Al-Qadisiyah Journal for Administrative and Economic Sciences ISSN Online : 2312-9883
QJAE, Volume 24, Issue 3 (2022) ISSN Print : 1816-9171
Manuscript ID:

Indicators analysis of Financial Soundness An analytical study on a sample of private banks listed in the Iraq Stock Exchange

Dergham Sahib Abbas (1), **Abdullah Kazem Hassan** (2)
[1] University of Al-Qadisiyah / College of Administration and Economics / Business Administration Department(admin.mang21.25@qu.edu.iq)
Corresponding Autho
Abstract
The current research seeks to analyze indicators of financial Soundness, Represented by (capital adequacy, asset quality, profitability index, sound management, bank liquidity, interest rate risk),and in order to achieve the goal of the research, the Iraqi Stock Exchange was chosen as an applied field represented by private banks, and the research sample included (10) private banks and on the basis of a time series of (10) years, and the results were reached using the program Statistician such as (SPSS.V.25) to analyze the data to reach conclusions, the most prominent of which was the low needs of the banks of the study sample for funds, due to the fact that most banks retain excess cash liquidity, due to the banks adopting a conservative investment policy, due to the political, economic and security conditions of the country, as they maintain high cash liquidity inside the banks.
Key words: **Financial Soundness**

المستخلص
يسعى البحث الحالي الى تحليل مؤشرات السلامة المالية متمثلة بـ (كفاية رأس المال ،جودة الموجودات ،مؤشر الربحية ،سلامة الادارة، السيولة المصرفية ،مخاطرة سعر الفائدة), ولأجل تحقيق هدف البحث تم اختيار سوق العراق للاوراق المالية كحقل تطبيقي متمثلا بالمصارف الخاصة, وقد شملت عينة البحث (10) مصارف خاصة وعلى اساس سلسلة زمنية مدتها (10) سنوات, وتم التوصل الى النتائج باستخدام البرنامج الاحصائي مثل (SPSS.V.25) لتحليل البيانات للتوصل الى الاستنتاجات التي كان ابرزها انخفاض احتياجات المصارف عينة الدراسة للأموال وذلك بسبب احتفاظ اغلب المصارف بسيولة نقدية فائضة وذلك بسبب اتباع المصارف سياسة استثمارية متحفظة وذلك يرجع للظروف السياسية والاقتصادية والأمنية للبلد فهي تحتفظ بسيولة نقدية عالية داخل المصارف.
الكلمات الدلالية:- السلامة المالية

Introduction
Banks seek to achieve a number of economic and development goals, the most important of which is maintaining their financial integrity and stability, as the sound banking and financial system allows raising the efficiency of financial intermediation as well as the effectiveness and efficiency of monetary policies. Extremely, through its importance related to maximizing the wealth of shareholders, which is the main goal that the management of the bank seeks, because financial Soundness is the yardstick by which the owners can evaluate the efficiency of the bank's management, The issue of financial safety in banks has occupied a fundamental importance at the present time due to the challenges and influences that surround the current banking environment with all the forces and trends it bears, which made this environment a challenging environment that produced many problems and financial crises, which made financial and international efforts focused on how to achieve and maintain financial safety. In banks using many models and techniques.

Methodology
First: Research Problem
The research problem emerges from the need for financial indicators that give an accurate perception of the bank's condition and financial position and shed light on the extent to which the bank may be exposed to financial crises and consequently affect the Soundness of the banking system. The research problem can be identified from the following questions:

A-What is the role of financial safety indicators in evaluating the performance of banking business management and operations?

B-Do the banks of the study sample depend on the financial indicators that ensure the achievement of financial soundness ?

C-What are the appropriate sources of financing to ensure the achievement of financial soundness?

Second: Research objectives

A-Measure and analyze the financial safety indicators of the study sample banks to determine the reasons for the rise or fall and its reflection on their stability.

B- Shedding light on an important aspect of knowledge in the banking sector, which is financial soundness.

Third: Importance Of Research

The importance of the research is represented in the following points:-

1-The importance of explaining the reasons for the decline in the financial Soundness indicators of the bank.

2-The importance of the financial Soundness of the bank in improving the financial position of the bank.

Fourth: limits of the study

The structural and formal framework of the study is represented in the scope and limits of the study as follows:

1-Cognitive limits:

axis includes financial Soundness and its indicators and its measurement in the business establishments in general and the banks of the study sample in particular, and all of these variables trace their intellectual origins To the science of business administration and, more precisely, to the science of financial management

2-Spatial limits of the study:

The spatial boundaries of the study were as follows- :

A - The study population: It is represented in the banks listed in the Iraqi Stock Exchange represented by (24) banks as the appropriate place to test the model and hypotheses of the study.

b Study sample: (10) banks were selected from the banks listed in the Iraq Stock Exchange as shown in Table (1).

3-Time limits of the study:

The temporal limits of the applied aspect in the same banks are represented in the years adopted by the study according to a time series for the period from the year (2010) to the year (2019).

Table (1) Commercial Banks Study Sample

The authorized start-up capital (billion dinars)	Founding date	Bank
400	1999	Sumer Commercial Bank
200	1998	Credit Bank of Iraq
400	1995	Al Ahli Bank of Iraq
400	1993	Middle East Bank
55	2005	Al-Mansour Investment Bank
600	1999	Gulf Commercial Bank
100	1992	Baghdad Bank
1000	2001	Mosul Bank for Development and Investment
150	1992	Commercial Bank of Iraq
207	2005	Bank of Economy, Investment and Finance

Fifth: Study population and sample

The study population includes the private commercial banks listed in the Iraq Stock Exchange, which consists of twenty-four banks, but the study sample, which included ten banks, was selected: (Sumer Commercial Bank, Iraqi Credit Bank, Al-Ahly Bank of Iraq, Middle East Bank, and Al-Mansour Investment Bank Khaleej Commercial Bank, Bank of Baghdad, Mosul Bank for Development and Investment, Commercial Bank of Iraq, Bank of Economy, Investment and Finance) for the period 2010-2019.

Sixth: Methods of data collection

The researcher relied on several methods to collect information and data for the current study and for the purpose of completing the intellectual and practical (applied) side as follows- :

A - the intellectual side

In framing the theoretical aspect, the researcher relied on a set of available sources related to the subject of the study, which are books, letters, theses, research, and Arab and foreign studies, as well as the adoption of the global information network (Internet) in order to enrich the theoretical aspect.
B- the practical side
The researcher collected data from the annual reports issued by the Iraq Stock Exchange and the Iraq Stock Exchange, the study sample after reviewing what was available from that data in the main sites of banks on the international information network. Private business study sample.
Seventh: Measurement indicators adopted in the study
The study focused on the use of a set of indicators related to the subject of the study, and it was addressed in the theoretical side for the purpose of showing the financial Soundness. Applied study, the following indicators were adopted:-

Source	Equation	Index
El- Ansary & Hafez, 2015: 806	Tier 1 regulatory capital/risk-weighted assets	Capital adequacy
Wahyuni,2018:434	Net provision for non-performing loans / capital	Asset quality index
Gitman,2009:68	Net Income / Equity	Profitability Index%
Berk,2014:34	Current assets / total assets	Bank liquidity index
Ozili&Outa,2017:147	Ratio of loans and advances to total deposits = total loans and advances / total deposits	Management’s Soundness indicators
Al-Husseini and Al-Douri, 2000: 228	Interest rate sensitive assets / interest rate sensitive liabilities	Interest rate risk

