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The impact of banking risks (liquidity risk) on banking stability: an analytical study of a sample of banks listed in the Iraqi market Securities for the period (2010-2022)

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Abstract : The research shows the impact of banking risks represented by liquidity risks on banking stability. For a sample of banks listed on the Iraq Stock Exchange. . The research was conducted on (3) commercial banks listed on the stock market for the period (210-2022). The research relied on the annual financial statements of sample banks searched. Financial indicators were also used to measure the research variables. The research relied on two indicators of liquidity risks (cash in banks / total deposits, loans and advances / total deposits). The research reached a set of conclusions, the most important of which is: the existence of an inverse relationship between liquidity risks and banking stability. The research also showed that liquidity risk has a clear impact on banking stability. The research concluded with a set of recommendations, the most important of which are: maintaining high and good levels of banking stability. Through risk management because of its an important role in raising the level of stability and thus reducing the severity of the impact of the risks to which the commercial bank is exposed.

Search keywords: Liquidity risk, banking stability

Introduction: The banking sector represents an important center in the economic and financial system because of its significant impact that cannot be ignored in the field of economic development through the provision of banking services of all kinds Savings collect most of society's contributions and grant credit for all economic and investment activities. Banking risks are considered one of the biggest challenges facing banks .As the risks to which commercial banks are exposed are many and varied, liquidity risks are considered one of the most important risks because of their significant impact on the size of the loss to which the bank is exposed if they occur. These risks have increased, and it has become obligatory for bank management to deal with potential risks, search for the causes of their occurrence, and try to avoid them. And enhancing the positive effects and trying to develop them, as well as focusing on the importance of achieving good levels of banking stability, which is a basic foundation that banks aim to achieve when carrying out banking operations, in light of the developments taking place in the economic and financial field. . Banking stability is achieved when commercial banks are able to confront risks and any negative effects, as well as impose supervision on banks to maintain the integrity of the financial position and achieve a sound banking sector that preserves the rights of investors and depositors.

Research Methodology

1-Research problem :

Banking risks are among the most important challenges facing bank management, as dealing with these risks is not an easy matter due to structural and organizational problems and the major challenges facing management Iraqi banks, which represent the instability of the economic and political situation, which in turn led to the instability of the investment environment, and thus the weak connection of Iraqi banks to the banking system. Global, which led to the decline of the Iraqi banking sector from keeping pace with banking developments and changes at the global level, and therefore a pivotal problem can be identified stating ((Is there an impact of banking risks (liquidity) on the banking stability of the banks in the research sample))

2-The importance of research:

1- Research and investigate the importance of banking risks and their types in achieving banking stability and the variation in the level of this impact from time to time.
2- Taking note of the importance of banking stability, which has become a goal that banks seek to achieve, especially after banks have recently been exposed to repeated financial crises.
3- Knowing banking risks and how to address and manage them is considered one of the main factors in the success and prosperity of banking systems and achieving their goals, as the inability to manage risks leads to loss of returns and failure to achieve their strategic goals.

3-Research objective:

The research aims to shed light on a cognitive and academic aspect of banking, namely banking risks and their role in achieving banking stability by explaining the impact of banking risks and the policy adopted in the commercial banks of the same study in enhancing and reducing risks.

4-Research hypotheses:

1-Is there an effect of liquidity risk (bank cash index to total deposits) on the banking stability of the banks in the research sample?

2-Is there an effect of liquidity risk (an indicator of advances and loans to total deposits) on the banking stability of the banks in the research sample?

5-The research community and its sample:

The banking system consists of commercial banks only, numbering (23) banks. A sample of (3) commercial banks was taken.

6-Spatial and temporal limits of research:

Spatial boundaries: Iraq Stock Exchange

Time limits: The research period was set from (2010) to (2022).

