sup>	0.379	0.299	27.565
3	0.602 <sup>c</sup>	0.363	0.303	27.492
4	0.576 <sup>d</sup>	0.332	0.291	27.726

Note: a. Predictors: (Constant), *PROF*, *MB*, *OWNERSHIP*, *BOARD*, *DISCLOSURE*; b. Predictors: (Constant), *PROF*, *OWNERSHIP*, *BOARD*, *DISCLOSURE*; c. Predictors: (Constant), *OWNERSHIP*, *BOARD*, *DISCLOSURE*; d. Predictors: (Constant), *OWNERSHIP*, *BOARD*.

(b) ANOVA<sup>e</sup> analysis

Model		Sum of squares	df.	Mean square	F	Sig.
1	Regression	14,436.181	5	2887.236	3.682	0.010 <sup>a</sup>
	Residual	23,524.187	30	784.140		
	Total	37,960.368	35			
2	Regression	14,405.109	4	3601.277	4.739	0.004 <sup>b</sup>
	Residual	23,555.258	31	759.847		
	Total	37,960.368	35			
3	Regression	13,774.798	3	4591.599	6.075	0.002 <sup>c</sup>
	Residual	24,185.570	32	755.799		
	Total	37,960.368	35			
4	Regression	12,592.380	2	6296.190	8.190	0.001 <sup>d</sup>
	Residual	25,367.988	33	768.727		
	Total	37,960.368	35			

Note: a. Predictors: (Constant), *PROF*, *MB*, *OWNERSHIP*, *BOARD*, *DISCLOSURE*; b. Predictors: (Constant), *PROF*, *OWNERSHIP*, *BOARD*, *DISCLOSURE*; c. Predictors: (Constant), *OWNERSHIP*, *BOARD*, *DISCLOSURE*; d. Predictors: (Constant), *OWNERSHIP*, *BOARD*; e. Dependent variable: *LEV*.

(c) Coefficient<sup>a</sup> estimates

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	-39.090	21.252		-1.839	0.076
	<i>BOARD</i>	5.721	2.752	0.315	2.079	0.046
	<i>OWNERSHIP</i>	0.474	0.181	0.400	2.619	0.014
	<i>DISCLOSURE</i>	1.064	1.032	0.174	1.031	0.311
	<i>MB</i>	-0.101	0.507	-0.032	-0.199	0.844
	<i>PROF</i>	-0.311	0.352	-0.132	-0.886	0.383
2	(Constant)	-39.272	20.901		-1.879	0.070
	<i>BOARD</i>	5.669	2.696	0.312	2.102	0.044
	<i>OWNERSHIP</i>	0.475	0.178	0.401	2.672	0.012
	<i>DISCLOSURE</i>	0.971	0.906	0.159	1.072	0.292
	<i>PROF</i>	-0.315	0.346	-0.134	-0.911	0.369
3	(Constant)	-38.586	20.831		-1.852	0.073
	<i>BOARD</i>	5.185	2.637	0.285	1.967	0.058
	<i>OWNERSHIP</i>	0.466	0.177	0.393	2.630	0.013
	<i>DISCLOSURE</i>	1.113	0.890	0.182	1.251	0.220
4	(Constant)	-35.046	20.814		-1.684	0.102
	<i>BOARD</i>	5.196	2.659	0.286	1.954	0.059
	<i>OWNERSHIP</i>	0.519	0.173	0.438	2.990	0.005

Note: a. Dependent variable: *LEV*.

Finally, corporate governance disclosure as a proxy for asymmetric information between managers and investors is expected to be negative and statistically significant. However, Table 5 shows that the coefficient estimate of *DISCLOSURE* variable is positive, indicating that firms with higher levels of corporate governance disclosure (less information asymmetry) has higher debt-to-equity ratio. This finding is statistically insignificant and not consistent with prior research. This leads us to reject hypothesis 3.

## 8. Conclusion

The aim of this paper was to examine the effect of corporate governance mechanisms on capital structure for Saudi Arabian listed companies. Our results show that the corporate capital structure decisions in Saudi Arabia is driven by some of the same corporate governance determinates suggested in prior research. Based on a sample of 37 Saudi Arabian listed companies, our results show that the number of directors on boards and ownership concentration are the main drivers of Saudi companies for capital structure decisions.

Our results, however, show that corporate governance reporting was not an important driver of Saudi companies for capital structure decisions. This might be due in part to the nature of the Saudi business environment where there is a weak reporting requirement of the practice of corporate governance in the country. This fact could have encourage parties to loan agreements approach different means to get the needed information rather than the traditional reporting mechanisms which is likely to be practical in a small community of businesses. This is also likely to be affected by the characteristics of Saudi society whereas the impact of the personality and power of particular individuals, the role of family and friend relationships prevail over regulations, and tasks, and the existence of a high level of secrecy.

