

# Evaluating the Financial Soundness of Kuwaiti Banking Sub-Sectors Using EAGLES Financial Model: A Comparison Study between Islamic and Conventional Banks

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DOI: [10.36348/SJEF.2019.v03i10.004](https://doi.org/10.36348/SJEF.2019.v03i10.004)

| Received: 08.10.2019 | Accepted: 16.10.2019 | Published: 21.10.2019

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## Abstract

After the Asian financial crisis in 1997, CAMELS model for evaluating banks financial soundness became questionable since the model was unable to predict the financial collapse of Asian banks. As a result, new models of evaluating the financial soundness of banks were developed. One of these models was the EAGLES model that showed to be a worthy model to consider. The model examines six areas that mostly affects the financial soundness of banks. These areas are earning, assets quality, growth, liquidity, equity, and strategic responsiveness. This study aims to compare the financial soundness of Islamic and conventional banking sub-sectors in Kuwait over the period 2011-2018. Results shows that conventional banks outperformed Islamic banks in all areas except in the growth side. The results obtained from the trend analysis revealed that Islamic banking sector is improving more rapidly in all areas, except in liquidity, and that can be explained by the fairly young age of Islamic banking and its position in the learning curve which is much steeper than conventional banking position which is somewhat flat.

**Key words:** EAGLES financial model, financial soundness, Trend analysis, CAMELS model, Islamic banks.

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## INTRODUCTION

Having a healthy and sound banking sector is an important element for the growth and prosperity of any economy. In order to ensure the quality of the banking sector supervisory authorities should monitor the financial position of banks and enforcing related legislations and regulatory policies in order to correct any divergence from the core banking purpose [1]. CAMELS model, that was originally founded in 1979 as CAMEL model and the "S" was added in 1996 to represent the market sensitivity, was and still is the go-to model among supervisory authorities to determine the financial soundness of banks despite showing its inability to detect banking sector meltdowns during the Asian crisis in 1997 and the global financial crisis in 2008. One example is the Bank of Clark County in Washington State in the United States which went bankrupted in 2009 despite having a CAMELS rating of 2, 1 being very safe and 5 being in distress, as to CAMELS rating categories. Parsons [2] stated those effective regulatory authorities' needs to be "forward-looking" and not "backward-looking" as CAMELS model presents.

EAGLES model, just like CAMELS model, is based on financial ratios which proven to be very useful in determining the financial soundness of banks. Gitman [3] defines financial ratios analysis as a method that involves calculating and interpreting financial ratios that are found in the firm's Financial Statements to analyze and monitor firm's performance. Altman's [4] concluded that models that are based on financial ratios are able to determine the financial soundness and provides an early warning system for companies. Payne [5] stated that in focusing on areas of good and bad performance, financial ratios are a good way to guide the management to trace out existing strength and weakness and focus on channelized the efforts. Myšková and Hájek [6] stated that financial ratios are the most popular and most widely used methods of financial analysis because they can be used as input data of more complex mathematical models. Al Gagawi and Ibrahim [7] believe that quantitative indicators (ratios) are more appropriate than qualitative based models as they are derived from the company's financial reports, which reflect its operating performance. James [8] stated that the main objective of analyzing financial ratios is to evaluate the results for

decision-making purposes. It helps them to identify and focus on areas of weak performance and areas where there is better performance.

Many researchers used EAGLES model to evaluate the financial soundness of banks. Some of these researches would include, Kumari and Prasad [9] that compared the financial performance of selected 10 public and private sector banks over a 10 year period using EAGLES model. Their results showed that Yes Bank was the top performer in terms of Return on Assets (ROA), gross NPA, and Provision Coverage Ratio (PCR). While Kotak Mahindra Bank was also performing efficiently in terms of investment-to-deposit and Capital Adequacy Ratio (CAR). They concluded that private banks over performed public banks and there was a significant difference in the performance of selected public and private sector banks. Vong and

Song [10] used EAGLES model to compare the financial soundness of 4 Indonesian banks based on their 1996 financials. They found that Bank International was the best performer in terms of earnings, liquidity, and strategic response while Bank Danamon had the best scores in assets quality and loan growth.

## METHODOLOGY

EAGLES financial model is a model that is based on financial ratios. Back *et al.* [11] found that financial models based on financial ratios outperforms the models that are based on common financial variables. Following Vong and Song [10], the ratios used in determining the financial soundness of Kuwaiti banking sub-sectors are shown in table 1.

