Saleh Salem Saeed Bajrei
MSc (International Accounting),
PhD Candidate,
School of Maritime Business
and Management,
University of Malaysia Terengganu
21030 Kuala Nerus, Terengganu, Malaysia
salehsalem06@yahoo.com
ORCID ID:
https://orcid.org/0000-0001-7016-8296

Shahnaz Ismail
PhD (Accounting),
Senior Lecturer,
School of Maritime Business
and Management,
University of Malaysia Terengganu
21030 Kuala Nerus, Terengganu, Malaysia
shahnaz@umt.edu.my
ORCID ID:
https://orcid.org/0000-0002-6830-9843

Safwan Mohd Nor
PhD (Finance),
RHB Islamic Endowed Scholar in Finance,
UMT Fund Manager,
University of Malaysia Terengganu
21030 Kuala Nerus, Terengganu, Malaysia;
Research Associate,
Victoria Institute of Strategic Economic Studies,
Victoria University
Melbourne, Victoria, 3000, Australia
safwan@umt.edu.my;
safwan.mohdnor@live.vu.edu.au
ORCID ID:
https://orcid.org/0000-0003-0791-2363

Panel data analysis of ownership structure and board effectiveness influence on GCC bank performance

Abstract. This study aims to analyze the influences of board directors' effectiveness and ownership on bank performance among the six Gulf Cooperation Council (GCC) countries: Saudi Arabia, UAE, Oman, Kuwait, Bahrain, and Qatar. Five hypotheses were singled-out for further approbation. Unbalanced secondary panel data were collected from 68 banks with a total of 268 observations for the period 2012-2015. During this period, the economy of GCC was experiencing the fall of oil price that resulted in low GDP, increase fiscal deficit, reduction of banks reserves and decline in banks' profitability and the share prices. These were the critical years to the banks in GCC countries as their performance was crucial. Besides facing diplomatic crisis in the following years, GCC countries strived to improve their financial sector. Secondary data was obtained from banks' annual reports, websites of stock exchange and Thomson Reuters Datastream. The findings revealed a significant association between board of directors' effectiveness, government-owned banks, and GCC national ownership with the banks' performance. Findings also showed the best board structure for banks and the need to unify the regulations among the six countries. As for the policymakers, the outcome of this study might indicate needed reconsideration of the legal infrastructure and facilitates of investment as well as signal to management, investors and auditors the best ways to invest and control the banks. The outcome may help to enhance closer ties among the GCC countries.
Keywords: Board Effectiveness; Foreign Ownership; Local Ownership; GCC; Bank Performance
JEL Classifications: G21; G32; G34
DOI: https://doi.org/10.21003/ea.V172-01

Баджрей С. С. С.
магістр, здобувач ступеня доктора філософії, Школа морського управління та бізнесу,
Малайзійський університет Теренґґану, Куала Нерус, Малайзія
Ісмаіл С.
кандидат економічних наук, старший викладач, Школа морського управління та бізнесу,
Малайзійський університет Теренґґану, Куала Нерус, Малайзія
Нор С. М.
кандидат економічних наук, дослідник гранту для ісламських вчених у галузі фінансів RHB,
керівник фонду UMT, Малайзійський університет Теренґґану, Куала Нерус, Малайзія;
науковий співробітник, Інститут стратегічних економічних досліджень, Університет Вікторія, Мельбурн, Австралія
Аналіз панельних даних, що стосуються впливу структури власності та ефективності роботи рад директорів на банки країн Ради співробітництва арабських держав Перської затоки
Анотація
Метою роботи є аналіз впливу ефективності структури власності та роботи рад директорів банків країн, що входять до Ради співробітництва арабських держав Перської затоки, а саме: Саудівської Аравії, ОАЕ, Оману, Кувейту, Бахрейну та Катару. Авторами статті розглянуто п'ять гіпотез. Панельні дані, що містять 268 спостережень, були отримані від 68 банків за період 2012–2015 рр. У зазначений період економіка країн, що входять до складу Ради співпраці арабських держав Перської затоки, перебувала під впливом падіння цін на нафту, результатом чого стало зниження показників ВВП відповідних країн, збільшення дефіциту бюджету, зменшення резервів банків, а також зниження їх рентабельності й падіння ціни акцій. Зазначений період став критичним для банків країн, що входять до складу Ради співпраці арабських держав Перської затоки, оскільки безпосередньо позначився на ефективності їх функціонування. Окрім вирішення проблем дипломатичного характеру, особливу увагу з боку вище названих країн було приділено поліпшенню стану фінансового сектора держав. Дані, необхідні для проведення дослідження, були отримані шляхом вивчення річних звітів банків, вебсайтів фондових бірж, а також потоків даних компанії «Thomson Reuters». Результати дослідження показали

