Corporate Governance: The International Journal of Business in Society

The mediating effect of dividend payout on the relationship between internal governance and free cash flow
Moncef Guizani,

Article information:

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

The mediating effect of dividend payout on the relationship between internal governance and free cash flow

Moncef Guizani

Abstract

Purpose – This paper aims to examine the mediating effect of dividend payout on the relationship between internal governance mechanisms (board of directors and ownership structure) and the free cash flow level.

Design/methodology/approach – Linear regression models are used to investigate such relationships applying data from a sample of 207 non-financial firms listed on the Gulf Cooperation Council countries' stock markets between 2009 and 2016. To test the significance of mediating effect, the author uses the Sobel test.

Findings – The author finds a partial mediation effect of dividend on the relationship between both board independence and managerial ownership and the level of free cash flow. The results confirm the major role of outside directors in corporate governance. This governance mechanism contributes to the protection of shareholders' interests through a generous dividend policy. However, the author finds that large managerial shareholdings increase the level of free cash flow through lower dividend payouts. This result suggests that powerful managers follow their preference of retaining excess cash to their own interests.

Practical implications – This paper offers insights to policy-makers of emerging economies interested in the development of the corporate governance. This study provides guidance for firms in the construction and implementation of their own corporate governance policies.

Originality/value – The main contribution of the present paper is to examine the dividend payout as a potential mediating variable between internal governance mechanisms and free cash flow. Moreover, it highlights the issue of efficient management of substantial funds in Sharia-compliant and non-Sharia-compliant firms.

Keywords Corporate governance, Board of directors, Corporate ownership

Paper type Research paper

Moncef Guizani is Assistant Professor at the Department of Business Administration, College of Sciences and Humanities Slayal, Prince Sattam Bin Abdulaziz University, Slayal, Saudi Arabia.

1. Introduction

How firms limit their free cash flow (FCF) in the face of low investment opportunities is one of the most important research topics in financial economics. This is the case because low investment opportunities can distort the efficient allocation of internal funds and destroy firm value. When firms have limited investment opportunities, cash holdings are largely at risk of being diverted by managers in projects that benefit them personally, thereby damaging the interests of shareholders (Easterbrook, 1984; Jensen, 1986; Dittmar *et al.*, 2003). The FCF hypothesis of agency theory suggests that excess cash reserves increase managerial discretion and provides managers with the incentive to pursue their own interests. The problem stems from self-serving managers who divert cash flow to benefit themselves at the expense of shareholders. Myers and Rajan (1998) suggest that managers tend to retain more private benefits from liquid assets, and Byrd (2010) argues that FCF is available to managers for discretionary purpose. Opler *et al.* (1999) highlight managers' preference for

| CORPORATE GOVERNANCE |

the control that comes with holding high levels of cash reserves. Apart from using FCF to invest in projects with negative net present value (NPV), Kadioglu and Yilmaz (2017) suggest that managers tend to make unnecessary expenditures that benefit themselves at the expense of shareholders' interests. According to Labhane and Mahakud (2016), the excess amount of FCF in the hands of managers increases the agency cost, as they are free to use these financial reserves for their own interests. To avoid any wasteful expenditure, shareholders of such firms monitor the activities of managers. These monitoring activities increase the firm cost of monitoring and hence increase the agency cost.

One of the ways to reduce the FCF problem is to pay out more of these substantial cash flows as dividends (Fairchild, 2010). Agency theory suggests that outside shareholders prefer dividends to retained earnings because insiders might squander cash retained within the firm (Easterbrook, 1984; Jensen, 1986; Myers, 2000). Distributing cash to shareholders reduces the chance that the managers may use the available resources inappropriately (Jensen, 1986; Lang and Litzenberger, 1989). Kadioglu and Yilmaz (2017) argue that dividends help check managers and create a discipline mechanism without the direct intervention of shareholders. In parallel, studies in finance suggest that payouts lower retained earnings and hence increase the need of managers to go to financial markets to raise funds, where monitoring is offered at lower costs. (Easterbrook, 1984; Jensen, 1986; La Porta et al., 2000; DeAngelo et al., 2006; Denis and Osobov, 2008; Guizani, 2014). To the extent that external financial markets play a monitoring role, they presumably reduce managers' incentives to engage in wasteful consumptions.

On the other side, some studies identify a number of governance mechanisms that realign the interests of agents and principals and so reduce agency costs. McKnight and Weir (2009) argue that there is a range of optimal governance structures that are consistent with performance maximizing (agency cost minimizing) outcomes. Richardson (2006) finds a positive relationship between over-investment and FCF, which is consistent with the agency cost explanation. In this context, the author suggests that certain corporate governance structures appear to mitigate the problems associated to over-investment.

Beyond the direct effect of governance mechanisms on the FCF, I argue that these mechanisms can indirectly influence the excessive cash flow through dividend payouts. In this respect, La Porta et al. (2000) suggest that having sound corporate governance practices in place can facilitate the redistribution process of excess cash flows in favor of shareholders' wealth. The authors discuss two opposing models of the relation between a firm's corporate governance quality and its payout policy: the outcome model and the substitute model. In the outcome model, the payment of dividends is the result of effective governance. Good governance reduces any misallocation of funds and makes expropriation from shareholders more difficult. Accordingly, shareholders successfully pressure managers to distribute excess cash (La Porta et al., 2000; Mitton, 2005; Jiraporn and Ning, 2006; Adjaoud and Ben-Amar, 2010). In contrast, the substitute model stipulates that the payment of dividends replaces other corporate governance mechanisms in mitigating agency conflicts. In the extent that better-governed firms are associated with lower agency costs, they are less likely to use dividends as a device to mitigate managers–shareholders conflicts (La Porta et al., 2000; Hwang et al., 2013; John et al., 2015).

Overall, previous studies have established two keys sets of relationships. To begin with, there are a number of corporate governance characteristics that are known to have effects on FCF (Richardson, 2006; McKnight and Weir, 2009). This relationship emerges according to the role of corporate governance mechanisms in monitoring the firm's managers. The second key relationship that has been studied in the literature is that of dividends and FCF. As previous research has shown, the firm's dividend payout is typically related to redistribution process of excess funds (La Porta et al., 2000; Mitton, 2005; Jiraporn and Ning, 2006;

Adjaoud and Ben-Amar, 2010; Hwang *et al.*, 2013). Thus, both corporate governance and dividends are related to excess funds redistribution.

What is less clear from the existing research is whether dividends play a mediating role in the relationship between corporate governance and FCF levels.

To tackle this issue, the present study tries to answer to the following question: does dividend payout mediate the effects of corporate governance factors (board size, board independence, chief executive officer [CEO] duality and managerial ownership) on FCF level?

We carry out this study taking into account for the philosophy under which the business is conducted. We distinguish between *Sharia*-compliant (SC) and non-*Sharia*-compliant (NSC) firms that operate under different sets of principles and rules. SC firms possess certain financial characteristics that can adversely affect the excessive cash flow available to managers. For instance, among the requirements for a firm to be SC is to have low leverage, low amount of account receivables and low amount of cash and interest-bearing securities. Accordingly, these different business philosophies may have an important effect on substantial funds.

This paper contributes to the existing literature in several important ways. First, to the best of our knowledge, it is the first study that examines the dividend payout as a potential mediating variable between corporate governance and FCF. Second, it highlights the issue of efficient management of substantial funds in SC and NSC firms. Thus, this paper can provide more insights into how dividend policy and internal governance mechanisms can solve the agency problems of FCF in SC and NSC firms. Finally, examining the mediating role of dividend policy in the relationship between internal governance mechanisms and FCF level in emerging markets is also important because the governance structure and financing environment in these markets have some unique characteristics.

The remainder of the paper is organized as follows. Section 2 presents an in-depth literature review and discusses the research hypotheses. Section 3 describes the data and methodology. The results and the associated discussions are presented in Section 4. Conclusions and implications are presented in Section 5.

2. Literature review and hypotheses development

2.1 Corporate governance in the Gulf Cooperation Council region: brief overview

The Gulf Cooperation Council (GCC) has already started to take steps toward developing and improving its corporate governance systems. According to Abdallah and Ismail (2017), the GCC governance codes have similar provisions, particularly in board composition. We notice that all GCC countries have codes that require setting up an Audit Committee composed mostly of independent non-executive directors. However, among GCC countries, only Qatar, Saudi Arabia, and UAE have Codes that recommend ongoing professional board development programs for directors.

In a comparison between the GCC corporate governance codes, Shehata (2015) shows that all GCC countries require majority (or at least 50 per cent) of the directors to be non-executives, as well as separating the roles of the CEO and chairman. They also require at least one-third of the board members to be independent. The number of members on the board is only determined in Bahrain and Saudi Arabia, where the other countries do not address this issue in their codes. Concerning board independence, all codes require independence of the board members in terms of their being former employees or senior executives[1].

With regard to ownership, Farooq and Derrabi (2012) report that the GCC governance machinery relies on a control-based system, which is characterized by significant insider ownership, concentrated shareholdings, low transparency levels and a strong inclination

towards family finance. In the same vein, Abdallah and Ismail (2017) report that family ownership is the foundation of the GCC economy, as family businesses in the region generate around 80 per cent of gross domestic product outside the oil sector.

On the other side, Pillai and Al-Malkawi (2017) reveal that the GCC countries follow a civil law legal system, which is deeply influenced by strong political and cultural ties. As argued by Fan and Yu (2012), the governance system in civil law countries relies extensively on internal monitoring mechanisms.

