



# Corporate governance mechanisms and capital structure in UAE

Corporate  
governance  
mechanisms

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## Abstract

**Purpose** – The purpose of this study is to examine the impact of corporate governance mechanisms on corporate financial decisions in one of the emerging economies, United Arab Emirates (UAE). In particular, the paper examines the degree to which internal corporate governance mechanisms and an external corporate governance mechanism affect UAE firms' capital structure.

**Design/methodology/approach** – The paper uses a multiple regression analysis to examine the association between corporate governance and capital structure for a sample of 71 UAE firms listed either in the Dubai financial market or the Abu Dhabi securities market during 2006.

**Findings** – The paper finds that institutional investors have a negative impact on debt-to-equity ratio. This result does not support the “active monitoring hypotheses” where institutional investors are expected to exercise their voting rights effectively in order to prevent managers from reducing their “employment risk” at the expense of the interests of shareholders. It also finds that dividend policy is negatively associated with debt-to-equity ratio, while firms' size is positively associated with debt-to-equity ratio.

**Research limitations/implications** – Empirical analysis suggests that corporate governance mechanisms have important implications for UAE firms' financial policies. UAE managers should be aware of the benefits of the implementation of effective internal and external corporate governance mechanisms while embracing international corporate governance standards. An effective implementation of the codes of corporate governance should improve the efficiency and effectiveness of UAE firms and the UAE stock markets.

**Originality/value** – To the best of the authors' knowledge, there is no study that has yet empirically examined the effect of the corporate governance mechanisms on capital structure in UAE or Middle Eastern countries. This study offers the first evidence of the impact of corporate governance mechanisms on capital structure in UAE.

**Keywords** Corporate governance mechanisms, Capital structure, Dividend policy, Emerging economies, Corporate governance, United Arab Emirates

**Paper type** Research paper

## 1. Introduction

The pioneer paper by Modigliani and Miller (1958) is considered to be the first academic paper to examine this interesting research topic. Modigliani and Miller (1958) show the irrelevance of capital structure decisions for firm value in perfect capital

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markets. In 1963, they also relax the perfect market assumptions and consider corporate tax in their models (Miller and Modigliani, 1963). Accordingly, they provide new evidence that the firm value will be enhanced if the level of debt increases. They conclude that interest is tax deductible, accordingly firms would benefit from debt tax shield when funding their activities by long-term debt. A natural response from academic researchers to these lines of research is to further investigate other determinants of corporate capital structure choices.

Despite the large number of studies on the determinants of capital structure, Myers (1984), Berens and Cuny (1995), Barclay and Smith (2005) and Al-Najjar and Hussainey (2011b) argue that the capital structure decision is a puzzle for accounting and finance researchers. This puzzle is due to the fact that the determinants of capital structure decision are still unknown and different capital structure theories and/or different quantitative regression models lead to different findings. Despite this extensive body of research, there has been little research to date examining the effect of corporate governance mechanisms on capital structure decision in general and particularly in emerging economies.

Prior research examines the effect of corporate governance internal and external mechanisms on corporate capital structure decisions (see e.g. Crutchley *et al.*, 1999; Gul, 1999; Wen *et al.*, 2002; Du and Dai, 2005; La Rocca, 2007; Driffield *et al.*, 2007; Al-Najjar and Taylor, 2008; Al-Najjar and Hussainey, 2011a, b). However, to the best of our knowledge, no study yet has examined the influence of corporate governance on capital structure decisions in United Arab of Emirate (UAE). Although this study has specific relevance to the needs of the UAE business environment, it is believed that many other developing countries, especially the Gulf Cooperation Council and middle eastern countries, share similar social, political and economic environments. The results of this study may be beneficial and applicable to these countries as well. In particular, managers should be aware of the benefits of the implementation of effective internal and external corporate governance mechanisms while embracing international corporate governance standards. In addition, managers (investors) should consider both capital structure and institutional when they take their financing (investment) decisions. Finally, the results of this study may be of interest to policy makers and regulators to ensure that there is a real commitment for all listed UAE firms to implement effective corporate governance mechanisms through improving the regulatory and enforcement corporate governance framework.

