The impact of financial risk on stock returns in the Jordanian commercial banks during the period (2007-2016)

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Abstract

This study aimed at measuring the impact of financial risks represented by (liquidity risk, credit risk and solvency risk) on the stocks return of Jordanian commercial banks. The study was conducted on the Jordanian banking sector consisting of thirteen Jordanian commercial banks during the period (2007-2016). In order to estimate the impact of financial risk on stocks returns, the study used Panel data analysis method. In order to test hypotheses, based on the Hausman test the random effect model was used between independent variables (liquidity risk, solvency risk, and credit risk) and stocks returns.

The study reached several results: There is not a significant impact on liquidity risk on the stock returns and thus acceptance of the first hypothesis, the existence of a negative

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impact of the risk of banks' solvency on the stock returns and thus rejecting the second hypothesis, and there is significance negative impact of credit risk on the returns of stocks, the third null hypothesis is rejected. The study recommended the need to reduce the credit risk by studying the financial solvency of customers (debtors), By seeking more collateral to ensure that the reduced probability of default in repayment, Thus eroding the stock's returns in the Banks as a result of this, And the need for banks to improve the level of financial solvency because of a clear reflection on the confidence of customers, especially depositors, which means increasing the funds flowing to the bank and therefore on investments and stocks returns, And the need to focus commercial banks on the optimal choice between profitability and liquidity in order to achieve acceptable returns under the level of liquidity risk desired.

Keywords: Commercial banks, financial risk, liquidity risk, credit risk, solvency risk, stock returns.

INTRODUCTION:

The banking system is the backbone of economic life in any country, because of the important role it plays in the national economy, and it has a major role in the economic development of any country, as commercial banks represent one of the pillars of the banking system and are in the second degree after central banks, and they are among the oldest of the In terms of origin, commercial banks are also considered one of the most important institutions on which economic development is based, through the work they do,, the services they provide, and the credit facilities they provide to individuals and various economic sectors to carry out their work in the fullest manner.

To raise the efficiency of the country's economy in general Commercial banks aim at achieving profits and maximizing the wealth of owners, like any other facility, by investing funds in assets that yield the largest possible return in return for bearing the level of risks. Commercial banks always seek to increase their returns, and to achieve this, they direct funds to investments that yield Higher returns, but such investments may face high risks that cause losses to the bank, and through the credit facilities offered by commercial banks and directing funds to investments, they are exposed to many risks that would lead to losses for the bank, so the bank must manage these risks. Since the main activity carried out by commercial banks is to accept deposits and provide various credit facilities to individuals and all sectors, and can also have a role in financing investment projects in various economic sectors, they must be exposed to the financial risks associated with those activities carried out by commercial banks, such as Credit risk, liquidity risk and solvency risk.

Investing in shares is one of the most important activities in the field of financial investment for any country where there is an organized financial market that operates within legislation and rules regulating dealing to ensure the safety of these transactions to protect investors. This is due to its ability to convert to liquidity at the lowest costs, especially in a market characterized by competition and high liquidity. Stock returns are affected by many factors and risks. Therefore, this study comes to measure the impact of financial risks (liquidity risk, credit risk, solvency risk) on stock returns in Jordanian commercial banks).

STATEMENT OF THE PROBLEM:

Jordanian commercial banks are exposed to many financial risks such as (credit risk, liquidity risk, and solvency risk) that affect banking performance and that all banks seek to maintain their performance, which is reflected in the stock returns of Jordanian commercial banks, and therefore it is necessary to study these risks And measuring its impact on stock returns in Jordanian commercial banks. The problem of the study is represented by the following question:

1- What are the financial risks facing Jordanian commercial banks and their impact (liquidity risk, solvency risk, and credit risk) on stock returns in Jordanian commercial banks?

The following sub-questions emerge from this question:

A- What is the impact of liquidity risk on stock returns in Jordanian commercial banks?

b- What is the impact of solvency risk on stock returns in Jordanian commercial banks?

C- What is the impact of credit risk on stock returns in Jordanian commercial banks?

RESEARCH OBJECTIVES :

The study aimed to know the financial risks (financial risks) and their impact on stock returns in Jordanian commercial banks during the fiscal period (2007-2016).

1-Identifying the financial risks facing Jordanian commercial banks.

2- Measuring the impact of financial risks (liquidity risk, solvency risk, and silk risk) on stock returns in Jordanian commercial banks.

