

*Full Length Research*

# IFRS Adoption and Financial Reporting Quality: Evidence from Bankruptcy Prediction

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**Accepted 18<sup>th</sup> October, 2019.**

The study discuss the predictive prowess of the Altman(1968 and 2000) corporate failure prediction models on the quality of accounting information. The models are tested using secondary data of 18 non-financial listed firms on the Ghana Stock Exchange following the adoption of IFRS in Ghana for the period 2006 to 2008. The predictive powers of the models are computed using Z-scores for the pre and post IFRS adoption and conclusions made based on the overall type II errors recorded between the two periods. The findings provide evidence that the predictive powers of the Altman (1968) corporate failure prediction model depends on the quality of accounting information. This is supported by the decline in the overall type II error from about 67% to about 61%between the pre and post IFRS adoption periods respectively. The findings also suggest that the revised corporate failure prediction model subsequently developed by Altman (2000) is not influenced by the quality of accounting information prepared by management. The overall type II error recorded for the two periods is about 67%implying that the revised model is not dependent on the quality of accounting data.

**Keywords:** Corporate failure, predictive prowess, type II error, IFRS adoption, corporate bankruptcy or financial distress

## I. INTRODUCTION

Financial statements aim at providing information about the financial position, performance and financial adaptability of an entity that is beneficial to a wide range of users in making economic decisions. The International Accounting Standards Board's (IASB) IFRS Framework also reecho that; "The aim of financial statements is to provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users in making economic decisions", (IASB 2010). This also indicates that for any piece of financial information to be useful for informed decisions, it must simultaneously satisfy both the fundamental qualitative characteristics (relevance and faithful representation) and the enhancing qualitative characteristics (comparable, verifiable, timely and understandable). Once the financial information become available and of the required quality standard as described above, they

serve the general purpose of providing financial information about the reporting entity that is useful to current and prospective investors, lenders and other creditors in making decisions about providing resources to the entity. But, this has not always been the case, as many investors have lost huge investments in the face of unexpected collapse of entities such as Enron, WorldCom and Parmalat in the 2000's. Many scholars have tried to predict the possible bankruptcy of many corporate entities by using financial data of selected firms for the purposes of shedding more light on the subject matter. Many economists emphasize the roles of heavy debts, high interest rates and reduced profits as some of the key factors. Indeed, theory has shown that the failure of most corporate bodies is usually as a result of liquidity problems or by a drastic decline in the market value of assets. The situation is not different among the

developing countries as various corporate scandals are equally recorded. Ghana a developing country south of the Sahara is not spared from this canker of corporate failures as a number of high profile firms went down. The Ghanaian corporate history is besieged with a number of companies that have gone into bankruptcy but only a handful of companies have managed to come out of it in sound financial health. Among the recent cases of corporate failure include Gateway Broadcasting Services, Ghana Co-operative Bank, Bank for Housing and Construction, National Savings and Credit Bank (Appiah 2011). Again, the case of corporate failure that is still fresh in the minds of Ghanaians is the recent catastrophic demise of various micro finance institutions such as DKM Ltd, Noble Dream Ltd, Diamond winners, among others that went down with scores of investors are still struggling to come to terms with their loss of investments. This has undoubtedly resulted in many asking whether it was possible to predict or better still see through a corporate firm's inability to continue as a going concern into the foreseeable future especially in a developing country like Ghana. This has resulted in many people asking, whether there are no proper signals by which one could find out whether any of these corporate institutions could collapse or is at the verge of collapsing. Indeed, to predict the probability that a firm will go bankrupt accurately, reliable empirical models are much needed. This allows the stakeholders to take either preventive or corrective action. The significance of this issue has generated a lot of research concerning the prediction of corporate bankruptcy or financial distress amongst firms. The motivation of empirical research on corporate bankruptcy prediction is clear since early detection and corrective measures are preferable than a company going into bankruptcy. The researcher of this work sort to study deeply into the area of bankruptcy prediction using the Altman (1968, 2000) model. The overriding objective of this study is to examine the extent to which the corporate failure prediction models developed by Altman (1968, 2000) predictive abilities depend on the quality of accounting information. Specifically, the study is to determine if the accuracy of the Altman (1968) model is affected by the quality of accounting information. It also aims to determine whether the revised Altman (2000) model is dependent on the quality of accounting data.