This paper is the first to examine the potential impact of internal and external corporate governance mechanisms on UAE firms' financing decision. The distinctive features of UAE make our study important. For example, Matly and Dillon (2007, p. 6) argue that, "Western investors have turned to Dubai to establish their regional headquarters while young entrepreneurs are creating firms in this tiny emirate; yet, with Qatar, Bahrain, and Oman establishing similar incentives on paper, why is Dubai still the destination of choice? We argue it is due to three drivers: (1) speed, (2) culture and (3) Governance". Therefore, exploring the association between corporate governance and capital structure is extremely important, especially after the current financial crises, to enhance the efficiency of the UAE market. The results of this study are likely to attract the attention of the UAE policy makers and regulators to important issues related to corporate governance and capital structure. The UAE has recently initiated the application of international standards of corporate governance attempting to merge with the global economy (for more details, see Aljifri and Moustafa, 2007). By examining the association between internal and

external corporate governance mechanisms and capital structure, this research might direct the UAE authorities' attention to the key drivers of UAE firms' financial decision. This information is needed for developing a model an effective corporate governance system. In addition, determining those factors that have significant effect on capital structure decisions will assist policy makers and regulators to identify situations where efforts should be made to have a desirable effect on firms' financing decision. This paper extends the literature by revealing the impact of selected corporate governance mechanisms (mainly institutional investors and governmental investors) that have not been examined in such an environment and have not been used extensively in other environments.

Empirical analysis shows that the capital structure decisions are affected by three variables (i.e. institutional investors, firm size and dividend payout). The only corporate governance variable that is found to have a significant relation with the debt-to-equity ratio is the institutional investors variable. This relation is found to be negative, implying that firms with a high proportion of shares held by institutional investors are less likely to use debt financing. This supports the pecking order theory where firms prefer an internal source of financing (e.g. cash flows from operating activities) (Myers, 1984; Myers and Majluf, 1984).

The remainder of this paper is organised as follows. Section 2 reviews relevant capital structure theories. Section 3 discusses previous studies on the drivers of corporate capital structure and develops the research hypotheses. Section 4 describes our research method and data. Section 5 presents the empirical findings, and Section 6 concludes and suggests areas for future research.

## 2. Capital structure theories, literature review and hypotheses

Since Modigliani and Miller's (1958) capital structure irrelevance propositions, academic researchers have advanced a number of capital structure theories. These theories are extensive and can be classified into two groups: tax-driven theories and non-tax driven theories (Harris and Raviv, 1991). Tax-based theories include both bankruptcy and trade-off theories; while non-tax based theories include agency, signalling, pecking order and transaction cost theories. Due to the fact that there is no taxation in UAE, both bankruptcy and trade-off theories are irrelevant for the UAE business environment. Therefore, the paper reviews relevant capital structure theories.

### 2.1 Capital structure theories

*Agency theory.* The agency relation is defined as: "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decisions making authority to the agent" (Jensen and Meckling, 1976, p. 308). Agency theory looks at the conflicts of interest arising from the possible divergence between the principal (shareholders) and agent (manager) of firms. It is argued that managers have incentives to make investment decisions that reduce their employment risk or increase their compensation (Amihud and Lev, 1981; Baker *et al.*, 1988; Donaldson, 1984). Such agency problems lead to agency costs which are related to monitoring costs and other costs by the agent to assure shareholder that there will be no harm to their interest.

Based on the agency theory, debt financing can be used as a useful governance device in reducing the conflict of interests between the agent and principal (Jensen, 1986). In particular, debt can serve as a substitute mechanism to reduce the agency

costs of free cash flow available to managers by making them disgorge it to investors (Jensen, 1986; Kochhar, 1996).

