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The Relationship between CEO Characteristics and Financial Bank Performance: Empirical Evidence from Iraq

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Abstract

This paper examines the link between financial bank performance and Chief Executive Officer (CEO) characteristics by the use of an unbalanced panel of 27 banks from 2005 to 2014 in Iraq. This study is estimated by using the panel fixed effects approach. CEO characteristics variables are represented by CEO tenure, CEO education and CEO ownership. Return on Equity (ROE) is used to measure the bank financial performance. The findings of this study show that CEOs equipped with high qualification and high share ownership lead to better performance of Iraqi banks. However, CEO tenure has no significant impact on bank financial performance in Iraq. Collectively, the results of this study suggest that banks seeking some improvement in their financial performance should recruit CEO who has high qualification and high share ownership. This study contributes to the existing literature of the upper echelon theory and the determinants of financial banks' performance. Firstly, to the author's best knowledge, this study is considered as the first study of its kind to test effects of CEO characteristics on the financial bank performance in Iraq. Secondly, to the author's best knowledge, this study is considered as the first study of its kind to test effects of CEO education in developing countries. Thirdly, the authors attempt to classify the CEO in accordance with the educational background into two groups for comparing the effects of CEO characteristics on banks' performance. The findings of this study will fill the literature gap of the association between CEO characteristics and banks' performance as demonstrated by the Upper Echelon Theory and Agency Theory.

Keywords: CEO Characteristics, Upper Echelon theory, Agency theory, Bank performance, Iraq.

1. INTRODUCTION

Banks play a vital role in the economic resource allocation of countries. Continuously, they channel funds from depositors to investors. They can do so if they generate necessary income to cover their operational cost they incur in due course of time. In other words, for sustainable intermediation function, banks need to be profitable. Beyond the intermediation function, the financial performance of banks has critical implications for economic growth of countries. Good financial performance rewards the shareholders for their investment. This, in turn, encourages additional investment and brings about economic growth. On the other hand, poor banking performance can lead to banking failure and crisis, which have negative repercussions on the economic growth. A well-functioning and inclusive banking sector is critical for efficient resource allocation leading to increased productivity, greater investment, higher overall levels of economic growth, and lower inequality. This is particularly critical in Iraq, where years of political instability and violence have impeded the development of a robust private sector.

CEOs have often been considered superstars in both academics and the business. CEOs become very positively popular when they take banks which have been performing poorly, and CEOs are able to bring renewed energy and making these banks succeed. With the declining nature in world banks, CEOs are under tremendous pressure to make things different during this period of recession. Institutions are often visible as a direct reversal of their top managers and CEO (Carpenter, Geletkanycz, & Sanders, 2004; Hambrick & Mason, 1984). If divergences CEO characteristics are key matter for bank performance, which are the characteristics recognize the good CEO? The previous literature on corporate governance has confirmed that the characteristics of CEOs grasp explanatory strength in explaining firm performance differentiation. (Graham, Harvey, & Puri, 2013; Fee, Hadlock, & Pierce, 2013; Kaplan, Klebanov, & Sorensen, 2012; Malmendier, Tate, & Yan, 2011). This study contributes to the existing literature by explaining the associations between CEO characteristics and financial bank performance.

Given their leadership positions and compensation, CEOs likely have a significant influence on their banks' success (Kaplan, *et al.*, 2012). In research arena, the investigation of the impact of the CEO characteristics on bank performance progressively has monopolized the consideration of analysts who consider the qualities of CEO as an approach to clarify the inverse banks performance. This paper is likely to expand research by its contribution towards better understanding of the CEO characteristics and performance of banks in Iraq. The key focuses of the study are in the CEO tenure, the CEO education and CEO ownership. In banks, these measures of corporate governance play a major role as CEOs have often been considered as superstars in both academics and the business. Moreover, it also identifies that corporate governance factors which influence the performance of banks in Iraq are similar to those in western businesses. Since corporate governance is unable to attract the attention of researchers in Iraq, this study provides a better understanding of corporate governance with the performance of banks, similar to that of global markets. The effect of CEO characteristics in the case of banks is very limited. This study aims to shed some light on this gap by the use of secondary data to test the impact of CEO characteristics on financial bank performance in Iraq.

