



## **MEASURING EARNINGS MANAGEMENT PRACTICES USING THE M-SCORE BENEISH MODEL FOR IRAQI BANKS LISTED ON THE IRAQ STOCK EXCHANGE**

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| <b>Received:</b> 24 <sup>th</sup> June 2023<br><b>Accepted:</b> 24 <sup>th</sup> July 2023<br><b>Published:</b> 25 <sup>th</sup> August 2023 | One of the most widespread practices that affect the quality of the company's financial reports is earnings management, as earnings management affects the process of showing the real performance of companies by exploiting flexibility in GAAP accounting principles). The use of the M-score model is important in discovering earnings management practices and has been applied the search on the 16 Iraqi banks listed in the Iraq Stock Exchange for the year 2018. The research found that the number of banks that manage their profits in the year 2018 according to the M-score model is nine banks, which constitutes 56.2% of the total sample of 16 banks listed in the market. Iraq Securities, the remaining 43.75% do not practice earnings management, while the research recommended the employment of statistical models (especially the M-score model) by external auditors to detect earnings management practices, as it is a useful technique and a good means that can be added to other control measures that they use in auditing the accounts of companies. |

**Keywords:** Earnings management, Beneish M-score model.

### **INTRODUCTION**

It is known that the evaluation of the management's performance is based in part on the company's accounting net profit figure. Therefore, the management resorts to various methods to maintain its growth level and mitigate its sharp fluctuations in order for the company's financial performance to appear stable through the financial statements, which are a summary of the operations and economic events that took place. During the financial period, which is subject in its preparation to accounting principles and standards, which in some areas require the exercise of personal estimates and diligence, and the flexibility in choosing between accounting methods and policies granted by generally accepted accounting principles (GAAP) enabled the companies' management to intervene in the achieved net accounting profit figure and try to change it Through earnings management practices.

#### **The Study Problem**

The research problem lies in answering the following question:

Do the Iraqi banks listed in the Iraq Stock Exchange practice earnings management when preparing their financial statements, or not?

#### **The Aim of the study**

1- Clarify the concept of profit management.

2- Applying the M-score model in the Iraqi banks listed in the Iraq Stock Exchange.

#### **The importance of the study**

The importance of this research stems from the increasing interest in the subject of profit management practices and ways to reduce them, as this subject is one of the main issues at the local and international levels, especially after the bankruptcy of many international companies and the increase in lawsuits against accounting and auditing offices that audit these companies.

#### **Study community and sample**

The research community included private commercial banks listed in the Iraq Stock Exchange to measure profit management using the M-score model, and the sample consisted of 16 Iraqi banks listed in the Iraq Stock Exchange during 2018.

#### **Methods of data collection**

The research relied on scientific references from research, master's theses, Arab and foreign articles, and annual reports issued by the research sample banks and listed on the Iraq Stock Exchange for the period (2017-2018), because the M-score model requires financial statements for a period of two years to calculate financial ratios.

#### **Earnings management concept**



Earnings management in general has attracted the attention of accounting literature since the end of the sixties, as a result of the bankruptcy of many international companies and accounting scandals (Obaidat, 2017: 2)) after the announcement of accounting scandals and the manipulation of profits was the cornerstone of these scandals, these scandals made earnings management an important issue for various users Accounting information, such as investors, is important in its significant impact on the quality of financial reports (Ali & Kamardin, 2018:441). There are many definitions of profit management, as Nia et al, 2015:2) see that it is a purposeful intervention for managers in the process of preparing financial reports with the aim of Obtaining private gains, while Okougbo & Okike (2015: 314) sees it as the use of personal judgment by managers in preparing financial reports and in structuring transactions to change financial reports either to mislead some stakeholders about the economic performance of the company or to influence contractual results that depend on reported accounting numbers.

As for the definition of the US Securities Commission (SEC)) as misrepresenting the application of generally accepted and generally accepted accounting principles (Adnan, 2015: 459).

As for kieso, profit management is defined as the planned timing of revenues, expenses, gains, and losses in order to increase profits (Priharta & Rahayu, 2019: 980).

### **There are three alternative definitions of earnings management:**

- 1) White Management Earnings:** Taking advantage of flexibility in choosing accounting treatments to refer to the manager's private information regarding the company's future cash flows, which is not harmful to the transparency of financial reports (Strakova, 2020:2).
- 2) Gray Management Earnings:** It is the choice of accounting treatments that are either opportunistic (maximizing management benefit only) or economically efficient.
- 3) Black Management Earnings:** It is the practice of using tricks to misrepresent or reduce the transparency of financial reports, and thus may mislead users of accounting information by manipulating accounting numbers (Nguyen et al, 2020:38).

