

Comparison between Islamic and Non-Islamic Banks Ratios to Predict Amman Stock Exchange Banking Index

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Abstract: *The purpose of this paper is to predict the banking sector index using financial ratios, and compare the capability of financial ratios for Islamic banks and financial ratios for non-Islamic Banks to predict the banking sector index in Amman Stock Exchange. The study used yearly data of three Islamic banks and thirteen non-Islamic banks during the period between 2005 and 2017. Ordinary least square method (OLS) has been utilized using seven financial ratios to predict the banking sector index. The findings revealed that the financial ratios can predict the banking sector index in Amman Stock Exchange. Mainly, the equity ratio (ER), debt (DR), and stock turnover (STR) of Islamic banks can predict of the banking sector index in Amman Stock Exchange. The quick ratio (QR), return on equity (ROE), return on assets (ROA), and market book value (MBR) of Islamic banks does not predict the banking sector index. In contrast, debt ratio (DR), stock turnover (STR), return on equity (ROE), return on assets (ROA), and price to book value (MBR) of non-Islamic banks can predict of the banking sector index. The equity ratio (ER) and a quick ratio (QR) of non-Islamic banks do not predict the banking sector index. Nevertheless, the findings also revealed that stock turnover ratio can predict of the banking sector index in Amman Stock Exchange for both Islamic and non-Islamic banks.*

Keywords: Islamic Finance, Banking, Financial ratios, Banking Sector Index, ASE

1. Introduction

In Jordan, the banking sector is one of the most important sectors listed on the Amman Stock Exchange. It's highly reliable, by investors, clients and government. The Jordanian banking sector consists of Islamic and non-Islamic banks owned by the private sector. The banking sector performance assessment is one of the key elements of the economy control system in Jordan. It provides a feedback to help the government identify deficiencies in the economy in various activities, and opportunities to improve future performance (Patrick, Tavershima, & Eje, 2017; Subramanyam & Wild, 2009).

Since the last decade, the banking sector in Jordan has developed significantly and many investment opportunities in banks have been created. Besides creating investment opportunities in non-Islamic banks, there were significant investment opportunities in Islamic banks. In recent years, increased need to distinguish investment opportunities. Investors tried to find a method to identify investment opportunities that achieve higher efficiency for the banking sector index in Amman Stock Exchange, mainly in Islamic banks from non-Islamic banks. The lack of rules of Shariah compliance is a major obstacle to distinguishing Islamic investment opportunities from non-Islamic in Jordan. Although there is a difference of

operational activity in Islamic banks and non-Islamic banks, all banks represent the banking sector index in the Amman Stock Exchange (Alswalmeh & Dali, 2019b; Mohd Dali, Mudasir, & AbdulHamid, 2008).

Nowadays, there is an urgent need for a good analysis of Islamic bank indicators that are related to the banking sector index than other non-Islamic banks. This is especially true for the banks that represent the banking sector index in Amman Stock Exchange, which are considered the main sources of indicators focused by investors. It is the right of investors to know the better desired investment opportunity from its undesirable based on Islamic and non-Islamic opportunity. In addition, financial ratios of the banks provide a set of choices that encourages investors to measure the most relevant indicators of Islamic banks in relation to the banking sector index, as well as non-Islamic banks. The effective performance analysis must include the ratios that measure the activity of the banks and determination of Islamic and non-Islamic banks effects towards banking sector index (Alswalmeh & Dali, 2019a).

Therefore, there is an urgent need to know the relationship between financial ratios of Islamic banks and measuring the ability to predict the banking sector index, as well as comparing with non-Islamic banks. The possibility of predicting situations and judging the policies and practices will be reflected later in the development of future financial plans and policies consistent Islamic and non-Islamic models by investors.

1.1. Questions

This study tries to answer three key questions:

- What is the capability of financial ratios for Islamic banks to predict the banking sector index in the Amman Stock Exchange?
- What is the capability of financial ratios for non-Islamic banks to predict the banking sector index in the Amman Stock Exchange?
- To what extent is the capability of financial ratios for Islamic banks comparable with financial ratios for non-Islamic Banks to predict the banking sector index in the Amman Stock Exchange?

1.2. Objective

This study aims to:

- Identify the relationships between the financial ratios of Islamic Banks and their capability to predict the banking sector index in the Amman Stock Exchange.
- Identify the relationships between the financial ratios of non-Islamic Banks and their capability to predict the banking sector index in the Amman Stock Exchange.
- Compare the capability of financial ratios for Islamic banks with financial ratios for non-Islamic Banks to predict the banking sector index of the Amman Stock Exchange.

