


## Research Article

# The Effect of Using Computerized Financial Statement Analysis on the Efficiency of Financial Performance: An Empirical Case on Industrial Factor in Project Scheduling-Jordan Case Study

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The study aimed to show the effect of the analysis of financial statements on the efficiency of the financial performance of the industrial sector, whose companies are listed in the financial market in Jordan. The study relied on the analysis of the financial statements for the years 2016–2021 published in the financial market for the industrial sector, and the mediating element was the Corona delinquents. The study relied on the indicators of return on assets, debt ratio, value, and the equation of market value to book value. Among the most important results of the study, several industrial enterprises lacked financial data for the research years, so they were removed from the analysis. The descriptive process test revealed: in the years after and during the Corona pandemic, industrial enterprises' total assets climbed by 12%. Variable net income after tax has increased by 55% in postcoronavirus years in Jordanian industrial public shareholding firms, and this is reflected positively in the shift in profits. The book value of the share for Jordanian industrial public shareholding companies remains stable. The Corona pandemic problem increases asset value and net profit for industrial public shareholding enterprises. Among its most important recommendations are the necessity of having disclosure laws for unusual items, such as the Corona pandemic, and the need for industrial companies to show the impact of the Corona pandemic by announcing their financial statements.

## 1. Introduction

Financial analysis is concerned with the study and analysis of financial statements for a specific period or related periods, and financial analysis has several tools, including analysis using financial ratios, vertical analysis, horizontal analysis, break-even analysis, and cash flow analysis, and by using financial analysis tools, it is possible to reach reliable information in making administrative decisions in preparing planning budgets [1].

- (i) The research contribution focuses on the extent to which financial analysis methods are utilized in the process of monitoring financial success during the

Corona epidemic. This focus may or may not continue depending on the continuity. For this study, the industrial sector was chosen because of the significant role it plays in bolstering the economy of the nation through the goods and services it offers.

*1.1. Study Problem and Questions.* The Corona pandemic has an impact on the economy in general, as its impact began in 2019 and until the end of 2021, so this study relied on analyzing the financial statements published in the Amman Stock Exchange for industrial public shareholding companies, to know the impact of those lists and their analyzes on the financial activities for the industrial sector.

So, main points in this research are given as follows:

- (i) Is there an effect of financial statements analysis on the return on assets in the industrial sector in Jordan?
- (ii) Is there an effect of financial statements analysis on fair value to book in the industrial sector in Jordan?
- (iii) Is there an effect of financial statements analysis on the debt-to-assets ratio in the industrial sector in Jordan?

*1.2. Research Hypotheses.* The following hypotheses are as follows:

- (i) There is no effect of financial statements analysis on the return on assets in the industrial sector in Jordan
- (ii) There is no effect of financial statements analysis on fair value to book in the industrial sector in Jordan
- (iii) There is no effect of financial statements analysis on the debt-to-assets in the industrial sector in Jordan

*1.3. Objectives of the Research.* Major goals are as follows:

- (1) Identifying the effect of the Corona pandemic on the financial performance of industrial public shareholding companies through the use of ratios
- (2) Knowing the evolution of the financial activities of industrial firms including periods before the Corona pandemic and the years after the Corona pandemic, to know the efficiency of the performance of the use of assets in achieving or increasing profits.
- (3) Identifying the efficient use of financial and nonfinancial resources before and after the Corona pandemic to improve the financial activities (performance) in the industrial sector in Jordan
- (4) Results and discussion that help researchers and financial analysts in studying the rest of the financial ratios in other sectors

*1.4. The Importance of Research.* The Corona delinquency is a double-edged sword so the first limit represents an opportunity for some companies to achieve returns through those delinquencies, while the second limit represents significant losses for the most important companies in the economy of any country. Also, this delinquency has no previous experience in how to deal with it, which necessitates giving human capital the largest role to deal with this delinquency to mitigate its effects on industrial and non-industrial companies.

The financial ratios are the output of the accounting system, which honestly reflects the nature of the transactions that focus on the company through the availability of evidence on those operations and information. This means that relying on financial ratios gives a degree of credibility to the results that the study will reach. Financial performance is also one of the matters that concern the owners of the company by maximizing profits or mitigating losses if there

are economic problems such as the Corona pandemic. The nature of the study is also an analytical study of the real ratios and numbers of the industrial sector in Jordan; this means that the results and recommendations reached by the study are credible because these published lists have been approved by the supervisors, the internal auditor, and the external auditor. Its consistency is appropriate to the results and recommendations of the study.

### *1.5. Terminology of Study*

The financial statements are the accounting information that shows the financial position of a company during a certain period and they are outputs of the accounting system [2].

Financial performance: a quantitative measure of how well a company uses its business assets and generates revenue. It indicates the degree to which the company's financial goals are achieved. It is an important aspect of financial risk management [3].

Financial analysis: a process of systematic processing of available data to obtain information that is used in the decision-making process, in evaluating the past and present performance of companies, and in anticipating what will be the results of the company in the future [4, 5].

Epidemic disease: an outbreak of a disease in which the number of cases is greater than expected in a specific population, geographic area, season, or period. This is according to the definition of the World Health Organization. The epidemic may occur in a confined geographical area or extend to several countries, and it may last for several days or weeks and may continue for years.

