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BANK CREDIT RISK AND WAYS TO MEASURE IT: AN ANALYTICAL STUDY OF THE IRAQI INVESTMENT BANK

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Abstract
One of the most important measures that allow achieving effective competition for the bank within the banking competition market is to reduce the number of losses that banks are exposed to as a result of the banking risks to which they are exposed in general, and the bank follows scientific methods and methods in measuring and disclosing these risks and trying to control them because as it is known that Banking activity is surrounded by several risks that the bank cannot eliminate, but it can be reduced, and one of these risks facing banking activity is "bank credit risk", so this research aims to study the accounting measurement process for bank credit risk and present the results that are reached, which represent useful information. to users of this information.

Introduction
The banking risks that banks are exposed to are among the threats that expose banks to financial failure and thus bankruptcy, as banks must work to reduce the impact of these risks on them because these risks cannot be avoided, but the losses resulting from them can be mitigated by following scientific and logical methods in the process Measuring and hedging these risks according to estimates of these potential losses, as banks today face competition challenges that have become of a global nature and that resulted from a set of variables in the international arena, such as the trend towards liberalizing international trade in financial services, the full trend towards information technology,[1] obligating commercial banks The necessity of keeping pace with developments, and preparing itself at all levels, by always working on training human cadres, modern management systems, developing accounting systems, especially the technological infrastructure, and searching for possible means to reduce the costs of banking services and achieve high returns for the bank.

Research Methodology

Research importance

The importance of the research stems from the fact that it focuses on the need for an effective banking system by measuring the bank credit risks to which the bank is exposed, as well as the accounting disclosure of these risks in a way that helps users of the accounting information resulting from this system from assessing the bank and the extent of its exposure to financial default or insolvency that the bank may face. As a result of the credit risk to which he is exposed.

Research objectives

The research objectives are to study the process of accounting measurement of bank credit risks and to present the results that have been reached, which represent useful accounting information to the users of this information.

The search problem

The problem of the research is the absence of an effective system for measuring bank credit risk in commercial banks, which leads to the weak ability of the bank to take appropriate decisions in the process of determining allocations for credit risks (provision for doubtful loans) to hedge credit risks, as well as the lack of sufficient accounting information about Credit risk in the annual reports of banks.

Research Hypothesis

The research hypothesis stems from the saying that measuring bank credit risks leads to a reduction in these risks and the bank will not be exposed to financial failure.

The concept and types of risk

There is no specific concept of risk as there are many concepts for this term, the Banking Regulation and Risk Management Committee emanating from the banking sector in the United States of America (Financial Services Round Table, FSR) defined risk as (the possibility of loss occurring either directly through losses in business results or Capital losses or indirectly through the presence of restrictions that limit the bank's ability to achieve its goals and objectives, as such restrictions lead to weakening the bank's ability to continue providing its business and practising its activities on the one hand and limit its ability to exploit opportunities available in the work environment On the other hand)[2].

(Horcher) believes that risk is (the possibility of losses due to the occurrence of events such as a change in market prices and other events with a low probability of occurrence that may lead to large losses, and the risk is particularly problematic because of its unpredictability, in other words, the risk is a Possible change in profits[3].

Types of banking risks

First, Financial risks:

It includes the risks related to the management of all assets and liabilities related to banks. This type of risk requires continuous control and supervision by the bank departments, according to the direction and movement of the market, prices, commissions, economic conditions, and the relationship with other relevant parties. Banks achieve, through the risk management method, a profit or a loss, and the financial risks are divided into[4].

1. **Credit risk:**

Credit risk always relates to loans, overdrafts or any credit facilities offered to customers. Risks usually arise when the bank grants customers loans that are due at a specific time in the future, and the customer fails to meet his payment obligations at the time of the loans.

Credit risk can be defined as not paying interest, principal, or both securities and loans on time.

