TESTING THE EFFECT OF FINANCIAL SOUNDNESS INDICATORS OF BANKS IN BANK SAFETY

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ABSTRACT

The main objective of the research is to test the effect of the financial soundness indicators of banks in the bank safety of a sample of Iraqi banks for the period from 2015 to 2020. The research data was obtained through the Iraq Stock Exchange website and the official websites of banks. The financial soundness of banks was measured through their indicators (capital adequacy indicator, liquidity indicator, asset quality indicator and profitability indicator), as well as bank safety was measured through one indicator consisting of (equity to total assets), and this was done by using some financial equations and statistical methods, which were analyzed using the program (SPSS v.22). The results of the research showed that the financial soundness indicators of banks negatively and insignificantly affect the bank safety of Iraqi banks, the research sample.

Keywords: The Financial Soundness Indicators of Banks, Bank Safety and Iraqi Banks.

INTRODUCTION

Banks have been at the forefront of those affected by the economic crisis caused by the COVID-19 pandemic. Central banks, large global banks, small and medium-sized regional banks, financial companies and competing banks have faced and are still facing unprecedented challenges and risks. It also began taking various actions to support its employees and customers, and to help strengthen the financial system. Of course, it will not be easy for if to move forward after this pandemic. Thus, it is necessary for banks to enhance their operational flexibility and plan for their business continuity to overcome this storm, in order to maintain the bank safety, that it should enjoy and which will earn it the trust of investors and the audience.

In order for Iraqi banks to maintain its bank safety and the trust of its audience of different stakeholders, it is considered that it should take into consideration the financial soundness indicators. This is because these indicators are one of the most important tools through which banks are monitored to see its ability to deal with fluctuations in the movement of capital. These indicators are divided into two types: the core indicators (which deal with indicators related to banks such as capital adequacy, asset quality, profitability, liquidity, and sometimes an indicator of sensitivity to market risks is added). And the preferred indicators (which deal with indicators related to other financial institutions as well as non-financial institutions, the family sector, in addition to the liquidity of the stock market, real estate markets, etc.). The focus of the current research will be on the essential indicators to see how they affect bank safety.

LITERATURE REVIEW

Financial Soundness Indicators of Banks

The concept of financial soundness of banks

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Banks play a critical role in the circulation of money and society's wealth in the economy. Therefore, effective banking activities can have significant effects on the growth of different sectors of the economy and the improvement of the quality and quantity of products (Fatahi et al., 2017: 30). The need to maintain financial soundness and stability in the economy is not a new issue. As this topic has been renewed, especially after the outbreak of the Asian financial crisis in the late 1990s and the global financial crisis in 2007-2008, from both the theoretical and operational aspects of the banking literature, and the world's leading experts spoke about the importance of establishing stability in every financial system. Consequently, the assessment of strengths and weaknesses in the financial sector, especially in banks, based on a set of financial indicators has become increasingly important. This assessment is fundamentally necessary to identify any potential problems that may weaken the financial sector and cause a financial crisis. It is expected that by doing so, a set of strategic policies and regulations, as well as actions, can be implemented to prevent the crisis. It is clear that the inadequacy of banks and the efficiency of the financial system mean nothing but the fragility, inflexibility, and resilience of the national economy (Khansari & Gulich, 2015: 93).

In addition to the above, the development and analysis of a set of financial indicators should help policy makers to identify the strengths and weaknesses of the financial system so that they can take preventive measures to avoid a crisis. As a result, the International Monetary Fund launched several initiatives in this field. In 1999, he began collecting and evaluating indicators of financial stability through the Joint Financial Sector Assessment Program between the International Monetary Fund and the World Bank, which aimed primarily at monitoring the fragility of the financial system. After extensive consultations in 2000, the International Monetary Fund, in cooperation with the International Accounting Standards Board, the Bank for International Settlements, the Basel Committee on Banking Supervision, and other international and regional organizations, published a compilation guide on Financial Soundness Indicators (FSIs). Which was based on the budget bank balance sheet and income statement information, aggregate indicators for the financial statements of non-financial companies and non-bank financial markets (Sugiyarto, 2015: 8).