Industrial sector: the sector that manufactures the final products, which can then be utilized, such as the construction industry, the industrial sector also known as the secondary sector, is one of the three sectors, which make up the economy of the country, the other two sectors are the main sector (includes agriculture, fishing, and mining) and the service sector (including hospitality and consulting) [6–8].

*1.6. Previous Studies.* “The effect of COVID-19 pandemic on financial performance of firms: empirical evidence from Vietnamese logistics enterprises.”

The study aimed to show the impact of the epidemic disease on activities of a financial nature by applying it to logistics activities, and the study was based on logistics companies in Vietnam, and also aimed to show the problems facing the logistics sector in the case of epidemic diseases (Corona). Among the most important results of the study is the absence of a significant improvement in the financial performance of the logistics sector in Vietnam for the study sample companies. Most important recommendation is the need to make special files on how to deal with Corona to benefit from them in the coming years [1].

“Impact of corona on the financial performance of logistics sector: evidence from G-20 countries.”

The study aimed to show the impact of epidemic diseases on the basic financial activities of the logistics sector in the twenty major countries. The study relied on the analytical method for the financial statements for the years 2010 to 2020. One of the most important results of the study is that there are 14 countries in which the financial performance was negatively affected during the period of the epidemic disease, and the impact of the logistics sector was significantly negative during the period of the epidemic disease. The most important recommendations of the study are the need to benefit from the experiences of countries that were not affected by the repercussions of the epidemic disease and the creation of a legal framework to deal with similar issues in the future [9].

“The effect of Coronavirus pandemic on the financial performance of companies in the Indonesia security markets.”

The study aimed to show the impact of the epidemic disease on the performance of financial activities in the financial market in Indonesia. The study relied on the method of analyzing the financial statements so that 49 companies in Indonesia were analyzed during the period of the epidemic disease. The most important results of the study are the presence of a large difference in the ratio of liquidity and financial leverage in the short term, and the study also showed an improvement in the profitability indicators of financial companies in Indonesia. Its most important recommendation is the necessity of having an integrated team of several disciplines to deal with the effects of epidemic diseases at the level of individuals or companies [9, 10].

“A critical review of the impacts of COVID-19 on the global economy and ecosystems and opportunities for circular economy strategies.”

The World Health Organization declared COVID-19 a global pandemic on March 11, 2020, but the world is still reeling from its repercussions. The cases originated in China and spread rapidly around the world, prompting the world’s governments to implement strict measures in an attempt to isolate cases and reduce the rate of transmission of the virus. However, these measures have shattered the mainstays supporting the economies of the modern world as global trade and cooperation have been subject to national focus and competition for scarce supplies. Against this background, this paper provides a critical review of the catalog of negative and positive impacts of the pandemic and presents perspectives on how to leverage them to move toward a better and more resilient low-carbon economy. The paper diagnoses the danger of relying on pandemic-driven benefits to achieve sustainable development goals and emphasizes the need for fundamental and critical structural change in the dynamics of our way of life. He advocates a rethinking of the current global economic growth model, shaped by a system of a linear and sustainable economy through profitable manufacturing processes and energy

consumption, in favor of a more sustainable model recalibrated within the framework of the circular economy (CE).

Building on the evidence supporting CE as a means of balancing the complex equation of profit with minimal environmental damage, the paper identifies sector-specific recommendations for CE-related solutions as a catalyst for global economic growth and development [11].

“The impact of corporate governance on firm performance during the COVID-19 pandemic: evidence from Malaysia.”

The study aimed to clarify the relationship between the company’s performance and the presence of corporate governance in 188 Malaysian companies in the financial market. The financial statements for the years 2019 and 2020 were analyzed to know the impact of the Corona pandemic on financial performance. The most important results of the study are that the general characteristics of the study sample companies have an impact on epidemic diseases for the years 2019 and 2020 in terms of financial leverage and the structure of corporate governance. The most important recommendation of the study is providing empirical evidence of the impact of the Coronavirus on the performance of the company and the federation of corporate governance [12].

“Analyzing the effects of COVID-19 pandemic on the financial performance of Chinese listed enterprises.”

The study aimed to show the impact of epidemic diseases on the performance of financial activities in Chinese companies registered in the financial market. The regression coefficient was used to analyze the financial statements of different types of companies. The most important results of the study: small-sized companies are among the companies most affected by the presence of epidemic diseases. Its most important recommendation is unifying the procedures from the banking sector and the industry sector to deal financially and account for the positive and negative effects of the Corona pandemic on the economy in general [13].

#### 1.6.1. Important Notes on Previous Studies

- (1) The previous studies focus on the positive impact or the positive impact of epidemic diseases on the performance of financial activities in various economic sectors.
- (2) It focuses on one year’s analysis of a specific trend or one analytical aspect of a specific type of industrial, service, or industrial company and does not take several variables related to profitability, assets, and others.
- (3) It takes focuses on economic performance as one of the important financial aspects and does not focus on financial indicators from several aspects.
- (4) It does not take several periods to know the direct impact of the Corona delinquency on the financial performance on the ground of the published financial statements, which gives the results more credibility.

