Measuring the Efficiency of the Jordanian Islamic Banks

Mahmoud Ali Jaradat

Al AL –Bayet University, Jordan, Faculty of Finance and Business Administration, Department of Banking and Finance

Abstract
The objective of this study is to analyze and compare the performance and efficiency of Jordanian Islamic bank during 2011-2014 using financial ratios. There are three Islamic banks in Jordan, the study found that JIBFI is relatively more efficient in term of profitability and liquidity and less risky compare to other banks.
Keywords: efficiency, financial ratios, Islamic banks, Jordan.

1-Introduction.

Measuring the efficiency of Islamic banks has gained scholars attentions all over the world. Since it has given rise to the interest of all interested parties such as shareholders, depositors, Bank management, government and the whole society. Different approaches have been used to measure the efficiency, among them is ratios analysis. The method has been adopted by many researchers such as Muhamad Abduh (2013), Ajlouni(2011), Hassan(2010). This approach has many positive aspects, the main advantage is it removes disparities. In this work, three Jordanian Islamic banks are included. The financial statements that are used for this work are obtained from annual report of each bank for the period of 2011-2014.

Islamic banking system in Jordan has started long time ago, as it goes back to 1978 when Jordan Islamic Bank for finance and investment (JIBFI) has operated in Jordan for the first time. Now another two banks have been operated, Islamic International Arab Bank(IIAB) and Jordan Dubai Islamic Bank (JDIB).

Since there are limited studies measuring the efficiency of Jordanian Islamic Banks, the objective of this work is to measure the efficiency during the period 2011-2014 as well as to compare between the efficiency level between the three banks.

The remainder of the study is organized as follows; section II reviews literature, section III gives theoretical framework, section IV introduces the data and methodology, and finally section V introduce the results and analysis.

II. Literature Review.

There has been extensive literature examining the efficiency of Islamic banks, particularly in the Islamic world. But work on examining and measuring Jordanian Islamic banks is still few.

Khan, Chauhary, Asad, Khan and Naqvi appraised and analyzed the operating efficiency of selected Malaysian Islamic Banks(MIB) and Pakistani Islamic Banks (PIB) using ratios model for a period of six years from 2006-2011. They found that (MIB) have appraised comparatively efficient operation subject to income-expense ratio and operating efficiency, while (PIB) have rigorously utilized assets. The study concluded that (MIB) are more efficient and (PIB) are tumbling in controlling operating expenses.

Hassan and Adam (2014) investigated the financial performance of Erbil Bank for Investment and Finance using parameters approaches (Financial ratios) for the period 2009-2013, the study showed that the overall financial performance of Erbil Bank is improving in term of liquidity ratios, asset quality ratios, and profitability ratios.

Samad (2004) investigated the performance of seven banks during the period 1994-2001, financial ratios were used to evaluate the credit quality, profitability, and liquidity performances. the results revealed that commercial banks were relatively less profitable, less liquid and were exposed to higher credit risk.

Abdus Samad and M.kabir (1999) evaluated the intertemporal and interbank performance of Islamic bank (Bamk Islam Malaysia Berhad (BIMB) in profitability, liquidity, risk and solvency, and community involvement for the period 1984-1997.

Financial ratios were used in measuring these performances. The study found that (BIMB) is relatively more liquid and less risky compared to a group of eight conventional banks, the study concluded that all Islamic banks have shown an improvement on their efficiency level.

Abdus Samad (2004)examined the comparative performance of Bahrain's interest free Islamic Banks and the inters based conventional commercial banks during the post Gulf war period with respect to profitability, liquidity, risk, and credit risk, nine financial ratios are used in measuring these performances the study concluded that there is major difference in performance between Islamic and conventional banks with respect to profitability and liquidity, however the study found that there exists a significant difference in credit

performance.

Mahmad Abduh (2013) investigate the efficiency and performance of five Islamic Banks in Bangladesh his study used ratio analysis and data envelopment analysis, the study concluded that all Islamic bans have shown an improvement on their efficiency level.

III. Theoretical Framework.

Islamic banks founded on a principles that prevent interest based activities and all transaction involving uncertainty and speculation.

Ajlouni (2012) has defined Islamic bank as a financial and monetary institution that provides financial and banking services through its financial intermediary role. That works under Islamic law which prohibits the payment of interests for lending of money as well as investing in businesses that produce prohibited products such as alcoholic drinks or gambling services.

Islamic banks use principle of sharing profits and loss as an alternative to interest based system. This [principle is a form of partnership, where partners share profit and losses on the basis of their capital share and effort. Unlike conventional finance, there is no guaranteed rate of return.