7-previous studies

1-Construction Study, Al-Samara, 2020

Researcher's name	Aintab Make Al-Banana, Saimaa Hassan Al-Samara
Study Title	Analysis of banking risks and their reflection on credit capacity using the Altman model - Master's thesis
Purpose of the study	Identify banking risks and determine the type of relationship between them and the credit capacity of the study sample.
The study sample	The study sample consisted of 2 banks for the period (2005-2017)
The most important results of the study	The study found that there is no statistically significant impact or correlation between banking risks and credit capacity
Area of benefit from the study	Strengthening the theoretical aspect of studying the subject of banking risks, as well as benefiting from and accessing sources of books and research.
The most important similarities	Study of banking risks.
The most important differences	The dependent variable, as well as the study sample, the statistical methods used, and the results.

2- Al-Subsidy study, 2022

Name of the researcher	Weyden Sawed Abdel Said Al-Subsidy - Master's thesis
Study Title	The impact of some financial variables on banking stability: a study in the Iraqi banking sector for the period 2018-2020.
Purpose of the study	Explaining the most important financial policy variables and measuring their impact on banking stability and its indicators. Explaining the importance of banking stability by studying and analyzing its indicators and their impact on the stability of the banking sector during the period of the study and knowing the extent of the impact of financial policy variables in achieving banking stability in Iraq.
The study sample	The Iraqi banking sector for the period 2010-2018
The most important results of the study	Internal public debt is the most influential variable. Internal public debt has an inverse relationship with the indicators of profitability and exchange rate risk. As internal public debt increases, this negatively affects these indicators, and a direct relationship with the capital adequacy index, asset quality and liquidity, while the impact of revenues and General expenses are limited to the indicators (capital adequacy and profitability), and the impact of public expenditures is limited to the capital adequacy indicator.
Area of benefit from the study	Providing the study with theoretical concepts related to banking stability.
The most important similarities	The dependent variable represented by banking stability
The most important differences	The independent variable, statistical methods, and the duration of the study.

The first axis

Theoretical aspect: banking risks and banking stability

First: the concept of risk

Many people have been exposed to the definition of risks, and their definitions have differed according to the environment to which each researcher belongs, the goal he seeks to achieve, and the angle from which he looks at the phenomenon under study. Despite the differences in opinions about defining the concept of risks, we will present some of these concepts as follows: (Abu Shah, 2013: 18**)**

- The state of uncertainty surrounding future events and results (Berge, 2010: 8)
- The possibility of events or a series of events occurring during a specific period of time that negatively affects the achievement of a specific goal. (Haney et.al: 2012)
- A relative measure of the degree of volatility of cash flow returns that will be obtained in the future. (Al-Hanoi, Al-Sharia، 2020)

Second: The concept of banking risks

- It is the situation that all business institutions face in carrying out their activities. However, this situation is considered more profound in financial institutions, especially banking ones. This is due to the nature of the activity of these institutions, which is based on trading in the funds of others. And work to maximize its profits and increase the strength of its financial position by mitigating the risks associated with the state of uncertainty in its activities when beginning to provide its services. (Al-Hay Bad, 2014)
- The material and moral losses that the bank bears as a result of carrying out a specific activity with volatile and irregular returns, and thus the actual returns achieved differ from the expected returns that can be achieved from that activity (Herbal, 2012,)

Third: Types of banking risks

1- Liquidity Risk

Liquidity is the main driver of any economic activity and the backbone of economic and development projects. It means cash and the extent of the possibility of converting an asset into cash quickly and without losses, as the goal of maintaining the liquidity of the asset into cash quickly and without losses, as the goal of maintaining liquidity of the asset is to obtain... On the possibility of facing obligations that may arise once they are expected (Hajji, Mohammad, 2020: 3), Liquidity risk is defined as the bank's inability to provide loans in a timely manner or fulfil its obligations. (Abdullah, 2017: 22) Liquidity has several types, including:

A- Financing liquidity risks: Financing liquidity risks appear when the bank is unable to face expected and unexpected cash flows efficiently, without affecting the daily operations carried out by the bank or the bank's financial position in general.