### 1.6.2. *The Current Study Differs from Previous Studies*

- (i) This study takes the financial statements published by the Amman Stock Exchange, which have been reviewed by internal and external audits, which may mean that there is great credibility in the results and recommendations of the study.
- (ii) It takes the impact of Corona delinquency on the financial performance for several successive periods so that the study was divided into two periods, the first period is 3 years before the Corona delinquency, and the second period is 3 years during and after the Corona delinquency.
- (iii) It is based on comparing the financial performance of the two periods before and after the Corona period so that the first period represents the years 2016, 2017, and 2018, and the second period is 2019, 2020, and 2021. So, the first period is considered as one period, and the second period is considered as one deception to facilitate the comparison process by measuring the financial performance of industrial companies.

### 1.6.3. *Additions from the Current Study to Previous Studies*

- (i) It focuses on financial indicators that help give a comprehensive view of the financial performance industrial sector in Jordan.
- (ii) It takes published financial statements of industrial companies for 6 years, and it was divided into two periods, precoronavirus and postcoronavirus years.
- (iii) It is a comparative study to find out the impact of the Corona pandemic on the financial performance of industrial companies listed on the Amman Stock Exchange.

## 2. **Theoretical Framework for the Study**

**2.1. Introductions.** Some countries in the world have adopted a policy of closure in the presence of epidemic diseases, but this policy had negative effects on the performance of the operational activities of companies in those countries [14, 15]. There are business organizations that were greatly affected due to the nature of the industry they practice, which led to these companies adopting financial policies to mitigate one of the negative effects of the presence of epidemic diseases, and this has a negative reflection on the role of governments in helping sectors affected by the process of complete closure during the epidemic disease period. The industrial sector is also one of the sectors that have been negatively affected by the presence of epidemic diseases [16].

During this unusual period, industrial companies registered on the Amman Stock Exchange - like other companies around the world - increased their credit allocations to cover expected losses as a result of the repercussions of the Corona pandemic; which led to an increase in provisions for potential losses. Therefore, the main reason behind the

decrease in (net profit) of industrial companies registered in Jordan is due to the increase in the percentage of the item allocated to expected losses [17].

**2.2. Financial Performance.** The step of evaluating financial performance is one of the most important steps that business organizations take in the field of auditing to ensure that they reach the goals required to work, which is necessary in light of the lack of ease and expansion of business organizations with the presence of the market characteristic of full competition. The supervisor must identify the balance sheet of the organization before thinking about preparing plans to avoid risks, and the financial manager must make several studies before making any long-term financial decisions, and these studies that the financial manager performs represent the analysis of financial performance, which includes the analysis of financial balance indicators and financial ratios [18].

Financial performance is a science that includes principles, rules, and foundations represented in the collection of information and information related to the company, and it depends on a detailed and accurate study and the creation of interconnection tools among them, such as the relationship between current assets that represent cash or cash-like in the company and the short-term obligations that represents a rolling commitment of the company. Therefore, the analysis related to financial performance is the cornerstone of the methods used by administrative decision-makers, whether in the case of using assets or in the event of obtaining those [19].

### 2.2.1. *The Concept of Financial Performance*

- (i) Financial performance: it is one of the criteria that depends on personal experience to determine the efficiency of management in employing assets and determining its ability to achieve profits. It is a term used as a tool for the financial position of a financial period [4].
- (ii) Financial performance  $t$  represents how the company's economic resources are managed to provide financial solvency and achieve profitability for the company during a specific financial period [18].

**2.2.2. The Importance of Measuring Financial Performance.** The benefit of stakeholders from the analysis varies according to the objective of the financial performance evaluation process, as follows [2]:

- (i) Accounts payable: focusing on the monetary items in the statement of financial position.
- (ii) Owners of debt instruments: they are concerned with the possibility of generating cash inside the company and cash outside it (assets, liabilities, and capital structure).
- (iii) Investment owners: they are concerned with the company's ability to determine the value of returns during the upcoming financial periods, and to determine the degree of stability in profits from one period to another.

2.3. *Financial Analysis Procedures in the Corona Pandemic.* Some procedures are [20] as follows:

- (i) Reviewing the necessary procedures in the steps of preparing the financial statements according to the date required by the administration, and evaluating the application of the procedures required by the financial markets.
- (ii) Reviewing the requirements of auditors in terms of providing plans to deal with potential risks and constantly cooperating with the needs of the audit committee.
- (iii) Using advanced financial maps and models to deal with unusual events and expanding financial disclosure requirements during the Corona pandemic period.
- (iv) Using electronic disclosure as much as possible to communicate information to stakeholders.

The financial analysis of the financial statements is defined as an assessment of the special financial situation in various establishments. This is performed through the role of the accountant, who is responsible for carrying out a number of duties, including analyzing profits as well as losses, in addition to following up on administrative decisions as well as contributing to the preparation of financial statements [21].

2.3.1. *Objectives of Financial Statement Analysis.* Financial statement analysis contributes to achieving many goals in the work environment, including [22].