чіткий взаємозв'язок між ефективністю роботи банків та ефективністю роботи рад директорів банків, державних банків, власністю й національною відповідальністю країн, що входять до складу Ради співпраці арабських держав Перської затоки. Результатом аналізу даних стало визначення найбільш оптимальної структури управління банками, а також необхідності уніфікації законодавства шести названих країн. Результати дослідження вказують на важливість перегляду інфраструктури законодавчої бази, що сприятиме залученню інвестицій та позитивно позначиться на роботі аудиторів та інвесторів щодо контролю й капіталовкладень. При цьому варто зазначити перспективність тіснішого співробітництва між країнами Ради співпраці арабських держав Перської затоки.
Ключові слова: ефективність ради директорів; участь іноземного капіталу; відповідальність місцевої влади; Рада співпраці арабських держав Перської затоки; ефективність роботи банків.

Баджрей С. С. С.
магистр, соискатель степени доктора философии, Школа морского управления и бизнеса,
Малайзийский университет Теренггану, Куала Нерус, Малайзия
Исмаил С.
кандидат экономических наук, старший преподаватель, Школа морского управления и бизнеса,
Малайзийский университет Теренггану, Куала Нерус, Малайзия
Нор С. М.
кандидат экономических наук, исследователь гранта для исламских ученых в области финансов RHB,
руководитель фонда UMT, Малазийский университет Теренггану, Куала Нерус, Малайзия;
научный сотрудник, Институт стратегических экономических исследований, Университет Виктория, Мельбурн, Австралия

Анализ панельных данных, касающихся влияния структуры собственности и эффективности работы советов директоров на банки стран Совета сотрудничества арабских государств Персидского залива

Аннотация
Целью данной работы является анализ влияния эффективности структуры собственности и работы советов директоров банков стран, входящих в Совет сотрудничества арабских государств Персидского залива, а именно: Саудовской Аравии, ОАЭ, Омана, Кувейта, Бахрейна и Катара. Авторами статьи рассмотрены пять гипотез. Панельные данные, содержащие 268 наблюдений, были получены от 68 банков за период 2012–2015 гг. В указанный период экономика стран, входящих в состав Совета сотрудничества арабских государств Персидского залива, была подвержена влиянию падения цен на нефть, результатом чего стало снижение показателей ВВП соответствующих стран, увеличение дефицита бюджета, уменьшение резервов банков, а также понижение их рентабельности и падение цены акций. Обозначенный период стал критическим для банков стран, входящих в состав Совета сотрудничества арабских государств Персидского залива, поскольку непосредственно сказался на эффективности их функционирования. Помимо решения проблем дипломатического характера, особое внимание со стороны выше названных стран было уделено улучшению состояния финансового сектора государств. Данные, необходимые для проведения исследования, были получены путем изучения годовых отчетов банков, вебсайтов фондовых бирж, а также потоков данных компании «Thomson Reuters». Результаты исследования показали четкую взаимосвязь между эффективностью работы банков и эффективностью работы советов директоров банков, государственных банков, собственностью и национальной ответственностью стран, входящих в состав Совета сотрудничества арабских государств Персидского залива. В результате анализа данных была определена наиболее оптимальная структура управления банками, а также необходимость унификации соответствующего законодательства шести названных стран. Результаты данного исследования указывают на важность пересмотра законодательной базы, что будет способствовать привлечению инвестиций и положительно скажется на работе аудиторов и инвесторов в отношении контроля и капиталовложений. При этом стоит отметить перспективу более тесного сотрудничества между странами Совета сотрудничества арабских государств Персидского залива.
Ключевые слова: эффективность совета директоров; участие иностранного капитала; ответственность местных властей; Совет сотрудничества арабских государств Персидского залива; эффективность работы банков.

