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Impact of Staff Efficiency on Impaired Financing of Islamic Banks, MENA Countries

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ABSTRACT

This paper reports evidence to support the insight that the impaired financing problem is highly likely connected to low staff efficiency in MENA country Islamic banks. Several macro and micro factors widely used in banking research are used along the measure of staff efficiency as the intervening factor to identify banking performance under impaired financing conditions. It is reasonable to assume that if staff do not work efficiently (for example for lack of skill), bank performance ought to be seriously affected; hence, staff efficiency would have a moderating effect when this factor is added to eight bank-specific factors. Impaired financing to total financing, as a ratio, is a proxy for impaired financing condition. Financial data are accessed for 22 banks from MENA countries covering the recent nine years to 2013. Applying a random effect model, we identify seven factors as significant contributors to performance. Next, by applying a hierarchical regression model, our tests reveal staff efficiency is a significant moderating factor. The result provides statistical support for the Resource-Based Theory, which suggests banks could reduce their impaired financing significantly by increasing staff efficiency. This is a new and significant finding on the linkage of finance with staff efficiency as a factor.

INTRODUCTION

Although eight years have passed, it is still vividly clear that the 2008 Global Financial

Crisis (GFC) was perpetrated by multiple causes. The first was the resulting fragility of the international financial market when interest rates started rising in mid-2006, which had a derailing effect on banks loaded with CDOs. The second was high impaired financing (also termed as non-performing loans in conventional banking) from over-leveraging in mortgage markets (Laeven & Valencia, 2008). The third was moral hazards and agency problems among top investment bankers and rating agencies over inappropriate credit rating of sovereign debts. The moral hazards and erosion of integrity led to several mega bank failures. Despite the importance of impaired loans for survival banks, little empirical findings are focussed on staff morality and efficiency in relation to impaired financing in banking studies. This is particularly important in Islamic Finance since high work ethics and honest dealings with customers are stressed for the conduct of Islamic financial transactions (Quran: al-Dhariyat, Verse 56).

Reference to some literature on this issue emphasises ethics and honesty as elements, which are found to lead to high staff efficiency (Ahmad & Owoyemi, 2012). Ismail (2010) and Sufian (2011) reported that banks could improve their profitability by increasing their human capital efficiency through constant training and by creating happiness in their work environment. The authors also revealed that employee productivity and human capital efficiency are positively and significantly related to firm performance and profitability. In addition, Wanyama and Mutsotso (2010)

highlighted that in Kenya performance increased when organisations had high capacity with productive employees and high job skills for bank employees.

Hence, staff efficiency plays an important role in finance, not only in terms of contributing towards profitability but also for ensuring that staff display ethical values prescribed by the company's code of conduct on ethical standards. Honest dealings promote a work culture that ensures clear effects on performance because high efficiency tends to reduce impaired financing through reduction of operational risk and credit assessment errors. The consequences of having to set aside higher financing loss-provisions for higher probability of loan defaults and lower profitability can be avoided. Sound Islamic banks could be a strong ingredient for future growth and long-term sustainability of banks in MENA (Middle Eastern & North African) countries.

It was the objective of this paper to examine the impact of staff efficiency as a moderating factor in reducing impaired financing on Islamic bank performance. This study selected Islamic banks in MENA countries as these countries are the fastest growing economies, with more than 20% market share of Islamic finance (World Islamic Banking Competitiveness Report 2013-14). We applied appropriate econometric models to study this issue.

The rest of the paper is organised as follows: Section 2 briefly describes the MENA countries and highlights the problem statement, research questions and significance of the study. Section 3 reviews

related literature and is followed by a look at our Methodology in Section 4 and finally, our results in Section 5. Section 6 concludes the paper.

