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THE ROLE OF STRESS TESTS IN REDUCING BANK LIQUIDITY CRISES: ANALYTICAL STUDY ON A SAMPLE OF COMMERCIAL BANKS

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Abstract:

Aims to demonstrate role of (ST) in reducing banking liquidity(BL) crises for private Iraqi banks, to identify indicators of liquidity crises , predictive scenarios for confronting these crises. It investigated role of (ST)scenarios as an independent variable, axis of indicators of banking liquidity crises as a dependent variable, for this purpose, Selecting a sample consisting of three commercial banks, namely (the National Bank of Iraq , Al-Mansour Bank, the Credit Bank), the research was launched So, achieve objectives by following the inductive approach, descriptive approach, analytical approach by studying theoretical framework of (**ST**)scenarios, (**BL**) indicators in sample banks. SO, most important ratios to measure, which were represented by four ratios: (liquid assets to total assets, cash credit to total deposits, time deposits to total deposits, cash credit to total assets a set of conclusions, most important of which are: (**ST**) are considered an early warning tool to determine extent of banks' ability to overcome crises by predicting crises measuring impact of these tests on banking liquidity indicators. In conclusion, research presented a set of recommendations, Due important of which are: Bank managements should review their investment mechanisms, methods tools focus on harmonizing banking liquidity aspect not neglecting it, as well as exploiting surplus funds in available investment opportunities not freezing them, taking into account special standard ratios and not exceeding them.

Keywords: (ST), crises, (BL).

1.INTRODUCTION

The practice of financial and banking institutions in their work surrounds them with many risks, liquidity risks are one of them. Leaving activities , work of these banking institutions without a process of monitoring , management will lead to many problems, including failure of these institutions to perform their work loss of their customers, in addition to cases of prosecution they may face, then their occurrence. In financial crises that threaten its position and reputation in front of dealing public, given that liquidity crisis (LC) affects banking industry in Iraq , lack of liquidity leads to bank bankruptcy confronting liquidity has become a challenge. The research was conducted for purpose of knowing possibility of predicting banking (BL) through (ST).

2.RESEARCH METHODOLOGY

2-1:. Scientific Methodology

problem of liquidity is one of complex problems facing commercial , Islamic banks in general. High levels of liquidity lead to problems of low returns and low utilization of available resources, while low liquidity ratios below standard ratios specified by supervisory authorities lead to banks being exposed to a crisis represented by bank's inability to fulfill its obligations. Based on above, research problem can be formulated as follows:

- **How can (ST) as an early warning tool help assess ability of banks to confront (LC) that they may be exposed to in future?**

2-2: Importance Of Research

- Highlighting An Important Cognitive Aspect In Banking , One Of Most Important Risk Management Tools, Which Is (ST).
- Explaining Concepts Of Banking (LC) And Indicators Of Their Occurrence.

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- Using Test Results To Develop , Develop Emergency Plans To Confront Various Risks Activate , Use Of Risk Mitigation Tools.

2-3:Research hypothesis

In order to, achieve its objectives, the research is based on basic premise that applying (ST) scenarios enables banks to know exposures , risks to which they may be exposed, also contributes to assessing their ability to confront banking (LC).

2-3: Research objectives

Understanding the objectives is a fundamental basis when constructing research. main objective of research is to reveal role of multi-variable stress testing scenarios in revealing banking liquidity risks crises, while sub-objectives of this research are as follows:

- Identify stages steps of applying banking (ST).
- Knowing possibility of predicting liquidity crises ability of banks to confront them if they occur in future.
- Early diagnosis of weaknesses through analyzing liquidity indicators of banks before shocks , studying and analyzing the post-shock liquidity indicators of banks in research sample.

2-4:Research methodology

The follow inductive approach, descriptive approach, analytical approach for purpose of achieving research objectives testing hypotheses, which includes reviewing most important ideas related to concept importance of (ST) scenarios , procedures must be taken in light of results, in addition to basic concepts about banking liquidity crises, their causes indicators. Bottom-up pressure tests were used, multiple scenario analysis was used. Multivariate scenarios with different proportions were assumed , were designed for purpose of study, by studying independent variable (ST) role in dependent variable (banking liquidity crises).