**Table-1: EAGLES Financial Ratios**

EAGLES Financial Ratios		
Earning	ROE	$\frac{\text{Net Profit}}{\text{Shareholders equity}}$
Assets Quality	NPL	$\frac{\text{Non - performing loans}}{\text{Total loans and advances}}$
Growth	Loans Growth	$\frac{\text{Total Loans}_t - \text{Total Loans}_{t-1}}{\text{Total Loans}_{t-1}}$
Liquidity	LDR	$\frac{\text{Total Loans}}{\text{Total Deposits}}$
Equity	Capital adequacy ratio	$\frac{\text{Tier 1 + Tier 2 Capital}}{\text{Risk Weighted Assets}}$
Strategic response	Interest burden	$\frac{\text{Interest margin}}{\text{Net Operating Cost}}$

## Data and Empirical Results

This study aims to evaluate the financial performance of the banking sub-sectors in Kuwait using EAGLES model. The model is used to compare the financial soundness of Islamic banks with that of conventional banks over the period 2011-2018. Aggregate data for the sub-sectors used in this study were obtained from the Kuwait institute of banking studies database.

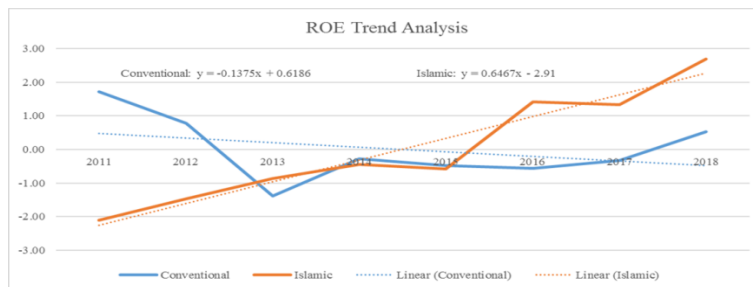
The main objective for any bank is maximizing the wealth of its shareholders and for that return on equity (ROE) is used to evaluate the earning ability of the bank. From table 2, it can be seen that, on an average, conventional banks had a higher mean return on equity (ROE) than Islamic banks. Conventional bank were able to produce a mean return of 8.63% compared to 7.70% for Islamic banks. But it can also be noted that during the last three years of the study period, 2016-2018, Islamic banks outperformed conventional banks in that area.

**Table-2: Empirical Results**

Conventional Banking Sub-Sector									
	2011	2012	2013	2014	2015	2016	2017	2018	Average
<b>Earning (ROE %)</b>	10.34	9.40	7.25	8.35	8.16	8.06	8.31	9.15	<b>8.63</b>
<b>Assets Quality (NPL %)</b>	6.11	4.96	3.08	2.25	2.07	2.09	1.24	1.13	<b>2.87</b>
<b>Growth (Loans %)</b>	0.82	14.49	8.02	8.46	8.61	-0.35	3.57	1.86	<b>5.69</b>
<b>Liquidity (LDR %)</b>	77.25	77.67	74.32	71.97	76.31	75.62	75.38	75.04	<b>75.45</b>
<b>Equity (CAR %)</b>	19.83	19.26	18.88	16.04	17.16	18.29	17.82	17.92	<b>18.15</b>
<b>Strategy (Times)</b>	8.07	9.00	9.48	8.86	8.57	6.27	6.02	5.06	<b>7.67</b>
Islamic Banking Sub-Sector									
	2011	2012	2013	2014	2015	2016	2017	2018	Average
<b>Earning (ROE %)</b>	5.60	6.23	6.83	7.26	7.12	9.13	9.04	10.39	<b>7.70</b>
<b>Assets Quality (NPL %)</b>	7.55	6.40	4.33	3.45	2.65	2.31	2.46	1.44	<b>3.82</b>
<b>Growth (Loans %)</b>	6.47	12.85	2.25	11.16	5.54	6.04	10.80	7.18	<b>7.79</b>
<b>Liquidity (LDR %)</b>	90.83	95.04	86.89	86.73	89.04	90.46	91.71	95.13	<b>90.73</b>
<b>Equity (CAR %)</b>	15.91	16.28	18.29	17.15	17.07	18.49	18.29	17.74	<b>17.40</b>
<b>Strategy (Times)</b>	7.34	7.45	8.22	6.78	6.89	5.83	5.90	5.25	<b>6.71</b>

By analyzing the trend of the return on equity ratio, as seen in figure 1, it can be seen that conventional banking sub-sector is showing a negative