ISLAMIC BANKING IN MENA COUNTRIES

The MENA countries consist of Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, the United Arab Emirates (UAE) and Yemen (World Economic & Financial Survey, 2011). Most of the Islamic banks are located in Bahrain, Kuwait, Qatar, Saudi Arabia and the United Arab Emirates. In 2004, the total Islamic banking assets of MENA countries were only 29% of the worldwide Islamic banking assets, but in 2008 the percentage increased to 50% of worldwide Islamic banking assets. The Islamic banking assets of MENA countries have shown an average growth rate of 72% for the period 2002-08 (Syed Ali, 2011). By end 2015, the total assets had increased to $979 billion (The Banker, 2015). Presently, the majority of the Islamic banks in MENA countries are privately-owned and they have a dual banking system with conventional banking and Islamic banking operating side by side.

In spite of high growth of more than 20% in assets of these banks (primarily driven by high demand in financing), profit-and-loss-sharing banking has not fully spared banks from experiencing high impaired financing since the GFC. The impaired financing ratio for Malaysia was 3.7% while for MENA

countries, it was 8.08% during 2005-13 (Mat Nor, 2015). Figure 1 shows the impaired financing position of banks in MENA countries during the crisis period from 2006 to 2008. Details of impaired financing data for Islamic banks in MENA countries are presented in Appendix A.
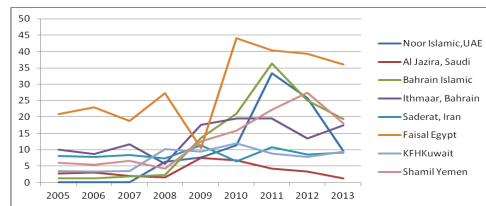

Figure 1. Impaired financing for Islamic banks in MENA countries

The high level of impaired financing shows the deterioration in asset quality of those banks, leading to a reduction in the banking profit at micro level. It is a hindrance to economic stability and growth at the micro level (Abd Karim, Chan, & Hassan, 2010).

Studies have identified bank-specific factors (Ahmad & Ahmad, 2004) and macro-economic variables such as GDP and inflation (Ahmad & Ariff, 2007; Abd Karim et al., 2010) as significantly contributing to high impaired financing. However, hardly any examination of the impact of staff efficiency on impaired financing has been reported to date. The first effort by Mohd Sultan (2008) suggested that the deterioration in assets quality might have occurred due to lack of staff efficiency in the evaluation of financing applications, screening and monitoring and control.

However, his suggestion was not supported by any empirical evidence.

Credit risk associated with non-performing loans has been studied by Ahmad and Ariff (2007), Louzis, Vouldis and Metaxas (2010), Mahmoud Al-Smadi (2009), Imaduddin (2011), Abd Karim et al. (2010), Ghosh and Ghosh (2011) and Aremu, Suberu and Oke (2010). These studies covered the determinants of credit risk but did not include staff efficiency. Past studies on efficiency were only related to cost efficiency and management efficiency (Abd Karim et al., 2010). In contrast, this study focussed on staff efficiency as moderator between internal factors and impaired financing of Islamic bank in MENA countries. Adebola, Wan Yusoff and Dahalan, (2011), Ahmad and Ahmad (2004) and WaeMustafa and Sukri (2015) did a comparative study on credit risk between conventional and Islamic banks in Malaysian but did not include staff efficiency.

Impaired financing should not be high if all borrowers of funds from banks fulfilled their contractual obligations according to the pre-agreed amount and schedules. The Quranic command is for customers to fulfil their accepted terms agreed in their financing agreements. However, the problem persists because of default payments by some customers and inefficient bank staff, resulting in impaired financing. Human resource is the most vexing managerial issue in Islamic banking as Islamic banks lack skilful and knowledgeable staff. Lack of operational expertise among such bankers

frequently leads to higher operational risk, which could stifle earning growth potential (Mohd Sultan, 2008). Karim et al. (2010) highlighted that high impaired financing reduces cost efficiency, resulting in inefficiency in the banking sector.

Lack of empirical literature on staff efficiency in relation to the determinants of impaired financing suggests a study should be useful on this topic.