2-5: Limits of research

- **Time limits**: Time Period For Research Was Set At One Year (2022) For All Banks Through Analysis Of Financial Statements, Based On Annual Financial Reports Of Commercial Banks Sampled For Research.
- **Spatial boundaries**: (ST) were applied to three commercial banks: (National Bank of Iraq, Credit Bank, and Al-Mansour Bank). To conduct a study of applied aspect of research, sample was chosen due to availability of financial data and annual reports for year (2022).

2-6: Financial methods and standards

IT, focused on using a set of indicators related to subject of study, they were addressed in theoretical framework in order to reach their results in practical framework for purpose of explaining role of (ST) in reducing (BKL). The analysis indicators adopted for application purposes will be presented briefly, as shown in table. following:

Table (1) Liquidity indicators , ratios in commercial banks in research sample.

Indicators	Ratios	Equations
Liquidity	Liquid assets to total assets	(Cash assets ÷ Total assets) x 100
	Cash credit to total deposits	(Cash Credit ÷ Total Deposits) x 100
	Time deposits to total deposits	(Time deposits ÷ Total deposits) x 100
	Cash credit to total assets	(Cash Credit ÷ Total Assets) x 100

Source: Researchers Based On Several Sources.

Table (2) multiple-variable (ST) scenarios and hypothesis ratios.

Scenario	Low intensity	Average intensity	High intensity
High non-return producing debt	50%	100%	200%
The bank is subjected to a fine or loss of a case filed against it (loss of capital)	10%	20%	30%
Withdrawal of investment deposits	10%	20%	30%

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Confiscation of letters of guarantee (conversion of pledge into cash credit)	**10%**	**25%**	**50%**
Loss of debit balances abroad	**25%**	**50%**	**75%**
Loss of part of investments	**25%**	**50%**	**75%**

Source: Based On Pressure Test Instructions Issued By Central Bank Of Iraq.

3.THEORETICAL FRAMEWORK :

3-1:Concept (ST)

As a result of large number of risks , crises to which banks are exposed, which prompted researchers international financial economic institutions to investigate causes of these (BC) in order to, reach appropriate solutions, it was necessary find a way evaluate their ability confront these risks crises, so banking industry produced one of precautionary control tools was launched. They must undergo stress tests to measure banks' ability confront banking risks and crises in a more efficient and effective manner.

3-2-2: concept definition of banking (ST)

(ST) are an established tool regulatory authorities one of modern banking risk management tools because of importance for assessing flexibility of individual banks banking sector as a whole. They play a decisive role in measurement monitoring, provide analysis of banking operations, highlight deviations (Chorafas, 2007:45), constitute exercises. Forward-looking analysis aims evaluate impact of severe reasonable negative assumptions (scenarios). importance of these tests has increased recently in light of global financial economic crises because of great effectiveness in alerting regulatory authorities bank management to impact of unexpected negative events associated with many risks providing these departments with indicators of size of capital required to confront losses resulting from financial shocks (Andrew & Jakob 2011 :1). tests were initially developed with a focus on individual banks. Furthermore, (ST) can help provide early warning attempt predict future financial events. evaluating financial stability in order to reduce identify excessive exposure risks (Quagliariello, 2009:22). What is meant by (ST) "bank used various techniques to evaluate ability to confront exposures in light of difficult business conditions conditions, by measuring impact of these exposures on bank's set of financial indicators, in particular impact on extent of capital adequacy and profitability" (BCBS, 2009 1)

Basel Committee also defined stress tests in third decisions as an important risk management tool used by banks as part of internal risk management, as alerts bank management of unexpected negative results for a group of risks, also provides them with amount of capital necessary to absorb losses in event of an occurrence. Major shocks. (BCBS, 2017:5)

3-2-3: Importance Of (ST) For Banks Purpose Of Use

(ST) are used by central banks, commercial banks, regulatory authorities as a tool to test the flexibility safety of the investment portfolio of a specific bank or of banking sector as a whole as a result of severe changes in economic environment. Banking **(ST)** are of great importance to safety of banking system, main purposes of **(ST)** are: Kapinos, et al, 2021, p. 5) (p 8.2013) (Madouros, BCBS: 2014:17)

