Risk and bank financial performance in Kuwait

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Abstract
The purpose of this study is to examine the effect of risk factors on the financial performance of Kuwaiti banks. The study based on the financial data of ten banks listed at Kuwait stock exchange (KSE) over the period 2008-2018. Return on assets (ROA) is used as the proxy of financial performance and operational risk, credit risk and liquidity risk as risk factors. Results of the research shows that the financial performance of Kuwaiti banks is mostly affected by operational risk and liquidity risk and that credit risk does not have any statically significant effect of their financial performance.

Keywords: Kuwaiti banks, Kuwait stock exchange (KSE), operational risk, credit risk, liquidity risk, return on assets, financial performance

Introduction
The banking sector is the cornerstone of any economy, ensuring a sound banking sector would yield to a healthier economy. Efficient and effective performance of the banking sector over time is an index of financial stability in any nation. Risk management is a key issue to sustain the financial stability. Risk is the deviation of the expected outcome, and risk management in any banks work to ensure that such deviation does not happen. Risk management is defined as “The process of identifying, assessing, and prioritizing risks of different kinds”. Allen et al., 2004 (4) stated that banks display better performance when they possess good risk management systems. Bird and Skinner (2005) (7) stated that the supreme assessment of risks control is maintenance of high returns, so “Superior risk management practices are really good for the bottom line”. Koller (2011) (12) argued that profitability is the most important and reliable indicator to measure the financial soundness of any financial institution. While Malik (2011) (13) states that profitability is one of the main determinants of the performance of any company. Hosna, Manzura, and Juanjuan (2009) (6) investigated the relation between the efficiency of risk management and the profitability of four commercial Swedish banks from 2000 to 2008 and found a positive relationship.

According to Tandellin et al. (2007) (17) and Abu Hussain & Al-Ajmi (2012) (1) operational risk, credit risk and liquidity risk are considered as the most important risks facing the banking sector. Al-Rdaydeh et al. (2017) (3) examined the effect of credit and liquidity risks on the profitability of Jordanian banks over the period 2006-2015 and concluded that both risks had a statistically significant negative relation with the return on assets of the banks. Al-Khouri (2011) (2) examined the effect of risk factors on the financial performance of 43 commercial banks operating in 6 of the Gulf Cooperation Council (GCC) countries over the period 1998-2008. He found that credit risk and liquidity risk were the major factors that affected the bank financial performance. Ruziqa (2013) (10) investigated the impact of credit and liquidity risk on bank profitability in Indonesia, and showed that credit risks had a negative effect while liquidity risk had a positive effect on banks’ performance. Jiang et al. (2012) (11) also concluded that there is a positive and significant effect of liquidity risk on bank profitability, which lead to the assumption that notwithstanding the trade-off between liquidity and profitability. On the contrary, Tabari et al. (2013) (19) found that the relationship between liquidity risk and bank performance is significant and negative; hence, led to a conclusion that the liquidity risk will trigger to the deterioration of the performance of the bank. Endawewe (2015) (8) investigated the impact of risk management on bank performance on the Ethiopian bank performance. Using the data of eight commercial banks over the period 2002-2013.
Four risk factors were used as independent variables that affects banks performance. The results of panel data regression showed that credit risk, Liquidity risk, and operational risk had negative and statistically significant impact on banks performance.

**Methodology**

This study is based on a model that was previously adapted by Aruwa and Musa (2014) [6] and Altarawneh and Shafie (2018) [5]. The model uses return on assets (ROA) as a dependent variable where it is used as a proxy of bank financial performance while operational, credit, and liquidity risks are set as independent variables. The model is presented in equation 1 as follows;

\[ ROA_i = \alpha + \beta_1 OR_{it} + \beta_2 CR_{it} + \beta_3 LR_{it} + \epsilon_{it} \]

Where:

- \( ROA \): Return on asset ratio, net income divided by total assets.
- \( OR \): Operational risk, total expenses divided by total assets.
- \( CR \): Credit risk, total debt divided by total assets.
- \( LR \): Liquidity risk, net loans divided by deposits.
- \( \alpha \): Constant.
- \( \beta_1, \beta_2, \beta_3 \): are the coefficients of variables.
- \( \epsilon_{it} \): Random Error of variable.
- \( i \): Banks.
- \( t \): Years.

Equation 1 is set to examine the following hypotheses,

1. \( H_0 \): There is no statistical significant relation between operational risk and financial performance.
2. \( H_0 \): There is no statistical significant relation between credit risk and financial performance.
3. \( H_0 \): There is no statistical significant relation between liquidity risk and financial performance.

