

# Financial fragility and its relationship to financial performance-A comparative study between a sample of private commercial banks listed on the Iraq Stock Exchange

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**Abstract:** Analyzing the reality of the financial fragility of the financial system, especially the banking system, is recent, as it has become an increasingly important goal in the context of making macroeconomic policies, especially its financial and monetary sides, and among the reasons why attention is directed towards the issue of the fragility of the financial system and that it has priority among the interests of financial policy makers. And monetary and economic around the world is the need for sudden financing operations, especially investment, which necessitated a study and analysis of the impact of the reality of the fragility of the financial system in Iraq on the state and the possibility or ability of the country's financial and banking system to face the necessary financing operations, especially the local investment ones, and reflects the fragility of the financial system On the state of deterioration and instability of the financial system, whether the banking side of it (i.e. financial and banking institutions), or the financial markets side, in a manner in which it does not perform its functions efficiently, especially the allocation of resources and directing them or making them ready for any sudden financing that can help the economic situation in the country.

**Key words:** Financial fragility, financial performance.

## 1. Introduction

Measuring financial fragility and financial excellence are important topics of interest to all types of operating organizations, especially the banking sector. Its costs are transferred to a financial settlement, which leads to higher costs, between lenders and savers, which helps to transfer money from one party to another, and these types of operations are not very simple and this is evident through the failures of many banks, and the high rate of failure of their systems led to bankruptcy To increase the researchers' tendency to study financial fragility in terms of its repercussions, and focused on the need for the efforts of safe and sound banks, but the failure that afflicted the largest banks and led to their collapse, especially in times of crisis, and especially for banks, so the focus must be not only in times of crisis, but in the ability to confront

Sudden external shocks that lead to a comprehensive and unexpected instability of the banking financial systems. Over the years, and on this basis, the stability of banks is a major source of concern for any economy, and this concern is reflected in the lack of sufficient financing in time.[1]

The increased risks of banks during the recent global financial crisis, and their systems became more vulnerable to bankruptcy, especially for banks located within the Caliphate economies, where global banks were facing financial turmoil. The fragility of banking systems, especially after the global financial crisis (2007-2008) in terms of its repercussions and repercussions, and the focus on the need for safe and sound banking systems, but the failure that afflicted most of the major banks, which led to a surprise that led to a comprehensive and unexpected instability of the systems Banking finance, although previous research showed many theoretical and experimental results that provided the foundations for understanding the causes of instability, and the changes that occur in the economic and political environment according to new factors. And the reasons why the hill is as fragile as the regulations, it is not surprising to specialists and practitioners. No matter how slow the pace of independence, there is no need for self-reliance in the life of any country. However, the Iraqi banking sector, especially private banks, suffers from clear problems that appeared in the sharp decline in stock prices. Leveraging appropriate debt where necessary to focus on net cash flow, ensuring investment opportunities are covered and appropriate distribution to shareholders.[2]

## **2. concept of Financial Fragility**

The main benefit of measuring financial fragility in companies is to provide financial regulators with an additional means to understand the economic economy mechanism adopted by companies of all kinds to acquire assets and the mechanism for enhancing this adoption value that has been preserved in its financial value (which enhances financial fragility) which will open the way in its case Explanation of why in the end) the executor intervenes proactively to the initiation events of the suspended execution A way to identify changes in financing practices and warn them as a warning bell to fall into the trap of financial fragility, and their intervention will enhance financial health, meaning that the main purpose of detecting financial fragility is not to discover financial crises or economic stagnation, but rather to intervene proactively to prevent or limit the occurrence of crises In the event of facing the simplest financial shocks, on the other hand, the main purpose of detecting financial fragility is not to reveal the asset price bubble, but rather to reveal the risks of debt deflation resulting from the interaction of debt with the financially fragile company if there was no asset price bubble. The company's value of assets is upward, even if it is financially sound and the existence of an asset bubble.[3]

If fragility is not detected or enjoys financial health in spite of the financial situation early, its disastrous results will not be avoided at the slightest internal or external shocks faced by the economic institutions. of research using special models to measure financial vulnerability in companies; With the aim of taking corrective measures to avoid falling into financial failure at the slightest shocks, through the innovations proposed by thinkers for the corporate financial system to reduce this risk, and from the financial information through which we can extract the financial ratios that make

up the financial vulnerability measurement models for alert and early warning. These models are tools to assist management in the decision-making process. Because it reflects the state of the institution, whether it enjoys financial health or suffers from a financial disease, which is financial fragility and needs corrective measures to restore its financial health.[4]

### 3. Financial vulnerability index

Several models are used to measure financial fragility, some are used at the macro level and others are used at the micro level. The following is a presentation of the most prominent of these models:[5]