1. Introduction

The finance sector was hit by the global financial crisis of 2007-2008. As a result, the international banking system became severely affected. Even though the crisis did not directly affect the Gulf Cooperation Council (GCC) countries which is comprised of six countries (Saudi Arabia, UAE, Oman, Kuwait, Bahrain and Qatar), the Council suffers from the downturn in global economic activities, especially after the decline in oil prices.

Recently, with low oil prices and the occurrence of geopolitical turbulence in countries neighboring to the GCC, profits have slumped and growth rates have declined. This has negatively impacted the GCC markets, the financial performance of the overall banking sector share prices and clients' behaviour (KPMG International Cooperative, 2017) [1].

Due to these developments, GDP growth among Middle Eastern and North African (MENA) countries grew slowly at 2% in 2013, which is lower by 2% than in 2012, showing 3% in 2014. The economies of the GCC states also grew at 5.2% in 2012, a decline from 7.7% in 2011 (IMF, 2013) [2]. However, the cumulative index performance in the GCC region fell from 22.98% in 2013 to 5.58% in 2014 (MSCI, 2017) [3]. In 2015, GDP improved to 3.8% but sharply decreased to 2.2 and 0.5% in 2016 and 2017, respectively. In addition, the low oil price affected the fiscal balance that changes it from a surplus in 2014, with around USD 240 billion to a deficit of approximately USD 46 billion in 2016. However, there was a slight improvement in 2017 due to the recovering oil revenues and the policy of central banks (IMF, 2017) [4].

Despite the above, the separation of ownership and control that exists in the banking system between the shareholders and management may lead to a rise in agency conflict. This is congruent with the agency theory which emphasises that managers are responsible for and have the right to access any kind of information unless they are prevented from doing so and provided the reason to protect and maintain company confidentiality. Therefore, the board of directors has to play the role of monitoring the managers. Hence, it is convenient to say that having effective board members is one possible way of reducing agency problem (Fama and Jensen, 1983) [5]. As a result of this conflict and corporate governance has been implemented in the GCC countries over the last decade. Despite the fact that there have been some significant gains and improvements in the practices of corporate governance, the sector is still facing some challenges, especially in the context of disclosure, risk management and board structure and practice.

This is particularly evident in the banking sector as it constitutes 60% of the region's overall financial structure (Saidi, 2011) [6]. There is a need to continue reviewing strategies which can help in enhancing the ways that will strengthen and improve governance mechanisms, influence the management's self-interest to align with interests of the stakeholders, customers and suppliers (Dalwai et al., 2015) [7].

Furthermore, there is also a need to examine governance mechanisms compositely, as the key determinant of effectiveness of board characteristics that maximises, and protect

shareholder interests. In the same vein, governance mechanisms are complementary to each other. Therefore, it is necessary to reflect on these mechanisms as a whole, because separating corporate governance mechanisms may lead to mixed findings (Ward et al., 2009) [8]. Pillai and Al-Malkawi (2018) [9] in their studies reveal that only few studies are related to corporate governance among the GCC countries and the findings are inconclusive. Furthermore, the studies focus more on board characteristics, whereas little consideration is given to the performance of the banks. Therefore, this is still an avenue to research the way the code of corporate governance differs in terms of its board characteristics among the six GCC members. In addition to this, ownership in the banking sector in the GCC region is mostly attributed to governments and family members.

Loghod (2010) [10] declares that family concentrated ownership and legal barriers are the main causes for foreign ownership being limited in the GCC banking sectors. Such concentration provides opportunities to gain greater power, since family members are able to intervene in policy development as well as set up regulations that suit their own interests. It is estimated that the value of outward remittances from the GCC countries officially exceeded USD 37 billion, due to which the GCC is considered to be among the biggest remitting regions in the world (Naufal, 2011) [11]. It is very important to take into account whether the GCC region will benefit from the reduction in restrictions regarding foreign ownership which is characterised mostly by ownership concentration.

Since the GCC is regarded as one integral economy, there is a need to establish closer ties among them. This effort requires harmonisation between the accounting and governance regulations through which cooperation can be enhanced in order to unify the standards that lead to improvement in the effectiveness of GCC financial institutions. Thus, it is vital to seek insights on the effectiveness of board and ownership in the performance of GCC banks.