- (1) Determining the financial position of the business and providing a visualization of the operational and financial performance of organizations.
- (2) Assessing the likelihood that companies will repay their short or long-term debt and close their debt.
- (3) Contributing to the preparation of future plans to activate the role of internal control.
- (4) Identifying weaknesses in the facilities and search for proposed solutions that contribute to providing the appropriate treatment for them.

2.3.2. *Steps for Analyzing Financial Statements.* The success of applying financial statement analysis depends on the main steps, the most important of which are [23] as follows:

- (1) Knowing the economic characteristics is the first step in analyzing financial statements and establishing a sequence of activities related to production or industry and the distribution of certain products or services in the organization.
- (2) The evaluation of the financial statements of the organization is the review of all the financial statements of the organization within the framework of

the accounting standards for this area, and when examining the financial accounts of the balance sheet, evaluation, classification, and recognition are the main elements of the correct evaluation, and when examining a list, it is important to assess its ability.

- (3) Profitability and risk analysis is the step that helps financial statement analysts evaluate the entity and the financial statements. When analyzing profitability, it is important to determine the scope of operating profit for the assets and shareholders of the company.
- (4) Preparing the expected financial statements, it is the last step in analyzing the financial statements and includes a set of assumptions that financial analysts need to prepare to predict the future of the facility and the field of work and then measure the nature of the impact of these assumptions on financial resources and cash flows.

2.3.3. *The Importance of Financial Statements.* The usefulness of financial statements is clear from several aspects, including [24] the following:

- (1) It determines the behavior of the business and its ability to raise funds, as well as the identification of sources and uses of funds.
- (2) It shows the company's ability to repay its debts in the current situation.
- (3) It contributes to the detection of profitability problems by following up on the behavior of the financial production up-to-date and finding the problem, if any.
- (4) It describes the financial ratios from the financial statements of the business conduct of the company.
- (5) It contributes to ensuring the accuracy of commercial transactions represented in agreements between a group of parties for the provision of services or the supply of goods according to predetermined conditions.
- (6) It is a tool for measuring changes in the company's current financial condition and performance.

### 3. Method and Analytical Procedures for the Study

3.1. *Introduction.* This chapter includes the methods of analysis that the researchers relied on to obtain the primary data to find answers to the study's questions and to test its hypotheses. This chapter also includes addressing the population and sample of the study, the method of processing study data and its tools, the sources of obtaining information, and the method of analyzing it to reach reliable results and recommendations.

**3.2. Study Methodology.** The study relied on the descriptive analytical approach which relied on the published financial statements of industrial companies listed on the Amman Stock Exchange for the years (2016–2021).

**3.3. Study Community.** The study population is represented by the industrial public shareholding companies listed on the Amman Stock Exchange, which are 55 industrial companies for the year 2022.

**3.4. The Study Sample.** The study sample is represented in the industrial public shareholding companies listed on the Amman Stock Exchange, numbering 20 companies, which are represented by the presence of capital of ten million dinars and more, and financial data are available for them for a year for the years 2016–2021.

### 3.5. Data Collection Sources

- (i) Primary sources: these are the financial statements published in the Amman Stock Exchange for the years 2016–2021 for industrial public shareholding companies.
- (ii) Secondary sources: they cover the theoretical framework of the study through books, periodicals, scientific journals, and master's and doctoral.

**3.6. Method and Procedures.** The researchers performed the following procedures for the purpose of conducting the analysis process:

- (i) Capital approval for industrial public shareholding companies with a value of ten million or more
- (ii) Excluding companies that do not have financial statements for the study period, which is 2016–2021
- (iii) It took 3 years, 2016, 2017, and 2018, which represent before the Corona pandemic, and took three years, which are 2019, 2020, and 2021, which represent the period after the Corona period
- (iv) Comparing the financial performance ratios by referring to the published financial statements

### 3.7. Data Analysis and Hypothesis Testing

**3.7.1. Introduction to Analyzing Financial Statements.** The process of analyzing financial statements was discussed to find out the effect of user analysis on the financial performance of industrial public shareholding companies. The researcher used descriptive tests for the study variables and tested the hypotheses related to the study.

**3.7.2. Descriptive Tests for Study Variables.** The study variables consist of the return on assets, the ratio of market value to the book value, and the ratio of debt to assets, which means that the items related to the subject of the study are

assets; net profit after tax; market value; book value; and obligations.

First, the total assets are considered one of the most important elements on which financial performance depends, as they represent the sources of money used and through which one can take a comprehensive view of the company's ability to invest its money and make a profit through it. The following Table 1 shows the process of development of total assets in the sample companies of the study.

It is noted from the previous table that 1 the values of total assets from year to year are somewhat continually increasing, as the lowest value of assets was in 2016 and the highest value of assets in the year 2021, and this indicates an increase in the value of the assets of industrial companies. This may mean the presence of investments in assets. This means that there is an impact on its financial performance. As assets represent the backbone of the financial performance of industrial companies. It is also noted that the value of assets for the years before Corona is less than the value of assets for the years after or during the Corona pandemic, and this indicates an increase in the value of assets in industrial companies and. It is also noted that the percentage change in total assets is approximately 12% compared to the precorona and postcoronavirus years, and this indicates that there are positive effects as a result of the Corona pandemic in the value of assets in industrial companies registered on the Amman Stock Exchange.