Elements of credit risk:[5]

A. Debtor:

Debtor means the person requesting credit who pledges to pay at a specific time, i.e. repay the loan with interest, and proves his ability to repay the credit through his management of the project, as well as the extent of his good faith in returning the principal of the credit with the interest accrued on it.

B. The bank:

The bank is the second element of credit risk and represents an important party to the lending process, as it directly affects the credit risk of its loans, whether it is a negative influence that increases the risk or a positive one to reduce it.

C. Credit:

Credit is the third element of credit risk, as it is the most important activity than the activities of other commercial banks because loans provided to customers represent the most important part of the assets of every commercial bank.

Types of bank credit risks:[6]

A. Negative risks: These are the risks arising from the possibility of the borrower not paying his obligations, i.e. delaying payment in a way that is not under the terms of the loan.
B. Securitization risks: Securitization means converting loans into negotiable financial instruments, i.e. transferring debts from basic loans to other lenders. The risks arise from the inability of new borrowers to repay.
C. Concentration risks: These risks affect organizations with non-diversified production in terms of sectors and regions. Changes that occur in the market may adversely affect the sector or the entire industry, and the diversified (financial) institution within one sector will suffer if things go wrong in that. Sector, a bank that gives credit to a large number of borrowers in a particular industry is exposed to the risk of concentration in the industry.
D. Country risks: International lending includes international risks related to the economic, political or social conditions of the country of origin. These risks become more clear when lending to foreign governments. It is represented in the countries' refusal to pay the payments on their due dates specified in the loan agreement. Thus, the failure to pay represents a country risk.

2. Liquidity risk

Banks and depository institutions are exposed to liquidity risks due to the scarcity of cash, as business requires the need to cover withdrawals from deposits and provide credit to creditworthy customers. For example, a bank that cannot secure cash on time will lose several customers and face a loss of revenue. [7]

3. Market risk

These reflect the factors that affect investments and fall within a scope outside the management of the project or the investor, but they are risks specific to economic changes and market impact on investment, and the most important types of these risks are (changes in interest rates and exchange rates, inflation and economic depression, and political and social risks).[8]

Types of market risk

A. Interest rate risk

It is the risk resulting from the bank's exposure to losses as a result of adverse movements in interest rates in the market, which may have an impact on the bank's returns and the economic value of its assets, as defined by Ross as the effect of changing the interest rate on the bank's profit margin [8].

B. The risk of fluctuations in exchange rates

It means the loss resulting from the decrease in the value of investment and assets as a result of the decrease in the value of the foreign exchange held by the bank. These are the risks resulting from dealing in foreign currencies and the occurrence of fluctuations in currency rates, which requires knowledge in full and adequate studies on the causes of price fluctuations.

4. Inflation risks

These are the risks resulting from the general rise in prices and then the decrease in the purchasing power of the currency [9].

5. Reputational risk

This risk arises as a result of the failure in the proper operation of the bank in a way that is not in line with the relevant regulations. Reputation is an important factor for the bank, as the nature of the activities performed by banks depends on the good reputation of depositors and customers [10].

Second, Operational risks

This type of practical risk includes the risks arising from the daily operations of banks, which are the risks of losses resulting from the insufficiency or failure of internal processes, individuals and systems Operational risks include the following:[11]

1. Financial fraud (embezzlement)

Cash embezzlement is one of the most common embezzlement among employees and represents the losses faced by banks as a result of cases of embezzlement of money deposited in banks or traveller's checks from branches and automated teller machines. The process of recovering those losses resulting from embezzlement is complex, difficult and sometimes impossible. This calls for the need to design embezzlement detection programs and develop more effective measures to reduce its occurrence[11].

2. Forgery

Operational losses resulting from forgery are represented in forgery of bank checks or forgery of negotiable papers such as letters of credit or forgery of legal agencies as a result of the inability of employees working in banks to sufficiently verify the authenticity of the documents submitted to them by customers before starting to pay their value.

