

RESEARCH TITLE

Predicting Financial Failure According to The Assessments of the Z-score Model to Determine The Continuity of Iraqi Industrial Companies

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Abstract

The study seeks to give a prediction of financial failure, according to the assessments of the z-score model, to determine the continuity of Iraqi industrial companies. The study aims at how to calculate financial changes (positive and negative) in a practical way and away from guesswork, personal judgment and jurisprudence in Iraqi industrial companies, the study shows the role of the z-score model in the statement of predicting financial failure and to determine the continuity of Iraqi industrial companies, the study relied on both deductive and inductive analytical methods, as according to the deductive method of highlighting the concepts of, To diagnose the problem of the study and determine its dimensions, the analytical approach has been adopted in analyzing the financial statements of companies namely (modern sewing company-pfadad soft drinks company-Al-Kindi vaccines and Medicines Company-clothing production company and general trade). The spatial boundaries of the companies were represented (modern sewing company-pvdad soft drinks company-Al-Kindi vaccines and Medicines Company-clothing production company and general trade), as for the temporal boundaries were for the years (2017-2021). The study found that the analysis of the modern sewing company, PFAD soft drinks company, Al-Kindi vaccines and Medicines Company, clothing production company and general trade, that the Z-score model index has reached the highest performance in the companies, respectively (43.624), (194.734), (316.508), (31.407) that is, the value of (Z) is higher than (2.60), and this indicates good performance in the company and the continuity of corporate performance. The study recommends the need to regulate the performance of the Iraqi securities market, in demanding companies to increase the percentage of reserves, for use in emergency cases.

Key Words: financial failure - continuity of corporate performance - model Z-Score.

INTRODUCTION

Iraqi industrial companies operate under economic conditions full of many and varied risks, and these risks may affect the work of industrial companies and expose them to the deterioration of their financial and economic situation, so great importance should be given to the stages that industrial companies go through, before they reach the state of deterioration and financial failure, by reviewing, studying and using the methods and Means reached by Field Research and studies, related to the various stages through which the performance of industrial companies can be diagnosed and treated in a timely manner, including the Z-score model, to avoid reaching other stages of deterioration leading to the final cessation of economic activity.

Financial default or technical bankruptcy is one of the important topics that researchers have been interested in, because of its negative effects on the national economy and on many groups working in it, and although the concept of bankruptcy in its legal sense means the exposure of companies to bankruptcy, but there are many terms that are used such as bankruptcy, failure, hardship, which are terms synonymous with the meaning of financial default, so the economic, legal and financial standards are mixed with each other in a way that describes the situation in which the economic unit is bankrupt or distressed. (Improved, 2016: 69).

In order to achieve the objectives of the study, and to prove its hypotheses, the research was divided into three parts between the first molecule, the methodology of the study, the presentation of the second molecule, the theoretical literature, and the treatment of the third part, the method and practical procedures and results.

FIRST : STUDY METHODOLOGY

Forecasting the financial failure of companies is of great importance in the field of financial management, in particular, because of the consequences of their failure of significant damage to the interested parties in the company, and failure forecasting also achieves many positive advantages for those who expect it in time, as they enable them to take the necessary measures to address it in its early stages on the one hand, and avoid reaching bankruptcy and liquidation on the other hand. The importance of predicting the financial default of debts stems from the interest of many authorities in this subject, where the prediction of default is of great importance to the beneficiaries of the financial statements (al-Rifai, 2017: 26-25) and as a result, the problem of the study arises in answering the following question: "Does the prediction of financial failure according to the assessments of the z-score model contribute to determining the continuity of Iraqi industrial companies?" "In order to answer and solve the problem of the study, the researcher proposed the following hypothesis:" the use of the Z-score model effectively contributes to distinguishing between companies with positive and negative changes and determining their continuity".