3- Measuring the impact of liquidity on stock returns in Jordanian commercial banks.

4- Measuring the impact of solvency risks on stock returns in Jordanian commercial banks.

5- Measuring the impact of credit risk on stock returns in Jordanian commercial banks.

THE IMPORTNCE OF THE STUDING:

The importance of this study in measuring the impact of financial risks (liquidity risk, credit risk, and solvency risk) on stock returns in Jordanian commercial banks. And will be known The impact of each of these risks on stock returns in commercial banks.
Thus, this study hopes to provide the Jordanian commercial banks with the impact of each of these risks on the stock returns to confront and reduce these risks to increase the returns on the shares of the Jordanian commercial banks.

RESEARCH HYPOTHESES:

The main hypothec:

There is no statistically significant effect at the significance level ($\alpha \leq 0$) for financial risks (liquidity risk, solvency risk, and credit risk) on stock returns in Jordanian commercial banks

Sub-hypotheses

H1: There is no statistically significant effect at the significance level ($\alpha \leq 0$) of liquidity risk on stock returns in Jordanian commercial banks.

H2: There is a statistically significant effect at the significance level ($\alpha \leq 0$) of solvency risks on stock returns in Jordanian commercial banks.

H3: There is no statistically significant effect at the significance level ($\alpha \leq 0$) of credit risk on stock returns in Jordanian commercial banks.

STUDY COMMUNITY:

The study population consists of 13 Jordanian commercial banks listed on the Amman Stock Exchange. The study will depend on the annual financial statements of these banks during the period between (2007-2016).

STUDY VARIABLES:

***Independent variables**: Financial risks: - credit risk Liquidity risk Solvency risk.

* **Dependent variable**: stock returns.

Stocks Returns: They are changes in the wealth or capital of the investor as a result of the investment, and these changes can occur due to cash flows such as interest or profits, or they can occur as a result of negative or positive changes in the prices of capital assets, and the actual stock return is calculated as follows (Dallol, 2010):$Ri=(Di+Pi-P0)/P0$

R: the actual return
D: dividends.
Pi: The closing price of the stock.
P0: the opening price of the stock.

Liquidity risks: These are the risks that arise when the bank is unable to meet its financial obligations when they are due, and they are the risks that arise as a result of depositors withdrawing their deposits, forcing the bank to sell its assets in a short period in order to face such withdrawals, and it also reflects the lack of cash. To meet the short-term obligations, the liquidity risk is calculated as follows (Mukanzi et.al, 2016):   **LR=CA/TA**

Where:
LR: Liquidity Risk.
CA: Cash Assets.
TA: Total Assets.
Credit risk: It is the risk resulting from the borrower's inability to fulfill his obligations to the bank on time, which is affected by the bank's revenues and capital, i.e. it arises when the bank is unable to recover the principal and interests of the loaned amount. Credit risks are calculated as follows (Saeed, Zahid, 2016):   **CR=NPL/TL**

Where:

CR: Credit Risk.

NPL: Non-Performing Loans

TL: Total loans of Banks

Solvency Risks: These risks indicate the bank's inability to meet its long-term obligations, and when the market value of the bank's obligations is greater than the market value of the bank's assets, solvency risks are calculated as (Curak, al. et, 2012):

SR=Eq/TA

Where:

SR: Solvency Risk

Eq: Equity

TA: Total Assets

To test the hypotheses of the study, this study used panel data analysis, and in order to test the hypotheses, used a random effect model between the independent variables (liquidity risk, solvency risk, credit risk) and stock returns as a dependent variable based on Hausman's test and the study used the following model (Bortolotti, D'Souza and Megginson, 2002) and (Tabari et al., 2013)

$$RET_{i,t} = \alpha_i + \beta_1 LIR_{i,t} + \beta_2 SOR_{i,t} + \beta_3 CRR_{i,t} + \varepsilon_{i,t}$$

whereas:

RET: Refers to the bank's share return.

LIR: the coefficient for the first independent variable (liquidity risk).

SOR: the coefficient for the second independent variable (solvency risk).