- main purpose of this **(ST)** framework is to provide a quantitative forward-looking assessment of extent of capital adequacy of banking system individual institutions within it, to identify, monitor take necessary measures to eliminate or reduce systemic risks, with aim of protecting and enhancing resilience of financial system.
- It helps estimating the potential risks of potential crises thus helps banks design hedges for such situations.
- **(ST)** support the assessment of banks' future risks provide them with better treatments for a range of negative outcomes. They can help highlight concentrations of risks interrelationships are not specified or sufficiently defined possibilities of their impact on banking regulation in times of distress.
- Forcing regulators financial institutions to periodically evaluate potential effects of high-severity negative scenarios, that **(ST)** assumptions in general must be implementable play an important role in evaluating strategic options in long-term business planning.
- **(ST)** are considered a regulatory tool to motivate banks to collect better data, expand quantitative analytical capabilities, engage in more robust and comprehensive risk management practices.

3-2-4:Types of (ST) and scenarios

There is no specific method or model for **(ST)** can be applied to all financial systems, but differ depending on nature of economy extent of development complexity of financial system in a country. **(ST)** can be classified into two main types: **(ST)** Instructions, 9:2018)

3-2-5:Sensitivity Scenarios Allergy tests

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Sensitivity tests are used to measure extent of impact of movements in risk factors (individually) on financial position of bank, as relationships and interactions between various risk factors are not taken into account. These tests aim to determine degree of sensitivity of the financial position. bank has a single factor approach to risks evaluates bank's ability to confront. (Stress Testing Instructions, 5: 2018). Sensitivity analysis tests include credit risk, concentration risk, liquidity risk, market risk, and operational risk.

3-3: Tests based on a hypothetical analysis of a group of scenarios (Scenario Analyses):

Also called multivariable scenario tests, these tests evaluate the impact of several variables several risks on bank's financial position (scenario analysis). These tests are more complex than sensitivity tests, as several unusual changes are made to several variables at same time, and assumptions can be made on a historical basis based on hypothetical events can It happened and did not happen in past. These tests evaluate impact of scenarios whose probability of occurring may be low, but their impact on bank, if they occur, will be large.

3-4: Measures to be taken in light of results of pressure tests

There is a set of measures must be taken by banks in light of results of (ST) scenarios, which are as follows: (Al-Shammari, 2013: 48):

- Enhancing capital adequacy in order to hedge and confront worse possibilities.
- Strictness in financing granting processes adherence to sound credit granting standards for purpose of avoiding default and reducing credit risks.
- Amending banking services pricing policies approved by bank and diversifying into banking services.
- Building additional allocations to enhance the bank's financial ability to confront crises and losses.

3-5: Banking liquidity crises(BLC)

(BLC)can be considered as loss of depositors' confidence in the banks, the withdrawal of their deposits by companies customers dealing with the banks. banking crisis is also associated with (LC), meaning that banking crisis is a (LC), which arises as a result of disturbances in banking system (Cortel and Raziq, 2009: 278) Repeated (BLC) can cause crises that may affect entire economy of country, as sudden withdrawal of funds or liquidity from a country will lead to a comprehensive financial crisis, and a (LC) may arise when the bank's policy is adventurous (Al-Hashemi, 2021262). Banking crises are usually preceded by booms in credit , bubbles in asset prices, although timing of the bursting of these bubbles is unknown because bubbles are, by definition, an unsustainable pattern of price changes or cash flows (Vodova, 2003:3). (LC) occurs when a bank faces a large sudden increase in request to withdraw deposits, at a time when the bank is lending or operating most of deposits it has and reserves a small percentage to meet daily withdrawal requests, which makes it naturally unable to respond to depositors' requests if they exceed those requests. ratio, thus crisis occurs.