Second, the total liabilities.

It is noted from the previous Table 2 that the total values of obligations in the years before Corona increases from year to year, and in contrast, the values of obligations in the years after or during Corona, their values decrease from year to year. Also, the decrease in obligations from one period to another may be an indication of the improvement of the financial performance of the company, and this indicates that the financial situation or performance of the Jordanian industrial companies has increased due to the presence of the Corona pandemic. It is also noted that the rate of change is 1.5%, and this is a rather good indication of the improvement in the financial performance of Jordanian industrial companies due to the presence of the Corona pandemic.

Third: net profit after tax.

It is noted from the previous Table 3 that the total values of net profit after tax for the years before Corona, that profits increased by large values from the year 2016 compared to the years 2017 and 2018 and the year 2020, and compared to the year 2021. Yan also notes that there is a big difference between the profits in 2016 compared to the profits in 2021. This indicates an improvement in the financial performance compared to the previous years. It is also noted that the value of profits in the years after or during Corona is significantly greater compared to the value of profits in the years before Corona, and this also indicates a positive impact on net profits during and after the Corona pandemic, as it is noted that the percentage of change in profits compared to the preimplementation and postapplication years 55% in favor of the years after or during Corona, and this indicates an

TABLE 1: The development of the total assets of the study sample companies before and after the application of the standard.

Year	Total assets	Post or during corona period 2019–2021	The period before corona 2016–2018	Change	Percentage change (%)
2021	3,727,638,457				
2020	3,102,854,421	9,960,278,531			
2019	3,129,785,653			1083984283	12
2018	3,034,835,843				
2017	2,901,962,219		8,876,294,248		
2016	2,939,496,186				

Change = Post or during corona period – The period before corona. Change percentage = change/The period before corona.

TABLE 2: The evolution of the liabilities of the study sample companies before and after the effects of the Corona pandemic.

Year	Total liabilities	Post or during corona period 2019–2021	The period before corona 2016–2018	Change	Percentage change (%)
2021	1,917,106,517				
2020	1,955,932,144	5,993,891,342			
2019	2,120,852,681			90,333,563	1.5
2018	2,285,773,217				
2017	1,987,164,859		6,084,224,904		
2016	1,811,286,828				

TABLE 3: The development of net profit for the study sample companies before and after the effects of the Corona pandemic.

Year	Net profit after tax	Post or during corona period 2019–2021	The period before corona 2016–2018	Change	Percentage change (%)
2021	628,004,516				
2020	154,355,933	990,012,472			
2019	207,652,023			554,135,320	55
2018	202,813,125				
2017	205,232,574		435,877,152		
2016	27,831,453				

increase in profits and thus an indication of the improvement in the financial performance of Jordanian industrial companies limited public shareholding.

Fourth: the book value of the share.

It is noted from the previous Table 4 that the book value of the share (which is the value of the company according to the values in the books) according to the years before the application of the standard is decreasing from year to year, and this indicates a low level of security for shareholders associated with the value of each share compared to the debts incurred on the shares. The carrying amount of the share in the postapplication years has increased from year to year, although this increase is small, it may be an indication of a slight improvement in the level of security for shareholders related to the value of the share compared to the debts owed by it. This may indicate a slight impact on the improvement of the financial performance of the Jordanian industrial public shareholding companies listed on the Amman Stock Exchange.

Fifth: the market value of the stock.

It is noted from the previous Table 5 that the market value of the share (which is the market value of the share in the Amman Stock Exchange that is scheduled to sell ordinary shares) for the years before Corona is constantly declining from year to year. This means that the value of the share in the Amman Stock Exchange is declining and this is a

negative indicator for shareholders to predict profits. This is a negative indicator of the improvement in the financial performance of the Jordanian public shareholding industrial companies. It also notes that the market value of the stock for the years after or during Corona has improved compared to the years before Corona, as the table shows that the market value increases for the years after the application of standard no. The stock was prepared for sale on the Amman Stock Exchange. It is also noted that the value of the change in the years before the application of the standard and the years after or during Corona has increased by 38.02 in favor of the years after or during Corona, which may indicate the improvement in the financial performance of industrial companies, and this is what confirmed by the rate of change of 22%. This indicates that there is a positive effect on the improvement of the market value of the shares in the Jordanian industrial public shareholding companies, and therefore there is a positive effect on the improvement of the financial performance of these companies.

Sixth: return on assets.

It is noted from the previous Table 6 that the average return on assets (an indicator that measures the company's profitability relative to its total assets, and the return on assets gives an idea of the management's efficiency in using its assets to achieve profits). For the years before Corona was 1.83% for the year 2016 and then increased to 2.34% and

TABLE 4: The evolution of the book value of the stock for the study sample companies before and after the effects of the Corona pandemic.

Year	Book value of the share	Post or during corona period 2019–2021	The period before corona 2016–2018	Change	Percentage change
2021	48.613				
2020	42.38	133.812			
2019	42.819			-1.355	-1%
2018	43.993				
2017	45.08		135.167		
2016	46.094				

TABLE 5: The development of the stock market value of the study sample companies before and after the effects of the Corona pandemic.