#### The First Model: - Accounting Model of (Minsky)

number of researchers used the accounting model of (Minsky) to understand and measure financial fragility, and this model (indicator) is called the fake hierarchy, which is a fraudulent investment process by paying the first (oldest) investor using the money of new investors and emphasizing the need for careful analysis of companies to understand financial fragility. The used is the analysis of the portfolio of the company represented by the financial and material assets it owns and the consequent financial obligations.[6], and to identify the risks associated with its ability to fulfill its financial obligations, and (Minsky) suggested dividing these companies according to the risk they bear into three categories These categories are as follows.[7]

The first category: hedging financing companies are companies that have the ability to fulfill all their obligations on time through their current expected revenues.[8]

The second category: speculative financing companies, which are companies whose expected revenues are only sufficient to cover part of the obligations when their maturity period comes, as they cannot fully pay the principal of the debt from the current cash flows and pay the amount of interest only, which forces them to issue new debts to meet the contractual obligations and incur additional costs. New in refinancing before the maturity date of the old debt.[9]

The third category: Ponzi finance companies, which are companies that are somewhat similar to speculative companies, with the difference that this type of company does not have the ability to fulfill all its contractual obligations when their due dates come through through their cash flows and expected realities.[8]

#### The Second Model: (BC) model

The (BC) model is the indicator that is used to measure financial fragility and the possibility of a comprehensive banking crisis. It represents the weighted arithmetic mean for each of (the ratio of loan provisions to bad loans, and the ratio of bad loans to total assets), and the positive result of this indicator indicates the existence of financial fragility, while the result The negative relationship indicates an inverse relationship between the indicator and the coverage rate of non-performing loans, and a direct relationship with the quality of the bank loan portfolio. The following equation is used for the purpose of measuring this model.[10]

$$BC = W_{Qual} * Qual - W_{Cover} * Cover$$

Since:

W: relative weight.

Qual: The quality of the loan portfolio.

Cover: The rate of coverage.

#### The Third Model:(Z-score) model

Financial literature usually uses (Z-Score) as an indicator to measure financial fragility, whose value indicates the extent of financial stability achieved by financial institutions

or financial fragility. This indicates that the institution enjoys financial stability, but the value of (Z-Score) means the measurement of standard deviations through the sum of the return on property assets to the total assets divided by the standard deviation of the return on assets and is calculated according to the following equation:[11]

$$Z = \frac{ROA + E/A}{6(ROA)}$$

Since:

ROA: return on assets

E / A: the ratio of ownership rights to total assets

6(ROA): the standard deviation of the return on assets

#### 4- Concept of Financial performance

The concept of financial performance is considered in the fundamental concepts of business organizations in general and banking establishments in particular, because through it a complete and comprehensive picture can be given of the progress of the organization's activities and work at the level of the internal and external environment. Proper diagnosis of financial health in order to know whether the institution has the ability to generate value and resilience in the future by relying on several financial procedures, such as preparing budgets, results accounts tables, and appended tables.[12]

#### 5-The importance of Evaluating Financial Performance

The success of a particular company is mainly explained by knowing the results of its performance over a certain period of time and the issue of performance in general and financial performance in particular has become one of the most discussed aspects by researchers and writers in The field of management science, as financial performance is one of the most used performance dimensions in evaluating corporate performance, being the most stable and developing dimension (indicates that the importance of corporate financial performance is as follows:[13]

- 1- It reflects the company's ability to achieve its goals
- 2- It provides a set of information that makes the company able to know its financial position, which contributes to helping it to take appropriate decisions in the future.
- 3- Determine the credit status of companies and their ability to fulfill their obligations.
- 4- Evaluating the efficiency of the administrative apparatus and its effectiveness in achieving the company's objectives.
- 5- It enables knowledge and follow-up of the company's activities and operations, as well as monitoring the surrounding financial and economic conditions.

The evaluation of the financial performance of companies is essential, as these companies need to obtain information regarding the return on the invested funds and their use agreed with this view, explaining that the process of evaluating financial performance contributes to providing complete information to shareholders and stakeholders to encourage them to take appropriate decisions, as well as using it to evaluate similar companies from the same industry or to compare industries in the group.[14]

confirms that financial performance evaluation is important for corporate investors to make investment decisions, as it enables them to avoid random investment and make a better decision in the high-risk capital market. Also, financial performance evaluation allows decision makers to judge the results of business strategies and activities in objective monetary terms.[15]



**6- Methods and tools for analyzing financial performance**

The analysis of financial performance is the means that enables the businessman or the organizations and institutions concerned with the analysis to derive a set of financial indicators about the activities of the establishment.

**1- Vertical analysis:**

Under this method, a comparison is made between the numbers of the financial statements for the same accounting period, so that the outcome of this comparison appears in percentage terms. For example, the value of each item of assets in the budget is attributed to the total assets in the same budget.