2. Literature Review

Financial statement analysis is an important part of the broader field of company's analysis. Subramanyam & Wild (2009, p.4) defined it as "application of analytical instruments and techniques to financial statements to derive estimates and inferences useful in business

analysis". Financial statement analysis reduces the uncertainty of business activities, and provides an effective systematic decision making tool for business.

The financial statements contain a set of figures showing the financial and investment performance of the company. The objective of each number is determined to meet the needs of analysts, management and investors about financial information. Robinson, Greuning, Henry, & Broihahn (2009) classified it into balance sheet, income, cash flows and shareholders' equity.

The ratios are one of analysis starting point, it's a tool for providing interpreting and identify areas requiring further investigation. Ratio analysis can reveal important relations and providing comparison which is difficult if considering individual component that make up the ratio. Furthermore, there are many studies that used financial ratios for verifying the relationship, impact and analysis of the companies and the sector index. Meriç, Kamisli, & Temizel, (2017) found that the relationships between the variables changes in size and direction from bank to bank. Arkan (2016) investigated the importance of financial ratios to predict stock price trends using ratios. The results showed that a positive significant relationships to stock price.

In addition, the study of Islamoglu, (2015) revealed that the financial ratios have predictive power on the Turkish banking sector index. Erdoğan, Erdoğan, & Ömürbek (2015) summarized that there are a significant relationship between liquidity ratio and the size of the company with the financial performance.

Jiang & Lee (2012) verified that forecasting by analyzing financial ratios achieved better returns using the share price, earnings per share, market value and book value ratios from 1926 to 2008 and the S&P 500 index. Using of 100 companies from 2003-2007, Alireza, Parviz, & Mina (2012) showed that the financial ratios are very important for knowing the financial situation. The study of Alexakis, Patra, & Poshakwale (2010) and Kumbirai & Webb (2010) concluded that the financial ratios can predict market returns and the performance of the sector.

This study came complement to make it a real scientific contribution and a new reference within the scientific practice framework. Many studies have tried to test the relationship between financial ratios with many variables. Some researchers, studied the impact of these variables on the Indices of various sectors. Others have measured the performance, prices of stocks, and several measurement models using financial ratios. Current study measured the predictability of the banking sector index in Amman Stock Exchange using financial ratios of Islamic and non-Islamic banks. Comparing the prediction of the financial ratios for Islamic and non-Islamic banks will contribute to create a new model identifying opportunities in Jordan Islamic investment. In addition, helping to determine the common financial ratios in forecasting banking sector index of all Jordanian banks.

3. Conceptual Framework

This study focused on determining the financial ratios affecting banking sector index on the basis of the investigated variables in the recent literature on the ratios to proceed with this research. The secondary data collected in this study include book, journals, and online databases. The research study conceptualized out on the financial ratios as independent variables, and banking sector index as dependent variables. Based on the statement, a

theoretical framework has been developed to represent the relationship between 7 financial ratios with the banking index.

4. Methodology

Financial ratios of all banks listed in Amman Stock Exchange are used to predict the Banking Sector Index. Namely, 3 Islamic banks are shown in Table (1) and 13 non-Islamic banks are shown in Table (2).

Table 1: Islamic Banks

#	Bank	Code
1	Jordan Islamic Bank	JOIB
2	Safwa Islamic Bank	SIBK
3	Islamic International Arab Bank	IIAB

Table 2: Non- Islamic Banks

#	Bank	Code
1	Arab Bank	ARBK
2	Jordan Kuwait Bank	JOKB
3	Jordan Commercial Bank	JCBK
4	Housing Bk. Trd. Fin	THBK
5	Arab Jordan Investment Bank	AJIB
6	Bank Al Etihad	UBSI
7	Arab Banking Corporation	ABCO
8	Invest Bank	INVB
9	Capital Bank	EXFB
10	Socgen Bk – Jordanie	SGBJ
11	Cairo Amman Bank	CABK
12	Bank Of Jordan	BOJX
13	Jordan Ahli Bank	AHLI

All these Islamic and non-Islamic banks represent the banking sector index in Amman Stock Exchange and will be used in the current study. In this case, financial ratios for the year of 2005 to 2017 is to be chosen for each bank. The secondary data related to ratios are collected from the annual reports of the banks. The ratios that were used as an independent variable are shown below:

Table 3: Independent Variables

#	Variables	Measurement	Reference
1	Equity Ratio %	Total Equity / Total Assets	(Whitehurst, 2003, p. 102)
2	Quick Ratio (Times)	(Cash + A.R. + Marketable Securities) / Current Liabilities	(Sub. & Wild, 2009, p. 37)
3	Debt Ratio %	Total Liabilities / Shareholders Equity	(Robinson et al., 2009, p. 289)
4	Stock Turnover %	No. of Shares Traded / No. of Subscribed Shares	(Gibson, 2009, p. 221)
5	Return On Equity %	Net Income / Average Shareholders' Equity	(Brealey et al., 2011, p. 712)

6	Return On Assets %	(Net Income + Interest Expense * (1-Tax Rate)) / Ave. Total Assets	(Horobet, 2012)
7	Price to Book Value (Times)	Share Market Value / Share Book Value	(Sub. & Wild, 2009, p. 37)

The dependent variable is the Banking Sector Index of Amman Stock Exchange. The data are collected from the website of Amman Stock Exchange based on the market value of the free float shares of the companies. The following formula is used to calculate the Index:

$$Index\ t = \frac{\sum_{i=1}^n (P_{ti} * S_{ti} * F_{ti})}{D_t}$$

Where: t: time. P_{ti} : the closing price of the company's share in t. S_{ti} : the number of shares listed for the company in t. F_{ti} : the company's coefficient in t. D_t : the divisor index in time t.

4.1. Data

The data were obtained from primary and secondary sources. Mainly, it obtained from secondary sources such as: annual reports issued by all Islamic and non-Islamic banks that represents the banking index of Amman Stock Exchange during the period 2005-2017. In addition, the banking sector index data from Amman Stock Exchange website in the same period.

4.2. Model Development

Many researchers have developed models to predict the banking sector index using financial ratios. Islamoglu (2015) studied the ability of financial ratios to predict the banking sector index in the Turkish banking market. The study revealed that the financial ratios have predictive power on the Turkish banking sector index. Alswalmeh & Dali (2019b) predicted the banking sector index using financial ratios. The findings revealed that the financial ratios can predict the banking sector index in the Amman Stock Exchange. This study came to distinguish the predicting of the financial ratios for Islamic banks, comparing with ratios of non-Islamic banks. Specifically, aims to identify the relationships between the financial ratios of Islamic and non-Islamic banks, and their capability to predict the banking sector index in Amman Stock Exchange. For answering the main research questions, the following hypotheses are developed.

H₁: “Financial ratios of Islamic banks have a capability predicting banking sector index in the Amman Stock Exchange”.

H₂: “Financial ratios of non-Islamic banks have a capability predicting banking sector index in the Amman Stock Exchange”.

H₃: “There are differences between the capabilities of financial ratios for Islamic banks comparable with financial ratios for non-Islamic banks to predict the banking sector index in the Amman Stock Exchange”.

4.3. Method

The study employs a quantitative research approach and used STATA15 to conduct Multiple Linear Regression using Ordinary Least Squares analysis. To fulfill the study objectives, all observations relative to dependent and independent variables are set together and the regression coefficient explains the impact of financial ratios towards Banking Sector Index.

The descriptive statistics, correlation, and the relationship between the variables will display. In addition, test the ability of the financial ratios to predict the banking sector index in the Amman Stock Exchange.

5. Analysis and Discussion

In this section, the descriptive statistics and relationships between the variables are displayed. In addition, test the ability of the financial ratios to predict the banking sector index in the Amman Stock Exchange. The Ordinary Least Squares (OLS) were used to test the correlation coefficient at a significant level ($\alpha = 0.05$).

5.1. Islamic banks

5.1.1. The Descriptive Statistics

Table (4) shows the descriptive statistics of the Islamic banks variables for the period [2005-2017]. Namely mean, standard deviation, minimum and maximum values of the observations.

Table 4: The Descriptive Statistics

<i>Variables</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
<i>Banking Index (BSI)</i>	39	4254.693	712.3008	3407.643	6171.341
<i>Equity Ratio (ER)</i>	39	16.7489	15.46637	5.17	82.61
<i>Quick Ratio (QR)</i>	39	8.362487	26.65687	0.000	120.195
<i>Debt Ratio (DR)</i>	39	83.2511	15.46637	17.39	94.83
<i>Stock Turnover (STR)</i>	39	33.89249	72.53493	0.000	322.788
<i>Return On Equity (ROE)</i>	39	10.90582	6.19558	-3.602	21.828
<i>Return On Assets (ROA)</i>	39	1.402077	1.554234	-1.476	8.102
<i>Market Book Value (MBR)</i>	39	0.9976667	0.863463	0.000	3.164

Table (4) shows that the mean of the banking sector index (BSI) was (4254.693), standard deviation (712.3008), the minimum value (3407.643) and maximum value (6171.341). It shows that there is a relatively large rise in the index value due to the variation in development and stability of the banking sector, which is considered one of the most important sectors in the Amman Stock Exchange and has a great role in maximizing the general index.