## LITERATURE REVIEW

Bankruptcy is a legal declaration of a person's or other entity's inability to pay off debts, in most jurisdictions imposed by a court order, often initiated by the debtor. According to Karles and Prakash (1987) bankruptcy "is a process which begins financially and is consummated legally". They underline that it is difficult

to pinpoint the precise moment that bankruptcy occurs and that it is a subjective decision in which financial failure persists. For example, the moment when the firm or credit or decides to file a legal action. However, in the United States, where the majority of bankruptcy prediction literature originates, the term bankruptcy refers to the legal insolvency procedure used for companies and individuals. In the UK, bankruptcy is a process for individuals only; companies in the UK will enter one of several legal insolvency processes (Wood, 2013). Bankruptcy prediction is the art of predicting bankruptcy and various measures of financial distress of (public) firms. The importance of predicting bankruptcy is relevant for creditors and investors in evaluating the likelihood that a firm may go bankrupt. The definition of financial distress is somewhat more difficult to form. A number of studies were performed in the 1960s to develop failure prediction and financial distress model which has lasted up to today. A number of people opine that Beaver (1966) and Altman (1968) models have been the most influential in terms of predicting bankruptcy and financial distress. However, impressive evidence exists about the strong accuracy of Altman's model. The prediction of corporate financial. The aim of the research was to test the applicability of the Altman (1968) model in Ghana.

## METHODOLOGY

The study applies quantitative and explanatory research designs. Explanatory research design according to Saunders, Lewis and Thornhill (2012) is a flexible and unstructured method that aids in studies where secondary data is the main data for analysis. The target population of this study consists of all Ghana Stock Exchange (GSE) listed firms prior to the adoption of IFRS and post adoption. It should however be noted that, Ghana officially adopted IFRS in 2007. At the time of undertaking this research, there were 43 companies listed firms on the Ghana Stock Exchange. However, financial institutions sum up to fourteen (14) are exempted from the study due to the fact that they are regulated by a different regulatory body. (i.e. Bank of Ghana) and so calculation and presentation of their financials is different from the rest of the other institutions listed. Again the financial institutions have their own monitoring mechanisms and therefore their effective performance does not depend solely on IFRS. The approach employed in this study is considered by the researcher as it is the most popular approach used by prior researchers (see Appiah, 2011; Altman, 1968, 2000; Beaver, 1966; Palepu, 1986; Taffler, 1995; Barnes, 1990). Out of the twenty-nine institutions remaining, per the objectives of the study, companies that are listed prior to the adoption of IFRS and post adoption of IFRS are chosen. Specifically, 18

companies are used for the period 2006 (pre-adoption) and 2008 (post adoption)

**Table 1:** Number of Listed Companies

Number of listed firms	43
<b>Less</b>	
Financial institutions	14
Firms with missing data	11
<b>Final sample with required data</b>	<b>18</b>

**Source:** Generated by Researcher

### Data analysis technique

The study followed the works of Argenti (1983), Moyer (1977) style of predicting corporate financial distress using eighteen (18) listed companies in Ghana. The study aims to find out whether the quality of accounting information has an effect on the predictive power of the Altman's MDA (1968,2000) Z

score model. The researcher again extracted the necessary data from the Ghana Stock Exchange and used Microsoft Excel and computed for the various variables in the model. The test for the study is conducted for the pre-adoption and post adoption period of IFRS using the following models.