Literature Review

First: The Concept Financial Soundness

In light of a local and global economic and financial reality in which financial systems expand, their complexities increase, their tools and activities diversify, the pace of modernization and globalization of their markets increases, and the elements of their risks and nature change. It and what it reflects from the standards of efficiency, productivity, stability, profitability, and the environment for facing shocks (Adelheid, 2010:2). It can be defined as the ability of the financial system to confront and resist financial and economic crises, absorb shocks resulting from the volatility of their variables, and prevent and/or reduce the negative effects that they can leave on the protected economic and financial variables. A key role in the comprehensive concept of financial stability and its consolidation (Bitar at al., 2017: 19).
Due to the multi-dimensionality of the concept of financial Soundness and the diversity of its aspects and the branching of its components, the possibility of relying on a single quantitative indicator capable of measuring the levels of its existence and the extents of its availability becomes an issue marred by a lot of unrealism and distance from accuracy, especially since the components of the financial system are usually linked to each other with a matrix of intertwined and complex relationships It increases the difficulty of predicting financial crises and increases the possibility of transmission of their effects. Therefore, resorting to the adoption of a comprehensive systemic concept to assess the extent to which the financial system enjoys soundness becomes an urgent financial and economic necessity. Hence, the International Monetary Fund came to develop a set of indicators that reflect the overall soundness of the financial system in a certain period. , and serve as diagnostic tools for the vulnerabilities that he suffers from and indicative tools for the glitches that can be infected (Chihi, 2020:96). It was also defined as a focused evaluation process for the operations and activities of the bank through risk control, as this concept reflects the great focus on risk management in the institution, and it has been clarified that there are four factors for sound risk management that include (Salina et al., 2020:2):-
1- The quality of the conditions of supervision and control by the board of directors in the institution.
2-Adequacy of policies and limits for all activities that contain significant risks.
3-The quality of risk control and supervision systems
4- Adequacy of internal control to prevent fraud and prohibited activities by some users.
The concept of Soundness is characterized by the preservation of sustainability for a long time, and the Soundness of the institution is defined as “a quantitative and qualitative condition for property rights, assets and liabilities, which provides an enhancement for the reliability and stability of institutional activity, ensuring increased confidence and the institution’s ability to withstand all negative factors of the market” (Hisar, 2017:4). Financial soundness is a situation in which the

indicators that characterize capital adequacy, asset quality and liquidity are within certain limits, and determining these indicators is the most important stage in the process of assessing financial soundness (AlAli, 2018:3).

Setting standards and improving supervision that contribute to achieving financial stability. This definition demonstrates financial soundness in terms of the tools it uses, which are indicators, standards, and control procedures in order to achieve its primary goal (15AlAli,2019:). The term financial Soundness includes the financial system as a whole, while the term banking Soundness includes the banking sector only, as it represents the ability of banks to withstand hostile situations such as fundamental changes in the bank's policies, financial liberalization, natural disasters, and therefore it reflects the bank's ability to meet its obligations under economic conditions. It is difficult to use its capital and reserves (Buhrira and Abdel Latif, 2017: 4). The financial soundness of the institution is a state in which the financial indicators that characterize the capital adequacy, asset quality, liquidity and effectiveness are within certain limits to ensure the bank's ability to withstand negative market conditions (Akhtar et al., 2020:3).

Financial soundness is one of the best indicators of an organization's ability to grow in the long term and operate successfully in a competitive market environment, as it is an organization's ability to manage its operations under hostile events, such as policy changes in the era of financial industry liberalization. Thus, it reflects the institution's ability to meet debt under unfavorable economic conditions through capital and reserve accounts (Chihi,2020:96). Financial Soundness can be seen as the ability of the financial and banking system to face financial and economic crises, absorb shocks and avoid the negative effects that they can leave on the local financial and economic aspects, through a set of control and precautionary measures used by the institution to determine the financial Soundness of the institution in a way that helps In avoiding the occurrence of imbalances and crises, and financial Soundness is defined as a description of the state of strength and stability that the institutional and financial system aspires to achieve through its ability to absorb internal and external crises and shocks, as financial Soundness represents an early warning tool in case the institution is exposed to risks (Khalil & Slimene, 2021:14).

Second: Importance Financial Soundness

Proceeding from the importance of the financial Soundness of the bank and the emergence of the urgent need to apply the financial Soundness regulations of the institution, and to implement the precautionary principles, and for the institution to be in a sound condition, so that it does not harm the customer associated with the services provided by it (Al-Obaidi et al., 2018: 14). By designing a program to assess the financial sector and to identify the strengths and weaknesses of the financial system and work to develop appropriate policy responses (Lawal, 2019:2). Through the supervisory institutions, guiding ways are found to develop management plans for financial crises and confront them, especially companies of systemic importance to take the necessary measures as simulations of early warning systems (Van-Thep, 2019:35).

The importance of financial Soundness indicators can be summarized in several control indicators used to measure the institution's Soundness. These indicators are used to assess the institution's performance level and discover defects in its performance at an early stage so as not to face problems that lead to its collapse, and thus these indicators define the possibilities of crises at a time early before the occurrence of the event to help take the necessary preventive measures or prevent the occurrence of these crises (Rahman, 2017:37). (Talibong, 2019:69) pointed out that the importance of financial Soundness is as follows-:

1-Financial soundness helps financial institutions to assess their operational resilience, viability, and continuity during the crisis period and beyond.

2-Financial soundness describes the reality and status of the institution in a way that enables decision makers to deal with weaknesses and overcome them in a timely manner, in order to avoid the occurrence of financial problems or crises similar to the recent crises.

3-Financial Soundness indicators are an early warning system that determines the financial position of the bank, in addition to it reflects the administrative efficiency of the institution in managing its liabilities and assets, and its ability to perform its role in financial intermediation while maintaining financial solvency.

4-It provides the possibility of evaluating the financial soundness of the institution based on objective quantitative measures, and through these indicators, the principles of transparency and disclosure are established, and all information is provided to market workers, the public of investors and all those who deal with the institution.

5- These standards allow for comparing the financial conditions of the institution locally and internationally through the application of indicators of financial Soundness in different countries, and their reliance on the standards of accounting and statistical systems approved by these countries.

The soundness of financial institutions is also a key part of the infrastructure for strong macroeconomic performance and effective monetary policy at the national level. Hence, central banks and governments are paying increasing attention to monitoring the soundness and efficiency of financial institutions and markets, and macroeconomic and institutional developments that pose potential risks to financial stability (Qasimi , 2018: 216).

On the other hand, financial Soundness indicators are methodological tools that help identify and qualify the soundness of financial systems and their weaknesses according to five areas of concern, namely, capital adequacy, asset quality, profits, liquidity, and sensitivity to market risks (Akani, 2019:2).