Table (4) shows the mean of the equity ratio (ER) was (16.7489), standard deviation (15.46637), the minimum value (5.17), and maximum value (82.61). The mean of quick ratio (QR) was (8.362487), standard deviation (26.65687), the minimum value (0), and maximum value (120.195). The mean of debt ratio (DR) was (83.2511), standard deviation (15.46637), the minimum value (17.39) and maximum value (94.83). The percentage of equity, quick, and debt ratios in Jordanian Islamic banks varied due to the size of the bank, different fund of investment, the small number of Islamic banks in Jordan, and offered a new shares in the past period.

The mean of the stock turnover ratio (STR) was (33.89249), standard deviation (72.53493), the minimum value (0) and maximum value (322.788). The mean of return on equity (ROE) was (10.90582), standard deviation (6.19558), the minimum value (-3.602) and maximum value (21.828). The stock turnover varied in Islamic banks, but demand appears to be often high and the return on equity is high compared with non-Islamic banks, but the number of the Islamic banks still limited and effects this ratio.

The mean of return on assets (ROA) was (1.42292), standard deviation (0.65487), the minimum value (-0.166) and the maximum (4.965). There is a significant variation in the return on total assets. There is a significant deviation in return on assets ratio of Islamic banks and appears to be a high variation in this ratio over the study period.

The mean of the market to book value ratio (MBR) was (1.402077), standard deviation (1.554234), the minimum (-1.476) and maximum (8.102). There is a significant difference between the maximum and minimum value of the market value to book value due to recent investments in Islamic banks.

5.1.2. The Multicollinearity Test

Table (5) shows the results of the Multicollinearity test for Islamic banks variables. The mean of Variance Inflation Factor (VIF) (2.74) is less than 10, also shows that Tolerance values (1/VIF) are less than 1 for all independent variables which are indications of the absence of a multiple correlation problem between Islamic banks independent variables (Gujarati, 2003).

Table 5: The Multicollinearity Test

<i>Variables</i>	<i>VIF</i>	<i>1/VIF</i>
<i>Equity Ratio (ER)</i>	1.42	0.705490
<i>Quick Ratio (QR)</i>	1.70	0.587540
<i>Debt Ratio (DR)</i>	2.85	0.350793
<i>Stock Turnover (STR)</i>	2.52	0.397592
<i>Return On Equity (ROE)</i>	4.23	0.236546
<i>Return On Assets (ROA)</i>	4.66	0.214563
<i>Market Book Value (MBR)</i>	1.83	0.547086
<i>Mean VIF</i>	2.74	

5.1.3. The Regression Analysis

The regression analysis for Islamic banks and used to test the hypothesis; H_1 : “Financial ratios of Islamic banks have a capability predicting banking sector index in the Amman Stock Exchange”. The results of regression model will be presented in the Table (6).

Table 6: Estimation of the Regression Model

$BSI_{i,t} = \alpha_{i,t} + \beta_1 ER_{i,t} + \beta_2 QR_{i,t} + \beta_3 DR_{i,t} + \beta_4 STO_{i,t} + \beta_5 ROE_{i,t} + \beta_6 ROA_{i,t} + \beta_7 MBR_{i,t} + \varepsilon_{i,t}$			
<i>Variables Reg. Banking Index</i>	<i>Coefficients</i>	<i>T-Test</i>	<i>P> T-Test </i>
<i>Equity Ratio (ER)</i>	31.17934	3.76	0.001*
<i>Quick Ratio (QR)</i>	-6.710052	-1.37	0.180
<i>Debt Ratio (DR)</i>	41.18821	11.57	
<i>Stock Turnover (STR)</i>	4.741593	2.17	0.000*
<i>Return On Equity (ROE)</i>	-8.395622	-0.25	0.038*
<i>Return On Assets (ROA)</i>	153.6787	1.11	
<i>Market Book Value (MBR)</i>	75.1847	0.48	0.802
<i>_Cons.</i>	3117.934	3.76	0.277
<i>Model :</i>	F(7, 32)	Prob > F	Adj R²
	3.11	0.000	0.2495
			R2
			0.3680

“ * ” means significant different from zero at the 5% level.

The result of the regression analysis of Islamic banks found that there are a significant correlation between the equity ratio (ER), debt ratio (DR), and stock turnover (STR).