Financial soundness indicators are defined as the set of indicators that reflect the current financial position of financial institutions in a country, which are calculated and published to support the macro-prudential analysis that presents an assessment of the strength and fragility of the financial system, in order to maintain financial stability, and in particular to prevent a possible collapse of the financial system (Kozaric & Zunic, 2014: 160).

While Kliushnyk et al. (2019: 4) defines it as statistical indicators that are used to monitor the financial situation and sustainability of the financial sector in the country, as well as support macro-prudential analysis.

As for Mengistu & Perez-Saiz, (2021: 349), indicate that financial soundness indicators are methodological tools that help identify and qualify the soundness and weaknesses of financial systems according to five areas of concern: capital adequacy, asset quality, profits, liquidity, and sensitivity to market risk.

Indicators for measuring the financial soundness of banks

Financial soundness indicators of in the banking sector provide useful information about the stability or volatility of the banking system. These indicators are presented in terms of six main sections known as the (CAMELS) model, which includes the following (Seyedi, & Abdoli, 2019: 110):

1. Capital Adequacy (C).
2. Asset quality (A).

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3. Management (M).
4. Profitability (E).
5. Liquidity (L).
6. Sensitivity to market risk (S).

Each of the six subgroups of these indicators has different components in assessing banking soundness and stability.

After reviewing the literature on the indicators of the financial safety of banks and how to measure them quantitatively. It became clear that most of the research and studies in this field depend in the measurement on four indicators called (core indicators), which will be adopted in the current research for measuring the financial soundness of Iraqi banks, and it is as follows:

Capital Adequacy Indicator: This indicator is also known as the capital-risk-asset ratio, which is the ratio of a bank's capital to its risks. In addition, the ratio shows the ability of banks to identify, measure and monitor the risks that arise and that may affect the amount of the bank's capital. Thus, the issue of capital adequacy is an important issue in banking, and banks that have a good level of capital adequacy appear to be financially sound (Sunaryo, 2020: 145). The equation for the capital adequacy indicator can be represented as follows:

Capital Adequacy (CA) = Equity ÷ Weighted Risk Assets × 100

Liquidity Indicator: The liquidity indicator shows the extent to which the bank's current assets, in its various forms, cover its short-term obligations. Liquidity ratios also measure a bank's ability to repay debt obligations and its margin of safety, by calculating metrics including the current ratio, the quick ratio, and the operating cash flow ratio (Batrancea, 2020: 802). The equation for the liquidity indicator can be represented as follows:

Liquidity (L) = Liquid Assets ÷ Total Assets × 100

Asset Quality Indicator: It is an assessment of a specific asset, showing the amount of credit risk associated with it. The bank's assets determine its condition, its ability to repay its loans in the future, and the smooth running of its operations. It is worth noting that the quality of assets is an important precautionary indicator to assess the financial health of the banking sector (Reddy & Babu, 2021: 56). The equation for asset quality indicator can be represented by the following:

Asset Quality (AQ) = Bad Debt ÷ Net Direct Facilities × 100

Profitability Indicator: An indicator used to measure the bank's ability to generate profits and normal business activities. Also called profitability ratios, it is a class of financial measures used to assess a bank's ability to generate profits related to its revenues, operating costs, balance sheet assets, or shareholders' equity over time, using data from a specific point in time. Profitability ratios are measured by comparing the different components in the income statement or balance sheet (Sembiring, 2020: 14). The equation for profitability indicator equation can be represented as below:

Profitability (P) = Return on Assets (ROA) = Net Income ÷ Total Assets × 100

Bank Safety

The concept of bank safety

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Safety is one of the most important conditions for the operation of any entity in economic conditions, especially for banks as public trust institutions. Ensuring an appropriate level of security is a basic requirement in the work of banks, which must be achieved by reducing the level of risks and increasing the level of trust from customers and the community. However, ensuring security is a permanent problem for banks due to the specificity of their activities, which is linked to the constant conflict between the need to ensure the security of funds held and the desire to maximize the profitability of banking operations. In addition, intensely changing market conditions, important linkages between banking institutions and long-range integration in terms of geography (cross-border integration) and sectors (inter-sectoral integration), lead to a situation where maintaining security is a difficult task to achieve (Chaikovska, 2021: 46).

