Determinants of Commercial Banks Performance: Evidence from Jordan

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Abstract

In order to show the Determinants of commercial banks performance, there are two categories, namely internal and external factors that effects on commercial banks performance. Internal determinants of statement variables and non-financial statement variables. While financial statement variables relate to the profitability, which are within the control of bank management, can be broadly classified into two categories, i.e. financial decisions which directly involve items in the balance sheet and income statement; non-financial statement variables involve factors that have no direct relation to the financial statements.

External factors are those factors that are considered to be beyond the control of the management of a bank.

This study comes to examine and analyse the factors that might affect on the Jordanian commercial banks performance during the period from 2000 through 2010.

This study applied a version of the model developed by Demerguç-Kunt and Huizingha (1999), Haron, Sudin (2004), Toni Uhomoibhi, (2008), Athanasoglou , Panayiotis P. and *et al*, (2008), and Ben Naceur and Goaied (2010).) By using Multiple Linear Regression Model.

The analysis revealed that there are significant and positive relationship between ROA and the Bank size(LOG TA) , Total liabilities/ total Assets (TL/TA) , Total Equity/ total Assets(TE/TA), Net Interest Margin (NIM)and Exchange Rate(ERS) of the commercial banks and there are significant and negative relationship between ROA and Annual Growth Rate for Gross domestic product (GDPGR), and Inflation Rate (INF) of the commercial banks .

Also this study found that there are significant and positive relationship between ROE and the Bank size(LOG TA) , Total liabilities/ total Assets (TL/TA),Net Interest Margin (NIM), Exchange Rate(ERS) and Loan / Total assets (L/TA), and there are significant and negative relationship between ROE and Annual Growth Rate for Gross domestic product (GDPGR), and Inflation Rate (INF) of the commercial banks .

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Keywords: Commercial banks performance , Return on Assets, Return on equity, Annual Growth Rate for Gross domestic product, Inflation Rate and Exchange Rate .

1. Introduction

The aim of this study is to determine and analyse the factors that might affect performance in Jordanian commercial banks during the period from 2000 through 2010.

The primary objective of this study is to provide answers to these questions:

1. What are the major performance measures that apply to Jordanian commercial banks?
2. What are the factors that affect the performance in Jordanian commercial banks?
3. How can the managers of commercial banks reduce the credit risk through enhancing the performance of their firms?

Most of the studies that have used bank profitability and margins, a key performance measures that apply to commercial banks , such as studies which prepared by Coit , Craig, I. and Karr , John , (1997) , Demirguc-Kunt and Huizinga , (1999) , Ben Naceur (2003) , Bikker and Metzemakers, (2004), Davis and Zhu, (2005 , Beckmann, Rainer ,(2007) , Toni Uhomoibhi, (2008) and khrawish *et al* 2011.

Also, these studies that have found that higher net interest margins and higher profitability are associated with stronger bank capital base, higher inflation, higher real interest rates and lower reserve requirements.

Many researchers used two measures for performance in commercial banks. These measures include, Return on assets(ROA) and Return on equity (ROE).

Most studies divided the determinants of commercial banks performance Into two categories, namely internal and external factors.

Finally, the managers of commercial banks can reduced the credit risk through enhancing the performance of their firms by controlling for macroeconomic conditions. For example, growth policies (as shown by credit expansion and market penetration) and managerial incentives ("gambling for resurrection") determine future loan losses. Davis and Zhu (2005) and Coit , Craig I , and Karr , John , (1997) .

This study was selected for many reasons:

1. The banking sector in Jordan is one of the vital economic sectors, It is contributed around 40 % from Gross Domestic Product (GDP)at year of 2009/2010 .
2. There are few studies on the Jordanian commercial banks performance
3. This study attempts to fill the gap of determinants of Jordanian commercial banks performance

Accordingly, this study is divided into five sections. The literature review of the determinants of commercial banks performance is highlighted in Section 2. Section 3 examines the methodology used in analyzing the relationship between the variables used in this study and the commercial banks performance. Section 4 elaborates on the findings and Section 5 concludes the paper.