2. Brief Literature Review and Hypotheses

Board Effectiveness

A good quality board alliance with better governance may support the banks' monitoring role and ultimately enhance the performance. Thus, a larger board size and independent directors relate to better firm performance (Nazir and Afza, 2018) [12], while higher ranking board independence is associated with greater firm value (Zhu et al, 2016) [13]. In contrast, a small board size with diverse experience and knowledge, allows easy coordination and communication (Al-Saidi and Al-Shammari, 2013) [14]. Klein (1998) [15] found no relationship between the presence of board committees and firm performance. It is therefore important to view corporate governance mechanisms as a joint combination of mechanisms which ensures that the interests of shareholders are protected (Ward et al., 2009) [8]. Thus, it is hypothesised that:

H_1: The effectiveness of the board of directors is positively related to bank performance.

Ownership

Sturm and Williams (2004) [16] reported that the efficiency of foreign banks is greater than that of domestic banks in Australia. Despite the fact that foreign investments led to improved profits and firm growth, it also exposed investors to the risk of expropriation by investee companies and nations (Chin et al., 2013) [17]. Hence, foreign ownership is negatively associated with performance (Li et al., 2018) [18].

In liberalising its economy, Bahrain's government permits 100% foreign ownership of assets for businesses in certain sectors (World Trade Organization, 2014) [19], Oman permits foreigners to own only 70% of business assets in the country (Ernst and Young, 2013) [20] while the other GCC members limit foreign ownership by non-GCC nationalities to 49%. Meanwhile, in the GCC countries, shareholders related to the domestic banking sector are limited to institutions, governments or families, thus creating a barrier for foreign banks to enter their local markets. Thus, in the GCC, there is limited foreign ownership as mandated by law and bilateral agreements among them which also limit the operation of foreign banks in these countries. It is hypothesised that:

H_2: Foreign, other GCC nationals' ownership is positively related to bank performance.

H_3: Foreign, non-GCC nationals' ownership is negatively related to bank performance.

Banks owned by governments tend to be more competent regarding credit risks and are averse to bankruptcy (El-Bannan, 2015) [21]. Thus, concentrated bank ownership showed better performance and higher earning power (Ozili and Uadialem, 2017) [22]. Corporate governance in Chinese firms increased the financial performance of state-owned firms in the market (Kang and Kim, 2012) [23].

Most GCC banks are owned by either the government or family members, which limits the entry of foreign ownership (Loghod, 2010) [24]. Thus, there is a lack of correlation between ownership concentration and bank performance. Meanwhile, family and public ownership influences the bank performance (Zouari and Taktak, 2014) [25]. Furthermore, firms that have government ownership increase their value (Beuselinck et al., 2017) [26].

In the GCC, family-owned firms account for approximately 60% to 70% of businesses, generating approximately USD 100 billion annually. Moreover, government ownership has a significant effect on financial performance in most GCC countries (Pillai and Al-Malkawi, 2018) [9]. In addition, institutional ownership is important for firms to perform effectively (Abdullah et al., 2008) [27]. Literature dedicated to the GCC market is still insufficient since most studies were conducted in the developed countries and results were mixed (Abraham, 2013) [28]. Thus, it is hypothesised that:

H_4: Government-owned banks are positively related to bank performance.

H_5: Private owned banks are positively related to bank performance.

3. Purpose

The purpose of this paper is to examine the determinants of market-based performance of banks in GCC countries, which includes the effectiveness of the board of directors, foreign ownership and local concentrated ownership.

4. Results

To research the subject, we conducted a panel data analysis using data from 68 banks from the six GCC countries, covering the period between 2012 and 2015. The period was chosen because during this time, the banking sector in the GCC was facing serious challenges in its financial operations due to the fall of oil prices, decline in GDP, increase of fiscal deficit and decrease in bank reserves. Following these issues, the GCC countries faced a diplomatic crisis with the occurrence of political differences in 2016, which later led to diplomatic relations cut-off in some states in 2017. The crisis affected the financial flows and the mobility of capital (IMF, 2017) [4]. As a result, it mitigated the movement of investors and shareholders in the region. Due to this, the ownership and boards structures in the GCC region were also affected.