2.2 Internal governance mechanisms and free cash flow

According to existing literature, it is difficult to prove a direct relationship between the internal governance mechanisms and the level of FCF. However, it has been shown that these mechanisms can act on firm performance and corporate cash holdings. This study relies on two internal governance mechanisms: the board of directors and the ownership structure.

Beginning with Jensen (1986), many studies have found that agency costs are high when high FCFs are combined with poor growth opportunities. Managers have preferences to reduce their needs for capital markets by retaining substantial cash flows. Consequently, the ability of the capital market to monitor management decisions will be limited, which increases managerial discretion.

Previous studies have focused on comparing the performance of companies relating to their investment opportunities and their internal governance mechanisms. With reference to the board of directors, researchers identify three key board characteristics that could affect agency costs, the board size, duality and the percentage of non-executive directors. With regard to the board size, Jensen (1993) suggests that larger boards create agency costs, give rise to free rider problems and cause delay in making good decisions and in actively supervising the firm. According to the author, larger boards are subject to high levels of conflicts as a result of a less cohesive relationship and understanding among the board members. Accordingly, as argued by Fresard and Salva (2010), when governance mechanisms are poor, self-interested managers have the ability to use corporate resources in favor of their own interests. Excess cash enables them to take actions that benefit themselves by spending on unprofitable investments. Because cash reserves are easier to expropriate than other assets, turning excess cash into personal benefits is easier than transferring other assets to private benefits (Myers and Rajan, 1998).

Overall, smaller boards are favored in the findings. Studies by Lipton and Lorsch (1992) and Jensen (1993) show that smaller boards can be seen as a better tool to govern the firm. As suggested by the authors, large boards suffer from free riding problems, and consequently, they are less active in providing monitoring activities. In a same vein, Lasfer (2002) finds that the large size of the board negatively affects the performance of firms with low growth opportunities. Garcia-Ramos and Garcia-Olalla (2011) suggest that reasonable board size is more effective in controlling the firm, while a bigger board negatively affects the firms' performance. According to Lee and Park (2016), a well-functioning board enhances the firm transparency and reduces the likelihood that insiders waste cash for their personal benefits. In the GCC context, prior studies by Naushad and Malik (2015), Al-Matari et al. (2012) and Aljifri and Mustafa (2007) report a negative relationship between board size and firm performance:

 H1a. A small size of the board of directors contributes to the reduction of the free cash flow level.

On the other side, to reduce the manager's discretion and ensure the effectiveness of the board in limiting the misuse of FCF, Jensen (1993) recommends the separation of the functions of chairman of the board (COB) and CEO. The author considers duality as

undesirable because it gives one person too much power potentially over the decision-making process. CEOs holding the chairperson title will lead to ineffective monitoring of the management by the board. They may use their increased power for rent extraction (Broye *et al.*, 2017). However, separating these roles is seen as an essential key in ensuring good corporate governance. Agency theory argues that dual leadership structure reduces agency costs of FCF. According to managerial power theory, CEOs having a combined operational and supervisory role may use their increased power for rent extraction (Bebchuk and Fried, 2004). In this context, Fresard and salva (2010) suggest that when CEOs have sufficient control rights over corporate decisions, cash holdings are largely at risk of being diverted out of the firm. In contrast, Broye *et al.* (2017) consider that separating the positions of COB and CEO is an essential key to ensure good corporate governance. Studies by Richard and Nelson (1999) and Lasfer (2002) find that this separation positively affects the performance of firms with low growth opportunities and allows, therefore, limiting agency problems of FCF. In the GCC region, Al-Malkawi and Pillai (2013) suggest that the business culture entails a single-tier board system because of a family-dominated ownership structure and does not permit a third party to assume executive role. Their empirical evidence shows an inverse relationship between CEO duality and firm performance:

H1b. The separation of the positions of CEO and COB contributes to the reduction of the free cash flow level.

Besides, the structure of a board is an essential part of governance mechanisms (Jensen, 1993). Numerous studies support the view that non-executive directors act independently as monitors to protect the interest of shareholders and that corporations perform better when the board includes more outside directors (Fama and Jensen, 1983; Hermalin and Weisbach, 1988; Byrd and Hickman, 1992; Brickley *et al.*, 1994, Arslan *et al.*, 2010; O'Connell and Cramer, 2010). As effective monitors, independent directors are most likely to provide active monitoring (Adams *et al.*, 2010; Jensen and Meckling, 1976; Rosenstein and Wyatt, 1990). Accordingly, managers are expected to safeguard shareholders' interests, and one of the ways they can do this is to limit the amount of cash reserves under their control (Raheja, 2005; Seifert and Gonenc, 2018). In a same vein, Belkhir *et al.* (2014) hypothesize that independent directors mitigate the agency costs associated with cash holdings and compel managers to spend wisely. In the presence of effective boards of directors, insiders are less inclined to spend excessive funds on perquisites or low return projects. Their empirical findings reveal that investors are more likely to discount the value of excess cash held by firms with low corporate governance. This value discount is, however, less pronounced in firms with more independent boards. Overall, Belkhir *et al.* (2014) argue that independent boards seem to be effective in mitigating investors' concerns about any misallocation of funds. This leads to the following testable hypothesis:

H1c. The presence of outside directors contributes to the reduction in the free cash flow level.

Concerning ownership structure, the agency theory highlights the fundamental role of managerial ownership in mitigating shareholders–managers conflicts. According to Jensen and Meckling (1976), there is a convergence of interests between shareholders and managers as the manager's ownership increases. Similarly, Jensen (1986) argues that managerial ownership reduces the risk of wasting substantial funds. Hence, higher managerial ownership should reduce agency costs. According to the incentive-alignment effect, managers are less likely to divert resources away from value maximization as their ownership increases. Accordingly, one would expect a negative relationship between managerial ownership and cash holdings (Ozkan and Ozkan, 2004).

In contrast, Stulz (1988) suggests that large insider holdings aggravates, rather than mitigates, the agency conflict between shareholders and managers. Holding a large block

of stocks, the manager can hinder the control function of the takeover process and thereby entrenches himself. In the same way, Morck *et al.* (1988) argue that high levels of managerial ownership could lead to entrenchment, as outside shareholders find it difficult to control the actions of such managers. Berger *et al.* (1997) define entrenchment as the extent to which managers fail to experience discipline from the full range of corporate governance and control mechanisms. At a certain level of ownership, entrenched managers have sufficient control to follow their own objectives without fear of discipline from other ownership interests. In this context, Myers and Rajan (1998) suggest that self-interested managers want to hold cash assets because they are less costly in transferring them to private benefits than other assets. Similarly, Elyasiani and Zhang (2015) find that entrenched managers prefer liquid assets because they provide resources to pursue personal objectives. Jiang and Lie (2016) also reveal that self-interested managers are reluctant to pay out excess cash unless the firms are subject to external pressure. The findings of Ozkan and Ozkan (2004) reveal a non-monotonic relationship between managerial ownership and cash holdings. Cash holdings first fall as managerial ownership increases up to 24 per cent, possibly suggesting that the alignment effects of managerial ownership dominate the entrenchment effects. Then, cash holdings increase as managerial equity holdings increase to 64 per cent, falling again at higher levels of managerial ownership.

Based on the above discussion, we hypothesize that:

> *H1d*. (Convergence/entrenchment): Higher managerial ownership reduces/increases the free cash flow level.

2.3 Dividend policy and free cash flow

The FCF theory highlights the important role of dividend payout in controlling agency costs associated with the substantial cash flow of the firm. Paying out dividends is helpful for reducing excess cash available to managers and reducing agency costs (Christie and Zimmerman, 1994). Dividends help check managers and serve as a disciplinary mechanism without the direct intervention of shareholders. Dividend payouts can also mitigate agency conflicts associated with the overinvestment of FCFs by managers in the absence of profitable investment opportunities. Jensen (1986) suggests that recurring dividends is an effective tool in restraining management from expending cash unnecessarily. Distributing excessive cash flows to shareholders when the firm has no attractive investment opportunities alleviates conflicts between managers and shareholders. Easterbrook (1984) and Jensen (1986) argue that dividends force managers to return internally generated funds to shareholders and raise additional capital in external markets, which are subject to greater scrutiny. According to Smith *et al.* (2017), dividends reduce excess cash, forcing management to be more dependent on shareholders and creditors as sources of financing for future projects. Empirically, several studies, such as those by Smith and Watts (1992), Gaver and Gaver (1993), Gugler (2003) and Kadioglu and Yilmaz (2017), confirm the ability of an adequate dividend policy to solve the FCF problem:

> *H2*. Dividend payout contributes to the reduction of the free cash flow level.

2.4 Governance mechanisms and free cash flow: the mediation effect of dividend payout

Referring to the existing literature, we argue that internal governance mechanisms can exert an indirect effect on the FCF through dividend payout. In this respect, Hu and Kumar (2004) find that firms pay more in dividends when there is a higher percentage of independent board members. Similarly, Yarram and Dollery (2015) state that there is a positive relation between board independence and dividend payout in Australian firms. Bhattacharya *et al.* (2016) report that more board independence explains higher dividend payout. In Saudi

stock market, the findings of Hamdouni (2015) show a positive relationship between board independence and the level of dividend payout. According to the author, dividend policy is the result of the independence of the members of the board.

Besides, some studies argue that large boards may be non-functional and may not help in mitigating the agency conflicts opposing managers to shareholders. Consequently, larger boards may lead to lower dividend payouts. Empirically, the findings are mixed. Abdelsalam *et al.* (2008) find no significant association between board size and dividend payout. However, Abor and Fiador (2013) find it was positively significant in some countries and negative in others.