CRR: coefficient of the third independent variable (Credit risk).

e: random error

LITERATURE REVIEW:

Amran study (2015), entitled "The impact of risk management (liquidity - credit - capital) on the degree of banking security"

This study aimed to analyze and discuss the impact of liquidity, credit and capital risk management on the degree of banking security in the Libyan National Commercial Bank by analyzing the financial data of the study variables during the period (2004-2010), using regression analysis by using the statistical analysis program Minitab. The study showed that there is a direct relationship between liquidity risk and the degree of banking security on the one hand, and an inverse relationship between credit risk and capital risk with the degree of banking security in the National Commercial Bank.

The study recommended the need to work on strengthening banking security by finding a kind of balance with the various banking risks, and the need to strengthen and restructure the capital in the National Commercial Bank as it is the main supporter of banking security.

Omran's study (2015), entitled "The Impact of Banking Risks on the Degree of Banking Security in Private Commercial Banks in Syria."

This study aims to identify the role of financial analysis through financial ratios in predicting the degree of banking security for private commercial banks operating in Syria, and to identify the factors that affect the degree of banking security in Syrian banks, and to predict them through the use of the study model based on financial analysis of ratios. the study sample banks

during the period (2008-2013). The study reached several results, and the most important of these results is the existence of a statistically significant correlation and effect between liquidity risk, capital risk, rate of return on assets and the degree of banking security in the study sample banks. And the absence of a statistically significant correlation between credit risk, interest rate risk, and the degree of banking security. The study showed that capital risks have the greatest impact on banking security. It also recommended the need to find a kind of balance between banking security and each of the liquidity risks, credit risks, capital adequacy and the rate of return on assets.

The study of Al-Amin and others (2014), entitled "Determinants of capital adequacy and their impact on the degree of banking security - an applied study on Syrian private banks -".

This study aimed to demonstrate the relationship and impact of capital adequacy determinants on both capital adequacy and the degree of banking security in the Syrian Arab Republic. To achieve this, the necessary data for this study were collected from two sources: the financial statements and bank disclosures, the sample of the study, and the reports of the Damascus Stock Exchange during the period (2007-2011). For the purposes of the analysis, Pearson correlation coefficient and multiple regression model were used to study the relationship and impact of the following determinants: (liquidity risk, interest rate risk, credit risk, capital risk, return on equity, return on total assets, and rate of revenue power, on each of the capital adequacy Money and bank credit score The results of the study showed that the adequacy of the Syrian banking capital is related to a positive and statistically significant relationship with each of the capital risks and the rate of return on total assets, and it is linked with a statistically significant negative relationship with both the

rate of return on equity and credit risks, As for the rest of the variables (liquidity risk, interest rate risk, rate of revenue power), the results showed that they are not related to a statistically significant relationship with the adequacy of the Syrian banking capital. capital risk, liquidity risk, interest rate risk, as for the rest of the variables (rate of return on total assets, rate of return on equity, credit risk, rate of revenue power) the study explained It does not have a statistically significant relationship with the degree of Syrian banking security

Muriithi and Waweru (2017) "Liquidity Risk and Financial Performance of Commercial Banks in Kenya."

This study aimed to demonstrate the impact of liquidity risk on the financial performance of commercial banks in Kenya, during the period between 2005-2014 for the study sample consisting of forty-three banks in Kenya. With the return on equity, (Panel Data) was also used, and pair correlations were made between variables to alleviate homogeneous potential problems, and (F-Test) was used to determine the regression coefficient, while the coefficient of determination was used to determine the extent of variance in the dependent variable that It was explained by the independent variable, and the results indicate that the net independent funding ratio is negatively correlated with the short- and long-term financial performance, while the liquidity coverage ratio does not significantly affect on the financial performance of banks in Kenya.

Alsalmat, and Mustafa (2016). "The Impact of Capital Structure on Stock Return: Empirical Evidence from Amman Stock Exchange".

This study aims to study the relationship between the capital structure and the return on shares for all industrial companies listed on the Amman Stock Exchange during the period from (2007-2014) after controlling the ratio of the market value of the

share to the book value of each share, as a proxy for growth opportunities, company size, and turnover ratio, as an alternative to stock liquidity, earnings per share, and return on assets. The panel data analysis method was used.

The empirical results indicated that there is a statistically significant negative effect of the capital structure on the return on equity. In addition, stock liquidity and asset return have a statistically significant positive effect on stock return.

3**- Mukanzi, Mukanzi and Maniagi (2016). Influence of financial risk on stock return of non financial firms listed on Nairobi securities exchange**.

