Impact of IFRS Adopting on Altman Model Prediction Accuracy

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Abstract— Study the prediction of failure is an exciting topic in time of deteriorating economy. Banks compromise an important pilar within any economy. Altman model for prediction of financial failure is well-known application amongst the academicians. Current study test the impact of adopting IFRS on the accuracy of Altman model by testing the output of the model before and after imposing the IFRS application in the Iraqi private banks in 2017. The major finding of the study is that adopting IFRS enhanced the model prediction accuracy toward much plausible results.

Indexed Terms- IFRS, Financial Failure, Altman Model, Prediction, Distress.

I. INTRODUCTION

Studying the reality of banks listed on the Iraq Stock Exchange by measuring the prediction of financial failure of the sample banks and knowing the performance of the banking institution. The research gains its importance by knowing the impact of the international standards on predicting the financial failure of the sample banks and reaching results and proposals that contribute to the development of the banking sector and driving the national economy forward.The problem of the research revolves around knowing what is presented in the financial reports and statements, which are prepared according to the International Financial Reporting Standards (IFRS), on predicting the financial failure of the sample banks. Therefore, the problem of the research stems from raising the main question (Does the application of the international IFRS standards for preparing financial reports have an impact on predicting financial failure?), while keeping the other factors constant.

II. THEORETICAL BACKGROUND

A. The concept of financial failure prediction

Before delving into the concept of financial failure, it is necessary to look at the researchers' opinions about the term "prediction" in general. Both Duran and Gregory see prediction as knowing what will happen in the future by making likely occurrences (Armstrong, 2011). Taqz also went in the same direction, but he defined prediction simply as the process of "predicting the future." From an administrative perspective, management in any company is supposed to be interested in the future in order to make decisions related to it. Therefore, prediction is an activity within functional management and is closely related to it (Taqz, 2022). Predicting financial failure is considered a complex phenomenon that specifically attracted researchers' attention at the beginning of the twentieth century. The first person to write about it at the international level was Fitzpatrick in 1932 The financial failure does not happen suddenly, but rather it is a process that extends over several stages and its origin varies from one company to another. The signs of failure that the company presents to its shareholders or financial analysts through financial data may be a factor that contributes at any time to tracking the company's financial events to predict its financial failure. Despite the diversity of opinions and ideas among researchers in defining the concept of financial failure, it is believed that there is almost a consensus on the general concept. Wilcox (1970) defined it as a decrease in asset value, while Blum (1970) defined financial failure as the inability of a company to repay its debts(Ocal et al., 2015). Casta &Zerbeb" defined financial failure similarly, as the company's inability to generate cash flows, meaning that the company's available assets are unable to meet its obligations (Oudgou&Moudden 2020).

The International Accounting Standards Board (IASB) issued International Standard on Auditing (ISA) No. 570, which deals with going concern issues. The board has established a set of indicators to cast doubt on a company's ability to continue as a going concern or to predict its failure. These indicators include an increase in current liabilities over current assets, the inability to repay loans, and the inability to meet obligations to creditors. (Zabdeh, 2021). In the first stage, some indicators may appear that can be addressed by management, such as a continuous increase in costs and outdated production methods. In the second stage, the company is unable to meet its current obligations and has a continuous need for cash. The third stage means a decrease in the revenue-generating capacity of the unit at some point, and the possibility that the economic unit may become unable to pay its expenses and debts. In the fourth stage, the quantity of obligations exceeds the value of the economic unit's assets, and quantitative failure and bankruptcy become a legal reality. The final stage occurs when legal measures are taken to protect the rights of creditors, and the company is declared bankrupt, meaning liquidation of the company. At this stage, the company has reached the stage of financial failure. (Al-Sufraani&Mohammed, 2021).