2 Literature Review

Most studies divide the determinants of commercial banks performance into two categories, namely internal and external factors. Internal determinants of profitability, which are within the control of bank management, can be broadly classified into two categories, i.e. financial statement variables and non-financial statement variables. While financial statement variables relate to the decisions which directly involve items in the balance sheet and income statement; non-financial statement variables involve factors that have no direct relation to the financial statements. The examples of non-financial variables within the this category are number of branches, status of the branch (e.g. limited or full-service branch, unit branch or multiple branches), location and size of the bank. Number of branches. Haron, Sudin (2004),

External factors are those factors that are considered to be beyond the control of the management of a bank. Among the widely discussed external variables are competition, regulation, concentration, market share, ownership, scarcity of capital, money supply, inflation and size. Haron, Sudin (2004),

The researchers who have studied the effects internal and external factors that might affect on the bank profitability are Demirgüç-Kunt and Huizinga (1999) , Cavallo and Majnoni (2001), Ben Naceur (2003) , Bikker and Metzemakers (2004), Davis and Zhu (2005) and Aburime, Toni Uhomoibhi (2008) .

Samad, Abdus , (2004) , examined the study of Bahrain's Commercial Bank Performances During 1994-2001, The main focus of this study is to examine empirically the performance of Bahrain's commercial banks with respect to credit (loan), liquidity and profitability during the period 1994-2001. Ten financial ratios are selected for measuring credit, liquidity and profitability performances. By applying student's t-test to these financial measures, this paper finds that commercial banks' liquidity performance is not at par with the banking industry. Commercial banks are relatively less profitable and less liquid and, are exposed.

E Philip Davis and Haibin Zhu (2005) , examined the study of Commercial property prices and bank performance during 1989–2002. This paper seeks to fill the gap by undertaking an extensive analysis of a sample of 904 banks worldwide. It is seek to assess the effect of changes in commercial property prices on bank behavior and performance in 15 industrialized economies, the results of this study suggest that commercial property prices tend to be positively associated with bank lending and profitability, and negatively associated with banks' net interest margin and bad loan ratios. Such an impact exists even when conventional independent variables determining bank performance are included as controls. Further extensions show that the magnitude of this impact is related to the size of the bank, the strength of bank capitalization, the direction of commercial property price movements, and regional factors. The results have implications for risk managers, regulators and monetary policy makers.

Athanasoglou , Panayiotis P. and *et al*, (2008), have investigated the Determinants of Bank Profitability in South Eastern European Region .They were using an unbalanced panel dataset of South Eastern European (SEE) credit institutions over the period 1998-2002.They were finding a positive relationship between banking reform and profitability .

Toni Uhomoibhi, (2008), have investigated the Determinants of Bank Profitability: Macroeconomic Evidence from Nigeria . This study sought to econometrically identify significant macroeconomic determinants of bank profitability. Using a panel data set comprising 1255 observations of 154 banks over the 1980-2006 period and macroeconomic indices over the same period, regression results reveal that real interest rates, inflation, monetary policy, and exchange rate regime are significant macroeconomic determinants of bank profitability in Nigeria. Banking sector development, stock market development, and financial structure are insignificant; and the relationship between corporate tax policy and bank profitability in Nigeria is inconclusive.

Ben Naceur, S .and Goaied, M. (2010), have investigated "The Determinants of Commercial Bank Interest Margin and Profitability: Evidence from Tunisia.

This study investigated the impact of banks' characteristics, financial structure and macroeconomic indicators on banks' net interest margins and profitability in the Tunisian banking industry for the 1980-2000 period. Individual bank characteristics explain a substantial part of the within-country variation in bank interest margins and net profitability. High net interest margin and profitability tend to be associated with banks that hold a relatively high amount of capital, and with large overheads. Size is found to impact negatively on profitability which implies that Tunisian banks are operating above their optimum level.