Agency theory also suggests that CEO duality gives rise to a possible conflict of interests. In this context, Tian and Yang (2014) find that dual CEOs wield more power over other stakeholders, as evidenced by their ability to extract higher rents. Likewise, Geiler and Renneboog (2016) find that CEOs use their power to determine payout policy with regard to its effect on their wealth.

Based on the above discussion, we propose the following hypotheses:

> *H3a*. The small size of the board of directors contributes to the reduction in free cash flow level through dividend payouts.
>
> *H3b*. The separation of the positions of CEO and COB contributes to the reduction in free cash flow level through dividend payouts.
>
> *H3c*. The presence of outside directors contributes to the reduction in free cash flow level through dividend payouts.

On the other side, several studies suggest that dividend payouts can play a useful role in resolving shareholders–managers conflicts. Lopez-Iturriaga and Lima (2014) argue that the dividend policy plays an important role as a disciplining mechanism in the management of companies with low growth opportunities, given that the payment of dividends reduces the FCF that managers can use at their own discretion. Numerous scholars argue that dividends and managerial ownership may be substitutes in reducing the agency costs of FCF (Rozeff, 1982; Jensen *et al.*, 1992; Lee, 2011). Firms with high percentage of insider stock ownership tend to pay small dividends, while those with low insider stock ownership pay high dividends. Considered as substitute of dividend payout, managerial ownership directly acts as governance mechanism that reduces the agency costs of FCF.

We argue that managerial ownership–dividend payout relationship depends on managers' behavior. First, if managers act in favor of shareholders' interests, then they are expected to be more aligned with the goals of shareholders. As a result, managers will choose higher dividend levels when the firm has limited growth opportunities and excess cash flow. This argument is consistent with the convergence of interests' hypothesis of Jensen and Meckling (1976). According to this hypothesis, an increase in insider ownership leads to a decrease in agency costs as managers bear a larger share of these costs. Therefore, managers holding a substantial shareholding encourage dividend payout in firms with high FCF. Second, if managers act in their own interests, then insider ownership increases are associated with entrenchment-related agency costs. In this context, Demsetz (1983) and Fama and Jensen (1983) point out that managers holding large shareholdings may have enough voting power to ensure that their position inside the company is secure. To their part, Opler *et al.* (1999) argue that managers inherently wish to accumulate excess cash to increase the flexibility in pursuing their personal objectives. Consequently, managers may become to a great extent insulated from disciplining mechanisms. Therefore, lower dividend payouts offer managers more financial flexibility, as the retained earnings can be used for value-increasing investment opportunities (James *et al.*, 2017). Therefore, based on the above discussion, we propose the following hypothesis:

H3d. (Convergence/entrenchment): Managerial ownership contributes to the reduction/ increase in free cash flow level through dividend payouts.

3. Data description and methodology

3.1 Sample selection and variables' definition

Our sample consists of firms listed on the GCC stock exchanges over the period of 2009-2016. GCC countries are Saudi Arabia, Bahrain, Kuwait, Qatar, UAE and Oman. Data are hand-collected from companies' financial reports provided by the website "argaam.com". We have constructed a panel data of non-financial listed companies from 2009 to 2016. Our initial sample consists of all GCC listed companies. We proceed as follows:

First, we exclude banks and insurance because of their specific rules and regulations.

Second, we exclude firms with missing information for the period ranging from 2009 to 2016. We limit our study to companies for which annual reports are available. The final sample consists of 207 firms with a total of 1,656 firm-year observations.

To categorize firms as SC or NSC, we follow the classification provided by the Dow Jones. The process used by the Dow Jones consists of two steps. The first step screens the core business of companies for compliance. We manually check the business description for each company and exclude those whose core business activities are non-permissible according to Islamic law (firms dealing in pork-related products, alcohol, arms manufacturing, tobacco, conventional financial services such as banking and insurance, casinos/gambling, pornography, gold and silver trade and hotel industry).

After removing firms with inappropriate core and secondary business activities, the remaining companies are screened on the basis of different financial ratios. The Dow Jones identifies three ratios:

1. *Leverage ratio*: The total debt to market capitalization is less than 33 per cent.

2. *Cash ratio*: The cash and interest-bearing securities to market capitalization is less than 33 per cent.

3. *Liquidity ratio*: The account receivables to market capitalization is less than 33 per cent.

Panel A of Table I summarizes the distribution of firms according to *Sharia* compliance across countries. As shown, SC firms outnumber NSC firms in all countries. The average frequency of SC firms is 69.08 per cent, and country averages range from 88.89 per cent in Bahrain to 58.97 per cent in UAE.

Sharia compliance also varies across industries. As reported in Panel B of Table I, industry averages range from 78.12 per cent in agriculture and food industry to 63.64 per cent in consumer services.

To measure FCF, we follow Miguel and Pindado (2001) and Pindado and De la Torre (2005). We compute FCF by multiplying cash flow (CF) by the inverse of Tobin's Q (1/Q). The larger CF is and the lower Tobin's Q, the greater the risk of FCF. To measure CF, we adopt the measure used by Lehn and Poulsen (1989): CF = earnings before interests, taxes, depreciations and amortizations (EBITDA) – taxes – interest paid on debt – total dividends. We measure Tobin's Q as follow: (The market value of equity + the book value of debt)/the book value of assets. Tobin's Q is considered as a measure of growth opportunities that allows us to identify the anticipated risk of FCF. Table II summarizes all variables of the study.

3.2 Descriptive analysis

Panel A of Table III provides the main summary statistics (mean, standard deviation, minimum, median, and maximum) for the variables used in the empirical analysis. Overall,

Table I Number of SC and NSC firms

	SC firms		NSC firms	
	No. of firms	Frequency (%)	No. of firms	Frequency (%)
Panel A: SC and NSC firms in different countries				
Countries				
Saudi Arabia	54	77.14	16	22.86
Bahrain	8	88.89	1	11.11
Kuwait	25	58.14	18	41.86
Qatar	16	72.73	6	27.27
UAE	23	58.97	16	41.03
Oman	17	70.83	7	29.17
Total	*143*	*69.08*	*64*	*30.92*
Panel B: SC and NSC firms in different industries				
Industry				
Petrochemical industries	19	67.86	9	32.14
Cement	10	66.67	5	33.33
Agriculture and food industries	25	78.12	7	21.88
Industrials	22	64.71	12	35.29
Building and construction	17	65.38	9	34.62
Retail	14	70	6	30
Consumer services	14	63.64	8	36.36
Real estate development telecommunication	12	75	4	25
Utilities	4	66.67	2	33.33
Total	6	75	2	25
	143	*69.08*	*64*	*30.92*

Notes: The following table shows the number of SC firms and NSC firms for our sample. The sample comprises firms from Saudi Arabia, Bahrain, Kuwait, Qatar, UAE and Oman. The sample period is from 2009 to 2016. Panel A documents the number of SC firms and NSC firms for each year, while Panel B documents similar statistics for each industry

Table II Variable definition and measurement

Variable name	Variable abbreviation	Measurement method
Variable associated to FCF		
Free cash flow	FCF	(EBITDA – taxes – interest paid on debt – total dividends)/Tobin Q_{t-1}
Variables associated to corporate governance		
Board structure	BS	Number of board members
	DUAL	Dummy variable that takes the value 1 if the CEO and COB positions are held by the same person and 0 otherwise
	IND	Number of independent administrators/Number of board members
Ownership structure	MAN	Number of shares owned by directors/total of shares
Variable associated to dividend policy		
Dividend policy	DIV	Dividends/Earnings ratio
Control variables		
Growth	GTH	$(\text{Sales}_t - \text{Sales}_{t-1})/\text{Sales}_{t-1}$
Firm size	SIZE	Ln (total assets)
Leverage	LEV	Total debt/book value of total assets

GCC firms face higher risk of FCF. We find that the mean value of the FCF is 0.038, ranging from −0.288 to 0.688 with a standard deviation of 0.070. Moreover, in 50 per cent of cases, firms retain a level of FCF higher than 0.026. These findings point to problems of FCF in GCC firms. In parallel, these firms pay, on average, 41.4 per cent of their earnings as dividend. The standard deviation of the dividend payout ratio is 35.5 per cent, suggesting that the dividend payout ratio is relatively highly dispersed. Concerning board characteristics, we find results that agree with the recommendations of corporate governance. The sample presents an average of 8 members with a maximum and a

Table III	Summary statistics and descriptive analyses				
Variable	*Mean*	*SD*	*Minimum*	*Median*	*Maximum*
Panel A: summary statistics					
FCF	0.038	0.070	−0.288	0.026	0.688
DIV	0.414	0.355	0	0.462	1.450
BS	8.336	1.645	4	9	13
DUAL	0.491	0.501	0	0	1
IND	0.522	0.190	0	0.555	1
MAN	0.220	0.255	0	0.148	0.800
GTH	0.119	0.446	−0.998	0.074	4.358
SIZE	9.333	0.715	7.731	9.292	11.531
LEV	0.176	0.168	0	0.135	1.098
ROA	0.091	0.099	−0.509	0.086	1.103
Panel B: high FCF firms versus low FCF firms					
	High FCF firms (1)		*Low FCF firms* (2)		*t*-statistic (1) − (2)(3)
DIV	0.368		0.461		−3.646***
SHAR	0.761		0.743		0.583
BS	8.551		8.122		3.642***
DUAL	0.493		0.488		0.144
IND	0.496		0.549		−3.911***
MAN	0.232		0.208		2.157**
GTH	0.161		0.077		2.628***
SIZE	9.407		9.260		2.858***
LEV	0.190		0.162		2.363***
Panel C: high payout firms versus low payout firms					
	High payout firms (1)		*Low payout firms* (2)		*t*-statistic (1) − (2) (3)
SHAR	0.813		0.691		3.956***
BS	8.589		8.083		4.319***
DUAL	0.486		0.496		−0.288
IND	0.630		0.414		19.11***
MAN	0.201		0.239		−3.468***
GTH	0.085		0.153		−2.104**
SIZE	9.441		9.225		4.238***
LEV	0.146		0.205		−4.969***
Panel D: SC firms versus NSC firms					
	SC (1)		NSC (2)		*t*-statistic (1) − (2) (3)
FCF	0.034		0.052		−3.152***
DIV	0.438		0.331		3.572***
BS	8.207		8.727		−3.824***
DUAL	0.511		0.429		1.966**
IND	0.540		0.469		4.578***
MAN	0.207		0.259		−4.087***
GTH	0.090		0.207		−3.176***
SIZE	9.191		9.767		−10.305***
LEV	0.133		0.305		−13.676***

Notes: This table provides the means, standard deviations, minimum, medians and maximum of the variables used in the paper, as well as the correlations between them; the table also shows the difference of means tests between SC and NSC firms in their financial characteristics *** and ** indicate significance at the 1 and 5% levels, respectively

minimum that reach 13 members and 4 members, respectively. CEO duality registers a mean value of 0.491, indicating that 49.1 per cent of firms are operating in the one-tier board topology where the COB is the same as the CEO. Mean non-executive directors (board independence) over period indicates that on average, one-half (52.2 per cent) of the members of the board are not executive members[2].