#### Altman (1968) Model

$$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 0.999X_5 \dots \dots \dots (1)$$

#### Altman (2000) Model

$$Z = 0.717X_1 + 0.847X_2 + 3.107X_3 + 0.420X_4 + 0.998X_5 \dots \dots \dots (2)$$

**Table 2;** Variables Measurement and Definition

MODEL	SYMBOL	MEASUREMENT
Altman (1968) Z= 1.2X <sub>1</sub> + 1.4X <sub>2</sub> + 3.3X <sub>3</sub> +0.6X <sub>4</sub> + 0.999X <sub>5</sub> Discrimination zones: Z > 2.99, "Safe" zone 1.81<Z < 2. 99 "Grey" zone Z < 1.81 "Distress" zone	Z	Overall index
	X <sub>1</sub> = WC/TA	Working capital/Total asset
	X <sub>2</sub> = RE/TA	Retained earnings/Total Assets
	X <sub>3</sub> = EBIT/TA	Earnings before Interest and Taxes/Total Assets
	X <sub>4</sub> = MVE/BTL	Market Value of Equity/Book Value of Total Liabilities
	X <sub>5</sub> = S/TA	Sales/Total Assets
Altman (2000) Revised Model Z = 0.717X <sub>1</sub> + 0.847X <sub>2</sub> + 3.107X <sub>3</sub> + 0.420X <sub>4</sub> + 0.998X <sub>5</sub>	Z	Overall Index
	X <sub>1</sub> = WC/TA	Working capital/Total asset
	X <sub>2</sub> = RE/TA	Retained earnings/Total Assets
	X <sub>3</sub> = EBIT/TA	Earnings before Interest and Taxes / Total Assets
	*X <sub>4</sub> =BVE/TL	*Book Value of Equity / Total Liabilities
	X <sub>5</sub> = S/TA	Sales/Total Assets

### Assessment of companies correctly classified

The table 3 shows the number of firms that were correctly classified before and after the adoption of IFRS in Ghana. As can be observed from the table,

6 firms were correctly classified before the adoption of IFRS while 7 firms were correctly classified after the adoption of IFRS using the Altman 1968 model

**Table 3:** Assessment of companies correctly classified (Profile of Non-Failed Companies classified as Non-Failed)

Pre- IFRS Adoption 2006				Post- IFRS Adoption 2008			
Firm	Z-score	Turnover Gh¢'000	Total Assets Gh¢'000	Firm	Z-score	Turnover Gh¢'000	Total Assets Gh¢'000
FML	3.5	323,747	182,970	FML	4	55,041	32,858
PBC	13	2,486,622	189,916	PBC	4.3	245,478	67,468
UNIL	3.4	1,164,180	555,326	UNIL	3.2	160,859	101,751
ARYTN	15	7,954,284	7,521,871	ARYTN	4.4	9,481,076	9,336,044
PZC	10	223,761,509	43,042,894	TOTAL	4.5	566,514	148,151
CLYD	3.5	20,262,615	31,379,899	BOPP	3.3	20,589	21,898
	-	-	-	SWL	3.1	2253	1653
<b>Mean</b>		<b>42,658,826</b>	<b>13,812,146</b>	<b>Mean</b>		<b>1,504,544</b>	<b>1,387,118</b>

Source: Generated by Researcher

**Table 4:** Assessment of type II error companies

Pre-adoption 2006				Post-adoption 2008			
Firm	Z-score	Turnover Gh¢	Total Assets Gh¢	Firm	Z-score	Turnover Gh¢	Total Assets Gh¢
<b>BOPP</b>	2.3	90,792,025	122,237,752	<b>CPC</b>	1.2	59,394	182,032
<b>CPC</b>	0.3	290,436	794,432	<b>GWEB</b>	(0.3)	532	1,699
<b>GWEB</b>	0.4	6,766,833,904	15,391,636,689	<b>GGBL</b>	1.8	137,475	155,403
<b>GGBL</b>	1.7	755,445	1,047,711	<b>PKL</b>	1.6	2,877	2,419
<b>PKL</b>	2.6	23,237,764	30,041,658	<b>PZC</b>	2.5	42,775	38,361
<b>SWL</b>	2.0	17,294,893	73,335,227	<b>ABL</b>	1.6	25,219	26,954
<b>TOTAL</b>	1.8	1,778,327,000	1,261,220,000	<b>ALU</b>	0.6	57,127	70,808
<b>ABL</b>	1.5	198,949	216,509	<b>SPL</b>	1.8	2,468	3,341
<b>ALU</b>	2.7	533,088	288,178	<b>CLYD</b>	(5.8)	1,091,518	1,535,468
<b>SPL</b>	1.5	18,971,186	31,263,268	<b>MLC</b>	1.6	25,895	29,188
<b>MLC</b>	1.7	125,271,873	156,436,947	<b>CMLT</b>	1.1	2,049	2,932
<b>CMLT</b>	0.8	15,189,571	30,952,655				
<b>Mean</b>		<b>736,474,678</b>	<b>1,424,955,919</b>	<b>Mean</b>		<b>131,575</b>	<b>186,237</b>