The study is important, because the prediction of changes and financial failure of companies is very important, for managers, stakeholders and other related parties, through the users of financial statements get early warnings that work to achieve many positive benefits for those who expect them in time, and in order to be able to take appropriate measures to address changes in its early stages, and avoid reaching bankruptcy and liquidation, so the study seeks to give a prediction of financial failure according to the assessments of the z-score model to determine the continuity of Iraqi industrial companies. The study aims at how to calculate financial changes (positive and negative) in a practical way and away from guesswork, personal judgment and jurisprudence in Iraqi industrial companies, the study shows the role of the z-score model in the statement of predicting financial failure and to determine the continuity of Iraqi industrial companies, the study relied on both deductive and inductive analytical methods, as according to the deductive method of highlighting the concepts of the problem of studying and determining its dimensions, By reviewing the financial reports of Iraqi industrial companies for the years from 2016 to 2021 and the bulletins issued by the Iraq Stock Exchange related to the subject. The analytical approach has been adopted in analyzing the financial statements of companies (modern sewing company - bafdad soft drinks company - Al-Kindi vaccines and Medicines Company-clothing production and General Trading Company). The spatial boundaries of the companies were represented (modern sewing company-pvdad soft drinks

company-Al-Kindi vaccines and Medicines Company-clothing production company and general trade), as for the temporal boundaries were for the years (2017-2021).

The sample of the study was represented by a group of companies belonging to the Iraqi industrial sector ,where four Iraqi industrial companies belonging to the same market were selected (modern sewing company - pfadad soft drinks company - Al - Kindi vaccines and Medicines Company-clothing production company and general trade).

A few studies have dealt with the subject, one of these studies is a study (Mustafa , Judy ,2022), as it aimed to clarify the importance of predicting the state of financial failure , which may face financial institutions in general and banks in particular ,through relying on mathematical models , where the Taffler and Tisshow 1977 model was used to measure the prediction of financial failure, and also relied on financial reports published in the Iraq stock exchange, for the research sample banks include (International Development Bank, Sumer bank , Kurdistan bank) for financial years (2016-2020) as the most important finding of the research, the reliance on financial failure prediction models, The study also showed the importance of adopting a model that is appropriate to the data available to investors, in terms of (the size of the bank, the type of industry, etc.), it also showed that the frequent faltering that affects financial banks listed in the financial market, this negatively affects the market itself, as it prompts market participants to refrain from dealing with it, and recommended that the supervisory authorities analyze the financial data resulting from the use of failure prediction models finance , To be able to make the necessary decisions related to troubled banks or threatened with failure.

A study (Abdullah , 2022) showed the dual use of financial failure prediction analysis according to the Altman model , and stress tests to achieve integration in Banking Risk Management ,and 5 equations were used that form the basis of the Altman basic model on the financial statements of the National Bank of Iraq , and analyze the extent of its exposure in the future to financial failure , then use stress tests to identify the bank's ability to withstand crises, especially in light of its low classification according to the Altman model and the probability of its failure in the future, thus proving or denying the research hypothesis, and according to the Altman model, the bank is threatened with failure in the near future, It is located within the red zone according to the description of the model, and it will incur losses if it experiences crises in the future according to the analysis of pressure tests. She recommends that the dual use of the Altman model and stress tests help give a clear idea to the management of banks about the real risks, to implement effective and rapid reforms.

A study (Abdi , Abdullah , 2022) indicated that the efficiency of the performance of the financial activity of banks is the cornerstone in achieving its goals , represented by survival, growth and continuity , and mismanagement of this activity, and may eventually lead to what is known as the financial decline , which is described as an alarm bell for future financial changes , may eventually lead to financial failure, and the announcement of liquidation. Financial activity plays an important role in the administrative process , as it contributes effectively to providing the required information to decision makers , regardless of their administrative levels and the type of decision taken ,in addition , it provides information that helps in making various forecasting operations , including predicting financial failure, which is prepared for the purpose of helping banks achieve the goal of survival, growth and continuity, and finding appropriate solutions to any financial dilemma they may face, so the causes of financial decline must be known in order to go beyond falling into financial failure. Based on the foregoing ,the current research is directed to understanding and analyzing the financial variables that ensure the assessment of (Bank of Baghdad), the research sample, and the extent of its vulnerability to financial failure by knowing and studying the financial situation for several years to predict the extent of its ability to continue to provide its services using financial failure forecasting models represented by models (Sherrod) and(springgate).A study (Hassan ,2018) explained the role of accounting disclosure and its ability to predict financial failure , and the extent of continuity of companies operating in the tourism and hotel sector listed on the Iraq Stock Exchange, after determining the ability of disclosure to detect and distinguish between failed and successful companies . To achieve these goals, the research was based on the bilateral logistic regression model to enhance the predictive ability of Disclosure, for a sample of (8) companies listed