Also, there are many researchers have used bank profitability and margins, a key performance measurs that apply to commercial banks , such as studies which prepared by Demirgüç-Kunt and Huizinga (1999) , Cavallo and Majnoni (2001), Laeven and Majnoni (2003) , Ben Naceur (2003) , , Davis and Halbin , Bikker and Metzemakers (2004)and Davis and Zhu (2005) .

They are finding that higher net interest margins and higher profitability are associated with stronger bank capital base, higher inflation, higher real interest rates and lower reserve requirements.

Khrawish and et al (2011) have investigated "The Determinants of Islamic Bank Profitability: evidence from Jordan " . This study comes to examine and analyse the factors that might affect on the

Jordanian Islamic bank profitability during the period from 2005 through 2009 by using Multiple Linear Regression Model.

The analysis revealed that there are significant and positive relationship between Return on Assets (ROA) and Provision for Credit Facilities + Interest in Suspense)/Credit Facilities(PRFCFI/CF) , Total Equity/ total Assets (TE/TA) and total income / Total Asset (TI/TA) of the Islamic Banking , and there are significant and negative relationship between ROA and the Bank size (Log TA), Total liabilities/ Total Assets (TL/ TA) Annual Growth Rate for Gross domestic product(GDPGR), Inflation Rate (INF) and Exchange Rate (ERS) of the Islamic Banking .

Also this study found that there are significant and positive relationship between Return on equity (ROE) and Log TA, TL/ TA, TI/TA and ERS of the Islamic Banking , and there are significant and negative relationship between ROE and PRFCFI/CF, TL/ TA, GDPGR and INF of the Islamic Banking.

Finally, the findings of this study might be used as a guideline in advancing the relevant recommendations to help financial managers in their decisions to improve and enhance the performance of banking in Jordan.

3. Methodology and Data Description

The study follows a functional model which was already employed earlier by Demerguç-Kunt and Huizingha (1999), Haron, Sudin (2004) , Toni Uhomoibhi, (2008), Athanasoglou , Panayiotis P. and *et al*, (2008), and Ben Naceur and Goaied (2010). The study model is tested on time series cross-sectional bank level data in the context of Jordan over the 2000-2010. The empirical specification focuses on the reported determinants of Jordanian commercial banks performance which is assumed to be a function of a set of bank characteristics. To control for the effect of the internal and external factors on Jordanian commercial banks performance, we use Pooled Ordinary Least Squares (OLS) For the determinants testing purposes, we used two models:

Model 1: $\text{ROA} = c + a1\ \text{size} + a2\ TL/TA + a3\text{TE/TA} + a4\ \text{NIM} + A5\ \text{GDPGR} + a6\ \text{INF} + a7\ \text{ERS} + e\text{-}$ (1)

Model 2: $\text{ROE} = c + a1\ \text{size} + a2\ TL/TA + a3\ \text{L/TA} + a4\ \text{NIM} + A5\ \text{GDPGR} + a6\ \text{INF} + a7\ \text{ERS} + e$ (2)

Where,
ROA = Return on Assets
ROE = Return on equity
C = constant term
Size = the Bank size
TL/TA =Total liabilities/ total Assets
TE/TA = Total Equity/ total Assets
NIM = Net Interest Margin
L/TA = Loan / Total Assets
(GDPGR) =Annual Growth Rate for Gross domestic product
INFf = Inflation Rate
ERS= Exchange Rate
e= the error term
Data

The sample of this study consists of panel data for all Jordanian commercial banks listed in the Amman Stock Exchange (ASE) for the sample period (2000-2010) and available continuous series of accounting and financial information. The study sample consists of 14 banks. These selected banks must then meet the following filtering conditions:

- The shares of Jordanian commercial banks have been traded in the Amman Stock Exchange in the period 2000-2010.
- Trading has not been interrupted in those banks' shares which have not been merged or liquidated through out the period of study.
- Data have been available about those banks throughout the period of study.