The analysis of ownership structure shows that shares owned by managers register overall mean value of 22 per cent. As indicated by the results, the distribution of managerial

ownership is largely dispersed. The minimum and maximum values of the stocks owned by managers are 0 and 80 per cent, respectively, with standard deviation of 25.5 per cent.

Relating to control variables, we find an average growth as a percentage of sales growth of 11.9 per cent. The mean value of firm size measured by the log of total assets records 9.333 and leverage records overall mean of 17.6 per cent.

In Panels B, C and D of Table III, we present the descriptive statistics partitioned according to the level of FCF, the payout ratio and *Sharia* compliance. In Panel B, we differentiate between firms according to the median level of FCF, and in Panel C, we differentiate between firms according to the median level of payout ratio. In Panel D, we distinguish between SC and NSC firms.

To investigate the differences that exist between groups of GCC firms, we carry out several differences of means tests for all variables used in the multivariate analyses.

As Panel B of Table III shows, firms with low level of FCF differ from those of high level of FCF in several aspects (see *t*-statistics in Column 3). They pay out higher dividends, have smaller boards of directors that are more closely held by non-executive directors and have lower managerial ownership compared to firms with high level of FCF. These results suggest that shareholders make governance mechanisms active when the FCF reaches a certain level. In addition, growth, firm size and leverage are significantly lower in firms with low level of FCF relative to those with high level of FCF.

The univariate tests presented in Panel C of Table III show that the mean values of governance mechanisms differ significantly across the two groups of firms differentiated according to the level of payout ratios. In fact, boards are significantly larger and more independent in high payout firms. Additionally, managers in these firms hold less shares relative to those in low payout firms.

Based on *Sharia* compliance criteria, we find that all mean values of the governance mechanisms differ significantly across the two groups. Relative to NSC firms, SC firms have smaller and more independent boards. Moreover, the CEOs are more likely the COBs in firms operating in accordance with *Sharia*, and managers of these firms hold less shares relative to those non-compliant to *Sharia*.

We also observe that firms in accordance with *Sharia* differ significantly to NSC firms in terms of FCF level and dividend payout. They also differ significantly in terms of debt ratio confirming the *Sharia* role in reducing debt.

3.3 Empirical specifications and methodology

To examine whether dividend payout mediates the relationship between governance mechanisms and FCF, we use Baron and Kenny's (1986) regression approach, while taking into consideration the recent critique and modifications suggested by Hsu *et al.* (2012). According to Baron and Kenny (1986), testing for mediation effect can be done following three steps:

1. regressing the mediator on the independent variables;

2. regressing the dependent variable on the independent variables; and

3. regressing the dependent variable on both the independent variables and mediator.

Baron and Kenny (1986) pointed out three alternatives. First, if the influence of the independent variables on the dependent variable becomes insignificant in the presence of the mediator, the effects of the independent variables are completely mediated by the mediator. Second, if the influence of the independent variables remains significant in the presence of the mediator, the effects of the independent variable are partially mediated. Finally, if any of the above conditions are not satisfied, there is no mediation effect.

In testing the mediation effect, Hsu *et al.* (2012) suggest that the following conditions have to be met:

- Examine the direct effect of the independent variables (board characteristics and managerial ownership) on the dependent variable (FCF) [estimate and test path (c) in Figure 1, i.e. Model 1].

- The independent variables (board characteristics and managerial ownership) have an effect on the mediator (the dividend payout) [estimate and test paths (a_i) as shown in Figure 1, i.e. Model 2].

- The mediator (the dividend payout) has an effect on the dependent variable (FCF) [estimate and test path (b) as shown in Figure 1, i.e. Model 3].

- Examine the effect of the independent variables (board characteristics and managerial ownership) on the dependent variable (FCF) by controlling for the effects of the mediator [estimate and test paths (c_i') as shown in Figure 1, i.e. Model 4].

To determine the statistical significance of the mediation effect, we use the Sobel test.

The regression models are therefore given as follows:

$$\textit{Regression Model 1:}$$
$$FCF_{i,t} = \beta_0 + \beta_1 BS_{i,t} + \beta_2 DUAL_{i,t} + \beta_3 IND_{i,t} + \beta_4 MAN_{i,t} + \beta_5 GTH_{i,t} + \beta_6 SIZE_{i,t}$$
$$+ \beta_7 LEV_{i,t} + \varepsilon_{i,t} \tag{1}$$

$$\textit{Regression Model 2:}$$
$$DIV_{i,t} = \beta_0 + \beta_1 BS_{i,t} + \beta_2 DUAL_{i,t} + \beta_3 IND_{i,t} + \beta_4 MAN_{i,t} + \beta_5 GTH_{i,t} + \beta_6 SIZE_{i,t}$$
$$+ \beta_7 LEV_{i,t} + \varepsilon_{i,t} \tag{2}$$

$$\textit{Regression Model 3:}$$
$$FCF_{i,t} = \beta_0 + \beta_1 DIV_{i,t} + \beta_2 GTH_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 LEV_{i,t} + \varepsilon_{i,t} \tag{3}$$

$$\textit{Regression Model 4:}$$
$$FCF_{i,t} = \beta_0 + \beta_1 BS_{i,t} + \beta_2 DUAL_{i,t} + \beta_3 IND_{i,t} + \beta_4 MAN_{i,t} + \beta_5 DIV_{i,t} + \beta_6 GTH_{i,t}$$
$$+ \beta_7 SIZE_{i,t} + \beta_8 LEV_{i,t} + \varepsilon_{i,t} \tag{4}$$

For the all models, we divide sample into two subgroups according to *Sharia* compliance. Companies that pass both the industry test and financial test are included in the SC group. The others are included in NSC group.

To verify the multicollinearity among the explanatory variables, we use two tests. In the first test, a Pearson correlation matrix is estimated. Multicollinearity refers to a situation in which

Figure 1 Research framework
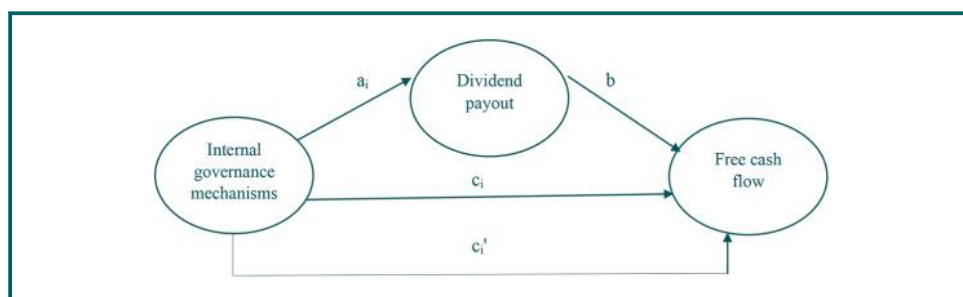
two or more explanatory/independent variables are highly correlated. If the Pearson correlation coefficient exceeds 0.7 (limit fixed by Kervin, 1992), we conclude the presence of multicollinearity. The results are illustrated in Table IV, where it can be seen that the correlation coefficients are low (<0.6), suggesting that there is no serious problem of multicollinearity among these variables.

To further test whether the explanatory variables are correlated, we calculated the variance inflation factor (VIF). This index shows how much the variance of an estimated regression coefficient is increased because of multicollinearity. Studenmund (2006) indicates that the common critical point is 10. If the VIF is larger than 10, then multicollinearity is quite high in the respective regression model. As highlighted in Table IV, the VIF for individual variables is very low. This indicates that the explanatory variables are not substantially correlated with each other.

The above stated models of analysis are estimated using panel data regression. According to Baltagi (2005), panel data give multiples solutions to many problems related to cross-sectional specification such as unobserved heterogeneity, degrees of freedom, dynamics and collinearity among the explanatory variables. It controls for unobserved heterogeneity of firms by including firm characteristic effects, which may be random or fixed (Hsiao, 2014).

For panel data estimates, the F-test (Baltagi, 2005) and the Breusch and Pagan's (1980) Lagrange multiplier test are performed to decide between pooled regression and the alternatives of panel data (fixed and random effects, respectively). As can be seen from the results reported in Table V, both tests are significant, which implies that the fixed effects model and the random effects model are preferred to the pooled model. Therefore, to decide between these two models, we conduct a Hausman (1978) specification test. As shown in Table V, the Hausman test is significant in all cases. These results imply that the fixed effects model are preferred to the random effects model (Greene, 2003; Baltagi, 2005).

