“The impact of free cash flow, equity concentration and agency costs on firm’s profitability”

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THE IMPACT OF FREE CASH FLOW, EQUITY CONCENTRATION AND AGENCY COSTS ON FIRM'S PROFITABILITY

Abstract

This paper examines how free cash flow and equity concentration are associated with agency costs, and how they influence the profitability of insurance firms listed on the Saudi Stock Market. The results indicate that equity concentration has no significant impact on agency costs, free cash flow has no significant impact on agency costs and agency costs have no significant impact on firm's profitability. The findings of this study do not show any evidence to support the agency theory among insurance firms listed on the Saudi Stock Market.

Keywords agency theory, equity concentration, agency costs, firm's profitability, Saudi Arabia

JEL Classification G30, G34, L25, O25

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INTRODUCTION

The profitability of firms and the variables which affect the profitability occupy a significant part of corporate financial management literature. Many studies explore the impact of external factors such as economic growth or recession on the firm's performance, while others focus on the impact of internal management factors such as the ownership structure and the robustness of financial management. In addition to the economic variables, the degree and extent of corporate governance play a major role in deciding a firm's value. The agency costs stem from the conflict of interests between the stockholders and managers. The incomplete contractual relationship between the owners and the management is the primary cause of agency costs (Bearle and Means, 1932; Jensen and Meckling, 1976). Often, the size of the firm and ownership structure influence the existence and amount of agency costs. The agency theory concludes that block holders can mitigate the agency costs by their control on the corporate board and the selection of top management (Brickley et al., 1994; Chen and Yur-Austin, 2007). The Middle East firms are historically characterized by the concentration of family control and they remain less explored compared to the firms in developed stock markets in research areas such as agency costs and equity concentration and their influence on firm's performance (Samargandi et al., 2014).

Saudi Arabia is a key member of the Organization of the Petroleum Exporting Countries (OPEC) and is the largest economy in the Middle East. Petroleum and related industrial activities account for a major share

of the Gross Domestic Product (GDP) of the country. Since the oil price started its rally in 2014, there are major economic policy changes that have affected the nature of decision making in the firms. These changes call for more alert and vigilant corporate financial management to tide over the consequences of the oil price crisis and the geopolitical disturbances in the region.

The Capital Markets Authority of Saudi Arabia (SAMA) formed in 2004 controls the Saudi Stock Market and has established the rules and regulations to safeguard the interests of the investors and to ensure fairness in the stock market transactions. The Saudi Stock Market was mostly informal during the 1970s with only 14 companies listed. In 1984 the government created a Ministerial Committee to develop and regulate the market which led to the formation of the Saudi Stock Exchange (Tadawul) in 2007. A closer look at the stock market data demonstrate that the market still has fewer listings relative to the size of the Saudi economy and the number has grown only slowly over time (Rahman et al., 2015). In Saudi Arabia, the majority of firms listed in the stock exchange are not available for trading. This is attributed to the large scale government or semi-government ownership in the firms. Also, the majority of firms do have passive owners who are not actively involved in the buying and selling of shares (Masoud and Hardekar, 2014). Nevertheless, the Saudi Stock Market has made significant progress in facilitating and sustaining firm's growth in value and supports the services of other financial sectors to the corporate world (Balcilar et al., 2013). Thus, the Saudi Stock Market behaves differently from the majority of global stock markets but reflects changes in the stock markets of other Gulf Cooperation Countries (GCC).

The future performance of the Saudi economy would strongly depend on the targeted economic development and financial activities in the non-oil sector especially in the area of services in the current economic situation. The main objective of this study is to examine the impact of equity concentration on agency costs, the impact of free cash flow on agency cost, as well as the impact of the agency costs on the performance of insurance companies listed on the Saudi Stock Market. Our data were primarily collected from annual reports and audited financial statements of the years 2010-2013 and acquired from the Saudi Stock Market website. The final sample of this study includes 140 firm-year observations.

The rest of the paper is organized as follows section 1 discusses relevant literature supporting the current study, while section 2 explains the methodology and tools. Section 3 of the paper presents the major findings of the study.

1. LITERATURE REVIEW

The ownership structure which is determined by the distribution of equity affects the corporate performance and the level of corporate governance. The principal-agent relation between the shareholders and the management is complex and a conflict of interest may arise when the shareholders are interested in maximizing the firm's value while the managers are interested in maximizing their personal returns. This conflict leads to the emergence of agency costs. Thus, the agency theory concentrates on directing the management towards stockholder interest by reducing the agency cost (Bearle and Means, 1932). In this section, the literature exploring the relation between ownership structure, agency costs and firm's profitability, both in the global and the regional context, is reviewed.

