Abstract – The global economic crisis has caused many drastic changes in operation of the global banking system. However, Islamic banking considered to be an emerging force presenting stability and growth. The purpose of this study are the measurement of stability and comparison of Islamic and conventional banks in Gulf Cooperation Council’s (GCC) and the Middle East & North Africa’s (MENA) countries. New evidence about determinants of performance and risk of Islamic banks vs. conventional banks exists. The research is based on financial data of 144 banks from 16 countries where Islamic and conventional banking institutions operate, for the time period 2003–2012, which is divided into two sub-periods: pre-crisis (2003–2007) and post-crisis (2008–2012) in order to investigate the effect of the economic crisis on the stability of Islamic banking institutions.

Keywords – GCC countries, MENA region, Risk, Financial crisis, Islamic Banking, profitability, bank stability.

1. Introduction

The global economic crisis has brought many drastic changes in functioning of the global banking system. Many scholars and practitioners noticed many problems in the operation of the traditional Western model of the banking system. Among this dramatically changed banking environment, attention turns to Islamic banking as an emerging force in the last three decades. According to Bernardo Vizcaíno (2013) the twenty largest Islamic banks grow by 16% each year, far exceeding traditional banking institutions. Total assets in Sharia-compliant financial institutions will be worth 2 trillion dollars globally in 2014 according to Ernst & Young consultants (2013). It is evident that the Islamic banking and finance (IBF) was transformed over the years from a financial experiment to an important factor in the global financial system (Khan, 2010).

Despite the growth, the IBF is in an embryonic stage compared with the 100 trillion of conventional banking. Islamic banks dominate in many countries in the Middle East and the Arabian Gulf, while large portions of western banks modulate their activity or create new products in order to comply fully with the rules of Sharia (Ariss, 2010).
Sharia is the legal framework within which the public and private aspects of life are regulated for those living in a legal system based on fiqh (Islamic principles of jurisprudence) and for Muslims living outside the domain (Beck et.al. 2013)

There are about 270 Islamic banks worldwide showing that Islamic finance is not limited to countries that Islam dominates. According to Kerr (2007), Britain announced far-reaching plans to turn London into IBF world center, beginning with the publication of the first Islamic bond issued by a European country by November 2013 (Financial times, 2010).

Although the rapid growth of Islamic banking and finance especially in the last decade, little academic research has been in the functioning of Islamic banking institutions. This paper examines the comparison between Islamic and conventional banks in terms of profitability and stability before and after the crisis broke out in 2007 in a sample of 16 countries working together both types of banking institutions, using micro and macro level data. It is the beginning on an ongoing debate about whether the Islamic banking system is more stable compared to the traditional banking system.

There is a criticism of the Islamic banking and financial system. Kuran (2004, 1993) emphasizes that Islamic banks operate under asymmetric information and inevitably employ techniques similar to conventional banking that makes them ultimately not easily separated in the function way from previous. Kuran (1993) argues that the advent of IBF took shape in colonial India in order to banish the western (Christian) social system in all aspects of Muslim life. So the Islamic Economics is not presented as an alternative to the traditional financial system, but to strengthen the Islamic identity as a whole. Khan (2010) calls this argument as Kuran thesis. In a contrary view, Ahmad (1993) argues that any similarities exist with the conventional banking is simply a transition until complete product supply are fully compliant with Sharia.

Many analysts and academics agree with Kuran thesis (Yousef, 2004; El Gamal, 2006). However, results from other studies suggest that Islamic banks in the country level have lower rates of non-performing loans compared to conventional banks (Baele et. al., 2012). Simultaneously on an extensive survey of Turkish Islamic banks, Ongena S. and Sendeniz Yuncu I., (2011) deal mainly with young companies focusing on industry. Cihak and Hesse (2010) concluded that large traditional banks with high levels of reserves are less stable than small Islamic banks. Beck et al. (2013) in a comprehensive study between Islamic and conventional banks using a data sample from 22 country, found that Islamic banks present less profitability, higher intermediation ratio, better capital quality and better capitalization than conventional banks. They found also significant that during the crisis Islamic banks perform better than conventional banks in capitalization level and quality of capital.