The study depended on the following sources for collecting the data needed:
- Annual reports issued by Jordanian commercial banks.
- Annual report issued by Amman Stock Exchange.
- Annual reports issued by the Central Bank of Jordan.
- Some statistics issued by the Jordanian General Statistics Departments.

Explanatory variables
Dependent variables:

Independent and dependent variables of the current study have been determined according to the results reached by previous studies and how far data have been available for measurement purposes. There are two measures used to identify the dependant variables. These measures are:

1. Return on Assets (ROA):

Return on assets is the ratio of Net Income after Taxes/Total Assets. The rate of return secured on a bank's total assets indicates the efficiency of its management in generating net income from all of the resources (assets) committed to the institution,Rose ,Peter S. , (2008) , Hempel, G., D. Simonson, and A. Coleman (1994), And Hudgins, Sylvia C. (2006).

It is measured by Net income to total assets. It is argued by Demerguç-Kunt and Huizingha (1999), Cavallo and Majnoni (2001), Bashir, Abdel Hamid M. , (2003) . Laeven and Majnoni (2003) , Ben Naceur (2003) , , Davis and Halbin , Bikker and Metzemakers (2004), Davis and Zhu (2005) and Aburime, Toni Uhomoibhi (2008) .

This ratio demonstrates the relationship between net income and total assets. Selecting this measure is attributed to the fact that using net income for funding purposes within the financing structure constitutes an incentive and target for many companies to increase their return on investment. Meanwhile, the capital structure policy involves venture and returns trade-off simply because using debt extensively increases the risks faced by the banking, but amplifies total invested funds and expected return.

2. Return on Equity (ROE) :

Return on equity capital is the ratio of Net Income After Taxes/Total Equity Capital. It represents the rate of return earned on the funds invested in the bank by its stockholders. Nonbank financial firms have stockholders, too who are interested in the return on the funds that they invested, ,Rose ,Peter S. And Hudgins,Sylvia C. (2006).

It is measured by Demerguç-Kunt and Huizingha (1999), Cavallo and Majnoni (2001), Bashir, Abdel Hamid M. , (2003) . Laeven and Majnoni (2003) , Ben Naceur (2003) , , Davis and Halbin , Bikker and Metzemakers (2004), Davis and Zhu (2005) and Aburime, Toni Uhomoibhi (2008) .

ROE, on the other hand, reflects how effectively a bank management is using shareholders' funds. A bank's ROE is affected by its ROA as well as by the bank's degree of financial leverage (equity/ asset). Since returns on assets tend to be lower for financial intermediaries, most banks utilize financial leverage heavily to increase return on equity to a competitive level.

This ratio is intended to measure the risks to which the commercial banking are subjected through depending on money borrowed for financing its assets. A lower index in this regard means that the bank depends on borrowed money for financing its assets, thereby exacerbating capital risks.

Independent variables:

Independent variables of the study on which data were collected include the following:

1. Bank size:

it is measured by the natural logarithm of total assets. It is argued by Demerguç-Kunt and Huizingha (1999), Haron, Sudin (2004), Toni Uhomoibhi, (2008), Athanasoglou, Panayiotis P. and *et al*, (2008), and Ben Naceur and Goaied (2010). They found a significant positive relationship between Return on Asset and Return on Equity and size of the banking. They have been selected the size of the banking as an independent variable because Large size is expected to promote economies of scale and reduce the cost of gathering and processing information. In general, large-sized banks have the advantage of providing a larger menu of financial services to their customers, and hence mobilize more funds (Bashir, 1999).