Table (6) shows the correlation coefficient between the banking sector index with an equity ratio (ER) was (31.17934) at the 1% level of significance, which is the best indicator of Islamic banks for the banking sector index. Similarly, the correlation coefficients between the banking sector index with a debt ratio (DR) and Stock Turnover Ratio (STR) was (41.18821 and 4.741593) at the 1% and 5% level of significance respectively.

Table (6) also shows a correlation between the banking sector index with quick ratio (QR), return on equity (ROE), return on assets (ROA), and market book value (MBR) but it's not significance. In addition, it shows the Adjusted R-squared was (0.2495), which represent the capability predicting banking sector index using financial ratios. In other words, 24.95% of the change in the banking sector index on the Amman Stock Exchange are due to the changes in the financial ratios that have statistically significant relationship with the index. Therefore, financial ratios of Islamic banks have a capability predicting banking sector index in the Amman Stock Exchange.

Consequently, this analysis indicates that the equity ratio (ER), debt ratio (DR), and stock turnover (STR) have a significant relationship and can predict of the banking sector index in ASE. The quick ratio (QR), return on equity (ROE), return on assets (ROA), and market book value (MBR) have not significant relationship with the banking sector index. Therefore, do not predict banking sector index in ASE.

These findings are consistent with the study results of Islamoglu, (2015). In contrast, it were inconsistent with the study results of Jiang and Lee (2012), Erdogan, Erdogan, & Omurbek (2015), and Arkan (2016).

5.2. Non-Islamic banks

5.2.1. The Descriptive Statistics

Table (7) shows the mean, standard deviation, minimum and maximum values for the observations of the non-Islamic banks variables at the period [2005-2017].

Table 7: The Descriptive Statistics

<i>Variables</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
<i>Banking Index (BSI)</i>	169	4254.693	705.1989	3407.643	6171.341
<i>Equity Ratio (ER)</i>	169	15.1401	13.3799	1.201	182.39
<i>Quick Ratio (QR)</i>	169	0.36476	0.10981	0.162	635
<i>Debt Ratio (DR)</i>	169	85.8075	2.83392	78.036	93.504
<i>Stock Turnover (STR)</i>	169	14.9918	22.4509	0.030	182.39
<i>Return On Equity (ROE)</i>	169	10.1797	5.14313	-1.448	39.841
<i>Return On Assets (ROA)</i>	169	1.42292	0.65487	-0.166	4.965
<i>Market Book Value (MBR)</i>	169	1.45788	.874421	0.542	5.991

Table (7) shows the mean of the equity ratio (ER) was (15.1401), standard deviation (13.37985), the minimum value (1.201), and maximum value (182.39). The equity ratio in non-Islamic Jordanian banks varies due to the different nature of their dependence on owners' funds and other reserves.

The mean of the quick ratio (QR) was (0.36476), standard deviation (0.10981), the minimum value (0.162), and maximum value (635). Table (7) shows that liquidity ratios are less

than one and a difference in the quick ratio from one bank to another due to the fact that banks to some extent suffer inability to meet short-term obligations.

The mean of the debt ratio (DR) was (85.8075), standard deviation (2.83392), the minimum value (78.036) and maximum value (93.504). The difference in the debt ratio is normal because banks rely almost entirely on customers deposit in financing their existing investments or any new investments in Jordan.

The mean of the stock turnover ratio (STR) was (14.9918), standard deviation (22.4509), the minimum value (0.030) and maximum value (182.39). There is a significant difference in the stock turnover ratio due to the difference in trading volume and the number of shares subscribed. Recently, noted during the data collection process that there is a significant difference in trading volumes from one bank to another, and the banks that have a good reputation had better volumes than banks with a relatively lesser reputation.

The mean of return on equity (ROE) was (10.1797), standard deviation (5.14313), the minimum value (-1.448) and maximum value (39.841). There is a significant difference in the ability of non-Islamic Jordanian banks to achieve net income, due to the difference in the size of income, financing methods in Jordanian banks, and in interest margin from one bank to another. In addition, to the difference between interests on loans compared to interest on deposits.

The mean of return on assets (ROA) was (1.42292), standard deviation (0.65487), the minimum value (-0.166) and the maximum (4.965). There is a significant variation in the return on total assets. This is due to the difference in the returns of the banks, as well as the difference in the size of the Jordanian banks listed on the Amman Stock Exchange.

The mean of the market to book value ratio (MBR) was (1.45788), standard deviation (0.874421), the minimum (0.542) and maximum (5.991). There is a significant difference between the maximum and minimum value of the market to book value, due to the difference in stock prices in the financial market and the varying demand for specific types of stocks, including high liquidity with minimizing the potential risks.