Our study focuses mainly to the factors that affect profitability using internal and external factors, in order to prove if IB’s are more stable and profitable than CB’s. This is the end of the introductory session. The rest of the paper is structured with the literature review in section 2, the variable selection in section 3, the empirical results in section 4 and finally the conclusion in section 5.

2. Literature review

2.1 A review on Islamic banking and Finance

There are five basic principles according to Beck et al. (2013), which differentiate Islamic banking system in the form of operation from the Western banking model. The prohibition of gharar (uncertainty or risk, commonly speculation). The prohibition of riba (defined as the interest rate) and the prohibition of financing of illegal activities such as weapons, drugs and other activities the Qur’an forbid, such as alcohol and pork. Principles of high importance are the sharing of profits and risk between the depositor and the borrower and all transactions must be supported by the actual transaction of a real asset. El Hawary et al. (2004) agrees with principles and adds no exploitation between two parties. In a strict interpretation, the above rules prohibit all kinds of derivatives that do not trade any underlying fixed asset and speculative financial transactions such as options, futures (Usmani, 2002). Similarly activities
such as issuing government bonds with a fixed coupon rate, inflation indexing and foreign exchange dealings are also prohibited.

Although religious restrictions are imposed governing Islamic banking system, the development of IBF is also linked to the development of both the accounting, legal and audit framework. Ariss (2010) has documented the steps taken in order to fully support the development of Islamic banking in all its aspects.

Over the past years, the literature focuses on the viability of Islamic banking system and several studies using separation of Islamic vs. Conventional banks for providing evidence of this theory. Iqbal (2005) explores the architecture of Islamic banking system and financial intermediation. Samad and Hassan (1999) find in their research that Islamic banks perform better than conventional banks. Hearn et al. (2009) in their research about Islamic Finance and market segmentation found that there are firm governance benefits arising from Islamic finance, monitoring costs are substantial and banking system is better placed to administer financing activities. Mills and Presley (1999) cited in Chapra (2000) make an effort to show that an economy that relies less on credit (debt) and more on equity is superior than an economy based primarily on debt even in the short-term. Chong and Liu (2009) on their study about whether Islamic banking is interest-free or interest-based, suggest that the adoption of the profit loss sharing is restricted by competition, as even the most effective practices of conventional banking. They end that yields on bank deposits is inextricably linked to the yields of conventional banking, because of the competition. Jawadi et al. (2015) investigated the ability of Islamic banks to play the role of leader in revamping and driving conventional banking using panel data causality analysis and they found that there is no significant causality effect from Islamic to conventional banks indicating that Islamic banks are not able to play a role of leader.

2.2 Bank stability and risk

Existing literature provides significant evidence on bank stability and risk. Agoraki et al. (2011) in their research about regulations, competition and bank risk-taking in transition countries found that non-performing loans and credit risk are reduced because of the capital requirements and regulations that have direct impact. Although, when banks have sufficient market power, they tend to increase their credit risk. Supervisory power tends to be effective in reducing insolvency risk but similar to credit risk, this effect is independent of market power. Soedarmono et al. (2013) in a comprehensive study about bank competition, crisis and risk taking for Asian commercial banks during the period 1994 to 2009 argue that higher risk taking of bank, insolvency risk cannot be offset in less competitive environments by the increase of capital ratios. For the Asian banks the results showed that lower competition doesn’t moderate bank risk taking neither provide incentives to hold sufficient capital during crisis period.

Jimenez et al. (2008) studied the impact of competition in bank risk-taking for a dataset of Spanish banks and found that standard measures of market concentration do not affect the ratio of non-performing loans. Using Lerner indexes based on bank-specific interest rates, the researchers found a negative relationship between loan market power and bank risk. Fungacova and Weill (2009) studied how market power influences bank failures in a large dataset of Russian banks and argue that a higher degree of market power reduces the occurrence of failure and so greater bank competition is detrimental for financial stability. Stiglitz and Weiss (1981) in their work about credit rationing states that increasing interest rates or increasing collateral requirements could increase the riskiness of the bank’s loan portfolio, in a way that safer investors will be discouraged and by inducing borrowers to invest in riskier projects, thus could decrease the bank’s profits.