This study aimed to demonstrate the impact of financial risks on the stock returns of non-financial companies in the Nairobi Stock Exchange. The study depends on the quantitative method, and secondary data was collected from the Nairobi Stock Exchange, and the study sample consists of forty companies listed on the Nairobi Stock Exchange. There was statistical significance between the observed and expected values with the use of Pearson's square to give the degree of importance of the relationship, and the results of the study indicate that business and credit risks have a negative correlation and a significant impact on stock returns, while liquidity risks have a positive correlation and a significant impact on stock returns for non-financial companies The study made recommendations, including the adoption of appropriate systems for managing financial risks and improving the efficiency of credit procedures

The Empirical Model:

This study uses cross-sectional time-series data analysis (tabular data) because the tabular data is certainly the most appropriate because it takes into account the changes over time of the indicators, it also takes into account the different characteristics

of each bank and temporary changes in the working environment of banks (Bortolotti, D, 'Souza and Megginson, 2002).

Study model:

$$RET_{i,t} = \alpha_i + \beta_1 LIR_{i,t} + \beta_2 SOR_{i,t} + \beta_3 CRR_{i,t} + \varepsilon_{i,t}$$
……(1)

Whereas

$RET_{i,t}$: the rate of return of the bank i at year t. $LIR_{i,t}$: Bank's liquidity risk i at year t The $SOR_{i,t}$ solvency risk of the bank i at year t. . $CRR_{i,t}$ The credit risk of the bank i at year t. 1,2, 3: regression coefficients $\varepsilon_{i,\square}$: error criterion. α_i: cross section of the models.

Data analysis and hypothesis testing

After obtaining the necessary data, and based on previous studies, the researcher used the appropriate statistical tests based on the **EVIEWS** software, with the aim of answering the study questions and testing its hypotheses and then formulating results and recommendations, which can be clarified through the following stages

Data analysis skoon time series static test:

Several standard studies (Stock and Watson, 1988), (Plosser & Nelson, 1982) and (Yule, 1926), have proven that time series related to financial variables are characterized by instability resulting from the problem of false regression (Spurious Régression). The misleading results obtained where R2 values are high even in the absence of a real relationship between the variables, and therefore it is necessary to ensure the stability of the study variables by relying on the Unit Root Test by using the (ADF) Augmented Dickey Fuller test to test the extent The stability of the time series or not containing the unit root so that

the null hypothesis is that the time series of the variable contains the unit root, that is, it is unstable. This hypothesis is judged to be accepted or rejected by noting the value of "Probability", if it is less than (0.05).This means that the calculated value of the (ADF) statistic is greater than its tabular value, which means rejecting the assumption of the basis with the presence of a unit root and judging the stability of the time series of the variable under study

Time series stability tests for the study variables

Table (1) results of the stability test time series

Tests				
PP-Fisher chi-sq		**ADF-Fisher Chi-sq**		**variables**
the level Prob	**The first difference Prob**	**the level Prob**	**The first difference Prob**	
0.0000	0.0000	0.0365	0.0069	**LIR**
0.0023	0.0003	0.2119	0.0041	**SOR**
0.0000	0.0001	0.0002	0. 0000	**RET**
0.1362	0.0001	0.0043	0. 0488	**CRR**

Prepared by the researcher based on EVIEWS outputs

Through the results obtained and shown in Table (2), it was found that the variables are not characterized by stability when conducting the (ADF) test. The estimated absolute values of the statistics were less than the critical ones for all levels of statistical significance, which requires accepting the null hypothesis and indicating the existence of unit roots, and after taking The first difference is that all variables are stable at the level of significance 5%, while the data were stable at the level using the (PP) test. In order to ascertain whether the variables are integrated of the first degree or not, the researcher tested the

degree of residual integration, and this is illustrated by the following table

Table (2) Results the stability test of the residual

the level			variables
PP	**ADF**	**deceleration**	
***0.0000	*****0.0000**	3	Z=resid

It indicates the stability of the variables at the level of significance 1%, 5% and 10%

Prepared by the researcher based on EVIEWS outputs

Through the results obtained and shown in Table (**1**), it was found that the residuals are characterized by quiescence when conducting the (ADF) and (PP) tests at the level. Unit roots, and therefore the residuals are integral of zero degree (0)I at a significant level less than 1%. In view of the obtained results and considering that the residuals are static at zero degree (0)I, the null hypothesis that the variables are not integrated cannot be rejected (Al-Sawai, 2011).