And he defined it (Al-Zabari & Al-Fatlawi, 2021:5) as the process of selecting accounting policies in the light of generally accepted accounting principles (GAAP) in order to meet the interests of management by

exploiting the weaknesses inherent in accounting policies. This definition indicates that earnings management does not violate the principles generally accepted accounting.

The researchers defined earnings management as measures taken by choosing accounting policies to obtain certain goals, for example, to achieve their own interests or increase the market value of the company.

### **Earnings motives**

There are many motives that urge the management to practice earnings management in order to influence the declared profit number to achieve the target profit. Some of these motives make the management increase the realized profits, while others reduce these profits. To give a clear picture of these motives, we discuss the most important of them as follows:

- 1) **The opportunistic motive:** the management aims to mislead the users of the accounting information contained in the financial statements about the basic economic performance of the company or to influence its contractual results, motivated by self-interest (Ghazali et al, 2015:192).
- 2) **The motive of efficiency:** the aim of this motive is to influence the users of the financial statements and accounting information by showing the company's income in a way that achieves a balance between return and the degree of risk in order to ensure the company's continuity and survival in the competitive market (Wali et al, 2019:83), and through that The motives of profit management can be divided into four main motives, each of which may involve the opportunistic motive, the efficiency motive, or both motives together (Al-Nisour, 2020:47):
  - A. **Motives related to the expectations and evaluation of the financial market:** The increasing use of accounting information by investors and financial analysts to assist in evaluating shares may create an incentive for managers to manipulate profits in an attempt to influence the performance of the share price in the short term and to match these profits with the expectations of investors and analysts. Millions (Jiang, 2020:142).
  - B. **Contractual motives:** The agency theory describes the company as a group of contractual relations, and its existence is achieved through one or more of the convention contracts. And the costs incurred by management to reduce conflicts of interest, and accordingly contracts are used to reduce the negative effects of conflicts of interest



between management, shareholders, and creditors (Jabbar, 2018:5).

- C. **Organizational motives:** The work of joint-stock companies imposes different legislations that may generate motivation for managers to practice profit management. These legislations may be specific to a specific sector, such as the banking sector, which is subject to special legislations such as capital adequacy requirements, and may be general legislations such as anti-monopoly legislations or others. The presence of these legislations stimulates Management to manipulate profits so that companies appear to be committed to these legislations for the purpose of avoiding government interference and sometimes works to reduce their profits in order to appear less profitable to reduce the possibility of attracting political attention (Nama, 2018: 17).
- D. **Tax motives:** Taxes imposed on corporate profits depend directly on accounting numbers, which prompts the administration to choose alternative accounting methods and policies that reduce taxable profit, and the company that resorts to reducing the profit number pays less taxes (Shaan, 2016: 12) One of the methods used to achieve this purpose is the method of calculating the depreciation of fixed assets, as the management chooses the method that increases the depreciation expense in the current period or chooses between the FIFO method) and the LIFO method) for inventory evaluation, which leads to a decrease in profit and then a decrease Tax payments, in addition to storing profits in good

years to increase these profits in bad years et al, 2020: 3205) (Irawan.

#### **Beneish M-score model**

The M-Score model is a mathematical model created by Professor Masoud Benish in (1999) that uses financial ratios and eight variables, to find out if the company has done any kind of manipulation of its profits (Anh & Linh, 2016:16) if the M-score is greater than the standard Reference (-2.22) The company should be marked as profit manipulators, but if the M score is less than -2.22)), this indicates that companies do not manipulate profits (Al-azzawi et al, 2019:2910), this model has distinct characteristics from previous models used since this model is specialized in the financial statements of the profit management account and the statement of financial position with cash flows (Talab et al, 2017: 299), this model also helps in determining (Ahmed, 2021: 60):

$$\mathbf{M\text{-}score = -4.84 + 0.920*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI - 0.172*SGAI + 4.679*TATA - 0.327*LVGI}$$

**DSRI** = Days sales in receivables index.

**GMI** = Gross margin index.

**AQI** = Asset Quality Index.

**SGI** = Sales growth index.

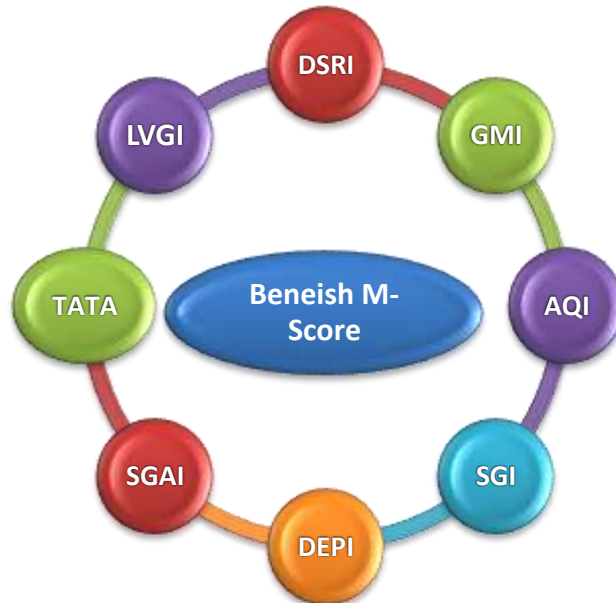
**DEPI** = Extinction index.