3. Counterfeiting coins

The development of technology in most countries has helped to increase the incidence of counterfeiting currencies, as the United States of America estimated the size of the counterfeit dollar currency at about one billion US dollars, denominations of 100, 50, 20 dollars, and it is traded outside the United States of America, as it is difficult to detect this.

4. Theft and burglary

The increased use of security safety standards in banks has led to a reduction in cases of theft and robbery, and one of the most important safety standards is the use of advanced warning systems, the use of safe rooms and the use of joint responsibility to open safes with secret numbers and distribute them among more than one person.

5. Electronic hazards

These crimes are among the most common crimes and are represented in the following main areas: ATMs, credit cards, points of sale, and automated data exchange.

6. Occupational hazards

It includes professional errors, negligence and risks associated with legal responsibility, in which a distinction must be made between professional risks that affect the board of directors from those affecting the same bank.

7. Strategic risks.

These are the risks resulting from the bank taking a decision that may be wrong that leads to the bank losing or losing gains through the alternative opportunity or the management's failure to make a decision that could have led to gains for the bank or warded off risks to which the bank is exposed.[12]

8. Compliance risks, legal and regulatory risks

These are risks that result from the possibility of violating or not applying the regulatory laws and rules, and the risks of compliance resulting from the violation of the application of laws and rules, which negatively affect the bank and lead to the bank being subjected to penalties in the form of financial penalties or deprivation from practising a specific activity.

Measuring credit risk

The measurement of credit risk depends mainly on the accounting information that appears in the basic financial statements and the attached statements in the annual reports of the banks. Through this accounting information, indicators are reached that indicate the bank credit risks that banks are exposed to.

The most available models for application in banks are those that depend on indicators that help banks build a measurement model that they adopt in measuring bank credit risk, and among these indicators are the following.[13]

1. Non-performing loans index = total non-performing loans / total loans

A decrease in this indicator indicates a decrease in credit risk, given the decrease in non-performing loans to the total loans.

2. Bad loans index = bad loans / total loans

A decrease in this indicator indicates a decrease in credit risk, given the decrease in bad loans to the total loans.

3. Credit risk allowance indicator = credit risk allowance / total loans

The rise in this indicator indicates a good consideration that the bank took the appropriate precaution to face these risks in the event of their occurrence.

4. Short-term loans index = short-term loans / total loans

An increase in this indicator indicates an increase in credit risk.

5. Provision for doubtful loans = allowance for doubtful loans / total loans

The rise in this indicator indicates a good consideration that the bank took the appropriate precaution to face these risks in the event of their occurrence.

It can be said that credit risk is one of the main financial risks facing banks, and here the efficient banking system in general and the financial and accounting system, in particular, plays an important role in controlling and controlling these risks because they represent a critical element in determining the profitability of banks. And that when measuring bank credit risk, banks should measure liquidity risk at the same time because each of them has an impact on the other, and in general, banking risks are interrelated with each other because one causes the other, such as credit risk and liquidity risk. The indicators for measuring liquidity risk that depends on the financial statements of the annual reports of banks and which can be applied by banks are the following:

1. Liquidity risk = cash and bank balances / total assets

The rise in this indicator indicates a decrease in liquidity, considering that this reflects the increase in cash balances, whether in the fund or with banks, which the bank faces its various obligations.

2. Liquidity risk = cash and short-term investments / total assets

An increase in this indicator indicates a decrease in liquidity risk, given that it is possible to increase cash and investments with which the bank faces its various obligations.

3. Liquidity risk = total loans / total deposits

An increase in this indicator indicates a high liquidity risk, given that this increases the percentage of loans that cannot be liquidated when liquidity is needed.

4. Liquidity risk = current assets / total deposits

An increase in this indicator indicates a decrease in liquidity risk because it reflects the increase in current assets with which the bank faces its other obligations.

Indicators used to measure bank risks

Bank credit risk is one of the most important risks faced by commercial banks. It arises from the possibility of the customer not paying his obligations on their due date, which leads to the banks being exposed to losses as a result of the customer's non-payment. It is known that banks cannot cancel these risks, but they are mitigated by following an effective credit policy based on criteria for granting bank credit, which works to mitigate these risks as well as the effective structuring of the loan.

