

CORPORATE GOVERNANCE, BANK SPECIFIC CHARACTERISTICS, BANKING INDUSTRY CHARACTERISTICS, AND INTELLECTUAL CAPITAL (IC) PERFORMANCE OF BANKS IN ARAB GULF COOPERATION COUNCIL (GCC) COUNTRIES

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ABSTRACT

This paper examines the level of intellectual capital (IC) performance of listed banks in Arab Gulf Cooperation Council (GCC) countries using VAIC methodology and investigates the hypothesised impact of several corporate governance variables, bank specific characteristics and banking industry characteristics on IC performance. We extend previous research on determinants of IC performance by considering domestic and foreign strategic institutional ownership, bank specific characteristics and banking industry characteristics. Our findings show that board size, number of independent directors, family ownership and domestic strategic institutional ownership have significant relationship with IC performance. In addition, our study provides evidence that except for bank internationality, bank specific characteristics and banking industry characteristics play important roles in determining IC performance among GCC banks.

Keywords: intellectual capital performance, value added intellectual coefficient (VAIC), banks, Gulf Cooperation Council (GCC)

INTRODUCTION

With the advent of knowledge-based economy, intellectual capital (IC), rather than physical and financial capital becomes the main factor in driving firm value and sustaining its competitive advantage. This is particularly so in knowledge intensive industries such as the banking industry, as its key resources are intangible and intellectual in nature (Shih, Chang, & Lin, 2010). Intellectual capital, which includes human capital and structural capital, is one of the significant assets in the banking industry (Kamath, 2007; Goh, 2005). According to Goh (2005), banks depend crucially on the physical capital to operate, but the quality of services and products they provide to their customers depend

eventually on IC. Until now, there has been no generally accepted definition or classification of intellectual capital (Zeghal & Maaloul, 2010). However, the definitions of intellectual capital given by researchers are not significantly different (Tayles, Pike, & Sofian, 2007). For the purpose of this study and consistent with previous studies such as Williams (2001) and Ho and Williams (2003), the definition derived by the Organization for Economic Co-operation and Development (OECD) is used. The OECD (2000) defines IC as the "economic value of two categories of intangible assets of a firm: (1) organisational (structural) capital; and (2) human capital." This definition is consistent with the value added intellectual coefficient (VAIC) methodology used in this study to measure IC performance.

Empirical research on the determinants of IC performance using VAIC method dates back to the work by Williams (2001), with two streams of subsequent studies documenting the impact of corporate governance and firm characteristics on IC performance. However, empirical research to date has focused on the matured capital markets such as those of the U.K., Sweden and Australia (Joshi, Cahill, & Sidhu, 2010; El-Bannany, 2008; Ho & Williams, 2003) and emerging markets such as Malaysia (Abidin, Kamal, & Jusoff, 2009; Saleh, Abdul Rahman, & Hassan, 2009) and South Africa (Swartz & Firer, 2005). As far as we are concerned, no study has been conducted in GCC countries (comprising of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and Arab Emirates) regarding IC performance and its determinants.

The GCC countries share some common economic, cultural, and political similarities, which by far outweigh any differences they might have (Al-Muharrami & Matthews, 2009). Collectively, GCC countries have a mature, efficient, stable and profitable banking system. In most of the GCC countries, the banking sector is the second highest contributor of the countries' GDP after the oil and gas sector (Al-Obaidan, 2008). Thus, employing appropriate economic and financial policies to improve the efficiency of the banking sector is the prime objective of the GCC countries, in which they plan to transform their economies into international financial and trade centers (Al-Obaidan, 2008). Since IC becomes the essential resource of banks' success (Kamath, 2007; Goh, 2005), GCC banks have been required to leverage their knowledge or IC, internally and externally. By doing so, banks would be ready to face challenges of globalisation, intensive competition, barriers for foreign bank entry and increased demand by customers for sophisticated and innovative products and services (Al-Obaidan, 2008).

Accordingly, motivated by the need to address the determinants of IC performance of GCC banks, this paper aims to examine the influence of corporate governance (board size, number of independent directors, government ownership,

family ownership, domestic strategic institutional ownership, and foreign strategic institutional ownership), bank specific characteristics (bank internationality, bank adherence to Islamic shariah principles, and bank riskiness), and banking industry characteristics (banking industry concentration and presence of foreign banks) on IC performance. Our focus is on GCC listed banks during the period 2008 to 2010.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Board of Directors

The board of directors is an important tool to create, develop, leverage, and manage IC of a firm and thus, affect its performance (e.g. Abidin et al., 2009; Ho & Williams, 2003). According to Williams (2001), boards of directors can structure relevant strategies and policies on how to obtain and best utilise the required resources underlying IC. Williams (2001) argues that a firm's board of directors can influence the formation of IC related strategies and policies and ultimately performance. However, there are limited studies that investigate the relationship between board of directors and IC performance (see Abidin et al., 2009; Ho & Williams, 2003; Williams, 2001). Moreover, the results of these studies are inconclusive.

Board size

According to resource dependency theory, larger boards are more likely to include a large pool of experts with diverse industrial and educational backgrounds, and skills that enhance boards' information processing capabilities. This can mitigate individual directors' deficiencies in business skills through collective decision makings, which in turn improves the quality of strategic decisions and actions made by a firm (Abeysekera, 2010; Dalton, Daily, Johnson, & Ellstrand, 1999). Furthermore, it is argued that larger boards are more likely to increase firms' ability to obtain and secure critical resources from their environment such as IC resources (Abeysekera, 2010), assisting in developing better interlocking relationships between the firm and its external stakeholder groups and enhancing its legitimacy and image in society (Zahra & Pearce, 1989). Thus, we hypothesise the following:

- H1: There is a positive relationship between board size and bank IC performance.