Third: Indicator Financial Soundness

In order to avoid the financial crises that could afflict the financial systems in different countries, which have significant negative effects on the economies of those countries, international financial organizations such as the International Monetary Fund have begun working on deriving financial Soundness indicators at the macroeconomic level to be an early warning bell about the sensitivity of the financial sectors to crises. These indicators include many aspects, including asset quality, capital efficiency, profitability, and liquidity (Swalih, 2021: 296).

Interest in the subject of (Financial Soundness indicators) began in the early 2000s by the International Monetary Fund in response to the financial market crisis in the nineties of the twentieth century. Macro Prudential indicators) for evaluating the international financial systems. The main objective of the financial Soundness indicators was to contribute to increasing the transparency of the international financial systems and to obtain a clearer picture of the strengths and weaknesses of these systems, for the purpose of distinguishing between correct and unhealthy financial systems. These efforts were accompanied by measures to improve market control. Which is one of the mainstays in determining the adequacy of the capital owned and specified by the Basel Committee for Banking Supervision and Supervision in the Bank for International Settlements, and which will enhance the activity and strength of the international financial system (Anna et al., 2008: 14).

The creation of indicators of financial Soundness is part of the intensification of international efforts to strengthen the stability of the international financial system, and the costly financial crisis in the nineties of the twentieth century had pushed to the fore the issue of the importance of the stability of the financial system of countries as a prerequisite for prosperity and economic prosperity, and through indicators of financial Soundness sought The international community has called for continuous cooperation with international institutions and its response to increasing the need for international availability of data on the integrity of international financial systems (Aspal, 2016:13). Among the most important indicators of financial Soundness for banks are (Atkins, 2006:3):-

1- Capital Adequacy Index

Attention to the adequacy of banking capital and its standards has become one of the contemporary issues, as a result of the successive developments that the markets are witnessing globally, due to the exposure of banking work (with regard to the type and nature of funds sources and their uses) to many risks that may result from internal factors related to the bank's activity and management, or from factors An external result of changing the conditions under which the bank operates, given the specificity of the bank's work and its characteristics associated with multiple and opposing parties at the same time (Aweke et al., 2017:2).

Capital is a key factor in assessing the strength and Soundness of the bank, and the adequacy and availability of capital affects the resilience of financial institutions to withstand shocks in their balance sheet, as capital acts as a barrier against unexpected losses and thus helps banks to overcome the risks of bankruptcy, and sufficient capital enhances the ability The bank will continue to pursue growth and diversification strategies, while the lack of capital will be an obstacle to doing so (Bahrini, 2011: 17).

The capital adequacy index is a measure of the financial strength of the bank, and the attention and focus on the overall position of the bank's capital is to protect depositors from potential crises as a result of losses incurred by the bank, and capital is the means to protect the bank from losses (Bateni,2014:12). The capital adequacy ratio is an important measure (Soundness) for banks and depository institutions because it serves as a buffer or cushion to absorb losses (Berk, 2017:47). The Basel Committee introduced the Capital Adequacy Regulations in 1988, which required globally active banks to maintain a minimum capital equal to 0.08 of risk-adjusted assets, with a capital consisting of Tier 1 capital, i.e. equity capital and reserves. disclosed, second-tier capital, that is, long-term debt, undisclosed reserves and mixed instruments (Bessis, 2010:4).

2- Asset Quality Index

The quality of assets refers to exposure to risks due to loans granted by the bank, and the quality of bank loans is affected by the level of non-performing loans and the appropriateness of loan loss provisions and management and that the greatest risk faced by banks is the losses resulting from overdue loans and that the poor quality of assets is the main reason for the failure of the bank, so results in High-quality assets have higher profit margins, and thus higher profits, however if the banks collected high non-performing loans, bad debts, and did not have good collateral to back their loans, there would be less chance of survival, thus establishing a link between assets, profits and the Soundness of banks (Ali et al., 2013:9).

And that the ability of the bank to use the available resources to create the maximum value for the bank, and that the administrative efficiency, integrity, the quality of the bank's board of directors and the level of professionalism are necessary to ensure a sound banking system (Almarzoqi, 2015: 174). The administrative structure and the ability of bank officials and managers to take decisions helps to generate revenues and control expenses, which is one of the indicators of the creditworthiness of the bank, which contributes to the Soundness of the bank (Asteriou, 2007: 2). The quality of assets is determined in particular by the quality of loans because this category of assets represents a large share in the total balance sheet of the bank, as the quality of loans is measured by the ratio of non-performing loans to total loans, and loans are the most important part of the assets as it reflects the ratio of non-performing loans to The total loans owned by the bank is an important indicator in the assessment, but the high ratio also reflects a more sensitive asset structure (Audu, 2013:71).

3- profitability index

It is represented in the bank's ability to obtain profits through banking investment, and this method can obtain a return commensurate with the size of the bank's resources during a period of time, and the ability of the bank to achieve profits is through the optimal investment of the bank's resources to achieve a return commensurate with the volume of its resources during A period of time, and profitability is expressed in certain proportions, which represent: the rate of return on investment in a specific resource of the bank (Dorina, 2015: 91).

Profits are defined as the rate of return on the invested money, which is an indicator of the bank's management's ability to effectively employ the bank's resources to generate value for stakeholders and maintain the bank, where there is a negative relationship between profitability and the possibility of bank failure and that the bank's profitability is affected by the composition of the asset portfolio, management quality and operational adequacy (Greene, 2003: 4).

It is a reflection of the way of banking management in light of the environment in which banks operate, that is, the profitability of banks must reflect the quality of their management and the behavior of shareholders in addition to their competitive strategies, efficiency and risk management capabilities (Sharma et al., 2013: 57). Profitability is defined as the strength of the financial position of banks and the extent to which they are able to avoid losses and thus not to depreciate the value of shareholders. It is the ratio used to measure the company's ability to reap profits from its normal business activities (Singh et al., 2015:131). The quality of profits reflects the current operational performance, which will be a good indicator of future operating performance, and to measure the profitability of banks there are a set of ratios used, the most important of which are the return on assets, the return on equity, the net interest margin and the rate of return on deposits (Ayadurai, 2018:21).

4- Bank Liquidity Index

Liquidity refers to the financial suitability of the bank and its ability to meet its short-term obligations on their due dates, i.e. maintaining a sufficient liquidity ratio to carry out major operational operations and face emergency situations. Low or diminishing liquidity ratios are early warning indicators of cash flow problems and potential business failures, despite The importance of maintaining liquidity, but this means reducing the volume of returns, so a state of balance must be reached between the need for the security provided by liquidity in exchange for investing in liquidity and achieving additional profits (Bitar at al., 2017:19).

And (Kolum, 2016:4) defined it as the ability of the financial institution to meet its normal obligations, and to create credit, through the institution retaining part of the liquid assets, or assets that can be converted into liquid quickly without incurring substantial losses in their value, or through the institution's ability to Providing sources of borrowing to meet normal and emergency withdrawal needs. Given the importance of liquidity for banks, the monetary authorities set minimum limits for the volume and type of liquidity that must be maintained by banks and the Central Bank as the last party to lend to banks, which requires estimating liquidity needs by predicting the size of loans and analyzing the behavior of deposits in order to avoid reaching cases of liquidation and declaring bankruptcy, which means Maintaining a liquidity ratio The bank avoids access to cases of financial hardship, taking into account the need to invest the available cash to achieve the goal of profitability (Aspal, 2016:13).