Research Questions

The following were the research questions explored in this study.

- How do internal factors (financing to deposit ratio, loan loss provision, liquidity ratio, capital ratio, net interest margin, profitability, loan growth and net charged off) influence the impaired financing of selected banks in MENA countries?

- Is staff efficiency able to moderate the relationship between internal factors and impaired financing of selected banks in MENA countries?

Significance of the Study

This study did not only identify the determinants, but measured the moderating effect of staff efficiency on impaired financing. This is aimed at providing fresh evidence, which has conceptual justification and also offers possible explanations as to why impaired financing exists among Islamic banks to a much greater extent than in other banks. Understanding the impact

of these factors on impaired financing is useful for management in selecting appropriate strategies to curb credit risk and to prevent serious erosion of income and equity. The result on the moderating effect, if found to be true, could be used to expand management focus from financial factors to include staff efficiency in reducing impaired financing and credit risk management problems. A focus on human efficiency is a more effective way of minimising losses by removing human negligence or moral hazards (operational risk) since Islamic banking principles call for honest, responsible and sincere work ethics. For policy makers and regulators, this would form a strong foundation for stronger corporate and human governance to be emphasised for controlling the behaviour of bankers from excessive risk taking.

LITERATURE REVIEW

Related Theories and Evidence

Central to the study is the Resource-Based theory (Barney, 1991). This theory explains that resources are all assets, capabilities, organisational features, information and knowledge, among other characteristics, which can be controlled by organisations to plan and implement organisational strategies to improve organisational efficiency and effectiveness. Human resource is highly important and is the greatest asset to the success of an organisation (Collins & Porras, 1994). Hence, staff are a valuable asset to banks and their efficiency and productivity lead to the success of the banks. In addition,

resource-based theory has provided a crucial theoretical justification for the role of human resource. According to this perspective, differences in banks' performance can be attributed to distinctive resources and their capabilities. When employees are highly competent and knowledgeable, they are more able to contribute towards bank efficiency and generate revenues and profit. They become assets to banks instead of liabilities. Staff efficiency also reduces mistakes in the evaluation and selection of financing projects and the documentation process of the banks.

Another theory is the Moral Hazard Theory. Sinkey (2002) defined moral hazards as irresponsible actions by one party aimed at another party with the purpose of getting benefits at the expense of the other party. These actions are individually advantageous but entail costs on others. Moral hazards occur when information symmetries exist between the two parties. In this case, bank management might engage in adverse selection of less creditworthy borrowers if their staff do not provide them with complete information for them to consider in arriving at the most appropriate or strategic decisions. Moral hazards may cause banks to incur financial losses and agency problems.

A specific financial ratio known as impaired financing (IF) ratio (impaired financing to total financing) is often used to measure credit risk (Ahmad & Ariff, 2007). Obalemo (2007) defined impaired financing as non-payment of financing over 90 days by the borrower to the lender as agreed.

They further revealed that when a customer fails to fulfil his financing obligation or agreement within the agreed timeframe, financing default is triggered. Meanwhile, Ghosh and Ghosh (2011) and Karim et al. (2010) suggested that impaired financing reduces bank cost efficiency and leads to poor credit management resulting in bad-quality loans.

Financing-to-deposit ratio is measured by dividing total financing to total deposits. The ratio is an indication of how banks mobilise their deposits by giving financing. Misra and Dhal (2011) found that credit-to-deposit ratio is positively and significantly related to impaired financing in India. This result is supported in Ahmad and Ariff (2007), who revealed that financing-to-deposit ratio has a positive and significant influence on impaired financing in banks in Malaysia, USA and France. They reported that the larger the loan portfolio, the higher was the default rate. Loan loss provision to total financing ratio is measured by dividing total loan loss provision by net interest revenue. It is used to appraise a bank's assets quality in order to evaluate the bank's stability and performance. Al-Wesabi and Ahmad (2013) found that loan loss provision is positively and significantly related to impaired financing of Islamic banks in GCC countries. This finding supports Ahmad and Ariff's (2007) result that loan loss provision is positively and significantly related to credit risk of banks in Australia, Japan, Mexico and Thailand.

