

## Impact of Financial Factors on the Size of the Credit Facilities Granted by the Jordanian Commercial Banks for the Period 1996-2012

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#### Abstract

This study aimed to find the impact of capital, volume of deposits, size of cash holdings, and interest rates in the Jordanian commercial banks on the credit facilities that granted for customers . I had been collecting data on credit facilities which granted by Jordanian commercial banks and the financial factors that formed the study (amount of capital, volume of deposits, size of cash holdings and the interest rate) from different resources , then the data was analyzed through the statistical analysis of E-views program by using a set of tests, including test method of least squares in the regression analysis (OLS). The results indicated that there was no significant effect for the size of capital, volume of deposits, size of cash holdings, and the interest rate in the Jordanian commercial banks on size of the credit facilities that granted for customers. The study also recommended that the Jordanian commercial banks has to follow the policies revolving credit contribute to improve the capital ratios for total assets, and the percentage of total deposits to total assets, domestic assets, and the rate of interest, since it shows the results of the analysis that the credit facilities that are causing these variables.

Keywords: credit, financial factors, commercial banks

#### 1.Introduction

The financial institutions and private commercial banks establishment specialized reliable working on the economic management for the funds preserved and credit facilities, in other words, they place to meet money supply and demand it, that the bank plays an important role to vacillate the financial mediation, the place which meets money supply, demand it, which was the main mission, to accept deposits from depositors and lending to other parties, the main function is pooling funds and employed to finance different economic activities in the state with the necessary funds for the modernization and development, also aims to be a good governance that make a profit, besides function of traditional and mandate to maintain depositors' money of distribution and allocation money on various items of the assets for the Commercial Bank. The loans are the most important aspect that investing financial resources of banks, accounting for some assets which represents the return that generated by the majiority of the revenue, , due to its from other financial institutions, the weakness of capital contribution in total Finance resources, where the most available sources of funds for their activities comes from different kinds of deposits, so the commercial banks will be cautious to the management of their assets and their opponents to take into account a set of rules which governing their investment activities therefore, the capital, the size of monetary assets , deposits of the public and the interest rate together constitute the financial factors determine the eventual size of the credit facilities provided by commercial banks to its customers.

- 1.1.Importance of the study:Is to highlight the impact of the financial factors among Jordanian commercial banks on credit facilities, and the impact of these factors on the ability of banks to employ funds in the form of loans, these factors contribute to the development of the performance of commercial banks ,it is working to strengthen the power centers of these banks, also to provide an opportunity to the commercial banks to invest their money in different areas of loans and investment.
- 1.2.Objectives of the study: This study seeks to achieve the following objectives: To identify the size of the capital in the Jordanian commercial banks and their impact on the size of the credit facilities granted
- To identify the volume of deposits in Jordanian commercial banks and their impact on the size of the credit facilities granted
- To identify the size of the cash assets of commercial banks in Jordan and its impact on the size of the credit facilities granted
- Understand the interest rates in the Jordanian commercial banks and their impact on size of the credit facilities granted.
- 1.3.Problem of the study: It appears through the volatilities of volume for credit facilities extended by Jordanian commercial banks, what factors of financial impact in determining the size of the credit facilities granted ,and identifying a set of financial factors perhaps the most important: the amount of capital, volume of deposits, the



size of monetary assets and the interest price. problem can be summarized through the study of the following questions

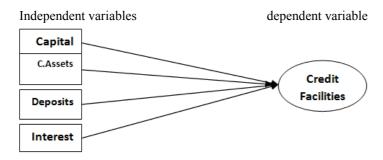
- What is the effect size of cash assets at commercial banks of Jordan on the size of the credit facilities granted during the period (1996 -2012)?
- What is the impact of volume of deposits in Jordanian commercial banks on the size of the credit facilities granted during the period (1996 2012)?
- What is the effect of the amount of capital to the Jordanian commercial banks on the size of the credit facilities granted during the period (1996 2012)?
- What is the impact of the interest rate at commercial banks of Jordan on the size of the credit facilities granted during the period (1996 2012)?

## 2. Methodology of the study:

- **2.1.Society and the study sample**: Study population consists of all Jordanian commercial banks and Islamic branches of foreign banks operating in Jordan. Sample of the study: The study sample consisted of Jordanian commercial banks (13) banks.
- **2.2.Variables of the study**: Depending on the literature of the study variables, including the following: The dependent variable (Dependent variable) the size of the credit facilities granted during the study period

Independent variables (Independent Variable) the size of the cash assets, customer deposits, capital, and the interest rate.