There are many measures of financial failure, some of which are descriptive, and others are financial. Descriptive models evaluate various factors such as industry, competition, operational performance, and cash flow according to certain ratios to reach overall ratios. Due to the lack of consensus among researchers regarding descriptive measures

The researcher believes that quantitative indicators (financial ratios) are more appropriate for studying financial failure, as their data are derived from the company's financial reports and reflect operational performance, which meets the study's objectives and requirements. Some of the most important of these measures include the Altman Z-score is one of the most important measures used in accounting and finance literature. It is also known as the Z-score and is based on the weighted combination of five financial ratios, which are, Working Capital Ratio to Total Assets, Retained Earnings to Total Assets Ratio, Book value per share to total liabilities ratio, Profit Before Interest and Taxes (PBIT) to Total Assets Ratio. When the value of z is less than 1.2, the company is considered a failure, while if the value of z is greater than 2.9, the company is considered successful.(Hasan, 2022)

B. Concept and Nature of the International Standards for the Preparation of International Report.

The International Financial Reporting Standards (IFRS) represent accounting standards issued by the International Accounting Standards Board (IASB) with the aim of providing a common financial accounting language to increase transparency in the presentation of financial statements. The IFRS standards require all companies to use the same rules and standards for preparing financial statements. The International Financial Reporting Standards (IFRS) are defined as a set of guidelines and directives that companies and institutions should comply with when measuring and presenting information in financial statements, ensuring accuracy and reliability of financial data.(Prabu et al., 2021)

The Factors Influencing the Adoption of International Financial Reporting Standards (IFRS) :There are three factors and determinants behind the international desire to adopt international financial reporting standards, namely (Hasan et al., 2021).

The existence of an integrated and independent organization for the development and creation of standards that includes, as a fundamental basis, both an independent council for decision-making, a specialized advisory council for consultation and support, and a center for research and studies to develop standards

- Availability of human and financial resources sufficiently
- The presence of professional accountants and highly competent accounting offices.
- The availability of strong organizations that have an interest in regulating standards, such as the Securities and Exchange Commission and banks

III. METHODOLOGY

Current study collecting the main inputs from the financial statements of banks that covered by the study. Financial statements (income statement and Balance sheet) as reported by listed bank on the website of Iraq stock exchange. Due to the directions and regulation issues, Iraq stock exchange requested from all listed banks to issue their financial statements complied with (IFRS) sciences 2017. Therefore, the sample divided into two groups, first group covered the post new regulations imposed (2009-2013), besides, this period was stable and witness the second group consisting of banks started reporting their financial statement according to the new directions along five years later (2017-2021). The period from 2014 to 2016 was avoided in our study due to instability economically and politically when the attack of terrorist groups on Iraq happen and the liberation operations that follow it.

The general model (Z-Score) of bankruptcy is initially tested by (Altman, 1968) for manufacturing enterprises. Instead of traditional fragrance financial ratios like the common analysis, the model utilizes multiple discriminant statistical styles. Equation (1) represents the general (Original) model of Altman.

Z score = $0.012x1 + 0.014x2 + 0.033x3 + 0.006x4 + 0.999x5$ ……. (1)

Where variables is

X1 = Working capital/Total assets

X2 = Retained Earnings/Total assets

X3 = Earnings before interest and taxes/total assets

X4= Market value equity/Book value of total debt

X5 = Sales/Total assets

Z = Classifier Value of Altman

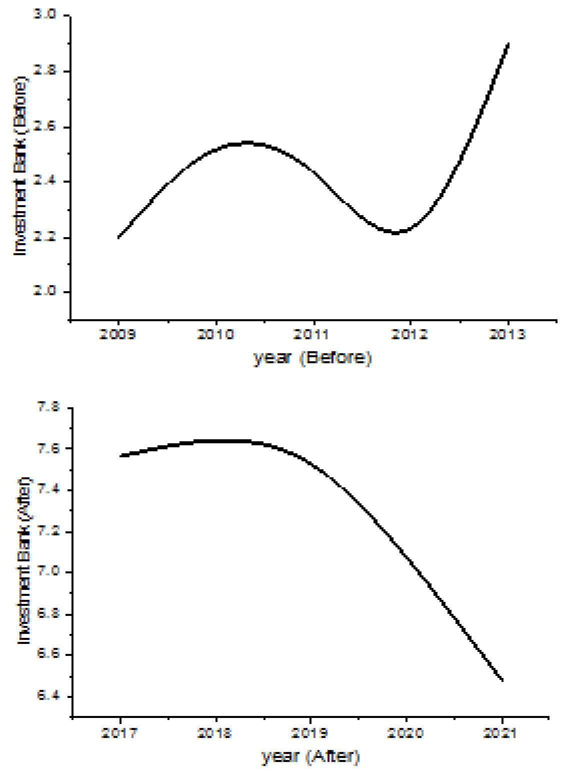
Altman Value (Classifier) has calculated based on the equation No.1, That frequented for each bank and for all.