2. Total liabilities/ total Assets (TL/TA)

Some Researchers, Bashir, Abdel Hamid M. , (2003)and Haron, Sudin (2004) used the ratio of total liabilities to total assets (LATA) as a proxy for risk, because there are some deposits of Islamic banks include investment, saving, and demand deposits. Investment deposits are not exactly liabilities to the bank since their nominal value is not guaranteed. Hence, the ratio LATA should generally be lower than it appears to be. So, It is using TL/TA adds a greater depth in understanding the risks a bank takes when trying to obtain higher returns. First, a higher risk ratio is an indicator of lower capital ratio or greater leverage. A lower capital ratio may trigger safety and public confidence concerns for the respective bank. Besides, a lower capital ratio indicates less protection to depositors whose bank accounts are not fully insured. Second, when a bank chooses to take more capital risk (assuming this is allowed by its regulators), its leverage multiplier and return on equity, will increase. In the absence of deposit insurance, high risk-taking will expose the bank to the risk of insolvency. Therefore, the sign of coefficient of LATA may be negative or positive.

3. Total Equity/ total Assets (TE/TA)

There are many Researchers, Demergüç-Kunt and Huizingha (1999), Haron, Sudin (2004) , Toni Uhomoibhi, (2008), Bashir, Abdel Hamid M. , (2003) , used Total Equity/ total Assets (TE/TA) as Independent variables that affecting on ROE and ROI because the large size of equity is expected to reduce the risk (capital risk) and a lower capital ratio may trigger safety and public confidence concerns for the respective bank. In general, the large size of equity have the advantage of providing a larger menu of financial services to their customers, and hence mobilize more funds (Bashir, 1999).It is expected a significant positive relationship between TE/TA and Return on Asset and Return on Equity.

4. Net Interest Margin (NIM)

Net Interest Rate Margins (NIM) represents a vital component of profitability and typified a summary measure of bank net interest rate of return. Of which, interest margin reflects both the volume and mix of a bank's assets and liabilities, and covers the costs of the intermediation function. In Jordan, given the variations in banks profitability, and the need to generate an adequate level of interest margins in relation to profitability, the issue of how those margins are determined and adjusted to changes in the banking industry deserves more attention. [1]

Net interest margin measures the gap between the interest income the bank receives on loans and securities and interest cost of its borrowed funds. It reflects the cost of bank intermediation services and the efficiency of the banking sector.[2] In general, the higher is the net interest margin, the higher are banks' profit and the more stable is the banking sector. However, a higher net interest margin could reflect riskier lending practices associated with substantial loan loss provisions, and, by end, could be an indication of inefficiency in the banking sector.(Khrawish and *et al, 2008)*

5. Annual Growth Rate for Gross domestic product (GDPGR):

There are many Researchers , Haron, Sudin (2004) , Toni Uhomoibhi, (2008), Bashir, Abdel Hamid M. , (2003) , used Annual Growth Rate for Gross domestic product (GDPGR) as Independent variables that affecting on ROE and ROA because the high of Annual Growth Rate for Gross domestic product (GDPGR) means the increased of investment (Chan andGemayel, 2004; Singh and Jun, 1995).

. So , There is a direct impact between GDPGR and on ROE and ROA as soon as, It is expected a positive relationship between GDPGR and ROE and ROA.

6. Annual inflation rate (AIR):

This is another important environmental condition which may effect on on ROE and ROA. This factor represents the changes in the general price level or inflationary conditions in the economy. The impact of inflation rates on on ROE and ROA depend on its effect on the investor's return. Nonnenberg and Mendonca (2004) investigated that the on ROE and ROA is correlated to level of economy's degree of openness, risk and variables related to macroeconomic performance like inflation, risk and average rate of economic growth. The results also show that the on ROE and ROA has been

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[1] The bank interest spread is defined as the difference between the yield on average interest earning assets and the cost of interest bearing liabilities. The margin, commonly known as the net interest margin, is defined as the difference between interest revenue and interest expenses expressed as percentage of average interest earning assets.

closely associated with stock market performance. Lastly, a causality test between on ROE and ROA and GDPGR is performed.