It is one of the most important indicators used in measuring the risks of the bank:

1. The indicator of total short-term loans/total current assets, as the rise of this indicator, indicates the high risk of bank credit due to the rise in short-term loans that the bank should face in the event of non-payment by the borrowing customers on their due dates. Where the Iraqi Investment Bank recorded the highest rate in 2008, reaching .512%.
2. Indicator of non-performing loans (late payments) / short-term loans Most of the loans granted by Iraqi commercial banks are short-term loans, which constitute the largest percentage of the total loans and advances granted by commercial banks. The Investment Bank of Iraq recorded the highest percentage of loans in 2008. Non-performing loans amounted to 2.05 of the total short-term loans, which is double the short-term loans, which means that there is a high credit risk for the Investment Bank of Iraq.
3. Allowance for doubtful loans / non-performing loans, as the high of these ratios, is good, that is, the larger the ratio, this means that the banks have taken into account the realization of these credit risks and thus hedge to confront them when they occur, as we find that the Investment Bank of Iraq was almost 100% Of the non-performing loans for the research years, except for the year 2005, when it was 1.6 times, and this indicates that the loans exceeded the maturity period for more than one year, so the provision amounted to 100%.
4. The indicator of the allowance for doubtful loans / bad loans, as this indicator, shows the coverage of these loans written off and their amortization through the allocation to hedge these risks, as we find that the Iraqi Investment Bank, the ratio of the allocation to the bad loans was the allocation covering these loans for the research years 2005, 2007 and 2008, as ranged (1.2, 7.2 and 2.6), respectively.
5. Bad loans index / total loans, the Iraqi Investment Bank represented 3% for the year 2005, 15% for the year 2006, 3% for the year 2007 and 36% for the year 2008. Much more, and this is an indicator of the credit risks faced by the bank as a result of writing off loans from the total loans.

Conclusions

1. There are some credit bases and standards that are adopted by banks to grant bank credit to the customer, in a way that guarantees the banks to recover their money, and there are many types of credit facilities offered by banks to their customers, but the most important and most important type of facilities is cash credit.
2. Banks are exposed to two main types of risks, which are financial risks and operational risks. Credit risk is one of the financial risks that banks are exposed to resulting from the borrower's failure to pay according to the contract.
3. The banking crises that banks face, especially the credit risks that expose banks to financial crises that may lead to bankruptcy.
4. Banks take several measures to treat their problems before reaching a state of bankruptcy. One of these measures is to resort to the central banks, which take some emergency means to save the banks from these crises as soon as possible, and restructure the bank and merge the banks.

5. The most important risks that lead to financial default are a credit risk. The credit risk is the customer's failure to pay the loan amount or interest (or both) and the concept of financial default reflects the disorder of the relationship between the borrowing customer and the bank dealing with it, the customer's financial default. It is due to poor credit decision-making by the competent department that may cause the bank to lose its assets and lose the principal and interest of the loan.

Recommendations

1. Banks should have the ability and ability to diagnose, measure and treat risks early, and this is achieved through the presence of an information system that enables management to achieve its goal, which is to measure credit risk, as well as the availability of procedures to monitor the financial performance of customers.
2. The necessity of the availability of competent and competent banking human cadres to measure credit risks and apply models for predicting financial failure, as well as qualifying workers in the field of banking risks.
3. The necessity of noticing the growth rates of non-performing loans and working to reduce them to the percentages that do not pose a threat to the bank.
4. To assess the efficiency of debts, non-performing loans should be analyzed to identify the reasons that led to their default to avoid them in the future.
5. The possibility of establishing a specialized department to follow up on the credit granted, independent of the credit department, whose mission is to follow up on the borrower customer from the date of granting him credit facilities, or not granting him any facility except in return for an acceptable guarantee and after obtaining the fundamental approvals to grant him that facility.

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