1.1. Review on the relationship between ownership structure and firm's profitability

An early study used the concepts of inside equity (managers), outside equity and debt to define ownership (Jensen and Meckling, 1976). Further, it was suggested that ownership structure of a firm can be constructed using variables including proportion of foreign share ownership, managerial ownership percentage, largest institutional shareholder ownership, largest individual ownership, and government share ownership (Zheka, 2005). Managers' investment in the company includes the stock options given, as incentives or as partial owners, as well as their professional capital. When managerial stock increases, it reduces the value of the component of management wealth held in

stock, because higher liquid balances reduce variance of return and, hence the value of stocks (Galai and Masulis, 1976). Some studies report that insider ownership plays a significant role in determining cash holdings (Luo and Hachiya, 2005) which contradicts an earlier research which proved this relation to be not significant (Papaioannou et al., 1992).

Empirical research investigating the connection between managerial ownership and firm's performance led to mixed conclusions. Some researchers have reported that there is no significant relation between managerial ownership and firm's value (Demsetz and Lehn, 1985, Demsetz and Villalonga, 2001). Some studies favor a non-linear relation between the two variables which is supported by the 'convergence of interest hypothesis' with the assumption that positive relationship between managerial ownership and corporate performance and 'managerial entrenchment hypothesis' suggest that higher managerial ownership does not necessarily increase firm's value (Morck et al., 1988). Many other researchers also explored the relation between the ownership structure and firm's value empirically (Hermalin and Weisbach, 1991; Cui and Mak, 2002; Davies et al., 2005). These studies have considered managerial ownership as exogenous to the firm, whereas some other researchers have treated it as an endogenous variable (Cho, 1998; Himmelberg et al., 1999).

Explaining the relationship between institutional ownership and corporate performance, it was found that institutional ownership contributed positively to the corporate performance on account of the ability of the institutional investors to use expert and cost-effective monitoring of the management's actions (Pound, 1988). However, the business relationships of the institutions with the firm in which they hold shares may hamper this positive relationship. Further, they may develop mutually beneficial relationships, which may eventually bring the firm's value down. Thus, the impact of institutional ownership on firm's value is complex. Synthesizing the results of several studies, we can infer that when the managerial ownership is lower, the wealth of management invested in the company would be lower and this may lead to managerial decisions, which would waste cash and, hence, would destroy value. As the managerial interest grows, managers' wealth invested in the company would be higher and managers would have more at stake and would be motivated to preserve the value of the firm through prudent application of cash reserves. They also commented that corporate governance institutions have to be vigilant in streamlining the management behavior towards increasing firm's value rather than furthering their self-interest (Fama, 1980; Fama and Jensen, 1983; Demsetz, 1983; Morck et al., 1988; Cui and Mak, 2002; Cornett et al., 2007; Acharya and Bisin, 2009; Ozkan and Ozkan, 2002).

1.2. Review on the relationship between agency costs and firm's profitability

The concept of agency costs is based on the premises of existence of conflict of interest between the management and stockholders. The divergence of the interests of the management and the shareholders may lead to inefficiency in management and, hence, it becomes necessary for the shareholders to find ways of monitoring and minimizing such divergence. This leads to the emergence of agency costs, which are essentially the costs of monitoring for the conflict of interests between the managers and the shareholders. Academicians have examined the issue of agency costs from different perspectives.

Early literature on the agency problem attempted the measurement of agency costs through the monitoring cost of managerial actions, bonding costs of restrictive covenants and residual loss due to suboptimal managerial decisions. It was Jensen (1986) who associated Free Cash Flows (FCF) with agency costs. The Free Cash Flow (FCF) is the difference between operating cash flows and the sum of capital expenditure, inventory cost and dividend payment. This is the amount of idle cash flow available at the management's discretion without affecting the operation of the firm. It was argued that too much of FCF leads to agency cost due to internal wasteful use of corporate resources. Studies attributed the failure of the US companies to meet the return on investment criteria in 1986 mainly to FCF (Jensen, 1986; Jensen, 1993). Further, researchers commented that abuse of FCF in the hands of managers influence stock valuation and corporate profitability negatively (Chung et al., 2005).

However, all empirical research does not support the positive relation between FCF and agency costs. After the data of public listed companies on Taiwan Stock Exchange were examened, it was concluded that there is a significant effect of FCF on agency costs but the direction of the effect may vary (Wang, 2010). On the one hand, there may be an increase in agency costs, while, on the other hand, there may be a decrease due to increases in the operational efficiency. Further, positive impact may be due to the increase in investment opportunities for the idle cash, which results in increased value for the firm. Similar results were reported by several other authors as well (Gregory, 2005). Also, the FCF calculation process is criticized for its lack of accounting precision.