3-5-1: Liquidity indicators: Liquidity is generally defined as ability to convert assets into money quickly and without achieving a loss. Liquidity ratios reflect the bank's ability to meet short-term obligations using assets that are easily , quickly converted into cash. These assets that are liquidated in a short period are called liquid assets. In many cases, financial failure of banks occurs due to mismanagement of liquidity, as liquidity represents most important means of protecting the bank from risks of bankruptcy through its ability to meet obligations characterized by immediate payment. most important indicators of bank liquidity are the following:

- **Liquid assets to total assets:** An increase in ratio indicates a decrease in liquidity risks because it reflects an increase in cash balances (Jassem, 2023: 376). A decrease in this ratio from standard rates means that bank is exposed to many risks, including the inability to face sudden withdrawals risks. Financing and other risks. ratio approved by Central Bank related to liquid assets index total assets is (30%) as a minimum (Ahmed, 2021: 204).
- **Cash credit to total deposits: (LDR)**. This ratio reflects the banks' ability to employ funds obtained from deposits meet customers' loan needs, and also shows bank's ability to rely on credit as a source of liquidity (Sari, 2018:373).
- **Term deposits to total deposits:** They represent largest percentage of bank's resources consist of fixed deposits made by individuals and various entities. With regard to type of deposits, we find banks are not obligated to pay them except on date specified for deposit, that is, after the expiry of a certain period agreed upon by deposit holder. With the bank, is what gives freedom to lend or invest it and achieve greatest amount of returns in comparison, which makes banks pay a higher rate of interest on it to encourage attracting largest amount of (Al-Lami, 2016: 367).
- **Cash credit to total assets:**

  This ratio measures total loans outstanding as a percentage of total assets. The higher ratio indicates decline in the bank's liquidity, higher the ratio, greater the bank's risk in cases of default (Bateni, etal.,

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2014:112). This ratio is considered as a comparison between size of large loans granted compared to total assets owned by bank. (Prabowo,etal,2018:4)

4.THE PRACTICAL FRAMEWORK FOR (ST) AND (BLC)

Financial analysis plays an important role in evaluating the conditions , safety of banking institutions , highlights defects in performance of their activities, then future scenarios can be developed in light. It worth noting that researchers chose a number of indicators of **(BLC)**in proportion to data available in budget items and clarifications in the annual reports of the banks in the study sample. The horizontal analysis method will be used, through comparison to the year (2022), and accordingly, financial indicators will be used. Which was mentioned previously.

4-1:Study and analyze indicators of (BLC)before shocks

Table (3) Financial analysis of liquidity indicators for commercial banks, research sample (2022)

The ratio	Standard ratios	Al-Ahly Iraqi	Al-Mansour	Credit
Liquid assets to total assets	**≥30**	**%47**	**%60**	**%28**
Cash credit to total deposits	**≤75**	**%59**	**%45**	**%7**
Time deposits to total deposits	**__**	**%44**	**%26**	**%11**
Cash credit to total assets	**__**	**%42**	**%26**	**%2**

Source: Prepared by researchers based on annual reports of banks in research sample for the year 2022.

A. Liquid assets to total assets

indicator to measure bank's liquid assets to total assets. A high ratio indicates that there are untapped cash balances, which reduces the final return the bank obtains. A decrease in ratio from its standard rates means bank is exposed to many risks, including inability to face sudden withdrawals. As for financing risks other risks, ratio approved by the Central Bank related to liquid assets index total assets is (30%) as a minimum. When we follow results of this ratio in commercial banks, we notice that Al-Mansour Bank achieved the highest ratio (60%), while Credit Bank recorded lowest ratio (28%). The ratios vary with the ratio of National Bank of Iraq (47%) , indicate bank's ability to provide more liquidity than Other banks during analysis through their maintenance of cash ratios capable of covering bank's obligations , fact that they represent the largest percentage of the assets owned by bank, which is an indicator of a level of good security makes bank avoid risks that could arise as a result of financial hardship and inability to pay obligations.

B. Cash credit to total deposits

As for cash credit index to total deposits, results showed a difference in percentages, with National Bank of Iraq achieving highest percentage (59%) and Credit Bank achieving lowest percentage (7%), while a large discrepancy was observed with percentage of Al-Mansour Bank (45%). However, all... banks demonstrated their commitment and did not exceed the specified standard percentage (75%). This ratio reflects bank's ability to employ available funds obtained from deposits to meet loan needs of customers.