## Chart(1) study's model



**2.3.Study,s Models**. To achieve the goal of the study,it was took multiple linear regression model that demonstrates the effect of independent variables on the dependent variable as in the study (Peter Mandy 0.2011) and as follows:

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C.F = a + B1dep + B2cap + B3Asset + B4Int + e

dep = the volume of deposits

Cap = capital

Asset = cash assets

Int = interest rate

e = random line

a = fixed regression equation

B1, B2, B3, B4 = mi regression equation

. C.F = credit facilities

. C.F = credit facilities
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- **2.4.Sources of information and data collection**: will be used for the purposes of data collection, secondary sources of periodicals and books, theses and Web sites, in addition to the annual reports and monthly bulletins of the commercial banks in addition to the primary sources, which require the processing of a researcher's raw data. The study period. The analysis of the study period, the credit facilities for commercial banks in the light of the Jordanian statement impact of the independent variables mentioned above during the years (1996-2012).
- **2.5.Method of data analysis**. Data will be analyzed using a variety of statistical tests depending on the program E\_views)), by :
- 1) multiple linear regression analysis to test hypotheses using  $((R^2, which represents the coefficient of determination to see the effect of each of the variables on the dependent variable$
- 2) test based on the duplication of causality (Granger) to figure out the direction of the relationship between the variables



- 3) Test Normal Distribution)) to ensure normal distribution of the variable of the study.
- 4) test (Test of Homogeneity) to ensure the homogeneity of the data in the study.
- 5) test of correlation)) to measure the problem of autocorrelation.
- 6)circles calculations and standard deviations to know the amount of dispersion between the data
- 7) test method of least squares in the regression analysis (OLS) to test hypotheses.
- 8) Test Augmented Dickey-Fuller (ADF), and test Phelps Peron (PP) to test the unit root (Unit Root Test), and to identify the stability of the data in a time series (Stationary) to test the Zero hypothesis  $\beta = 1$  versus the alternative hypothesis  $\beta = 0$ .
- 9) the written test duplication (Multi collinearity Test) to make sure there is no duplication between the linear variables of the study.

4. Literature Review. In a study of (Peter Mandy, 2011) entitled: "Factors affecting the allocation of credit in the Kenyan banking and financial institutions." The impact of financial resources of financial institutions in the granting of credit to borrowers, it has dealt with various types of financial risks carried out various studies on the performance of banks with focus on the performance of the officers "credit and lending to micro-finance institutions, however, were conducted on the factors that influence the allocation and granting of credit in the financial institutions in Kenya, therefore this study has to study the factors that influence the practices and the allocation of credit in financial institutions in Kenya, the objective of this study was to determine whether the commercial banks' credit policy and any impact on the allocation of credit to any other factors, such as determining the level of the spread of lending policy which takes into account the size of the assets, banking deposits, the interest rate and the capital, also based on need to focus on standards and credit conditions, policies, credit collection, its impact on the allocation of credit and the extent of the application of these financial institutions, credit policies in addition to the impact of these practices on the allocation of credit as study aimed to directors and officers of commercial banks and institutions, mortgage estate who bear direct responsibility for the allocation of credit, however, the study found that financial institutions did not make efforts to diversify risk and promote economic growth in relation to all sectors of the economy such as consumer loans and commercial loans, mortgages and other, it was selected sample includes 43 of licensed commercial banks, and mortgage companies, all in the capital, Nairobi, has been collecting primary data using questionnaires, data were analyzed using descriptive statistics and deductive These included descriptive statistics for the average mean and standard deviation, using the links and multiple regression analysis results of the study to the financial institutions and customers were able to obtain accurate information about Multi credit allocation and consider the factors affecting the allocation, the results showed regression analysis to be dependent variables both individually and jointly significant and have an impact on the allocation of credit as results indicated that the credit policy greatly affect the level of credit allocation, followed by credit conditions) and Finally, the study demonstrated that the four variables independent significantly affect the allocation of credit and financial institutions formulate credit policies in order to minimize risk, it is advisable to financial institutions to educate their customers on the policies of their credit to improve credit allocation study recommends also need to be made More research on the impact of the credit reference reports on the allocation of credit and the other hidden factors affecting the allocation of credit by commercial banks in Kenya that should also include all providers of credit in financial institutions. Study (Murillo Kambllo .2011) entitled: "The liquidity management and investment firms during the financial crisis" in this study researcher used a unique data to study how he managed liquidity in companies during the financial crisis, the analysis of the study provided new insights about the interactions between internal liquidity and external funds, also credit decisions estate such as investment and employment describe first how to use the facilities, credit lines during the crisis (access to the bank, the size of the facilities, and withdrawal of funding), with characteristics of these activities (fees, profit margins, maturity and guarantees), whether managers had difficulties in renewing or start funding lines, the study also described the dynamics of credit lines and the results of the subsequent re-negotiation, also offered how companies can trade-off between credit lines and internal liquidity (cash and profits) when facing a shortage of credit sharply and found that lines of credit are associated with increased spending at companies that cash-strapped companies with limited access to credit lines. in contrast that period took a choice and differentiation between savings and investment during the period of the financial crisis. Perhaps one of the most important results of the study provide credit eased the impact of the financial crisis on corporate spending in general. In a study of (Anthony Orji, (2011) entitled: "The savings bank and bank loans in Nigeria," the determinants and effects on economic growth. "Where the purpose of this study was to demonstrate the determinants of savings bank in Nigeria, as well as study the impact of savings on the volume of loans on economic growth in Nigeria in the period from 1970 - 2009, the results showed the the positive impact and the succession of high values and savings amounts of GDP per capita among commercial banks ,also negative impact of real interest rates, exchange rates in addition to the rate of inflation on the size of the domestic savings own, on the other side the results of the study showed also positive of relationship between