Year	Stock market value	Post or during corona period 2019–2021	The period before corona 2016–2018	Change	Percentage change (%)
2021	74.85				
2020	50.57	172.48			
2019	47.06			38.02	22
2018	40.06				
2017	44.12		134.46		
2016	50.28				

TABLE 6: The development of return on assets of the study sample companies before and after the effects of the Corona pandemic.

Year	Return on assets	Post or during corona period 2019–2021	The period before corona 2016–2018	Change	Percentage change (%)
2021	5.28				
2020	1.77	8.4			
2019	1.36			2.27	27
2018	1.87				
2017	2.34		6.13		
2016	1.83				

then it decreased to 1.87%, and this indicates relative stability in the return on assets for those years in the Jordanian industrial public shareholding companies. It is also noted that the years after or during Corona, there is a rise from year to year, and this indicates the presence of efficiency from the administration in managing and exploiting its assets, and this leads to an improvement in the financial performance of industrial companies listed on the Amman Stock Exchange. It is also noted that the average return on assets for the years after or during Corona is greater than the average return for the years before Corona, and this indicates that the management of Jordanian industrial companies has a greater degree of efficiency in operating their assets and obtaining appropriate profits, and this indicates an improvement in the financial performance of companies Industrial public shareholding, and the rate of change in the comparison process is 27%, and this is a positive indicator of the improvement in profits and financial performance of industrial companies listed on the Amman Stock Exchange.

Seventh: market value to book value.

It is noted from the previous Table 7 that there is stability in the number of times the market value with the book value (such as the difference between the company's accounting value resulting from its actual assets and the

market value of the company represented by the stock price and future expectations). For the years before Corona, it is also noted that there is relative stability also in the years after or during Corona in the Jordanian industrial public shareholding companies. This indicates that the Corona pandemic in industrial companies did not affect the turnover rate of the market value with the book value. It is also noted that the percentage change is very simple, which confirms the existence of a very weak effect of the turnover rate of the market value to the book value, and the presence of a very weak effect on the financial performance.

Eighth: the ratio of debt to assets.

It is noted from the previous Table 8 that the debt ratios for the years before Corona increase from year to year, and this is considered a negative indicator of the process of hiring assets compared to the indebtedness, and this negatively affects the financial performance of the industrial companies in the study sample. It is also noted that the debt ratios are stable for the years after or during Corona this indicates the presence of stability in the debt ratios of the Jordanian industrial public shareholding companies. It is also noted that the debt ratios have increased in the years after implementation by 11%, and this indicates that the financial



TABLE 7: The evolution of the market value of the stock to the book value of the companies, a sample of the study, and before and after the effects of the Corona pandemic.

Year	Market value to book value per once	Post or during corona period 2019–2021	The period before corona 2016–2018	Change	Percentage change (%)
2021	120.1952				
2020	119.9076	360			
2019	119.8071			1	0.3
2018	119.5281				
2017	119.5234		359		
2016	119.5012				

TABLE 8: The evolution of the debt-to-asset ratio of the study sample before and after the effects of the Corona delinquency.

Year	The ratio of debt to assets	Post or during corona period 2019–2021	The period before corona 2016–2018	Change	Percentage change (%)
2021	41.43224				
2020	40.71265	41.05			
2019	41.00418			3.65	11
2018	40.12353				
2017	34.93853		37.4		
2016	33.90935				

performance has not improved much in the industrial public shareholding companies.

As shown in Table 9, it is noted that all the variables of the study represent a positive change in financial performance with a difference in the value of the average change. Where the variable net profit after tax represents the highest impact in terms of years after or during Corona compared to the years before Corona, and the lowest effect of the variables on financial performance is variable book value per share for industrial public shareholding companies.

3.8. *Test of Hypothesis.* Independent variables: financial statements.

Dependent variables: return on assets, the ratio for debt, and market value to book value ratio.

The following hypotheses are as follows:

- (i) There is no effect of financial statements analysis on the return on assets in the industrial sector in Jordan
- (ii) There is no effect of financial statements analysis on fair value to book in the industrial sector in Jordan
- (iii) There is no effect of financial statements analysis on the debt-to-assets in the industrial sector in Jordan

3.8.1. *The First Hypothesis.* There is no effect of financial statements analysis on the return on assets in the industrial sector in Jordan.

The multiple linear regression test was used to test the first hypothesis in terms of a test to analyze the lists of return on assets according to the following table.

Table 10 shows that the value of the significant significance is 0.0325, which is less than the significance level of 5%, and based on the decision rule mentioned earlier, the null hypothesis is rejected and the alternative hypothesis is

accepted, which states that there is a statistically significant impact of the analysis of the financial statements on the return on assets among the industrial companies listed on the Amman Stock Exchange. The value of the correlation strength is 0.342, which measures the average level of the correlation between the independent and dependent factors, and the coefficient of determination  $R^2$  indicates the strength of the interpretation of the model, and this is that the independent variables represented by the components of return on assets explain 0.116 of the change in the dependent variable.