4. Results and discussion

4.1 The direct effect of governance mechanisms and dividend payout on free cash flow level

Model (1) of our regression tests the direct effect of internal governance mechanisms on the level of FCF for the overall sample and for the two sub-samples SC and NSC firms. The results are reported in Table V (Columns 1, 5 and 9). As can be seen from these results, only two governance mechanisms have significant effects, the independent directors and

Table IV	Correlation matrix (total sample)										
VIF	FCF	DIV	SHAR	BS	DUAL	IND	MAN	GTH	SIZE	LEV	VIF
FCF	1										
DIV	−0.149	1									1.76
SHAR	−0.113	0.124	1								1.31
BS	0.065	0.191	−0.137	1							1.36
DUAL	−0.036	0.028	0.071	0.039	1						1.02
IND	−0.153	0.587	0.163	0.039	0.022	1					1.60
MAN	0.243	−0.141	−0.146	0.046	−0.045	−0.207	1				1.15
GTH	0.113	−0.088	−0.114	0.017	0.022	−0.099	0.099	1			1.05
SIZE	0.047	0.189	−0.348	0.486	−0.063	0.005	−0.066	0.108	1		1.98
LEV	0.007	−0.204	−0.442	0.190	−0.017	−0.207	0.218	0.169	0.483	1	1.72

Note: This table provides the correlation coefficients among explanatory variables and their Variance Inflation Factors

Table V Regression results

Variables	Total sample				SC firms				NSC firms			
	Model 1 (1)	Model 2 (2)	Model 3 (3)	Model 4 (4)	Model 1 (5)	Model 2 (6)	Model 3 (7)	Model 4 (8)	Model 1 (9)	Model 2 (10)	Model 3 (11)	Model 4 (12)
Intercept	0.534***	-2.668***	0.451***	0.419***	0.135	-2.870***	0.054	0.016	1.219***	-1.502*	1.198***	1.254***
BS	-0.004	-0.005		-0.004	-0.001	-0.002		-0.001	-0.017	0.006		-0.017
DUAL	-0.02	0.012		-0.001	-0.002	0.016		-0.001	-0.017	0.091		-0.019
IND	-0.071***	0.735***		-0.039**	-0.051***	0.685***		-0.023*	-0.148***	0.861***		-0.168***
MAN	0.094***	-0.549***		0.070**	0.103***	-0.554***		0.080***	0.005	-0.646***		0.020**
DIV			-0.063***	-0.043***			-0.054***	-0.041***			-0.056**	0.023
GTH	0.018***	-0.011	0.019***	0.018***	0.040***	-0.003	0.041***	0.040***	-0.001	-0.001	0.002	-0.001
SIZE	-0.045***	0.303***	-0.040**	-0.032**	-0.008	0.332***	0.001	0.005	-0.087**	0.139	-0.107**	-0.091**
LEV	-0.067*	-0.180**	-0.062**	-0.074***	-0.033	-0.310**	-0.041*	-0.046*	-0.276***	0.276*	-0.269***	-0.282***
R^2	0.120	0.356	0.122	0.140	0.163	0.318	0.179	0.199	0.281	0.556	0.217	0.283
F	4.57***	9.98***	5.46***	4.66***	5.20***	9.24***	6.41***	5.56***	5.20***	5.99***	4.59***	4.82***
Hausman	25.39***	52.03***	25.74***	26.18***	21.28***	37.79***	21.61***	18.49***	17.19**	19.15***	14.79**	15.84**
Breush-Pagan	177.1***	524.8***	250.2***	183.1***	296.1***	427.8***	360.8***	312.6***	71.39***	51.34***	70.60***	64.1***
N	1,656	1,656	1,656	1,656	1,144	1,144	1,144	1,144	512	512	512	512

Notes: The following table documents regression results obtained using equations (1)-(4). The sample comprises firms from Saudi Arabia, Bahrain, Kuwait, Qatar, UAE and Oman. The sample period is from 2009 to 2016. The coefficient that are significant at 10% are followed by *, those at 5% and 1% by **and ***, respectively

managerial ownership. While the first governance mechanism has a positive effect, the effect of the second mechanism is negative. Hence, as supported by previous studies (Fama and Jensen, 1983; Hermalin and Weisbach, 1988; Byrd and Hickman, 1992; Brickley et al., 1994, Arslan et al., 2010; O'Connell and Cramer, 2010), independent directors act as managers' monitors and protect shareholders' interests. They significantly contribute to the reduction of the level of FCF that can be wasted by managers. However, large managerial shareholdings are associated with high level of FCF. This finding is consistent with managerial entrenchment hypothesis that suggests that entrenched managers extract private benefits by undertaking inefficient projects and larger advantages from shareholders (Jensen and Ruback, 1983; Shleifer and Vishny, 1989). In addition, entrenched mangers have the ability to use the remaining funds for their own benefits rather than to fulfill the interests of shareholders.

When we split our sample into SC and NSC firms, we observe significant effects of independent directors and managerial ownership in the first group and only a significant effect of independent directors in the second group. Moreover, the negative effect of independent directors on the level of FCF is stronger in NSC firms. These findings can be explained by the specific characteristics of SC firms. In fact, among the requirements for a firm to be SC is to have low cash and low account receivables that limit the FCF available to managers. According to Myers and Rajan (1998), managers can obtain more private benefits when firms have high liquid assets. Marquardt and Wiedman, (2004) and Caylor (2009) suggest that higher account receivables give managers an opportunity to manipulate their accounting statements. We argue that the manipulation of accounting statements and the extraction of private benefits result in higher agency costs. Overall, as SC firms have lower cash available with them, it is very likely that they face lower FCF problems relative to their NSC counterparts.

Model (3) examines the effect of dividend payout on FCF level. Results from the estimation of this model are reported in Table V (Columns 3, 7 and 11). The estimated coefficients reveal that dividend payout negatively affects the FCF level. The higher the payout ratio, the lower the FCF level. Moreover, it is noticeable that this payout effect is similar in both SC and NSC firms, which suggests the useful role of dividend in reducing excessive funds available to managers. As suggested by Jensen (1986), recurring dividends is an effective tool in restraining management from expending cash unnecessarily. Distributing excess cash flows to shareholders when the firm has no attractive investment opportunities reduces the agency cost by eliminating the possibility that managers can use these cash flows at their own discretion.

4.2 The indirect effect of governance mechanisms on free cash flow level: the mediating role of dividend payout

Beginning with the effect of governance variables on the mediator (dividend payout), as reported in Table V (Columns 2, 6 and 10), we find significant coefficients associated to board independence and managerial ownership. In accordance with previous studies (Hu and Kumar, 2004; Yarram and Dollery, 2015; Hamdouni, 2015; Bhattacharya et al., 2016), our results show a positive association between outside directors and dividend payout. More independence of the board protects shareholders' interests by forcing managers to higher payouts. Based on Sharia compliance criteria, we observe a high coefficient associated to board independence in NSC firms compared to those operating in accordance with Sharia. This finding suggests that outside directors are less effective in firms compliant to Sharia compared to those non-compliant to Sharia.

Moreover, the results show a negative association between managerial ownership and dividend payout. This finding may be explained in two ways. First, in firms with dispersed ownership structure, greater insider ownership indicates better shareholder protection. In accordance with the convergence of interest hypothesis, as insider ownership increases,

agency costs may be reduced as managers bear a larger share of these costs. Therefore, greater managerial ownership encourages dividend payout when firms have limited investment opportunities. Second, in firms with a concentrated ownership structure, however, a higher level of ownership may not necessarily indicate better shareholder protection (Chiou et al., 2010). According to Pinkowitz et al. (2006), if shareholder protection is poor, managers have a tendency to use company resources for their own private benefit. In the GCC context, ownership is concentrated and managers hold large proportions of shares. This leads to a potential conflict between insiders and outside shareholders. Consequently, greater managerial ownership will be associated with additional agency costs and reducing dividend payouts.

In the last step (Model 4), we examine the mediating effect of dividend payout on the relationship between governance mechanisms and FCF level. Controlling for the effect of the mediator variable (dividend payout), the results reported in Table V (Column 4) reveal a negative and significant (at 95 per cent level) relationship between independent directors and the FCF level. Hence, outside directors act as an effective internal governance mechanism in GCC firms. They contribute to the protection of shareholders' interests through a generous dividend policy.

We also observe a positive and significant (at 95 per cent level) association between managerial ownership and the FCF level. Therefore, large managerial shareholdings increase the level of FCF through lower dividend payouts. This result suggests that powerful managers follow their preference of retaining excess cash that enables them to pursue their own interests. Managers of GCC firms prefer earnings retention to dividend payout for many reasons. First, cash reserves allow managers to reduce firm risk and protect their under-diversified human capital (Fama, 1980). Second, as firm risk reduced, this provides managers with job security. Third, cash holdings provides managers the resources to pursue objectives that deliver private benefits. As reported by previous studies (Saidi and Kumar, 2010; Abdallah and Ismail, 2017), substantial family holdings compose the bulk of ownership and control of GCC companies. The governance of these companies is faced with issues such as succession and management of conflicts. According to Villalonga and Amit (2009), family managers create conflicts between the controlling family and minority shareholders. Family shareholders have both the incentive and the ability to expropriate and to pursue activities contrary to minority shareholders' wealth maximization (Anderson and Reeb, 2003a; Bae and Goyal, 2010). Therefore, they may be tempted to use substantial funds in ways that do not benefit minority shareholders but that are beneficial to the family.