Various approaches to the definition of bank safety can be found in the literature. The main reason for the difficulty of defining bank safety uniformly is the great diversity and the number of factors that determine it. Bank safety can be defined from different points of view, namely stability, trust, solvency, level of risk, balance of job execution, level of compliance, banking supervision, etc. One of the most appropriate definitions of banks security is that given by (Capiga et al., 2011: 67), which states that bank safety is the state in which the bank achieves economic, financial and real estate balance, allowing it to perform its functions safely even during external shocks.

Indicators for Measuring Banking Safety

Due to the great diversity and number of factors that determine bank safety, there are difficulties in measuring it accurately, as mentioned earlier. On the one hand, bank safety must be taken into account in terms of the banks' financial position, and on the other hand - in terms of the environment in which the bank operates. In the literature, there are different approaches to measuring the level of bank safety, which often take into account individual determinants of safety, such as the level of capital adequacy, liquidity, profitability, leverage, deposit guarantee schemes, etc. Moreover, no standardized bank safety measure has yet been introduced that would allow to determine the level of security and answer the question of whether a bank is safe (Xie et al., 2018: 252).

For measuring the bank safety of Iraqi banks, the research sample, and after searching the literature in this field, one indicator was found by which bank safety can be measured, and it will be represented by the following equation:

Bank Safety (BS) = Equity ÷ Total Assets

RESEARCH METHODOLOGY

Research Objectives

The current research seeks to answer the following two questions:

1. Is there an effect of the financial soundness indicators of banks in bank safety?
2. What is the effect of financial soundness indicators of banks in bank safety?

Research Hypothesis

In order to develop an accurate answer to the research questions mentioned, the research hypothesis was formulated as follows:

"There is a statistically significant effect of the financial soundness indicators of banks in enhancing bank safety".

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Research Sample

The current research sample was represented in (5) banks listed in the Iraq Stock Exchange for the period from 2015 to 2020. The financial data was obtained through the official website of the Iraq Stock Exchange, which issues a comprehensive report on the activity of banks and companies during the fiscal year, and a sample was selected its number is (5) banks, out of the total number of (43) banks. The reason for this is that not all banks have financial data for the mentioned period, due to the instability of the current economic and political situation in the country. Therefore, data from (5) banks was relied only, which means that there are no missing data.

FINANCIAL AND STATISTICAL ANALYSIS

Financial Analysis

Financial analysis of the capital adequacy indicator

Table 1 shows that the highest public sector rate for the capital adequacy indicator was (1.39) in 2017, and the lowest overall rate for the same indicator was in 2020 when it reached (1.16). The two mentioned rates and all the remaining general rates meet the minimum capital adequacy indicator of (7%) according to the decisions of the (Basel III) committee. As for the banks in the research sample, all of them also met the capital adequacy indicator. Mansour Bank achieved the highest rate among other banks, reaching (2.08), while the Bank of Baghdad achieved the lowest rate of capital adequacy indicator at a rate of (0.79). While the remaining banks were, its rates are as follows: Mosul Bank at a rate of (1.35), the Investment Bank of Iraq at a rate of (1.25), Elaf Islamic Bank at a rate of (0.84).

Table 1
THE RESULTS OF THE FINANCIAL ANALYSIS OF THE CAPITAL ADEQUACY INDICATOR OF THE STUDY SAMPLE BANKS FOR THE PERIOD (2015-2020)

Banks	Symbol	2015	2016	2017	2018	2019	2020	Average
Investment Bank of Iraq	BIBI	1.49	1.3	1.39	1.22	1.02	1.05	**1.25**
Mansour Bank	BMNS	1.91	2.26	2.06	2.04	2.09	2.1	**2.08**
Mosul Bank	BNFI	1.2	1.42	1.62	1.39	1.23	1.25	**1.35**
Elaf Islamic Bank	BELF	0.68	0.69	0.87	0.62	1.07	1.11	**0.84**
Bank of Baghdad	BBOB	0.64	0.86	1.03	1.27	0.64	0.29	**0.79**
Average		**1.18**	**1.31**	**1.39**	**1.31**	**1.21**	**1.16**	

Source: Prepared by the researcher based on computer output.