3.8.2. *The Second Hypothesis Test.* There is no effect of financial statements analysis on fair value to book in the industrial sector in Jordan.

Table 11 show the value of the significance is 0.043, which is less than the significance level of 5%, and based on the decision rule mentioned previously, the null hypothesis is rejected and the alternative hypothesis is accepted, which states that there is a statistically significant impact of financial statements analysis on the market value ratio to the book value of industrial companies listed on the Amman Stock Exchange. As the value of the correlation strength of 0.542 measures the level of the average correlation between the independent factors and the dependent factors, and the coefficient of determination  $R^2$  indicates the strength of the interpretation of the model, and this is that the independent variables represented by the components of the ratio of the market value to the book value explain the rate of 0.239 of the change that takes place in the dependent variable.

3.8.3. *The Third Hypothesis.* There is no effect of financial statements analysis on the debt-to-assets in the industrial sector in Jordan.

TABLE 9: Summary of tables for study variables.

Variable	Post or during corona period 2019–2021	Before corona period 2016–2018	Change percentage
Assets	9960278531	8,876,294,248	12%
Liabilities	5993891342	6,084,224,904	1.5%
Net income after tax	990012472	435,877,152	55%
Book value/shares	133812	135.167	-1%
Market value/shares	17248	134.46	22%
Return on assets	8.4%	6.3%	27%
Market value to book value	360	359	0.3%
Ratio of debt to assets	41.05	37.4	11%

TABLE 10: Results of multiple linear regression analysis of the effect of listing analysis on return on assets.

Variable	Regression factor	Beta power	T Value	Significant
Constant	1.428-	—	1.14-	0.16
Net income	0.052-	0.073-	0.61-	0.37
Total assets	0.011-	0.05-	0.039-	0.49
R Value		0.342		
R <sup>2</sup> value		0.116		
F Value		1.95		
Significant level		0.0325		

TABLE 11: Results of multiple linear regression analysis of the effect of analyzing financial statements on the ratio of market value to book value.

Variable	Regression factor	Beta power	T Value	Significant
Constant	1.714-	—	1.82-	0.13
Market value/ share	0.039-	0.067-	0.51-	0.29
Book value/ share	0.018-	0.09-	0.027-	0.49
R value		0.542		
R <sup>2</sup> value		0.239		
F value		2.23		
Significant level		0.043		

Table 12 shows that the value of the significant significance is 0.027, which is less than the significance level of 5%, and based on the decision rule mentioned earlier, the null hypothesis is rejected and the alternative hypothesis is accepted, which states that there is a statistically significant impact financial statements analysis on the debt to assets ratio of industrial companies listed on the Amman Stock Exchange. As the value of the correlation strength is 0.449, it measures the level of the average correlation between the independent factors and the dependent factors, and the coefficient of determination  $R^2$  indicates the strength of the interpretation of the dependent variable.

## 4. Results and Discussion

### 4.1. Results

- (1) Public shareholding industrial companies do not disclose or report on the effects of the Corona pandemic and its impact on the business and activities of these companies.

TABLE 12: Results of multiple linear regression analysis of the effect of list analysis on the debt-to-assets ratio.

Variable	Regression factor	Beta power	T Value	Significant
Constant	1.94-	—	2.08-	0.13
Total liabilities	0.064-	0.053-	0.82-	0.18
Total assets	0.016-	0.14-	0.041-	0.44
R value		0.449		
R <sup>2</sup> value		0.201		
F value		1.95		
Significant level		0.027		

- (2) There are several industrial companies that do not have financial data for the years related to the study, and these public shareholding industrial companies were excluded from the analysis process.
- (3) When conducting the test of the descriptive procedure, the following was found: the value of the total assets of the industrial companies in the study sample increased by 12%, in the years after and during the Corona pandemic.
  - (i) The presence of relative stability in the value of obligations for public shareholding companies for the years after the Corona pandemic compared to the years before the Corona pandemic.
  - (ii) The variable net income after tax has increased in the postcoronavirus years by 55% in the Jordanian industrial public shareholding companies, and this is reflected positively in the change in profits in the postcoronavirus years.
  - (iii) There is relative stability in the book value of the share for the Jordanian public shareholding industrial companies.
- (4) The Corona pandemic crisis has had a positive impact on the financial performance of industrial public shareholding companies by increasing the value of assets and increasing net profit.

4.2. Discussion. Based on the results of the study, the researcher discussed the following:

- (1) The necessity of a legal obligation to disclose unusual items to public shareholding industrial companies, as it was found that companies have no disclosure of

the impact of the Corona pandemic on the company's business and activities.

- (2) The necessity of having a theoretical reference explaining the procedures for the disclosure process in industrial public shareholding companies and determining the degree of its consistency with other standards related to the economic environment in Jordan.
- (3) Applying the study to other sectors such as the services sector and the commercial banking sector to get a more comprehensive view of the impact of the Corona pandemic on the various economic sectors in Jordan.
- (4) Requiring industrial public shareholding companies in Jordan to apply the requirements of accounting disclosure in unusual items, including losses and profits delinquent due to the Coronavirus.
- (5) The presence of specialists in the application of international reporting standards in industrial companies helps in the rapid response of the company to the application of international standards and finds problems that may arise for companies facing problems in emergency accounting issues.