Correlation test between independent variables:

Table (3). The correlation coefficient between the independent variables

SOR	LIR	CRR	
0.018	0.23	1	CRR
0.04	1		LIR
1			SOR

Prepared by the researcher based on EVIEWS outputs
Table No. (2) shows the correlation coefficient between the independent variables of the banks under study, as it is clear

that there is no high correlation between the independent variables.

Model estimation:
The fixed effects model, the random effects model, and the Haussmann test were estimated. The Generalized least square (GLS) method was also used, which takes into account the heterogeneity and the autocorrelation of the error limit (Green, 2008). Where the table shows (3) Results of estimation of the fixed effect model, Table (4) results of random effect estimation, and Table (5) Results of Haussmann test.

Table (4) Results of the Fixed Impact Model

		Dependent Variable: RET		
		Method: Panel Least Squares		
		Date: 10/07/17 Time: 10:22		
		Sample: 2007 2016		
Prob.	**t-Statistic**	**Std. Error**	**Coefficient**	**Variable**
0.2020	1.283205	0.130878	0.167943	C
0.0705	-1.825676	0.331615	-0.605422	LIR
0.0363	-2.118452	0.542720	-1.149726	CRR
0.9283	0.090162	0.877647	0.079130	SOR
1.015632	F-statistic		0.117883	R-squared
0.444510	Prob(F-statistic)		0.001814	Adjusted R-squared

Prepared by the researcher based on EVIEWS outputs

Table (5) Results of the random effect model

		Dependent Variable: RET
Method: Panel EGLS (Cross-section random effects)		
		Date: 10/07/17 Time: 10:24
		Sample: 2007 2016

Prob.	t-Statistic	StdError	Coefficient	Variable
0.1634	1.401854	0.099779	0.139875	C
0.0313	-2.114370	0.198845	-0.420432	CRR
0.3477	-0.942586	0.226951	-0.213921	LIR
0.0491	-1.973988	0.205868	-0.406381	SOR
6.176550	F-statistic		0.453672	R-squared
0.000000	Prob(F-statistic)		0.405844	Adjusted R-squared

Prepared by the researcher based on EVIEWS outputs

Table (6) Haussmann test results

	Correlated Random Effects - Hausman Test		
Prob.	Chi-Sq. d.f.	Chi-Sq. Statistic	Test Summary
0.4076	3	2.898098	Cross-section random
WARNING: estimated cross-section random effects variance is zero.			

Prepared by the researcher based on EVIEWS outputs

In order to find out the appropriate model for estimation (fixed effect model or random effect model), the Haussmann test was estimated and through the results of the Haussmann test in Table (5) and through the chi-squared value and the probability of (.4076) which is greater than 5% and therefore accepted Nothingness hypothesis. Which states that the random effect model is appropriate to estimate the impact of each of the liquidity risk, solvency risk, and credit risk on stock returns, and rejecting the alternative hypothesis that states that the fixed effect model is appropriate for the estimation.

2- Hypothesis testing

In order to test the hypotheses, a random effect model was used between the independent variables (liquidity risk, solvency risk, and credit risk) and stock returns as a dependent variable based on Hausman's test. Table (5) shows the following:

-Through a value of (0.45), it was found that there is a statistically significant effect of financial risks (liquidity risk, solvency risk, and credit risk) on stock returns in Jordanian commercial banks, and therefore the main hypothesis is rejected, which states that there is no significant statistically significant effect. of financial risks (liquidity risk, solvency risk, and credit risk) on stock returns in Jordanian commercial banks, and accepting the alternative hypothesis that there is a statistically significant impact of financial risks (liquidity risk, solvency risk, and credit risk) on stock returns in commercial banks Jordanian

-There is no significant effect of liquidity risk on stock returns, where the value of the morale is (0.34) which is greater than 5%, and therefore the first null hypothesis is accepted which states that there is no significant effect of liquidity risk on stock returns and rejecting the alternative hypothesis that there is a significant effect of risk Liquidity over stock returns

-There is a significant and negative impact of the solvency risks of banks on stock returns, where the moral value reached (0.049), which is less than 5%, and the value of the solvency risk factor reached (-0.40), and therefore the second null hypothesis is rejected, which states that there is no significant effect of the risks The solvency of banks on stock returns and acceptance of the alternative hypothesis that there is a significant effect of the solvency risks of banks on stock returns