*Signalling theory.* Asymmetric information costs exist when only manager possess private information about firm's return opportunities and at the same time shareholder do not have access to this information. Signalling theory suggests that the choice of the firm's capital acts as a signal to outsider investors of the information held by shareholders (Michaelas *et al.*, 1999). This indicates that outsiders will consider any meaningful change in capital structure as a signal for corporate potential performance. The theory assumes that firms should not send any false signals to the market, and consequently investors can differentiate among firms using such signals. The announcement of debt financing may be considered as a positive signal by shareholders. A debt issuance may signal that the firm has good financial prospects that managers do not want additional shareholders to share this potential profit (Ryen *et al.*, 1997; Koch and Shenoy, 1999). In addition, the debt issuance may signal that the firm will be able to pay dividend for current shareholders (Chang and Rhee, 1990).

*Pecking order theory.* The pecking order theory was developed in two pioneer academic papers (Myers, 1984; Myers and Majluf, 1984). The theory assumes that firms generally prefer internal to external finance. The theory is based on two practical assumptions (Myers, 2001). First, there is an information asymmetry between managers and shareholders. Second, firms would follow a pecking order in their financing, in which managers would prefer an internal source of financing (i.e. cash flows from corporate operations). If the cash flows from corporate operations are insufficient and external funds are required for capital investment, firms will issue the safest security first, this is, debt. Myers (1984) argues that firms would prefer debt financing rather than issuing equity because of lower information costs associated with debt financing. This leads to an increase in the debt-to-equity ratio. If there is a requirement of further external financing, firms work down from safe to riskier debt, perhaps convertible securities or preferred stock are used first, and when it is not reasonable to use more debt then equity will be the last option.

*Transaction cost theory.* Transaction cost theory mainly was developed by Coase (1937). Kochhar (1996, p. 715) explains that, "transaction cost economies is concerned with the governance of contractual relations in transactions between two parties (Coase, 1937; Williamson, 1975, 1985)". Each governance structure is associated with different levels of transaction costs. These include "costs arise from the setup and running costs of the governance structures, as well as other costs, such as those due to renegotiation, that arise from a shift in the alignment" (Kochhar, 1996, p. 715). He argues that transactions costs and benefits associated with different sources of finance are not the same. For example, although debt holders can push the firm into bankruptcy if the firm fails to meet its contractual obligations (i.e. repaying the principal and the interest), they have little control over managerial actions in ensuring that resources are efficiently used. On the other hand, the equity holders have control over managerial actions (i.e. they can monitor and evaluate managerial actions continuously). In addition, equity possesses stronger governance abilities than the debt instrument (Kochhar, 1996) and then transactions costs for equity issuance is usually higher than transaction costs for debt issuance. Furthermore, it is well known that large firms tend to have more transactions in the stock market compared with small firms. Therefore, this theory predicts that transaction costs of large firms are more likely to be lower than transaction costs for

small firms. Hence, large (small) firms are expected to use more (less) equity financing than debt financing.

### 2.2 Review of literature and research hypotheses

Prior research suggests several factors that affect firms' financing decision. For example, Titman and Wessels (1988) find that firm's size and profitability are negatively associated with the debt-to-equity ratio, while firm's asset tangibility is positively associated with the debt-to-equity ratio. These findings are consistent with transaction cost theory, pecking order theory and agency theory. Similarly, Rajan and Zingales (1995) find that the market-to-book ratio of assets and profitability ratio are negatively associated with the debt-to-equity ratio, while asset tangibility and firm's size are positively related to the debt-to-equity ratio. These results are consistent with pecking order theory, bankruptcy theory and agency theory. However, the negative relation between the market-to-book ratio of assets and the debt-to-equity ratio is inconsistent with agency theory. In addition, Delcours (2007) finds that asset tangibility is positively associated with capital structure choices and this finding is consistent with agency theory. Consistent with the pecking order theory Delcours (2007) also finds a negative association between profitability and capital structure choice. These empirical suggest that firm characteristics affect corporate capital structure choices.

Researchers also find that internal and external corporate governance mechanisms affect corporate capital structure decisions (Crutchley *et al.*, 1999; Gul, 1999; Wen *et al.*, 2002; Du and Dai, 2005; La Rocca, 2007; Driffield *et al.*, 2007; Al-Najjar and Taylor, 2008; Al-Najjar and Hussainey, 2011a, b). Although the relation between corporate governance and capital structure has been the subject of extensive research in developed countries, limited research has been carried out to investigate the issue in business environment of developing countries and even fewer such studies may be found in the middle eastern countries due to the unavailability of corporate governance data.