Source: Generated by Researcher

The table 4 shows the number of firm that were misclassified before the adoption of IFRS in Ghana. From the table, it can be seen that 12 firms were misclassified as against 11 firms which were misclassified after the adoption of IFRS in Ghana. Again from the table, it can be observed that, the

average total assets for the pre-adoption period was Gh¢1,424,955,919 while that of post-adoption period was Gh¢186,237. Also the table shows an average total revenue for the pre-adoption period as Gh¢736,474,678 while that of post adoption was Gh¢131,575.

### Validation of Altman 1968 Model

**Table 5:** Z-score of selected firms

COMPANY NAME	PRE-ADOPTION Z-SCORE	INTERPRETATION	POST-ADOPTION Z-SCORE 2008	INTERPRETATION
<b>2006</b>				
BOPP	2.3	Grey	3.3	Safe
CPC	0.3	Failed	1.2	Failed
GWEB	0.4	Failed	(0.3)	Failed
FML	3.5	Safe	4.1	Safe
GGBL	1.7	Failed	1.8	Grey
PKL	2.6	Grey	1.6	Failed
SWL	2.0	Grey	3.1	Safe
PBC	13	Safe	4.3	Safe
UNIL	3.4	Safe	3.2	Safe
TOTAL	1.8	Grey	4.5	Safe
PZC	10	Safe	2.5	Grey
ABL	1.5	Failed	1.6	Failed
ALU	2.7	Grey	0.6	Failed
SPL	1.5	Failed	1.8	Grey
CLYD	3.5	Safe	(5.8)	Failed
MLC	1.7	Failed	1.6	Failed
CMLT	0.8	Failed	1.1	Failed
ARYTN	15	Safe	4.4	Safe
<b>Overall type II error</b>	67%	12	61%	11

Source: Generated by Researcher

### Assessment of companies correctly classified using Altman 2000 Model

The Table 6 shows the number of firms that were correctly classified using the Altman 2000 revised model. From the table, it can be seen that 6 firms were

correctly classified for both the pre and post adoption period of IFRS.

**Table 6:** Assessment of companies correctly classified (Profile of Non-Failed Companies classified as Non-Failed)

Pre-adoption 2006				Post-adoption 2008			
FIRM	Z-score	Turnover Gh¢	Total Assets Gh¢	FIRM	Z-score	Turnover Gh¢	Total Assets Gh¢
BOPP	5.2	90,792,025	122,237,752	BOPP	6.6	20,589	21,898
FML	3.3	323,747	182,970	FML	3.5	55,041	32,858
PBC	13.0	2,486,622	189,916	PBC	4.2	245,478	67,468
UNIL	3.6	1,164,180	555,326	UNIL	3.1	160,859	101,751
PZC	10.6	223,761,509	43,042,894	ARYTN	4.0	9,481,076	9,336,044
ARYTN	10.7	7,954,284	7,521,871	TOTAL	4.3	566,514	148,151
<b>Mean</b>		<b>54,413,728</b>	<b>28,955,122</b>	<b>Mean</b>		<b>1,754,926</b>	<b>1,618,028</b>

Source: Research Findings

The table 6 shows the average total assets for the firms correctly classified for pre-adoption and post-adoption period of IFRS. The average asset as shown in table 4.4 was Gh¢ 28,955,122 for the pre-adoption

period while that of post adoption period shows a figure of Gh¢ 1,618,028 for firms correctly classified. The average turnover was Gh¢54,413,728 and Gh¢1,754,926 for pre and post adoption period