Presence of independent directors

From resource dependency perspective, independent directors provide more resources, information, and legitimacy to a firm leading to improved quality managerial decisions and firm performance (Hillman, Cannella, & Paetzold, 2000). Independent directors are more likely than inside directors to oppose a narrow definition of organisational performance, which focuses primarily on financial measures. In addition, independent directors are more likely to support managerial long-term oriented decisions that enhance firm long-term performance (Ibrahim, Howard, & Angelidis, 2003). Hence, it is expected that independent directors are more likely to support IC-related strategies such as investing in human resources, R&D activities and information technology. Consequently, IC performance will be enhanced. Thus, the following hypothesis is proposed:

H2: There is a positive relationship between the presence of independent directors and bank IC performance.

Ownership Structure

Ownership structure is another main mechanism of corporate governance that can play an important role in developing IC performance or otherwise (Saleh et al., 2009; Keenan & Aggestam, 2001). In contrast to banks in developed countries, GCC banks are characterised as having concentrated ownership and a large set of blockholders who are related to different degrees of risk aversion and resource endowment (Chahine, 2007).

Government ownership

Governments of GCC countries have a significant stake of ownership in most of the banks (Chahine, 2007; Al-Hassan, Khamis, & Oulidi, 2010). Theoretically, there are two reasons as to why government ownership is detrimental to firm performance. First, governments are likely to pay special attention to political and social goals such as low output prices, employment or external effects which may lead to politicising resource allocation process, and thus reduce the efficiency and value of firms (Najid & Abdul Rahman, 2011). Second, the government is not the ultimate owner, but the agent of the real owners, the citizen. A large number of owners would delegate their monitoring role to politicians and bureaucrats who may not actively monitor firms due to their lack of personal interest at ensuring that an organisation is run efficiently (Ab Razak, Ahmad, & Aliahmed, 2008). These two disadvantages of government ownership can detriment banks performance in terms of IC. Saleh et al. (2009) further state that government

ownership may negatively influence human capital performance of a firm through the appointment of less experienced staff for political or social goals.

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

H3: There is a negative relationship between government ownership and bank IC performance.

Family ownership

Family ownership is a unique feature of GCC banks (Chahine, 2007; Al-Hassan et al., 2010). It is argued that family ownership suffers from significant drawbacks arising from possible severe managerial entrenchment and agency problems (Saleh et al., 2009; Braun & Sharma, 2007). Family owners may choose to appoint company executives from family members. They may also exhibit a preference for risk reduction and preservation of firm capital, and extract benefits from the firm at the expense of minority shareholders (Braun & Sharma, 2007). All these significant drawbacks arising from family ownership may detriment IC performance.

Saleh et al. (2009) argue that family owners are more concerned in extracting wealth for their private benefits at the expense of minority shareholders, avoiding long-term investments such as investing in IC resources. According to Fernandez and Nieto (2006), the conservative nature of family ownership limits family firms' ability to acquire knowledge-based assets such as technologies, well-known brands or qualified employees.

Further, managers in family-owned companies tend to face cognitive conflicts in maintaining professional relationships versus family relationships since family firms often tend to appoint family members in key managerial positions at the expense of hiring professional and qualified employees (Chen & Hsu, 2009). This will in turn lead to reduced human capital performance. Therefore, we propose the following hypothesis:

H4: There is a negative relationship between family ownership and bank IC performance.

Domestic and foreign strategic institutional ownership

Strategic institutional shareholders are long-term investors with long-term commitments towards the firm in which they invest in. The contribution of strategic institutional shareholders to their investee-firms typically goes beyond financial contributions and extends to provision of non-financial resources such

as managerial expertise and technical collaborations (Chahine & Tohme, 2009; Douma, George, & Kabir, 2006). Therefore, we expect that such type of institutional shareholders will be more willing to invest in risky projects such as those related to IC because of their incentive to increase firm value and ensure its future viability.

However, it is argued that the role of strategic institutional shareholders may differ according to their nationality (Chahine & Tohme, 2009; Douma et al., 2006). From resource-based perspective, nationality of shareholders can be regarded as a source of sustained competitive advantage (Chahine, 2007; Douma et al., 2006). This issue is quite conceivable, particularly in Arab countries where foreign institutional shareholders are more likely to outperform their domestic counterparts in terms of experience, organisational, monitoring and technological capabilities, and credibility (Chahine & Tohme, 2009). Therefore, this study expects that given the heterogeneity in resources and organisational capabilities between domestic and foreign strategic shareholders, they will have different impact on IC performance.

Therefore, based on the above arguments above, we hypothesise the following:

- H5a: There is a positive relationship between domestic strategic institutional ownership and bank IC performance.
- H5b: There is a positive relationship between foreign strategic institutional ownership and bank IC performance.
- H5c: The positive association of foreign strategic ownership is significantly higher than the positive association of domestic strategic institutional ownership.