the private sector savings and loans that granted to the private sector and to the government, therefore the results of the study recommended that it should be directed toward the government's efforts to improve per capita income and reduce the unemployment rate in the country in an attempt to accelerate the pace of growth in the country's economic growth. In a study of Mustafa and Younis (2009) entitled: "The analysis of interest rates in the banking sector in Bangladesh" this paper used to find out how to maximize profit on the basis as an experimental models in the banking industry and to explain the style of the spread and application of interest rates in the banking sector using data from sample of Bangladesh banks which included 48 banks to cover the period from 2004 to 2008, results of the study analysis showed that there is an increasing in the volume of non-interest income as a percentage of total banking assets, and a decreasing in interest rates, as the study results showed that inflation, operating costs all contributed to decline market share of commercial banks deposits, thus a reduction in the statutory reserve requirements and taxes. The study Crossman and Kerr (2003). Recent studies on the credit-west and procedures for granting facilities and the risk that faced by banks, the subject of loans that are related to the routine outstanding problems, the wasted time, lack of objectivity, and to solve problems, which constitute an obstacle in front of the credit, not only in Western countries but also in the Arab countries to be an important benefit from this study, where is the address to the new policy followed by the granting of credit, which banks will work a set of measurements of performance, characteristics of credit or loans that taken by someone in previous time with suppose the same conditions, this policy (credit records) (credit Scoring) a method of evaluate and predict the credit risk associated with the application of modern credit, which helps bank to make the right decision as an objective in a short time. The result of this policy objectivity lacking in the granting credit, the elimination of routine banking business, and reduce the time needed to take the final decision about granting or deny credit. Study Came Jacksbon and Casper (2003), the personal information is playing the biggest role in the acceptance of credit or reject, the study observed from of credit policy the importance of personal information, and the study touched the importance of personal information as a criterion for risk, as this study has shown through analysis of sample for Swedish society, it is possible to reduce the degree of risk less than 20% in case of interest of personal information when the customer is a student. Prior to this study FEDs (2002), the study about Western developed on the subject of policies that raise the demand for credit with the survival low degree of risk on U.S. banks, when observed in American banks high proportion of the funds deposited, then rise in money supply available for credit against the low demand, a problem took accumulation of money in banks, the solution to this problem is to add flexibility to the policy of granting credit and interest rates in order to create a demand for bank credit to meet high supply with non-banks' exposure to the risk of nonpayment, was from the Monetary Authority (Treasury) that awarded agencies (company lending), the amounts necessary for being more ability and flexibility to do the studies and secured more at banks, because the agreements signed between them and the bank, also bank has collateral for these companies, which makes it less vulnerable as that low interest rates increasing the demand for credit, that making the credit policy balanced between supply and demand with not susceptible to the risk for being a big deal with one party. Study Abu Muammar, (2002), entitled "The role of banks in investing in Palestine for the period between 1999-2000." One of the most objectives for this study is to detect the causes weakness of the banks operating in Palestine to increase the size and proportions of facilities that are provided to the Palestinian economy, in case volume of credit facilities to size of the deposit is about 35%, this proportion is relatively weak compared to banks operating in Jordan or Egypt, this makes the banks have to Find a better investment climate outside of Palestine, which made facilities for foreign banks 52% of the total deposits for banks that operating in Palestine. The result of this study reached several conclusions, including that the proportion of facilities to deposits in Egyptian banks that operating in Palestine much higher than those offered by other banks, due to increasing in the volume of banks deposits, also the agricultural sector is one of the poorest sectors of the economy that supported by banks and affected by the political, legal conditions and inexperience banks negatively on the role of the banks in role of increasing the size of facilities. One of the main recommendations for this research should be granted licenses and specialized banks to stop issuing licenses for more commercial banks, as well as the demand to expand in the granting of credit, especially long-term, and passing legislation to help banks to provide the facilities, the trend towards investment is to support development plans in Palestine. The study also recommended to form a fund to meet investment risk with the participation of banks operating in Palestine, the Palestinian Monetary Authority infrastructure for this province also there is a lack of coordination between different industries, and recommended to develop new strategies to identify the needs of the credit facilities until the process of searching for sources of funding.