The liquidity ratio also indicates whether the bank is able to adequately meet the requirements of current and future cash flows without negatively affecting its daily operations or incurring losses. Liquidity is considered as insurance against shocks during crises.

Liquidity is defined according to the Uniform Financial Institutions Classification System of 1997 (UFIRS) as the ability to fund assets and meet obligations when they fall due. Liquidity is necessary in a credit union to compensate for expected and unexpected fluctuations in the balance sheet and provide funds for growth. One of the most important ratios for measuring liquidity is liquid assets To total assets (Buhraira and Abdel Latif, 2017: 4).

5- Administration Soundness Indicators

The quality of management is of great importance in determining the future of the bank and managing banking operations. It manages the quality of loans and requires them to ensure that the bank is profitable. The most important ratios used to evaluate the efficiency of management are described, which are non-interest expenses to total income and total loans to total deposits (Aspal, 2016: 13).

A - Expenses other than interest to total income

Non-interest expenses are calculated to total income, i.e. the amount of administrative expenses to total income, and this indicator is often called the efficiency ratio, as it provides insight into the portion of total revenue equivalent to covering operating expenses, including per capita costs and occupancy expenses (Bitar at al. ,2017:19). The growth of non-interest income has a positive impact on the profitability of the bank, however the positive impact on profitability was limited due to the increase in operating costs associated with the development of non-interest income-generating activities (Aspal, 2016:13).

B- Total loans and advances to total deposits

The loan-to-deposit indicator is one of the commonly used ratios for many countries in banking management and monitoring activities to improve the quality of liquidity risk management for banks, as well as to ensure stability and the integrity of the financial system. Positive on the profitability of banks, and this ratio is calculated by having the total loans and advances in the numerator and the total deposits as the denominator (Bitar at al., 2017:19).

6-Indicator of sensitivity to market risk

As a result of changes in interest rates, foreign exchange rates and stock prices. The sensitivity of market risk is assessed by banks and these fluctuations in variables affect the bank's earning ability. Therefore, the sensitivity to market risks indicates the extent to which the bank is negatively affected by these changes. Market risks are the result of the impact of commercial activities, non-commercial activities and foreign exchange operations. To assess sensitivity, we refer to the most important ratio (Buhraira and Abdel Latif, 2017: 4)

This indicator indicates the ability of contemporary banks to reduce the negative effects of interest rate fluctuations, which is the ratio of interest rate sensitive assets / interest rate sensitive liabilities. The market, i.e. in line with the prevailing trends, if the assets and liabilities are analyzed at any point in time, the banking administration can determine the degree of imbalance in the field of correspondence between the interest rate sensitive assets with their sensitive liabilities. Prevailing and Prospective (Aspal, 2016:13).

Fourth: The importance of financial Soundness indicators

The importance of financial Soundness indicators can be summarized in several control indicators used to measure the Soundness of the banking system, as these indicators are used to assess the level of banks' performance and to discover defects in their performance at an early stage so as not to face problems that lead to its collapse, and thus these indicators define the possibilities of crises Early before the event to help take the necessary preventive or preventative measures from the occurrence of these crises (Buhrira and Abdel Latif, 2017: 4). Thus, the importance of indicators for assessing the soundness of financial systems can be clarified by the following points (Kolum, 2016:4) & (IMF, 2010:38):

1-It helps banks and financial institutions to assess their operational flexibility and the possibility of their survival and continuity during the crisis period and beyond, and in light of these turmoil, the question arises about how to deal, in a timely manner.

2-Describes the reality and situation of the bank in a way that enables decision-makers to deal with weaknesses and overcome them in a timely manner, in order to avoid the occurrence of financial problems or crises similar to the recent ones.

3- Financial Soundness indicators are an early warning system that determines the financial position of the bank, in addition to it reflects the administrative efficiency of the bank in managing its liabilities and assets, and its ability to perform its role in financial intermediation while maintaining financial solvency.

4- It allows the possibility of evaluating the financial soundness of the banking system based on objective quantitative measures. Through these indicators, the principles of transparency and disclosure are established, and all information is provided to market workers, the public of investors and all those dealing with banks.

5- These standards allow comparing the financial conditions of banks locally and internationally through the application of financial Soundness indicators in different countries, and their reliance on the standards of accounting and statistical systems approved by these countries.

Fifth: Financial Soundness models

To measure financial soundness, there are many models through which the extent of improvement in the financial situation and its soundness is measured. The most important models are- :

1-A model (Bankometer) to measure financial Soundness

The researchers applied the (Bankometer) model that was developed based on the recommendations of the International Monetary Fund (2000), which is a recent innovation in the field of bank Soundness assessment that was created by derivation. From both the CAMELS model and the CLSA stress test, it is a good measure framework for assessing the Soundness of banks and providing them with equations that can help them choose the best bank according to their needs and financial transactions (Aspal, 2016:13).

Capital Adequacy Ratio

Capital to Assets Ratio: Capital/Asset

Equity to total assets: Equity / Asset

-NPLs to Loans: NPLs / Loans NPLs to Loans: NPLs / Loans

-Cost to Income Ratio: Cost/Income

-Asset Loans: Loans to Assets: Loan/Asset

$$S=CA + EA + CA + NPL + CI + LA$$

2-CAMELS model for measuring financial Soundness

The CAMELS model represents an important and essential aspect of the Soundness and success of banks, and is subject to measurement, such as the asset quality index. The administration has clear strategies and objectives in guiding local banking institutions and international business, as well as collecting financial ratios in line with management strategies.

Achieving and maintaining financial stability and Soundness requires the adoption of a two-way financial policy (AlAli, 2018:3).

The first: - preventive directed towards preventing crises and problems in the financial system. Examples of cases in which the financial system is in distress are:

1-The existence of liquidity problems.

2-The deterioration in the quality of assets due to the increase in bad and non-performing loans, in sectors subject to an increase in credit concentration to fluctuations, and the preventive measures that prevent this emphasize the need for continued monitoring and supervision of banks and financial institutions on a regular basis in order to achieve rapid early diagnosis (early warning) of points Weaknesses in any part of the financial system.

The second: It is therapeutic in nature, and it seeks to contain and surround the crisis as soon as possible and prevent the spread of infection with it.

Applied Aspect Of Research

Analyze Financial Soundness indicators

This topic will address the presentation of the nature of the work of the study sample banks, as the study sample was represented by the Iraqi private commercial banks listed in the Iraq Stock Exchange, as the study sample was selected, which included ten banks: (Sumer Commercial Bank, Iraqi Credit Bank, Al-Ahly Bank of Iraq, Middle East Bank, Al-Mansour Investment Bank, Gulf Commercial Bank, Bank of Baghdad, Mosul Bank for Development and Investment, Commercial Bank of Iraq, Bank of Economy, Investment and Finance)for the period (2010-2019). This topic aims to analyze the indicators of the financial soundness of the commercial banks, the study sample.