Bank Specific Characteristics

Bank internationality

From the organisational learning theory perspective, firms that enter foreign markets can enhance the learning of new skills and capabilities that significantly improve a firm's ability to innovate, take risk, and develop new revenue streams (Zahra & Hyton, 2008). The interaction between parent firms and their branches or subsidiaries in international markets permit the former to expose themselves to different systems of innovation, diverse ideas, and multiple cultural perspectives. This will enhance firms' ability to learn and acquire new knowledge and skills, which in turn improves the current capabilities of firms and increases its stock of

knowledge or IC (Zahra, Ireland, & Hitt, 2000; Zahra & Hyton, 2008). The newly acquired knowledge and skills can manifest itself in upgrading and promote firms' innovation (Zahra & Hyton, 2008). It is further argued that setting up of branches in developed countries helps banks in less developed countries to learn advanced skills and experience which will improve the level of management (Zhang, 2008). Thus, we hypothesise as follows:

H7: There is a positive relationship between bank internationality and bank IC performance.

Bank adherence to Islamic Shariah principles

In GCC countries, Islamic banks and conventional banks operate side by side. Islamic banks operate based on Islamic *Shariah* principles. From the Islamic point of view, Islamic banks are based on more moral and ethical principles that are adherent to the Islamic religion than conventional banks (Ajmi, Hussain, & Al-Saleh, 2009). We argue that the adherence to Islamic *Shariah* principles related to banking transactions (*muamalat banking*) by GCC banks can inevitably enhance the likelihood of IC performance for both human capital and customer capital that, in combination, constitute the most important components of IC in banks. This is the case because, based their religious beliefs, Muslims view banking transactions that are in line with Islamic *Shariah* principles as part of their ethical principles. Consistent with this theoretical argument, previous empirical literature evidences that employees and customers are concerned about the ethical issues of the companies they deal with. In support for this, several studies have shown that as employees and customers assess a company's ethical conduct, their level of satisfaction and loyalty to the company increase (Valenzuela, Mulki, & Jaramillo, 2009). Based on the above arguments, the following hypothesis is proposed:

H8: There is a positive relationship between banks' adherence to Islamic Shariah principles and their IC performance.

Bank riskiness

The banking industry is described as the most risky industry because banks are highly leveraged when compared to other industrial firms. This study argues that there are several reasons to believe that bank riskiness can influence negatively bank IC performance. By exposing to high risks, banks are more likely to be under strict monitoring by supervisory agencies (Pathan, 2009). According to Pathan (2009), in the presence of continued and close monitoring by regulators, bank managers and directors act more conservatively to avoid any lawsuits. Therefore, it is reasonable to expect that spending on long-term projects such as

R&D projects, employees' training programs, and information technology will reduce because of the restrictions on risky investments. Consequently, the ability of banks to generate new ideas and innovative services and products will be limited, leading to reduced IC performance.

From the market discipline perspective, the perception that an organisation is unsafe and exposed to high level of risks can create doubts in the minds of its partners and customers that will switch potential businesses elsewhere (Ross, 2005). As a result of losing depositors' confidence, it is reasonable to expect that relationships with customers will damage, customer loyalty will erode, and bank reputation will destroy, leading to negative effects on bank IC performance.

From the above arguments, the following hypothesis is proposed:

H9: There is a negative relationship between bank risk and bank IC performance.

Banking Industry Characteristics

Banking industry concentration

The banking industry in GCC countries is relatively concentrated with a few domestic players dominating the market (Al-Hassan et al., 2010). The efficient structure (ES) hypothesis argues that the degree of market concentration should be considered a consequence of the superior efficiency of bank firms. Consequently, banks that operate more efficiently may adopt internal and/or external growth strategies. Therefore, the most efficient banks may gain market share and may be the driving force behind the process of market concentration.

Based on efficient structure hypothesis, it is argued that efficient banks (i.e. those with superior management and production technologies that translate into higher profits) are more likely to focus on enhancing efficiency of value creation activities such as IC performance. This is achieved by engaging more in social responsibility programs that enhance firm reputation and satisfy stakeholders' expectations (Hammond & Slocum, 1996). Consequently, banks' relational capital performance could be enhanced. In terms of human resources, it is argued that monopolists have more resources that help them to hire the most skilled and qualified people (Gayle, 2001) which in turn could enhance human capital performance.

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

H10: There is a positive relationship between banking industry concentration and bank IC performance.

Presence of foreign banks

Theoretically, it is argued that the presence of foreign banks leads to improved performance of domestic banks through spillovers of knowledge from foreign banks to domestic banks (Claessens, Demirguc-Kunt, & Huizinga, 2001; Goldberg, 2004). The knowledge spillover from foreign banks to domestic banks in terms of new and advanced technologies, processes, and managerial skills can lead to improved IC performance of domestic banks through enhanced employees' productivity (human capital), improved quality of customer offerings (customer capital), and improved banks' routines and processes (organisational capital). In addition to knowledge spillover, this study argues that the competitive pressures from foreign banks may force domestic banks to focus on improving its IC performance through increasing investments in resources underlying IC such as human resources development, technology and R&D expenditures. This argument is consistent with "quiet life" hypothesis, which argues that the increase in competitive pressures due to the presence of foreign banks may force the managers of domestic bank to give up their sheltered "quiet life" and use resources more efficiently and adopt new technologies to maintain their market shares (Berger & Hannan, 1998).

Thus, based on the discussion above, we hypothesise the following:

H11: There is a positive relationship between the presence of foreign banks and bank IC performance.