The relevant data were obtained from three different sources: banks' annual reports, websites of the securities markets and Thomson Reuters Datastream. Only banks for which the data were complete were used for further analysis. However, the two banks that were used in the sample were found to be established during the period of the study and therefore fulfilled only 2 years of the data requirement. As a result, unbalanced panel data was obtained and was used for the analysis. In order to assess the determinants of bank performance, an unbalanced fixed effect panel analysis was employed based on the following empirical regression model:

$$\text{Tobin's } Q_{it} = (a_0 + u_i) + \beta_1 \text{BODEF}_{it} + \beta_2 \text{GVOWNB}_{it} + \beta_3 \text{PRVOWNB}_{it} + \beta_4 \text{GCCOWN}_{it} + \beta_5 \text{OTFRGNOWN}_{it} + \beta_6 \text{BSIZ}_{it} + \beta_7 \text{BAGE}_{it} + \beta_8 \text{BLEV}_{it} + \beta_9 \text{PRVROE}_{it} + \varepsilon_{it}. \quad (1)$$

Tobin's Q is the dependent variable and a proxy for banks' performance. The independent variables are the board of directors' effectiveness (BODEF), the government owned banks (GVOWNB), the private owned banks (PRVOWNB),

GCC ownership (GCCOWN) and foreign non-GCC ownership (OTFRGNOWN). The four control variables are the bank size (BSIZ), the bank age (BAGE), the bank leverage (BLEV), and the previous year's return on equity (PRVROE).

The main tool used to measure performance is Tobin's Q, measured by the equity market value (market capitalization) and divided by the equity book value, as a proxy for bank performance. The ratio is then transformed into the logarithm. The independent variables used in this study to proxy board effectiveness are the board size, the number of independent directors, board meetings, non-executive members and board committees. These five characteristics were transformed into an index value where each characteristic used a dummy variable of 1 when the value was equal or above the sample median and 0 otherwise.

The local concentrated ownership was proxies of either government-owned or private banks. The dummy variable 1 is used for major ownership either by the government or private owners and 0 otherwise. This paper defines two types of foreign ownership in GCC countries' banks. The first type is ownership by foreigners, who were permitted to own capital up to 100% in any business sector in any GCC country but were constrained by the council protocol and agreements among GCC countries. The second type is ownership that is restricted by the public law of the GCC countries. As for foreign ownership, the measurement used in the study was the percentage of ownership by two categories of foreigners in the public market, namely ownership by other GCC nationals and ownership by non-GCC nationals. Based on previous research by Zouari and Taktak (2014) [25], and Nazir and Afza (2018) [12], this study employs the bank size, the bank age, the leverage and the return on the equity of the previous year as control variables. These variables were generally found to represent the impact on financial performance.

In preparing the data for the analysis, the non-normality distribution data of variables were winsorized (a central tendency is given) at the 1st and 99th percentile levels. As for the multicollinearity test shown in Table 1, this study found no serious problem of multicollinearity as the TOL is below 0.88 and VIF is less than 2.3, where the acceptable values for the tolerance should be less than 1.0 and VIFs not more than 10, to show only a little or no multicollinearity (Gujarati, 2012) [10]. Therefore, there is no intercorrelation of the independent variables in the data.

Table 2 reports the descriptive statistics for all the variables. The average score for performance using Tobin's Q is 25.2, while the board of directors' effectiveness index is 3.2. On average, government-owned banks represent 14.18%, private banks - 54.5%, GCC-owned banks - 14.6%, and other foreign-owned banks - only 8.1%.

Table 3 presents the regression result using the fixed effect method and shows that the overall model is a good fit at the 1% level with R^2 of 29.4% (F - stat 10.43). The results reveal that the board of directors' effectiveness (BODEF) is negative. It not significantly related to the banks' market performance (t = -3.33, p < 0.01). H_1 was not supported, which implies that a board of directors of GCC banks with a high combination of characteristics seems to have less effect on the share price of banks and fails to enhance the bank value in the market.

The result contradicts Nazir's and Afza's (2018) [12] findings, which documented that board characteristics seem to be positively related to the firm's performance. This may be due to problems in coordinating the decision-making process, to communicate information, and attract investors. Moreover, large board membership may cause communication problems and carry more risk (Al-Saidi and Al-Shammari, 2013) [14].

