# Performance Evaluation of the Jordanian Commercial Banks Based on Bankometer Parameters

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## Abstract

Due to the vital role of banking sector in every country's economy, the sustainability of this sector became a priority especially in the aftermath of the global financial crisis of 2007-2008. The main objective of this study is to assess the soundness of Jordanian commercial banks listed in Amman's Stock Exchange (ASE) during the period (2008-2015). The study applied the Bankometer model analysis and concluded that all banks under study are safe in terms of all parameters of the model despite the slowdown of economy and the regional instability.

**Keywords:** financial soundness, bankometer model, commercial banks, ASE

## 1. Introduction

The collapse of Petra bank, one of the leading banks in Jordan following the 1988-1989 economic crises, together with the appearance of financial difficulties in other financial institutions, jeopardized the integrity of the whole banking system. The financial difficulties emerged because of inadequate banking regulations, overexposure of banks and imprudent speculation on foreign exchange. In the aftermath of this crisis, the Central Bank of Jordan (CBJ) issued a number of regulatory measures in order to strengthen its supervision over the banking institutions. At that time, these measures were consistent with Basel Accords recommendations for regulations in the banking industry. Most banks in Jordan meet the requirements of Basel II and are concerned to meet the requirements of Basel III.

Moody's report of 2016, states that despite the fact that Jordan's banking system is large and has high overseas exposure mainly in the Middle East and North Africa region (MENA), is still resilient amid regional instability and uncertainty.

## 2. Statement of the Problem

The banking operations are susceptible to different kinds of risks that require appropriate measures in order to avoid these risks. As a result of the last financial crisis of 2008-2009, Basel Committee introduced several amendments to Basel II accords to be implemented in Basel III. These amendments aim at protecting banks from exposing to financial risks by strengthening the process of supervision. To comply with the requirements of Basel III, Jordanian banks have to increase its capitals which in turn will hamper their banking activities.

## 3. Objective of the Study

The main objective of this study is to measure the level of vulnerability of the banking system in Jordan during the period 2008 - 2015 based on' bankometer' model developed by International Monetary Fund (IMF, 2000). This study may help all stakeholders in decision making and controlling the banking system to avoid possible future financial difficulties.

## 4. Literature Review

The process of evaluation for banks' financial performance is continuous and different models have been used such as; Z-Score model, CAMEL model, CLSA and Bankometer. Many researchers used these different models in different perspectives and periods. Rahmat (2002) conducted a research by applying Z- Score model to assess the soundness of banks in Indonesia during the period (1995-1997) before they were declared bankrupt by the Bank of Indonesia. Some researches especially those conducted in banking sector argue that Z- Score Model of Altman is not suitable to assess the performance of banks. Makkar and Singh (2012) examined the solvency of

commercial banks in India during the period 2006/2007-2010/2011 by applying Bankometer. The results indicated that Bankometer model can provide accurate assessment of banks; Swair (2005) and Salim (2011) argue that a company may use a combination of models to assess the possibility of financial distress.

CAMEL model which was adopted by the Committee of Basel in 1988 as a standard model of bank rating, was used by many researchers such as Thomson (1991) who used this model to assess the banks that faced failure in the 80's and concludes that CAMEL ratios can accurately predict the possibility of failure in a bank and can be used as an early warning system in banks. Hadane (2009) explains in his study that stress testing is very useful tool and due to financial crisis of 2008-2009 many banks failed in stress testing, Anita and Shveta (2012) attempted to evaluate the solvency of 37 commercial banks in India during the period 2006/2007 to 2010/2011 using Bankometer's parameters. The results of the study showed that the private banks were sounder than the public banks. Das and Ghosh (2006) found a close relationship between the efficiency and soundness of banks as determined by capital adequacy ratio, Dar and Presely (2000) have analyzed some components of CAMEL model i.e. Management and internal control of banks and companies. They found that the lack of correct balance between management and internal control is the major cause of loss especially in the Islamic finance structure; Godlewski (2003) examined the validity of the CAMEL rating model for banks default in emerging markets by concentrating on using a logical model applied to a database of defaulted banks in emerging markets. According to Kumbhakar and Sarkar (2003) the performance of private sector banks not public sector banks have improved in response to deregulation measures. Maria, Silva and Thannassoulis (2003) evaluated the performance of Japanese banks and they found that the major problem of failed banks was not the inefficiency of management but the below standard of capital adequacy ratio and bad asset quality. Wu and Zhang (2005) reached to a conclusion that the industry factors and the size of a bank play a vital role in affecting the financial distress and the cost of this distress is high when a corporate stand in poor environment, and that there is a positive relationship between asset size and financial distress cost. Said and Saucier (2003) analyzed the liquidity, solvency and the efficiency of sample banks in Japan using CAMEL rating model during the period (1993-1999) concentrating on capital adequacy, assets quality, liquidity and earnings.