RESEARCH METHOD

Sample

The population comprises of all listed banks in GCC countries during the period 2008–2010. The dataset consists of 74 GCC listed banks. However, all Kuwaiti listed banks (11 banks) and several banks in other GCC countries are excluded from the sample due to missing relevant information. The final sample consists of 128 observations over the period.

Measurement of Variables

IC performance

We measure IC performance by using value added intellectual coefficient (VAIC) method developed by Pulic (1998). The instrument is widely used in studies of IC performance (see Ku Ismail & Abdul Kareem, 2011; Goh, 2005; Ho & Williams, 2003). Algebraically, VAIC is expressed as follows:

$$VAIC = CEE + HCE + SCE \quad (1)$$

where, (i) CEE is an indicator of Value Added efficiency of capital employed ($CEE=VA/CE$); $CE = (\text{book value of total assets}) - (\text{intangible assets}) = (\text{financial assets}) + (\text{physical assets})$, (ii) HCE is an indicator of Value Added efficiency of human capital ($HCE=VA/HC$); $HC = \text{total salaries and wages}$, and (iii) SCE is an indicator of Value Added efficiency of structural capital ($SCE=SC/VA$), $SC= VA - HC = (\text{value added}) - (\text{total salaries \& wages})$. IC efficiency (ICE) is the sum of human capital efficiency (HCE) and structural capital efficiency (SCE). Total VA is calculated as follows:

$$VA = OP + EC + D + A \quad (2)$$

where, OP = Operating Profit; EC = Total Employee Expenses; D = Depreciation; and A = Amortization.

Independent variables

Board size is the number of directors on the board. We measure board independence by the number of independent directors on the board (Abeysekera, 2010). Government ownership is measured as a percentage of the ordinary shares held by the government. Family ownership is measured as a percentage of the ordinary shares held by the family. Strategic institutional ownership is defined as the ownership of corporations and other investors from related industry in the firm (Chahine & Tohme, 2009, Chahine, 2007; Douma et al., 2006). Following Chahine (2007), banks and financial institutions that hold shares in banks are classified as strategic shareholders. Domestic (foreign) strategic institutional ownership is measured as the sum of the ordinary shares held by the domestic (foreign) banks and financial institutions that hold 5% or more shares in the bank. Bank internationality is a dummy variable, scoring 1 if the bank has at least one foreign subsidiary and 0, otherwise. The adherence to Islamic *Shariah* principles is measured using a dummy variable. The bank will be perceived as adherence to Islamic *Shariah* principles if it is an Islamic bank giving the value 1, and 0 otherwise. Following previous studies such as Laeven and Levine (2009), bank

risk is calculated by a Z-score = (Return on assets + capital asset ratio) divided by the standard deviation of return on assets. Following Al-Muharrami and Matthews (2009), banking industry concentration is measured by using k-bank concentration ratio (CR₃) which is based on summing only the market shares of the three largest banks in the total assets of the banking market. The presence of foreign banks is measured as the ratio of the number of foreign banks to the total number of banks in the banking system in each country (Claessens et al., 2001).

Control variables

We control for other determinants of IC performance identified in the existing literature, that is bank size and financial performance, measured by the natural log of total assets and return on equity (ROE), respectively.

Statistical Analysis

We employ pooled ordinary least square (OLS) regression to examine the relationship between independent variables and IC performance, represented by the structural equation as follows:

$$\text{ICP} = \alpha + \beta_1\text{BOSIZE} + \beta_2\text{INDD} + \beta_3\text{GOV} + \beta_4\text{FAM} + \beta_5\text{DSIOW} + \beta_6\text{FSIOW} + \beta_7\text{INTN} + \beta_8\text{ADH} + \beta_9\text{RISK} + \beta_{10}\text{CONC} + \beta_{11}\text{FRBK} + \beta_{12}\text{BASIZE} + \beta_{13}\text{ROE} + \varepsilon,$$

where,

ICP = intellectual capital performance;
BOSIZE = board size;
INDD = board independence;
GOV = governmental ownership,
FAM = family ownership,
DSIOW = domestic strategic institutional ownership,
FSIOW = foreign strategic institutional ownership,
INTN= bank internationality,
ADH = adherence to Islamic *Shariah* principles,
RISK = bank riskiness,
CONC = banking industry concentration,
FRBK = presence of foreign banks,
BASIZE = bank size;
ROE = return on equity; and
 ε = error term.

This study undertook normality, linearity, homogeneity and multicollinearity tests¹ to ensure the quality of data and variables. We also

conducted the sensitivity analysis of the basic model using two alternative measures of board size (the natural logarithm of the total number of board members, and a dummy variable, scoring 1 if the board size is greater than the median and 0, otherwise), as well as two alternative measures of board independence (a natural logarithm of the number of independent directors, and a dummy variable based on the above median threshold).

FINDINGS

Table 1 shows the descriptive statistics of the variables. Intellectual capital performance (VAIC) varies from -4.28 to 12.10 with a mean of 4.20 . The mean score is consistent with those reported by Al-Musalli and Ku Ismail (2011) among United Arab Emirates domestic listed banks (score of 4.4) for the same period (2008–2010) and Abdul Salam et al. (2011) among Kuwaiti banks (score of 4.45) for the pooled data for ten years (1996–2006). The average IC performance of the GCC listed banks in this study is lower than those reported by El-Bannany (2008) for UK banks (10.80), Goh (2005) for Malaysian banks (7.11), but is higher than those reported by Joshi et al. (2010) in Australia (3.80).