*Internal corporate governance mechanisms.* Board size. The board of directors is responsible for managing a firm's activities and making strategic decisions (i.e. the optimal capital structure mix). The relation between the number of directors on boards and corporate capital structure choices has been well established in prior accounting and finance research (see e.g. Mehran, 1992; Berger *et al.*, 1997; Wiwattanakantang, 1999; Wen *et al.*, 2002; Du and Dai, 2005; Abor and Biekpe, 2005; Al-Najjar and Hussainey, 2011a, b). However, the empirical evidence on direction of the association between board size and capital structure is mixed.

Mehran (1992), Berger *et al.* (1997) and Abor and Biekpe (2005) find that firms with larger board of directors generally prefer lower debt-equity ratios. Berger *et al.* (1997) argue that larger boards exert pressure on managers to follow lower debt-to-equity ratio and enhance firm performance. On the other hand, a positive and statistically significant association is found in Jensen (1986). This positive sign indicates that firms with a larger board size are more likely to use more debt to finance their activities than equity. Other researchers find no statistically significant relation between board size and debt-to-equity ratio (Wiwattanakantang, 1999; Wen *et al.*, 2002; Al-Najjar and Hussainey, 2011a). Wen *et al.* (2002) argue that firms with large boards are more likely to follow a policy of higher levels of debt-equity ratios to enhance firm value especially when these are entrenched due to greater monitoring by regulatory authorities. They also argue that large boards may find it difficult to reach a consensus

in decisions which can ultimately affect corporate governance quality of a particular firm (i.e. increasing agency costs). Hence, debt issuance is more likely to be used as a governance mechanism to reduce the conflict of interests between the agents and principals by reducing the agency costs of free cash flow available to managers (Jensen, 1986; Kochhar, 1996).

In UAE, the board size of large firms is more likely to be large (Aljifri and Moustafa, 2007). Prior research shows that large firms with large board size are expected to be profitable and have less potential for bankruptcy compared with small firms (e.g. Eisenberg *et al.*, 1998; Mak and Kusnadi, 2005). Aljifri and Moustafa (2007, p. 86) find that "UAE firms, on average, do not select their board members optimally which may lead to lack of coordination, communication, and cause decision making problems". Because of this situation in the UAE business environment, prior research argues that it is extremely difficult to reach a consensus in decisions in a UAE economic system and this might lead to increase agency costs and reduce firm performance (see Aljifri and Moustafa, 2007). Additionally, Anderson *et al.* (2004) argue that the cost of debt is generally lower for firms with large number of directors on their board. This is because larger boards provide greater monitoring of the financial accounting process (Anderson *et al.*, 2004). Anderson *et al.* (2004, p. 340) also explain that "one of the most important responsibilities of the board from a creditor's perspective is oversight of financial reporting. Because debt holders rely on accounting based covenants in lending agreements, creditors may have concerns with board and audit committee monitoring of the financial accounting process". Therefore, we expect that UAE firms with higher board size will use debt issuance rather than equity issuance to finance their activities. This should reduce agency costs for these firms. Thus the first hypothesis is formulated as follows:

*H1.* There is a positive relation between board size and the debt-to-equity ratio.

The relation between institutional investors and corporate capital structure decisions has received little attention in prior research. Jensen (1986) argues that institutional investors can reduce the agency costs by monitoring the corporate performance and by forcing managers to take decisions of the interests of shareholders. Lev (1988) argues that the institutional investors are well informed compared with individual investors. This is due to the fact that institutional investors have easy access to different sources of information. In addition, Demsetz (1983) and Shleifer and Vishny (1986) argue that institutional investors practice their voting rights to systematically monitor managers and monitor management team's performance effectively. Accordingly, Lakshmi (2009, p. 2) argues that: "The close monitoring of institutional investors may force managers to take decisions in the interests of shareholders. Their ability to pursue self interests may diminish. As a result, managers may be prevented from employing lower levels of debt to protect their employment risk".