On the other hand, the ownership by GCC nationals (GCCOWN) of up to 100% shows a significant positive relationship with the bank financial market performance (t = 3.56, p < 0.01). H_2 is supported in line with Sturm and Williams (2004) [23] and Chin et al. (2013) [5] who show that foreign ownership enhances investment and leads to

Tab. 1: **Results from the VIF and TOL**

Variables	VIF	TOL
PRVOWNB	2.25	0.444
BSIZ	2.16	0.464
GCCOWN	2.13	0.469
GVOWNB	1.84	0.545
BLEV	1.57	0.637
PRVROE	1.41	0.707
OTFRGNOWN	1.29	0.777
BAGE	1.28	0.784
BODEF	1.14	0.878

Source: Compiled by the authors

Tab. 2: **Descriptive statistics**

Variables	Mean	Std. Dev.
Log Tobin's Q	0.252	0.478
BODEF	3.205	0.332
GVOWNB	0.1418	0.3494
PRVOWNB	0.545	0.499
GCCOWN	0.146	0.225
OTFRGNOWN	0.081	0.14
BSIZ	23.267	1.315
BAGE	9.176	0.705
BLEV	0.846	0.086
PRVROE	0.099	0.081

Source: Compiled by the authors

Tab. 3: **Panel regression model results**

Variables	Coeff.	t-statistics	p-value (Sig)
BoDEF	-0.0675	-3.33	0.001 ***
GCCOWN	0.989	3.56	0.001***
OTFRGNOWN	-1.278	-0.95	0.345
GVOWNB	0.622	4.68	0.000***
PRVOWNB	-0.0431	-0.7	0.484
BSIZ	0.91	4.32	0.000***
BAGE	0.298	0.71	0.483
BLEV	-1.491	-2.63	0.011 **
PRVROE	0.503	1.06	0.294
No. of observation	268		
F-statistic	10.43 ***		
R^2	0.294		

Note: The significance levels are indicated as ***- at 1%, ** - at 5%, and * - at 10%, respectively.

Source: Compiled by the authors

increases in profits and firm growth. Ownership by other foreign non-GCC nationals, which is restricted by the law of the GCC countries, is found to be negatively insignificant on bank performance. H_3 is therefore not supported. This finding supports prior research which has documented that foreign investments expose investors to risk (Chin et al., 2013) [5]. The different results for the two types of foreign ownership may be due to whether full ownership was allowed to foreign investors, which would likely motivate market performance. This means that there are collectively increasing facilities for the inflow of foreign investments which probably benefit the host country. This is in contrast to foreign ownership limited by law for the reason that the banks may block foreign investors' IPO due to the scope of ownership being already occupied. It might also be due to the lack of information held by the investor, as they have weak representation in top management.

This result presents an insight to regulators and policymakers to reform their legal infrastructure in the GCC to allow foreigners to invest their income internally rather than remitting it outwards.

GCC government-owned banks show a significant positive relationship with bank performance (t = 4.68, p < 0.01), which supports H_4. This finding is in line with Beuselinck et al. (2017) [4] who show that firms with government ownership have lower costs and an increase in value. This means that investors in the GCC are more confident of those banks that operate with higher capital and are supported by the governments, especially in unexpected investment circumstances. Banks owned by local private

sectors show a negative relationship with bank performance (t = -0.70, p = 0.84), therefore H_5 is not supported.

This finding is consistent with Zouari and Taktak (2014) [25] who found a lack of correlation between ownership concentration and bank performance. This may imply that the private sector faced a serious competitiveness and there is a need for the government to encourage local investors and offer further facilities and incentives to them.

5. Conclusion

This paper has investigated the association between the effectiveness of the board of directors as a composite measure of the board of directors' characteristics (size, meetings, independence, non-executive members and number of board committees), local block shareholders of banks (government-owned and private banks) and the two types of foreign ownership (other GCC nationals and non-GCC nationals) with the GCC bank market performance in the business environment of GCC countries.

GCC banks should reconsider reducing their board structure as the findings show that large boards have less influence on the bank market performance. Furthermore, GCC governments should expand ownership and attract more investors among the GCC members to invest in their countries. Therefore, it is recommended that GCC countries should reassess their legal tax and investment infrastructures to make them more attractive to investors.