**2- Horizontal Analysis / Trend Analysis:**

Where the movement of a specific item or several items is studied over several financial periods to identify the amount and direction of change in the movement of the item or the rate of change over the time period in the field of comparison.

**3- Financial Ratio Analysis:**

This method of analysis is the most common because it provides a large number of financial indicators that can be used to evaluate the performance of the enterprise in the areas of liquidity, activity and profitability.

The financial analysis tools and evaluation criteria are not a rigid template that any analyst should apply, but rather there is a degree of flexibility in them [16].

**7-Analysis of the results:** For the purpose of completing the aspects of the research, this research came for the purpose of measuring financial vulnerability and financial performance In the Iraqi commercial banks, the research sample for the period (2018-2021), with an explanation of the level of this Fragility in these banks through the use of the (Z-score) model, and this will be done through the following:

**1-7- The descriptive aspect of the research:**In this paragraph, the research sample will be described by presenting the banks The Iraqi commercial research sample, as well as a description and presentation of the adopted research data and indicators To prove the research hypotheses, the research relied on three commercial banks listed in the Iraq market for securities to measure financial fragility and financial performance, and the following paragraphs explain the level of performance The financial statements of these banks are as follows:

**1-Al-Taif Islamic Bank for Investment and Finance:**

2018	2019	2020	2021	General budget
47,087,024.25	139,512,409	199,720,331	387,935,717	Total assets
814,041.57	36,979,797	96,027,313	184,488,989	total liabilities
46,272,982.68	102,532,612	103,693,018	203,446,728	Total shareholder equity

47,087,024.25 2	139,512,40 9	199,720,331	387,935,717	Total liabilities and shareholders' equity
-61,100.136	792,335,117	605,706,44 2	-265,388	Net profit

**Source: prepared by the researcher based on the data published on the official website of the bank.**

Based on what came in the table (1), it appears that the bank in 2018 was suffering from major financial problems, as it achieved a loss of (-61,100,136), but it improved its financial performance in 2019 and achieved a net profit of (792,335,117), and this development is a good indicator and recovery Clear financial, but the bank declined its financial performance again, in 2020 after achieving a net profit of (605,706,442), meaning that there is a difference of (186,628,675), and this financial deterioration continued until 2021 after it achieved a loss of (-265,388). The researcher believes that the reason for this is the impact of the Corona pandemic on the performance of most institutions, in addition to other factors

## **2 - Iraqi Trade Bank:**

2018	2019	2020	2021	General budget
21,146,247	28,793,14 7	25,467,46 9	29,004,43 3	Total assets
17,934,657	25,114,36 7	22,315,91 7	25,827,96 9	total liabilities
3,211,590	3,678,78 0	3,151,552	3,176,464	Total shareholder equity
21,146,247	28,793,14 7	25,467,46 9	29,004,43 3	Total liabilities and shareholders' equity
180,110	556,529	236,254	216,791	Net profit

**Source: prepared by the researcher based on the data published on the official website of the bank.**

Based on what came in the table (2 ), it appears that the bank in 2018 has achieved a net amount of (180,110), and in 2019 there was an increase in the amount of the bank's net profit amounting to (556,529), and the bank's financial performance declined in 2020 as it achieved a net profit of ( 236,254) i.e. a decline from 2019 by (320,254), and in 2021 the financial performance declined again with a net profit of (216,791), as we note that the best year in which the bank achieved a net profit is the year 2019 and after that it began to decline, and the researcher believes that the reason is This is the impact of the Corona pandemic on the performance of most institutions, in addition to other factors.

### 3-Gulf Commercial Bank:

2018	2019	2020	2021	General budget
578,336,518,931	549,145,530,701	510,798,283,631	538,490,755,397	Total assets
263,863,593,025	242,436,472,500	203,626,172,180	234,164,978,560	total liabilities
314,472,925,906	306,709,058,201	307,172,111,451	304,325,776,837	Total shareholder equity
578,336,518,931	549,145,530,701	510,798,283,631	538,490,755,397	Total liabilities and shareholders' equity
591,789,500	3,931,357,837	1,477,089	5,038,769,658	Net profit

**Source: prepared by the researcher based on the data published on the official website of the bank.**

Based on what came in table (3), it appears that the bank in 2018 has achieved a net amount of 591,789,500), and in 2019 there was an increase in the net profit of the bank amounting to 3,931,357,837), and the bank's financial performance declined in 2020 as it achieved a net profit of 3,931,357,837 (1,477,089) i.e. a decline from 2019 by (3,929,880,748), and this is a significant decline in the bank's financial performance, and in 2021 the bank's financial position improved compared to the previous year as it achieved a net profit of (5,038,769,658), i.e. an increase in net profit by ( 5,037,292,569), and the researcher believes that the reason for the fluctuation of

financial performance is due to the impact of the Corona pandemic on the performance of most institutions, in addition to other factors.