1-Capital Adequacy Index

Capital adequacy indicators are considered one of the international standards for measuring the degree of credit risk and are used in order to protect depositors and enhance the stability and efficiency of financial systems. Capital adequacy indicators are measured through the following equation:

Capital Adequacy = Regulatory Tier 1 Capital / Risk Weighted Assets

We note from Table (1) that the average capital adequacy of the banking sector amounted to (2.0043) with a standard deviation of (0.921), and the highest average capital adequacy was from the share of the Middle East Bank, which amounted to (3.656), while the lowest average was from The share of Khaleeji Commercial Bank reached (1,438), and other banks came in varying proportions

Table (1) The capital adequacy of the study sample banks

S.D	average	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Bank name
0.557	**1.442**	**2.011**	**1.123**	**1.763**	**1.854**	**1.504**	**0.622**	**1.632**	**0.557**	**1.045**	**2.310**	Sumer Commercial Bank
0.862	**1.336**	**0.311**	**2.959**	**2.649**	**0.867**	**1.243**	**0.567**	**0.948**	**2.070**	**1.087**	**0.662**	Iraqi Credit Bank
3.957	**2.489**	**0.940**	**0.341**	**1.520**	**14.142**	**0.520**	**0.907**	**3.124**	**0.586**	**1.156**	**1.658**	Al Ahli Bank of Iraq
6.119	**3.656**	**3.011**	**0.810**	**3.215**	**0.401**	**1.030**	**0.609**	**2.367**	**21.768**	**0.857**	**2.488**	Middle East Bank
2.764	**2.604**	**1.565**	**5.579**	**0.913**	**1.775**	**2.089**	**0.866**	**1.507**	**9.859**	**1.341**	**0.549**	Al-Mansour Investment Bank
0.581	**1.438**	**2.185**	**1.026**	**0.889**	**1.542**	**2.040**	**1.114**	**1.934**	**0.608**	**2.198**	**0.843**	Gulf Commercial Bank
1.022	**2.012**	**2.676**	**2.280**	**2.625**	**1.439**	**0.304**	**2.515**	**0.512**	**3.726**	**1.366**	**2.679**	Baghdad Bank
0.973	**1.645**	**0.435**	**2.127**	**0.323**	**2.955**	**0.944**	**3.486**	**1.605**	**1.071**	**1.951**	**1.554**	Mosul Bank for Development and Investment
0.967	**1.530**	**1.584**	**0.996**	**1.033**	**2.364**	**1.042**	**2.207**	**0.593**	**3.846**	**0.517**	**1.124**	Commercial Bank of Iraq
1.085	**1.891**	**1.973**	**1.449**	**0.731**	**2.384**	**4.033**	**1.121**	**2.399**	**0.311**	**3.199**	**1.314**	Bank of Economy, Investment and Finance
0.921	**2.0043**	**1.6691**	**1.869**	**1.5661**	**2.9723**	**1.4749**	**1.4014**	**1.6621**	**4.4402**	**1.4717**	**1.5181**	average

2-Asset Quality Index

Capital credibility indicators depend on the reliability of the asset quality indicators, as the risks of financial insolvency for financial institutions and banks are mostly of the quality of assets, and the quality of assets is measured through the following equation:

Asset quality index = net provision for non-performing loans / capital

We note from Table (2) that the average asset quality for the banking sector amounted to (0.8158) with a standard deviation of (0.732), while the highest average asset quality was from the share of Khaleeji Commercial Bank, which amounted to (1.338), while the lowest average was from the share of a bank Al-Mansour Investment, which amounted to (0.405), and other banks came in varying proportions.

Table (2) Indicator of the quality of assets in the study sample banks

S.D	average	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Bank name
1.480	**0.812**	**0.250**	**0.188**	**0.407**	**0.122**	**5.202**	**0.103**	**0.499**	**0.193**	**0.882**	**0.275**	Sumer Commercial Bank
1.588	**0.966**	**0.107**	**5.608**	**0.531**	**0.108**	**0.633**	**0.165**	**1.062**	**0.178**	**1.080**	**0.186**	Iraqi Credit Bank
1.598	**0.888**	**0.254**	**1.227**	**0.274**	**0.078**	**0.366**	**0.137**	**5.570**	**0.080**	**0.757**	**0.136**	Al Ahli Bank of Iraq

1.552	**0.915**	**0.182**	**1.948**	**0.447**	**0.056**	**0.294**	**0.079**	**5.283**	**0.084**	**0.628**	**0.147**	Middle East Bank
0.422	**0.405**	**0.732**	**0.121**	**0.152**	**0.137**	**0.077**	**0.273**	**0.931**	**1.358**	**0.101**	**0.163**	Al-Mansour Investment Bank
1.840	**1.338**	**6.074**	**3.493**	**1.042**	**0.373**	**0.915**	**0.116**	**0.583**	**0.142**	**0.204**	**0.440**	Gulf Commercial Bank
1.930	**0.867**	**0.165**	**6.643**	**0.095**	**0.004**	**0.161**	**0.480**	**0.227**	**0.200**	**0.423**	**0.274**	Baghdad Bank
0.650	**0.630**	**0.476**	**2.261**	**0.415**	**0.105**	**0.818**	**0.147**	**1.333**	**0.166**	**0.362**	**0.212**	Mosul Bank for Development and Investment
0.583	**0.558**	**2.110**	**0.242**	**0.035**	**0.593**	**0.541**	**0.042**	**0.448**	**0.975**	**0.417**	**0.179**	Commercial Bank of Iraq
1.109	**0.779**	**3.000**	**2.863**	**0.300**	**0.031**	**0.971**	**0.027**	**0.132**	**0.032**	**0.126**	**0.308**	Bank of Economy, Investment and Finance
0.921	**2.0043**	**1.6691**	**1.869**	**1.5661**	**2.9723**	**1.4749**	**1.4014**	**1.6621**	**4.4402**	**1.4717**	**1.5181**	average

Table (2) Indicator of the quality of assets in the study sample banks

3-profitability index

The profitability indicator focuses on the indicators that divide the profitability of financial institutions and banks. The profitability of banks is measured by the following equations:

Profitability Index = Net Income / Equity

We note from Table (3) that the average profitability index for the banking sector amounted to (1.5509) with a standard deviation of (1.146), and the highest average for the profitability index was from the share of Sumer Commercial Bank, which amounted to (3.223), while the lowest average was from the share of a bank The Iraqi credit amounted to (0.955), and other banks came at varying rates.