IV. RESULTS AND DISCUSSIONS

4.1. Investment Bank Case

As obvious in the figure.1, Investment Bank (IB) situation was better in the end of the first period. Meanwhile IB still fluctuated within gray zone, but it completes the period 2.9 EMS value to brick the safe Zone. After applying IFRS, IB reveals better functioning in terms of EMS. But by the time the curve going to decrease as COVID-19 pandemic outbreak and the policy. In case of IB, The main observation is that EMS record high values, where most of it was higher than 6.4. this imply the impact of IFRS on EMS calculation is clear and evident.

Figure.1
Investment Bank EMS values over the period



4.2. Babylon Bank Case

From Figure .2, EMS trends show an opposite direction completely. The period in before you can identify a low value even with try to reach the safe zone. The classifier couldn't tangent the minimum value of safe zone. In contrast, the after period reveal a contrarian behavior. The EMS value give a high value regardless of it went to decrease gradually then. This meaning that IFRS adopting makes a intense improvement on EMS produce. In line with, the decline in time of pandemic could proof the validity of EMS under adopting IFRS.

Figure.2
Babylon Bank EMS values over the period

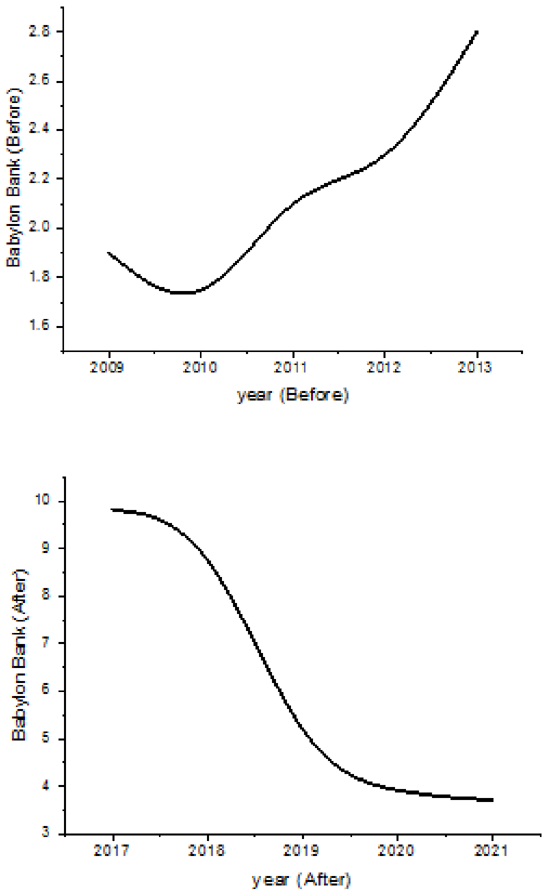
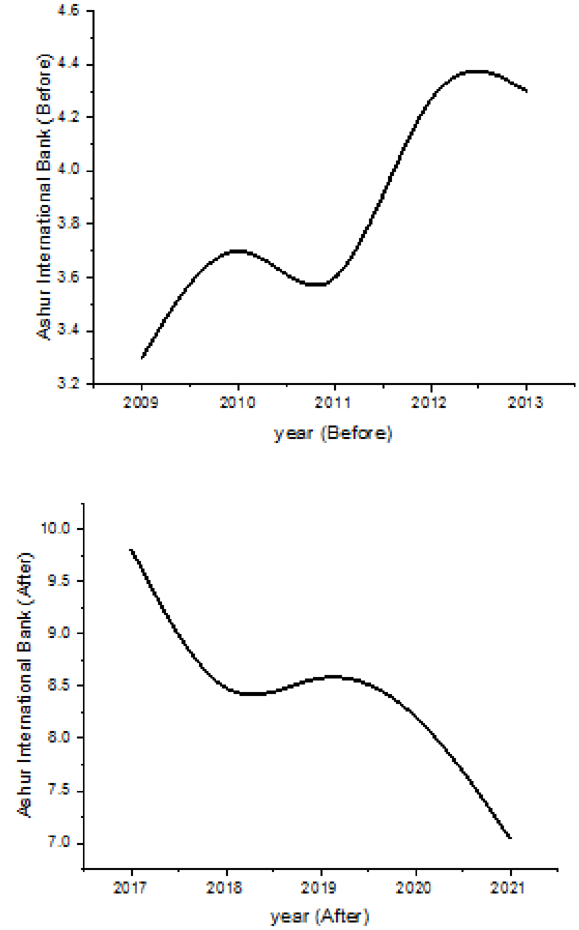