Table 1
Descriptive statistics

	<i>N</i>	Min	Max	Mean	SD
<i>ICP</i>	128	-4.28	12.10	4.20	2.67
<i>BOSIZE</i>	128	3	13	9.16	1.9
<i>INDD</i>	128	1	10	4.78	2.09
<i>GOV</i>	128	0.00	70.00	18.96	21.53
<i>FAM</i>	128	0.00	69.98	8.88	13.26
<i>DSIOW</i>	128	0.00	99.88	21.03	27.40
<i>FSIOW</i>	128	0.00	49.38	6.73	12.93
<i>RISK</i>	128	-0.39	2.25	1.25	0.46
<i>CONC</i>	128	0.24	0.68	0.43	0.14
<i>PRBK</i>	128	0.15	0.49	0.38	0.12
<i>BASIZE</i>	128	8.01	10.79	9.86	0.59
<i>FINPR</i>	128	-0.45	0.36	0.11	0.13

The results of the regression analysis of the basic model (Model 1) are shown in the second column of Table 2. The regression model is significant ($F = 20.572$, $P < 0.000$) with an adjusted R square of 0.667 .

Board Characteristics

Contrary to the prediction of the resource dependency theory and prior findings of Abidin et al. (2009) and Ho and Williams (2003), this study finds a high significant negative association between board size, presence of independent directors and IC performance at 1% of significance level. Thus, both Hypotheses 1 and 2 are not supported. According to Dwivedi and Jain (2005), larger boards may make it difficult for the members to use their knowledge and skills effectively due to problems of coordinating the contributions. Another explanation for the negative findings found in this study may be because GCC banks, on average, do not select their board members optimally. The OECD-Hawkamah survey reveals that most of the selected directors in boards of GCC banks lack the necessary skills and adequate understanding of the banking environment (OECD, 2009) which may lead to the lack of coordination and communication that cause decision making problems.

With respect to the presence of independent directors, Mujtaba and William (2011) state that the concept of independent directors is relatively new in the GCC region and there are challenges associated with the recruitment of suitable and truly independent directors on the boards of companies in the GCC region. Another explanation for the negative association may be due to the strong influence of family owners in GCC banks, especially in appointing independent directors. Family owners may nominate independent directors who are less likely to challenge the former's interests that do not favour developing IC resources. Thus, it seems that the independent directors merely sit on the board to fulfil the requirements made by the GCC code of corporate governance, but might not be able to exercise their power.

Ownership Structure

With respect to governmental ownership variable, this study does not find any significant association between governmental ownership and IC performance. Thus, Hypothesis 3 (H3) is not supported. This finding is similar to that of Saleh et al. (2009). A plausible explanation for the insignificant finding between government ownership and IC performance is that GCC governments invested in GCC banks but allowed control over key aspects of the banks to be retained by the private partners.

Table 2
Multiple regression results

$$ICP = \alpha + \beta_1BOSIZE + \beta_2INDD + \beta_3GOV + \beta_4FAM + \beta_5DSIOW + \beta_6FSIOW + \beta_7INTN + \beta_8ADH + \beta_9RISK + \beta_{10}CONC + \beta_{11}FRBK + \beta_{12}BASIZE + \beta_{13}ROE + \varepsilon$$

	Model 1 Coef.	Model 2 Coef.	Model 3 Coef.	Model 4 Coef.	Model 5 Coef.
(Constant)	7.247 (1.745)	9.026 (2.132)	7.555 (1.814)	8.504 (2.021)	1.950 (8.222)
BOSIZE	-.173 (-2.710)***	-.187 (-2.838)***	-.177 (-2.705)***	-.173 (-2.676)***	-.170 (-2.612)***
INDD	-.225 (-3.506)***	-.215 (-3.328)***	-.232 (-3.637)***	-.211 (-3.235)***	-.188 (-3.092)***
GOV	-.106 (-1.289)	-.117 (-1.430)	-.093 (-1.118)	-.113 (-1.361)	-.152 (-1.809)*
FAM	-.301 (-4.127)***	-.329 (-4.434)***	-.303 (-4.153)***	-.323 (-4.451)***	-.360 (-4.980)***
DSIOW	-.125 (-1.658)*	-.134 (-1.770)*	-.126 (-1.670)*	-.147 (-1.928)*	-.128 (-1.673)*
FSIOW	-.020 (-.271)	-.027 (-.376)	-.021 (-.291)	-.024 (-.329)	-.032 (-.445)
INTN	.070 (1.135)	.064 (1.051)	.073 (1.174)	.060 (.961)	.076 (1.227)
ADH	.192 (3.003)***	.194 (3.041)***	.199 (3.078)***	.199 (3.096)***	.158 (2.351)***
RISK	.189 (2.375)**	.196 (2.463)**	.204 (2.524)**	.201 (2.503)**	.223 (2.753)**
CONC	.284 (4.389)***	.284 (4.391)***	.287 (4.432)***	.277 (4.255)***	.215 (3.502)***
FRBK	-.193 (-2.828)***	-.198 (-2.913)***	-.232 (-3.347)***	-.201 (-2.899)***	-.199 (-2.862)***
BASIZE	-.044 (-.505)	-.032 (-.362)	-.080 (-.907)	-.060 (-.675)	-.068 (-.764)
ROE	.463 (6.063)***	.456 (5.993)***	.480 (6.278)***	.454 (5.862)***	.457 (5.879)***
Adjusted R ²	0.667	0.669	0.667	0.662	0.660
F- statistics	20.572***	20.744***	20.565***	20.146***	19.937***
Durbin-Watson	2.137	2.108	2.121	2.141	2.119

Notes: ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels respectively.