on the Iraq stock exchange for the tourism and hotel sector for a period of (2005 - 2016), to investigate the research variables and verify the ability of these variables to predict the failure and success of companies , the research has concluded that accounting disclosure has the ability to detect and predict the financial failure of sample companies from the tourism and hotel sector , and the study recommends the need to adopt the management of the Iraq Stock Exchange, the indicators included in the local legislation as a minimum basis in the classification of companies , into failed companies and successful companies, and seek to adopt one of the important controls in determining the continuity of the listing of shares of those companies in the market

SECOND :THEORETICAL LITERATURE

1 .2 Financial Failure:

The topic of financial failure is one of the most important topics that companies and related parties should pay attention to, because of its negative effects if it occurs on society in general and companies and related parties in particular, and although the main goal of companies is to achieve the goals for which they have established continuity and profits, they may go through difficult stages in their economic life, as they are exposed to a recession and depression, which leads to a weak demand for their services , In order to avoid what financial failure can lead to, companies must predict it before it happens using the methods available and applicable to them.(Naama, Hassan, 2019: 67) financial failure is defined : " as a late stage that serves to decline companies that precede more catastrophic events such as bankruptcy or liquidation" (Platt , Platt,2002:185) . While Outecheva defined financial failure:" as a situation in which the company has insufficient cash flows to cover its obligations,which causes a temporary shortage of liquidity (Outecheva, 2007:18)".Ngwa is defined as the company's inability to pay its financial obligations on their due dates (Ngwa,2016:1)

Therefore , bankruptcy from a legal point of view refers to the state of judicial bankruptcy that an economic Company is exposed to as a result of its ceasing to pay its debts on their due dates, so that it is declared bankrupt by a ruling of the competent court for the purpose of liquidation and sale in preparation for the repayment of these debts to their owners(Drake&Fabozzi ,2010: 169) this means that bankruptcy is official ,as it takes place in a legal court and has a clear start date (Shnov, 2015 :5) , as for financial default,it lacks a specific definition explaining its beginning or end (Platt &Platt, 2002:186)

2 .2Continuity Of Corporate Performance

With regard to continuity as a positive characteristic of profits , Steinwender points out that the advantage of these characteristics lies in the recurring part of activities and events that lead to profit . Accordingly, the larger the recurring components of the activities of an economic unit , the easier it is to predict their occurrence ,and the profits achieved are of greater benefit in making decisions, while the risk is lower after excluding non-recurring activities (Steinwender, 2008 :16-17).

This feature will be useful to all those who benefit from accounting information .financial analysts can make better forecasts, managers can plan more accurately, and investors make better decisions based on more reliable financial information. the crucial aspect of the Continuity feature lies in its origin. if the continuity of profits is the product of repeated activities of the economic unit, it will certainly be a positive quality for it, but in fact there is always the possibility of profit management. While the continuity characteristic of profits gives a positive image of the economic unit ,and is important for interested parties , as there is an incentive for management to show profits as recurring, and in this context ,many studies have found that some treatments for extinction and other accounting rules can increase the continuity of profits, but they reduce their usefulness for decision-making, so profits do not always reflect the usual business activities of the economic unit, and based on the foregoing, although the continuity characteristic is often viewed positively for the quality of profits, it should to study well to get to the truth of their roots (Dechowe &Schrand , 2004:5).