Cihak and Hesse (2008) compare stability among a dataset of 120 Islamic and conventional banks in 18 countries during the period 1993-2004, using Z-score as an indicator of insolvency risk. The main results of their study are that small Islamic banks tend to be more stable than small conventional banks, large Islamic banks are riskier than small Islamic banks and large conventional banks are financially stronger than large Islamic banks.
Gamaginta and Rokhim (2011) for the period 2004-2009 analyzed the stability of 12 Islamic and 71 conventional banks in Indonesia using Z-score indicator. Their results showed that conventional banks are more stable than Islamic banks except the 2008-2009 crisis period where the two categories of banks gave the same degree of stability. Zeitun (2012) provides evidence that the performance of Islamic and Conventional banks in GCC countries are affected by internal factors (bank specific factors) and external factors (macroeconomic variables), but not by foreign ownership. For the examined macroeconomic variables the results show that GDP is positively correlated to bank profitability, while inflation has a negative correlation with bank profitability. Pasiouras and Kosmidou (2007) using data for a six years period from 1995-2001 for 15 European countries, examined how banking environment (stock market capitalization to GDP, GDP growth, bank total assets to GDP, concentration and inflation rate) and bank specific variables (total assets, equity to total assets and loans to customers) affect profitability of domestic and foreign commercial banks. Their results showed a positive correlation between bank performance and these variables. Olson and Zoubi (2008) compared Islamic and conventional banks for the GCC countries using 26 financial ratios over the period 2000-2005. Their empirical results suggested that conventional banks operate with lower risk and are more efficient than Islamic banks. Haron (2004) in his study on Islamic banks performance, found that internal factors of the bank such as total expenditures, liquidity, profit-sharing ratio and the external factors such as interest rates, market size, bank size and money supply are significant and correlated with the Islamic banks profitability and income. Lemonakis et al. (2015) in a comprehensive study about efficiency, capital and risk in banking industry for MENA countries showed that efficiency and risk measured by Altman’s Z-score is negatively related. More specifically they showed that since Z-score is used as an indicator, it’s lower values indicate greater bankruptcy risk (less stability). From the empirical results they found that banks insolvency risk is increased with low assets quality and greater bank size.

3 Variable selection and model approach

3.1 Data

A cross-sectional and time series (panel data analysis) data relating to the banks in MENA countries and GCC countries is used in this research. The data sample is categorized into two separate time periods. These are: pre-recession period (2003-2007) and post-recession period (2008-2012). The balance sheets (internal factors) of Islamic and conventional banks were derived from the Bankscope-Bureau Van Dijk database. From the database of World Bank Development Indicators (WDI) we extracted the macroeconomic data (external factors) used in our study.

3.2 Samples

In this study, six samples are used. The first sample examines the pre-recession period (2003-2007) including 23 Islamic banks and 121 conventional banks from Bahrain, Bangladesh, Egypt, Gambia, Jordan, Kuwait, Lebanon, Mauritania, Pakistan, Qatar, Saudi Arabia, Tunisia, Turkey, United Arab Emirates, United Kingdom and Yemen (Graph 1 presents the final distribution of our sample), while the second examines the post-recession period (2008-2012). The third sample examines the pre-recession period for IB and the fourth the post-recession period for IB. The last two samples examines the pre-recession and post-recession period for conventional banks.
3.3 Variables used in the research

Using factor analysis, reduction of variables is achieved in order to have robust results. The dependent variable used to measure profitability is Return on Assets (ROA) ratio and independent variables used are bank specific factors (internal factors) along with macroeconomic variables (Table 1), in order to examine the effect of banks environment on profitability (performance) and stability.

This study uses return on average assets (ROAA) as measure of bank performance as it is widely used in literature (Soedarmono et al., 2011; Ariss, 2010; Olson and Zoubi, 2011; Kosmidou, 2008; Siddiqui, 2008). Kosmidou et al. (2007) argue that return on assets is the most useful measure of profitability over time because assets have a direct impact on both expenses and income. ROA has an ambiguous impact on bank risk-taking according to Delis and Kouretas (2011). However, in this research it is expected to find positive link between profitability and risk, because in general high levels of profits are accompanied by higher levels of risk. According to Olson and Zoubi (2008), Islamic banks for the GCC countries found to have higher ROA than conventional banks.