**Table 7:** Assessment of type II error companies

Pre-adoption 2006				Post-adoption 2008			
FIRM	Z-score	Turnover Gh¢'000	Total Assets Gh¢'000	FIRM	Z-score	Turnover Gh¢'000	Total Assets Gh¢'000
CPC	0.4	290,436	794,432	CPC	1.2	59,394	182,032
GWEB	0.4	6,766,833,904	15,391,636,689	GWEB	(0.3)	532	1,699
GGBL	1.7	755,445	1,047,711	GGBL	1.6	137,475	155,403
PKL	0.8	23,237,764	30,041,658	PKL	1.6	2,877	2,419
SWL	1.7	17,294,893	73,335,227	SWL	2.9	2,253	1,653
TOTAL	1.6	1,778,327,000	1,261,220,000	PZC	2.5	42,775	38,361
ABL	1.4	198,949	216,509	ABL	1.6	25,219	26,954
ALU	2.6	533,088	288,178	ALU	0.8	57,127	70,808
SPL	1.3	18,971,186	31,263,268	SPL	1.5	2,468	3,341
CLYD	1.1	20,262,615	31,379,899	CLYD	(5.4)	1,091,518	1,535,468
MLC	1.8	125,271,873	156,436,947	MLC	1.7	25,895	29,188
CMLT	0.7	15,189,571	30,952,655	CMLT	1.0	2,049	2,932
<b>Mean</b>		<b>730,597,227</b>	<b>1,417,384,431</b>	<b>Mean</b>		<b>120,799</b>	<b>170,855</b>

**Source:** Generated by Researcher

The table 7 shows companies that were misclassified as failed firms (type II error). The table shows an average total assets of Gh¢1,417,384,431 and Gh¢170,855 for the pre-adoption and post-adoption period of IFRS. The total average revenue was Gh¢730,597,227 and Gh¢170,855 for the pre and post adoption period. Again, from table 4.5, it is evident that using the Altman 2000 revised model, there was not any difference in the number of firms that were classified as failed as against the ones classified as non-failed. 12 firms were classified as failed before the adoption period and the same number was classified as non-failed. Both periods showed a type II error of 67% each.

A lower type II error indicates an improvement in the financial reporting quality. Based on the research findings, it is obvious that adoption of IFRS in Ghana had a decline in the number of firms that were previously predicted as failed firms by the Altman 1968 model and it can therefore be said that financial reporting quality based on IFRS has an effect on the predictive power of the model. This supports the works of Pae et al. (2006), Hung and Subramanyan (2007) and Xiong (2006). Their study confirms that IFRS adoption increases the quality of information reported.

#### Assessment of companies correctly classified using Altman 2000 Model

The table, shows the number of firms that were correctly classified using the Altman 2000 revised model. From the table, it can be seen that 6 firms were

correctly classified for both the pre and post adoption period of IFRS.

**Table 8:** Assessment of companies correctly classified (Profile of Non-Failed Companies classified as Non-Failed)

Pre-adoption 2006				Post-adoption 2008			
FIRM	Z-score	Turnover Gh¢	Total Assets Gh¢	FIRM	Z-score	Turnover Gh¢	Total AssetsGh¢
BOPP	5.2	90,792,025	122,237,752	BOPP	6.6	20,589	21,898
FML	3.3	323,747	182,970	FML	3.5	55,041	32,858
PBC	13.0	2,486,622	189,916	PBC	4.2	245,478	67,468
UNIL	3.6	1,164,180	555,326	UNIL	3.1	160,859	101,751
PZC	10.6	223,761,509	43,042,894	ARYTN	4.0	9,481,076	9,336,044
ARYTN	10.7	7,954,284	7,521,871	TOTAL	4.3	566,514	148,151
<b>Mean</b>		<b>54,413,728</b>	<b>28,955,122</b>	<b>Mean</b>		<b>1,754,926</b>	<b>1,618,028</b>

**Source:** Research Findings

The table shows the average total assets for the firms correctly classified for pre-adoption and post-adoption period of IFRS. The average asset as shown in the table was Gh¢ 28,955,122 for the pre-adoption

period while that of post adoption period shows a figure of Gh¢ 1,618,028 for firms correctly classified. The average turnover was Gh¢54,413,728 and Gh¢1,754,926 for pre and post adoption period.