Crutchley *et al.* (1999) provide evidence that the association between institutional investors and the debt-to-equity ratio is positive and statistically significant. This leads us to formulate the second research hypothesis as follows:

*H2.* There is a positive relationship between institutional investors and the debt-to-equity ratio.

Aljifri and Moustafa (2007) argue that the UAE government has significant ownership in many firms listed in either the Dubai financial market or the Abu Dhabi securities market. These firms have greater ease to secure funding from different sources and also have less pressure to comply with the financial reporting requirements. Therefore, government may force corporate managers to take decisions in the interests of shareholders. Consequently, managers will potentially avoid choosing lower levels of debt to guard their employment risk. Empirically, Gul (1999) finds a positive association between governmental ownership and debt financing. Therefore, the third research hypothesis is formulated as follows:

*H3.* There is a positive relationship between governmental ownership and the debt-to-equity ratio.

*An external corporate governance mechanism.* A number of relatively new papers have investigated the association between asymmetric information and corporate financial decisions (see Li and Zhao, 2008 for more details). In a recent study, Bharath *et al.* (2009) use a new information asymmetry index and study the degree of information asymmetry is considered as one of the determinants of corporate capital structure decisions. They contributed to the accounting and finance literature by offering the first evidence that asymmetric information drives the capital structure decisions of US firms. In particular, they find a positive relationship between their measure of asymmetric information and the debt-to-equity ratio. In other words, their findings show that US firms with higher levels of information asymmetry are more likely to use debt in financing their activities than equity.

Based on the above results, the paper investigates the role of the information environment on the capital structure decisions for a sample of UAE listed firms. The quality of external auditor is used as a proxy for the firm's information environment. Prior research finds that the quality of external auditor is negatively associated with information asymmetry. For example, Lee *et al.* (2007) and Hussainey (2009) find that when financial statements are audited by Big 4 firms, the levels of corporate information asymmetry between the firm and investors are reduced and hence investors can better anticipate future earnings in the stock market. Based on these arguments and empirical evidence, we formulate the fourth research hypothesis as follows:

*H4.* There is a negative relationship between the quality of external auditor and the debt-to-equity ratio.

### 3. Research method and data

#### 3.1 Research method

With the aim of examining the association between corporate governance internal and external mechanisms and corporate capital structure decisions, the debt-to-equity ratio is regressed on four corporate governance mechanisms and some control variables. The following model is used to test the four research hypotheses:

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

where  $Lev_{it}$  is our measure of the capital structure decisions which is defined as debt to equity ratio;  $\alpha$  is the intercept;  $\beta'$  is the slope coefficient estimates of regressors;  $X_{it}$  is the corporate governance variables (i.e. board size, institutional investors,

governmental ownership and audit type) and for firm  $i$  at time  $t$ . Our dependent and independent variables are defined in Table I.

Four control variables are considered in the regression model. These include Tobin's  $Q$ , profitability, firm size and dividend policy. Tobin's  $Q$  is used in prior research as a proxy for growth opportunity. For example, Shyam-Sunder and Myers (1999) find that corporate growth opportunity is negatively associated with the debt-to-equity ratio. This result is consistent with the theoretical prediction of the trade-off theory.

In addition, profitable firms are likely to have more retained earnings. Therefore, based on the pecking order theory, profitable firms would prefer internal financing sources over external sources. So a negative association between profitability and the debt-to-equity ratio is found in prior research (i.e. Kayhan and Titman, 2007).

Furthermore, it is argued that large firms are more mature firms; and less likely to bankrupt because of lower default risk than smaller firms (Elsas and Florysiak, 2008). Additionally, because of economies of scale, these firms face relatively lower cost per monetary unit raised externally. As a result trade-off theory argues that larger companies are more leveraged than smaller ones. This is because larger firms will bear lower cost of debt because of the economies of scale. Empirical research supports the positive association between leverage and firm size (see e.g. Rajan and Zingales, 1995; Frank and Goyal, 2003; De Jong *et al.*, 2008; Noulas and Genimakis, 2011; Al-Najjar and Hussainey, 2011a, b).