The figures in the parentheses are the t-statistics.

Model 1 is the basic model; Model 2: BOSIZE = natural log of number of board members; Model 3: BOSIZE = 1 if number of board members is above sample median, otherwise 0; Model 4: INDD = natural log of number of independent directors; Model 5: INDD = 1 if number of independent directors is above sample median, otherwise 0.

Regarding family ownership, consistent with expectations and similar to prior study by Saleh et al. (2009), this study finds a negative significant association between family ownership and IC performance; thus, Hypothesis 4 (H4) is supported. The result confirms the managerial entrenchment hypothesis, which suggests that high family ownership indicates high probability of opportunistic behaviour of families in pursuing their objectives at the expense of minority shareholders.

The coefficient for domestic strategic institutional ownership is significant at the 10% level. However, the coefficient is negative suggesting there is a moderately negative relationship between domestic strategic institutional ownership and IC performance. Thus, H5a is not supported. This may be due to the fact that most of the GCC banks and financial institutions are government and/or family controlled (Chahine, 2007; OECD, 2009) and at present, it appears that managers of these institutions do not necessarily have the proper incentive to encourage their counterparts in other GCC banks to invest in resources underlying IC.

Surprisingly, foreign strategic institutional ownership has shown insignificant impact on IC performance, suggesting that foreign banks and other foreign financial institutions do not improve IC performance of GCC banks; thus, H5b is not supported. A possible explanation is that the GCC region is regarded as risk prone, especially the political risks (Laabas & Abdoumoula, 2005). Therefore, banks and other financial institutions from developed countries may prefer to keep short-term relationships with domestic banks focusing on profitability opportunities in GCC domestic markets instead of focusing on transfer of knowledge, technology, and new management styles and skills to investee-domestic banks. In addition, it has been argued that in situations involving low total percentage shares of foreign strategic investors, foreign investors have low motivation to introduce advanced technologies, new products, and suitable corporate governance mechanisms (Shen et al., 2009) which make their impact on IC performance insignificant.

Bank Specific Characteristics

The relationship between bank internationality and IC performance is statistically insignificant even at 10%. Thus, Hypothesis 7 (H7) is not supported. This may be due to low ability of GCC banks to absorb, internalise and exploit new knowledge and skills from foreign markets. Investments in R&D which are viewed as the base to build innovative capabilities and acquire, assimilate, and creatively exploit new knowledge from foreign operations (Zahra & Hyton, 2008) are still extremely low in GCC banks (Jabsheh, 2005). This possibly contributes

to the inability of GCC banks to benefit from the advantages of international expansion in developed markets to improve IC performance.

Consistent with our expectation, this study finds a positive significant association between the adherence to Islamic *Shariah* principles and IC performance at a 1% level. Thus, H8 is supported. The result implies that banks that operate in line with the Islamic *Shariah* principles have higher IC performance than those that do not. In respect of the bank riskiness variable, this study used the *Z*-score of each bank to measure bank riskiness. The *Z*-score is a measure of bank stability and indicates the distance from insolvency as defined as a state where losses surmount equity (Laeven & Levine, 2009). According to Laeven and Levine (2009), *Z*-score is the inverse of the probability of insolvency. Thus, a higher *Z*-score indicates that the bank is more stable and bank riskiness is lower. The coefficient of bank riskiness (i.e. *Z*-score) is positive and significantly associated with IC performance as predicted. Thus Hypothesis 9 (H9) is supported.

Banking Industry Characteristics

Our results show that the degree of banking industry concentration has a positive effect on the level of IC performance, providing support to efficient structure (ES) hypothesis. Thus, Hypothesis 10 (H10) is supported. With respect to the presence of foreign banks, interestingly, the results of the regression analysis indicate that the presence of foreign banks is negatively associated with IC performance at a 1% level. Thus Hypothesis 11 (H11) is not supported. One plausible explanation is that GCC banks are not sufficiently competent in adapting to the new competitive environment as a result of the presence of foreign banks. Foreign banks in GCC countries such as Citigroup and HSBC are characterised as having advanced technology, broader product offerings, high-quality and sophisticated risk management techniques, and qualified human capital (Turk-Ariss, 2009). These advantages of foreign banks are likely to motivate customers in GCC countries to switch to foreign banks because they are more able to meet their needs and demands for superior and innovative products and services. This would finally lead to eroding customer base of GCC banks, detrimental to their IC (customer capital) performance. Furthermore, in order to mitigate information costs of doing businesses in local markets and have a deep understanding of local businesses, foreign banks may resort to introduce a higher remuneration package and wages than that introduced by domestic banks. This would attract the most skilled and qualified local bankers and employees in domestic banking market.

Control Variables

Our findings show that bank size does not influence bank IC performance. This finding is however similar to the findings reported by Joshi et al. (2011), of the Australian owned banks. As expected and consistent with prior findings by El-Bannany (2008) and Swartz and Firer (2005), we find a positive significant association between bank financial performance and IC performance.