B- Market liquidity risks: Sometimes it may be difficult for the bank to dispose of some of the assets it holds, whether by sale or according to prevailing market prices, and thus it is difficult to liquidate them.

C- Accidental liquidity risks: They arise from sudden withdrawals that the bank may be exposed to from customer deposits or sudden withdrawals from accounts that enjoy credit facilities granted to some customers. (QANQALJI, 2010: 20)

2- Credit Risk

Credit is considered one of the most attractive areas of investment for banks and is mainly represented by the loans that banks grant to their customers. Credit means the trust that banks place in their customers by making an amount of money available to them to use for a specific purpose during a specific period and to be repaid under certain conditions in exchange for an agreed-upon financial return (Muhammad, 2011). :11) As for credit risk, it is considered one of the most important risks to which commercial banks are exposed, as it represents about 60% of the total risks. It arises from the possibility of the inability or desire of the borrower or the other party to fulfill its financial obligations, represented by all or part of the interest due or the principal of the loan, or both. . (Al-AZZAWI, 2010: 141)

3-Market Risk

It is defined as the risks to which profits or capital are exposed, as a result of changes in the market value of all securities held by the bank. (Huddinge and Rose 2008:215).

4-Bank insolvency Risk

Financial solvency is defined as the bank's net balance, that is, the difference between the value of its uses and its liabilities. Therefore, we say that the bank enjoys financial solvency if its uses exceed its liabilities. The existence of solvency risks is due to the inadequacy of capital to absorb the losses that may occur, and thus these losses affect depositors and creditors. Therefore, commercial banks are concerned with the adequacy of capital for banks, as it is considered a guarantee for the rights of depositors and creditors ((Al-Malawi, 2013: 21))

5- Operational Risk

These are the risks resulting from a weakness in internal control or the failure of the bank as a result of inefficiency or failure of internal procedures due to systems or individuals or due to external circumstances (235: 2012, Mamandi)

6- Political Risk

It is represented by the effects resulting from violating legislation and laws in the countries in which banks operate, as banks must be fully aware and have accurate knowledge of the laws and regulations of the country in which they operate in order to limit or reduce the impact of these risks. These risks may arise when violating established laws, rules and regulations, especially those related to combating money laundering, or when the bank violates the capital adequacy ratio by maintaining the minimum capital adequacy ratio (Narayan & MAHADEVA: 2016: 1218).

Factors affecting banking risks

1- Fluctuation of external factors: Fluctuations and changes in exchange rates and interest rates have an impact on the institutions' budget. It may also turn its profits into losses and also affect the bank's treasury, and therefore because the bank is sensitive to changes in interest rates.

2- -Legal and supervisory changes: These changes are considered supportive of sound credit management standards, and the establishment of formal oversight of the risk center reflects the quality of standards that the bank's management is committed to applying.
3- Some of the bank's financial activities do not appear in the balance sheet in the form of liabilities or assets despite having a clear impact on the banks' returns and risks. These are those activities that generate profits or expenses without owning assets that create liabilities.
4- Technological developments: Developments occurring in the field of information technology affect the comprehensive process that includes determining the measurement and management of risks, as technology is considered one of the main factors that contribute to determining the advantages of competition between different institutions.
5- Competitive pressures: The competitive environment in which banks operate directly or indirectly affects risks, and therefore banks prepare themselves to face competition. (Hayat, 2014: 49) Competitive pressures: The competitive environment in which banks operate directly or indirectly affects risks, and therefore banks prepare themselves to face competition. (Hayat, 2014: 49) Competitive pressures: The competitive environment in which banks operate directly or indirectly affects risks, and therefore banks prepare themselves to face competition. (Hayat, 2014: 49) Competitive pressures: The competitive environment in which banks operate directly or indirectly affects risks, and therefore banks prepare themselves to face competition. (Hayat, 2014: 49)

Measuring banking risks

Indicators for measuring liquidity risk

The most important indicators used to measure and estimate liquidity risks in commercial banks are**:**

-Total cash in banks to total deposits: An increase in this indicator indicates a decrease in liquidity risks, given that this reflects an increase in cash flow whether in the fund or with the bank, and thus an increase in the bank's ability to perform its agreed-upon financial obligations on time.