5.2.2. The Multicollinearity Test

Table (8) shows the results of the Multicollinearity test for non-Islamic banks variables. The mean of Variance Inflation Factor (VIF) (3.89) is less than 10, also shows that Tolerance values (1/VIF) are less than 1 for all independent variables which are indications of the absence of a multiple correlation problem between Islamic banks independent variables.

Table 8: The Multicollinearity Test

<i>Variables</i>	<i>VIF</i>	<i>1/VIF</i>
<i>Equity Ratio (ER)</i>	1.67	0.600407
<i>Quick Ratio (QR)</i>	1.64	0.609934
<i>Debt Ratio (DR)</i>	2.42	0.413009
<i>Stock Turnover (STR)</i>	2.01	0.496601
<i>Return On Equity (ROE)</i>	8.85	0.113018
<i>Return On Assets (ROA)</i>	8.86	0.112810
<i>Market Book Value (MBR)</i>	1.76	0.567211
<i>Mean VIF</i>	3.89	

5.2.3. The Regression Analysis

The regression analysis for non-Islamic banks and used to test the hypothesis; H_2 : “Financial ratios of non-Islamic banks have a capability predicting banking sector index in the Amman Stock Exchange”. The results of regression model will be presented in the Table (9).

Table 9: Estimation of the Regression Model

$BSI_{i,t} = \alpha_{i,t} + \beta_1 ER_{i,t} + \beta_2 QR_{i,t} + \beta_3 DR_{i,t} + \beta_4 STO_{i,t} + \beta_5 ROE_{i,t} + \beta_6 ROA_{i,t} + \beta_7 MBR_{i,t} + \varepsilon_{i,t}$				
Variables Reg. Banking Index		Coefficients	T-Test	P> T-Test
Equity Ratio (ER)		-1.85509	-0.52	0.600
Quick Ratio (QR)		480.2129	1.12	0.263
Debt Ratio (DR)		64.54148	3.21	0.002*
Stock Turnover (STR)		8.118872	3.51	0.001*
Return On Equity (ROE)		-52.16573	-2.46	0.015*
Return On Assets (ROA)		536.2483	3.22	0.002*
Market Book Value (MBR)		381.2205	6.85	0.000*
_Cons.		-2340.027	-1.34	0.183
Model :	F(7, 161)	Prob > F	Adj R²	R2
	29.93	0.000	0.5466	0.5655

“* ” means significant different from zero at the 5% level.

The result of the regression analysis found that there are a significant correlation between the debt ratio (DR), stock turnover (STR), return on equity (ROE), return on assets (ROA), and price to book value (MBR). Table (9) shows the correlation coefficient between the banking sector index to return on assets (ROA) was (536.2483) at the 1% level of significance, which is the best indicator of non-Islamic banks in the banking sector index. Similarly, the correlation coefficients between the banking sector index with a debt ratio (DR), stock turnover ratio (STR), and price to book value (MBR) was (64.54148, 8.118872, and 381.2205) respectively, at the 1% level of significance.

In addition, the correlation coefficient between the banking sector index and return on equity (ROE) was (-52.16573) at the 1% level of significance, but it is a negative correlation. The researchers attributed that to the low volume of shareholders' equity in non-Islamic Jordanian banks, which gives an unusual correlation to the return on equity ratio with the banking sector index.

Table (9) shows the correlation between the banking sector index with an equity ratio (ER) and a quick ratio (QR), but not significant. In addition, Table (9) also shows the Adjusted R-squared was (0.5466), which represent the capability predicting banking sector index using financial ratios. In other words, 54.66% of the change in the banking sector index on the Amman Stock Exchange are due to the changes in the financial ratios of non-Islamic banks that have statistically significant relationship with the index. Therefore, the financial ratios of non-Islamic banks have a capability predicting banking sector index in the Amman Stock Exchange.

In contrast to Islamic banks, this analysis indicates that the debt ratio (DR), stock turnover (STR), return on equity (ROE), return on assets (ROA), and price to book value (MBR) have a significant relationship with the banking sector index, and can predict of the banking sector index in ASE. The equity ratio (ER) and a quick ratio (QR) haven't significant relationship with the banking sector index. Therefore, can't predict banking sector index in Amman Stock Exchange. These findings are consistent with the study results of Jiang and Lee (2012),

Erdogan, Erdogan, & Omurbek (2015), and Arkan (2016). In contrast, it was inconsistent with the study results of Islamoglu, (2015).