This study contributes to the existing literature of the upper echelon theory and the determinants of financial banks' performance. Firstly, to the authors' best knowledge, this study is considered as the first study of its kind to test effects of CEO characteristics on the financial bank performance in Iraq. Secondly, to the authors' best knowledge, this study is considered as the first study of its kind to test effects of CEO education in developing countries. Thirdly, the authors attempt to classify the CEO in accordance with the educational background into two groups for comparing the effects of CEO characteristics on banks' performance. The remainder of this study is organized as follows. In the second section, the authors discuss the literature review and hypotheses developments. In the third section, the research method is explained. The fourth section presents the results and discussion. The final section illustrates a summary of the study and concluding remarks.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

This segment includes the understanding of CEO characteristics, bank financial performance and hypothesis development. This study discusses CEO characteristics literature as follow: Firstly, the association between the CEO tenure and financial performance of the bank is discussed. Next, the discussion includes the relationship of CEO education and CEO ownership with the performance of the bank.

2.1. CEO Tenure and Bank Performance

CEO tenure is the number of years the CEO has been on the board of directors O'Sullivan, Mamun and Hassan (2015). The number of years that a CEO has been in the realm of affairs will significantly affect bank's profitability because they have knowledge and experience (O'Sullivan *et al.* 2015; Buchanan, 1974). Gabarro (1987) explains that new CEOs normally need one or two years to obtain the necessary task knowledge to be able to take key decisions. Shen (2003) discusses that the CEOs continue to compile task knowledge and also develop their leadership skills with the passing time. The CEO serve in the same position for long period are encouraged to enhance the profitability because they have the interest to see the findings of their decision taken (Kyereboah-Coleman, 2008). As CEO serve in her or his position for long period, the confident of CEOs becomes more and their financing decision manifests more challenges (Orens & Reheul, 2013). In this study, the

authors contend that when a CEO serves longer in a bank, it serves as an additional motivating force to advance the enthusiasm of shareholders. Due to the fact that they are separated from job stability, the CEOs manage to get the chance to witness aftereffects of decisions taken. The association between CEO tenure and bank performance results have been documented in existing literature. O'Sullivan et al. (2015), Agrawal and Knoeber (1996) find that CEO tenure is positively related with banks' performance. Meanwhile, Belkhir (2009), Al Farooque, Van Zijl, Dunstan and Karim (2007), Kyereboah-Colema and Biekpe (2006) found inverse impact of CEO tenure on bank performance. Moreover, according to the upper echelon theory, CEO tenure has a vital impact on firm performance (Hambrick & Mason, 1984). Consequently, the hypothesis concerning CEO tenure is stated as follows:

H1: CEO tenure significantly and positively influences the financial bank performance.

2.2. CEO Education and Bank Performance

There are limited studies examine the relationship between CEO education and bank performance (King, Srivastav, & Williams, 2016). While, many researches have studied the relationship between CEO education and firm performance. According to Mehran, Morrison and Shapiro (2011), the corporate governance of banks is different from that of non- financial firms for two reasons. First is that banks have many more stakeholders; second is that the business of banks is opaque and complex.

King *et al.* (2016) utilize a sample of 172 US banks for the period 1992 to 2011. Their study suggests that the management education provides skills and enables the CEOs to manage increasingly complex and larger banks and improve their performance. Similarly, Jalbert, Rao and Jalbert (2002) utilize a sample of 800 establishments and find that the CEO education is positively associated with establishment ROA. On the other hand, Lindorff and Jonson (2013), Gottesman and Morey (2010) find that there is no relationship between CEO education and firm performance. Likewise, Nielsen (2010) clarifies that establishment choices and behavior are strongly influenced by the background of CEO education when the environment has high uncertainty. Hence, owing to high uncertainty in the Iraqi environment, banks performance may be significantly influenced by the CEO educational backgrounds. Moreover, according to the upper echelon theory, CEO education has a vital impact on firm performance (Koyuncu, Firfiray, Claes, & Hamori, 2010; Jalbert *et al.*, 2002). All the previous studied conducted test the impact of CEO education on firm performance, and only one is conducted in the USA tested CEO education with bank performance; therefore, this study is considered as the first study of its kind in developing countries to examine the impact of CEO on bank performance. Therefore, this study attempts to test on the impact of CEO education on bank performance in Iraq. This leads to the following hypothesis;

H2: The CEO education is significantly positively related to banks' performance.