7. Exchange rate stability (ERS):

The exchange rate may have a direct impact on ROE and ROA given a favorable movement in exchange rates; the expectation is that the coefficient of this variable will be positive on ROE and ROA Haron, Sudin (2004).

Description of variables

Table 1 summarizes the statistics for the various explanatory dependent variables (ROA and ROE) for the entire sample of Jordanian Commercial Banks.

Table 1: Descriptive Statistics for dependent Variables (2000- 2010)

	Mean	Std. Deviation
ROA	.00583545016117	.014181210949479
ROE	.09281468857260	.164877678138833

From these results, it can be seen that Jordanian commercial Banks (ROA) have a mean of 0. .0058. This ratio is accepted when we compared with the Mean of commercial banking in European countries. It is reached about 0.0037 during the period 1989–2002. Also the mean ratio of ROE in the Jordanian commercial Banks is acceptable that reached about (0. 16928) when we compared it with the Mean of ROE for European countries which be reached .085. (E Philip Davis and Haibin Zhu, 2005)

Apparently the standard deviation for both ROA and ROE indices are extremely (.01418) and (.1648) .This ratios are a acceptable for both ratios when we compared it with the standard deviation of ROE for European countries which be reached (.0058 and .(0 90) during the period 1989–2002. (E Philip Davis and Haibin Zhu, 2005)

Table 2 summarizes the statistics for the various explanatory independent variables for the entire sample of Jordanian commercial banks.

Table 2: Descriptive Statistics for independent Variables (2000- 2010)

	Mean	Std. Deviation	N
Log TA	8.530	.476	139
TL/TA	1.964	.1.097	139
TE/TA	.07167	.0776	139
NIM	.0205	.0086	139
GDP growth (annual %)	.0518	.0417	139
inflation	2.787	1.601	139
Exchange Rate	1.42	.0178	139

From these results, it can be seen that the Mean of Jordanian commercial banks of Log TA (8.530), TL/TA rate on average is .1.964 TE/TA is .07167, NIM is .0205, GDP growth Rate is .0518, inflation is 2.787 and the Exchange Rate is 1.42. Table No2 shows also the Std. Deviation for these Variables are Apparently .476, 1.097, .0776, .0086,0417, 1.601 and, .0178. These Variables are similar the Std. Deviation for commercial banking in for European countries during the period 1989–2002. (E Philip Davis* and Haibin Zhu, 2005)

Table 3 presents a correlation matrix of the ROA and explanatory variables.

Table 3: Correlation matrix of the ROA and explanatory variables

	ROA	log assets	TL/TA	equity / TA	NIM	GDP growth (annual %)	inflation	Exchange Rate
ROA	1.000							
log assets	.387	1.000						
TL/TA	.387	.	1.000					

Table 3:   Correlation matrix of the ROA and explanatory variables - continued

equity / TA	.222	-.101	-.101	1.000				
NIM	.317	.237	.237	.122	1.000			
GDP growth (annual %)	.084	-.108	-.108	-.069	-.299	1.000		
inflation	.084	-.175	-.175	-.088	-.076	.121	1.000	
Exchange Rate	.058	-.215	-.215	-.152	-.362	.879	.274	1.000

From these results, it can be seen that all variables are positively related to ROA. This means that all variables are will rise relative to the ROA. These results similar the results which be finding in UAE's Islamic and conventional national banks during the period 1996-2008 and other countries like Bahrain , Samad, Abdus , (2004)and Al-Tamimi Hussein A. Hassan (2010)
Table 4 presents a correlation matrix of the ROE and explanatory variables.