These results show that an increase in loan loss provision ratio indicates an increase in impaired financing. Liquidity ratio is an indicator of a bank's capability of meeting short-term obligations by converting existing liquid assets into cash. It is measured by dividing net loan by total assets, where a higher ratio indicates lower liquidity. In a position of tight liquidity, most banks increase their lending rates to compensate for higher risks and higher cost of funds. Borrowers will face difficulty in meeting repayment obligations due to higher interest/profit rate (conventional/Islamic bank). Iqbal (2012) found that liquidity has negative and significant influence on impaired financing of conventional and Islamic banks in Pakistan. This result was supported by McCann and Culder (2012), who revealed that liquidity ratio is negatively and significantly related to loan default in Irish SME loans. They further revealed that an increase in liquidity ratio lowers impaired financing.

Capital ratio is measured by dividing equity by total assets. This measurement is the standard ratio used to determine the overall financial stability of banks. It measures the level of leverage used by a bank. Low ratio indicates that the banks' managerial performance is good. Ezeoha (2011) revealed that capital is negatively and significantly related to impaired financing in Nigeria. The result also shows that high capital ratio lowers impaired financing. On the other hand, Azeem and Amara (2014)

provided evidence that a bank's profitability is negatively and significantly related to the level of impaired financing. In addition, the study showed that capital ratio has a negative relationship with impaired financing.

Net interest margin is calculated by dividing interest income (net of interest expenses) to total assets. This ratio evaluates the operation and competency of a bank in utilising its assets in generating income. Higher ratio indicates that the bank is doing well. Roy (2014) found that net interest margin has a positive relationship with impaired financing but this relationship is insignificant. That study supported Maudos and Guevara (2004), who showed that there is a positive and significant relationship between credit risk and net interest margin.

Profitability is calculated by dividing interest income on loans by average gross loan or financing. This ratio is used to examine the bank's ability to generate earning profit from their financing activities. Mc Cann and Culder (2012) and Guy and Lowe (2012) found that there is a negative and significant relationship between profitability and impaired financing. Loans or financing growth is an indicator for the bank's annual changes in disbursing new financing to the customers. It is calculated by dividing changes in total loans for the year with the previous year's total loan. Net charged off to gross financing is used as an indicator of the amount that is unlikely to be collected by a bank or the amount that the bank has written off or charged off. It is calculated by dividing net charged off by gross financing. Boahene, Dasah and

Agyei (2012) revealed that net charge-off has a positive and significant relationship with bank profitability and performance. The result was supported by evidence in Chronopoulos, Liu, McMillan and Wilson (2013), who pointed out that net charge-off has a positive and significant relationship with profitability. They further suggested that higher loan charged off reflects recognition of bad loans in that year but may lead to greater profits in the following year. Meanwhile, Azeem and Amara (2014) found that a bank's profitability is negatively and significantly related to the level of impaired financing.

Staff efficiency is calculated by dividing personnel expenses with net interest income. This ratio is a measure of how effective a bank is in using personnel expenses (inclusive of salary marketing costs and other personnel costs) to generate income (Hays, De Lurgio & Gilbert, 2011). Lang and Jagtiani (2010) suggested that in order for the organisation to be more effective in identifying and managing risk, it requires the development of a powerful independent risk management function with appropriate resources and skills. Further, Sufian (2011) and Ismail (2010) revealed that employees' productivity and human capital efficiency are positively and significantly related to bank performance and profitability. In addition, Aremu et al. (2010) suggested that an effective credit administration and an effective internal control help improve a bank's profitability by reducing impaired financing.