2.3 CEO Ownership and Bank Performance

According to agency theory, the potential conflict can be dealt with by aligning the interests of the management more closely with those of shareholders/owners by increasing managers' share ownership (Jensen & Meckling, 1976). It would reunite the ownership and control through meaningful management share ownership and better management-supervision (Elson, 1996). Such alignment of interests would help decrease the requirement for supervision and reduce agency costs and hence it increases firm performance.

Empirical studies (for instance: Palia & Lichtenberg, 1999; Chung & Pruitt, 1996; Jensen & Meckling, 1976) suggest that increasing the proportion of equity owned by top executives increases firm performance because of better alignment of interests between management and outside shareholders. Moreover, Mamatzakis and Bermpei (2015) conduct a study in US and find a positive relationship between CEO ownership and bank performance. Likewise, Tomar and Bino (2012) using a sample of 14 listed banks on Amman Stock Exchange for the period 1997 to 2006, they find out that the CEO ownership has positive influence on bank performance. Moreover, Jensen and Meckling (1976) suggest that increasing the proportion of equity owned by top executives (CEO) increases firm value because of better alignment of interests between management and outside shareholders. Accordingly, the hypothesis for the association amongst CEO share ownership and bank performance is as follows:

H3: CEO ownership has a significant positive impact on financial banks' performance.

3. RESEARCH METHODOLOGY

3.1 Sample and Data

This study uses unbalanced panel data drawn from annual reports for 27 private commercial and Islamic local banks over a ten-year period from 2005 to 2014 inclusively. The total observations in the sample are 260. The financial data and CEO data like tenure and ownership are collected manually from bank's annual report. However, information on CEO education are collected from bank websites and biographical information available on other websites.

3.2 Variables Measurement

3.2.1. Dependent Variable

The dependent variable of this study is financial banks' performance which is proxy by return on Equity (ROE). Liang, Xu and Jiraporn (2013), Chitan (2012) highlight that ROE is an important element in measuring bank performance. Therefore, this study utilizes ROE as bank performance measurement. According to Liang *et al.* (2013), ROE is the ratio of net income after taxes divided by total equity capital. It represents the rate of return earned on the funds invested in the bank by its stockholders.

3.2.2 Independent Variables

This study proposes different measurement for CEO characteristics. (a) CEO tenure: The number of years the CEO has held his or her position (O'Sullivan *et al.*, 2015). (b) CEO education: the CEO education level was measured following to King *et al.* (2016) by a categorical variable ranging from 1 to 3 as follows: 1 (earned bachelor degree), 2 (earned master/MBA degree), 3 (earned PhD/doctorate). (c) CEO ownership: refers to the percentage of shares held by CEO to total number of shares in the same period (Walters, Kroll, & Wright, 2008).

3.2.3 Control variables

Based on previous studies, this study also identifies few variables, such as control variables. (a) Bank Size (BANKZ): It is measured by the log of total Assets (Al-Saidi & Al-Shammari, 2013). (b) Bank type (BANKT): It is measured by a dummy variable where (1) indicates that it is a conventional bank and (0) indicates that it is an Islamic bank to (Hussein & Al-Tamimi, 2010). (c) Non-performing loan (NPL): The study uses the value of the ratio of non-performing loan to total loan (El-Chaarani, 2014). (d) Capital Adequacy Ratio (CAR): It is the ratio of total capital to total risk weighted assets (Almekhlafi, Almekhlafi, Mohamed, & Hu, 2015).

3.3 Research Model

To test the relation between CEO characteristics and financial banks' performance, the authors create the study model as follows:

$$ROE_{it} = \beta_0 + \beta_1 CEOT_{it} + \beta_2 CEOED_{it} + \beta_3 CEOOWN_{it} + \beta_4 BANKZ_{it} + \beta_5 BANKT_{it} + \beta_6 NPL_{it} + \beta_7 CAR_{it} + \epsilon_{it}$$

where: ROE = Return on Equity, CEOT= CEO tenure, CEOED = CEO education, CEOOWN = CEO ownership, BANKZ = Bank Size, BANKT = Bank Type, NPL = Non-Performing Loans, CAR= capital adequacy ratio, ϵ_{it} = Error term.