The main limitation of the study is that it did not cover the whole market, so the sample may not be representative of the population of Saudi companies. This, however, is justified by the nature of the study, which relied on the availability of data needed. Further recheck was carried for companies which are not included. We found that these companies are in general small and less likely to affect the results. Nevertheless, a study with a large number of companies is needed for future research. A future research may also try to overcome the limitation of the availability of data and investigate other determinants of capital structure decisions by utilizing other mean of research tools such interviews with parties involved in loan agreements.

### References:

- Aba-Alkhalil, K.. (2001). *Regulating the auditing profession in Saudi Arabia: The formulation of early auditing standards*. Ph.D. Thesis. University of Essex.
- Abdeen, A. & Dale, S.. (1984). *The Saudi financial system in the context of Western and Islamic finance*. John Wiley & Sons.
- Abor, J. & Biekpe, N.. (2005). *Does corporate governance affect the capital structure decisions of Ghanaian SMEs?* Working paper, University of Stellenbosch Business School.
- Al-Amari, S.. (1989). *The development of accounting standards and practices in the Kingdom of Saudi Arabia*. PhD Thesis. University of Glasgow.
- Al-Motairy, O.. (2003). Implementing corporate governance in Saudi Arabia. *Arab Journal of Administrative Sciences*, 10(3), 281-305.
- Al-Najjar, B. & Hussainey, K.. (2010a). *What drives firms' capital structure and dividend policy?* Working paper, Middlesex University, UK.
- Al-Najjar, B. & Hussainey, K.. (2010b). *Revisiting the capital structure puzzle: UK evidence*. Working paper, Middlesex University, UK.
- AlNodel, A.. (2004). *The business risk audit approach: International dissemination and the impact of a business orientation on*

- auditors' perceptions of risks. PhD Thesis. University of Manchester.
- Al-Rumaihi, J.. (1997). *Setting accounting standards in a non-western environment with special reference to the Kingdom of Saudi Arabia*. PhD Thesis. University of Dundee.
- Aly, D., Simon, J. & Hussainey, K.. (2010). Determinants of corporate internet reporting: Evidence from Egypt. *Managerial Auditing Journal*, 25(2), 182-202.
- Berger, P. G., Ofek, E. & Yermack, D. L.. (1997). Managerial entrenchment and capital structure decision. *Journal of Finance*, 52, 1411-1438.
- Bhagat, S. & Bolton, B.. (2008). Corporate governance and firm performance. *Journal of Corporate Finance*, 14(3), 257-273.
- Bharath, S., Pasquariello, P. & WU, G. (2009). Does asymmetric information drive capital structure decisions? *Review of Financial Studies*, 22(8), 3211-3243.
- Capital Market Authority (CMA). (2006). Retrieved September 15, 2006 from <http://www.cma.org.sa/cma%5Far/>.
- Charkham, J.. (1994), *Keeping good company: A study of corporate governance in five countries*, Oxford Press, Oxford, UK.
- Demirage, I.. (1998), *Short termism, financial systems, and corporate governance, in corporate governance, accountability, pressures to perform: An international study*, JAI Press, 7-24
- Driffield, N., Mahambare, V. & Pal, S.. (2007). How does ownership structure affect capital structure and firm value. *Economics of Transition*, 15(3), 535-537.
- Du, J. & Dai, Y.. (2005). Ultimate corporate ownership structure and capital structures: Evidence from East Asian economies. *Corporate Governance*, 13(1), 60-71.
- Elloumi, F. and Gueyie, J.. (2001), "Financial distress and corporate governance: an empirical analysis", *Corporate Governance, International Journal of Business in Society*, 1(1), 15- 23.
- El-Sharkawy, H.. (September, 2006). Historical years in Saudi stocks. *Al-Jazirah Newspaper*, No. 12413.
- Ezzamel, M. and Willmott, H.. (1993). "Corporate governance and financial accountability: recent reforms in the UK public sector", *Accounting, Auditing, and Accountability Journal*, 6(3), 109-132.
- Fouzy, S.. (2003). *Evaluation of corporate governance in the Arab Republic of Egypt*. Working paper No. 82, The Egyptian Center for Economic Studies, 1-39.
- Groot, T., (1998), The impact of performance pressures on R & D management in the Netherlands, in *Corporate governance, accountability, and pressures to perform: An international study*, JAI Press, 163-184.
- Hove, M.. (1986). Accounting practices in developing countries: Colonialism's legacy of inappropriate technologies. *International Journal of Accounting Education and Research*, 22(1), 81-100.
- Hove, M.. (1990). The Anglo-American influence on international accounting standards: The case of the disclosure standards of the international accounting standards committee. *Research in Third World Accounting*, 1, 55-66.
- Hussainey, K. & Al-Nodel, A.. (2008). Corporate governance online reporting by Saudi companies. *Research in Accounting in Emerging Economies*, 8, 39-64.
- Hussainey, K., Schleicher, T. & Walker, M.. (2003). Undertaking large-scale disclosure studies when AIMR-FAF ratings are not available: The case of prices leading earnings. *Accounting and Business Research*, 33(4), 275-294.
- Jensen M. C.. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76, 323-329.
- Kahlid, T. M.. (1983). Financial audit: Comparative study about the responsibility of an external auditor in the Kingdom of Saudi Arabia and the United Kingdom. In *Proceedings of the Second Accounting Conference on Accounting Development*. Riyadh, King Saud University.
- La Rocca, M.. (2007). The influence of corporate governance on the relation between capital structure and value. *Corporate Governance*, 7(3), 312-325.
- Li, K. & Zhao, X.. (2008). Asymmetric information and dividend policy. *Financial Management*, 37(4), 673-694.
- Ling, T. & Zheng, J.. (2005). Board characteristics and capital structure: An empirical study on China's private listed companies. *Journal of Modern Accounting and Auditing*, 1(7), 31-40.
- Mehran, H.. (1992). Executive incentive plans, corporate control, and capital structure. *Journal of Financial and Quantitative Analysis*, 27, 539-560.
- Middle East Finance and Economy (ameinfo). (2006). *Will the Saudi stock market boom continue?* Retrieved September 30, 2006 from <http://www.ameinfo.com/fn/>.
- Miller, M. & Modigliani, F.. (1963). Corporate income taxes and the cost of capital: A correction. *American Economic Review*, 53(3),