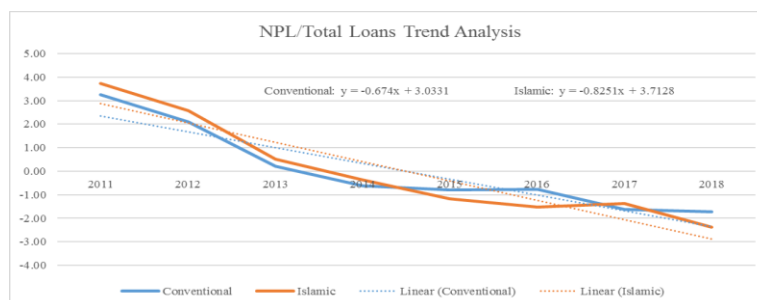
slope indicating that return on equity in conventional banks is deteriorating while Islamic banks are showing an upward trend in that ratio.



**Fig-1: Earning Trend Analysis**

In terms of assets quality, conventional banks have always had less non-performing loans to total loans ratio. This low ratio would imply that conventional banks have a more efficient customer credit checking methods than Islamic banks. The non-performing loans in conventional banks represent 2.87% of total loans while Islamic banks had a mean non-performing loans to total loans of 3.82%. It can be

noted that this ratio was at its highest level in 2011 and that was due to consequences of the global financial crisis in 2008. In examining the slope in assets quality, it can be seen from figure 2, that both Islamic and conventional banks are improving there. Both are showing a downward slope indicating the fall of non-performing loans in their loans portfolio.



**Fig-2: Assets Quality Trend Analysis**

Returns from interest on loans are the main source of income for any bank. For that matter it can be said that there is a direct relation between the bank loan portfolio size and the income the bank generates. The growth in loans would imply a growth in income and from table 2, it can be seen that Islamic banks were able to generate average growth in their loans during the

study period of 7.79% compared to 5.69% for conventional banks. In examining the trend on loans growth, as seen in figure 3, it can be seen that Islamic banks had a positive beta while conventional banks showed a negative beta indicating the growth rate in conventional banks is declining.

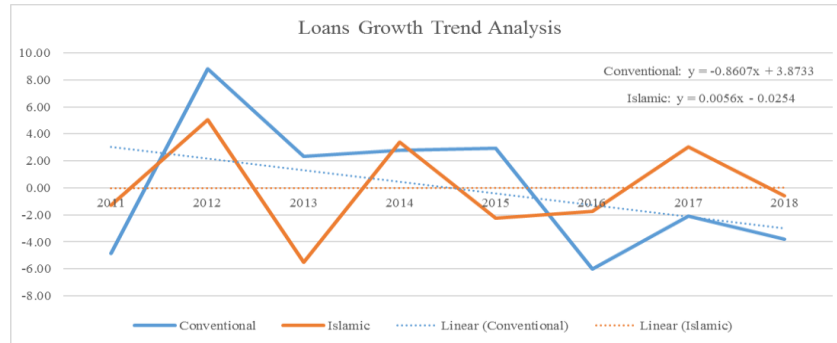


Fig-3: Growth Trend Analysis

Balancing between liquidity and profitability is a difficult task for any bank, utilizing the liquidity the bank has on loans would boost the banks' profitability but at the same time would make the bank vulnerable against any liquidity crunch. Having a lower loans to deposit ratio would indicate a conservative bank policy at the expense of profitability. For that matter, as shown in table 2, conventional banks were more conservative

in their loan expansion at the expense of liquidity. Conventional bank had a mean loan to deposit ratio over the study period of 75.45% compared to the more aggressive Islamic banks that had that ratio at 90.73%.The trend analysis also confirms this observation by showing positive beta of 0.3144 for Islamic banks compared to negative beta of -0.2224 for conventional banks.