Table 4:   Correlation matrix of the ROE and explanatory variables

	ROE	log assets	Loan/TA	NIM	TL/TA	inflation	Exchange Rate	GDP growth (annual %)
ROE	1.000							
log assets	.514	1.000	.					
Loan/TA	-.328	-.341	1.000					
NIM	.137	.237	.365	1.000				
TL/TA	.514	-	. -.341	.237	1.000			
inflation	.152	-.175	.179	-.076	-.175	1.000		
Exchange Rate	.185	-.022	-.175	-.362	-.215	.274	1.000	
GDP growth (annual %)	..159	-.112	-.215	-.299	-.108	.121	.879	1.000

From these results, it can be seen that Loan/TA only negative relationship with ROE while other variables are positively related to ROE, it is means that Loan/TA only will be fall more than interest paid on liabilities , but other variables will be increased because there are positive relationship between them and ROE .

Hypotheses:
Based on the above discussion it can form the hypotheses as follows:
1. Size:
Ho1: There is a significant positive relationship between ROA and ROE ratios and size of the commercial Bank.
2. TL/ TA
Ho2: There is a significant positive relationship between ROA and ROE ratios and TL/ TA of the commercial Bank.
3. NIM
Ho3: There is a significant positive relationship between ROA and ROE ratios and NIM of the commercial Bank.
4. GDPGR:
Ho4: There is a positive relationship between ROA and ROE ratios and GDPGR of the commercial Bank.
5. INF
Ho5: There is a positive relationship ROA and ROE ratios and INF of the commercial Bank.
6. ERS
Ho6: There is a positive relationship ROA and ROE ratios and ERS of the commercial Bank.
7. TE/TA

Ho7: There is a significant positive relationship between ROA ratio and TE/TA of the commercial Bank.

   8. Loan / TA

Ho8: There is a significant positive relationship between ROE ratio and Loan / TA of the commercial Bank.

4. Results and Discussion

Table 5 shows the results of regression analysis of the (ROA) model used to explain determinants of the Jordanian commercial banks performance

Table 5:   Regression Results of ROA (2000 - 2010)

	Sig *	Coefficient	t- statistic
Constant	<.003*	-.281	219.566
Log TA	<.008*	1.583	-83.055
TL/ TA	<.002*	.431	5.681
TE/TA	<.005*	.285	3.885
NIM	<.001*	.286	3.699
GDPGR	<.002*	-.042	-.270
INF	<.059***	-.129	1.697
ERS	<.093***	.299	1.790
Sig. F Change	< .001*		
Durbin-Watson	3.002		

* Significant at the 1 percent level
** Significant at the 5 per cent level
*** Significant at the 10 per cent leval

Table 6 shows the results of regression analysis of the (ROE) model used to explain determinants of the Jordanian commercial banks performance

Table 6:   Regression Results of ROE (2000 - 2010)

	Sig *	Coefficient	t- statistic
Constant	.000*	-.281	-4.160
Log TA	<.000*	1.583	-4.097
Loans/TA	.002*	.431	3.681
NIM	<.005*	.285	6.885
TL/TA	<.001*	.286	2.699
INF	<.002*	-.042	3.543
ERS	<.000*	.129	3.521
GDPGR	<.100***	-.299	-.1000
Sig. F Change	< .000*		
Durbin-Watson	1.358		

* Significant at the 1 percent level
** Significant at the 5 per cent level
*** Significant at the 10 per cent level

Tables 5 and 6 present the results of regressing ROA and ROE on bank
Characteristics and the rest of the control variables. As expected, the coefficient estimates of Log TA, TL/TA, NIM and ERS are significant and positive relationship between it and ROA and ROE (Tables 5 and 6). This result is similar to those results that are obtained by Bashir, Abdel Hamid M., (2003), Haron, Sudin (2004)), and Ben Naceur and Goaied (2010).
   , As well as, these results are similar to those of the expected hypotheses:
   Ho1: There is a significant positive relationship between ROA and ROE ratios and size of the commercial Bank.

Ho2: There is a significant positive relationship between ROA and ROE ratios and TL/ TA of the commercial Bank.

Ho3: There is a significant positive relationship between ROA and ROE ratios and NIM of the commercial Bank.