433-443.

- Modigliani, F. & Miller, M.. (1958). The cost of capital, corporation finance and the theory of investment. *American Economic Review*, 48(3), 261-297.
- Mohamed, F.. (2002). Financial reporting on the Internet: a survey of Egyptian, Saudi Arabian and Kuwaiti companies. *Journal of Financial and Commercial Studies*, 3, 203-227.
- Oyelere, P. & Mohamed, E.. (2005, November). A survey of internet reporting of corporate governance practices by companies listed in Oman in *The 2nd Annual International Accounting Conference*, Istanbul, Turkey.
- Presley, R.. (1984). *A guide to the Saudi Arabian economy*. London: Macmillan Press.
- Ramady, M.. (2005). *The Saudi Arabian economy: Policies, achievements and challenges*. New York: Springer.
- Regional Corporate Governance Working Group of Middle East and North Africa. (2003). *Recommendations in corporate governance*. Center for International Private Enterprise. Retrieved September 20, 2006 from: <http://www.cipe-arabia.org/search.asp>.
- Saudi Arabian Capital Market Authority (SACMA). (2006). Guidance of corporate governance. SACMA website Retrieved May 15, 2010 from [http:// www.cma.org.sa](http://www.cma.org.sa)
- Saudi Arabian Monetary Agency (SAMA). (2007). Retrieved September 20, 2007 from <http://www.sama.gov.sa/>.
- Shinawi, A. & Crum, W.. (1971). The emergence of professional public accounting in Saudi Arabia. *International Journal of Accounting Education and Research*, 6(2), 103-110.
- TADAWUL. (2006). Retrieved January 5, 2010 from [http://www.tadawul.com.sa/wps/portal!/ut/p/\\_s.7\\_0\\_A/7\\_0\\_49I](http://www.tadawul.com.sa/wps/portal!/ut/p/_s.7_0_A/7_0_49I).
- Vinten, G. (2000). Corporate governance the need to know, *Industrial and Commercial Training*, 32(5), 173-178.
- Vinten, G. (2001), Corporate governance and the sons of Cadbury, *Corporate Governance: International Journal of Business in Society*, 1(4), 4-8.
- Wen, Y., Rwegasira, K. & Bilderbeek, J.. (2002). Corporate governance and capital structure decisions of the Chinese listed firms. *Corporate Governance*, 10(2), 75-83.
- Wikipedia website. (2006). Retrieved July 10, 2008 from <http://www.Wikipedia.com>.
- Wiwattanakantang, Y.. (1999). An empirical study on the determinants of the capital structure of Thai firms. *Pacific-Basin Finance Journal*, 7, 371-403.
- Writer, N.. (2001), Turnbull 2000: Corporate governance and the financial sector, *Balance Sheet*, 9(2), 20-23.

(Edited by Linda and Mary)