6. Comparison between Islamic and Non-Islamic Banks

The regression analysis of Islamic and non-Islamic banks used to fulfill the objective of comparing the capability of financial ratios of Islamic banks with financial ratios of non-Islamic Banks to predict the banking sector index in Amman Stock Exchange. In answering the question, “To what extent is the capability of financial ratios for Islamic banks comparable with financial ratios for non-Islamic Banks to predict the banking sector index in the Amman Stock Exchange? The hypothesis H_3 : “There are differences between the capabilities of financial ratios for Islamic banks comparable with financial ratios for non-Islamic banks to predict the banking sector index in the Amman Stock Exchange” is developed.

Table 10. Shows that the predictable financial ratios of the banking sector index in Amman Stock Exchange for Islamic and non-Islamic banks. It shows that there is a significant difference in predicting the banking sector index between Islamic banks and non-Islamic banks. The Islamic banks analysis indicates that the equity ratio (ER), debt ratio (DR), and stock turnover (STR) have a significant relationship and can predict of the banking sector index in Amman Stock Exchange. The quick ratio (QR), return on equity (ROE), return on assets (ROA), and market book value (MBR) haven’t significant relationship with the banking sector index. Therefore, can’t predict banking sector index in Amman Stock Exchange. In contrast, the non-Islamic banks analysis indicates that the debt ratio (DR), stock turnover (STR), return on equity (ROE), return on assets (ROA), and price to book value (MBR) have a significant relationship with the banking sector index and can predict of the banking sector index in Amman Stock Exchange. The equity ratio (ER) and a quick ratio (QR) haven’t significant relationship with the banking sector index. Therefore, can’t predict banking sector index in Amman Stock Exchange.

Table 10: Predictable Ratios

<i>Non-Islamic</i>	<i>Islamic</i>	<i>Islamic & Non-Islamic</i>
Debt Ratio (DR)	Equity Ratio (ER)	Stock Turnover (STR)
Stock Turnover (STR)	Debt Ratio (DR)	
Return On Equity (ROE)	Stock Turnover (STR)	
Return On Assets (ROA)		
Market Book Value (MBR)		

Table 10. Shows that the banking sector index is predictable through the equity ratio (ER), debt ratio (DR), and stock turnover ratio (STR) of Islamic banks. The results also showed that the banking sector index is predictable through the ratios of non-Islamic banks by the debt ratio (DR), stock turnover (STR), return on equity (ROE), return on assets (ROA), and price to book value (MBR). Accordingly, accept the hypothesis H_3 : “There are differences between the capabilities of financial ratios for Islamic banks comparable with financial ratios for non-Islamic banks to predict the banking sector index in the Amman Stock Exchange”.

Table 10. Also shows that the stock turnover ratio (STR) is a common significant indicator to predict the banking sector index using the financial ratios of Islamic and non-Islamic banks, where we can predict the banking sector index using this ratio in both Islamic and non-

Islamic banks. Furthermore, the quick ratio (QR) not a significant indicator to predict the banking sector index for Islamic and non-Islamic banks.

7. Conclusion

This study examined the ability of seven financial ratios to predict of the banking sector index in Amman Stock Exchange. Mainly, compare the capability of financial ratios for Islamic banks with financial ratios for non-Islamic Banks to predict the banking sector index of the Amman Stock Exchange. The study used yearly data of Islamic and non-Islamic banks during the period between 2005 and 2017. Ordinary least square (OLS) has been utilized using seven financial ratios to predict the banking sector index. Considering the variables selected among the financial ratios, the findings revealed that equity ratio (ER), debt ratio (DR), and stock turnover (STR) of Islamic banks can predict of the banking sector index in Amman Stock Exchange. The quick ratio (QR), return on equity (ROE), return on assets (ROA), and market book value (MBR) of Islamic banks does not predict the banking sector index in Amman Stock Exchange. In addition, debt ratio (DR), stock turnover (STR), return on equity (ROE), return on assets (ROA), and price to book value (MBR) of non-Islamic banks can predict of the banking sector index in Amman Stock Exchange. The equity ratio (ER) and a quick ratio (QR) of non-Islamic banks do not predict the banking sector index in Amman Stock Exchange. Finally, the study conclude that the stock turnover ratio (STR) can predict of the banking sector index in Amman Stock Exchange for both Islamic and non-Islamic banks.

8. Recommendation

Based on the results, the researchers recommend expanding the studies by taking other financial ratios and testing their relationship with the banking sector index, in order to have a comprehensive understanding of the ability of all ratios to predict the index. The current study conducted a comparison between Islamic and non-Islamic banks to predict the banking sector index. Such studies should be conducted for different sectors to predict the index of respective sectors or the market index. In addition, the study recommends to conducting the comparisons between different sectors determining the ratios involved in predicting the index, which reflects the best indicators correlated with the financial market indices.