Finally, prior research found a negative relationship between dividend policy and capital structure. In particular, Jensen *et al.* (1992) and Aivazian *et al.* (2003) among those who argued that a firm's debt-to-equity ratio is a key factor explaining the firm's decisions to pay dividend. This result is supported by the agency costs theory of dividend policy. On the other hand, Chang and Rhee (1990) find a positive relationship between debt-to-equity ratio and corporate dividend policy, suggesting that "Firms with high payout ratios tend to be debt financed, while firms with low payout ratios tend to be equity financed" (p. 23). This result is supported by the signalling theory suggesting that a highly leveraged firm is more likely to pay more dividends to signal that it is financial healthy and it has the ability to pay off its future obligations. Our control variables are defined in Table I.

Variable	Definition
Leverage ( $Lev_{it}$ )	Debt to equity ratio
Board size	The number of executive and non-executive directors on the board
Institutional investors	The proportion of the ordinary shares held by the institutional investors
Governmental ownership	The proportion of ordinary shares owned by the government
Audit type	A dummy variable coded as 1 when firms' financial statements are audited by one of the four big auditing firms and 0 otherwise. Big 4 audit firms in the sample are Deloitte & Touche; Ernst & Young; KPMG and PricewaterhouseCooper
Tobin's $Q$	The market value of equity plus the book value of the debt divided by the book value of the total assets
Profitability	Net income divided by sales
Firm size	The natural logarithm of sales
Dividend policy	Dividend payout ratio

**Table I.**  
Definition of variables



### 3.2 Sample selection and data collection

Our study focuses on firms that are publicly listed in either the Dubai Financial Market or Abu Dhabi Securities Market in 2006. There is no obvious institutional or other reason for choosing any particular sample period. The year 2006 is chosen because it was the most recent year for which company annual reports were available at the time of undertaking this research[1]. Therefore, this study does not consider the impact of global financial crisis on capital structure.

At the end of 2006, the total number of UAE listed firms was 117. Companies in the banking, finance and insurance sectors (46 companies) were excluded because they are more regulated and have different capital structure mechanisms. The sample size is 71 companies. This represents approximately 61 per cent of the total population and 100 per cent of the total of the non-financial firms (see Table II). Firm characteristics and corporate governance information is hand collected from the firms' annual reports.

## 4. Empirical results

### 4.1 Descriptive analysis

Table III reports the minimum, maximum, mean and standard deviation for the continuous variables in the sample data of this study. A broad range of variation is evident in the sample. The table shows that the mean debt-to-equity ratio is 0.36. This indicates that UAE firms, on average, do not have high gearing. Mean profitability is positive (i.e. 0.32) indicating that UAE firms, on average, are profitable.

Sectors	No. of firms
All sectors	117
Banking and insurance sectors	46
The study sample	71

**Note:** The Abu Dhabi Securities Market and Dubai Financial Market use different sector classifications which make determining the number of firms in each sector difficult and not accurate

**Table II.**  
Sample selection

	N	Minimum	Maximum	Mean	SD
Debt equity	71	0.00	6.83	0.36	0.97
Board size	71	3.00	15.00	7.00	2.18
Institutional investors	71	0.00	0.99	0.30	0.023
Governmental ownership	71	0.00	0.80	0.11	0.19
Audit type – Big 4**	41	0.00	6.83	0.42	1.13
Audit type – non-Big 4**	30	0.00	3.98	301	0.73
Tobin Q (growth)	71	0.02	3.16	1.33	0.61
Profitability	71	0.01	0.93	0.32	0.24
Firm size <sup>a</sup>	71	7	21	13.19	2.09
Dividends payout	71	0.00	0.96	0.26	0.27

**Notes:** Variables definitions are reported in Table I.<sup>a</sup>Firm's size is measured by the natural logarithm of sales in the regression model used in this study. \*\*No significant difference was found, using a Mann-Whitney test, between the mean of the Tobin Q in firms engaging with Big 4 and firms engaging with other auditing firms.

**Table III.**  
Descriptive statistics

Mean institutional ownership is 0.30, while mean governmental ownership is 0.11 indicating that the governmental investors participate less in the ownership of UAE firms than institutional investors. Finally, the table shows that the financial statements of 41 firms are audited by at least one Big 4 accounting firm, while the financial statements of the remaining firms are audited by non-big audit firms.