## 5. Study Hypothesis

Based on the study's problem and the objective stated above, the hypothesis has been set as follows in its null form:

$H_0$: There is no relationship between parameters of the solvency ratios of commercial banks operating in Jordan.

## 6. Theoretical Frameworks

Bankometer model was developed by International Monetary Fund (IMF) recommendations in 2000 in order to assess the financial health of banks. The model is as follows:

$$S = 1.5\ X\ CA + 1.2X\ EA + 3.5X\ CAR + 0.6\ X\ NPL + 0.3X\ CI + 0.4\ XLA$$

Where 'S' stands for solvency and,

  X1 = CA stands for capital assets ratio. Capital/ Assets >=04%

  X2 = EA stands for equity to assets ratio. Equity/ Assets > =02%

  X3 = CAR stand for capital adequacy ratio. 40% = <CAR > =08%

  X4 = NPL stands for non- performing loans to total loans. NPLS/ Loans = < 15%

  X5= CI stands for cost to income ratio. Cost / Income = < 40%

  X6 = L A stands for total loans to total assets. Loans / Assets =< 65%

With criteria:

1)  Value of S < 50 means the company is in difficult financial situation.

2)  Value of 50 < S < 70 means the company is in the gray area.

3)  Value of S > 70 means the company is in a very good state.

## 7. Methodology and Analysis

The study is descriptive and analytical, it illustrates the performance of 13 listed banks based on secondary data obtained from published annual reports, annual reports of the CBJ, in addition to website of ASE during the periods (2008-2015) in order to measure the ability of Bankometer model in assessing the soundness of these banks, results are shown on table 1 below and Figure 1.

Table 1. Calculated results using Bankometer parameters model 2008-2015

| Parameters  Bank's Name | CAR  $40 \leq CAR \geq 8\%$ | CA  $\geq 4\%$ | EA  $\geq 2\%$ | NPL  $\leq 15\%$ | CL  $\leq 40\%$ | LA  $\leq 65\%$ | S  Max70%; Min 50% |
|---|---|---|---|---|---|---|---|
| Arab Bank | 0.2058 | 0.135 | 0.1719 | 0.0021 | 0.4411 | 1.2081 | 1.7459 |
| Arab Jor.Inv.Bank | 0.2389 | 0.106 | 0.1386 | 0.0017 | 0.5349 | 0.2400 | 1.4189 |
| Arab Bank. Corp. | 0.2398 | 0.097 | 0.5362 | 0.0157 | 0.5501 | 0.1437 | 1.8582 |
| Capital Bank | 0.2167 | 0.147 | 0.1848 | 0.0181 | 0.6239 | 0.3388 | 1.5343 |
| Cairo Amman | 0.1549 | 0.029 | 0.0653 | 0.0005 | 0.6651 | 0.2628 | 0.9689 |
| Jordan Commercial | 0.1463 | 0.119 | 0.2684 | 0.0048 | 0.7665 | 0.5787 | 1.4781 |
| Bank Al- Itehad | 0.1892 | 0.071 | 0.1444 | 0.0005 | 0.5723 | 0.0398 | 1.1912 |
| Housing Bank | 0.2532 | 0.047 | 0.1590 | 0.0003 | 0.5027 | 0.2456 | 1.3967 |
| Jordan Kuwait Bank | 0.1624 | 0.044 | 0.1636 | 0.0003 | 0.4044 | 0.4410 | 0.9519 |
| Bank of Jordan | 0.1308 | 0.059 | 0.1023 | 0.0007 | 0.9994 | 0.4106 | 1.1335 |
| Jordan Ahli Bank | 0.1308 | 0.048 | 0.0916 | 0.0078 | 0.7337 | 0.3481 | 1.0037 |
| Socite General Bank | 0.2641 | 0.073 | 0.0789 | 0.0013 | 0.4136 | 0.1505 | 1.3134 |
| Investment Bank | 0.2396 | 0.090 | 0.1311 | 0.0009 | 0.3943 | 0.2838 | 1.3632 |
| Average | 0.1979 | 0.082 | 0.1720 | 0.0042 | 0.5848 | 0.3609 | 1.3352 |
| St. Deviation | 0.0482 | 0.037 | 0.1215 | 0.0060 | 0.1743 | 0.2905 | 0.2838 |
| Median | 0.2058 | 0.073 | 0.1444 | 0.0013 | 0.5501 | 0.2838 | 1.3632 |