Study reported by mandolins, (2001), entitled "The role of the banking system in Palestine and its impact on financing for development." The aim of this study was to examine the extent which banks operating in Palestine, the expectations of their desired, evaluation of service delivery credit, especially in the area of its contribution to the process of financing for economic development, from results of this study; the reluctance of banks for expansion of development projects, as a result of many factors, including the political, economic and social conditions in the West Bank and the Gaza Strip, as well as the novelty of the banks operating in Palestine,



the lack of knowledge of funding that needs for the West Bank areas and the Gaza Strip. The study recommended that to accelerate the commercial banks in the decision-making process, requests facilities especially Arab banks operating in Palestine, with a reduced interest rate on the loan until it is encouraging customers to borrow, then increase and support the Palestinian economy. In a study of Hanna, (2000), entitled "The role of accounting information in the rationalization of investment policies and assess the portfolio securities in the commercial banks." The aim of this study is to attempt to cure the problem of investment banks to trade in securities, that meet the investment objectives, and how to choose securities that achieve these goals, the problem of how to manage this portfolio and follow-up of funds constituent. The most important of these problems, how to evaluate the financial portfolio, whether this evaluation administrative, accounting or technician. The results of this study indicated that the investment in stock occupies a second position, especially in case of low demand for loans. The study found the demand to rely on mathematical and statistical methods to reach the optimal diversification of the portfolio, in addition for using a certain administrative and technical methods for optimal utilization of resources in banks. The study also recommended to increase and activate the governor of their stock, then activate the stock market, thus the development of bank deposits, as beneficial to the national economy and on the banks on the other hand, through its composition of investment funds ,which formed its job market maker, where ensure underwriting and promotion of new securities, expanding in the granting of loans to ensure the securities, which encourages small savers to request of investing in securities and the consequent revitalization of the stock market, then to the national economy. Also study of Mansoura, (1999), entitled "Determinants of bank's credit to commercial banks that applied to national banks in the United Arab Emirates." This study aimd to identify internal and external variables that affect the bank's share of credit and the rate of growth for credit The consolidated at the level of different sizes to the banks, and the determinants of the total volume of bank credit at the level of each bank without that extends to every type of bank credit, the present study drafting model consists of three points to explain the behavior of bank credit in commercial banks, which includes first selected a specific share of bank, second the specified rate of bank credit, third is the growth rate of this credit. The results of this study demand for continuous monitoring of the regulatory requirements for behavior of bank's credit and control rates. Lifting funding has followed with policy characterized by venturing capital investment. The study recommended for using bank management when planning for the impact of the credit policy of nontraditional variables, attention to managing the costs of granting credit. The study also recommended that there should be a division of the senior management of all bank cares collect data banks, competition and economic, monetary policies, work to predict the behavior of competitors and growth opportunities in front of banks, as well as the requirments for regulators to follow up the behavior of credit to the national banks, that puts a limit proportion of risky assets to liquid assets and control the placement of funds in banks. A study Fadel, (1998), entitled "Using discriminant analysis method for multiple variables in the monitoring and evaluation of credit facilities in commercial banks with the applications." The aim of this study is to learn how to use the method of discriminant analysis of the variables multiple monitoring and evaluation of credit facilities in commercial banks and tried this research to study the commercial bank in Egypt, also researcher study the quantitative methods that have been built the accounting data which published and unpublished. The results of this study should be based on banks information that contribute to control and evaluate the decision of bank's credit, including making possible errors for these decisions at a minimum, thereby reducing risks of granting credit facilities and advised this study, the banking system, the need to rely on the scientific method to streamline the process of monitoring and evaluation credit facilities granted. A study Ebadi, (1997), entitled "Credit Services in commercial banks operating in Palestine." This study aimed to investigate the facts about the phenomenon of weak credit services and stand on the true proportion of credit and development. As well as knowledge of the underlying causes of the reduction of the ability of commercial banks to provide credit facilities to increase its loans for various sectors of the economy. This study has three forms distributed to both the commercial banks that operating in the West Bank, businessmen, experts and academics from specialists. The results of this study suggest that the fundamental reason for the low loan to deposit ratio to the commercial banks themselves where they do not give enough importance to the profitability of the proposed project financing or cash flow of the project, which will depend on the availability of security, as well as the study found belief business need for the Monetary Authority that provide a minimum percentage of facilities for deposits up to reduce the leakage of deposits abroad and invest at home, also saw this study, the need to raise awareness of the banking population through lectures, seminars, publications and media of different addition to the possibility of creating a bank of data about the centrality of risk for exchange of information for people with high risk, providing the commercial banks, the process of studying and evaluating credit applications, loss resulting from the provision of facilities for people with bad reputation and high risk. Carried out by the Palestinian banking system in economic activity, but there are some deficiencies in the nature of work and effectiveness of this device, where we find that the most of the loans granted by local banks of Palestinian was directed towards sectors of non-commodity trade, personal facilities while commodity sectors such as industry, agriculture, received just a small percentage of these loans and recommended this study, for the need to operate the banks to enlarge their size



through merger or increase their capital and improve the skills of human, technological, and expanding funding for the banking operations of non-traditional funding to establishment of corporate mergers, privatization, facilities management and leasing finance, may require legislative amendments so that banks can carry out these activities.