4. FINDINGS AND DISCUSSIONS

4.1 Descriptive Statistics and Pearson Correlation

Table 1 illustrates the mean values, standard deviation values, and Pearson correlations for the study variables. The statistics reveal that Iraqi CEOs have been holding the CEO position for 3 to 4 years in the same bank with stander deviation 0.160. In terms of CEO education level, the Table 1 also indicates that the average of Iraqi

CEOs qualification is master or MBA (mean = 1.753) with standard deviation 0.801. In terms of CEO ownership, the results also point out that the mean of Iraqi CEOs ownership is 0.137 with standard deviation 0.096. On average, bank size of the sample banks over the 2005-2014 periods is 8.20 with standard deviation 0.557. As this study samples private local commercial and Islamic banks, 82.6% are commercial banks with standard deviation 0.379. Table 1 also shows the mean value for CAR is 55.03%. The percentage is found to be much higher than 8%, the minimum requirement for capital adequacy under Basel guidelines, and also higher than 15%, the minimum requirement for Central Bank of Iraq (CBI). Iraqi commercial banks hold more capital than required which indicates that the Iraqi banks have high solvency. Finally, non-performing loans (NPL) also is indicating a high percentage (20.9 %). The reason for the scenario with high NPL might be for political instability and security situations (Aziz, 2013).

Table 1 further illustrates that all correlation values amongst independent variables are low and lower than 0.80; that means there is no multicollinearity problem between variables (Gujarati & Porter, 2009).

Table 1. Means, Standard Deviations and Pearson Correlation

	Mean	SD	1	2	3	4	5	6	7
1. Return on Equity	0.372	0.160	1						
2. CEO Tenure	3.965	2.482	0.091	1					
3. CEO Education	1.753	0.801	0.360**	0.152*	1				
4. CEO Ownership	0.137	0.096	-0.297**	0.144**	-0.051	1			
5. Bank Size	8.120	0.557	0.132*	-0.118	0.036	-0.004	1		
6. Bank Type (Dummy)	0.826	0.379	0.068*	0.227**	0.062	0.414**	-0.004	1	
7. Capital Adequacy Ratio	0.550	0.234	-0.055	-0.033	0.064	-0.031	-0.037	0.016	1
8. Non-Performing Loans	0.209	0.112	-0.210**	-0.258**	-0.396	-0.21**	0.014	0.285	0.025

Note: N = 260; **p < 0.01, *p < 0.5.

4.2 The Relationship between CEO characteristics and Financial Bank Performance

Table 2 illustrates the multiple regression analysis results, using fixed effects model. Jarque-Bera Test is used to test the normality. Table 2 shows that the p-values are not significant ($P > 0.05$), that means the residuals are normally distributed. Secondly, White Test (White, 1980) is used to check whether the study model is suffering from heteroskedasticity or not. The results show that the residual is homoscedasticity. Third, the authors check for serial correlation of residuals, using Breusch-Godfrey Serial Correlation LM Test and the results show that there no serial correlation problem in the model of the study. Lastly, the Variance Inflation Factors (VIF) values are below than 10; thereby, the model does not suffer from multicollinearity problems.

To determine a suitable model for panel data analysis, the authors run a Hausman Test (Wooldridge, 2003) to compare between fixed effects model and random effects model. The P-value for Hausman Test suggests fixed effects model as suitable model. Subsequently, to compare between pooled OLS and fixed effects model, the authors conduct Time-Fixed Effects Test (FE Test) following to Torres-Reyna (2007). FE Test indicates that the fixed effects model performs better than the pooled OLS.

From the use of panel fixed effects approach, it can be found out that table 2 shows there is no significant relationship amongst the CEO tenure and bank performance. Therefore, H1 is rejected. This finding is in the same line with previous studies (e.g. Al-Matari, Al-Swidi, & Fadzil, 2014; Gibson, 2011). The possible reason behind the weak association between the tenure of CEO and ROE is that the CEOs who serve for longer period in the same position decrease the disclosures regarding the corporate governance practices since they believe that they have more authority and the board of directors supervision are not effective (Shen, 2003).