S.D	average	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Bank name
1.039	**3.223**	**0.372**	**2.563**	**0.734**	**0.102**	**0.459**	**1.133**	**0.117**	**1.196**	**0.228**	**0.329**	Sumer Commercial Bank
0.643	**0.955**	**1.849**	**0.733**	**0.863**	**0.648**	**0.267**	**0.497**	**0.588**	**0.294**	**2.149**	**1.664**	Iraqi Credit Bank
0.770	**0.982**	**0.375**	**0.223**	**1.733**	**1.118**	**1.256**	**0.430**	**0.072**	**1.422**	**2.654**	**0.534**	Al Ahli Bank of Iraq
1.905	**2.042**	**1.753**	**3.227**	**0.860**	**3.693**	**6.675**	**0.058**	**0.442**	**0.891**	**0.857**	**1.969**	Middle East Bank
0.585	**0.898**	**1.053**	**1.356**	**1.408**	**0.694**	**0.388**	**0.321**	**0.165**	**1.533**	**0.222**	**1.842**	Al-Mansour Investment Bank
0.913	**1.321**	**1.447**	**2.911**	**2.845**	**1.142**	**0.290**	**1.481**	**0.404**	**1.425**	**0.111**	**1.157**	Gulf Commercial Bank
1.015	**1.014**	**0.894**	**1.949**	**0.364**	**0.559**	**2.323**	**0.100**	**0.258**	**0.079**	**0.476**	**3.134**	Baghdad Bank
1.813	**2.222**	**5.477**	**4.446**	**1.366**	**1.399**	**3.486**	**0.493**	**0.253**	**0.728**	**0.671**	**3.903**	Mosul Bank for Development and Investment

1.444	**1.573**	**1.360**	**3.757**	**0.070**	**0.956**	**0.702**	**0.313**	**3.529**	**0.059**	**3.762**	**1.218**	Commercial Bank of Iraq
0.876	**1.279**	**1.366**	**1.322**	**0.350**	**3.036**	**1.709**	**0.141**	**0.573**	**1.373**	**0.553**	**2.372**	Bank of Economy, Investment and Finance
1.146	**1.5509**	**1.5946**	**4.7487**	**1.0593**	**1.3347**	**1.7555**	**0.4967**	**0.6401**	**0.9**	**1.1683**	**1.8122**	average

Table (3) The profitability index in the study sample banks

4-Bank Liquidity Index

The importance of indicators lies in their effective role in monitoring the liquidity of financial institutions and banks, especially in cases of financial insolvency as a result of poor management of liquidity. Liquidity is measured by the following equation:

Bank liquidity index = current assets / total assets

We note from Table (4) that the average of the banking liquidity index for the banking sector amounted to (1.1865) with a standard deviation of (0.478). The share of Sumer Commercial Bank reached (0.180), and other banks came in varying proportions.

Table (4) Bank liquidity index in the study sample banks

S.D	average	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Bank name
0.262	**0.180**	**0.045**	**0.155**	**0.135**	**0.037**	**0.166**	**0.158**	**0.951**	**0.069**	**0.029**	**0.055**	Sumer Commercial Bank
0.787	**1.522**	**1.922**	**0.452**	**0.837**	**1.160**	**0.695**	**1.149**	**1.257**	**2.552**	**2.495**	**2.699**	Iraqi Credit Bank
0.570	**0.638**	**2.201**	**0.443**	**0.103**	**0.080**	**0.399**	**0.425**	**0.735**	**0.487**	**0.804**	**0.703**	Al Ahli Bank of Iraq
0.208	**0.412**	**0.996**	**0.218**	**0.269**	**0.289**	**0.382**	**0.337**	**0.324**	**0.417**	**0.436**	**0.453**	Middle East Bank
1.015	**1.962**	**1.027**	**1.440**	**0.776**	**2.767**	**2.019**	**3.646**	**3.651**	**0.895**	**1.949**	**1.445**	Al-Mansour Investment Bank
2.364	**2.604**	**2.881**	**0.737**	**9.405**	**1.982**	**1.596**	**2.756**	**1.348**	**2.520**	**1.716**	**1.098**	Gulf Commercial Bank
0.575	**0.582**	**2.088**	**0.180**	**1.119**	**0.382**	**0.202**	**0.325**	**0.137**	**0.719**	**0.341**	**0.329**	Baghdad Bank
0.565	**0.997**	**2.517**	**0.548**	**0.626**	**0.734**	**0.577**	**0.866**	**1.082**	**1.421**	**0.725**	**0.877**	Mosul Bank for Development and Investment
0.766	**0.883**	**0.086**	**0.230**	**2.056**	**1.078**	**2.356**	**0.139**	**0.104**	**1.098**	**0.917**	**0.763**	Commercial Bank of Iraq
2.558	**2.085**	**2.510**	**2.825**	**8.107**	**0.208**	**0.252**	**1.080**	**0.121**	**5.233**	**0.482**	**0.031**	Bank of Economy, Investment and Finance
0.478	**1.1865**	**1.6273**	**0.7228**	**2.3433**	**0.8717**	**0.8644**	**1.0881**	**0.971**	**1.5411**	**0.9894**	**0.8453**	average

5-Administration Soundness Indicators

Management's Soundness indicators can be measured through loans and advances to total deposits, and this ratio is measured by the following equation:

Ratio of loans and advances to total deposits = total loans and advances / total deposits

We note from Table (5) that the average management Soundness index for the banking sector amounted to (0.9625) with a standard deviation of (0.352), while the highest average for the management Soundness index was from the share of the National Bank of Iraq amounting to (2.172), while the lowest average was The share of the Iraqi Credit Bank reached (0.415), and other banks came in varying proportions

Table (5) The Soundness index of management in banks, the study sample

S.D	average	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Bank name
1.411	**2.020**	**1.811**	**0.901**	**1.467**	**4.934**	**1.449**	**0.620**	**0.116**	**2.180**	**3.737**	**2.983**	Sumer Commercial Bank
0.234	**0.415**	**0.792**	**0.732**	**0.239**	**0.490**	**0.148**	**0.125**	**0.186**	**0.660**	**0.383**	**0.397**	Iraqi Credit Bank
2.285	**2.172**	**2.679**	**0.481**	**8.072**	**4.383**	**0.178**	**1.598**	**0.818**	**1.521**	**0.816**	**1.172**	Al Ahli Bank of Iraq
0.781	**1.277**	**1.862**	**1.237**	**0.292**	**2.531**	**0.954**	**0.427**	**2.369**	**1.852**	**0.670**	**0.573**	Middle East Bank
0.308	**0.316**	**0.100**	**0.334**	**0.147**	**0.073**	**0.313**	**0.104**	**0.416**	**0.080**	**1.145**	**0.451**	Al-Mansour Investment Bank
0.303	**0.357**	**0.113**	**0.970**	**0.115**	**0.039**	**0.705**	**0.061**	**0.523**	**0.494**	**0.448**	**0.107**	Gulf Commercial Bank
0.492	**0.736**	**0.750**	**0.934**	**0.140**	**1.062**	**0.832**	**0.165**	**1.769**	**0.181**	**0.443**	**1.082**	Baghdad Bank
0.121	**0.472**	**0.502**	**0.610**	**0.398**	**0.464**	**0.534**	**0.216**	**0.497**	**0.354**	**0.664**	**0.481**	Mosul Bank for Development and Investment
0.459	**0.583**	**0.775**	**1.457**	**0.698**	**1.218**	**0.217**	**0.087**	**0.596**	**0.616**	**0.034**	**0.130**	Commercial Bank of Iraq
2.913	**1.277**	**0.102**	**0.367**	**0.104**	**0.555**	**9.965**	**0.072**	**1.144**	**0.205**	**0.122**	**0.132**	Bank of Economy, Investment and Finance
0.352	**0.9625**	**0.9486**	**0.8023**	**1.1672**	**1.5749**	**1.5295**	**0.3475**	**0.8434**	**0.8143**	**0.8462**	**0.7508**	average

6-Market risk sensitivity index

It expresses the interest rate risk and is measured from interest rate sensitive assets to interest rate sensitive liabilities. This ratio is measured by the following equation:

Interest Rate Risk = Interest Rate Sensitive Assets / Interest Rate Sensitive Liabilities