The second variable is CAPITAL, equity to total assets ratio that is used to measure risk. Berger et al. (2009) found a positive correlation between capital strength and profitability. In the other side, Kosmidou et al. (2007) and Staikouras et al. (2008) found that there is a possibility for banks to be over-capitalized.

The third variable is SIZE (Olson and Zoubi, 2011; Kosmidou et al. 2007) and is measured as the natural logarithm of total assets, since log transformation allows possible nonlinear relation with risk. Srairi (2013) concludes that bank size and risk is negative related. As larger banks can suffer from "too big to fail" effects with high incentives to take excess risk and at the same time hold lower capital ratios. (Soedarmono et al 2011). Size is by far the most used accounting variable and the literature suggest a positive relationship between profitability and size.

The fourth variable used is ln_personnel, the personnel expenses for Islamic and conventional banks. Assaf et al. (2011) used this variable to measure the impact of personnel expenses on banks profitability in their research for technical efficiency in Saudi Arabian banks. The final variable of the internal factors of the banks, in order to measure bank insolvency risk is Z-score. Z-score is developed by Boyd and Graham (1986, 1988) and is used by many...
studies as it represents a more universal measure of bank risk taking and is defined as
\[ Z = \frac{(ROA + EA)}{\sigma(ROA)} \]
, where ROA is the return on assets, EA is the equity to assets ratio and \( \sigma(ROA) \) is the standard deviation of the return on assets. Boyd et al. (2006) cited in Agoraki et al. (2011) state that this risk measure is monotonically associated with the banks probability to default and has been used by the majority of researchers in banking and finance literature. Lepetitet et al. (2008) argue that a higher value of Z-score shows a decrease on risk thus the bank is more stable. Soedarmono et al. (2011) in their research found a positive impact of market power on bank risk taking.

Srai (2013) using Z-score as a measure of banks probability of default found that, family owned Islamic banks is not significantly different from that of family owned conventional banks. Their results indicate that family conventional banks tend to have a higher asset risk but not necessarily a higher default probability. A recent work of Soedarmono et.al. (2013) show that higher market power leads to higher bank insolvency risk measured by ZROA.

Bourkhis and Nabi (2013) showed that the impact of financial crisis on banking soundness have no significant difference between Islamic and conventional banks but in average there were some evidence that IBs were more sound (in regards of the Z-score).

The rest of the variables are the external factors influence banks environment. Those are claims on central government, domestic credit provided by banks, domestic credit provided by private sector, the annual percentage of inflation consumer prices (INFLATION) and the merchandise trade as percentage of GDP. Central government represent as ( % ) of the GDP, which include the loans to central government institutions net of deposits. Inflation is measured by the growth of the consumer price index and is expected to have a positive effect on bank risk (Gamaginta and Rokhim 2011). Soedarmono et al. (2013) found that inflation is statistically significant and has positive impact on bank risk.

Table 1. Variables selection

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Symbol</th>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROAA</td>
<td></td>
<td>Profit performance</td>
<td>Return on Assets of the firm.</td>
</tr>
<tr>
<td>z₁</td>
<td>SIZE</td>
<td>Natural logarithm of total assets</td>
<td></td>
</tr>
<tr>
<td>z₂</td>
<td>CAPITAL</td>
<td>Equity to total assets % ratio</td>
<td></td>
</tr>
<tr>
<td>z₇</td>
<td>ln_personnel expenses</td>
<td>Natural logarithm of Personnel expenses</td>
<td></td>
</tr>
<tr>
<td>z₁₂</td>
<td>Z score</td>
<td>Z score indicator</td>
<td></td>
</tr>
<tr>
<td>z₁₃</td>
<td>Claims on central government</td>
<td>Claims on central government etc. ( % GDP)</td>
<td></td>
</tr>
<tr>
<td>z₁₄</td>
<td>Domestic credit provided by private sector</td>
<td>Domestic credit provided by private sector ( % of GDP)</td>
<td></td>
</tr>
<tr>
<td>z₁₅</td>
<td>Domestic credit provided by banks</td>
<td>Domestic credit provided by banks ( % GDP)</td>
<td></td>
</tr>
<tr>
<td>z₁₇</td>
<td>Inflation</td>
<td>Inflation consumer prices</td>
<td></td>
</tr>
</tbody>
</table>
Domestic credit provided by banks is included in order to investigate the participation of the banks in each county’s debt and used as measure of stability. In a recent research about the inter-relation between international banking-sector flows and domestic private credit, Bruno and Shin (2013) highlight this indicator as the domestic credit provided by the financial sector includes all credit to various sectors on a gross basis, with the exception of credit to the central government, which is net. The financial sector is consisted by monetary authorities, deposit money banks, as well as other financial corporations.