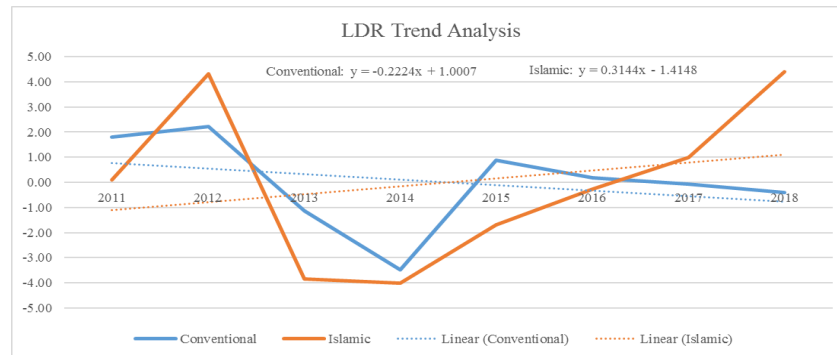


Fig-4: Liquidity Trend analysis

Capital adequacy has profound impact upon the bank. Not only is there an international guideline (Basle II) that stipulates a bank must have a minimum capital equivalent to 8% of risk adjusted asset. Many banks are restricted to open additional branches unless they meet minimum capital requirements. Kosmidou [12] and Dang [13] defined capital adequacy as the sufficiency of the amount of equity to absorb any shocks the bank might encounter and it shows the internal strength of the bank to withstand losses during crisis periods. Capital to risk-weighted assets ratio

(CAR) is advocated to ensure that the bank can bear a reasonable amount of losses occurring during the operations and to determine the bank's loss bearing capacity. Again in terms of capital adequacy, conventional banks showed a higher ratio indicating that they are more capable of absorbing any financial fall down in the bank business than Islamic banks. Again in examining the trend line, it can be observed that Islamic banks are showing improvement in that area while conventional banks are showing deteriorating trend.

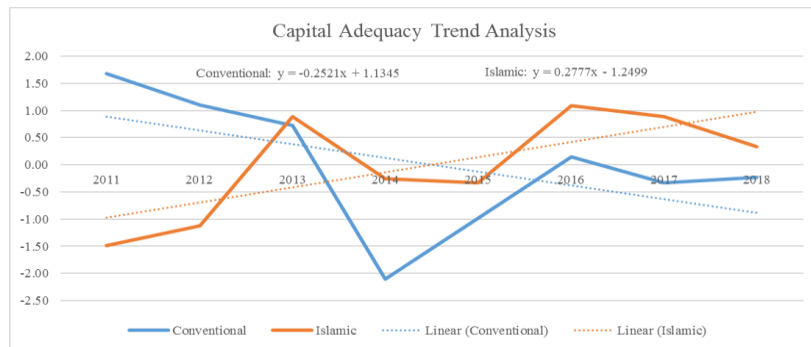


Fig-5: Capital Adequacy Trend Analysis

The effective management of a bank strategy is indicated by the strategic response quotient (SRQ). It is an intriguing ratio because it assesses management's ability to lend, to garner deposits, obtain fee-based income and to manage the operating cost. As to what is an appropriate balance of the three core banking activities will depend on the bank's strategy. The SRQ is obtained by dividing the interest margin by net

operating cost. The higher figure the better combined with excellent risk controls. Conventional banking sub-sector again outperformed Islamic banks in that category since they scored a mean average of 7.67 compared to 6.71. But when examining the trend line it can be seen that conventional banks are showing a declining slope line in that ratio while Islamic banks are showing an upward trend.

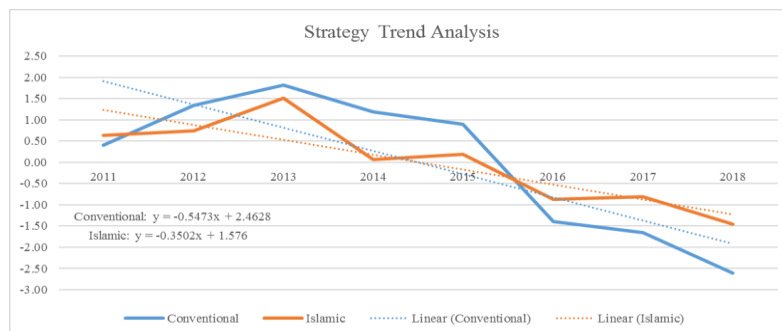


Fig-6: Strategic Response Trend Analysis

## CONCLUSION

The aim of this study is to compare the financial soundness between Islamic and conventional banks that are listed at Kuwait stock exchange over the period 2011 to 2018. Results showed that, on an average, conventional bank outperformed Islamic banks in all areas except in growth. But, in the last three years of the study period Islamic banks overcome conventional banks in the areas of earnings and strategic management responsiveness. In terms of trend analysis results, they revealed that Islamic banks are improving more rapidly than conventional banks in all areas except in liquidity. The results from this study suggests that Islamic banks are improving much more than conventional bank but they have to address their weak area and that is liquidity. Conventional banks on the other hand are facing problems in growth at the present time but trend analysis suggests that this problem will spread to other areas such as earnings and strategic management responsiveness.

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