Concerning the other governance mechanisms (board size and CEO duality), there is no significant effect on the level of FCF.

The Sobel test for the indirect effects reported in Table VI shows that the effects of independent directors and managerial ownership on FCF through their indirect effects via dividend payout are significant.

Taken together, our findings show a partial mediation effect of dividend on the relationship between both board independence and managerial ownership and the level of FCF.

Table VI Sobel tests of indirect effects of governance variables on FCF					
	Total sample		SC firms		NSC firms
Governance variables	Sobel test statistic	Prob.	Sobel test statistic	Prob.	Sobel test statistic	Prob.
Board size	−0.374	0.354	0.228	0.409	−0.229	0.409
Board independence	−6.165	0.000	−6.264	0.000	−2.08	0.018
CEO duality	−0.945	0.172	−0.591	0.277	−1.17	0.120
Managerial ownership	3.301	0.000	7.162	0.000	1.905	0.028

Based on *Sharia* compliance criteria, the results (Table V, Columns 8 and 12) reveal indirect significant effects of both board independence and managerial ownership on FCF in the two groups of firms. However, we notice that the indirect effect of outside directors on the FCF level through dividend payout is less important in SC firms compared to in NSC firms. The coefficients associated to the variable IND are −0.023 and −0.168 for the two groups, respectively. This finding shows that outside directors act more effectively as governance mechanism in NSC firms. This is because SC firms have some unique characteristics that lead to higher dividend payout and hence lower FCF level. According to Guizani (2017), because SC firms are constrained to low level of debt and low level of cash, they have higher chances to pay dividends than their counterparts NSC ones. Furthermore, consistent with avoidance of the FCF problem, the author finds that the dividend payouts of SC companies respond more strongly to FCF than do the dividend payouts of NSC companies. SC companies are likely to pay out more of their FCF than NSC companies, which can prevent managers from misusing the resources in ways that may not maximize shareholder wealth. Likewise, Hamdouni (2015) finds that the effects of the corporate governance improvements on dividends' sensitivity to FCF is consistent with the substitute hypothesis for SC firms. This result shows that the improvements in corporate governance mechanisms, such as board independence, reduce SC firms' need to force out the FCF through dividends.

With regard to managerial ownership, we find a higher coefficient in SC firms compared to NSC firms. Large manager shareholdings are associated with higher FCF through dividend in SC firms than in NSC firms. Managerial ownership reduces more the importance of dividend policy in controlling agency costs in SC firms compared to NSC firms. Compliance to *Sharia* reduces firms' need to governance mechanisms to control agency costs of FCF.

We notice that the Sobel tests associated to board independence and managerial ownership are significant. Consequently, regarding the previous results, we find a partial mediation effect of dividend on the relationship between board independence and the level of FCF in both firms' group. Concerning managerial ownership, we find a partial mediation effect of dividend policy in SC group and a complete mediation effect of dividend policy in NSC group.

5. Conclusions and implications

Firms generating a significant amount of discretionary funds, which exceed the need for positive NPV investments, are faced with the issue of efficient management of these resources. Jensen (1986) argues that self-interested managers are inclined to spend excess cash on unnecessary expenses and unprofitable investments, because even negative NPV projects can increase their personal utility. In the same vein, Ang *et al*. (2000) and Chung *et al*. (2005) document that managers tend to use FCF at their own discretion. Besides, the FCF problem severity seems to be dependent on compliance with *Sharia*. In fact, among the key characteristics of *Sharia* compliance is to have low leverage, low amount of account receivable and low ratio of cash and interest bearing.

To mitigate this managers' practice, scholars emphasize on the major role of dividend and internal governance mechanisms in reducing excess cash. The payment of high dividends subjects managers under financial market discipline. By making internal funds insufficient to cover investment needs, managers are forced to access the external capital markets to finance new projects. Thus, dividend puts the management under inspection by security exchange, investment banks and capital suppliers. With regard to internal governance mechanisms, we consider tow effects on FCF level. First, a direct effect that results in an effect on agency costs. Second, an indirect effect on the FCF through dividend payouts.

The proposed study sought to provide some answers to the empirical questions about the mediating role of dividend payout on internal governance–FCF relationship. The study

applies a panel regression to a data set composed of 1,656 observations from 207 GCC companies during the period of 2009-2016.

Empirical results reveal that only two governance mechanisms that significantly affect the FCF levels. On the one hand, consistent with previous studies (Fama and Jensen, 1983; Hermalin and Weisbach, 1988; Byrd and Hickman, 1992; Brickley *et al.*, 1994, Arslan *et al.*, 2010; O'Connell and Cramer, 2010), outside directors contribute to the reduction of the FCF. Hence, they act as managers' monitors and protect shareholders' interests. On the other hand, large managerial shareholdings are associated with high level of FCF. This finding is consistent with managerial entrenchment hypothesis that suggests that entrenched mangers have the ability to use the remaining funds for their own benefits rather than to fulfill the interests of shareholders.

Based on *Sharia* compliance criteria, we find stronger direct effect of independent directors on the FCF in NSC firms compared to SC firms. In fact, as SC firms have lower cash available with them, it is very likely that they face lower FCF problems relative to their NSC counterparts.

Empirical findings also reveal that dividend payout negatively affects the FCF level. The higher the payout ratio, the lower the FCF level. Moreover, it is noticeable that this payout effect is similar in both SC and NSC firms, which suggests the useful role of dividend in reducing excessive funds available to managers. As suggested by Jensen (1986), recurring dividends is an effective tool in restraining management from expending cash unnecessarily.

The results also show that dividend payout mediates the effects of independent directors and managerial ownership on the FCF level. As they significantly reduce FCF through dividend payout, outside directors act as an effective internal governance mechanism in GCC firms. They contribute to the protection of shareholders' interests through a generous dividend policy. In contrast, we find a positive and significant association between managerial ownership and the FCF level. Therefore, large managerial shareholdings increase the level of FCF through lower dividend payouts. Managers of GCC firms prefer earnings retention to dividend payout not only because of a desire to use excess cash in private rent-seeking activities but to reduce firm risk to protect their under-diversified human capital (Fama, 1980).

We notice that the indirect effect of outside directors on the FCF level through dividend payout is less important in SC firms compared to NSC firms. This finding shows that outside directors act more effectively as governance mechanism in NSC firms. This is because SC firms have some unique characteristics that lead to higher dividend payout and hence lower FCF level.

The results of this study shed light on the effectiveness of internal governance mechanisms in firms' resources allocation. They have important implications. First, this study provides guidance for firms in the construction and implementation of their own corporate governance policies. The results reveal that outside directors may contribute in administrating the resources efficiently and usefully, which result in reducing the FCF. Consequently, GCC firms should enhance the other board characteristics to avoid funds' misallocation. They should employ experienced and capable CEO who can apply his/her business proficiency for firm's growth and conflict of interest alleviation. Moreover, GCC firms should hire competent internal board members who act in favor of shareholders' interests. In total, as discussed by Saidi and Kumar (2010), targeted reforms for GCC firms include reforming company boards by increasing overall board independence and reducing the number of family members or requiring firms to establish advisory board of directors.

Second, GCC firms should reduce managers' resources wasteful by limiting the role of family members in senior management.

Third, the results reveal that dividend payout is the best solution to reduce substantial funds in GCC firms. Therefore, regulatory bodies may encourage dividend distribution that serves as a disciplining mechanism, thereby reducing agency cost.

In sum, different stakeholders, including investors and analysts, can refer to this paper during decision-making.

Further studies may extend the present research by including other internal mechanisms such as audit committee, external auditors and institutional ownership, as well as external governance mechanisms; the exclusion of them is the main limitation of this paper.

Notes

1. The GCC codes provide definition of board independence with respect to different criteria that violate board independence: ''Having a material business relationship directly or as a partner shareholder or senior employee of a body that has such a relationship has been used by the six codes to define the independence of the board members. The financial relationship amount is specified only in the Bahraini and UAE codes. Family connections are considered in relation to defining board independence in all codes, except in Kuwait, whereas board tenure duration is addressed only in Bahrain and Qatar, where the former specifies a maximum of six years and the latter nine. Holding a significant number of shares is also included in all countries' codes, except for that of Oman. Finally, cross-directorship is discussed only in Qatar, Saudi Arabia and Kuwait.''

2. For instance, GCC governance codes call for having majority non-executive directors, at least one-third of the board member should be independent, the roles of the CEO and the COB should be separated, etc. For a detailed review of these codes, please see the report titled 'Hawkamah Brief on Corporate Governance Codes of the GCC'.

References

Abdallah, A. and Ismail, A.K. (2017), "Corporate governance practices, ownership structure, and corporate performance in the GCC countries", *Journal of International Financial Markets Institutions and Money*, Vol. 46 (January), pp. 98-115.

Abdelsalam, O., El-Masry, A. and Elsegini, S. (2008), "Board composition, ownership structure and dividend policies in an emerging market: further evidence from CASE 50", *Managerial Finance*, Vol. 34 No. 12, pp. 953-964.

Abor, J. and Fiador, V. (2013), "Does corporate governance explain dividend policy in Sub-Saharan Africa?", *International Journal of Law and Management*, Vol. 55 No. 3, pp. 201-225.

Adams, R.B., Hermalin, B.E. and Weisbach, M.S. (2010), "The role of boards of directors in corporate governance: a conceptual framework and survey", *Journal of Economic Literature*, Vol. 48 No. 1, pp. 58-107.

Adjaoud, F. and Ben-Amar, W. (2010), "Corporate governance and dividend policy: shareholders' protection or expropriation?", *Journal of Business Finance & Accounting*, Vol. 37 Nos 5/6, pp. 648-667.