Financial analysis of the liquidity indicator

Table 2 shows that the highest public sector rate for the liquidity indicator was (0.97) in 2015, and the lowest overall rate for the same indicator was in 2020 when it reached (0.83). As for the banks in the research sample, there are two banks who rates are equal, it's the Iraqi Investment Bank with a rate of (0.97), and Mansour Bank with a rate of (0.97) as well. While Mosul Bank achieved the lowest rate of the liquidity indicator at a rate of (0.80), while the remaining banks had their rates on as follows: Bank of Baghdad at a rate of (0.90), Elaf Islamic Bank at a rate of (0.83).

Table 2
THE RESULTS OF THE FINANCIAL ANALYSIS OF THE LIQUIDITY INDICATOR OF THE STUDY SAMPLE BANKS FOR THE PERIOD (2015-2020)

Banks	Symbol	2015	2016	2017	2018	2019	2020	Average

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Investment Bank of Iraq	BIBI	0.97	0.97	0.96	0.97	0.97	0.97	**0.97**
Mansour Bank	BMNS	0.99	0.96	0.96	0.97	0.97	0.97	**0.97**
Mosul Bank	BNFI	0.99	0.84	0.84	0.74	0.69	0.68	**0.80**
Elaf Islamic Bank	BELF	0.93	0.87	0.90	0.85	0.83	0.60	**0.83**
Bank of Baghdad	BBOB	0.96	0.87	0.86	0.94	0.83	0.95	**0.90**
Average		**0.97**	**0.90**	**0.91**	**0.89**	**0.86**	**0.83**	

Source: Prepared by the researcher based on computer output.

Financial analysis of the asset quality indicator

Table 3 shows that the highest public sector rate for the asset quality indicator was (0.26) in 2020, and the lowest general rate for the same indicator was in 2016 and 2017, when it reached (0.08). As for the research sample banks, Mosul Bank achieved the highest rate among other banks, reaching (0.24). While the Investment Bank of Iraq achieved the lowest rate for the asset quality indicator at a rate of (0.02), while the remaining banks had their rates as follows: Bank of Baghdad with a rate of (0.18), Elaf Islamic Bank at a rate of (0.16), Mansour Bank for Investment at a rate of (0.09).

Table 3
THE RESULTS OF THE FINANCIAL ANALYSIS OF THE ASSET QUALITY INDICATOR OF THE STUDY SAMPLE BANKS FOR THE PERIOD (2015-2020)

Banks	Symbol	2015	2016	2017	2018	2019	2020	Average
Investment Bank of Iraq	BIBI	0.03	0.02	0.02	0.02	0.01	0.02	**0.02**
Mansour Bank	BMNS	0.11	0.06	0.05	0.04	0.14	0.14	**0.09**
Mosul Bank	BNFI	0.06	0.09	0.09	0.28	0.31	0.60	**0.24**
Elaf Islamic Bank	BELF	0.15	0.07	0.08	0.26	0.14	0.25	**0.16**
Bank of Baghdad	BBOB	0.12	0.13	0.19	0.13	0.21	0.30	**0.18**
Average		**0.09**	**0.08**	**0.08**	**0.15**	**0.16**	**0.26**	

Source: Prepared by the researcher based on computer output.

Financial analysis of profitability indicator

Table 4 shows that the highest public sector rate for the profitability indicator was (0.05) in 2015, and the lowest overall rate for the same indicator was in 2016 and 2017, reaching (0.01). As for the banks in the research sample, the Mosul Bank and the Iraqi Investment Bank achieved the highest rate among other banks, reaching (0.03), while the remaining three banks achieved the same rate of (0.02), represented by Mansour Bank, Elaf Islamic Bank and Bank of Baghdad.