For the same reason, the domestic credit provided by private sector is also included. Finally the merchandise trade ratio only includes trade in goods and can be used as an indicator of the overall health of each of the examined countries economy. A report from the Department of Business innovation and Skills, UK Government (2015) shows that, this indicator is affected not only by the trade policies adopted by each country or the result of multilateral trade negotiations, but also, and importantly, by the wider macro economic context such the state of the world economy. The indicator is defined as imports + exports (both goods and services) / GDP.

### 3.4 Empirical Model-Methodology

The empirical model we use for the three examination periods is the following, where $\varepsilon$, represents the error term.

$$ ROAA_{i,t} = \beta_0 + z_{18i,t} + \beta_2 z_{12i,t} + \beta_3 z_{13i,t} + \beta_4 z_{14i,t} + \beta_5 z_{15i,t} + \beta_6 z_{17i,t} + \beta_7 z_{18i,t} + \varepsilon_{i,t} $$

The methodology used is panel data analysis with multivariate regression models based on different data segmentation. The random effect model is applied in this research. Under this type of model (random effect) the estimation method is estimated generalized least squares (EGLS).

### 3. Empirical Results

#### 4.1 Financial performance of all banks for pre and post-recession period

The results of the first two models including the whole sample of the selected banks are presented below (Table 2). For the model of the pre-recession period, the results of the econometric analysis suggest that size has a negative connection with profitability before the outbreak of the financial crisis. However, for the post-recession period size has a positive link with profitability indicating that large Islamic and conventional banks are more profitable than small (Gamaginta and Rokhim 2011, Sullivan and Spong 2007, Paligorova 2010).

Capital is statistically significant for the post-recession period and has a positive correlation with profitability (Berger et al., 2009). Personnel expenses variable has positive sign for both periods, showing that banks (IB and CB) with good management of labor increase their profitability before and during crises. Regarding to Z-score, it is found that for both periods
has negative sign indicating that impacts profitability negatively (Soedarmono et al., 2013; Srairi, 2013). Claims on central government variable found to be statistically significant for the pre-recession period, but not for the post-recession period. The coefficient has negative sign for both periods suggesting that has a negative impact on banks profitability. Domestic credit provided by private sector for the pre-recession period presents negative sign showing negative correlation with banks profitability. Regarding to domestic credit provided by banks, has negative sign for the pre-recession period that there is a negative impact on banks profitability. Inflation found to have a negative impact on profitability for both IBs and CBs in both periods (Olson and Zoubi, 2011). Merchandise trade is found to be no significant for none of the examination periods.

Table 2. Financial performance for IBs and CBs for pre and post-recession period

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>R²</th>
<th>Coefficients</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-recession period</td>
<td>Post-recession period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>1.449* (0.000)</td>
<td>0.538308</td>
<td>0.881196* (0.000)</td>
<td>0.418271</td>
</tr>
<tr>
<td>z1</td>
<td>-0.0227 (0.3837)</td>
<td></td>
<td>0.053892* (0.000)</td>
<td></td>
</tr>
<tr>
<td>z2</td>
<td>0.001288 (0.6175)</td>
<td></td>
<td>0.009712* (0.0004)</td>
<td></td>
</tr>
<tr>
<td>z7</td>
<td>0.097708* (0.000)</td>
<td></td>
<td>0.090814* (0.0000)</td>
<td></td>
</tr>
<tr>
<td>z12</td>
<td>-0.049993* (0.000)</td>
<td></td>
<td>-0.0419* (0.0000)</td>
<td></td>
</tr>
<tr>
<td>z13</td>
<td>-0.019812* (0.0179)</td>
<td>F-stat 9,133</td>
<td>-0.02084*** (0.0945)</td>
<td>F-stat 5,632</td>
</tr>
<tr>
<td>z14</td>
<td>-0.014802* (0.0478)</td>
<td>Prob.(F-statistic) 0.000</td>
<td>-0.01538 (0.2088)</td>
<td>Prob.(F-statistic) 0.000</td>
</tr>
<tr>
<td>z15</td>
<td>0.016923** (0.0281)</td>
<td></td>
<td>0.018731 (0.1211)</td>
<td></td>
</tr>
<tr>
<td>z17</td>
<td>-0.025326* (0.0191)</td>
<td></td>
<td>-0.01515 (0.0199)</td>
<td></td>
</tr>
<tr>
<td>z18</td>
<td>0.001286 (0.1469)</td>
<td></td>
<td>-0.00249 (0.0897)</td>
<td></td>
</tr>
</tbody>
</table>