- **4.1.What distinguishes this study.** We have characterized this study from previous studies that it came to looking at the financial factors affecting the size of the credit facilities granted by commercial banks of Jordan, one of the most important aspects of investment funds for commercial banks and perhaps the most important of these factors, volume of deposits, amount of capital, volume of cash assets and the rate interest. Also the impact of these factors on the ability of commercial banks to employ their money in the form of loans and the importance for economic activity in financing funds for its development and modernization with pumping money into the arteries of the national economy
- **4.2.Hypotheses of the study**: Based on the problem of the study, the study hypotheses were formulated as follows:

#### The first major hypothesis:

- H01: There is no statistically significant effect on size of capital in the Jordanian commercial banks on size of the credit facilities granted.
- H1: There is a statistically significant effect on size of capital in the Jordanian commercial banks on size of the credit facilities granted.

## The second main hypothesis

- H02: There is no statistically significant effect on the size of the cash assets of commercial banks in Jordan on the size of credit facilities granted.
- H1: There is a statistically significant effect on the size of the cash assets of commercial banks in Jordan on the size of the credit facilities.
- The first sub-hypothesis :
- H021: No statistically significant effect of the size of the domestic assets of commercial banks in Jordan on the size of the credit facilities granted.
- H1: There is a statistically significant effect of the size of the domestic assets of commercial banks in Jordan on the size of the credit facilities granted.

The second sub-hypothesis

- H022: There is no statistically significant effect on the size of the foreign assets of commercial banks in Jordan on the size of the credit facilities granted.
- H1: There is a statistically significant effect on the size of the foreign assets of commercial banks in Jordan on the size of the credit facilities granted.

## The third main hypothesis

- H03: No statistically significant effect of the volume of deposits in Jordanian commercial banks on the size of credit facilities granted
- H1: There is a statistically significant effect of the volume of deposits in Jordanian commercial banks on the size of credit facilities granted

The first sub-hypothesis :

- H031: There is no statistically significant effect on the size of domestic deposits at the commercial banks of Jordan on the size of credit facilities granted.
- H1: There is a statistically significant effect on the size of domestic deposits at the commercial banks of Jordan on the size of credit facilities granted.

The second sub-hypothesis

- H032: There is no statistically significant effect on the size of foreign deposits at the commercial banks of Jordan on the size of credit facilities granted.
- H1: no statistically significant effect on the size of foreign deposits at the commercial banks of Jordan on the size of credit facilities granted.

#### The Fourth main hypothesis

- H041: No statistically significant effect of the interest rate at commercial banks of Jordan on the size of the credit facilities granted
- H1: There is a statistically significant effect of the interest rate at commercial banks of Jordan on the size of credit facilities granted

#### 4.3. Determinants of the study

- 1) the study doesn't include any foreign banks operating in Jordan.
- 2) This study is limited to factors that affecting the credit granted by the Jordanian commercial banks (capital,



deposits, interest rate, assets)

3) are not exposed to the study of other non-financial factors that may affect the credit granted by commercial banks of Jordan, but confined only to information derived from the budget for the commercial banks

**5.Data analysis and hypothesis testing** .Description variables of the study. Apennan tables below a summary of the results of descriptive statistics for the variables of the study, and the correlation between them during the period (1996 - 2010):

Table (1)Summary results of descriptive statistics (%)

1					
min	max	Standard dev.	mean	variable	
8857.7	34362	8532.713	18967.54	TA	
2017.1	6516.5	1501.633	4462.573	Fo. ASSETS	
6840.6	28205.8	7252.619	14504.93	DEM. ASSETS	
771	4856.6	1317.534	2277.807	CAPITAL	
3920.3	14228.4	3796.09	7474.647	LOAN	
8.79	13.11667	1.772215	10.42667	IRATE	
5988.8	22225.2	5247.286	11924.2	TDEP	

By the results in Table (1) shows us the following:

- TA: The highest value of total assets (34362) J.D at 2010, while the lowest value (8857.7) J.D at 1996, but reached the arithmetic mean (18967.54), and the standard deviation (8532.713).
- Fo. ASSETS: The highest value of foreign assets (6516.5) thousand dinars in 2010, while the lowest value (2017.1) J.D at 1996, but reached the arithmetic mean (4462.573), and standard deviation (1501.633).
- DEM. ASSETS: The highest value of the assets of the local (28205.8) J.D at 2010, while the lowest value (6840.6) J.D at 1996, but reached the arithmetic mean (14504.93), and the standard deviation (7252.619).
- CAPITAL: The highest value of capital (reserves + equity) (4856.6) J.D at 2010, while the lowest value (771) thousand J.D at 1996, but reached the arithmetic mean (2277.807), and standard deviation (1317.534).
- LOAN: The highest value of the value of loans (14228.4) J.D at 2010, while the lowest value (3920.3) J.D at 1996, but reached the arithmetic mean (7474.647), and standard deviation (3796.09).
- IRATE: The highest value of the interest rate is about (13.12%) in 1997, while the lowest value of about (8.79%) in 2004, but reached the arithmetic mean (10.42667), and standard deviation (1.772215).
- TDEP: The highest value of total deposits (22225.2) J.D at 2010, while the lowest value (5988.8) J.D at 1996, but reached the arithmetic mean (11924.2), and standard deviation (5247.286).

Table (2) the correlation between the variables of the study

IRATE	DEPRATIO	CAPRATIO	CHDEA	CHFOA	CHLOAN	Variable
					1.000	CHLOAN
				1.000	0.0188	CHFOA
			1.000	-0.3863	0.7831	CHDEA
		1.000	0.1452	-0.2608	0.1842	CAPRATIO
	1.000	-0.2515	-0.4570	0.2826	-0.5632	DEPRATIO
1.000	0.5326	-0.3519	-0.5546	0.4110	-0.5914	IRATE

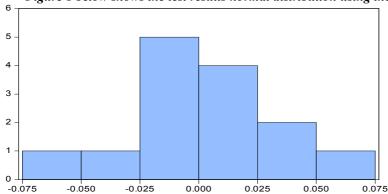
By the results in Table (2) shows us that there is a correlation is positive between size of loans (CHLOAN) and foreign assets (CHFOA), domestic assets (CHDEA), and the ratio of capital to total assets (CAPRATIO), where the magnitude of the relationship about (1.9%) (78.3%), and (18.4%), respectively, and note that there is a correlation is negative between the size of loans (CHLOAN) and all of the ratio of deposits to total assets (DEPRATIO), and the interest rate (IRATE) reaching the strength of this relationship is about (56 -%), and (59 -%), respectively, and for the nature of the relationship between foreign assets (CHFOA) and all of the domestic assets (CHDEA), and the ratio of capital to total assets (CAPRATIO), it is a negative relationship its about (-38.6%), and (-26%), respectively, while the associated variable foreign assets (CHFOA) with each of the ratio of deposits to total assets (DEPRATIO), and the interest rate (IRATE) a positive relationship with a magnitude of about (28.33%), and (41%), respectively, as to nature of the relationship between domestic assets (CHDEA), and ratio of capital to total assets (CAPRATIO) are positive relationship around (14.5%), and the relationship

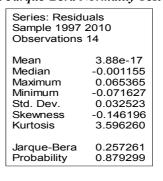


between domestic assets (CHDEA) and all ratio of deposits to total assets (DEPRATIO), and the interest rate (IRATE) are negative with a magnitude of about (45.7%), and (55.5-%), respectively, with respect to variable ratio of capital to total assets (CAPRATIO), is associated negative relationship with both the proportion of deposits to total assets (DEPRATIO), and the interest rate (IRATE) with a magnitude of about (25%) - (35% -), respectively, and finally linked. Variable ratio of deposits to total assets (DEPRATIO) a positive relationship with the interest rate (IRATE) with a magnitude of about (53%).

# Testing multiple regression analysis (Multi Regression) - test normal distribution Normality Test

Figure 1 below shows the test results normal distribution using the Jarque-Bera Normality Test:





From conditions of using the linear regression analysis that the data used in analysis normally distributed, through the figure (2) adopt us to study data in the form of normal distribution, is illustrated by the value of the significance which amounted to (0.879), a value greater than (0.05).

#### Test duplication linear Multi Collinearity Test

*Table (3) the written test duplication* 

VIF	Variable
1.184091	CAPRATIO
1.488908	DEPRATIO
1.606118	CHDEA
1.289013	CHFOA
1.884522	IRATE

From conditions of using of linear regression analysis lack duplicated written between the variables used in the analysis, and through the table (3) shows that the value of (VIF) for all variables of the study less than (5), which indicates the lack of duplicated written between the variables of the study.