We note from Table (6) that the average interest rate risk for the banking sector amounted to (1.3509) with a standard deviation of (0.768). The share of the Commercial Bank of Iraq amounted to (0.689), and other banks came in varying proportions

S.D	average	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Bank name
3.246	**1.638**	**0.275**	**1.008**	**0.479**	**0.119**	**11.322**	**0.352**	**0.810**	**0.762**	**0.119**	**1.132**	Sumer Commercial Bank
1.627	**1.667**	**2.228**	**4.691**	**1.805**	**0.621**	**0.511**	**1.080**	**0.218**	**4.662**	**0.620**	**0.235**	Iraqi Credit Bank
1.794	**1.398**	**0.513**	**0.668**	**0.921**	**0.176**	**0.563**	**1.209**	**6.664**	**0.803**	**0.867**	**1.593**	Al Ahli Bank of Iraq
0.767	**0.946**	**1.209**	**0.996**	**0.098**	**1.150**	**0.909**	**0.593**	**2.859**	**0.263**	**0.116**	**1.269**	Middle East Bank

3.112	**1.816**	**10.877**	**0.934**	**1.942**	**0.276**	**0.149**	**0.111**	**2.254**	**1.275**	**0.258**	**0.082**	Al-Mansour Investment Bank
2.106	**1.971**	**2.704**	**2.334**	**1.650**	**0.249**	**5.523**	**6.067**	**0.234**	**0.381**	**0.244**	**0.327**	Gulf Commercial Bank
1.029	**0.829**	**0.232**	**3.612**	**0.149**	**0.002**	**1.366**	**0.239**	**0.358**	**0.234**	**1.151**	**0.952**	Baghdad Bank
1.071	**1.102**	**1.197**	**3.680**	**0.792**	**0.188**	**2.389**	**0.355**	**1.296**	**0.524**	**0.241**	**0.362**	Mosul Bank for Development and Investment
0.796	**0.689**	**2.686**	**0.381**	**0.319**	**0.715**	**0.253**	**0.038**	**1.427**	**0.046**	**0.998**	**0.025**	Commercial Bank of Iraq
1.508	**1.453**	**2.847**	**3.741**	**3.367**	**0.036**	**1.659**	**2.768**	**0.015**	**0.036**	**0.030**	**0.028**	Bank of Economy, Investment and Finance
0.768	**1.3509**	**2.4768**	**2.2045**	**1.1522**	**0.3532**	**2.4644**	**1.2812**	**1.6135**	**0.8986**	**0.4644**	**0.6005**	average

7-Summary of financial health indicators

Table (7) Summary of financial Soundness indicators in the study sample banks

average	interest rate risk	bank liquidity	management Soundness	profitability index	asset quality	capital adequacy	index / Bank name
1.859	**1.638**	**0.180**	**2.020**	**3.223**	**0.812**	**1.442**	Sumer Commercial Bank
0.959	**1.667**	**1.522**	**0.415**	**0.955**	**0.966**	**1.336**	Iraqi Credit Bank
1.684	**1.398**	**0.638**	**2.172**	**0.982**	**0.888**	**2.489**	Al Ahli Bank of Iraq
1.686	**0.946**	**0.412**	**1.277**	**2.042**	**0.915**	**3.656**	Middle East Bank
1.059	**1.816**	**1.962**	**0.316**	**0.898**	**0.405**	**2.604**	Al-Mansour Investment Bank
1.130	**1.971**	**2.604**	**0.357**	**1.321**	**1.338**	**1.438**	Gulf Commercial Bank
1.032	**0.829**	**0.582**	**0.736**	**1.014**	**0.867**	**2.012**	Baghdad Bank
1.091	**1.102**	**0.997**	**0.472**	**2.222**	**0.630**	**1.645**	Mosul Bank for Development and Investment
0.919	**0.689**	**0.883**	**0.583**	**1.573**	**0.558**	**1.530**	Commercial Bank of Iraq
1.326	**1.453**	**2.085**	**1.277**	**1.279**	**0.779**	**1.891**	Bank of Economy, Investment and Finance
1.274	**1.3509**	**1.1865**	**0.9625**	**1.5509**	**0.8158**	**2.004**	average

The results that were analyzed for the indicators of financial Soundness showed that these indicators vary in the percentages achieved at the level of individual banks from year to year compared to the years of analysis, and their annual averages differ at the level (banks) of the study sample, and thus the ability of those banks to achieve their goals, as the rates of Those indicators during the years of analysis for each bank and during the years approved in the study, where the results and percentages mentioned in the table indicate that the financial soundness, the high rate of change, the changes and indicators that show an improvement in the effectiveness and ability of most banks to achieve acceptable financial performance indicators, especially in The last years of the analysis, compared to the annual rates, which were considered a criterion for comparing the indicators that were achieved in the approved banks in this study, and the above results indicate that the highest capital adequacy ratio was achieved by the Middle East Bank. The ratio during the years of analysis, as for the profitability indicator, it shows that Sumer Commercial Bank is higher than the rest of the other banks, as it appeared that the National Bank of Iraq is bright What is wrong with the rest of the banks in the management Soundness index, as we find that Al Khaleej Commercial Bank is the highest achieving the banking liquidity index, while we find that Al Khaleej Commercial Bank is the highest achieving the interest rate risk index.

Conclusions and Recommendations

1-Conclusions

1-The low needs of the banks in the study sample for funds, due to the fact that most banks retain excess cash, due to the banks' conservative investment policy, due to the political, economic and security conditions of the country, as they maintain high cash liquidity within the banks.

2-The results of the financial analysis showed that the Mosul Bank for Development and Investment suffers in recent years from weak sources of financing by ownership, that is, its increased exposure to liquidity risks, and then the possibility of their exposure to failure or bankruptcy.

3-The Iraqi commercial banks, the study sample, relied on a variety of funding sources, as he noticed that in recent years for some of the study sample banks, their reliance on equity financing and increased reliance on deposit financing, meaning the absence of a clear policy and the continuation of their basic banking operations.

4-The rapid expansion of the financial services industry and the globalization of financial markets have enhanced opportunities for economic growth, increased risks in the financial sector, and strongly illustrated the challenges in maintaining the stability of the financial system. Therefore, the issue of financial system stability has become one of the agenda items at the local and international levels.

2-Recommendations

1-To face the challenges imposed on its financial system, and in particular the banking system, it is necessary to think about ways and mechanisms to enhance the status of banks, strengthen their financial positions and support their competitiveness by strengthening their capital and turning them into comprehensive banks that provide all services, especially all the new financing, and this is to diversify their strategy on the one hand, and responding to its financing protests for economic institutions on the one hand.

2-The necessity for the management of banks to pay attention to the financial Soundness of the bank, through the management of banks measuring the sources of funding for banks and determining the bank's needs for funds.

3-The study recommends that the bank follow a policy to invest its surplus funds through the management of bank liquidity to help it achieve profits from these invested funds. That is, encouraging banks to find new mechanisms and sound methods that enable them to make better use of the deposits available to them in order to achieve profits.

4-Every bank must fulfill the financial obligations related to its capital to ensure the continuity of confidence in it, as a bank that is not financially able to serve its goals and the national economy.