Index of total cash in banks to total deposits = (bank in total cash)/(total deposits) *100%.....1
(Khaddar, Passim, 2015: 208)

-Total loans to total deposits (employment ratios):
An increase in this indicator indicates an increase in liquidity risks since this increases the proportion of loans that cannot be easily liquidated when liquidity is needed. On the other hand, an increase in the ratio of loans to deposits affects the bank's position and leads to an increase in new sources of cash to meet new lending requests.

Total loans to total deposits index = (total loans)/ (total deposits) *100%...2
(Al-Rubies, Raid, 2011: 177)

Banking stability

The banking system is the most important component of the financial system, and it is the primary financier of economic development and maintaining its stability. It is considered an important pillar in raising the ability of banks to perform their tasks and this is reflected in the provision of banking services, represented in providing liquidity and providing financial credit, through which the financial system in the country is held together. Able to confront internal and external shocks and the presence of a sound banking system is one of the important pillars of the safety of the banking system as a whole and the economic sector in general**.**

First: The concept of banking stability

The concept of banking stability is new compared to monetary and economic stability. Many international and regional bodies have addressed it, in addition to economists and researchers, to the point that they have not reached a specific and widely accepted definition. This is why the economic literature includes multiple concepts, but it mostly refers to the absence of banking crises and the efficient distribution of financial resources with the ability of the banking sector to withstand shocks (Miguel & Charles 4: 2009).

Second: The importance of banking stability

1- Banking stability is important in promoting economic development.
2- Banking stability has a major role in increasing the stability of the exchange rate and the stability of the general level of prices.
3--Contributes to implementing best banking practices.
4-An important factor in achieving political stability for countries. (Khalid, 2017:3)

Factors Affecting Banking Stability

Factors Affecting Banking Stability

1- Financial liberalization: Granting independence to banks and financial institutions and abolishing all controls and restrictions by the monetary authority leads to the banking system being exposed to great risks, and thus instability. (Gonium, 2019: 334)

2- Financial solvency: It is one of the important indicators that indicate the soundness of the bank's financial position, because of its close connection to the banking business. It also indicates that the bank possesses capital with which it can confront risks, in addition to attracting deposits that lead to profitability and banking growth, as indicated by the bank's operational sustainability, especially when facing temporary shocks. Hamid: 2012:33)
3- Monetary instability: Monetary stability is very important for the banking sector. The imbalance that occurs at the price level and high inflation rates creates a state of instability, and the opposite happens if the banking system contributes an effective role in reducing inflation waves. (Ream, 2017: 32)

The impact of liquidity risk on banking stability

Liquidity is the ability of banks to fulfil their current obligations, and failure to fulfill the bank's daily obligations is the inability to borrow from customers and failure to pay net obligations. Liquidity is the ability to provide funds to fulfill contractual obligations, and it has three dimensions: (risk - cost - and the time dimension) and is concerned with Commercial banks have more liquidity than other financial institutions, because a large portion of their liabilities consists of short-term liabilities, and the ratio of their cash liabilities to their total resources is very large." Liquidity risks are considered one of the most important risks facing banks, as liquidity is one of the most important features that distinguish commercial banks from other business institutions. Therefore, the mere rumour that the bank does not provide liquidity is enough to shake the confidence of depositors and push them to withdraw their deposits. There are factors and reasons that lead to increased exposure. The bank leads to liquidity risk and thus affects the stability of the bank, including the unfair distribution of the bank's assets for uses that are difficult to convert into liquid balances and poor planning for the bank to obtain sufficient liquidity to meet its obligations, in addition to the severe crises to which the financial markets are exposed, changes in the economic conditions of the country, and this It leads to a loss of the ability to pay obligations.