#### 4.2 Regression analysis

Table IV present the empirical findings. It shows that the coefficient of determination ( $R^2$ ) is equal to 32 per cent and the adjusted  $R^2$  is equal to 18 per cent which means that a reasonable proportion of the variance is accounted for. The table also shows that the model reaches statistical significance as the  $p$ -value is  $<0.05$ . Tolerance values are calculated using  $(1 - R^2)$  for each variable. Since all values are more than 0.10, there is no issue of multi-collinearity between the independent variables (Menard, 1995). Also, all of the variance inflation factors for the independent variables are  $<10$ , suggesting that there is no multi-collinearity between these variables (Myers, 1990)[2].

Looking at the  $\beta$  coefficients for the independent variables, the table shows that the  $t$ -statistics with the largest absolute values are 3.366 ( $p$ -value  $<0.01$ ),  $-2.884$  ( $p$ -value  $<0.01$ ) and  $-2.259$  ( $p$ -value  $<0.05$ ), which relate to firm size, dividends payout ratio and institutional investors ratio, respectively. This indicates that the three variables have a comparable degree of importance in the model. In other words, these variables are the key drivers for the capital structure decision in UAE firms.

The variable of institutional investors has a negative effect on capital structure. This indicates that firms that have a large proportion of institutional investors have less debt to finance. This result does not support the "active monitoring hypothesis" of Demsetz (1983) and Shleifer and Vishny (1986) where institutional investors are expected to exercise their voting rights effectively in order to prevent managers from reducing their "employment risk" at the expense of the interests of shareholders. On the other hand, the result is consistent with of the study by Pound (1988) who

Descriptions	Expected significance	Coefficients			Collinearity statistics	
		$B$	$t$	$p$ -value	Tolerance	VIF
Constant		-0.968	-1.254	0.217		
Board size	-	-0.054	-1.480	0.147	0.884	1.131
Institutional investors	+	-0.008**	-2.259	0.029	0.754	1.327
Governmental ownership	+	-0.002	-0.420	0.677	0.898	1.114
Audit type	+	-0.065	-0.446	0.658	0.894	1.119
Tonin $Q$ (growth)	+	0.007	0.059	0.953	0.940	1.064
Profitability	-	-0.268	-1.376	0.176	0.803	1.245
Firm size	+	0.160***	3.366	0.002	0.642	1.557
Dividend payout	-	-0.002***	-2.884	0.006	0.633	1.579
Observation			71			
$R^2$			0.32			
Adjusted $R^2$			0.18			
$F$ -value			2.35**			
Durbin-Watson			2.06			

**Table IV.**  
Empirical findings

**Notes:** Variables definitions are reported in Table I. \*\*\*Significant at the 0.01 level; \*\*significant at the 0.05 level; \*significant at the 0.10 level

suggests that there is a strategic alignment of managers and institutional investors. Therefore, we reject our second hypothesis.

The model shows that the dividends payout ratio has a significant negative impact on capital structure. This result supports the theoretical expectation regarding the disciplining role of dividend payouts. This result can be interpreted in another way, and it can be argued that a firm with a high payout ratio is more likely to use up its opportunity to reinvest for future growth. In other words, the higher the dividends payout ratio, the less the retained earnings, and hence the more debt a firm may need. Then the question is why the relationship between the payout of dividends and capital structure is negative. One possible interpretation for this result is that paying out more dividends exposes firms to more monitoring. Moreover, higher payout can limit management discretion over free cash flow. This causes the negative association between the dividends payout ratio and debt-to-equity ratio.

Firm size is found to have a positive significant impact on capital structure. This is consistent with the findings of Klapper and Love (2004), Bohren and Odegaard (2003) and Larcker *et al.* (2004). This result may reflect an independent source of value creation, possibly due to market power and economies of scale and scope (Bohren and Odegaard, 2003). In addition, Aljifri and Moustafa (2007) find that large firms in the UAE have more resources (e.g. more skilled managers) compared to medium and small firms. These resources may help them to be more efficient and attractive to lenders. This indicates that large firms in the UAE tend to be more diverse in their debt management, and less likely to go bankrupt. Moreover, these firms are more likely to have a relatively lower cost for debt raised externally because of economies of scale (i.e. raising larger amounts of external finance).