T. Time deposits to total deposits

It appears from table above that lowest liquidity risk is represented by the lowest percentage achieved by the Credit Bank (11%) and the highest risk is represented by highest percentage achieved by National Bank of Iraq (44%). We also note balance of percentage achieved by Al-Mansour Bank (26%).

Th. Cash credit to total assets

A high percentage of this ratio means a high liquidity risk, in return, a high return achieved vice versa. There is no specific standard ratio for indicator, but the objectives must be harmonized according to the bank's risk tolerance policy. We notice a large discrepancy when preparing this indicator, as highest percentage belonged to National Bank of Iraq (42%). While the lowest percentage achieved by Credit Bank was (2%), noting difference in percentages with Al-Mansour Bank (26%).

Figure (1) liquidity indicators for commercial banks sampled in study.

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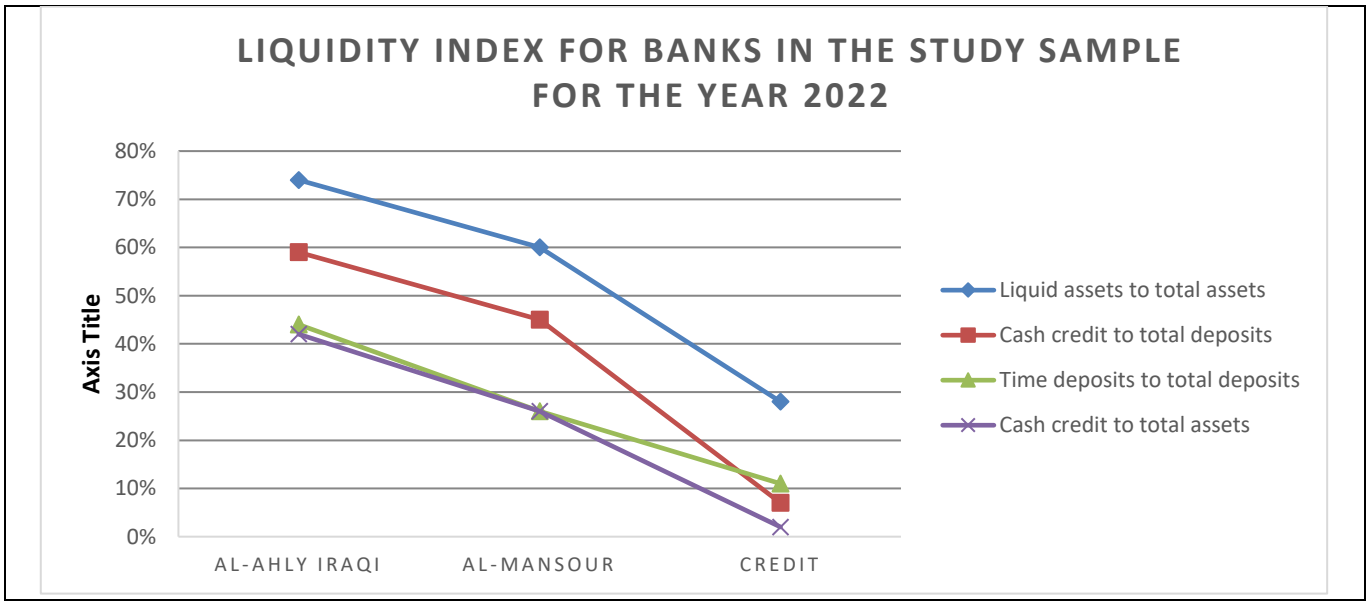

Source: Prepared researchers based on Excel

4-2:Study and analyze indicators of(BLC) after shocks

Multi-variable stress tests were applied to Iraqi banks, sample of study for year (2022), several scenarios were chosen. In study, impact of these scenarios on indicators of banking financial crises will be analyzed. explain that mentioned scenarios are assumptions (shocks) translated into ratios were assumed for the purposes of research, these ratios were applied to commercial banks, study sample, on their financial statements in order to know the strength ability of banks to confront these potential shocks , crises. After applying , completing banking stress tests for scenarios with multiple variables , after applying financial ratios (post-shock), these ratios will be analyzed and clarified according to each indicator and according to table for each of the banks in study sample, which are as follows:

4-3:The National Bank of Iraq

Table (4) Financial analysis of liquidity indicators for National Bank of Iraq, shock)

Source: Prepared by researchers based on bank's annual reports, research sample for year 2022.