Sources of funds in the Islamic Banks are of two kinds : internal sources and external ones. The internal sources represents the equity capital which include capital, reserves and retained earnings. However the external resources is the deposits which represents the one of the most important and largest resources that the bank depends on, deposits in Islamic banks are of several types, i.e. (current, saving, and investing accounts). Some external funds of Islamic banks include bonds, accounts covering fund, financial guarantees, credit cards, insurance letters, charities, services, and grants. (Ajlouni, 2012).

Uses of fund in the Islamic banks.Uses of funds in the Islamic banks based on the principle of prohibiting the interests. The following means are available for Islamic Banks to use their fund (Ajlouni, 2012).Using resources in Islamic banks based on the principle of prohibiting interests, to replace interests the ideal mode of financing is financing on profit and loss sharing (PLS) basis. The bulk of financing by Islamic banks has to be equity orientated. In this mode of financing the losses are shared by the financier along with the enterpreur in the ratio of their capitals. The profits are shared in an agreed ratio.

There are two types of mode of financing representing depends on profit and loss sharing (PLS):

1- Mosharkah (joint venture): It is a contract between the Islamic bank and two or more parties in a project for limited period of time, the distribution of return if any between them is predetermined on agreed percentage of the returns regardless of capital share invested. However the loss is directly related to the percentage of capital shares (Ajlouni,2012)

2- Modarabah (venture capital): it is a contract between the Islamic bank who provides the capital, and an entrepreneur who carry out the investment, for predetermined period of time. The distribution of return is similar to that of Mosharakeh, however, the loss will only be burden by the bank, while the entrepreneur loose his efforts.(Ajlouni,2012)

However such kind of financing (Mosharakah and Modarabah) may face moral hazard risk, therefore, it was necessary to consider another modes of financing such as:

1- Morabaha (cost-plus sale): In this mode, the bank at the request of its client, purchases the specified goods from a third party against payment. Then the bank sells these goods to the client at cost plus an agreed fixed margin as well as the term of payment, i.e. period of time to pay back the credit.

2- Lease: There are two types of leasing contract in Islamic banks:
    a- Lease contract: the assets are leased for a specific period of time and then returned to the owner.
    b- Lease end in the purchase of the leaser asset, at the end of the period, the asset ownership transfer to the leaser (Abdel Rhaman, 2010).

However, there are many more modes of financing, but to be considered less important, such as:

1- Sales on credit.
2- Farming.
3- Irrigation.
4- Manufacturing.

Differences between Islamic and conventional banks: The differences between Islamic and conventional banks are shoen in table 1 below:

Table (1) differences between Islamic and conventional banks

Islamic banks	Conventional banks
The product mix, each product or service is guided by sources of Shariah and products approved by shariah boared within each bank.	Products are developed based on demand, competition and banks strategy. Products development is not guided religious doctourines and values but corporate governance practices and approved by the board of directors.
The product mix intends to balance profit-maximum doctrine and social responsibleitiy.	The product mix focus that emphasize on profit and value creation
Deposits products products are compensated by profit loss sharing	Deposits are agreed rents
Defaulters are not penalized (although in some countries a small penalty is levied as a deterrent and channeled to charity.	Past due loan products are normally charged cumulative interest rate.
Islamic banks product cannot finance economic activities which are non shariah compliant (examples: loans to breweries, piggeries casinos)	There are no such restrictions for conventional banks

Duski asyraf wajdi(2008)

V. Data and Methodology.

Financial management theories provide different indexes to measure bank's efficiency and performance. One of them is financial ratio analysis. Financial ratios have been used quit commonly and extensively in the literature. For example Ajlouni (2012), Samad and Hassan (2000), El Sayed Elsiefy (2013). In order to observe how Jordanian Islamic banks performed during the period 2011-2014, the study uses ten financial ratios broadly categorized into five group :

1. Profitability ratios.
2. Liquidity ratios.
3. Risk and insolvency ratios.
4. Managerial and efficiency ratios.
5. Management ability ratios.

Data for each year have been compiled from the financial statements of the banks. The financial statements that were used for the study were obtained from the annual reports of each bank for the period 2011-2014.

Profitability ratios: There are two types of Profitability ratios:

a. Return on assets ratio (ROA): it is the ratio of measuring managerial efficiency, it shows how a bank can convert its assets into net profit. ROA=$\frac{Net profit}{Total assets}$.

A higher ratio indicates a higher ability and therefore is an indicator of higher efficiency and performance. (Muhamad Abduh, 2013).

b. Return of equity ratio (ROE): it is an indicator of measuring managerial efficiency. It measures a firm's efficiency at generating profits from every unit of shareholders equity. A higher ratio is an indicator of higher managerial efficiency and performance. The formula for calculating return on equity is ROE=$\frac{Net profit}{Equity}$.