Table 4
THE RESULTS OF THE FINANCIAL ANALYSIS OF THE PROFITABILITY INDICATOR OF THE STUDY SAMPLE BANKS FOR THE PERIOD (2015-2020)

Banks	Symbol	2015	2016	2017	2018	2019	2020	Average
Investment Bank of Iraq	BIBI	0.03	0.02	0.01	0.06	0.03	0.01	**0.03**
Mansour Bank	BMNS	0.02	0.01	0.01	0.01	0.01	0.05	**0.02**
Mosul Bank	BNFI	0.09	0.01	0.01	0.01	0.01	0.04	**0.03**
Elaf Islamic Bank	BELF	0.06	0.01	0.01	0.02	0.03	0.01	**0.02**
Bank of Baghdad	BBOB	0.04	0.02	0.01	0.04	0.01	0.01	**0.02**
Average		**0.05**	**0.01**	**0.01**	**0.03**	**0.02**	**0.02**	

Source: Prepared by the researcher based on computer output.

Financial analysis of the Bank Safety Indicator

Table 5 shows that the highest public sector rate for the bank safety indicator was (0.63) in 2018, and the lowest overall rate for the same indicator was in 2015 when it reached

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(0.43). As for the research sample banks, Elaf Islamic Bank achieved the highest rate among other banks as it reached (0.84). While the Bank of Baghdad achieved the lowest rate for the banking safety indicator at a rate of (0.22), while the remaining banks had their rates as follows: Mosul Bank with a rate of (0.67), the Iraqi Investment Bank (0.49), and Mansour Bank (0.23).

Table 5
THE RESULTS OF THE FINANCIAL ANALYSIS OF THE BANK SAFETY INDICATOR FOR THE STUDY SAMPLE BANKS FOR THE PERIOD (2015-2020)

Banks	Symbol	2015	2016	2017	2018	2019	2020	Average
Investment Bank of Iraq	BIBI	0.51	0.50	0.49	0.47	0.49	0.46	**0.49**
Mansour Bank	BMNS	0.27	0.26	0.22	0.19	0.19	0.22	**0.23**
Mosul Bank	BNFI	0.72	0.65	0.66	0.65	0.65	0.68	**0.67**
Elaf Islamic Bank	BELF	0.49	0.64	0.70	1.59	0.74	0.87	**0.84**
Bank of Baghdad	BBOB	0.17	0.24	0.24	0.24	0.24	0.20	**0.22**
Average		**0.43**	**0.46**	**0.46**	**0.63**	**0.46**	**0.49**	

Source: Prepared by the researcher based on computer output.

Statistical Analysis

The current research began with the hypothesis that (there is a statistically significant effect of the financial soundness indicators of banks in bank safety), and the testing of this hypothesis appears through the results contained in Table 6 below. As it is clear from Table (6) that there is an inverse effect of the financial soundness indicators of banks on bank safety by (-0.436). Which is not significant, as the level of significance reached (0.463) which is greater than the level of significance that the researcher assumed (0.05). This means that increased attention to indicators of the financial soundness of banks will lead to a decrease in bank safety. According to the calculated (F) value of (0.705) which is smaller than its tabular value (3.80), this hypothesis is rejected at the research level.

Table 6
THE RESULTS OF TESTING THE EFFECT OF FINANCIAL SOUNDNESS INDICATORS IN THE BANK SAFETY OF THE STUDY SAMPLE BANKS FOR THE PERIOD (2015-2020)

Dep. variable	Bank Safety				
Ind. variable	**β**	**T. Value**	**R^2**	**F. Value**	**Sig.**
Financial Soundness Indicators	-0.436-	-0.839-	.190	.705	.463

Source: Prepared by the researcher based on computer output.

CONCLUSION

The current research sought to test the effect of financial soundness indicators of banks in bank safety. By selecting a sample of Iraqi banks amounting to (5) banks listed on the Iraqi Stock Exchange for the period from 2015 to 2020. Moreover, through the results of the research, especially the results of statistical analysis, the research reached a conclusion that the financial soundness indicators of banks have an adverse effect in bank safety, by testing the main hypothesis of this research. Based on the results that have been reached, it is clear that there are some other factors that can play a major role in achieving bank safety for the Iraqi banks, the sample of the study that must be investigated.

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