- **The first scenario (low intensity):**

The results of financial analysis in table above for study indicators related to National Bank of Iraq after the

Indicators	Lineage	Standar ratio	Before the shock	After the shock		
				Low intensity (first scenario)	Moderate intensity (second scenario)	High intensity (Third scenario)
Liquidity	Cash balances to total assets	≥30	%47	42%	35%	26%
	Cash credit to total deposits	≤75	%59	65%	74%	87%
	Time deposits to total deposits	___	%44	42%	39%	36%
	Cash credit to total assets	___	%42	47%	54%	64%

application of low-severity shock showed that bank responded to the shock in somewhat limited proportions, and that there were changes in the level of the ratios of liquidity indicators before , after the shock, whether they were Increase or decrease, but all ratios indicate balance of liquidity, solvency, and bank's ability to overcome first low-severity scenario.

- **second scenario (moderate severity):** results of financial analysis in Table (4) of study indicators related to National Bank of Iraq after application of moderate-severity shock showed that bank responded to shock in somewhat limited proportions, there were changes in level of ratios of liquidity indicators before after shock.

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Whether it is high or low, but all ratios indicate balance of liquidity, solvency, bank's ability to overcome the first moderately severe scenario.

- **The third scenario (high severity):** results of liquidity indicators after the high-severity shock were observed as a decrease in (ratio of cash balances to total assets) from (47%) before shock to (26%) after the shock, this is an indication of bank's exposure to a liquidity crisis after shock. Because percentage fell below the minimum standard percentage set by Central Bank of Iraq (30%). It was also observed that there was a negative increase in (ratio of cash credit to total deposits) from (59%) to (87%) after shock. increase resulted from scenario of converting pledged credit to losing cash credit and a decrease in total deposits after withdrawing fixed deposits. ratio showed a significant increase from the ratio. standard approved by Central Bank of Iraq, which must not exceed (75%).

- **Al-Mansour Commercial Bank**

Table (5) Financial analysis of liquidity indicators for Al-Mansour Commercial Bank, research sample (post-shock)

Source: Prepared researchers based on bank's annual reports, research sample for year 2022.

Indicators	Lineage	Standar ratio	Before the shock	After the shock		
				Low intensity (first scenario)	Moderate intensity (second scenario)	High intensity (Third scenario)
Liquidity	Cash balances to total assets	≥30	60%	56%	51%	45%
	Cash credit to total deposits	≤75	45%	49%	55%	65%
	Time deposits to total deposits	__	26%	24%	22%	19%
	Cash credit to total assets	____	26%	29%	33%	39%

- **Scenario (Low Severity):** Results of financial analysis in the table above for indicators of study related to Al-Mansour Bank after the application of low-intensity shock showed that bank responded to shock in somewhat limited proportions, that there are changes in level of the ratios of liquidity indicators before and after shock, whether they were an increase. Or a decrease, but all ratios indicate balance of liquidity, solvency, and bank's ability to overcome the first low-severity scenario.
- **Scenario (Moderate Severity):** results of financial analysis in Table (5) of study indicators related to Al-Mansour Bank after application of moderate-severity shock showed this bank responded to shock in somewhat limited proportions, that there were changes in level of ratios of liquidity indicators both before after the shock. It was an increase or a decrease, a slight decrease was observed in all ratios. This indicates solvency of bank's liquidity position and its ability to overcome liquidity crisis after a moderately severe shock.
- **Scenario (High Severity):** results of liquidity indicators after high-severity shock at Al-Mansour Bank were observed as a decrease in (ratio of cash balances to total assets) from (60%) before shock to (45%) after shock, this is an indication of the solvency of position. bank's liquidity , ability to overcome (LC) because ratio decreased, but did not exceed minimum standard ratio set by Central Bank of Iraq (30%). It was also observed there was a negative increase in (ratio of cash credit to total deposits) from (45%) to (65%) after shock. This increase resulted from scenario of converting pledged credit to losing cash credit , a decrease in total deposits after withdrawing fixed deposits. percentage showed an increase but did not exceed standard ratio approved by Central Bank of Iraq (75%), all results of liquidity indicators observed a slight change in ratios, this is an indication of solvency of bank's liquidity position and its ability to overcome the liquidity crisis after a high-severity shock.