Figure.3
Ashur International Bank EMS values over the period



4.3. Ashur International Bank Case
Ashur Bank disclosed an adverse behavior. Whereas in the first period EMS values show gradually increasing. The values graduate within safe zone range. The values confirm that Ashur Bank performed well in the given period. Even though the second period was in the safe zone with high values, the trend of the values shows a decline sequence. Although the producers of EMS never get into the gray zone, but the behavior show a significant deferent attitude after applying IFRS. Figure .3 show the major results that mentioned above.

4.4. Bank OF Baghdad Case
Bank of Baghdad one of the well-known Iraqi banks, Even the first period shows low EMS values which reveals that the bank in the distressed zone. The Banks work fine with a wide customer base. Figure.4 show that after applicate IFRS, EMS values rises and tend to be more plausible. This could be a confirmation about the viability of IFRS adoption among Iraqi banks. Figure.4 show a familiar trend in the second period, where most of sample banks conduct same alike.

Figure.4
Ashur International Bank EMS values over the period

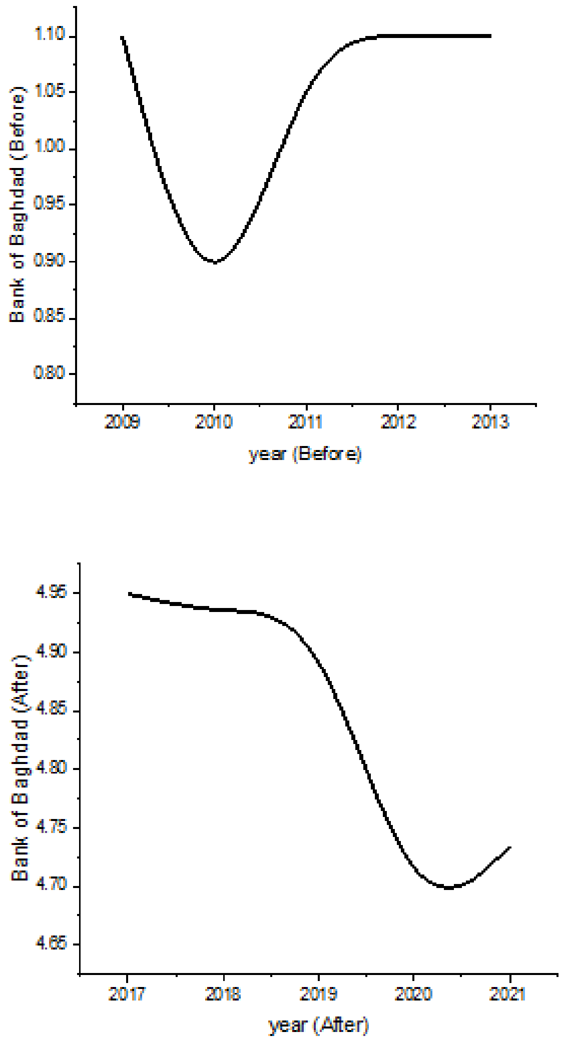
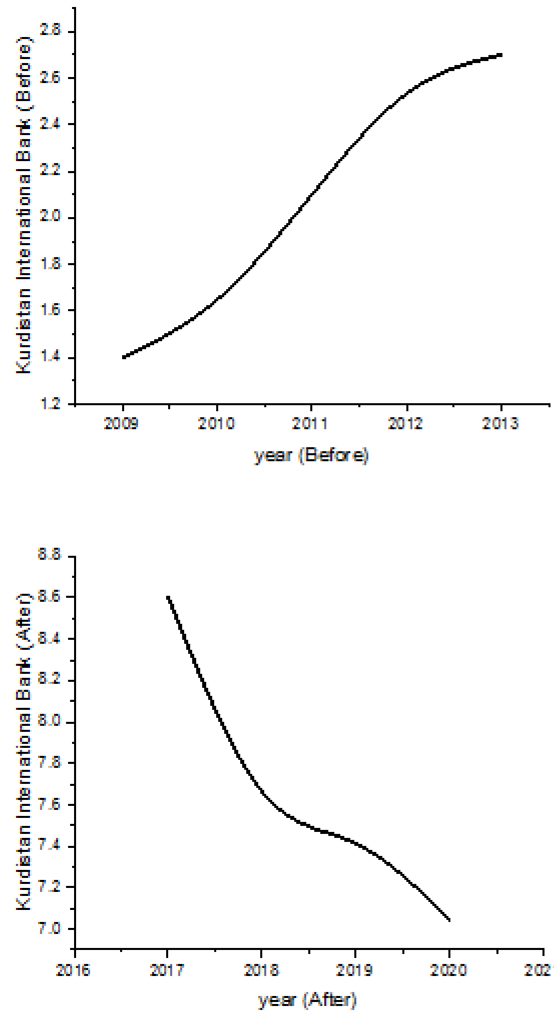