**SGAI** = Sales, general and administrative expenses.

**TATA** = Total asset maturity.

**LVGI** = Leverage Index.

This model can be applied in companies provided that two years of financial data are available to calculate the ratios in measuring the company's tendency to engage in profit manipulation. Finance. The Beneish M-score indicators can be put in the following form:



**Figure (1) Beneish M-score indicators**

**Steps to measure earnings management**

**1- Days Sales Receivables Calculation Index (DSRI)**

Days sales were calculated in the receivables index through (net receivables for the current year / sales of the current year) / (net receivables for the previous year / sales of the previous year). DSRI is an indicator of the number of days of credit sales in the first fiscal year referred to as year t compared to the previous year t-1. A significant increase in DSRI could be the result of a change in credit policy by the company with the aim of stimulating sales in order to combat increased competition

(Halilbegovic et al, 2020:149), but if the increase in receivables on sales is unusual, then this could indicate huge revenues (Kurniasih, 2021: 23-26) when the DSRI ratio is 1.031 or less. There is no data manipulation Financial, but if the DSRI ratio is (1.465) or more, this indicates that the financial statements may be manipulated and that the company is giving more credit than before, the high ratio indicates the presence of exaggerated revenue or manipulation in terms of credit sales (Akra & Chaya, 2020:72) DSRI can be calculated through the following equation:

$$DSRI = \left( \frac{Netreceivable_{t}}{Sales_{t}} \right) / \left( \frac{Netreceivable_{t-1}}{Sales_{t-1}} \right)$$

**Table No. (1)**

| DSRI |                       |                           |                           |       |
|------|-----------------------|---------------------------|---------------------------|-------|
| NO.  | Bank                  | NET RECEIVABLE SALES 2017 | NET RECEIVABLE SALES 2018 | DSRI  |
| 1    | Assyria Bank          | 0.071                     | 0.188                     | 2.655 |
| 2    | Commercial Bank Gulf  | 1.726                     | 2.685                     | 1.556 |
| 3    | Investment Bank Iraqi | 0.586                     | 1.418                     | 2.421 |
| 4    | Bank Elaf Islamic     | 0.886                     | 2.637                     | 2.977 |



|    |                                  |        |        |       |
|----|----------------------------------|--------|--------|-------|
| 5  | <b>Bank Iraqi Islamic</b>        | 0.453  | 1.699  | 3.751 |
| 6  | <b>of Iraq United Bank</b>       | 3.865  | 7.937  | 2.053 |
| 7  | <b>Bank of Iraq The National</b> | 1.357  | 1.783  | 1.313 |
| 8  | <b>North Bank</b>                | 11.087 | 33.602 | 3.031 |
| 9  | <b>Bank Middle East</b>          | 3.655  | 6.3    | 1.724 |
| 10 | <b>Investment Bank Mansour</b>   | 0.918  | 0.571  | 0.622 |
| 11 | <b>Mosul Bank</b>                | 5.363  | 5.224  | 0.974 |
| 12 | <b>Baghdad Bank</b>              | 0.749  | 0.755  | 1.008 |
| 13 | <b>Babylon Bank of</b>           | 6.491  | 13.223 | 2.037 |
| 14 | <b>Bank Kurdistan</b>            | 0.031  | 0.098  | 3.132 |
| 15 | <b>Bank Iraqi Union</b>          | 0.931  | 3.671  | 3.945 |
| 16 | <b>Sumer Bank</b>                | 0.552  | 0.241  | 0.437 |

## 2- Gross Margin Index (GMI)

The gross margin index was calculated through (previous year's sales - cost of goods sold for the previous year / previous year's sales) / (current year's sales - cost of goods sold for the previous year / current year's sales), the gross profit measurement ratio is compared in year t-1 With total profit in year t, if GMI > 1 the result of total profit gets worse. A decline in GMI indicates that the company is going through bad times, so the possibility of earnings manipulation will be higher. (Oktaviani, 2021:46-48). GMI can be measured through the following equation:

$$GMI = \left( \frac{\text{Sales } t-1 - \text{Cost of goods sold } t-1}{\text{Sales } t-1} \right) / \left( \frac{\text{Sales } t - \text{Cost of goods sold } t}{\text{Sales } t} \right)$$