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- **Credit Bank**

Table (6) Financial Analysis of Liquidity Indicators for Credit Bank Research Sample (Post-Shock)
Source: Prepared by researchers based on bank's annual reports, research sample for year 2022.

Indicators	Lineage	Standar ratio	Before the shock	After the shock		
				Low intensity (first scenario)	Moderate intensity (second scenario)	High intensity (Third scenario)
Liquidity	Cash balances to total assets	≥30	28%	26%	21%	7%
	Cash credit to total deposits	≤75	7%	12%	20%	33%
	Time deposits to total deposits	__	11%	10%	9%	8%
	Cash credit to total assets	____	2%	4%	9%	26%

- **scenario (low severity):** results of financial analysis in table above for study indicators related to credit bank after applying low-severity shock showed that this bank responded to shock in somewhat varying proportions, largest change was in the share of (ratio of cash balances to total assets), as It decreased from (28%) before the shock to (26%) after shock, this percentage exceeded standard percentage approved by Central Bank of Iraq (30%). A negative increase was also observed in (ratio of cash credit to total deposits) from (7%) to (12%) after the shock. This increase results from scenario of converting pledged credit to losing cash credit and a decrease in total deposits after withdrawing fixed deposits.
- **scenario (moderate severity):** It was also noted results of liquidity indicators varied in percentages, largest change was in share of (ratio of cash balances to total assets), as it decreased from (28%) before shock to (21%) after the moderate-severe shock. A negative increase was observed in (ratio of cash credit to total deposits) from (7%) to (20%) after the shock. This increase results from the scenario of pledged credit turning into losing cash credit and a decrease in total deposits after withdrawing fixed deposits.
- **scenario (high severity):** results of liquidity indicators after high-severity shock observed a significant decrease in (the ratio of cash balances to total assets) from (28%) before the shock to (7%) after the shock, and this is an indication of bank's exposure to a liquidity crisis after The shock because the percentage exceeded the minimum standard percentage (30%). This is an indication that bank is exposed to a liquidity crisis after a high-intensity shock.

5.CONCLUSIONS AND RECOMMENDATIONS

5-1: Conclusions:

- (ST) are considered an early warning tool to determine extent of banks' ability overcome crises by predicting crises measuring impact of these tests on banking liquidity indicators.
- (low-medium) intensity shock did not affect National Bank of Iraq, but it did not exceed high-intensity shock, So, is what was shown by the results of the analysis of (BL) indicators. This indicates the bank's ability to overcome it certain levels and cannot overcome higher shocks.
- Al-Mansour Commercial Bank was able to pass all (ST) scenarios, shocks (high-medium-low) intensity did not affect bank's liquidity indicators, this was shown by results of analysis, which indicate balance of liquidity, solvency, and bank's ability to overcome crises.
- The Commercial Credit Bank was affected by all levels of (ST) shocks (low medium - high) in severity, as was shown by results of analysis of liquidity indicators, as showed a decrease in all ratios and an exceedance of standard ratios specified by Central Bank of Iraq, and indicates expansion in investments.
- Al-Mansour Bank maintains high liquidity that is not exploited in investment opportunities, and this leads to low profitability.

5-2 Recommendations:

- banks in research sample must commit applying (ST) as an essential , complementary part of banking risk management, taking into account the results of tests and developing emergency plans to confront a decline in liquidity below the minimum level.
- Banks must adopt strategies capable of confronting and overcoming crises with the least possible loss.

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- Banks must review their investment mechanisms, methods and tools and focus on harmonizing the banking liquidity aspect and not neglecting it, as well as exploiting surplus funds in available investment opportunities not freezing them, taking into account special standard ratios and not exceeding them.
- All bank departments must work to attract stable deposits and diversify the banking services provided, taking into account maturity dates, to avoid falling into liquidity crises.

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