**Data and empirical results**

This study is set to examine the effect of risk factors on the financial performance of Kuwaiti commercial banks. The data used in this study were obtained from the annual reports of the banks over the period 2008 to 2018. Annual reports were downloaded from the Kuwaiti stock exchange and Kuwait Institute of banking studies websites.

Before conducting the hypothesis analysis, diagnostic test on data normality distribution and multicollinearity test are performed to ensure the reliability of the regression model. By looking at the descriptive statistics in table 1, it can be seen that the skewness value of the independent variables is less than \( \pm 3 \) and kurtosis did not exceed \( \pm 10 \) which indicates that the data is normally distributed.

The correlation analysis measures the strength and the nature of the relation between variables where it takes a value between -1 and 1. The correlation analysis can also be used to identify any multicollinearity in the data. Multicollinearity can cause unrealistically high standard error estimates of regression coefficients and in the end can cause false conclusion about the significance of independent variables in the model being evaluated. In this research, a threshold of 0.70 is used to identify multicollinearity. Using Pearson correlation analysis in table 2, it can be seen that such problem does not exists.

<table>
<thead>
<tr>
<th>Table 2: Pearson Correlation Matrix</th>
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<tbody>
<tr>
<td>ROA &amp; OR &amp; CR &amp; LR</td>
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<tr>
<td>ROA &amp; 1 &amp; 0.4755 &amp; 0.8623 &amp; 0.9833</td>
</tr>
<tr>
<td>OR &amp; -0.658 &amp; 1 &amp; -0.0194 &amp; -0.050</td>
</tr>
<tr>
<td>CR &amp; 0.047 &amp; -0.194 &amp; 1 &amp; 0.1014*</td>
</tr>
<tr>
<td>LR &amp; 0.171 &amp; -0.063 &amp; -0.050 &amp; 1</td>
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By looking at the regression results, presented in table 3, it can be seen that the model had an adjusted R square of 0.439 indicating that the model was able to explain 43.9% of the variation in return on assets (ROA) while the remaining 56.1% is due to other variables that were not included in the model. The model achieved a significance \( F \) value that is lower than 0.01 which means that the model is 'Applicably correct and appropriate'.

In examining the hypotheses set, it can be seen that operational risk had a statistically significant inverse relation with the bank financial performance which is in-line with Isshaq and Alufar-Bokpin (2009) [10]. When it comes to the second hypothesis, results show that there is an opposite relation between credit risk and return on assets (ROA) of Kuwaiti bank but that relation was statistically insignificant which collaborates with Sayedi (2014) [15] findings. In terms of the relation between liquidity risk and the financial performance on Kuwaiti bank, results shows a statistically significant direct relation which supports Jiang et al. (2012) [11] findings.

<table>
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<th>Table 3: OLS Regression Results</th>
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<tr>
<td>Regression Statistics</td>
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<tr>
<td>Multiple R &amp; 0.675</td>
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<tr>
<td>R Square &amp; 0.456</td>
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<tr>
<td>Adjusted R Square &amp; 0.439</td>
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<tr>
<td>Significance F &amp; 3.3972E-13</td>
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<tr>
<td>Observations &amp; 104</td>
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<tr>
<td>Coefficients &amp; Standard Error &amp; t Stat &amp; P-value</td>
</tr>
<tr>
<td>Intercept &amp; 0.0382 &amp; 0.0132 &amp; 2.8840 &amp; 0.0048</td>
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<tr>
<td>OR &amp; -0.0628*** &amp; 0.0071 &amp; -8.8186 &amp; 0.0000</td>
</tr>
<tr>
<td>CR &amp; -0.0119 &amp; 0.0118 &amp; -1.0089 &amp; 0.3155</td>
</tr>
<tr>
<td>LR &amp; 0.0104* &amp; 0.0061 &amp; 1.6994 &amp; 0.0923</td>
</tr>
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</table>

**Conclusion**

The banking sector is a vital component in any economy, having a financially sound banking sector would ensure a healthier economy. In order to maintain a healthy banking sector, bank managers should address the risks that could cause diversion from their plans. This study is set to examine the effect of risk factors that might cause diversion in the financial performance of commercial banks listed at Kuwait stock exchange over the period 2008-2018. Using OLS regression method, results showed that the financial performance of Kuwaiti banks was mostly affected by...
operational and liquidity risks while credit risk did not show any statistically significant effect on their financial performance.

References