Prob. Is in parentheses
*: statistical significant at 1% level of significance, **: statistical significant at 5% level of significance
***: statistical significant at 10% level of significance

4.2 Financial performance of IBs and CBs for pre-recession period

Regarding to the financial performance of IBs and CBs for the pre-recession period (Appendix, Table 3), IBs size has positive impact on profitability in contrast with CBs. IBs are better capitalized and have higher quality assets (Beck et al., 2013) due to higher costs of setting an IB. Considering personnel expenses variable is positive and significant, it is found that personnel expenses have a positive impact on bank profitability for the pre-recession period. Z-score is statistically significant and has negative sign showing that bank risk impacts negatively the profitability of IBs and CBs. Srairi (2013) found similar results showing that ROA is insignificantly associated with Z-score. For claims on central government variable it is observed that has negative sign on CBs profitability. This can be explained due to the fact that conventional banks have no restrictions derived from Sharia compliance and are able lending more easily the state. Inflation showed to be significant for CBs and has negative sign indicating a negative impact on banks profitability. Therefore, an...
increase of inflation induces negatively the financial performance of CBs (Schaeck and Cihak, 2007).

4.3 Financial performance IBs and CBs: post-recession period.

In this section (Appendix, Table 4) the financial performance of IBs and CBs for post-recession period is examined. The size for both IBs and CBs is significant and positive, indicating that SIZE has a positive impact on bank's profitability. Larger IBs and CBs are more profitable than small ones after crisis, thus there is no differentiation regarding size (Beck et al., 2013). Capital is significant for IBs and has a positive sign, indicating a positive impact on IBs' profitability after crisis. Personnel expenses variable has a positive impact on profitability for CBs. Considering z-score, it is clearly that an increase of risk affects negatively the profitability of IBs and CBs and finally the stability. Our findings come in line with Ariss (2010) who concluded that large IBs and CBs are able to take excessive risk than small one. Moreover Lemonakis et al. (2015) do agree with our findings that profitability and risk are negatively related. Claims on central government variable are significant for IBs and has a negative impact on profitability. The results come in contrast with the pre-recession period it is found a non-significant relationship. Domestic credit provided by private sector variable is significant and has a negative impact on IBs profitability. Additionally, domestic credit provided by banks is significant and impacts positively IBs profitability. Inflation showed to be significant for IBs. The negative sign indicates a negative impact on banks profitability. Therefore, an increase of inflation induces negatively the financial performance of IBs (Schaeck and Cihak, 2007).

4. Conclusions

The global financial crisis has brought many and drastically changes in the management and operation of the banking system. Islamic banking system is experiencing a radical growth during the last three decades. The majority of literature claims that there are no significant differences between Islamic and conventional banking. Nevertheless, they conclude that Islamic banks are more stable, better capitalized and have higher quality assets. The novelty of this research is the examination of stability and profitability of Islamic vs. conventional banks before and after the outburst of the financial crisis in 2007. Our results for the pre-recession indicate that IBs profitability is affected positively by size and personnel expenses and is negatively affected by risk. For CBs it is showed that personnel expenses impact positively the profitability and risk, claims on central government, inflation impact negatively. For the post-recession period it is clear that the profitability is positively affected by size and capital affects only IBs profitability. CBs profitability is also affected positively by personnel expenses, while risk has a negative impact. Moreover we showed that risk also affects negatively the stability of IBs and CBs before and after the recession period. Considering IBs risk, claims on central government, domestic credit from private sector and inflation have a negative correlation with profitability, while domestic credit provided by banks found to have a positive relation.