Also, Tables 5 and 6 shows a significant positive relationship between ROA and ROE ratios and ERS of the commercial Bank. This result is similar to expected hypotheses of 6.

Ho6: There are a positive relationship between ROA and ROE ratios and ERS of the commercial Bank.

Tables 5 and 6 shows also, a significant negative relationship between ROA and ROE ratios and GDPGR and INF of the commercial Bank. These results are different to those of the expected hypotheses 4 and 5:

Ho4: There is a positive relationship between ROA and ROE ratios and GDPGR of the commercial Bank.

Ho5: There is a positive relationship ROA and ROE ratios and INF of the commercial Bank.

These results are similar to those results that are obtained by Haron, Sudin (2004), Demerguç-Kunt and Huizingha (1999), Toni Uhomoibhi, (2008), and Ben Naceur and Goaied (2010).

Finally, Table 6 shows also a positive relationship between ROE ratios and Loan /TA of the commercial Bank this result is similar to expected hypotheses of 8.

Ho8: There is a significant positive relationship between ROE ratio and Loan / TA of the commercial Bank.

Table 5 shows also, the DW statistic is substantially (DW =3.002) It means there is evidence of positive serial correlation. As a rough rule of thumb, if DW is less than 1.0, there may be cause for alarm.

F Change for ROA is < .001 It means there is evidence of positive serial correlation over the period (2000 – 2010), Kunt and Huizingha (1999), Toni Uhomoibhi, (2008), and Ben Naceur and Goaied (2010).

Table 6 shows also, the DW statistic is substantially (DW =1.358) It means there is evidence of positive serial correlation. As a rough rule of thumb, if DW is less than 1.0, there may be cause for alarm.

F Change for ROA is < .000 It means there is evidence of positive serial correlation over the period (2000 – 2010), Kunt and Huizingha (1999), Toni Uhomoibhi, (2008), and Ben Naceur and Goaied (2010).

5. A Summary and Conclusions

The primary objective of this study is to examine and analyse the Determinants of commercial banks performance during the period from 2000 through 2010.

The study follows a functional model which was employed earlier by Demerguç-Kunt and Huizingha (1999), Haron, Sudin (2004) , Toni Uhomoibhi, (2008), Athanasoglou , Panayiotis P. and *et al*, (2008), and Ben Naceur and Goaied (2010).

The study model is tested on time series cross-sectional bank level data in the context of Jordan over the 2000-2010. The empirical specification focuses on the reported determinants of commercial banks performance which is assumed to be a function of a set of bank characteristics. To control for the effect of the internal and external factors on commercial banks performance, we use Pooled Ordinary Least Squares (OLS)

The analysis revealed that there are significant and positive relationship between ROA and the Bank size(LOG TA) , Total liabilities/ total Assets (TL/TA) , Total Equity/ total Assets(TE/TA), Net Interest Margin (NIM)and Exchange Rate(ERS) of the commercial banks and there are significant and negative relationship between ROA and Annual Growth Rate for Gross domestic product (GDPGR), and Inflation Rate (INF) of the commercial banks .

Also this study found that there are significant and positive relationship between ROE and the Bank size(LOG TA) , Total liabilities/ total Assets (*TL/TA*),Net Interest Margin (NIM), Exchange Rate(ERS) and Loan / Total assets (L/TA), and there are significant and negative relationship between ROE and and Annual Growth Rate for Gross domestic product (GDPGR), and Inflation Rate (INF) of the commercial banks .

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Appendix A

List of Jordanian commercial banks

1. Arab Bank
2. The Housing Bank for Finance and Trade
3. Jordan Kuwait Bank
4. Jordan National Bank
5. Union Bank for Trade and Investment
6. Jordan Investment and Finance Bank
7. Arab Jordan Investment Bank
8. Bank of Jordan
9. Middle East Investment Bank
10. Philadelphia Bank
11. Jordan Gulf Bank
12. Cario Amman Bank
13. Industrial Development Bank
14. Societeh general Bank – Jordan