**Table No. (2)**

| GMI |                                  |                |                |        |
|-----|----------------------------------|----------------|----------------|--------|
| NO. | Bank                             | GmPerecnt 2017 | GmPerecnt 2018 | GMI    |
| 1   | <b>Assyria Bank</b>              | 0.462          | 0.11           | 4.211  |
| 2   | <b>Commercial Bank Gulf</b>      | 0.194          | 0.055          | 3.559  |
| 3   | <b>Investment Bank Iraqi</b>     | 0.194          | 0.055          | 3.559  |
| 4   | <b>Bank Elaf Islamic</b>         | 0.219          | 0.11           | 1.981  |
| 5   | <b>Bank Iraqi Islamic</b>        | 0.412          | 0.408          | 1.011  |
| 6   | <b>of Iraq United Bank</b>       | -0.169         | -1.236         | 0.137  |
| 7   | <b>Bank of Iraq The National</b> | 0.158          | -0.435         | -0.363 |
| 8   | <b>North Bank</b>                | -0.79          | -3.513         | 0.225  |
| 9   | <b>Bank Middle East</b>          | 0.022          | -0.124         | -0.173 |
| 10  | <b>Investment Bank Mansour</b>   | 0.679          | 0.727          | 0.934  |
| 11  | <b>Mosul Bank</b>                | 0.511          | 0.292          | 1.748  |



|    |                         |       |       |       |
|----|-------------------------|-------|-------|-------|
| 12 | <b>Baghdad Bank</b>     | 0.283 | 0.153 | 1.842 |
| 13 | <b>Babylon Bank of</b>  | 0.286 | 0.337 | 0.85  |
| 14 | <b>Bank Kurdistan</b>   | 0.65  | 0.331 | 1.963 |
| 15 | <b>Bank Iraqi Union</b> | 0.035 | 0.016 | 2.22  |
| 16 | <b>Sumer Bank</b>       | 0.037 | 0.151 | 0.248 |

### 3- Asset Quality Index (AQI)

The asset quality index was calculated through  $(1 - \text{current assets for the current year} + \text{property, plant and equipment for the current year} / \text{total assets for the current year}) / (1 - \text{current assets for the previous year} + \text{property, plant and equipment for the previous year} / \text{total assets for the previous year})$ , this ratio is used to measure Non-current assets other than property, plant and equipment to total assets, and measures the ratio of total assets to uncertain future benefits. If  $AQI > 1$  indicates that the firm has the ability to increase its share of deferred costs. (Oktaviani, 2021:46-48), and it can be measured through the following equation:

$$AQI = \frac{1 - \frac{\text{Current Assets } t + \text{Plant, Property \& Equipment } t}{\text{Total Assets } t}}{1 - \frac{\text{Current Assets } t-1 + \text{Plant, Property \& Equipment } t-1}{\text{Total Assets } t-1}}$$

**Table No. (3)**

| AQI |                                  |                                 |                                 |         |
|-----|----------------------------------|---------------------------------|---------------------------------|---------|
| NO. | Bank                             | 1-Current Assets+ PP&E/ TA 2017 | 1-Current Assets+ PP&E/ TA 2018 | AQI     |
| 1   | <b>Assyria Bank</b>              | -0.843                          | -0.873                          | 1.036   |
| 2   | <b>Commercial Bank Gulf</b>      | -0.871                          | -0.845                          | 0.97    |
| 3   | <b>Investment Bank Iraqi</b>     | -0.928                          | 30.777                          | -33.155 |
| 4   | <b>Bank Elaf Islamic</b>         | -0.86                           | -0.831                          | 0.966   |
| 5   | <b>Bank Iraqi Islamic</b>        | -0.912                          | -0.919                          | 1.008   |
| 6   | <b>of Iraq United Bank</b>       | -0.634                          | -0.787                          | 1.241   |
| 7   | <b>Bank of Iraq The National</b> | -0.949                          | -0.935                          | 0.986   |
| 8   | <b>North Bank</b>                | -0.768                          | -0.767                          | 0.998   |
| 9   | <b>Bank Middle East</b>          | -0.657                          | -0.833                          | 1.268   |
| 10  | <b>Investment Bank Mansour</b>   | -0.963                          | -0.966                          | 1.004   |
| 11  | <b>Mosul Bank</b>                | -0.978                          | -0.742                          | 0.759   |
| 12  | <b>Baghdad Bank</b>              | -0.828                          | -0.922                          | 1.113   |
| 13  | <b>Babylon Bank of</b>           | -0.542                          | -0.604                          | 1.115   |
| 14  | <b>Bank Kurdistan</b>            | -0.919                          | -0.937                          | 1.019   |



|           |                         |        |        |       |
|-----------|-------------------------|--------|--------|-------|
| <b>15</b> | <b>Bank Iraqi Union</b> | -0.932 | -0.913 | 0.979 |
| <b>16</b> | <b>Sumer Bank</b>       | -0.888 | -0.868 | 0.977 |