Liquidity ratios: Liquidity ratios shows the bank's ability to pay its current obligations; generally, the higher the value of the ratio, the larger the margin of safety that a bank current assets to cover short term obligations. (Mostafa Hassan, 2014).

a. Cash deposit ratio: Cash is the most liquid assets, the higher the cash to deposits the more liquid is the bank, however, higher cash ratio could possibly suggest inefficient use of a valuable resources. The formula for calculating cash deposit ratio is CDR=$\frac{Cash}{Deposits}$.

b. Loan deposit ratio (LDR):

A higher loan deposit ratio indicates that bank takes more financial stress by making excessive loan. (Abdus Samad).

c. Current asset ratio (CAR):

CAR=$\frac{Assets}{Total assets}$.

A high (CAR) indicates that a bank uses more liquid assets, a lower ratio is a sign of less liquidity which mean that there are more long term assets.

Risk and solvency ratios: A bank is solvent when the total value of its assets is greater than its liability.

a. Dept equity ratio $DER=\dfrac{Dept}{Equity}$

A lower ratio is a good sign for a bank, since equity provides protection against losses resulting from asset value decrease or unpaid loans.

b. Dept to total assets ratio

$DTAR=\dfrac{Debt}{Totalassets}$

It measures the ability of the bank to pay its debt. A low (DTAR) indicates that the bank is not involved in more risky activities.

c. Loans to deposits ratio:

$LDR=\dfrac{Loans}{Deposits}$.

It measures credit risk for the bank. A lower value indicates a solvency.

Managerial efficiency ratios : The Income expenses ratio

$IER=\dfrac{Income}{Totalopoeratingexpences}$.

High value indicates more efficiency which means the bank can achieve net income with lower expenses .

Management ability indicators: This indicator is measured by the assets utilization (AU) ratio. It indicates how efficient banks are in utilizing their assets to generate income. A higher rate ratio implies more efficiency. The formula to measure the ratio is $AU=\dfrac{Total\ revenues}{Total\ assets}$

The   Financial Performance: The financial analysis for the Islamic international Arab Bank financial performance is shown in Table 2 below.

Table (2) the financial analysis for the Islamic international Arab Bank financial performance

year	ROA	ROE	CDR	CAR	DER	DTAR	LDR	IER	AU
2011	0.009438	0.1180606	0.1615347	0.05045219	0	0	2.233353227	1.79286719	0.03053666
2012	0.009838	0.1143747	0.151784	0.05434042	0	0	1.783363363	1.53047737	0.04060552
2013	0.011708	0.1346581	0.0755161	0.06551233	0	0	0.753966455	1.68495669	0.04121076
2014	0.008519	0.1024208	0.4420122	0.38544838	0	0	0.342571028	1.60145281	0.03244534

Table (3) the financial analysis for the Jordan Dubai Islamic Bank financial performance

year	ROA	ROE	CDR	CAR	DER	DTAR	LDR	IER	AU
2011	0.01527326	0.04651688	0.41425008	0.06072863	0.01983421	0.00651232	3.81936190	1.34189336	0.05631974
2012	0.00449247	0.01680236	0.63035407	0.09107214	0.0141045	0.00377115	3.84468561	1.04876347	0.03697115
2013	0.00278277	0.01137215	1.50876299	0.21194218	0.0097071	0.0023753	3.19498203	1.10602898	0.04367316
2014	0.00292309	0.01473952	1.95307502	0.20854269	0	0	4.156556739	1.130515521	0.036054796

Table (4) the financial analysis of the Jordan Islamic bank financial performance

year	ROA	ROE	CDR	CAR	DER	DTAR	LDR	I ER	AU
2011	0.009772	0.136913	0.4667397	0.4195596	0.0056595	0.0004039	0.4218228	1.7247751	0.0326816
2012	0.012063	0.159294	0.2423681	0.2162654	0.0044416	0.0003363	0.6578969	1.7709601	0.0389840
2013	0.013745	0.176569	0.29508467	0.26325986	0.0057487	0.00044750	0.60927291	1.95220667	0.04045097
2014	0.012695	0.1599127	0.331768866	0.293592695	0.00635351	0.000504408	0.571576188	1.830833843	0.039689677