Aljifri, K. and Mustafa, M. (2007), "The impact of corporate governance mechanisms on the performance of UAE firms: an empirical analysis", *Journal of Economics and Administrative Sciences*, Vol. 23 No. 2, pp. 71-93.

Al-Malkawi, H.A.N. and Pillai, R. (2013), "Corporate governance and firm performance: evidence from UAE", *International Journal of Applied Social Sciences*, Vol. 2 No. 1, pp. 37-42.

Al-Matari, Y.A., Al-Swidi, A.K., Bt-Fadzil, F.H. and Al-Matari, E.M. (2012), "Board of directors, audit committee characteristics and performance of Saudi Arabia listed companies", *International Review of Management and Marketing*, Vol. 2 No. 4, pp. 241-251.

Anderson, R.C. and Reeb, D.M. (2003a), "Founding-family ownership and firm performance: evidence from the S&P 500", *The Journal of Finance*, Vol. 58 No. 3, pp. 1301-1328.

Ang, J., Cole, R. and Lin, J. (2000), "Agency costs and ownership structure", *The Journal of Finance*, Vol. 55 No. 1, pp. 81-106.

Arslan, O., Karan, M.B. and Ekşi, C. (2010), "Board structure and corporate performance: managing global transitions", *International Research Journal*, Vol. 8 No. 1, pp. 3-22.

Bae, K.H. and Goyal, V.K. (2010), "Equity market liberalization and corporate governance", *Journal of Corporate Finance*, Vol. 16 No. 5, pp. 609-621.

Baltagi, B.H. (2005), *Econometric Analysis of Panel Data Econometric Analysis of Panel Data*, John Wiley & Sons, The Atrium, Southern Gate, Chichester.

Baron, R.M. and Kenny, D.A. (1986), "The moderator–mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations", *Journal of Personality and Social Psychology*, Vol. 51 No. 6, pp. 1173-1182.

Bebchuk, L. and Fried, J. (2004), *Pay Without Performance: The Unfulfilled Promise of Executive Compensation*, Harvard University Press, Cambridge.

Belkhir, M., Boubaker, S. and Derouiche, I. (2014), "Control–ownership wedge, board of directors, and the value of excess cash", *Economic Modelling*, Vol. 39, pp. 110-122.

Berger, P.G., Ofek, E. and Yermack, D.L. (1997), "Managerial entrenchment and capital structure decisions", *The Journal of Finance*, Vol. 52 No. 4, pp. 1411-1438.

Bhattacharya, D., Li, W.H. and Rhee, S.G. (2016), *Does Better Corporate Governance Encourage Higher Payout? Risk, Agency Cost, and Dividend*, Hitotsubashi Institute for Advanced Study, Hitotsubashi University.

Breusch, T.S. and Pagan, A.R. (1980), "The Lagrange multiplier test and its applications to model specification in econometrics", *Review of Economic Studies*, Vol. 47 No. 1, pp. 239-253.

Brickley, J.A., Coles, J.L. and Terry, R.L. (1994), "Outside directors and the adoption of poison pills", *Journal of Financial Economics*, Vol. 35 No. 3, pp. 371-390.

Broye, G., François, A. and Moulin, Y. (2017), "The cost of CEO duality: evidence from French leadership compensation", *European Management Journal*, Vol. 35 No. 3, pp. 336-350.

Byrd, J.W. (2010), "Financial policies and the agency costs of free cash Flow: evidence from the oil industry", *SSRN Electronic Journal*, available at: http://dx.doi.org/10.2139/ssrn.1664654

Byrd, J.W. and Hickman, K.A. (1992), "Do outside directors monitor managers?", *Journal of Financial Economics*, Vol. 32 No. 2, pp. 195-221.

Caylor, R. (2009), "Strategic revenue recognition to achieve earnings benchmarks", *Journal of Accounting and Public Policy*, Vol. 29 No. 1, pp. 82-95.

Chiou, J.R, Chen, Y.R. and Huang, T.C. (2010), "Assets appropriation via cash dividends: free cash flow or tunneling?", *China Journal of Accounting Research*, Vol. 3 No. 1, pp. 71-93.

Christie, A.A. and Zimmerman, J.L. (1994), "Efficient and opportunistic choices of accounting procedures: corporate control contests", *The Accounting Review*, Vol. 69 No. 4, pp. 539-566.

Chung, R., Firth, M. and Kim, J.B. (2005), "Earnings management, surplus free cash flow, and external monitoring", *Journal of Business Research*, Vol. 58 No. 6, pp. 766-776.

DeAngelo, L., DeAngelo, H. and Stulz, R. (2006), "Dividend policy and the earned contributed capital mix: a test of the life-cycle theory", *Journal of Financial Economics*, Vol. 81 No. 2, pp. 227-254.

Demsetz, H. (1983), "The structure of ownership and the theory of the firm", *Journal of Law and Economics*, Vol. 26 No. 2, pp. 375-390.

Denis, D. and Osobov, I. (2008), "Why do firms pay dividends? International evidence on the determinants of dividend policy", *Journal of Financial Economics*, Vol. 89 No. 1, pp. 62-82.

Dittmar, A.K., Mahrt-Smith, J. and Servaes, H. (2003), "International corporate governance and corporate cash holdings", *Journal of Financial and Quantitative Analysis*, Vol. 38 No. 1, pp. 111-133.

Easterbrook, F.H. (1984), "Two agency-cost explanations of dividends", *American Economic Review*, Vol. 74 No. 4, pp. 650-659.

Elyasiani, E. and Zhang, L. (2015), "CEO entrenchment and corporate liquidity management", *Journal of Banking and Finance*, Vol. 54, pp. 115-128.

Fairchild, R. (2010), "Dividend policy, signaling and free cash flow: an integrated approach", *Managerial Finance*, Vol. 36 No. 5, pp. 394-413.

Fama, E.F. (1980), "Agency problems and the theory of the firm", *Journal of Political Economy*, Vol. 88 No. 2, pp. 288-307.

Fama, E.F. and Jensen, M.C. (1983), "Separation of ownership and control", *Journal of Law and Economics*, Vol. 26 No. 2, pp. 301-325.

Fan, S.Z. and Yu, L. (2012), "Identifying missing information of the conventional corporate governance index? An international study", Working paper, *SSRN Electronic Journal*, doi: 10.2139/ssrn.2002795.

Farooq, O. and Derrabi, M. (2012), "Effect of corporate governance mechanisms on the relationship between legal origins and cost of debt: evidence from the Middle East and North Africa region", *African Journal of Business and Management*, Vol. 6 No. 7, pp. 2706-2715.

Fresard, L. and Salva, C. (2010), "The value of excess cash and corporate governance: evidence from US cross-listings", *Journal of Financial Economics*, Vol. 98 No. 2, pp. 359-384.

Garcia-Ramos, R. and Garcia-Olalla, M. (2011), "Board characteristics and firm performance in public founder-and non-founder-led family businesses", *Journal of Family Business Strategy*, Vol. 2 No. 4, pp. 220-231.

Gaver, J.J. and Gaver, K.M. (1993), "Additional evidence on the association between the investment opportunity set and corporate financing, dividend, and compensation policies", *Journal of Accounting and Economics*, Vol. 16 Nos 1/3, pp. 125-160.

Geiler, P. and Renneboog, L. (2016), "Executive remuneration and the payout decision corporate governance", *Corporate Governance: An International Review*, Vol. 24 No. 1, pp. 42-63.

Greene, W.H. (2003), *Econometric Analysis*, Prentice Hall, Upper Saddle River, N.J.

Gugler, K. (2003), "Corporate governance, payout policy and the interrelation between dividends, R&D, and capital investment", *Journal of Banking and Finance*, Vol. 27 No. 7, pp. 1297-1321.

Guizani, M. (2014), "Controlling shareholders' activism quality and the disciplinary role of dividend", *Research Journal of Finance and Accounting*, Vol. 5 No. 23, pp. 25-34.

Guizani, M. (2017), "Free cash flow, agency cost and dividend policy of sharia compliant and non-sharia-compliant firms", *International Journal of Economics and Management*, Vol. 11 No. 2, pp. 355-370.

Hamdouni, A. (2015), "Dividend policy and corporate governance in Saudi stock market: outcome model or substitute model?", *Corporate Ownership & Control*, Vol. 12 No. 2, pp. 74-91.

Hausman, J.A. (1978), "Specification tests in econometrics", *Journal of the Econometric Society*, Vol. 46 No. 6, pp. 1251-1271.

Hermalin, B.E. and Weisbach, M.S. (1988), "The determinants of board composition", *Rand Journal of Economics*, Vol. 19 No. 4, pp. 589-606.

Hsiao, C. (2014), *Analysis of Panel Data*, Cambridge University Press, Cambridge.

Hsu, W.L., Wang, G.Y. and Hsu, Y.P. (2012), "Testing mediator and moderator effects of independent director on firm performance", *International Journal of Mathematical Models and Methods in Applied Sciences*, Vol. 6 No. 5, pp. 698-705.

Hu, A. and Kumar, P. (2004), "Managerial entrenchment and payout policy", *Journal of Financial and Quantitative Analysis*, Vol. 39 No. 4, pp. 759-790.

Hwang, L.S., Kim, H., Park, K. and Park, R.S. (2013), "Corporate governance and payout policy: evidence from Korean business groups", *Pacific-Basin Finance Journal*, Vol. 24 (September), pp. 179-198.

James, H., Benson, B.W. and Wu, C. (2017), "Does CEO ownership affect payout policy? Evidence from using CEO scaled wealth-performance sensitivity", *The Quarterly Review of Economics and Finance*, Vol. 65 (August), pp. 328-345.