Continuity is defined as the ability of companies to continue their operations in the foreseeable future , and they will not exit the industry, or liquidate their business, and until that happens, they must be able to manage and increase their resources adequately, and for an unlimited period of time enable them to fulfill their obligations and achieve their plans (Burke et al.,2015:1)

Continuous profits can be considered a desirable attribute because profits that are able to predict themselves are more valuable to users ,for evaluation purposes, so continuity or sustainability has been used as a measure of the quality of accounting profits, more useful for future performance and the reason

for this is that continuous profits will make current profits a measure of IT (Herly,2012:34)

The imposition of continuity is one of the basic requirements on the basis of which financial statements are prepared, and means that the value of current assets recorded in the accounting books of the economic unit will be collected, and that current liabilities will be paid during the conduct of business of the Economic Unit (Clark, and Newnam, 1986:22) . Continuity means that "an economic unit is created to last from one period to another with the ability to meet its obligations when the payment deadline arrives without the need to substantially dispose of its assets or change its debt structure , or having to reduce the size of its operations" (Abu Ghazaleh , 2013 : 553) .When preparing the financial statements, the management should conduct an assessment of the ability of the economic unit to remain continuous, and the financial statements should be prepared on this basis unless there is an intention of the management either to liquidate the project or stop practicing its activity or it no longer has a realistic option but to do so. (Abu Ghazaleh is a former source : 557), and in the event that the financial statements are not prepared on the basis of the continuing unit, that fact should be disclosed along with the basis on which they were prepared as well as the reason behind this decision, and the subject of financial failure is closely related to the imposition of continuity and the extent of the auditor's ability to detect indicators that raise doubts about the possibility of continuing the economic unit in doing its business and its inability to do so, the auditor may issue a clean report without referring to the issue of lack of continuity when auditing the financial statements and financial reports of economic units at the end of the year, but after a short period, the economic unit may It completely collapses and is officially declared bankrupt (Gali , 2001 : 148) .The international auditing Standard No. 570 of 2003 "imposing continuity" considers the economic unit as continuing in business for the foreseeable future and the preparation of financial statements for general purposes comes on the basis that it is continuous, unless management intends to liquidate or stop operations or has no realistic alternative but to do so, based on the foregoing, continuity is tantamount to continuing without interruption, the economic unit will continue its normal activity for a relatively unlimited period, and it is not liquidated in the foreseeable future , Unless events or circumstances appear that have the force of negative impact on the functioning of the economic unit and its activity , or in the intention of the management or owners to liquidate it (Al-Aradi ,2014 :2).(Muhaisen, 2016 : 101) companies that fail differ in terms of the ways failure occurs and the path they take before failure occurs, as there are companies that live a long time before they fail or are unable to live more than five years, as the (AL-ghussein) study stated that more than (50%) of companies that fail may not exceed the fifth year of their life, and some may reach the excellent level and then fail and others may not be able to overcome the level of poor performance (al-ghussein, 2004: 30) , When companies fail, they suffer losses (negative operating income or net loss) for at least three consecutive years (Outecheva,2007:16). The (Bilderbeek&Pompe) study believes that the relationship between the age of a company and the possibility of predicting bankruptcy has received the attention of many literature , as predicting the bankruptcy of small companies is more difficult than predicting long-standing companies,and it makes sense when older companies experience financial failure and failure, they will suffer a gradual dissolution before heading for bankruptcy (Bilderbeek&Pompe, 2005:850).

2 .3The Quality Of The Estimates Of The Management Of Economic Units To Estimate Financial Default:

Some financial reporting frameworks contain an explicit requirement for management to make a specific assessment of the viability of an economic unit as a going concern (Abu-Ghazaleh, 2013 : 553) .When preparing financial statements , the management of economic units should make an assessment of the ability of those units to continue , and financial statements should be prepared on the basis of the continuation of the economic unit, unless the management intends to liquidate the unit, or stop trading or there is no real alternative but to do so, and when the economic unit is aware of this-when – If there are material doubts related to events or circumstances that may raise significant doubts regarding the viability of the economic unit, these doubts should be disclosed ,but if the financial statements are not prepared on the basis that the economic unit continues to engage in activity , disclosure here is not necessary.

In order for the assessment of the imposition of continuity of the economic unit to be appropriate , the management of the unit should take into account all available information for the near future, which should have been at least twelve months from the date of the previous balance sheet.

Since the imposition of continuity is a major imposition in the preparation of financial statements, the

management of economic units is responsible for the future outcome of events or circumstances that are inherently uncertain, and the uncertainty is due to the following factors (Abu Ghazaleh , 2013 : 554).