Nonetheless, the results illustrate a positive significant association between CEO education and bank performance at high confidence level ($p\text{-value} < 0.01$), and it is consistent with the upper echelon theory. Hence, H2 is accepted. Additionally, this finding is consistent with the finding of King *et al.* (2016), Koyuncu *et al.* (2010) and Jalbert *et al.* (2002) argue that there is a vital relationship amongst CEOs educational background and firm performance. On the contrary, the result differs from Lindorff and Jonson (2013) and Gottesman and Morey (2010) as they find no relationship amongst CEO education and firm performance. This could be justified

as CEO's high qualification increases bank profitability. Thus, they tend to utilize their knowledge and experience to manage the bank effectively and efficiently.

On the other hand, CEO ownership is negatively, significantly correlated to the financial bank performance, and this finding is inconsistent with the agency theory. Therefore, H3 is rejected. However, this finding is consistent with Griffith, Fogelberg and Weeks (2002), as they retrieve a significant negative relation amongst CEO ownership and bank performance. On the contrary, the result differs from Tomar and Bino (2012) and Mehran (1995) as they find out that the CEO ownership has positive influence on bank performance. It appears to be unexpected since predominantly, a CEO with enthusiasm always look out to boost shareholders riches for the firm. Nonetheless, the CEO may accept suboptimal returns keeping in mind the end goal to decrease banks' particular risk because of the lack of extending his or her own particular investment portfolio being a part of a bank. Consequently, both joining of intrigue and entrenchment affect performance; however, the peripheral effect of these components changes with the level of CEO ownership.

Moreover, the findings of this study illustrate that the size of the bank has a positive effect on bank performance, which goes parallel with the notion that large bank tends to have the ability for efficiency improvement through resource consolidation and alliance with other banks (Arouri, 2011). Nonetheless, the findings show that the percentage of non-performing loan has a significant negative influence on performance as measured by ROE, which matches the notion that non-performing loan in the financial sector increases the possibility to lead establishment to difficulty and worse bank performance (Messai & Jouini, 2013).

Table 2 Regression results

Variable	Coefficient	t-Statistic	P-Value	VIF
Constant	0.063	0.468	0.639	
CEOT	0.003	0.862	0.389	1.137
CEOED	0.054**	4.609	0.000	1.223
CEOOWN	-0.245**	-2.330	0.020	1.220
BANKZ	0.037*	2.253	0.025	1.009
BANKT	0.069**	2.679	0.007	1.278
CAR	-0.049	-1.354	0.176	1.021
NPL	-0.176**	-1.973	0.049	1.357
Hausman Test	P < 0.05			
FE Test	P < 0.05			
Adjusted R-squared	0.256			
F-statistic	13.73**			
Diagnostic Tests	P-value	Results		
Normality	0.072	The residuals normally distributed.		
Serial Correlation	0.222	There is no serial correlation problem.		
Heteroscedasticity	0.499	The residuals are homoscedasticity.		

Note: **p < 0.01, *p < 0.5.

4.3. The Relationship amongst CEO characteristics and Bank Performance by grouping

The outcomes of the earlier sections refer that CEO education significantly contributes to the association between CEO characteristics and financial bank performance. The authors adopt Romanelli (1989) to investigate this matter in detail, by classifying the education level of CEO in two groups, which are whether CEOs have postgraduate degree and CEOs have undergraduate degree. The findings of Table 3 indicate that CEO with long tenure utilizes her or his experience to improve the bank profitability when she or he has postgraduate degree. Nonetheless, CEO tenure does not have any significant influence on bank performance when the CEO has got

her or has undergraduate degree. The most interesting result here is that CEO with higher share ownership hedges in the bank investments management through retaining high liquidity, which is reflected on the decrease of bank profitability when she or he acquires undergraduate degree. On the contrary, CEO with high share ownership utilizes her or his knowledge and experience in the bank investments management through employing the bank funds efficiently and effectively which is reflected on the high profitability of the bank when she or he has high qualification.

Table 3 CEO Educational Qualification by Grouping

Variable	CEOs have Undergraduate degree		CEOs have Postgraduate degree	
	Coefficient	t-Statistic	Coefficient	t-Statistic
Constant	0.740**	5.917	-0.168	-1.447
CEOT	-0.004	-0.092	0.009*	2.580
CEOOWN	-0.302*	-2.506	0.326**	2.633
BANKSZ	-0.036*	-2.535	0.056**	3.985
BANKT	0.002	0.093	-0.005	-0.053
CAR	0.045	0.910	0.151**	3.809
NPL	-0.432**	-4.328	-0.260*	-2.208
Adjusted R ²	0.186		0.484	
F-statistic	5.667**		22.28**	

Note: **p < 0.01, *p < 0.5.