The present study is the beginning in a series of studies intending to accomplish in order to provide literature with new findings regarding stability, profitability and efficiency of the Islamic Banking and Finance system. Further research could include
more internal factors and a wider range of Islamic banks. Additionally in future studies we could measure the impact of Islamic banking system in the global banking system.

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Appendix

Table 3. Pre-recession period: Financial performance of IS\(b\) and CB\(b\)

<table>
<thead>
<tr>
<th>Variables</th>
<th>(c)</th>
<th>(z1)</th>
<th>(z2)</th>
<th>(z7)</th>
<th>(z12)</th>
<th>(z13)</th>
<th>(z14)</th>
<th>(z15)</th>
<th>(z17)</th>
<th>(z18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional banks coefficients</td>
<td>1.624</td>
<td>-0.044435</td>
<td>0.001341</td>
<td>0.0978*</td>
<td>-0.04494*</td>
<td>-0.02237**</td>
<td>-0.01763</td>
<td>0.019902</td>
<td>-0.03133**</td>
<td>0.0002</td>
</tr>
<tr>
<td>probability</td>
<td>0</td>
<td>0.0828</td>
<td>0.6818</td>
<td>0</td>
<td>0</td>
<td>0.0409</td>
<td>0.1006</td>
<td>0.0734</td>
<td>0.0228</td>
<td>0.7454</td>
</tr>
<tr>
<td>Islamic banks coefficients</td>
<td>0.45275</td>
<td>0.074858*</td>
<td>-0.00344</td>
<td>0.106276*</td>
<td>-0.052789*</td>
<td>-0.014051</td>
<td>-0.008855</td>
<td>0.011712</td>
<td>-0.005212</td>
<td>0.005647</td>
</tr>
<tr>
<td>probability</td>
<td>0.1445</td>
<td>0.0114</td>
<td>0.1036</td>
<td>0.0001</td>
<td>0</td>
<td>0.4374</td>
<td>0.5849</td>
<td>0.4723</td>
<td>0.327</td>
<td>0.0807</td>
</tr>
</tbody>
</table>

*: Statistical significant at 1% level of significance  
**: statistical significant at 5% level of significance  
***: statistical significant at 10% level of significance

Table 4. Post-recession period: Financial performance IB\(b\) and CB\(b\)

<table>
<thead>
<tr>
<th>Variables</th>
<th>(c)</th>
<th>(z1)</th>
<th>(z2)</th>
<th>(z7)</th>
<th>(z12)</th>
<th>(z13)</th>
<th>(z14)</th>
<th>(z15)</th>
<th>(z17)</th>
<th>(z18)</th>
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<tr>
<td>Conventional banks coefficients</td>
<td>0.93117</td>
<td>0.037937*</td>
<td>0.0094</td>
<td>0.0929*</td>
<td>-0.01179*</td>
<td>-0.01176</td>
<td>-0.007752</td>
<td>0.0112</td>
<td>-0.0043</td>
<td>-0.0014</td>
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<tr>
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<td>0</td>
<td>0.0778</td>
<td>0</td>
<td>0</td>
<td>0.2852</td>
<td>0.4713</td>
<td>0.2931</td>
<td>0.6418</td>
<td>0.2778</td>
</tr>
<tr>
<td>Islamic banks coefficients</td>
<td>1.343</td>
<td>0.084376*</td>
<td>0.017102**</td>
<td>0.064849</td>
<td>-0.056424*</td>
<td>-0.056943*</td>
<td>-0.050446*</td>
<td>0.051962*</td>
<td>-0.06576*</td>
<td>-0.00822</td>
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<tr>
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<td>0.0002</td>
<td>0.0275</td>
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<td>0.0188</td>
<td>0.0152</td>
<td>0.0013</td>
<td>0.124</td>
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</tbody>
</table>

*: Statistical significant at 1% level of significance  
**: statistical significant at 5% level of significance  
***: statistical significant at 10% level of significance