**8-Description of search data and indicators:** To measure the variable of financial fragility and financial performance, there is a set of financial models, some of which are used at the macro level and others are used at the micro level, noting that the most used model in previous studies and research is the (Z-score) model, whose value indicates the extent of stability and financial recovery or The financial fragility achieved by financial institutions, that is, there is an inverse relationship between the value of the (Z-score) index and the financial performance. The higher the value of the indicator, the lower the levels of financial fragility. This indicator can be expressed through the following:

$$Z = \frac{ROA + E/A}{\sigma ROA}$$

Note that:

ROA: Return on Assets

E / A represents: the ratio of ownership rights to total assets

$\sigma(ROA)$  is the standard deviation of the return on assets

-By applying the above equation and relying on what was stated in the above tables, table (4) shows the data of the banks under discussion with the amount of the Z index, through which we can compare between the financial performance and the financial fragility of the banks.

**Table (4) z value for the period 2018 - 2021**

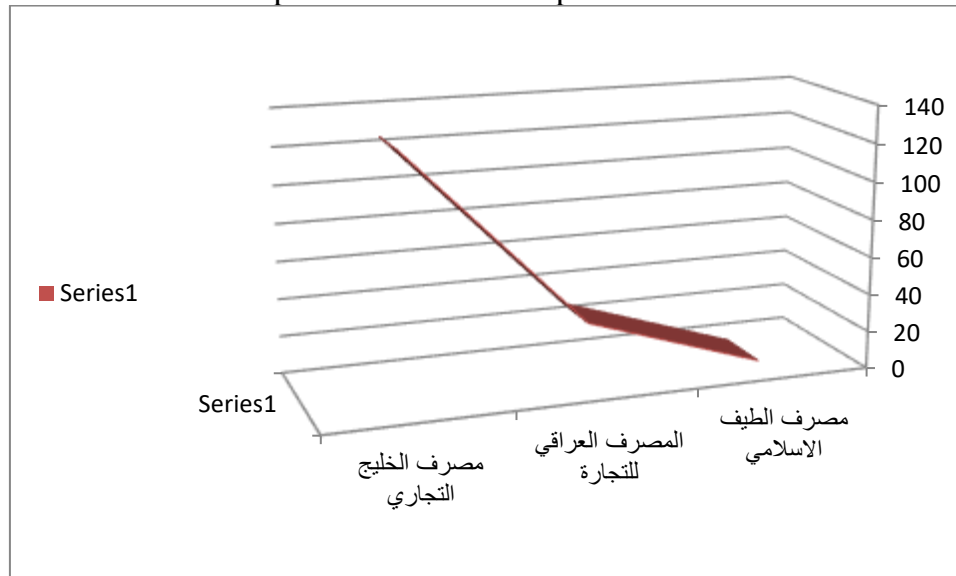
Gulf Commercial Bank	Iraqi Trade Bank	Al-Taif Islamic Bank	For the period from 2018-2021
2,176,771,088,660	104,411,296	774,255,481	Total assets
944,091,216,265	91,192,910	318,310,141	total liabilities
1,232,679,872,395	13,218,386	455,945,341	Total shareholder equity
2,176,771,088,660	104,411,296	774,255,481	Total liabilities and shareholders' equity
9,563,394,084	1,189,684	1,397,715,071	Net profit
0.0175735412	0.0455768311	0.0928745156	ROA
0.5662882417	0.1265991948	0.5888822904	E / A
0.00457975	0.005499866	2.737408005	$\sigma(ROA)$
127.49	31.31	0.25	Z

**Source:** prepared by the researcher based on the results of the spss v program. 22.

Based on what is stated in Table (4), it appears that the financial performance of Al-Taif Islamic Bank is the lowest among the banks under



study, as the Z-value index was (0.25), while Al-Khaleej Commercial Bank, its financial performance is the best performance among the banks under study, which It achieved financial indicators according to the Z value of (127.49), On the other hand, we note that there is a great agreement and harmony between the financial performance tables shown above and the (Z-score) index, which enables it to measure the financial fragility variable, and this is what supports the two research papers with the existence of an inverse relationship between financial performance and financial fragility.



**Figure (1) The level of financial performance and financial vulnerability Conclusion**

1-There is an inverse relationship between financial performance and financial fragility through the use of the (Z-score) model, which shows the extent of financial recovery or financial fragility of the surveyed banks, where the higher the value of the indicator (Z-score), the lower the levels of financial fragility.

2-The financial deterioration of the surveyed banks and the disparity in the losses they suffered is due to the impact of the Corona pandemic on the performance of most financial institutions. 3-Through the results, it was found that the Gulf Bank is the best in terms of financial performance, and according to the (Z-score) index, it was (127.49), while the Islamic Spectrum Bank and the Iraqi Bank were the least performing, in varying proportions

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