## Data Availability

The data used to support the findings of this study are included in the article.

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

## References

- [1] H. Xuang, "The effect of COVID-19 pandemic on financial performance of firms: empirical evidence from Vietnamese logistics enterprises," *Journal of Asian Finance, Economics and Business*, vol. 9, no. 2, 2021.
- [2] H. Al and Sherif, "Tone disclosure and financial performance: evidence from Egypt," *Arab Research Journal*, vol. 31, no. 1, 2021.
- [3] R. Henriques, "Social responsibility and financial performance," *Corporate Social Responsibility*, vol. 6, no. 4, 2020.
- [4] S. Suhadak and Kurniaty, "Stock return and financial performance as moderation variable in influence of good corporate governance towards corporate value," *Asian Journal of Accounting Research*, vol. 4, no. 1, 2019.
- [5] M. Elmarzouky, K. Albitar, and K. Hussainey, "Covid-19 and performance disclosure: does governance matter?" *International Journal of Accounting and Information Management*, vol. 29, no. 5, 2021.
- [6] A. Ghazi, "The Effect of Using Financial Analysis in Preparing Planning Budgets in Jordanian Industrial Companies," Master's Thesis, Al al-Bayt University, Mafrq, Jordan, 2016.
- [7] R. lotfi, B. Kargar, and A. Gharehbaghi, "A data-driven robust optimization for multi-objective renewable energy location by considering risk," *Environment, Development and Sustainability*, vol. 12, pp. 1–22, 2022.
- [8] R. lotfi and H. Nazarpour, "Viable closed-loop supply chain network by considering robustness and risk as a circular economy," *Environmental Science and Pollution Research*, vol. 29, pp. 1–20, 2022.
- [9] G. F. Frederico, "Impact of COVID-19 on financial performance of logistics firms: evidence from G-20 countries," *Journal of Global Operations and Strategic Sourcing*, vol. 15, 2022.
- [10] L. S. Musmini, "The impact of COVID-19 pandemic on the financial performance of firms on the Indonesia stock exchange," *Journal of Economics, Business, & Accountancy Ventura*, vol. 23, no. 2, 2020.
- [11] T. Mohammed and Mustapha, "A critical review of the impacts of COVID-19 on the global economy and ecosystems and opportunities for circular economy strategies," *Resources, Conservation and Recycling*, vol. 164, 2021.
- [12] S. F. A. Khatib and A. N. I. Nour, "The impact of corporate governance on firm performance during the COVID-19 pandemic: evidence from Malaysia," *The Journal of Asian Finance, Economics and Business*, vol. 8, no. 2, 2021.
- [13] A. Rababah and Al-Haddad, "Analyzing the effects of COVID-19 pandemic on the financial performance of Chinese listed enterprises," *Journal of Public Affairs*, vol. 20, no. 4, 2020.
- [14] S. Y. Ahmed, *Impact of COVID-19 on Performance of Pakistan Stock Exchange*, University Library of Munich, Munich, Germany, MPRA Paper, 2020.
- [15] H.-C. Chen and Y. Chia-Wei, "Global financial crisis and COVID-19: industrial reactions," *Finance Research Letters*, vol. 42, 2021.
- [16] S. Cheval and C. Mihai, "Observed and potential impacts of the COVID-19 pandemic on the environment," *International Journal of Environmental Research and Public Health*, vol. 17, no. 11, 2020.
- [17] B. Debata and P. Patnaik, "COVID-19 pandemic! It's impact on people, economy, and environment," *Journal of Public Affairs*, vol. 20, no. 4, 2020.
- [18] H. Karamoy, "The effect of financial performance and corporate governance to stock price in non-bank financial industry," *Corporate Ownership and Control*, vol. 17, no. 2, 2020.
- [19] Y. K. Lew and J. Yu, "The impacts of independent director and CEO duality on performance in the Chinese post-institutional-transition era," *Canadian Journal of Administrative Sciences/Revue Canadienne Des Sciences Administration*, vol. 35, no. 4, 2017.
- [20] Al-Khalayleh and Alaa, "Assessment of the Impact of the Corona Virus Pandemic on the Performance of Employees in Industrial Companies in the Al-Hussein Bin Talal Development Zone," Master's Thesis, Al al-Bayt University, Mafrq, Jordan, 2021.
- [21] A. Ahmad, "The impact of financial statement analysis on the profitability assessment (applied study of kirkuk company for producing constructional materials)," *Studies AND Scientific Researches*, Economics Edition, vol. 28, 2018.
- [22] C. Gibson, *Financial Reporting and Analysis Using Financial Accounting Information*, South Western, Cengage Learning, United State, 2013.
- [23] A. E. Adebisi, A. A. Iyiola, and A. A. Olayemi, "The statistical evaluation of the performance of financial ratio analysis in Nigerian manufacturing industry: an empirical study of guinness Nigeria PLC," *International Journal of Business and Management*, vol. 4, no. 1, 2016.
- [24] D. Ravinder and M. Anitha, "Financial analysis," *Journal of Economics and Finance*, vol. 2, no. 3, 2013.