#### 4- Sales Growth Index (SGI)

The sales growth index was calculated by (current year sales / previous year sales) SGI is the ratio of sales in the current year to sales in the previous year. A disproportionate increase in sales that cannot be explained by economic events or transactions such as large acquisitions may indicate manipulation with profits (Kurniasih, 2021: 23-26).

$$SGI = \left( \frac{\text{Sales } t}{\text{Sales } t-1} \right)$$

**Table No. (4)**

| <b>SGI</b> |                                  |                   |                   |
|------------|----------------------------------|-------------------|-------------------|
| <b>NO.</b> | <b>Bank</b>                      | <b>Sales 2017</b> | <b>Sales 2018</b> |
| <b>1</b>   | <b>Assyria Bank</b>              | 20,215,652,000    | 11,448,405,000    |
| <b>2</b>   | <b>Commercial Bank Gulf</b>      | 25,950,299,587    | 16,617,410,597    |
| <b>3</b>   | <b>Investment Bank Iraqi</b>     | 21,766,644,000    | 13,800,121,056    |
| <b>4</b>   | <b>Bank Elaf Islamic</b>         | 12,282,596,000    | 9,676,524,000     |
| <b>5</b>   | <b>Bank Iraqi Islamic</b>        | 21,548,786,000    | 17,718,274,000    |
| <b>6</b>   | <b>of Iraq United Bank</b>       | 18,536,978,138    | 13,593,165,876    |
| <b>7</b>   | <b>Bank of Iraq The National</b> | 37,241,566,000    | 13,624,656,000    |
| <b>8</b>   | <b>North Bank</b>                | 11,979,806,000    | 4,115,279,000     |
| <b>9</b>   | <b>Bank Middle East</b>          | 26,884,543,000    | 15,984,627,000    |
| <b>10</b>  | <b>Investment Bank Mansour</b>   | 25,795,117,768    | 33,382,864,503    |
| <b>11</b>  | <b>Mosul Bank</b>                | 11,266,333,952    | 10,399,335,488    |
| <b>12</b>  | <b>Baghdad Bank</b>              | 54,133,718,000    | 36,568,001,000    |
| <b>13</b>  | <b>Babylon Bank of</b>           | 16,145,077,368    | 13,325,346,248    |
| <b>14</b>  | <b>Bank Kurdistan</b>            | 82,854,810,000    | 38,082,348,000    |
| <b>15</b>  | <b>Bank Iraqi Union</b>          | 10,995,293,000    | 10,748,814,000    |
| <b>16</b>  | <b>Sumer Bank</b>                | 12,573,481,000    | 7,101,316,000     |

#### 5- Depreciation Index (DEPI)

The extinction index was calculated through (disappearance of the previous year / property, plant and equipment for the previous year + extinction of the previous year) / extinction of the current year / property, plant and equipment for the current year + extinction of the current year) DEPI is the ratio of the rate of extinction in the previous year at the appropriate rate for the current year, DEPI index >1 indicates that the rate of depreciation of assets is slowing down, possibly due to the company revising the estimated life of tangible assets which will eventually lead to an increase in income. This could be an indication of manipulation of assets (Kurniasih, 2021: 23-26).

$$DEPI = \left( \frac{\text{Depreciation } t - 1 / (\text{Plant, Property \& Equipment } t - 1 + \text{Depreciation } t - 1)}{\text{Depreciation } t / (\text{Plant, Property \& Equipment } t + \text{Depreciation } t)} \right)$$

**Table No. (5)**



| DEPI |                           |               |               |
|------|---------------------------|---------------|---------------|
| NO.  | Bank                      | Dep rate 2017 | Dep rate 2018 |
| 1    | Assyria Bank              | 0.037         | 0.038         |
| 2    | Commercial Bank Gulf      | 0.062         | 0.036         |
| 3    | Investment Bank Iraqi     | 0.038         | 0.043         |
| 4    | Bank Elaf Islamic         | 0.082         | 0.032         |
| 5    | Bank Iraqi Islamic        | 0.092         | 0.079         |
| 6    | of Iraq United Bank       | 0.03          | 0.031         |
| 7    | Bank of Iraq The National | 0.138         | 0.128         |
| 8    | North Bank                | 0.083         | 0.1           |
| 9    | Bank Middle East          | 0.02          | 0.027         |
| 10   | Investment Bank Mansour   | 0.037         | 0.047         |
| 11   | Mosul Bank                | 0.187         | 0.022         |
| 12   | Baghdad Bank              | 0.049         | 0.043         |
| 13   | Babylon Bank of           | 0.025         | 0.026         |
| 14   | Bank Kurdistan            | 0.086         | 0.102         |
| 15   | Bank Iraqi Union          | 0.055         | 0.03          |
| 16   | Sumer Bank                | 0.018         | 0.015         |