METHODOLOGY

Data Sources

This study used secondary data comprising financial ratios. The data for analysing the internal and moderating factors of this study were obtained from annual reports of MENA country Islamic banks as published in the Bank Scope database over the period 2005-2013. This period was chosen because major events took place in the financial market that directly or indirectly affected the banks' impaired financing. The Bank Scope database converts the data to a worldwide standard currency (USD) to facilitate comparisons.

The data used in this research were financial ratios from annual reports of the Islamic banks in MENA countries published in the Bank Scope database. The period of the study was nine years from 2005 to 2013 (note that this includes the GFC years). The independent variables consisted of eight internal factors (FD, LLP, LIQR, CAP, NIM, PROFIT, LGROW and NCOFF) and the moderating factor, staff efficiency (STAFFX). The dependent variable was impaired financing. The following hypotheses were developed to investigate the determinants of impaired financing and the moderating effect of staff efficiency. The method used are Random Effects model and Hierarchical multiple regression analysis.

Hypotheses

H_1: There is a positive and significant relationship between financing to (1) deposit ratio, (2) loan loss provision and (5) net interest margin and impaired financing.

H_2: There is a negative and significant relationship between (3) liquidity ratio, (4) capital ratio, (6) profitability, (7) loan growth and (8) net charged off and impaired financing.

H_3: The influence of internal factors, namely, financing-to-deposit ratio, loan loss provision, liquidity ratio, capital ratio, net interest margin, profitability, loan growth and net charged off on impaired financing is moderated by staff efficiency.

Multiple Regression Models

$$IF_{it} = \alpha_0 + \beta_1 FD_{it} + \beta_2 LLP_{it} + \beta_3 LIQR_{it} + \beta_4 CAP_{it} + \beta_5 NIM_{it} + \beta_6 PROFIT_{it} + \beta_7 LGROWit + \beta_8 NCOFFit + \varepsilon_{it} \qquad (1)$$

Hierarchical Moderated Multiple Regression Model

$$IF_{it} = \alpha_0 + \beta1 FD_{it} + \beta_2 LLP_{it} + \beta_3 LIQR_{it} + \beta_4 CAP_{it} + \beta_5 NIM_{it} + \beta_6 PROFIT_{it} + \beta_7 LGROW_{it} + \beta_8 NCOFF_{it} + \beta_9 STAFFX_{it} + \beta_{10} FD_{it}*STAFFX_{it} + \beta_{11} LLP_{it}*STAFFX_{it} + \beta_{12} LIQR_{it}*STAFFX_{it} + \beta_{13} CAPit*STAFFX_{it} + \beta_{14} NIM_{it}*STAFFX_{it} + \beta_{15} PROFIT_{it}*STAFFX_{it} + \beta_{16} LGROWit*STAFFX_{it} + \beta_{17} NCOFF_{it}*STAFFX_{it} + \varepsilon_{it} \qquad (2)$$

where α : constant

   i : bank

   t : time period

   ε_{it} : error term of bank i in time t, and

Moderating
variable: STAFFX   : staff efficiency

FINDINGS

Diagnostic tests for homoscedasticity, auto-correlation and penal data were conducted and the results are presented in Table 1.

Table 1
Diagnostic test

Test	(Prob>F)
Homoscedasticity/Heteroscedasticity Test	0.0000**
Auto-correlation Test	0.2028
Panel Data Test (Hausman Test)	0.9978

Note: *p<0.05, **p<0.01

The Breusch-Pagan test was used to detect the existence of heteroscedasticity in the model. The result rejected the null hypothesis, leading to the detection of heteroscedasticity in the model. Gujarati and Porter (2010) suggested that the White General Heteroscedasticity test be used to correct heteroscedasticity. Further, the Wooldridge test for autocorrelation in the panel data was used to detect serial or first-order autocorrelation. The result shows that this model was not significant at p>0.10, which failed to reject the null hypothesis and concluded that the data of the banks in MENA countries have no first-order autocorrelations. The Hausman test is employed to decide between using the fixed or random effects model as the most suitable for this study. The chi-squares score was 0.9978 (p>0.10). The data failed to meet the asymptotic assumptions and failed to reject the null hypothesis; hence, the random effects model was the most appropriate instead of the fixed effect model for use in this study.