## Test data smoothing Test of Homogeneity

Table (4) test data smoothing

Scaled explained SS	Obs R-squared	F-statistic	
1.959093	4.62182	0.788523	Test value
0.8548	0.4638	0.5861	Probability

From conditions of using the linear regression analysis there is no problem of the heterogeneity of data variables used in the analysis, and through the table (4) shows that the value of the significance probability for each of the test F-statistic, and Obs R-squared, and Scaled explained SS greater than (0.05), reaching this value (0.5861), (0.4638), and (0.8548), respectively, and therefore there is no problem there is the heterogeneity of the data between the variables of the study, namely that the study data homogeneous.



## **Test serial link Serial Correlation**

## Table (5) serial correlation test

Obs R-squared	F-statistic	
1.786131	0.438714	Test value
0.4094	0.664	Probability

From conditions of using the linear regression analysis there is no problem link chain between the data variables used in the analysis, through the table (5) shows that the value of the significance probability for each of the test F-statistic, and Obs R-squared greater than (0.05), reaching this value (0.664), (0.4094), respectively, and consequently there is a problem, there is no serial correlation between the variables of the study.

## Test the stability coefficient of error (Error Term)

Table (6) test the stability coefficient error

Those (b) test the stability coefficient error					
Dicky Fuler) ADF(	Philips Pirron) P-P(				
-3.65151	-3.88849	Test Value			
0.0202	0.0134	Probability			

Through Table (6) shows us that the test Phelps Peron (PP) for the coefficient of error (Error Term) significant moral and statistical , as the value of the significance of the test (0.0134), this value is statistically significant at the level of significance ( $\alpha \leq 0.05$ ), also reached the value of the significance of the test Dickey Fuller (ADF) (0.0202) , and this value is statistically significant at the level of significance ( $\alpha \leq 0.05$ ). Which indicates the stability of the coefficient of error over time , which would support the results of the test linear regression analysis.

## Testing multiple regression analysis (Multi Regression);

After making sure that the study data are normally distributed, that there is no there is a problem related to the duplicity of sin, the homogeneity of the data, and link chain, and not the stability coefficient of error, data were analyzed using the method of least squares (OLS) and the results were as follows:

Table (7) the results of the regression analysis test

Adjusted R-Squared	(β)	) Sig. (	variable
0.765789	0.368259	0.6878	CAPRATIO
	-0.94353	0.2137	DEPRATIO
	1.21104	0.0029	CHDEA
	0.381541	0.0139	CHFOA
	-0.01222	0.2126	IRATE
	0.613318	0.2174	A (fixed value)

Through Table (7) shows us that there is no impact to the ratio of capital to total assets (CAPRATIO) on size of credit facilities granted (loans) to the Jordanian commercial banks, as the value of significance (Sig.) (0.6878) which is not statistically significant. Accordingly, we reject the alternative hypothesis for this study and accept the premise of nihilism, which states:

"There is no statistically significant effect on the size of the capital in the Jordanian commercial banks on the size of the credit facilities granted ."It is clear to us that there is no impact to the ratio of deposits to total assets (DEPRATIO) on the size of the credit facilities granted (loans) to the Jordanian commercial banks, as the value of significance (Sig.) (0.2137) which is not statistically significant. Accordingly, we reject the alternative hypothesis for this study and accept the premise of nihilism, which states:

"There is no statistically significant effect on the size of deposits in Jordanian commercial banks on the size of the credit facilities granted ."But show us the results of the regression analysis that there is the impact of each of the variable domestic assets (CHDEA), and variable foreign assets (CHFOA), the volume of credit facilities (loans ) to the Jordanian commercial banks , as the value of significance (Sig.) (0.0029), and (0.0139), a statistically significant values . Accordingly, we reject the hypothesis of this study nihilism and accept the alternative hypothesis , which states :



"There is a statistically significant effect on the size of cash holdings in the Jordanian commercial banks on the size of the credit facilities." This is the main premise is clear to us that:

- "There is a statistically significant effect on the size of domestic assets in the Jordanian commercial banks on the size of the credit facilities granted ."

- "There is a statistically significant effect on the size of the foreign assets of commercial banks in Jordan on the size of the credit facilities granted ."For variable interest rate (IRATE) has been shown us that there is no trace of this variable on the size of the credit facilities granted (loans) to the Jordanian commercial banks, as the value of significance (Sig.) (0.2126) which is not statistically significant. Accordingly, we reject the alternative hypothesis for this study and accept the premise of nihilism, which states:

"There is no statistically significant effect of the interest rate at commercial banks of Jordan on the size of the credit facilities granted."For the regression equation can be written as follows:

## Loan = 0.613318 CAPRATIO - 0.94353 DEPRATIO + 1.21104 CHDEA + 0.381541 CHFOA - 0.01222 IRATE

With regard to the factor of identification rate (Adjusted R-Squared) , we find that it has reached about (  $76.6\,\%$  ) , and this means that the ratio of what is explained by the independent variables under study (the ratio of capital to total assets , the ratio of deposits to total assets, domestic assets , assets foreign , and interest rate ) , the changes in the dependent variable ( the size of credit facilities granted ) , is (  $76.6\,\%$  ) , and that there is a rate (  $23.4\,\%$  ) other factors that affect the size of the credit facilities granted.