The second axis

Liquidity risk analysis

For the research sample banks for the period (2010-2022)

Liquidity risk represents one of the most important risks that affect the banking stability of banks, given that liquidity risk is inversely related to liquidity ratios that reflect the amount of cash held by banks or assets that can be liquidated quickly and with minimal losses, and given that there is more than one indicator to measure banks' liquidity. The amount of liquidity was found by dividing the cash in banks by the total deposits, and the equation below was used for the purpose of measuring the liquidity of the banks in the research sample.

1- Liquidity index = cash in banks / total deposits 1

Table (1) Liquidity index for sample banks

Average for all banks	Iraqi Investment Bank	Middle East Bank	Commercial Bank of Iraq	Drains the years	
0.783	1.075	0.742	0.533	2010	.1
0.956	0.832	0.731	1.305	2011	.2
0.933	0.821	0.753	1.226	2012	.3
1.188	0.817	0.764	1.984	2013	.4
1.157	1.384	0.977	1.111	2014	.5
1.325	1.389	0.981	1.606	2015	.6
1.914	1.678	1.329	1.058	2016	.7
1.302	1.568	1.322	1.016	2017	.8
1.243	1.488	1.083	1.158	2018	.9
1.243	1.438	1.171	1.714	2019	.10
1.341	1.329	1.151	1.544	2020	.11
1.197	1.311	1.161	1.119	2021	.12
1.035	1.151	1.041	0.913	2022	.13
1.173	1.252	1.015	1.252	Arithmetic mean	.14

Source: Prepared by the researcher based on annual reports

The results in Table (1) showed the highest and lowest amounts of the liquidity index for each bank separately during the research period. The highest value for the liquidity index of the Commercial Bank of Iraq was in 2013, reaching 1.984. Therefore, it indicates a decrease in the risks to which the bank is exposed as a result of increasing cash on hand by a greater percentage than the total deposit. The lowest amount for the liquidity index was in 2010, when it reached (0.533), which indicates an increase in liquidity risks to which the bank may be exposed as a result of the increase in deposits and the decrease in cash on hand. The average liquidity index for the Commercial Bank of Iraq during the research period was (1.252)

The results of the analysis of data from the Middle East Investment Bank also showed that the highest amount for the liquidity index of (1.329) was reached during the year 2016. Therefore, this indicates a decrease in the liquidity risks to which the bank is exposed. This is due to the bank management providing the necessary liquidity to confront sudden withdrawals by relying on revenues generated from currencies. And other financial investments, as well as revenues generated from buying and selling foreign currencies. The liquidity index also reached its lowest level during the year 2011, reaching (0.732), which indicates an increase in liquidity risks that the bank may be exposed to as a result of a decrease in cash on hand in exchange for an increase in the size of the deposit, as well as the average liquidity index for the Middle East Bank during the research period (1.015).)

The results showed that the liquidity index of the Iraqi Investment Bank reached its highest level during 2016, reaching (1.679), which indicates a decrease in the liquidity risks to which the bank is exposed as a result of the increase in the volume of cash in the fund. The lowest amount for the liquidity index was reached during the year 2013, as It reached (0.817), and therefore this indicates an increase in liquidity risks to which the bank is exposed as a result of a decrease in current assets, including money, as a result of a decrease in short- and long-term funding sources. The average liquidity index of the Iraqi Investment Bank during the study period was (1.169).