1.3. Review on the relationship between ownership structure and agency costs

It was suggested that altering the ownership structure so as to increase the debt capital, thereby pressurizing the management to increase the firm's value would reduce agency costs. However, Wang (2010) pointed out that this solution itself may enhance the agency costs due to incentive effects (the debts may influence the investment decisions and cause opportunity wealth loss), monitoring costs, bonding costs paid to monitor adverse behavior of managers and bankruptcy and reorganization costs. Many other researchers also advocated this type of refraining approach despite criticism (Jensen and Meckling, 1976; Kester, 1986; Gul and Judy, 1998).

However, it was later confirmed that greater representation of owners other than the Board of Directors reduced agency costs (Gao and Kling, 2000) and it was suggested that greater analyst would help firms to fight agency costs (Doukas et al., 2000). However, a study using UK data pointed out that greater analyst following helped in reducing the agency costs only for small firms (McKnight and Weir, 2009). Thus, size of the firm was identified to be important in dealing with agency costs. In addition, it was proposed that corporate takeover or distribution of the idle cash flows to stockholders by stock repurchase or dividend payments could discourage the self-motivated behavior of the management (Shleifer and Vishny, 1991; Bethel and Liebeskind, 1993). The researchers who supported the encouraging approach, suggested that increasing the shares held by the management will change the management's action more in favor of the stockholders (Lehn and Paulsen, 1988; Dial and Murphy, 1994).

The literature related to the impact of ownership and management on the corporate performance is scant in the Middle East. Exploring owner-controlled and manager-controlled firms' performance in the United Arab Emirates (UAE) confirmed the agency cost theory and proved that owner-controlled firms perform better than manager-controlled firms. Further, it was demonstrated that government control positively contributed to corporate performance (Moustafa, 2005; Al Jifri and Moustafa, 2007). Later, it was identified that the relationship between the managerial ownership and corporate performance was not significant (Ellili, 2012). In Saudi Arabia, after examining the relation between ownership structure and dividend policies, it was identified that there is a positive and significant association between institutional ownership and composition of the Board of Directors (Soliman, 2013). Another study using the data related to 11 industrial and non-industrial sectors in Saudi Arabia found that ownership concentration is positive but the effect on performance measured by ROA (Return on Assets) is not significant (AlGhamdi and Rhodes, 2015).

Studies which explore how equity concentration and free cash flow influence agency costs, as well as how the agency costs influence the performance of insurance companies in the Saudi Arabian context are scant. It is this gap that the current paper attempts to fill.

2. RESEARCH TOOL AND METHODS

In this study, the variables are divided into four groups: the equity concentration variable, agency costs variable, free cash flow variable, performance variable, and control variables of size and leverage (see Table 1 below).

Table 1. Variables and measures

Variable	Proxy	Notation	Measure
Equity concentration	Major shareholders ownership	ec	The percentage of stocks owned by major stockholders
Agency costs	Sales to total assets	sta	Sales/Total assets
Free cash flow	Net cash flow	fcf	Operating cash flow – cash flow from investing activities
Performance variable	Return on equity	roe	Net profit/Total equity
Leverage	Total debt to equity	tde	Total debt/Total equity
Size	Logarithm of total assets	lta	Logarithm of total assets

Note: Table 1 describes the variables included in this study and how we measure them.

To investigate the relationships between the variables, a two-steps robust generalized method of moments (GMM) system estimation as applied to dynamic panel data is employed. The GMM system estimation is usually used in the estimation of autoregressive models, because it provides more accurate estimates compared to other techniques (Arellano and Alvarez, 2004) such as the estimation methods proposed by other researchers (Blundell and Smith, 1991; Alvarez and Arellano, 2003; Lancaster, 2002); Hsiao et al., 2002). Yet, these estimators require that the error variances remain constant through time consistency and the lack of robustness to time series heteroscedasticity is an important limitation of such estimators. In this paper, the method applied guarantees control for missing or unobserved variables and relationships (Arellano-Bond, 1991; Matyas and Sevestre, 1996). It also allows dynamic effects to be incorporated into the model and allows feedback from both current and past shocks (Hsiao, 1986; Gocer et al., 2014). In addition, the estimators of this model allow the inclusion of external instruments.