The hierarchical multiple regression analysis was performed to determine the projecting influence of independent variables (FD, LLP, LIQR, CAP, NIM, PROFIT, LGROW and NCOFF) on the dependent variable (IF) and the moderating effect of staff efficiency (STAFFX) on the independent variables and the dependent variable. The result is presented in Table 2. Model 1 results in Table 2 show this model to be significant at 0.000 level with the adjusted R^2 of 0.3461. It shows that the regression model consisting of FD, LLP, LIQR, CAP, NIM PROFIT, LGROW and NCOFF could explain 34.61% variation in impaired financing in the Islamic banks in MENA countries.

Further, there were seven predictors that were significant. These were FD (β=0.0515, t=2.2402), NIM (β=0.9885, t=3.0042) and NCOFF (β=0.9115, t=2.6405), in which each had a positive impact on IF of the banks. Other predictors, LIQR (β=-0.1412, t=-2.6704), CAP (β=-0.2002, t=-3.4963), PROFIT (β=-0.8132, t=-3.5228) and LGROW (β=-0.0586, t=-2.1506) all have negative impact on IF of the Islamic

Table 2
The moderating effects of STAFFX on bank specific factors and IF

Variable	Model 1		Model 2		Model 3	
	β	p-value	β	p-value	β	p-value
FD	0.0515	0.0263**	0.0509	0.0087***	0.0984	0.000***
LLP	0.0060	0.1731	0.0126	0.1816	0.0173	0.6835
LIQR	-0.1412	0.0083***	-0.1395	0.0021***	-0.2804	0.0013***
CAP	-0.2002	0.0006***	-0.1835	0.0166**	-0.0644	0.4274
NIM	0.9885	0.0031***	0.6014	0.0267**	0.5796	0.3259
PROFIT	-0.8132	0.0005***	-0.8581	0.0002***	-0.3111	0.7561
LGROW	-0.0586	0.0329**	-0.0561	0.0072***	-3.2654	0.0013***
NCOFF	0.9115	0.0090***	1.0095	0.0228**	-0.3487	0.7494
STAFFX			-0.0786	0.0354**	0.1206	0.7299
FD*STAFFX					-0.0012	0.0117***
LLP*STAFFX					-0.0007	0.8783
LIQR*STAFFX					0.0022	0.0909*
CAP*STAFFX					-0.0021	0.2269
NIM*STAFFX					-0.0052	0.7758
PROFIT*STAFFX					-0.0130	0.1832
LGROW*STAFFX					0.0014	0.0261**
NCOFF*STAFFX					0.0214	0.3686
R²	0.3750		0.3988		0.5009	
Adjusted R²	0.3461		0.3674		0.4491	
Sig F-Statistics	0.0000		0.0000		0.0000	
F-Statistics	12.9770		12.6808		9.6830	

Note: *p<0.10, **p<0.05, ***p<0.01

banks in MENA countries. Meanwhile, LLP had a positive but insignificant relationship with IF.

In Model 2, the moderating variable of staff efficiency (STAFFX) was included. The model was found to be significant at 0.000 level with adjusted R^2 of 0.3674. Hence, the model could explain approximately 36.74% variation in IF. Compared to Model 1, which had seven significant predictors, Model 2 showed eight predictors as being significant. FD (β=0.0509, t=2.6524), NIM (β=0.6014, t=2.2353) and NCOFF (β=1.0095, t=2.2977); each had a positive impact on IF of the Islamic banks. Other predictors, LIQR (β=-0.1395, t=-3.1246), CAP (β=-0.1835, t=-2.4188), PROFIT (β=-0.8581, t=-3.7721), LGROW (β=-0.0561, t=-2.7214) and STAFFX (β=-0.0786, t=-2.1208), all had negative impact on IF of the Islamic banks in MENA countries. Meanwhile, LLP had a positive but insignificant relationship with IF.