Second: The index of total loans to total deposits

The index of total loans to total deposits was calculated by dividing the total loans to total deposits, and the equation below was used to impose the measurement of this index for the banks in the research sample for the period (2010-2022)

Index of total loans to total deposits = total loans / total deposits x 100%...2

Table No. (2) Index of total loans to total deposits for the banks in the research sample

Average for all banks	Iraqi Investment Bank	Middle East Bank	Commercial Bank of Iraq	Drains the years	
0.252	0.447	0.307	0.004	2010	1
0.239	0.514	0.194	0.01	2011	2
0.325	0.781	0.174	0.021	2012	3
0.237	0.478	0.192	0.041	2013	4
0.221	0.376	0.263	0.026	2014	5
0.207	0.304	0.246	0.071	2015	6
0.296	0.275	0.374	0.241	2016	7
0.286	0.361	0.268	0.231	2017	8
0.295	0.461	0.193	0.232	2018	9
0.392	0.642	0.314	0.221	2019	10
0.455	0.471	0.304	0.59	2020	11
0.267	0.607	0.023	0.171	2021	12
0.173	0.267	0.177	0.077	2022	13
0.280	0.461	0.233	0.148	Arithmetic Mean	14

Source: Prepared by the researcher based on annual reports

The results in Table (2) showed the highest and lowest index of total loans to total deposits for each bank separately during the research period. The highest index of total loans to total deposits for the Commercial Bank of Iraq and Iraq was in 2016, reaching (0.241). To invest a significant portion of the plaintiffs' funds in loans granted to achieve. An increase in revenues, but will expose the bank to high risks, represented by the possibility of defaulters becoming insolvent and refraining from repaying the loan and its interest. The lowest index was in 2011, when it reached (0.010). As a result of the bank's hedging in granting loans to avoid its exposure to risks, the average index of total loans to total deposits for a commercial bank was also (0.115) and represents the lowest rate among the banks in the research sample.

The results of an analysis of Middle East Investment Bank data showed that the highest index of total loans to total deposits (0.374) was in 2016 as a result of the bank's expansion in granting loans in exchange for a decrease in the volume of cash deposits. The lowest index was also in 2012, when it reached (0.174) as a result of the increase in the volume of cash deposits. The average index of total loans to total deposits of Middle East Bank was (0.233)

The results also showed that the highest ratio of total loans to total deposits for the Iraqi Investment Bank was in 2012, when it reached (0.781), which was the result of a large increase in the volume of cash deposits, and after that, it began to gradually decrease during the following years to reach its lowest value in the year 2022. It reached (0.267) as a result of the decline in economic growth and the reluctance to borrow due to the deterioration of the security, political and economic situation of the country, as well as the average index of total loans to total deposits at the Iraqi Investment Bank (0.461).

Conclusions and recommendations:

A- Conclusions:

1-Working to find a balance between banking stability and banking risks in the Iraqi sector in general, and therefore because the subject of studying banking stability is one of the important topics that banks must pay attention to, and thus ensure their continuity in the banking market.

2-Analyzing indicators of banking risks and bank stability helps policymakers and relevant and supervisory bodies easily identify the strengths and weaknesses of the financial system so that they can take preventive measures to avoid a financial crisis.

3-Factors that affect bank stability vary. There are internal factors that control the path and external factors that are beyond his control. These factors suddenly affect banking stability

A- Recommendations :

Based on the conclusions reached, a set of recommendations is presented as follows:

1**-**It is necessary for Iraqi banks to formulate policies and strategies that will diagnose and identify the banking risks to which they may be exposed, as well as maintain sufficient reserves that enable them to confront those risks and verify the extent of The seriousness of its impact.

2- Qualifying human cadres to ensure the development of a culture and background for dealing with banking risks, and highlighting the seriousness of the absence of this and similar negative repercussions on banking stability. Achieving elements of discipline and stability by preparing educational courses, workshops and seminars for bank employees on banking risks and banking stability.

3-Focus on including future expectations and banking stability variables in the reports of the Central Bank of Iraq, as well as periodically reviewing the methods for calculating indicators used to measure banking stability and choosing the most appropriate ones for the state of the Iraqi economy.

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