This estimation approach in our model leads to the following estimation equations:

$$sta_{it} = \alpha + \beta_1 sta_{it_{-1}} + \beta_2 tde_{it} + \beta_3 lta_{it} + \\ + \beta_4 ec_{it} + \beta_5 fcf_{it} + \varepsilon_{it}, \quad (1)$$

$$roe_{it} = \alpha + \beta_1 roe_{it_{-1}} + \beta_2 tde_{it} + \beta_3 lta_{it} + \\ + \beta_4 sta_{it} + \varepsilon_{it}, \quad (2)$$

where (sta_{it}) is the first difference of sales to total assets used as the proxy of agency costs. The independent variables in the first model include the differenced lagged dependent variable; ($sta_{t_{-1}}$) which is the differenced lagged dependent variable of sales to total assets. The independent variables in model (1) also include (ec_{it})which is the first difference of equity concentration calculated as the percentage of stocks owned by major stockholders and (fcf_{it}) the first difference of free cash flow measured by cash flow from operating activities minus cash flow from investing activities (the cash flow from financing activities is usually equal to zero in most of banks). The first model also includes a control variable of size (lta_{it}) measured by the first difference of the logarithm of total assets, and a control variable of leverage (tde_{it}) measured by the first difference of total debt to equity. (roe_{it}) in model (2) is the first deference of return on equity and ($roe_{t_{-1}}$) is the differenced lagged dependent variable of return on equity, (ε_{it}) in the two models is the error term and (α) is the intercept.

We hypothesize a significant and negative relationship between equity concentration and agency costs, significant and negative relationship between free cash flow and agency costs and significant and negative relationship between agency costs and performance of insurance companies listed on the Saudi Stock Market in this study (Wang, 2010).

3. FINDINGS OF THE STUDY

In this section, we present the findings of the relationship between equity concentration, free cash flow and agency costs and the relationship between agency costs and profitability of insurance companies listed on the Saudi Stock Market for the period 2010–2013.

Table 2. Results of dynamic panel data two-steps robust system estimation

Model 1		Model 2	
Dependent: Agency Costs		**Dependent: Return On Equity**	
Regressors	**Coefficients**	**Regressors**	**Coefficients**
Lagged dependent	.1706835	Lagged dependent	-.1827311
Equity concentration	-.5934021	Agency costs	-.2358523
Free cash flow	-7.08e-08	Size	-.255889
Size	.2287943	Leverage	-.0342213
Leverage	.0062694		

Note: Table 2 reports the results of the dynamic panel data two-steps robust system estimation for the impact of equity concentration and free cash flow on agency costs as well as the impact of the agency costs on the performance for a sample of 140 firm-year observation for insurance companies listed on the Saudi Stock Market for the period 2010–2013. Dependent and independent variables are in the form of first difference. * Significant at 95% confidence level, ** significant at 99% confidence level.

The results of the lagged dependent variable in the first model show that the insurance firms' agency costs in the previous period have no effect on the insurance firms' agency costs in the current period, the coefficient of the lagged dependent variables in the first model is positive and not significant. While the coefficient of the lagged dependent variable in the second model is negative and not significant, this indicates that performance in the previous period has negative but not significant effect on insurance firms' performance in the current period. The results confirm that the equity concentration and free cash flow have no significant effect on agency costs and agency costs have no significant effect on insurance firms' performance. The results also show that the coefficients of both size and leverage in the two models are not significant. The finding of this study did not show any evidence to support the agency theory among the insurance firms listed on the Saudi Stock Market.

CONCLUSION

This paper measured the agency costs and analyzed whether they were influenced by equity concentration and free cash flows, and then we investigated their impact on the performance of insurance companies listed on the Saudi Stock Market for the period 2010-2013. Our findings would benefit the Central Bank to develop the corporate governance framework and guidelines to reduce the conflicts of interest in order to ensure the maximum shareholders' wealth and the highest levels of performance.

To the best of our knowledge, there is no single research conducted in the Kingdom of Saudi Arabia (KSA) about the impact of the agency costs and performance of insurance companies. Therefore, our research provides the very first observation regarding this topic. The robust GMM two-step dynamic panel data analysis method is employed to analyze the impact of the equity concentration and free cash flow on the agency costs, as well the impact of agency costs on insurance firms' performance. Our empirical results show that the equity concentration and free cash flow have no significant effect on agency costs, and agency costs have no significant effects on insurance companies' performance. Our study finds no evidence to support the agency theory among the insurance companies listed on the Saudi Stock Market. This study contributes to the existing literature and provides a better understanding of the relationship between equity concentration, free cash flow, agency costs, and insurance companies' performance of an emerging market in the Middle East.

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