- In general , the degree of uncertainty associated with the outcome of an event or circumstance increases significantly , the longer the time when the judgment about the outcome of the event or circumstance is made in the future, which is why most financial reporting frameworks that require management's explicit assessment , specify the period in which management is required to take into account all available information.
- Any judgment regarding the future is based on the information available at the time the judgment was rendered , and subsequent units may overturn the judgment that was reasonable at the time it was rendered.
- The size and complexity of the economic unit , the nature and conditions of its work and the degree of its impact on external factors all affect the judgment of the outcome of events or circumstances .(Improved, 2016 : 103).

2. 4 Model (Z-Score) Altman 1968 For Industrial Companies

Altman's work for the year (1968) is one of the first and most important works in which he tried to bypass the traditional method , which was used by the previous ones in predicting the failure and failure of companies , relying on simple statistical methods and indicators , in analyzing financial ratios , to choose one financial ratio that is believed to be the best in distinguishing between distressed and non-distressed companies (1229:2014,el.at& Meeampol), and used in the construction of the model a statistical method that is more complex, than the old method, he called it the method of discriminative analysis, during which he was able to deduce a linear relationship consisting of a set of variables, which is the best in distinguishing between distressed and non-distressed companies (Suvas et at,2014 : 3)

Altman used a sample of 66 industrial companies divided into 33 failed companies and 33 non-failed companies similar in industry and asset size (Bandyopadhyay,2006:257), and tested in the sample (22) a financial ratio for the first year before bankruptcy using discriminatory analysis and came to the selection of (5) financial ratios among the best characteristic ratios of performance, which can be used to predict financial failure and put it in the formula as follows:

$$Z=1.2X1+1.4X2+3.3X3+0.6X4+1X5$$

Where the :

X1= net working capital / total assets

X2= retained earnings / total assets

X3= earnings before interest and taxes / total assets

X4= market value of shareholders ' equity / total liabilities (Hasan , Samarakoon,2003: 3).

Z =continuity index (prediction of financial failure and failure)

If the value of (Z) exceeds (2.99) points, the company is not expected to stumble and fail in the near term because its performance was high , while if the value of (Z) falls below (1.81) points, companies are considered failures because their performance was low, but if the value of (Z) reaches between (1.10 - 2.60) points, it is difficult to judge the company's performance and predict the probability of its failure and failure or success (Lin,2009).

THIRD: APPLIED RESEARCH FRAMEWORK(METHOD AND PROCEDURES)

3.1 Study Methodology And Procedures

The problem of the study arises in answering the following question : " Does the prediction of financial failure according to the assessments of the z-score model contribute to determining the continuity of Iraqi industrial companies?" "In order to answer and solve the problem of the study, the researcher proposed the following hypothesis" that the use of the Z-score model contributes effectively to distinguish between companies with positive and negative changes and determine their continuity " as the study is important , it is an important role that predicting changes and financial

failure of companies is extremely important, for managers, stakeholders and other related parties , By providing users of financial statements with early warnings that work to achieve many positive advantages for those who expect them in a timely manner, and in order to be able to take appropriate measures to address changes in its early stages , and avoid reaching bankruptcy and liquidation cases, the study therefore seeks to give a prediction of financial failure according to the assessments of the z-score model to determine the continuity of Iraqi industrial companies. The study aims at how to calculate financial changes (positive and negative) in a practical way and away from guesswork , personal judgment and jurisprudence in Iraqi industrial companies , the study shows the role of the z-score model in the statement of predicting financial failure and to determine the continuity of Iraqi industrial companies , the study relied on both deductive and inductive analytical methods ,as according to the deductive method of highlighting the concepts of the problem of studying and determining its dimensions , By reviewing the financial reports of Iraqi industrial companies for the years from 2016 to 2021 and the bulletins issued by the Iraq Stock Exchange related to the subject . The analytical approach has been adopted in analyzing the financial statements of companies (modern sewing company - bafdad soft drinks company - Al - Kindi vaccines and Medicines Company-clothing production and General Trading Company). The spatial boundaries of the companies were represented by the modern sewing company-pfadad soft drinks company-Al-Kindi vaccines and Medicines Company-clothing production company and general trade, while the temporal boundaries were for the years (2017-2021).