The results offer implications on theory and practice. An effective board of directors is important to ensure good governance and better performance of GCC banks. Evaluating the performance of banks is useful in helping the related users such as regulators, depositors, clients and bank managers in making decisions as well as in implementing appropriate regulations. It also acts as a reminder to investors and depositors on the right time to invest or withdraw their investment from the banks.

One of the limitations of the study is that only banks that are listed on the GCC security markets were considered, thereby ignoring the non-listed banks and other financial firms. Therefore, the findings might not be generalised to other financial companies or non-listed banks. Furthermore, this paper focused on panel econometric tests, whereas future studies can explore the optimal combination of variables. In this aspect, one interesting avenue is the use of machine learning techniques to find the optimal corporate governance structure that can result in the best firm performance, such as the evolutionary algorithm as explored by Nor and Zawawi (2016) [19]. Finally, this study indexed only five characteristics for board composite effectiveness and a measurement for corporate governance quality that comprises other internal and external corporate governance mechanisms was not included in this study.

This study may be extended in several ways. Besides using Tobin's Q, other measures could be used to represent bank performance. Also, very little is known about the culture of GCC countries, which could be one of the unique characteristics that may impact bank performance in addition to family ownership and gender. This could be a potential area for future studies.

References

1. KPMG International Cooperative (2017). *GCC listed banks results.* Retrieved from https://assets.kpmg.com/content/dam/kpmg/qa/pdf/gcc-listed-banks-report.pdf
2. International Monetary Fund (2013). *Labor Market Reforms to Boost Employment and Productivity in the GCC.* Policy Paper. Washington. Retrieved from https://www.imf.org/external/np/pp/eng/2013/100513.pdf
3. MSCI (2017). *GCC Banks Index.* Retrieved from https://www.msci.com/documents/10199/4a6e8a57-1229-4733-bab5-80e3c6b0244e
4. International Monetary Fund (2017, December 14). *Gulf Cooperation Council: The Economic Outlook and Policy Challenges in the GCC Countries.* Policy Papers. Retrieved from https://www.imf.org/en/Publications/Policy-Papers/Issues/2017/12/14/pp121417gcc-economic-outlook-and-policy-challenges
5. Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law & Economics, 26*(2), 301-325. doi: https://doi.org/10.1086/467037
6. Saidi, N. (2011, November). Corporate governance in the GCC: What has been done and what remains. *Qatar Business Review,* 11-13.
7. Dalwai, T. A. R., Basiruddin, R., & Abdul Rasid, S. Z. (2015). A critical review of relationship between corporate governance and firm performance: GCC banking sector perspective. *Corporate Governance, 15*(1), 18-30. doi: https://doi.org/10.1108/CG-04-2013-0048
8. Ward, A. J., Brown, J. A., & Rodriguez, D. (2009). Governance bundles, firm performance, and the substitutability and complementarity of governance mechanisms. *Corporate Governance: An International Review, 17*(5), 646-660. doi: https://doi.org/10.1111/j.1467-8683.2009.00766.x
9. Pillai, R., & Al-Malkawi, H.-A. N. (2018). On the relationship between corporate governance and firm performance: Evidence from GCC countries. *Research in International Business and Finance, 44,* 394-410. doi: https://doi.org/10.1016/j.ribaf.2017.07.110
10. Gujarati, D. (2012). *Econometrics by example.* Macmillan International Higher Education.
11. Naufal, G. S. (2011). Labor migration and remittances in the GCC. *Labor History, 52*(3), 307-322. doi: https://doi.org/10.1080/0023656X.2011.600545
12. Nazir, M. S., & Afza, T. (2018). Does managerial behavior of managing earnings mitigate the relationship between corporate governance and firm value? Evidence from an emerging market. *Future Business Journal, 4*(1), 139-156. doi: https://doi.org/10.1016/j.fbj.2018.03.001