### 6- General and Administrative Expenditures Index (SGAI)

The general and administrative expenses index was calculated through (administrative and general expenses for the current year / current year sales) / general and administrative expenses for the previous year / sales of the previous year), which is the ratio for measuring selling expenses, general expenses and administrative expenses for sales in year t compared to year t-1, If SGAI >1 means that the cost of selling and general and administrative expenses increased proportionately more than sales, the presence of an imbalance in sales indicates a negative sign on the company's future prospects (Oktaviani, 2021:46-48).

$$SGAI = \left( \frac{\text{Selling General \& Administrative Expense } t / \text{Sales } t}{\text{Selling General \& Administrative Expense } t-1 / \text{Sales } t-1} \right)$$

**Table No. (6)**

| SGAI |                      |                  |                  |
|------|----------------------|------------------|------------------|
| NO.  | Bank                 | Sga / Sales 2017 | Sga / Sales 2018 |
| 1    | Assyria Bank         | 0.451            | 0.823            |
| 2    | Commercial Bank Gulf | 0.724            | 0.851            |





|    |                                  |       |       |
|----|----------------------------------|-------|-------|
| 3  | <b>Investment Bank Iraqi</b>     | 0.338 | 0.413 |
| 4  | <b>Bank Elaf Islamic</b>         | 0.51  | 0.771 |
| 5  | <b>Bank Iraqi Islamic</b>        | 0.444 | 0.494 |
| 6  | <b>of Iraq United Bank</b>       | 0.855 | 1.401 |
| 7  | <b>Bank of Iraq The National</b> | 0.438 | 1.429 |
| 8  | <b>North Bank</b>                | 1.392 | 3.231 |
| 9  | <b>Bank Middle East</b>          | 0.598 | 0.884 |
| 10 | <b>Investment Bank Mansour</b>   | 0.287 | 0.239 |
| 11 | <b>Mosul Bank</b>                | 0.399 | 0.595 |
| 12 | <b>Baghdad Bank</b>              | 0.272 | 0.393 |
| 13 | <b>Babylon Bank of</b>           | 0.595 | 0.364 |
| 14 | <b>Bank Kurdistan</b>            | 0.252 | 0.447 |
| 15 | <b>Bank Iraqi Union</b>          | 0.724 | 0.869 |
| 16 | <b>Sumer Bank</b>                | 0.931 | 0.773 |

### 7- Leverage Index (LVGI)

The leverage index was calculated through (current liabilities for the current year + long-term liabilities for the current year / total assets for the current year) / (current liabilities for the previous year + long-term liabilities for the previous year / total assets for the previous year), LVGI is the ratio of total debt to total assets in The current year compared to a similar ratio in the previous year, the higher the value of LVGI>1, the greater the reliance on debt-based asset financing. The leverage index can measure the possibility of sales manipulation related to the restrictions stipulated in the debt agreement (Kurniasih, 2021: 23-26).

$$LVGI = \left( \frac{\text{Current Liabilities } t + \text{Total Long Term Debt } t}{\text{Total Assets } t} \right) / \left( \frac{\text{Current Liabilities } t-1 + \text{Total Long Term Debt } t-1}{\text{Total Assets } t-1} \right)$$

**Table No. (7)**

| LVGI |                                  |                       |                       |       |
|------|----------------------------------|-----------------------|-----------------------|-------|
| NO.  | Bank                             | (Debts)/T Assets 2017 | (Debts)/T Assets 2018 | LVGI  |
| 1    | <b>Assyria Bank</b>              | 0.293                 | 0.435                 | 1.484 |
| 2    | <b>Commercial Bank Gulf</b>      | 0.468                 | 0.456                 | 0.975 |
| 3    | <b>Investment Bank Iraqi</b>     | 0.507                 | 0.534                 | 1.053 |
| 4    | <b>Bank Elaf Islamic</b>         | 0.303                 | 0.381                 | 1.255 |
| 5    | <b>Bank Iraqi Islamic</b>        | 0.43                  | 0.48                  | 1.115 |
| 6    | <b>of Iraq United Bank</b>       | 0.427                 | 0.411                 | 0.961 |
| 7    | <b>Bank of Iraq The National</b> | 0.527                 | 0.51                  | 0.967 |
| 8    | <b>North Bank</b>                | 0.366                 | 0.332                 | 0.906 |