The sample of the study was represented by a group of companies belonging to the Iraqi industrial sector ,where four Iraqi industrial companies belonging to the same market were selected (modern sewing company - pfadad soft drinks company - Al - Kindi vaccines and Medicines Company-clothing production company and general trade).

3.2 The Study Model Used

The Z-score model seeks to distinguish between companies in the industrial sector, and assess the extent to which those companies are able to continue , by relying on the financial statements, for a sample of each company (modern sewing company - pvdad soft drinks company - Al Kindi vaccines and Medicines Company - clothing production company and general trade)

The researcher has relied on the Z-score model in measuring the financial failure and the continuity of Iraqi industrial companies, the sample of the study, which is as follows:-

$$Z = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4$$

Where it indicates:-

X1= net working capital / total assets

X2= retained earnings / total assets

X3= earnings before interest and taxes / total assets

X4= market value of shareholders ' equity / total liabilities (Hasan , Samarakoon,2003: 3).

Z =continuity index (prediction of financial failure and failure)

Safety zone = $2.60 < Z$

Gray area = $2.60 > Z > 1.10$

Danger zone (default and Bankruptcy) = $1.10 > Z$

If the value of (Z) exceeds (2.60) points, the company is not expected to be exposed to financial failure, while if the value of (Z) falls below (1.10) points, it is more than others eligible for financial failure and failure.

But if the value of (Z) reaches between (1.10-2.60) points, it is difficult to judge the performance of the company and predict the probability of its failure or success .And the channel of analysis results:

Table No. (1) application of the Z-score model to predict the financial failure of a modern sewing company

The year	**Z	6.56X1	3.26X	6.72X3	1.05X4	Company valuation
2016	21.612	2.64574	0.905872	0.115034	0.504945	Continuous and successful performance
2017	34.056	4.765657	0.22889	0.294693	0.064182	Continuous and successful performance
2018	22.190	2.789932	0.212124	0.378653	0.621239	Continuous and successful performance
2019	33.553	4.443117	0.143087	0.450302	0.870619	Continuous and successful performance
2020	7.431	0.457145	0.124892	0.500172	0.633041	Continuous and successful performance
2021	43.624	6.154558	0.062382	0.365133	0.565486	Continuous and successful performance

Source: from the numbers of the researcher based on the financial statements of the companies sample study

It is clear from Table (1) that the modern sewing company index (Z) was indicated in 2016)) its success as the value of (Z) reached(21.612), which is higher than (2.60) and because current assets are larger than current liabilities , and the percentage has grown significantly during the study period , as in (2017) a high percentage , which is a good indicator of good financial performance in the company as the value of (Z) (34.056), while in 2018)) the value of (Z) became (22.190), which is greater than (2.60), and the value of performance in the company continued to grow, the last of which grew by very large proportions, especially in the year (2021), where the value of (Z)reached (43.624) , It is clear from the above ratios that the management of the modern sewing company is very good and did not indicate any failure of performance during all the years of study , if the value of (Z) was higher than(2.60), this indicates good performance in the company.

Table No. (2) application of the (Z-score) model to predict the financial failure of BFAD soft drinks company

The year	**Z	6.56X1	3.26X	6.72X3	1.05X4	Company valuation
2016	62.855	9.071	0.143	0.396	0.204	Company valuation
2017	194.734	19.698	19.698	0.130	0.401	Continuous and successful performance
2018	191.842	19.392	19.392	0.139	0.444	Continuous and successful performance
2019	97.7167	9.803	9.8037	0.141	0.467	Continuous and successful performance
2020	71.4701	7.136	7.136	0.125	0.521	Continuous and successful performance
2021	84.566	8.521	8.521	0.123	0.052	Continuous and successful performance

Source: from the numbers of the researcher based on the financial statements of companies research sample

It is clear from Table (2) that pfadad soft drinks company had an index (Z) in 2016)) its success as the value of (Z) reached a very large percentage(62.855), which is higher than (2.60) and because current assets are larger than current liabilities , and the percentage increased very significantly as in (2017) a high percentage , which is a good indicator of good financial performance in the company as it reached the value of (Z) (194.734), while in the year 2018)) the value of (Z) became (191.842), which is greater

than (2.60), and the value of performance in the company continued to grow, the last of which was growing by very large percentages .And in the year (2021), where the value of (Z) reached a percentage of (84.566) , It is clear from the above ratios that the management of the modern sewing company is very good and did not indicate any failure of performance during all the years of study , if the value of (Z) was higher than(2.60), this indicates good performance in the company .