Sensitivity Analysis

The results of the sensitivity analyses are presented in Table 2 (Models 2–5). Models 2 and 3 present the results of using the natural log and the dummy variable for board size, respectively. Models 4 and 5 show the results of using the natural log and the dummy variable for number of independent directors, respectively. Our results of all the models are almost similar to the basic model.

CONCLUSION

Our study has several policy implications. First, it may help the banking regulators in taking actions towards developing their performance and in turn maximising value creation. Second, regulators in GCC countries should revise the request for a minimum number (one-third of the board) of independent directors on the board of GCC banks. This is because independent directors in GCC countries in general do not possess the knowledge, skills and expertise in banking which may impede board processes and decision-making, and consequently IC performance. Otherwise, regulators in GCC countries should impose more strict nomination procedures for selecting the true independent directors.

The strong negative significant association between the presence of foreign banks and IC performance implies that the relaxation of entry barriers may not be an adequate solution for the GCC countries. While we hypothesise that the presence of foreign banks would help GCC banks improve their IC performance through either knowledge spill over or competition enhancement, our result shows that the presence of foreign banks deteriorates the IC performance of local banks.

NOTE

1. These tests are not reported here to save space, but they are available from the authors upon request.

REFERENCES

- Ab Razak, N. H., Ahmad, R., & Aliahmed, H. J. (2008). Government ownership and performance: An analysis of listed companies in Malaysia. *Corporate Ownership and Control*, 6(2), 434–442.
- Abeyssekera, I. (2010). The influence of board size on intellectual capital disclosure by Kenyan listed firms. *Journal of Intellectual Capital*, 11(4), 504–518.
- Abidin, Z. Z., Kamal, N. M., & Jusoff, K. (2009). Board structure and corporate performance in Malaysia. *International Journal of Economics and Finance*, 1(1), 150–164.
- Ajmi, J., Hussain, H. A., & Al-Saleh, N. (2009). Clients of conventional and Islamic banks in Bahrain: How they choose which bank to patronize. *International Journal of Social Economics*, 36(11), 1086–1112.
- Al-Hassan, A., Khamis, M., & Oulidi, N. (2010). The GCC banking sector: Topography and analysis. *Banks and Banks Systems*, 5(3), 15–28.
- Al-Muharrami, S., & Matthews, K. (2009). *Market power versus efficient-structure in Arab GCC banking*. Working paper No.7, Cardiff business school.
- Al-Musalli, M. A., & Ku Ismail, K. N. I. (2011). *Intellectual capital performance of the national united Arab Emirates listed banks*. Paper presented at the 7th Asia-Pacific Management Accounting Association APMAA, 17–19 November 2011, Kuala Lumpur.
- Al-Obaidan, A. M. (2008). Market structure concentration and performance in the commercial banking industry of emerging markets. *European Journal of Economics, Finance and Administrative Sciences*, 12, 104–115.
- Berger, A. N., & Hannan, T. H. (1998). The efficiency cost of market power in the banking industry: A test of the "Quiet Life" and related hypotheses. *The Review of Economics and Statistics*, 80(3), 454–465.
- Braun, M., & Sharma, A. (2007). Should the CEO also be chair of the board? An empirical examination of family-controlled public firms. *Family Business Review*, 20(2), 111–126.
- Chahine, S. (2007). Activity-based diversification, corporate governance, and the market valuation of commercial banks in the Gulf commercial council. *Journal of Management Governance*, 11, 353–382.
- Chahine, S., & Tohme, N. S. (2009). Is CEO duality always negative? An exploration of CEO duality and ownership structure in the Arab IPO context. *Corporate Governance: An International Review*, 17(2), 123–141.
- Chen, H. L., & Hsu, W. T. (2009). Family ownership, board independence, and R&D investment. *Family Business Review*, 22(4), 347–362.
- Claessens, S., Demirguc-Kunt, A., & Huizinga, H. (2001). How does foreign entry affect domestic banking markets? *Journal of Banking and Finance*, 25, 891–911.
- Dalton, D., Daily, C., Johnson, J., & Ellstrand, A. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal*, 42(6), 674–686.
- Douma, S., George, R., & Kabir, R. (2006). Foreign and domestic ownership, business groups, and firm performance: Evidence from large emerging market. *Strategic Management Journal*, 27, 637–657.