|    |                                |       |       |       |
|----|--------------------------------|-------|-------|-------|
| 9  | <b>Bank Middle East</b>        | 0.661 | 0.666 | 1.007 |
| 10 | <b>Investment Bank Mansour</b> | 0.78  | 0.81  | 1.039 |
| 11 | <b>Mosul Bank</b>              | 0.339 | 0.351 | 1.037 |
| 12 | <b>Baghdad Bank</b>            | 0.746 | 0.76  | 1.019 |
| 13 | <b>Babylon Bank of</b>         | 0.182 | 0.275 | 1.508 |
| 14 | <b>Bank Kurdistan</b>          | 0.438 | 0.512 | 1.168 |
| 15 | <b>Bank Iraqi Union</b>        | 0.557 | 0.524 | 0.941 |
| 16 | <b>Sumer Bank</b>              | 0.314 | 0.345 | 1.096 |

### 8- Total Accrual to Total Assets (TATA)

The index of total receivables to total assets was calculated through (net income for the current year - cash flows from operating operations for the current year / total assets for the current year), TATA is calculated as the change in working capital accounts minus depreciation and it is non-cash Akra& Chaya ,2020 :72)), TATA shows the extent to which the monetary basis can explain earnings and the relationship between higher positive benefit (less money) and higher earnings manipulation. (Octaviani, 2021:46-48)

$$TATA = \left( \frac{\text{Income from Operations } t - \text{Cash Flow From Operations } t}{\text{Total Assets } t} \right)$$

| TATA |                                  |                   |                                |        |
|------|----------------------------------|-------------------|--------------------------------|--------|
| NO.  | Bank                             | Total Assets 2018 | Net Income - Cf Operation 2018 | TATA   |
| 1    | <b>Assyria Bank</b>              | 467,479,690,000   | -94,138,462,000                | -0.201 |
| 2    | <b>Commercial Bank Gulf</b>      | 578,336,518,931   | -903,059,942                   | -0.002 |
| 3    | <b>Investment Bank Iraqi</b>     | 607,087,862,905   | 29,215,214,422                 | 0.048  |
| 4    | <b>Bank Elaf Islamic</b>         | 413,412,806,000   | -40,308,552,000                | -0.098 |
| 5    | <b>Bank Iraqi Islamic</b>        | 504,542,790,000   | -37,606,297,000                | -0.075 |
| 6    | <b>of Iraq United Bank</b>       | 515,575,374,763   | 66,499,431,768                 | 0.129  |
| 7    | <b>Bank of Iraq The National</b> | 525,757,058,000   | -30,383,971,000                | -0.058 |
| 8    | <b>North Bank</b>                | 416,054,286,000   | -33,266,493,000                | -0.08  |
| 9    | <b>Bank Middle East</b>          | 800,749,802,000   | -55,148,194,000                | -0.069 |
| 10   | <b>Investment Bank Mansour</b>   | 1,566,367,957,302 | -240,429,551,382               | -0.153 |
| 11   | <b>Mosul Bank</b>                | 409,740,060,338   | -67,041,977,586                | -0.164 |
| 12   | <b>Baghdad Bank</b>              | 1,113,538,558,000 | -67,742,920,000                | -0.061 |
| 13   | <b>Babylon Bank of</b>           | 375,666,557,542   | 24,847,982,435                 | 0.066  |
| 14   | <b>Bank Kurdistan</b>            | 1,262,959,834,000 | -189,624,886,000               | -0.15  |
| 15   | <b>Bank Iraqi Union</b>          | 548,551,108,000   | 24,426,339,000                 | 0.045  |
| 16   | <b>Sumer Bank</b>                | 409,535,591,000   | -43,602,804,000                | -0.106 |



After completing the calculation of the paragraphs of the equation for calculating profits management, the profits management for the banks of the research sample was calculated, and it was as follows in Table No. (9) below: Table (9) shows that the banks that have practiced profit management are (Ashur Bank, Al Khaleeji Commercial Bank, Elaf Islamic Bank, Iraqi Islamic Bank, United Bank of Iraq, North Bank, Bank of Babel, Bank of Kurdistan, and Union Bank of Iraq) due to the fact that the degree of M is greater From the reference standard (-2.22), as for the banks that did not practice profit management, they are (the Iraqi Investment Bank, the National Bank of Iraq, the Middle East