13. Zhu, J., Ye, K., Tucker, J. W., & Chan, K. J. C. (2016). Board hierarchy, independent directors, and firm value: Evidence from China. *Journal of Corporate Finance, 41,* 262-279. doi: https://doi.org/10.1016/j.jcorpfin.2016.09.009
14. Al-Saidi, M., & Al-Shammari, B. (2013). Board composition and bank performance in Kuwait: an empirical study. *Managerial Auditing Journal, 28*(6), 472-494. doi: https://doi.org/10.1108/02686901311329883
15. Klein, A. (1998). Firm performance and board committee structure. *The Journal of Law and Economics, 41*(1), 275-304. doi: https://doi.org/10.1086/467391
16. Sturm, J.-E., & Williams, B. (2004). Foreign bank entry, deregulation and bank efficiency: Lessons from the Australian experience. *Journal of Banking & Finance, 28*(7), 1775-1799. doi: https://doi.org/10.1016/j.jbankfin.2003.06.005
17. Chin, C.-L., Chen, Y.-J., Kleinman, G., & Lee, P. (2013). The effects of legal protections and control-ownership divergences on investor perceptions of foreign earnings. *Journal of Financial Regulation and Compliance, 21*(2), 164-187. doi: https://doi.org/10.1108/13581981311315668
18. Li, L., McMurray, A., Sy, M., & Xue, J. (2018). Corporate ownership, efficiency and performance under state capitalism: Evidence from China. *Journal of Policy Modeling, 40*(4), 747-766. doi: https://doi.org/10.1016/j.jpolmod.2018.03.002
19. World Trade Organization (2014, March 18). Trade Policy Review. *Report by Kingdom of Bahrain No. WT/TPR/G/294.* Retrieved from https://www.wto.org/english/tratop_e/tpr_e/g294_e.pdf
20. Ernst & Young (2013). *Doing business in Oman, An executive's guide to doing business in Oman.* Retrieved from https://vae.ahk.de/fileadmin/AHK_Vae/10_Countries/Oman/DBI_Oman_v27.pdf
21. El-Bannan, M. A. (2015). Do consolidation and foreign ownership affect bank risk taking in an emerging economy? An empirical investigation. *Managerial Finance, 41*(9), 874-907. doi: https://doi.org/10.1108/MF-12-2013-0342
22. Ozili, P. K., & Uadiale, O. (2017). Ownership concentration and bank profitability. *Future Business Journal, 3*(2), 159-171. doi: https://doi.org/10.1016/j.fbj.2017.07.001
23. Kang, Y.-S., & Kim, B.-Y. (2012). Ownership structure and firm performance: Evidence from the Chinese corporate reform. *China Economic Review, 23*(2), 471-481. doi: https://doi.org/10.1016/j.chieco.2012.03.006
24. Loghod, H. A. (2010). Do Islamic banks perform better than conventional banks? Evidence from gulf cooperation council countries? *API Working Paper Series, No. 1011.* Arab Planning Institute, Saudi Arabia. Retrieved from http://www.arab-api.org/images/publication/pdfs/297/297_wps1011.pdf
25. Zouari S. B. S., & Taktak, N. B. (2014). Ownership structure and financial performance in Islamic banks: Does bank ownership matter? *International Journal of Islamic and Middle Eastern Finance and Management, 7*(2), 146-160. doi: https://doi.org/ 10.1108/IMEFM-01-2013-0002
26. Beuselinck, C., Cao, L., Deloof, M., & Xia, X. (2017). The value of government ownership during the global financial crisis. *Journal of Corporate Finance, 42,* 481-493. doi: https://doi.org/10.1016/j.jcorpfin.2015.05.002
27. Wan Abdullah, Z. W., Ismail, S., & Jamaluddin, N. (2008). The impact of board composition, ownership and CEO duality on audit quality: the Malaysian evidence. *Management & Accounting Review, 7*(2), 17-28. Retrieved from http://arionline.uitm.edu.my/ojs/index.php/MAR/article/view/266
28. Abraham, A. (2013). Foreign ownership and bank performance metrics in Saudi Arabia. *International Journal of Islamic and Middle Eastern Finance and Management, 6*(1), 43-50. doi: https://doi.org/10.1108/17538391311310734
29. Nor, S. M., & Zawawi, N. H. M. (2016). Is there an optimal board structure? An analysis using evolutionary-algorithm on the FTSE Bursa Malaysia KLCI. *Procedia Economics and Finance, 35,* 304-308. doi: https://doi.org/10.1016/S2212-5671(16)00038-1

Received 5.09.2018