Jensen, G., Solberg, D.P. and Zorn, T.S. (1992), "Simultaneous determination of insider ownership, debt, and dividend policies", *Journal of Financial and Quantitative Analysis*, Vol. 27 No. 2, pp. 247-263.

Jensen, M.C. (1986), "Agency costs of free cash flow, corporate finance, and takeovers", *American Economic Review*, Vol. 76 No. 2, pp. 323-329.

Jensen, M.C. (1993), "The modern industrial revolution, exit and the failure of internal control systems", *The Journal of Finance*, Vol. 48 No. 3, pp. 831-880.

Jensen, M.C. and Meckling, W. (1976), "Theory of the firm: managerial behavior, agency costs and ownership structure", *Journal of Financial Economics*, Vol. 3 No. 4, pp. 305-360.

Jensen, M.C. and Ruback, R.S. (1983), "The market for corporate control: the scientific evidence", *Journal of Financial Economics*, Vol. 11 Nos 1/4, pp. 5-50.

Jiang, Z. and Lie, E. (2016), "Cash holding adjustments and managerial entrenchment", *Journal of Corporate Finance*, Vol. 36 (February), pp. 190-205.

Jiraporn, P. and Ning, Y. (2006), "Dividend policy, shareholder rights, and corporate governance", *Journal of Applied Finance*, Vol. 16 No. 2, pp. 24-36.

John, K., Knyazeva, A. and Knyazeva, D. (2015), "Governance and payout pre-commitment", *Journal of Corporate Finance*, Vol. 33 (August), pp. 101-117.

Kadioglu, E. and Yilmaz, E.A. (2017), "Is the free cash flow hypothesis valid in Turkey?", *Borsa Istanbul Review*, Vol. 17 No. 2, pp. 111-116.

Kervin, J.B. (1992), *Methods for Business Research*, Harper Collins Publisher, New York, NY.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R.W. (2000), "Agency problems and dividend policies around the world", *The Journal of Finance*, Vol. 55 No. 1, pp. 1-33.

Labhane, N.B. and Mahakud, J. (2016), "Determinants of dividend policy of Indian companies: a panel data analysis", *Paradigm*, Vol. 20 No. 1, pp. 36-55.

Lang, L. and Litzenberger, R.H. (1989), "Dividend announcements: cash flow signaling vs. free cash flow hypothesis?", *Journal of Financial Economics*, Vol. 24 No. 1, pp. 181-191.

Lasfer, M. (2002), "Board structure and agency costs", *EFMA 2002 London Meeting*, Cass Business School Research paper.

Lee, C. and Park, H. (2016), "Financial constraints, board governance standards, and corporate cash holdings", *Review of Financial Economics*, Vol. 28 (January), pp. 21-34.

Lee, W.J. (2011), "Managerial entrenchment and the value of dividends", *Review of Quantitative Finance and Accounting*, Vol. 36 No. 2, pp. 297-322.

Lehn, K. and Poulsen, A. (1989), "Free cash flow and stockholder gains in going private transactions", *The Journal of Finance*, Vol. 44 No. 3, pp. 771-787.

Lipton, M. and Lorsch, J.W. (1992), "A modest proposal for improved corporate governance", *Business Lawyer*, Vol. 48 No. 1, pp. 59-77

Lopez-Iturriaga, F. and Lima, V. (2014), "Do leverage dividend payout, and ownership concentration influence firms' value creation? An analysis of Brazilian firms", *Emerging Markets Finance & Trade*, Vol. 46 No. 3, pp. 80-94.

McKnight, P.J. and Weir, C. (2009), "Agency costs, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: a panel data analysis", *The Quarterly Review of Economics and Finance*, Vol. 49 No. 2, pp. 139-158.

Marquardt, C. and Wiedman, C. (2004), "How are earnings managed? An examination of specific accruals", *Contemporary Accounting Research*, Vol. 21 No. 2, pp. 461-491.

Miguel, A. and Pindado, J. (2001), "Determinants of capital structure: new evidence from Spanish panel data", *Journal of Corporate Finance*, Vol. 7 No. 1, pp. 77-99.

Mitton, T. (2005), "Corporate governance and dividend policy in emerging markets", *Emerging Market Review*, Vol. 5 No. 4, pp. 409-426.

Morck, R., Shleifer, A. and Vishny, R.W. (1988), "Management ownership and market valuation: an empirical analysis", *Journal of Financial Economics*, Vol. 20 (January-March), pp. 293-315.

Myers, S. and Rajan, R.G. (1998), "The paradox of liquidity", *Quarterly Journal of Economics*, Vol. 113 No. 3, pp. 733-771.

Myers, S.C. (2000), "Outside equity", *The Journal of Finance*, Vol. 55 No. 3, pp. 1005-1037.

Naushad, M. and Malik, S.A. (2015), "Corporate governance and bank performance: a study of selected banks in GCC region", *Asian Social Sciences*, Vol. 11 No. 9, pp. 226-234.

O'Connell, V. and Cramer, N. (2010), "The relationship between firm performance and board characteristics in Ireland", *European Management Journal*, Vol. 28 No. 5, pp. 387-399.

Opler, T., Pinkowitz, L., Stulz, R. and Williamson, R. (1999), "The determinants and implications of corporate cash holdings", *Journal of Financial Economics*, Vol. 52 No. 1, pp. 3-46.

Ozkan, A. and Ozkan, N. (2004), "Corporate cash holdings: an empirical investigation of UK companies", *Journal of Banking and Finance*, Vol. 28 No. 9, pp. 2103-2134.

Pillai, R. and Al-Malkawi, H.N. (2017), "On the relationship between corporate governance and firm performance: evidence from GCC countries", *Research in International Business and Finance*, available at: http://dx.doi.org/10.1016/j.ribaf.2017.07.110

Pindado, J. and De la Torre, C. (2005), "A complementary approach to the financial and strategy views of capital structure: theory and evidence from the ownership structure", Working Paper No. 666167, Social Science Research Network.

Pinkowitz, L., Stulz, R. and Williansom, R. (2006), "Does the contribution of corporate cash holdings and dividends to firm value depend on governance? A cross-country analysis", *The Journal of Finance*, Vol. 61 No. 6, pp. 2725-2751.

Raheja, C. (2005), "Determinants of board size and composition: a theory of corporate boards", *Journal of Financial and Quantitative Analysis*, Vol. 40 No. 2, pp. 283-306.

Richard, F.H. and Nelson, M.R. (1999), "Leadership structure and firm performance", *International Review of Financial Analysis*, Vol. 8 No. 1, pp. 83-96.

Richardson, S. (2006), "Over-investment of free cash flow", *Review of Accounting Studies*, Vol. 11 Nos 2/3, pp. 159-189.

Rosenstein, S. and Wyatt, J.G. (1990), "Outside directors, board independence, and shareholder wealth", *Journal of Financial Economics*, Vol. 26 No. 2, pp. 175-191.

Rozeff, M.S. (1982), "Growth, Beta, and Agency Costs as Determinants of Dividend Payout Ratios", *Journal of Financial Research*, Vol. 5 No. 3, pp. 249-259.

Saidi, N. and Kumar, R. (2010), "Corporate governance in the GCC", Working paper, Hawkamah Institute for Corporate Governance, Dubai.

Seifert, B. and Gonenc, H. (2018), "The effects of country and firm-level governance on cash management", *Journal of International Financial Markets, Institutions & Money*, Vol. 52 (January), pp. 1-16.

Shehata, N.F. (2015), "Development of corporate governance codes in the GCC: an overview", *Corporate Governance*, Vol. 15 No. 3, pp. 315-338.

Shleifer, A. and Vishny, R.W. (1989), "Management entrenchment: the case of managers' specific investments", *Journal of Financial Economics*, Vol. 25 No. 1, pp. 123-139.

Smith, C.W. and Watts, R.L. (1992), "The investment opportunity set and corporate financing, dividend, and compensation policies", *Journal of Financial Economics*, Vol. 32 No. 3, pp. 263-292.

Smith, D.D., Pennathur, A.K. and Marciniak, M.R. (2017), "Why do CEOs agree to the discipline of dividends?", *International Review of Financial Analysis*, Vol. 52 (July), pp. 38-48.

Studenmund, A.H. (2006), *Using Econometrics: A Practical Guide*, Pearson New International Edition, Edinburgh Gate, Harlow.

Stulz, R.M. (1988), "On takeover resistance, managerial discretion, and shareholder wealth", *Journal of Financial Economics*, Vol. 20 (January-March), pp. 25-54.

Tian, G.Y. and Yang, F. (2014), "CEO incentive compensation in US financial institutions", *International Review of Financial Analysis*, Vol. 34 (July), pp. 64-75.

Villalonga, B. and Amit, R. (2009), "How are US family firms controlled?", *Review of Financial Studies*, Vol. 22 No. 8, pp. 3047-3092.

Yarram, S.R. and Dollery, B. (2015), "Corporate governance and financial policies: influence of board characteristics on the dividend policy of Australian firms", *Managerial Finance*, Vol. 41 No. 3, pp. 267-285.

Further reading

Farinha, J. (2003), "Dividend policy, corporate governance and the managerial entrenchment hypothesis: an empirical analysis", *Journal of Business Finance and Accounting*, Vol. 30 Nos 9/10, pp. 1173-1209.

Schooley, D.K. and Barney, L.D. (1994), "Using dividend policy and managerial ownership to reduce agency costs", *Journal of Financial Research*, Vol. 17 No. 3, pp. 363-373.

Corresponding author

Moncef Guizani can be contacted at: guizani_m@yahoo.fr