At the same time, the corporate governance variables, government ownership, audit type and board size, were found not to have a significant impact on capital structure. So the first, third and fourth hypotheses are rejected. This result may be interpreted as indicating that the effective application of the appropriate principles and standards of corporate governance is limited in UAE listed firms. The quality of external auditors has no significant impact on capital structure. This is consistent with Aljifri's (2008) study who finds that there is no significant difference in the disclosure levels between firms engaging with the Big 4 audit firms and firms engaging with other audit firms. This suggests that audit quality has no impact on information asymmetry in UAE and hence does not affect firms' financial decisions. Finally, the findings show board size has a negative impact, although not significant, on capital structure. This might suggest that UAE firms, on average, may select board members who are more conservative in relation to financial risk.

## 5. Discussion and conclusions

The purpose of this study was to examine the impact of corporate governance mechanisms on firms' capital structure in UAE. The study found that institutional ownership is the key corporate governance mechanisms that drive capital structure decisions in UAE. Other internal and external corporate governance mechanisms have no impact on capital structure which could be a result of the absence of some important aspects of corporate governance practices and a lack of enforcement of rules in UAE.

The central conclusions from our empirical analysis suggest that the financing decisions of UAE firms are driven by three variables (i.e. institutional investors, firm size and dividend payout). The proportion of ordinary shares held by the institutional

investors is the only corporate governance variable found to have a statistically significant relation with debt-to-equity ratio. This relation is found to be negative which implies that firms who have a large proportion of institutional investors are less likely to meet their financing needs by using debt. This behaviour is compatible with the pecking order theory, according to which firms would prefer to use internal sources of financing, such as cash from operating activities.

The other corporate governance variables (board size, audit type and governmental investors) and other capital structure theories (i.e. trade off theory, bankruptcy theory, agency theory and transaction cost theory) are found to have no significant affect on capital structure decisions in the UAE. This is because of the different legal, institutional and cultural factors that shape the influence of corporate governance mechanisms on capital structure decision. For example, there is no tax in the UAE and hence as no tax shield effect of debt. Therefore, the trade off theory is not applicable to UAE. In addition, the corporate governance system is based on large shareholders, as in other developing countries, which makes the agency problem less severe and has only a weak affect on the capital structure decisions. This is because large shareholders manage these internal control systems and be responsible for approving operating and strategic management decisions of companies as well as pursuing a financing policy characterized as trading-on-equity (De Ocampo, 2000).

Our paper highlights the potential impact of the corporate governance system on the capital structure decisions for UAE non-financial listed companies. It extends the literature on the effect of firm-specific variables on capital structure decisions in the UAE by considering internal and external corporate governance mechanisms. This may help users of financial information to assess the impact of such variables in improving capital structure decisions. This study also indicates that there may be a need to encourage policy makers in the UAE to ensure that firms implement effective corporate governance mechanisms. This implementation should be appropriate for the UAE business environment while embracing international corporate governance standards. It is expected that the effective implementation of the codes of corporate governance will contribute to improve efficiency, effectiveness and governance in the UAE stock markets. Therefore, a real commitment is needed from all listed firms in the market, and this can only be achieved by improving the regulatory and enforcement frameworks.

Future research should be conducted taking into account other important corporate governance variables such as the level of ownership concentration, the percentage of outside board members, the existence of an audit committee, insider ownership, voting coalitions, product-market competition and other hidden cultural factors. Additional research might also be directed towards the effect of corporate governance mechanisms on the capital structure decisions of UAE firms using larger samples and longer time series.

#### Notes

1. Due to the fact that data are manually collected from the firms' annual reports; a time series analysis is not conducted in this study because of the high cost and the substantial effort needed for data collection.
2. A correlation analysis, supporting this finding, is omitted from the paper for reasons of space but is available from the corresponding author upon request.

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**Further reading**

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