**Table 9:** Assessment of type II error companies

FIRM	Pre-adoption 2006			Post-adoption 2008			
	Z-score	Turnover Gh¢'000	Total Assets Gh¢'000	FIRM	Z-score	Turnover Gh¢'000	Total Assets Gh¢'000
CPC	0.4	290,436	794,432	CPC	1.2	59,394	182,032
GWEB	0.4	6,766,833,904	15,391,636,689	GWEB	(0.3)	532	1,699
GGBL	1.7	755,445	1,047,711	GGBL	1.6	137,475	155,403
PKL	0.8	23,237,764	30,041,658	PKL	1.6	2,877	2,419
SWL	1.7	17,294,893	73,335,227	SWL	2.9	2,253	1,653
TOTAL	1.6	1,778,327,000	1,261,220,000	PZC	2.5	42,775	38,361
ABL	1.4	198,949	216,509	ABL	1.6	25,219	26,954
ALU	2.6	533,088	288,178	ALU	0.8	57,127	70,808
SPL	1.3	18,971,186	31,263,268	SPL	1.5	2,468	3,341
CLYD	1.1	20,262,615	31,379,899	CLYD	(5.4)	1,091,518	1,535,468
MLC	1.8	125,271,873	156,436,947	MLC	1.7	25,895	29,188
CMLT	0.7	15,189,571	30,952,655	CMLT	1.0	2,049	2,932
<b>Mean</b>		<b>730,597,227</b>	<b>1,417,384,431</b>	<b>Mean</b>		<b>120,799</b>	<b>170,855</b>

**Source:** Generated by Researcher

The Table 9 shows companies that were misclassified as failed firms (type II error). The table shows an average total assets of Gh¢1,417,384,431 and Gh¢170,855 for the pre-adoption and post-adoption period of IFRS. The total average revenue was Gh¢730,597,227 and Gh¢170,855 for the pre and post adoption period. Again, from table 4.5, it is evident

that using the Altman 2000 revised model, there was not any difference in the number of firms that were classified as failed as against the ones classified as non-failed. 12 firms were classified as failed before the adoption period and the same number was classified as non-failed. Both periods showed a type II error of 67% each.

**Table 10:** Z-score of selected firms

COMPANY NAME	Pre-Adoption Z-Score 2006	Interpretation	Post-Adoption Z-Score 2008	Interpretation
BOPP	5.2	Safe	6.6	Safe
CPC	0.4	Failed	1.2	Failed
GWEB	0.4	Failed	(0.3)	Failed
FML	3.3	Safe	3.5	Safe
GGBL	1.7	Failed	1.6	Failed
PKL	0.8	Failed	1.6	Failed
SWL	1.7	Failed	2.9	Grey
PBC	13.0	Safe	4.2	Safe
UNIL	3.6	Safe	3.1	Safe
TOTAL	1.6	Failed	4.4	Safe
PZC	10.6	Safe	2.5	Grey
ABL	1.4	Failed	1.6	Failed
ALU	2.6	Grey	0.8	Failed
SPL	1.3	Failed	1.5	Failed

<b>CLYD</b>	1.1	Failed	(5.4)	Failed
<b>MLC</b>	1.8	Failed	1.7	Failed
<b>CMLT</b>	0.7	Failed	1.0	Failed
<b>AYRTN</b>	10.7	Safe	4.0	Safe
Overall type II error	67%	12	67%	12

**Source:** Generated by Researcher

The table 10 represent the Z-score computation for various companies selected for the study. Benson Oil Palm Plantation was classified by Altman 2000 revised model, as safe firm for both the pre and post adoption period of IFRS. Cocoa Processing Company and Golden Web were both classified as failed firms for the pre and post adoption period of IFRS. Surprisingly, Golden Web recorded a negative Z-score of 0.3 for the post adoption of IFRS where information quality is expected to improve. Fan Milk Ghana Limited was classified by the model as safe firm for the pre and post adoption period of IFRS. However, Guinness Ghana Brewery Limited, Pioneer Kitchen Limited and Sam Woode Limited were all classified as failed firms by the model for the pre-adoption period of IFRS. Interestingly, Guinness Ghana Brewery Limited and Sam Woode Limited were classified as failed firms by the model for the pre-adoption period whiles Sam Woode was classified as laying in the grey area for the post-adoption period.