Table No. (3) application of the Z-score model to predict the financial failure of the Canadian vaccines and medicines company

The year	**Z	6.56X1	3.26X	6.72X3	1.05X4	Company valuation
2016	7.6003	0.978729	0.061695	0.006938	0.707305	Company valuation
2017	316.508	48.0326	0.072182	0.04755	0.737485	Continuous and successful performance
2018	63.170	9.447489	0.071034	0.009746	0.653419	Continuous and successful performance
2019	131.577	19.79162	0.100403	0.112869	0.668497	Continuous and successful performance
2020	130.8009	19.72457	0.101124	0.002647	0.685305	Continuous and successful performance
2021	176.589	26.69828	0.102829	0.002022	0.715829	Continuous and successful performance
						Continuous and successful performance

Source: from the numbers of the researcher based on the financial statements of companies research sample

It is clear from Table (3) that the Al-Kindi vaccines and medicines company had an indicator (Z) in 2016, its success rate reached (Z) value(7.6003), which is higher than (2.60), and the percentage increased significantly during the study period , as in (2017) a high percentage, which is a good indicator of good financial performance in the company reached (Z) value (316.508), while in (2018) the value of (Z) became (63.170), which is greater than (2.60), and the value of performance in the company continued to grow, the last of which grew by very large percentages, especially in the year (2021), where the value of (Z) reached (176.589) , It is clear from the above ratios that the management of the modern sewing company is very good and did not indicate any failure of performance during all the years of study , if the value of (Z) was higher than(2.60), this indicates good performance in the company.

Table No. (4) application of the Z-score model to predict the financial failure of the clothing production company and general trade

The year	**Z	6.56X1	3.26X	6.72X3	1.05X4	Company valuation
2016	31.407	4.65403	0.00365	0.111198	0.111861	Continuous and successful performance
2017	27.258	4.113703	0.006894	0.011924	0.162076	Continuous and successful performance
2018	10.527	1.444409	0.046665	0.110369	0.151258	Continuous and successful performance
2019	6.447	0.358006	0.023365	0.585476	0.084281	Continuous and successful performance
2020	3.232	0.398279	0.013511	0.07018	0.099361	Continuous and successful performance
2021	13.836	1.889412	0.053605	0.150595	0.242651	Continuous and successful performance

Source: from the numbers of the researcher based on the financial statements of companies research sample

It is clear from Table (4) that the clothing production and General Trading Company Index (Z) was indicated in 2016)) its success as the value of (Z) reached(31.407), which is higher than (2.60) because current assets are larger than current liabilities , and the percentage has grown significantly during the study period , as in (2017) a high percentage , which is a good indicator of good financial performance in the company as the value of (Z) (27.258), while in 2018, the value of (Z) became (10.527), which is greater than (2.60), and the value of performance in the company continued to grow, the last of which was a good percentage increase in the year (2021), where the value of (Z) reached (13.836) , It is clear from the above ratios that the management of the modern sewing company is very good and did not indicate any failure of performance during all the years of study , if the value of (Z) was higher than(2.60), this indicates good performance in the company.

Conclusions Of The Study:

1. It is clear from the results of the analysis that the modern sewing company with the index (Z) was a success in 2016 , as the value of (Z) reached(21.612), which is higher than (2.60), that is , current assets are larger than current liabilities , and the percentage has grown by large proportions during the study period , the last of which, it grew by very large proportions, especially in the year (2021), where the value of (Z) reached (43.624), as evidenced by the ratios that the management of the modern sewing company is very good, and did not indicate any failure of performance during all the years of study, if the value of (Z) was higher than (2.60), this indicates good performance in the company.
2. It is clear from the results of the analysis that the clothing production and General Trading Company has achieved successes , as the value of (Z) reached(31.407), which is higher than (2.60), and the value of performance in the company continued to grow, the last of which was a good percentage increase in (2021), where the value of (Z) reached (13.836), and it is clear from the ratios that the management of the modern sewing company is very good and did not indicate any failure of performance during all years of study.
3. The results of the study showed that pfadad soft drinks company had a good Z index, as the value of Z reached a very large percentage (62.855) , which is higher than (2.60), and the increase has continued to improve performance , the last of which was a very large percentage growth , in the year (2021), where the value of (Z) reached (84.566), and it is clear that the management of the modern sewing company is very good and did not indicate any failure of performance during all the years of study.
4. The results of the analysis of the study sample showed that the Al-Kindi vaccines and medicines company had an index (Z) in 2016 ,as the value of (Z) reached(7.6003), which is higher than (2.60), and the percentage increased significantly during the study period , as in (2017) a high percentage , which is a good indicator of good financial performance in the company, reached the value of (Z) (316.508), while in 2018)) the value of (Z) became it became (63.170), which is greater than (2.60), and the value of performance in the company continued to grow, the last of which grew by very large proportions, especially in the year (2021), where the value of (Z) reached (176.589) , It is clear from the above ratios that the management of the modern sewing company is very good and did not indicate any failure of performance during all the years of study , if the value of (Z) was higher than(2.60), this indicates good performance in the company.
5. It is clear from the results of the analysis of modern sewing company, PFAD soft drinks company, Al-Kindi vaccines and Medicines Company, clothing production company and general trade, that the Z-score model index has reached the highest performance in companies, respectively(43.624),(194.734),(316.508),(31.407) that is, the value of (Z) is higher than (2.60) , and this indicates good performance in the company and the continuity of corporate performance .

Recommendations Study:

1. It is necessary to sustain the process of growing the performance of companies , and to stay away from any practices contrary to ethical behavior , which requires the commitment of management , by avoiding deliberate interventions , to influence the performance of companies and mislead users of their financial statements .
2. The need to regulate the performance of the Iraq securities market , in demanding companies to increase the percentage of reserves ,for use in emergency cases.

3. The need to direct the management of the Iraq Securities Exchange and the supervisory authority to adopt a higher level of attention and focus more on the requirements of reporting on the chances of failure and failure of listed companies and based on the models or indicators included in the legislation as a minimum to classify and distinguish troubled companies and those that have the ability to continue , and seek to adopt them as one of the main controls in determining the continuity of listing the shares of those companies in the market , with follow-up and evaluation of the opinion expressed by the external auditor , to report on the ability of companies to continue their activities.

CONCLUSION OF STUDY :

The study is important , because the prediction of changes and financial failure of companies is extremely important, for managers, stakeholders and other related parties , through the users of financial statements to get early warnings that work to achieve many positive benefits for those who expect them in time, and in order to be able to take appropriate measures to address changes in its early stages ,and to avoid reaching bankruptcy and liquidation, the study seeks to give a prediction of financial failure , according to the assessments of the z-score model, to determine the continuity of Iraqi industrial companies. The study aims at how to calculate financial changes (positive and negative) in a practical way and away from guesswork, personal judgment and jurisprudence in Iraqi industrial companies, the study shows the role of the z-score model in the statement of predicting financial failure and to determine the continuity of Iraqi industrial companies, the study relied on both deductive and inductive analytical methods, as according to the deductive method of highlighting the concepts of , To diagnose the problem of the study and determine its dimensions, the analytical approach has been adopted in analyzing the financial statements of companies, namely (modern sewing company-pfadad soft drinks company-Al-Kindi vaccines and Medicines Company-clothing production company and general trade). The spatial boundaries of the companies were represented (modern sewing company-pvdad soft drinks company-Al-Kindi vaccines and Medicines Company-clothing production company and general trade, as for the temporal boundaries were for the years (2017-2021).The study found that the analysis of the modern sewing company, PFAD soft drinks company, Al-Kindi vaccines and Medicines Company, clothing production company and general trade, that the Z-score model index has reached the highest performance in the companies, respectively(43.624),(194.734),(316.508),(31.407) that is, the value of (Z) is higher than (2.60) , and this indicates good performance in the company and the continuity of corporate performance. The study recommends the need to regulate the performance of the Iraqi securities market, in demanding companies to increase the percentage of reserves, for use in emergency cases .

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