**Angel way - Granger (Engle-Granger). Method was used Angel - Granger (Engle-Granger)** clarify the direction of the causal relationship between the variables of the study period and when it slowed down (1), the following table shows the results of this test: *Table (8) the results of testing the direction of causality using Angel - Granger* 

	LOAN	FOA	CHDEA	CAPRATIO	DEPRATIO	IRATE
CHLOAN	NON	NON	1**	1*	1**	1**
CHFOA	NON	NON	NON	NON	1***	NON
CHDEA	**1	NON	NON	1***	NON	1* 1**
CAPRATIO	1*	NON	1***	NON	NON	NON
DEPRATIO	1**	1***	NON	NON	NON	NON
IRATE	1**	NON		NON	NON	NON

Table prepared by the researcher based on the test result Angel - Granger

Where: NON refers to the absence of a causal relationship by testing Angel - Granger (Engle-Granger), so that:

Causation \*\*\* statistically significant at 1%

\*\* Causal relationship statistically significant at (5%), and \* statistically significant causal relationship at (10%).

Results of Table (8) shows us the following:

First: the causal relationship of the two-way Found through testing Angel - Granger (Engle-Granger) that there is a two-way causal relationship between the proportion of deposits to total assets (DEPRATIO) and variable foreign assets (CHFOA), and this relationship is causal moral significance level (1%. (There is also a two-way causal relationship between the interest rate (IRATE) and variable assets Local (CHDEA), and this relationship is causal moral significance level (5%), and (10. ( %

Second, the causal relationship from one direction. Found through testing Angel - Granger (Engle-Granger) that there is a causal relationship one-way between the size of the credit facilities granted (loans) (CHLOAN) and all of (the ratio of capital to total assets, the ratio of deposits to total assets, and local assets, and interest rate), the significance level (5%), and (1%), it was found that the credit facilities that are causing (the ratio of capital to total assets, the ratio of deposits to total assets, domestic assets, and the interest rate. (There is also a causal relationship with one-way between the ratio of capital to total assets, and the assets of local significance level (1%), where The assets that are causing the local capital.

Third, the absence of a causal relationship . Found through testing Angel - Granger (Engle-Granger) that there is no causal relationship between:

- -Foreign assets and the size of the credit facilities (loans. (
- -Foreign assets and domestic assets.
- -Foreign assets and capital.
- -Foreign assets and the interest rate.
- -Domestic assets and deposits.
- -Capital and deposits.
- -Capital and interest rate.



-The interest rate with the deposits.

#### 6. Results and recommendations

#### 6.1.Results

- 1. No effect on size of capital in the Jordanian commercial banks on the size of the credit facilities granted.
- 2. No effect of volume of deposits in Jordanian commercial banks on the size of credit facilities granted.
- 3. No impact on the size of the cash assets of commercial banks in Jordan on the size of the credit facilities.
- 4 . No statistically significant effect of the interest rate at commercial banks of Jordan on the size of the credit facilities granted .
- 5. That there is a causal relationship one-way between the volume of credit facilities (loans) (CHLOAN) and all of (the ratio of capital to total assets, the ratio of deposits to total assets, domestic assets, and interest rate), the significance level (5%), and (1%), it was found that the credit facilities that are causing (the ratio of capital to total assets, the ratio of deposits to total assets, domestic assets, and the interest rate).
- 6. There is a causal relationship with one-way between the proportion of capital to total assets, and the assets of local significance level (1%), where the local assets that are causing the capital.
- 7. There is no causal relationship between each of the foreign assets and the size of the credit facilities (loans), foreign assets and domestic assets, foreign assets and capital, foreign assets and the interest rate, domestic assets, deposits, capital and deposits, capital and the interest rate, the interest rate with the deposits.

#### 6.2. Recommendations

- 1. The Jordanian commercial banks has to increase allocations of credit facilities granted by the increase in the value of monetary assets , as shown by the results of this study show that the value of cash holdings have an impact on the volume of credit facilities granted .
- 2 . The Jordanian commercial banks has to follow the policies revolving credit contribute to improve the ratio of capital to total assets , the ratio of deposits to total assets, domestic assets , and the interest rate , because it shows the results of the analysis that the credit facilities that are causing these variables .
- 3 . Conduct such an extensive study on a sample of Jordanian commercial banks so as to include Islamic banks , to be compared to the impact of financial factors on the size of the credit facilities granted between Jordanian commercial banks and Islamic banks
- 4. The researcher recommends a comprehensive study covering the whole of banks operating in the Jordanian market, if possible, include ( Jordanian commercial banks, and Islamic, and branches of foreign banks).

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