References

1. Ali, M.R., Rahman, M.M. & Mahmud M.S. (2013). Financial Soundness of the Textile Industry : Altman Z-score Measurement, Journal of Science and Technology,(14):7-18
2. Al-Obaidi, Muhammad Awad, Al-Bashir, Ibrahim Fadl Al-Mawla, Musharraf. M, & Omar Al-Sir Al-Hassan Muhammad. (2018). (The Role of Central Banks in Maintaining Financial Stability and Financial Soundness (Doctoral dissertation) Sudan University of Science and Technology
3. Aweke. Melako& . Melaku Alemu , (2017). " Financial Pereormance Analysis of Private Commercial Banks of Ethiopia: Camelratings" International Journal of Scientific and Research Publications, Volume 7
4. Bitar, M., Hassan, M. K., & Walker, T. (2017). Political systems and the financial soundness of Islamic banks. Journal of Financial Stability, 31, 18-44.
5. Bouhrira, Abbas and Mustafa, Abdellatif, 2017, Analysis of Banking Soundness Indicators in Algeria, Algerian Journal of Economic Development, No. 7.
6. CHIHI, S., & KHALIL, A. (2020). Do board characteristics affect the financial soundness of Islamic banks. African Scientific Journal, 3(2), 096-096.
7. Dorina, clichici & Corina, Gribincea (2015). Implications of the financial crisis. International Journal of Finance ,10:88-109
8. Khalil, A., & Slimene, I. B. (2021). Financial soundness of Islamic banks: does the structure of the board of directors matter?. Corporate Governance: The International Journal of Business in Society.
9. Lawal, T. T. (2019). Influence of bank financial soundness on the operational efficiency of deposit money banks in Nigeria (Doctoral dissertation, JKUAT-COHRED).
10. Van-Thep, N., & Day-Yang, L. (2019). Determinants of financial soundness of commercial banks: Evidence from Vietnam. Journal of Applied Finance and Banking, 9(3), 35-63.
11. Bitar, M., Hassan, M. K., & Walker, T. (2017). Political systems and the financial soundness of Islamic banks. Journal of Financial Stability, 31, 18-44.
12. Chihi, S., & Khalil, A. (2020). Do board characteristics affect the financial soundness of Islamic banks. African Scientific Journal, 3(2), 096-096.
13. Salina, A. P., Zhang, X., & Hassan, O. A. (2020). An assessment of the financial soundness of the Kazakh banks. Asian journal of accounting research.
14. Hisar, H. (2017). Assessment of financial soundness of private and public sector banks in India. Assessment.
15. Al-Ali, M. S., Al-Shamali, M. M., AlAwadhi, K. M., & AlSabah, A. M. (2018). The use of Zmijewski model in examining the financial soundness of oil and gas companies listed at Kuwait Stock Exchange. International Journal of Economics, Commerce and Management Research Studies, 1(2), 15-21.
16. Al-Ali, M., & Al-Yatama, S. (2019). Analyzing the financial soundness of Kuwaiti banks using CAMELS framework. Financial Risk and Management Reviews, 5(1), 55-69.
17. Bouhrira, Abbas and Mustafa, Abdellatif, 2017, Analysis of Banking Soundness Indicators in Algeria, Algerian Journal of Economic Development, No. 7.
18. Akhtar, H., Jabeen, R., & Shah, S. Z. A. (2020). Inflation Disagreement and Its Impact on Stock Market Volatility, Unemployment Rate and Financial Soundness. In IEIS2019 (pp. 487-497). Springer, Singapore.
19. Rahman, Z. (2017). Financial soundness evaluation of selected commercial banks in Bangladesh: an application of bankometer model. Research Journal of Finance and Accounting, 8(2), 63-70.
20. Talibong, J. K., & Simiyu, E. M. (2019). Financial soundness indicators and financial performance of deposit taking micro finance banks in Kenya. African Journal of Emerging Issues, 1(11), 67-84.
21. Qasimi Asia. (2018). The importance of banking auditing for risk management to enhance the financial soundness of banks. acquaintances. 11(20), 206-218.
22. Akani. Henry Waleru. (2019). "Capital Adequacy Ratios and Earnings Capability of Deposit Money Banks in Nigeria", Journal of Accounting, Finance &Management Discovery Volume 2.
23. Swalih, M., Adarsh, K., & Sulphey, M. (2021). A study on the financial soundness of Indian automobile industries using Altman Z-Score. Accounting, 7(2), 295-298.

24. Anna ,Maria Agresti, Patrizia Baudino and Paolo Poloni, (2008)."analysis of the banking sector a comparison of the two approaches," European Central Bank, Germany
25. Aspal, Parvesh Kumar, and Dhawan, Sanjeev, (2016) "Camels Rating Model For Evaluating Financial Performance of Banking Sector: A Theoretical Perspective" , International Journal of System Modeling and Simulation Vol. 1
26. Atkins, D, Drennan L. & Bates, I. (2006)." Reputational Risk: A Question of Trust", Publisher: Global Professional Publishing.
27. Bahrini, Raef, (2011)." Empirical Analysis of Non-perfuming Orming Loans in The Case of Tunisian Banks", Journal of Business Studies Quarterly, Vol. 3, No. 1.
28. Bateni.Leila, Hamidreza Vakilifard1 & Asghari .F, (2014)."The Influential Factors on Capital Adequacy Ratio in Iranian Banks", International Journal of Economics and Finance; Vol. 6, No. 11
29. Berk, jonathan & Demorzo, peter, (2017)." Corporate Finance", 4thed, Pearson, New York, NY.
30. Bessis, J. (2010). "Risk management in banking" (3rd ed.). London, UK: John Wiley & Sons.
31. Almarzoqi,Raja M . ,Naceur,Sami Ben &Kotak,Akshay (2015). What Matters for Financial Development and Stability ?.International Monetary Fund, IMF Working Paper,No.173.
32. Asteriou, D. & Hall,S.(2007).Applied Econometrics: A Modern Approach Using Eviews and Microfit .Palgrave Macmillan, USA
33. Audu, N.P., Okumoko, T.P.(2013). Financial development and Economic growth in Nigeria. European Journal of Business and Management ,5(19):69- 82.
34. Greene, William H.(2003).Econometric Analysis.5th ed, New Jersey: Prentice Hall.
35. Sharma, Nishi & Myanka (2013).Altman Model and Financial Soundness of Indian Banks. International Journal of Accounting and Financial.3(2): 55-60.
36. Singh,Raju Jan , Huang, Yifei (2015). Financial Deepening Property Rights and Poverty : Evidence from Sub-Saharan Africa. Journal of Banking and Financial Economics,1(3):130-151.
37. Ayadurai,Charmele &Eskandari ,Rasol , "Bank Soundness: A PLS SEM Approach" ,International Series in Operations Research & Management Science ,Volume 267,2018.
38. Kolum, Mical Cheruiyot, "A micro and macro prudential approach to financial soundness assessment of Commercial Banks in Kenya", A Thesis Submitted to Saint Strathmore University, School of Graduate Studies in Partial Fulfilment of the Requirements for the Degree of Ph.D , 2016

*r: Mohammed M.H. Al-Ardhy ffiliation:*University of Al-Qadisiyah *Email:* admin.mang21.25@qu.edu.iq