5. CONCLUSION

This study utilizes a sample of unbalanced panel data for 27 private local commercial and Islamic banks from 2005 to 2014 and utilizes ROE as measurement of bank performance to test the association between CEO characteristics and banks' performance. The findings of this study can be summarized as follow. The level of CEO education significantly positively is related to bank financial performance because CEO who has high qualification can utilize the bank resource effectively and efficiently. Nevertheless, CEO ownership has inverse impact on Iraqi financial bank performance. In another words, CEO tenure does not have any significant association with Iraqi bank performance.

By classifying the educational background of CEO into two groups, the authors assess the influences of CEO characteristics on Iraqi banks' performance. The CEO for long tenure improves the bank financial performance when he or she has postgraduate degree. Nevertheless, CEO tenure does not have any impact on Iraqi bank performance when she or he has undergraduate qualifications. With regard to the CEO ownership, the CEO has adverse impact on bank profitability when she or he has undergraduate education level. In other words, CEO with high share ownership utilizes her or his knowledge and experience in the bank investments management through employing the bank funds efficiently and effectively which is reflected on the high profitability of the bank when she or he has a high educational qualification. Based on the findings of this study, therefore, this study recommends that banks committed toward the enhancement of performance should select CEO has high qualification and low share ownership.

As a future research should utilize other CEO characteristics on bank performance in other countries and other sectors. Moreover, future studies are recommended to utilize another bank performance measurement like Economic Value Add (EVA), Return on Assets (ROA) and Net Interest Margin (NIM). Moreover, future studies may use more characteristics for the CEO, like founder CEO, CEO confidence, CEO gender, CEO age and CEO compensation and test their impact on bank performance.

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Housing Market Dynamics: New Insights from the Indicator Approach

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Abstract

The housing market and financial stability are inextricably linked. Indeed, insights on housing market risks can influence the financial stability of a country or region, passing critical impacts to the real economy as a whole. Therefore, the purpose of the present study is to model the oscillations of the housing market to explain and predict the boom-bust patterns in the housing cycle. We focus on the shifts in the fundamental driving forces of the housing cycle that are anticipated by a set of macro and micro foundations of housing behaviors. We explore the possibility that the waves in the housing market can be captured in information needed for policy planning, risk monitoring, and community development, as well as the delivery of affordable housing. In this context, a non-parametric indicator construction framework inspired by the National Bureau of Economic Research (NBER) of the United States was applied to develop the housing cycle indicator (HCI), with the aim of predicting the cyclical fluctuation in the housing market in the northern territory of Borneo Island. The constructed HCI correctly predicted the boom-bust patterns in the housing cycle and the average leading period was at best 9.75 months. The forward-looking attribute of the HCI suggests that it is a sound policy tool to foresee the housing market outlook in the near future.

Keywords: Housing cycle, financial stability, indicator

1. INTRODUCTION

The real estate market in general, housing market in particular, has long been acknowledged as a crucial source of risk to financial stability and economic growth. Hoyt (1933) defined the property market as a complex repercussion of the cyclical action of diverse dynamisms that convey impulses to each other in a consecutive timing. Despite of its complexity, the real estate has been widely regarded as an asset class for investment even though it does not have many appropriate hedging tools to account for its particular risk (Jin & Grissom, 2008). However, the importance of housing is not only limited to investment opportunity but it is necessary to strengthen homeownership as well as community development. Rossi and Weber (1996) claimed that homeownership is benign to the owners as they are more likely to have greater self-satisfaction and confidence. Hence, they are likely to contribute to the development of community. A study conducted by Rohe and Stewart (1996) also supported the fact that homeowners are believed to be more active in civic affairs and to maintain their properties at a higher standard. These activities, in turn, are thought to lead to more stable and greater social and economic development. Therefore, it is beneficial for the society to encourage more homeownership in the country.

In accordance to Wong, Puah, Mansor and Liew (2015), Malaysia stands well-off as one of the emerging countries while making significant headway toward a globalized and liberalized world, and its economy is unsurprisingly open to historic external influences and hence convey immense risk and uncertainty to the domestic market. In the land of Borneo per se, the real estate market has been regarded as an asset class for