Model 3 analysed the relationship between internal variables inclusive of moderating variable together with the interaction variables (FD, LLP, LIQR, CAP, NIM, PROFIT, LGROW, NCOFF, STAFFX, FD*STAFFX, LLP*STAFFX, LIQR*STAFFX, CAP*STAFFX, NIM*STAFFX, PROFIT*STAFFX, LQROW*STAFFX and NCOFF*STAFFX) and the dependent variable (IF).

The results presented in Table 2 show that this model was found to be significant at 0.000 level with adjusted R2 of 0.4491. The result does indicate that staff efficiency and its interactions with the internal factors could explain the variation in IF better compared to Model 2. The hierarchical regression result shows FD*STAFFX interacted negatively and significantly with IF (β=-0.0012, t=-2.550). Hence, the result in Model 3 indicated that staff efficiency moderated the effect of FD on IF of Islamic banks in MENA countries by changing the positive relationship to a negative relationship.

Meanwhile, the interaction terms between LIQR*STAFFX and IF showed a positive and significant (β=0.0022, t=1.7008) relationship, which indicated that staff efficiency moderated the effect of LIQR on IF. Further, the interaction between LGROW*STAFFX and IF revealed that there was a positive and significant relationship between LGROW*STAFFX and IF (β=0.0014, t=2.2447), suggesting that staff efficiency moderated the effect of LGROW on IF. In summary, the results are in support of the hypotheses H_{3a}

(FD*STAFFX), H_{3c} (LIQR*STAFFX) and H_{3g} (LGROW*STAFF).

CONCLUSION

This study introduced a new variable, staff efficiency as a moderating factor in the tested relationships between bank-specific factors and impaired financing of Islamic banks in MENA countries. The motivation for this inclusion stemmed from the need to understand why impaired financing is twice higher in Islamic banks and whether staff efficiency could reduce high impaired financing ratios of Islamic banks in MENA countries. The bank-specific factors consisted of Finance-to-Deposit Ratio (FD), Loan Loss Provision (LLP), Liquidity Ratio (LIQR), Capital Ratio (CAP), Net Interest Margin (NIM), Profitability (PROFIT), Loan Growth (LGROW) and Net Charged Off (NCOFF), while impaired financing to total financing was used as a proxy for impaired financing. Financial data were from 22 Islamic banks in selected MENA countries over the 2005-2013 periods. Based on random effect analysis, the result shows that FD, LIQR, CAP, NIM, PROFIT, LGROW and NCOFF contributed significantly to the impaired financing of Islamic banks in MENA countries.

On the other hand, the moderating model showed that staff efficiency could significantly reduce Islamic banks' impaired financing. It is recommended that Islamic banks build a systematic structure of continuous professional development in credit and risk management for their bank staff. The risk management approaches

have to vary from those of conventional banks. The study contributes empirical evidence on significant linkage between finance and human resource factors and the application of the Resource-Based Theory in banking studies. These results also support the Islamic finance philosophy, which propagates the nurturing of human resource competencies to safeguard stakeholders' interests towards achieving long-term sustainability of Islamic banks.