-There is a significant and negative impact of credit risk on stock returns, where the moral value reached (0.03) which is less than 5%, and the value of the credit risk factor has reached (-0.42) and therefore the third null hypothesis is rejected, which states that there is no significant effect of credit risks on the returns Stocks and accepting the alternative hypothesis that there is a significant effect of credit risk on stock returns

- It is clear from the value of F (6.176) and its significance (0.000000) that the model is valid for measuring the causal relationship between the independent variables and the dependent variable.

FINDINGS AND CONCLUSION:

The results show the following:

- Through a value of (0.45), it was found that there is a statistically significant effect of financial risks (liquidity risk, solvency risk, and credit risk) on stock returns in Jordanian commercial banks, and therefore the main hypothesis is rejected, which states that there is no significant statistically significant effect. of financial risks (liquidity risk, solvency risk, and credit risk) on stock returns in Jordanian commercial banks, and accepting the alternative hypothesis that there is a statistically significant impact of financial risks (liquidity risk, solvency risk, and credit risk) on stock returns in commercial banks Jordanian

-no significant effect of liquidity risk on stock returns, where the value of the morale reached (0.34) which is greater than 5%, and therefore the first null hypothesis is accepted, which states that there is no significant effect of liquidity risk on stock returns, and rejecting the alternative hypothesis that there is a significant effect of liquidity risk on stock returns. This means that the liquidity risks that commercial banks are exposed to do not affect the returns on their shares, and this matter is not compatible with the management of financial resources in commercial banks; It is known that the work of banks depends on the choice between profitability or safety, of which liquidity is one of its most important components. The preference for reducing liquidity risks means increasing the proportion of liquid assets from the bank's total assets, which means reserving more resources for investment and thus reducing the bank's profitability, which is reflected in the decrease stock returns.

This result differed with the result of a study (Makanzi et.al, 2016).

- There is a significant and negative impact of the solvency risks of banks on stock returns, where the value of the morale is (0.049), which is less than 5%, and the value of the solvency risk factor has reached (-0.40), and therefore the second null hypothesis is rejected, which states that there is no significant effect of the risks The solvency of banks on stock returns and acceptance of the alternative hypothesis that there is a significant effect of the solvency risks of banks on stock returns. This means that the high risk of solvency in commercial banks leads to a decrease in the returns on their shares. The solvency is the ability of banks to meet their obligations and achieve expansion and growth in the short and long term. This result is consistent with the financial logic; The rise in the solvency of banks means that they gain more confidence in the banking sector, and thus gain more sources of funds, especially deposits, which means an increase in funds destined for investment, which is reflected in an increase in returns. This result agreed with the result of a study (Bataynaeh, 2015).

-There is a significant and negative impact of credit risk on stock returns, as the morale value (0.03) which is less than 5%, and the value of the credit risk factor has reached (-0.42) and therefore the third null hypothesis is rejected, which states that there is no significant effect of credit risk on stock returns and accept the alternative hypothesis that there is a significant effect of credit risk on stock returns .

This means that the high credit risk in commercial banks leads to a decrease in the returns on their shares. The credit risk is represented in the ability of customers to pay their obligations to the bank, and this result is financially logical; A higher degree of credit risk means a higher probability of customers being

unable to pay, and consequently a higher ratio of bad debts or doubtful debts to the total payables. Bank stock returns. This result agreed with the result of a study (Makanzi et.al., 2016).

- It is shown by the value of F (6.176) and its significance (0.000000) that the model is valid for measuring the causal relationship between the independent variables and the dependent variable.

RECOMMENDATIONS:

Based on the results obtained through this study, the following recommendations can be made:

- It is necessary for commercial banks to focus on the optimal choice between profitability and liquidity in order to achieve acceptable returns in light of the desired level of liquidity risk.

- The need for banks to work on improving the level of financial solvency because of its clear reflection on the confidence of customers, especially depositors, which means an increase in the money flowing to the bank and thus on investments and stock returns.

- The need to reduce credit risks by studying the solvency of customers (debtors), and by requesting more guarantees to ensure the reduction of the probability of default in payment, and thus the erosion of the bank's returns as a result of this matter.

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