Table (5)the descriptive analysis for the banks financial performance

	The Jordan Islamic Bank		The Jordan Dubai Islamic Bank		The Islamic international Arab Bank	
	Mean	S.Deviation	Mean	S.Deviation	Mean	S.Deviation
ROA	0.012069	0.012643	0.0063679	0.0059872	0.0098754	0.0013404
ROE	0.15817253	0.163487179	0.0223577	0.01626086	0.117378544	0.0133142
CDR	0.333990356	0.300803011	1.1266105	0.72636353	0.207711724	0.1608649
CAR	0.298169415	0.267821855	0.1430714	0.07855768	0.138938331	0.1644639
DER	0.005551	0.005524	0.0109114	0.00837300	0	0
DTAR	0.00042306	0.00042783	0.0031647	0.00272107	0	0
LDR	0.56514222	0.60097207	3.7538965	0.40292639	1.278313518	0.8789634
I ER	1.819694	1.8434237	1.1568003	0.12806250	1.6524385	0.1129184
AU	0.0379516	0.0392691	0.0432547	0.00934865	0.036199	0.0054980

IV. Analysis.

profitability and return on assets: Tables 2,3,4 shows the return on assets of Islamic banks from 2011-2014. The (ROA) of (JIBFI) has found to be 0.0097, 0.0120, 0.0137 and 0.0126 respectively. Whereas, the (ROA) results of (JDIB) were 0.0152,0.0044, 0.0027 and 0.0029 in respective years. Moreover, the (ROA) of (IIAB) has found to be 0.0094, 0.0098,0.0117 and 0.0085 in respective years.

Table 5 shows that from 2011-2014, the (ROA) of JIBFI has remained higher as compared with the other two banks. which means JIBFI has managed its assets effectively to achieve profits. The ROA in average is higher in JIBFI (0.0120) where higher in JIBFI (0.0120) whereas the mean for the JDIB was 0.0063 and for IIAB was 0.0098, this indicates that JIBFI has better performance to that two other banks. at the same time, the risk level of this ROA which measured this ROA which is measured by standard deviation, are quite different for the three banks, but it seems the risk is low in general.

profitability and return on equity (ROE):Tables 2,3,4 shows the results of return on equity the results of return on equity of the Jordanian Islamic banks from 2011-2014. The ROE of JIBFI has found to be 0.136, 0.159,0.176 and 0.159 in respective years. Whereas the ROE of JDIB has found to be 0.046, 0.016, 0.011 and 0.014 in respective years. However the results for IIAB was 0.118, 0.114, 0.134 and 0.102 respectively. As seen from tables 2,3,4 that the ROE of JDIB is the lower among the other two banks. Concerning the average table 2 shows that the ROE of JIBFI is higher than the average of other two banks, because JIBFI is paying less share in profit for its depositors compared to the other two banks. If we compare in of three banks, ROE average, JIBFI is the highest ratio (0.158), showing that it has good performance.

liquidity ratios and CDR, CAR: In terms of liquidity ratios, tables 2,3,4 shows that JIBFI has higher (CDR,CAR) than those of the other two banks, the liquidity position of JIBFI has not changed over 3 years. Al two measures of liquidity do not show statistically significant difference the mean Of CDR, CAR are not so different , this indicates that banks maintenance of liquidity positions slightly stable during the period 2011-2014 this stable liquidity position reflect the nature of Islamic banks that they keep higher liquidity because since it can't employ the liquidity in money market securities. In term of most liquid assets, JIBFI shows better performance than other two banks.

Risk and solvency ratios: Banks performance risk and solvency between 2011-2014 (tables 2,3,4) reveals that JDIB's involvement in risky activities increased over years, the mean of risk ratios (DER, DTAR, LDR) DER to 3.7 in terms of LDR. LDR measure show deterioration of risk to for all three banks, however, JIBFI is found less risky and more solvent than the other two banks. The reason for high risk of Islamic banks in general is that its investment in joint venture activities rather investing in government securities.

Managerial and efficiency ratios: The income to expense (IER) is used to evaluate the managerial efficiency. Tables 2,3,4 shows IER for the three banks it seems that there is no significant difference between IER however IER of JIBFI was greater than the other two Islamic banks. when comparing IER among the three banks, it founded that only JIBFI has the consistency in increasing IER during the period 2011-2014, on average, the IER of JIBFI (1.819) is higher than the other efficiency generating income comparing to its operating expenses.

Management ability AU: This ratio measures the management's ability to use its assets to generate revenue. Tables ratio for the three banks, we can see from the tables the ratio is similar for the three banks and all of them had consistency ratio. On average, AU of JDIB (0.043) is higher than the other two banks, which mean that JDIB is using its assets effectively.

V. Conclusion

This study aimed TO analyze the efficiency of Jordanian Islamic banks, within the period of 2011-2014. It use s

ratio analysis to measure the performance then the efficiency.

The study concludes that JIBFI has performed better than the other two banks in terms of ratios analyzed, namely ROA, ROE, CDR, CAR, DER, and DTAR. However, JDIB has performed AU ratio.

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