Produce Buying Company and Unilever Ghana were both classified by the model as safe firms for both periods. Total Oil was described by the model as failed firm whiles the model classified the same firm as safe for the post-adoption period. PZ Cussons was classified as safe firm for the pre-adoption period whiles it was classified as laying in the grey area for the post adoption period. Accra Brewery and Aluminum Works were classified by the model as failed and grey firms respectively for the pre-adoption period of IFRS whiles they were both classified as failed firms by the model in the post adoption period of IFRS. Starwin Product Limited, Clydeston, Mechanical, Llyod and Camelot were all classified by the model in the pre and post adoption period as failed firms. Aryton Drugs was classified by the same model as safe firm for both pre and post adoption period of IFRS. From the table, and using the Altman 2000 revised model it is evident that number of firms that were classified as failed were 12 firms representing an overall type II of 67% for the pre-adoption period while the same was recorded for the post-adoption period. One would have expected that with the revised model, it would have predicted better. The results show no significant change in the type II error recorded for both periods. To answer the second research question of this study, the predictive power of the Altman revised model does not depend on the quality of accounting information. This results however, contradicts the results by Anjum et al (2012) whose

results shows that the Altman 2000 revised model is one of the most effective Multiple Discriminant Analysis that can safely be applied in modern economy to predict distress and bankruptcy one, two and three years in advance.

## FINDINGS

The results of the study indicate that using the Altman (1968) model, the number of firms that were classified as failed were lesser for the post-adoption period as against the pre-adoption period. Since IFRS is to ensure high quality of financial reporting, if lesser number of firms are recorded as failed firms, it is an indication that the quality of accounting information has effect on the accuracy of the model. This therefore answers the first research question of the study and also satisfy the first objective of the study.

The second objective pursued in the study was to find out whether the predictive power of Altman (2000) revised model is dependent on the quality of accounting data. The study results show that the predictive power of the model is not dependent on the quality of accounting data. This is the because the percentage of type II error in the pre and post adoption period of IFRS showed no significant difference. Both periods recorded a percentage error of 67% each.

## CONCLUSION

The study followed the works of Moyer (1977), Argenti (1983) and Appiah (2011) in testing the accuracy of the Altman's (1968) model using data set from the Ghana Stock Exchange Market for the periods 2006(pre-adoption of IFRS) and 2008 (post-adoption of IFRS). The results of the study show that Altman's (1968) Z-score model mis-classified major non-bankrupt firms as bankrupt. However, the model correctly classified some of companies as live and actively performing companies. The aim of the research was to find out whether the financial report based on IFRS could aid in the accuracy of the Altman 1968 model. The results showed that financial information reported based on IFRS could improve the accuracy prediction of the model. On the side, it was established that the predictive powerful of the Altman revised model is not dependent on the quality of



accounting information. This is because out of the 18 firms selected for the study, 12 firms were classified as failed firms for the pre-adoption period of and the same number were classified in the post adoption period even though Ghana had adopted IFRS and it was expected to have positive effect on the predictive power of the model.

## RECOMMENDATION

Based on the findings, the following recommendation are made for stakeholder's consideration. The study recommends that since there are other corporate failure prediction model, they should also be considered. Again, using the Altman (1968) model after adoption of IFRS in Ghana it was clear that fewer number of companies were predicted as failed firms. This shows that IFRS adoption helps to improve the quality of information and therefore the regulatory bodies should ensure that companies comply with IFRS since it leads to better reporting quality and also it boost investor confidence. Again, since IFRS is universal, it makes the interpretation of the financial statement easier.