Source: Authors' compilation based on the published annual reports of 13 listed Jordanian banks and the website of ASE during the periods 2008-2015.
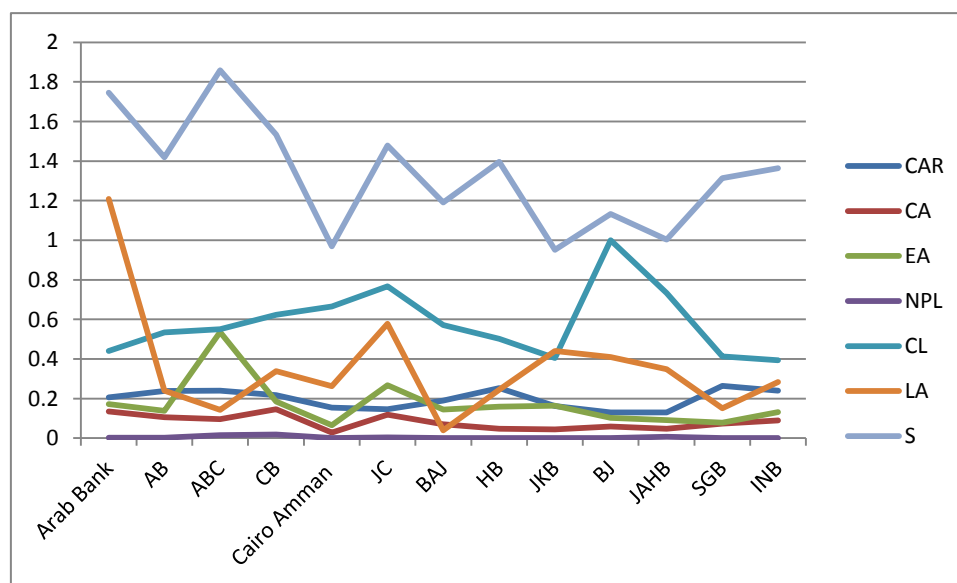


Figure 1. Depicted by the author

The highest value of solvency reflects the highest capital adequacy ratio in the Jordanian banks, and these ratios are above the prescribed level of Basel III (Minimum Total Capital Ratio plus Conservation Buffer of 11.50%), and above the requirements of CBJ in terms of capital adequacy ratio 12%. Capital to Assets Ratio shows how banks' assets are financed either by equity or long term debt. The higher ratio means more security for the bank. Cairo- Amman Bank has the lowest CA ratio which is 0.029% during the period 2008-2015, followed by Jordan – Kuwaiti Bank with CA ratio of 0.044%. These banks have to take necessary measures to increase this ratio to be more secure. Equity to Assets Ratio EA reflects the contribution of equity in financing assets, and how much a bank is dependent on external sources. The Jordan Ahli Bank had the lowest ratio of 0.0911% in comparison with other banks under study. Non-Performing Loans ratio or NPL indicates the delay in servicing the debt. The highest ratio among all listed Jordanian bank was noticed in Capital Bank with 0.018%, followed by Arab Banking Corporation Bank with 0.0157%. Cost to Income Ratio (CI) measures the operating expenses to operating income. The lower the ratio, the higher level of profit. The results of calculation show that the lower CI

ratio was noticed in Jordan- Kuwaiti Bank with 0.40% followed by Arab Bank with ratio of 0.44%. Loan to Asset Ratio or LA is a leverage ratio and reflects the percentage of assets that are financed by debts and the ability of a bank to meet financial obligation requirements for outstanding loans. The lower the ratio, the less dependency on debts and a positive impact on liquidity.

## 8. Conclusion

The analysis shows that all Jordanian listed banks had a strong capital base, high liquidity, good assets quality and good profitability and also show that all banks under study are safe in terms of all parameters of the model. These results are partially due to the prudent monetary policy of the Central Bank of Jordan. Bankometer proved to be a good instrument in assessing the financial soundness of banks and can be used as an early warning system in assessing financial performance of a bank.

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