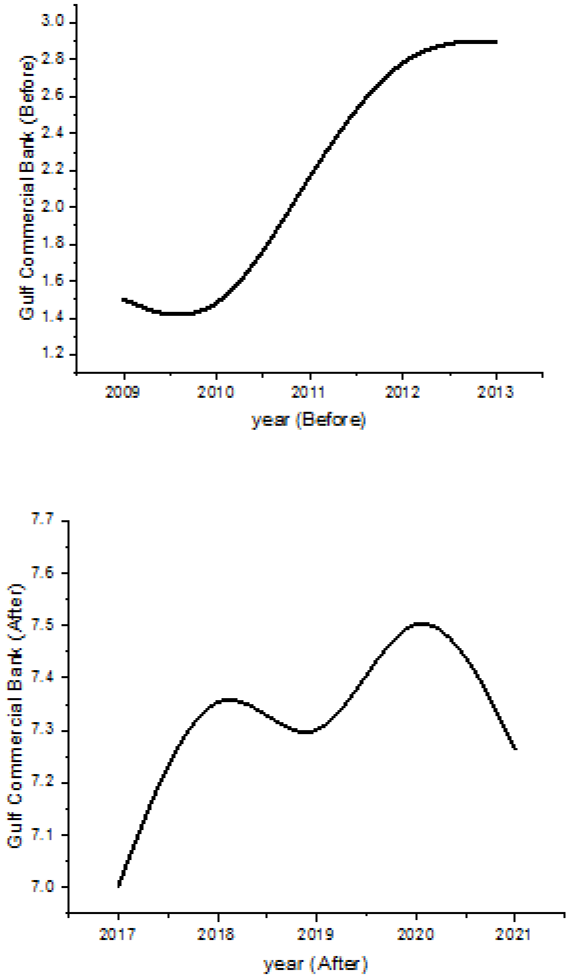
Figure.5
Kurdistan International Bank EMS values over the period



4.5. Kurdistan International Bank Case
Figure.5 evident that Kurdistan International Bank (KIB) never break safe zone limit and still shift within grey zone. After applying IFRS, EMS of KIB went up and hit its highest value at 8.6. This implies the application of IFRS improved the response EMS to the bank attitude and then reflect the result more realistic. All results is observed from Figure.5.

4.6. Golf Commercial Bank Case
Golf Commercial Bank (GCB) did not show exotic behavior compared to previous banks in the sample as in Figure.6 Simply, the first period easily addresses the weak accuracy of Altman model because of low EMS value results. Fron other hand, the second period and after imposing IFRS, the values of EMS have been increasing seemingly. This indicates the einstant impact of IFRS adoption on GCB financial statement accounts, consequently, the direct effect on EMS value and Altman model suitability.

Figure.6
Golf Commercial Bank EMS values over the period



CONCLUSION

Altman model of Financial Destress is still a famous model amongst existed methods of financial insolvency forecasting. The model has been updated by time with flexible versions to cover wide Spector of industries. Banks as service institution which has its features as its important economic role, therefore, predicting bank failure consider an important pillar in the economy. Current study shed light on the role of financial statements. Our findings indicate that Applying IFRS improves the accuracy of Altman model to high levels. All banks in the sample reveal the same behavior after adopting IFRS which enhance the unity of bank financial statement, thus v desired values of Altman model. Moreover, this imply that most of studies on Iraqi banks before 2017 could be come up with misleading results. For future studies, we recommend to study failure banks, even it is in small numbers with fragmented periods.

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