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## APPENDIX

		DATA SET FOR 2006 (PRE-ADOPTION OF IFRS)					
ALTMA (1968) MODEL		$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 0.999X_5$					
		X1*1.2	X2*1.4	X3*3.3	X4*0.6	X5*0.999	
COMPANY NAME		WC/TA	RE/TA	EBIT/TA	MVE/TL	S/TA	Z-SCORE
<b>BOPP</b>		0.157831	0.168049	0.181683	1.018876	0.742007	<b>2.268445</b>
<b>CPC</b>		-0.16348	0.111807	0.033867	0.001243	0.365224	<b>0.348657</b>
<b>GWEB</b>		-0.00292	-0.09665	0.063906	0.001505	0.439204	<b>0.405045</b>
<b>FML</b>		0.071035	0.381735	0.803402	0.429026	1.76763	<b>3.452827</b>
<b>GGBL</b>		-0.29364	0.295506	0.649813	0.280723	0.720322	<b>1.652726</b>
<b>PKL</b>		-0.21299	-0.15467	-0.08783	2.249031	0.772745	<b>2.566285</b>
<b>SWL</b>		0.043269	0.274226	1.391323	0.094093	0.235598	<b>2.038508</b>
<b>PBC</b>		0.102614	-0.04733	-0.21918	0.200352	13.08018	<b>13.11663</b>
<b>UNIL</b>		-0.06915	0.579522	0.76871	0.02309	2.094294	<b>3.39647</b>
<b>TOTAL</b>		-0.01898	0.057911	0.16028	0.238223	1.408595	<b>1.846027</b>
<b>PZC</b>		0.661951	0.261751	2.660653	1.071623	5.193372	<b>9.849349</b>
<b>ABL</b>		0.002306	0.174666	0.031383	0.38391	0.917976	<b>1.510241</b>
<b>ALU</b>		0.222271	0.286808	0.268246	0.048772	1.848007	<b>2.674104</b>
<b>SPL</b>		0.249095	0.058637	0.215588	0.368156	0.606213	<b>1.497689</b>
<b>CLYD</b>		0.118442	0.068096	0.262058	2.38905	0.645074	<b>3.48272</b>
<b>MLC</b>		0.241065	0.227247	0.236012	0.225083	0.799981	<b>1.729388</b>
<b>CMLT</b>		0.10391	0.062644	0.048672	0.057817	0.490245	<b>0.763287</b>
<b>AYRTN</b>		0.722527	2.662494	8.03108	2.721324	1.05643	<b>15.19386</b>

ALTMA (2000)	MODEL	0.717X1 + 0.847X2 + 3.107X3 + 0.420X4 + 0.998X5					
		X1*0.717	X2*0.847	X3*3.107	X4*0.420	X5*0.998	
COMPANY NAME		WC/TA	RE/TA	EBIT/TA	BVE/TL	S/TA	Z-SCORE
BOPP		0.094304	0.10167	0.171057	4.134943	0.741264	5.243237
CPC		-0.09768	0.067643	0.031886	0.000112	0.364858	0.366817
GWEB		-0.00174	-0.05847	0.060168	0.003204	0.438764	0.441919
FML		0.042443	0.230949	0.756415	0.550033	1.765861	3.345701
GGBL		-0.17545	0.178781	0.611809	0.36425	0.719601	1.698992
PKL		-0.12726	-0.09358	-0.08269	0.30152	0.771971	0.769961
SWL		0.025853	0.165907	1.309952	0.000415	0.235362	1.737489
PBC		0.061312	-0.02864	-0.20636	0.121979	13.06709	13.01538
UNIL		-0.04131	0.350611	0.723752	0.460309	2.092197	3.585554
TOTAL		-0.01134	0.035036	0.150906	0.018416	1.407185	1.600201
PZC		0.395516	0.158359	2.505045	2.36345	5.188173	10.61054
ABL		0.001378	0.105673	0.029548	0.373606	0.917057	1.427261
ALU		0.132807	0.173519	0.252557	0.160253	1.846157	2.565294
SPL		0.148834	0.035475	0.202979	0.274734	0.605607	1.26763
CLYD		0.070769	0.041198	0.246732	0.05216	0.644428	1.055288
MLC		0.144036	0.137485	0.222209	0.469338	0.79918	1.772248
CMLT		0.062086	0.037899	0.045825	0.046271	0.489754	0.681836
AYRTN		0.43171	1.610809	7.561383	0.002203	1.055372	10.66148