- Dwivedi, N., & Jain, A. K. (2005). Corporate governance and performance of Indian firms: The effect of board size and ownership. *Employee Responsibilities and Rights Journal*, 17(3), 161–172.
- El-Bannany, M. (2008). A study of determinants of intellectual capital performance in banks: The UK case. *Journal of Intellectual Capital*, 9(3), 487–498.
- Fernandez, Z., & Nieto, M. J. (2006). Impact of ownership on the international involvement of SMEs. *Journal of International Business Studies*, 37, 340–351.
- Goh, P. C. (2005). Intellectual capital performance of commercial banks in Malaysia. *Journal of Intellectual Capital*, 6(3), 385–396.
- Goldberg, L. S. (2007). Financial sector FDI and host countries: New and old lessons. *FRBNY Economic Policy Review*, March, 1–17.
- Hammond, S. A., & Slocum, J. W. (1996). The impact of prior firm financial performance on subsequent corporate reputation, *Journal of Business Ethics*, 15, 159–165.
- Hillman, A., Cannella, A., & Paetzold, R. (2000). The resource dependence role of corporate directors: Strategic adaptation of board composition in response to environmental change. *Journal of Management Studies*, 37(2), 235–256.
- Ho, C. A., & Williams, S. M. (2003). International comparative analysis of the association between board structure and the efficiency of value added by a firm from its physical capital and intellectual capital resources. *The International Journal of Accounting*, 38, 465–491.
- Ibrahim, N. A., Howard, D. P., & Angelidis, J. P. (2003). Board members in the service industry: An empirical examination of the relationship between corporate social responsibility orientation and directorial type. *Journal of Business Ethics*, 47, 393–401.
- Jabsheh, F. Y. (2005). *The GATS agreement and liberalizing: The Kuwaiti banking sector*. Working paper, Kuwait Institute for Scientific Research.
- Joshi, M., Cahill, D., & Sidhu, J. (2010). Intellectual capital performance in the banking sector: An assessment of Australian owned banks. *Journal of Human Resource Costing and Accounting*, 14(2), 151–170.
- Kamath, G. B. (2007). The intellectual capital performance of Indian banking sector. *Journal of Intellectual Capital*, 8(1), 96–123.
- Keenan, J., & Aggestam, M. (2001). Corporate governance and intellectual capital: Some conceptualizations. *Corporate Governance Journal*, 9(4), 259–275.
- Ku Ismail, K. N. I., & Abdul Kareem, M. (2011). Intellectual capital and the financial performance of banks in Bahrain. *Journal of Business Management and Accounting*, 1(1), 63–77.
- Laabas, B., & Abdmoula, W. (2005). Determinants of Arab intraregional foreign direct investments. *Working paper No. 0905*, The Arab Planning Institute, Kuwait.
- Laeven, L., & Levine, R. (2009). Bank governance, regulation and risk taking. *Journal of Financial Economics*, 93, 259–275.
- Mujtaba, N., & Williams, A. (2011). *Corporate governance and board composition: A comparison of GCC boards with UK, European and US boards*. Report issued by corporate governance consultants, Manama, Bahrain.
- Najid, N. A., & Abdul Rahman, R. (2011). Government ownership and performance of Malaysian government-linked companies. *International Research Journal of finance and economics*, 61, 42–56.

- Organization of Economic Co-operation and Development (OECD). (2000). *Final Report: Measuring and reporting intellectual capital*, Paris, France: Author.
- Organization for Economic Co-operation and Development (OECD). (2009, November). *Policy brief on improving corporate governance of banks in the Middle East and North Africa region*. Paris, France: Author.
- Pathan, S. (2009). Strong boards, CEO power and bank risk-taking. *Journal of Banking and Finance*, 33, 1340–1350.
- Pulic, A. (1998). *Measuring the performance of intellectual potential in knowledge economy*. Retrieved 24 January 2010, from <http://www.measuringip.at/Opapers/Pulic/Vaictxt.vaictxt.html>.
- Ross, A. (2005). Reputation: Risk of risks. *Economist Intelligence Unit Research Paper No. 4*. Retrieved from http://www.eiu.com/report_dl.asp?mode=fi&fi=1552294140.PDF&rf=0
- Saleh, N. M., Abdul Rahman, M. R. C., & Hassan, M. S. (2009). Ownership structure and intellectual capital performance in Malaysia. *Asian Academy of Management Journal of Accounting and Finance*, 5(1), 1–29.
- Shih, K., Chang, C., & Lin, B. (2010). Assessing knowledge creation and intellectual capital in banking industry. *Journal of Intellectual Capital*, 11(1), 74–89.
- Swartz, N. P., & Firer, S. (2005). Board structure and intellectual capital performance in South Africa. *Meditari Accountancy Research*, 13(2), 145–166.
- Tayles, M., Pike, R. H., & Sofian, S. (2007). Intellectual capital, management accounting practices and corporate performance: Perceptions of managers. *Accounting, Auditing and Accountability Journal*, 20(4), 522–548.
- Turk-Ariss, R. (2009). Competitive behaviour in Middle East and North Africa banking systems. *The Quarterly Review of Economics and Finance*, 49, 693–710.
- Valenzuela, L. M., Mulki, J. P., & Jaramillo, J. F. (2009). Impact of customer orientation, inducements and ethics on loyalty to the firm: Customers' perspective. *Journal of Business Ethics*, 93, 277–291.
- Williams, M. S. (2001). *Corporate governance diversity and its impact on intellectual capital performance in an emerging economy*. Working Paper, University of Calgary, Canada.
- Zahra, S. A., Ireland, R. D., & Hitt, M. A. (2000). International expansion by new venture firms: international diversity, mode of market entry, technological learning, and performance. *Academy of Management Journal*, 43(5), 925–950.
- Zahra, S. A., & Hayton, J. C. (2008). The effect of international venturing on firm performance: The moderating influence of absorptive capacity. *Journal of Business Venturing*, 23, 195–220.
- Zahra, S. A., & Pearce, J. A. (1989). Boards of directors and corporate financial performance: A review and integrative model. *Journal of Management*, 15(2), 291–334.
- Zeghal, D., & Maaloul, A. (2010). Analyzing value added as an indicator of intellectual capital and its consequences on company performance. *Journal of Intellectual Capital*, 11(1), 39–60.
- Zhang, X. (2008). Analysis on the motivations for the internationalization operation of China's commercial bank. *Asian Social Science*, 4(9), 76–79.