| 2018                             |       |        |         |       |       |       |        |       |         |        |
|----------------------------------|-------|--------|---------|-------|-------|-------|--------|-------|---------|--------|
| Bank/Indices                     | DSRI  | GMI    | AQI     | SGI   | DEPI  | SGAI  | TATA   | LVGI  | M-score | Result |
| <b>Bank Assyria</b>              | 2.655 | 4.211  | 1.036   | 0.566 | 0.989 | 1.823 | -0.201 | 1.484 | -0.878  | +      |
| <b>Commercial Bank Gulf</b>      | 1.556 | 3.559  | 0.97    | 0.64  | 1.731 | 1.175 | -0.002 | 0.975 | -0.896  | +      |
| <b>Investment Bank Iraqi</b>     | 2.421 | 3.559  | -33.155 | 0.634 | 0.893 | 1.225 | 0.048  | 1.053 | -13.79  | -      |
| <b>Islamic Bank Elaf</b>         | 2.977 | 1.981  | 0.966   | 0.788 | 2.589 | 1.512 | -0.098 | 1.255 | -0.791  | +      |
| <b>Islamic Bank Iraqi</b>        | 3.751 | 1.011  | 1.008   | 0.822 | 1.174 | 1.113 | -0.075 | 1.115 | -0.485  | +      |
| <b>Bank of Iraq United</b>       | 2.053 | 0.137  | 1.241   | 0.733 | 0.974 | 1.638 | 0.129  | 0.961 | -1.604  | +      |
| <b>National Bank of Iraq The</b> | 1.313 | -0.363 | 0.986   | 0.366 | 1.079 | 3.261 | -0.058 | 0.967 | -4.122  | -      |
| <b>Bank North</b>                | 3.031 | 0.225  | 0.998   | 0.344 | 0.831 | 2.32  | -0.08  | 0.906 | -2.197  | +      |
| <b>East Bank Middle</b>          | 1.724 | -0.173 | 1.268   | 0.595 | 0.735 | 1.478 | -0.069 | 1.007 | -3.124  | -      |
| <b>Investment Bank Mansour</b>   | 0.622 | 0.934  | 1.004   | 1.294 | 0.785 | 0.831 | -0.153 | 1.039 | -3.326  | -      |
| <b>Bank Mosul</b>                | 0.974 | 1.748  | 0.759   | 0.923 | 8.58  | 1.491 | -0.164 | 1.037 | -2.265  | -      |
| <b>Bank Baghdad</b>              | 1.008 | 1.842  | 1.113   | 0.676 | 1.123 | 1.444 | -0.061 | 1.019 | -2.625  | -      |
| <b>of Babylon Bank</b>           | 2.037 | 0.85   | 1.115   | 0.825 | 0.951 | 0.611 | 0.066  | 1.508 | -1.509  | +      |
| <b>Bank Kurdistan</b>            | 3.132 | 1.963  | 1.019   | 0.46  | 0.845 | 1.776 | -0.15  | 1.168 | -1.393  | +      |
| <b>Union Bank Iraqi</b>          | 3.945 | 2.22   | 0.979   | 0.978 | 1.827 | 1.201 | 0.045  | 0.941 | 1.134   | +      |
| <b>Bank Sumer</b>                | 0.437 | 0.248  | 0.977   | 0.565 | 1.184 | 0.83  | -0.106 | 1.096 | -4.272  | -      |

Bank, the Mansour Investment Bank, the Mosul Bank, the Bank of Baghdad, and the Sumer Bank) because the M score is less than the reference standard (-2.22). ), and the results indicate that the highest positive profit management level was for the Union Bank of Iraq (1.134), followed by the Iraqi Islamic Bank (-0.48).

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

1- Earnings management represents practices deliberately followed by managers in the light of generally accepted accounting principles (GAAP) and the flexibility available in them to achieve multiple goals. Earnings management is good when it aims to maintain stable financial performance, and bad when it aims to hide operational

performance. the company and mislead the users of the financial statements to achieve the personal interests of the managers.

- 2- The number of banks that manage their profits is 9 banks, i.e. 56.25% of the total sample of 16 banks listed in the Iraq Stock Exchange, the remaining 43.75% do not practice earnings management.
- 3- The M-score model is a useful technique for detecting earnings management practices that can be applied to improve the quality of financial statements and to protect investors.
- 4- The use of the M-score model is important in discovering earnings management practices in Iraqi banks listed on the Iraq Stock Exchange

### Recommendations



- 1- Employing statistical models (especially the M-score model) by external auditors to detect earnings management practices. It is a useful technique and a good method that can be added to other control measures that they use in auditing companies' accounts.
- 2- Applying the M-score model to the rest of the sectors in the Iraq Stock Exchange.
- 3- The need for the regulatory authorities to impose penalties on banks that prove their involvement in profit management practices.
- 4- The need to raise awareness by the Iraqi Securities Commission about the risks that may result from earnings management practices, especially in the long term.

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