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APPENDIX A

Impaired Financing of Islamic Banks in MENA Countries

NO	BANK	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)	2006 (%)	2005 (%)	Average (%)
1	Abu Dhabi, UAE	6.47	8.20	8.70	7.13	5.99	3.49	0.69	0.68	0.52	4.65
2	Dubai Islamic, UAE	9.32	12.5	14.5	8.34	5.99	4.13	4.04	3.92	3.98	7.42
3	Noor Islamic, UAE	9.51	25.8	33.3	11.40	7.60	6.30	n.a	n.a	n.a	15.64
4	Sharjah, UAE	5.41	5.98	3.72	2.60	1.43	1.03	4.19	2.61	3.40	3.37
5	Al Rajhi, Saudi	1.57	1.99	1.66	2.15	3.32	2.47	3.44	2.76	1.96	2.37
6	Al Jazira, Saudi	1.20	3.33	4.20	6.71	7.47	1.5	1.95	3.11	2.75	3.58
7	Islamic Dev, Saudi	0.98	0.99	0.92	1.01	1.82	0.81	0.62	1.2	0.91	1.03
8	AlBaraka, Bahrain	4.8	4.72	4.92	4.91	5.17	5.03	5.79	7.59	8.8	5.75
9	Al Salam, Bahrain	1.49	3.17	1.46	2.31	1.88	2.09	n.a	n.a	n.a	2.07
10	Bahrain Islamic	19.4	25	36.4	21	13.6	2.28	1.81	1.22	1.21	13.56
11	Ithmaar, Bahrain	17.5	13.5	19.6	19.6	17.6	5.67	11.6	8.64	10.1	13.75
12	Saderat, Iran	9.10	8.61	10.8	6.46	11.4	7.3	8.38	7.84	8.11	8.67
13	Faisal, Egypt	36.11	39.3	40.3	44	10.4	27.2	18.8	23.00	20.9	28.89
14	AlBaraka, Egypt	0.39	0.63	2.00	3.64	5.83	3.82	4.82	4.32	4.57	3.33
15	Jordan Dubai	6.75	3.25	4.43	0.77	17.5	45.7	48	49.6	51.3	25.26
16	Jordan Islamic	4.08	4.01	6.02	4.92	4.35	4.12	5.01	2.79	3.97	4.36
17	KFH Kuwait	9.45	7.74	8.77	11.9	9.47	10.2	3.44	3.33	3.46	7.53
18	Qatar International	1.15	1.67	1.76	3.87	1.55	1.52	2.4	2.32	3.85	2.23
19	Qatar Islamic	1.04	1.84	1.24	1.47	1.29	1.54	2.38	4.28	6.88	2.44
20	Saba, Yemen	20.80	18.9	15.8	6.67	7.19	8.62	7.78	7.86	7.82	11.27
21	Shamil, Yemen	18.04	27.4	22.2	15.8	12.6	4.27	6.61	5.44	6.02	13.15
22	Tadhamon, Yemen	6.94	4.76	7.27	1.45	1.87	2.60	n.a	n.a	n.a	4.15

APPENDIX B

Summary of Variables Definition and Measurement

Variables	Measurement	Source
Impaired Financing (IF)	Non-Current Financing / Total Financing	Rose (2002)
Financing-to-Deposit Ratio (FD)	Total Financing / Total Deposit	Ahmad & Ariff (2007) & Bank Scope
Loan Loss Provision Bank LLP)	Loan Loss Provision / Net Interest Revenue	Ahmad & Ariff (2007) & Scope
Liquidity Ratio (LIQR)	Net Financing / Total Assets	Brigham & Ehrhardt (2003) & Bank Scope
Capital Ratio (CAP)	Equity / Total Assets	Brigham & Ehrhardt (2003) & Bank Scope
Net Interest Margin (NIM)	Interest Income-Interest Expenses / Total Assets	Khan, Anuar, Choo, & Khan (2011) & Bank Scope
Profitability (PROFIT)	Interest Income on Loans / Average Gross Loans	Ben Ameur & Mhiri (2013) & Bank Scope
Loan Growth (2013) (LGROW)	Current year total loan-Previous year total loan / Previous-year total loan	Ben Ameur & Mhiri & Bank Scope
Net Charged Off (NCOFF)	Net Charged Off / Gross Financing	Bhat, Lee, & Ryan (2013) & Bank Scope
Staff Efficiency (STAFFX)	Personnel Expenses / Net Interest Income	Hays, De Lurgio, & Gilbert (2011) & Bank Scope