9. Limitations

One of the most important limitations faces this study is the number of Islamic banks in Jordan. The banking sector in Jordan consists of sixteen banks listed on the Amman Stock Exchange. There are only three Islamic banks include in Jordanian banking sector, which was a major reason for reducing the number of observations of Islamic banks.

References

- Alexakis, C., Patra, T., & Poshakwale, S. (2010). Predictability of Stock Returns using Financial Statement Information: Evidence on Semi-strong Efficiency of Emerging Greek Stock Market. *Applied Financial Economics*, 20(16), 1321–1326.
- Alireza, F., Parviz, M., & Mina, S. (2012). Evaluation of the Financial Ratio Capability to Predict the Financial Crisis of Companies. *The IUP Journal of Behavioral*, IX(1), 57–70. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2152863
- Alswalmeh, A., & Dali, M. (2019a). Dimensions Affecting Company'S Performance : A

- Systematic Review Of 4 Databases. *International Journal of Business and Technology Management*, 1(1), 46–56. <http://myjms.mohe.gov.my/index.php/ijbtm/article/view/5766>
- Alswalmeh, A., & Dali, M. (2019b). Prediction of The Banking Sector Index Using Financial Ratios: An Empirical Study on Amman Stock Exchange. *International Journal of Advanced Research in Economics and Finance*, 1(1), 1–9. <http://myjms.mohe.gov.my/index.php/ijaref/article/view/5753>
- Arkan, T. (2016). The Importance of Financial Ratios in Predicting Stock Price Trends: A Case Study in Emerging Markets. *Finanse, Rynki Finansowe, Ubezpieczenia*, 1(1), 13–26. <https://doi.org/10.18276/frfu.2016.79-01>
- Brealey, R. A., Myers, S. C., & Allen, F. (2011). *Principles of Corporate Finance* (10th ed.). McGraw-Hill/Irwin.
- Erdoğan, E. O., Erdoğan, M., & Ömürbek, V. (2015). Evaluating the Effects of Various Financial Ratios on Company Financial Performance: Application in Borsa Istanbul. *Business and Economics Research Journal*, 6(1), 35–42.
- Gibson, C. H. (2009). *Financial Reporting & Analysis* (11th ed.). United States of America: South-Western Cengage Learning.
- Gujarati, D. N. (2003). *Basic Econometrics* (4th ed.).
- Horobet, A. (2012). Interactions Between Fundamental Analysis and Market Performance For Romanian Companies: A Panel. *The Bucharest Academy of Economic Studies*.
- Islamoglu, M. (2015). Predictive Power of Financial Ratios with Regard to the Turkish Banking Industry an Empirical Study on the Stock Market Index. *Asian Economic and Financial Review*, 5(2), 249–263.
- Jiang, X., & Lee, B. S. (2012). Do Decomposed Financial Ratios Predict Stock Returns and Fundamentals Better? *The Financial Review*, 47(2012), 531–564. <https://doi.org/10.1016/j.jhazmat.2012.12.004>
- Kumbirai, M., & Webb, R. (2010). A financial Ratio Analysis of Commercial Bank Performance in South Africa. *African Review of Economics and Finance*, 2(1), 30–53.
- Meriç, E., Kamisli, M., & Temizel, F. (2017). Interactions among Stock Price and Financial Ratios: The Case of Turkish Banking Sector. *Applied Economics and Finance*, 4(November), 107. <https://doi.org/10.11114/aef.v4i6.2755>
- Mohd Dali, N. R. S. Bin, Mudasir, H. H., & AbdulHamid, S. (2008). Performance of Shariah compliance companies in the plantation industry. *International Journal of Islamic and Middle Eastern Finance and Management*, 1(2), 166–178. <https://doi.org/10.1108/17538390810881008>
- Patrick, Z., Tavershima, I. A., & Eje, E. B. (2017). Effect of Financial Information on Investment Decision Making By Shareholders of Banks in Nigeria. *Journal of Economics and Finance*, 8(3), 20–31. <https://doi.org/10.9790/5933-0803032031>
- Robinson, T. R., Greuning, H. van, Henry, E., & Broihahn, M. A. (2009). *International Financial Statement Analysis*. Hoboken, New Jersey: John Wiley & Sons, Inc.
- Subramanyam, K. R., & Wild, J. j. (2009). *Financial Sstatement Analysis* ((10th)). New York: New York, NY, 10020. <https://doi.org/10.1017/CBO9781107415324.004>
- Whitehurst, D. (2003). *Finance* (6th ed.). McGraw-Hill/Irwin.