

Advertisement Expenditure and Financial Distress Risk: A Study on Private Commercial Banks in Bangladesh

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ABSTRACT: *The economic outlook of a country is largely portrayed by the operative banks in a country as soundness of the banks represents a healthy economic condition of the country. Banking sector in Bangladesh has got the attention of the mass people for various reasons. Specially, the financial distress risks which put the banks in vulnerable condition. Banks may face financial distress risks for various reasons. This study examines the effect of advertisement expenditure over the financial distress of banks in Bangladesh which is based on secondary data which have been collected from the yearly financial statements of the banks. This study examines the effect of advertisement expenditure over the financial distress of banks in Bangladesh. Besides attempts have been taken to predict the relationship of advertisement expenditure with financial distress risks of 19 publicly traded private commercial banks of Bangladesh over 5 years ranging from 2017 to 2021 using Altman's Z Score Model (1995). Nonetheless, regression analysis has been conducted to showcase the relationship between advertisement expenditure and financial distress. However, this study reveals that Advertisement expenditure couldn't significantly predict financial distress where other factors except Advertisement expenditure may significantly impact the financial distress.*

Keywords: *Economic Outlook, Financial Distress, Advertisement Expenditure, Altman's Z score, Private Commercial Banks.*

1. INTRODUCTION

Out of many promotional tools, advertisement is one of the tools to help the financial intermediaries like banks to promote their products and services which ensure future earnings of the banks said by Lou, [28] and create a positive vibe among the investors of the banks in reference of Joshi and

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Hanssens [25]. The effective nature of advertisement has made it expensive to implement by the banks as promoting products of banks through advertisement requires a substantial amount of money to invest by Jensen and Jepsen [23]. The proponents of advertisement are many who demonstrated that advertising expenditures bring positive performance of banks in terms of sales, profitability and advertising expenses to sales ratio [29] [33] [26]. The opponents of advertising expenditures believe that advertisement sometimes only add up to the cost of services provided to the consumers which might cause extra burden on consumption of certain goods and services [23] [41].

Advertisement requires a significant amount of money to invest to make it effective to the eyes of the consumers as consumers are submersed with countless number of advertisements so there remains a competition to make an advertisement different from other advertisement which results in substantial amount of money to spend said by Jensen and Jepsen [23].

Molla and Rahaman [29] studied the consequence of advertisement expenditure over operating and market performance of financial institutions like banks only by getting to know that the impact of advertising expenditures on financial performance have been studied rigorously in developed countries whereas such study is almost none for Bangladesh.

However, to the best of authors' knowledge, no study has been conducted to address the issue of financial distress in banks resulting from advertising expenditure for an emerging market like Bangladesh. Banks may face a financial distress where they might be incapable in meeting the obligations or debt of the creditors who invests in the firm, eventually financial distress can trigger the firm to declare itself bankrupt, thereby liquidating assets to satisfy firm's debt or implementing a repayment plan [37].

Hence, considering the huge prospect of banking sector in Bangladesh, it is timely to analyze the relationship of advertising expenditures with financial distress of the financial intermediaries like banks. So, this study will address the issue of financial distress in relation to advertising expenditures by taking evidence from secondary data available in the yearly financial disclosure of selected banks in Bangladesh.

2. LITERATURE REVIEW

2.1 Advertisement

Advertisement which is part of promotional tools is referred as any exhibition and promotion of goods and services essentially nonpersonal and primarily with the intention of increasing sales thereby uplifting demand by a known

patron [27]. Business firm uses many communication tools to persuade customer for selling its products and advertisement is one of them [27].

2.2 Objectives of Advertisement

A company's brand is established at the same time products features, availability and benefit is communicated with the help of advertisement carried out [36]. Moreover, advertisement makes the customer attitude favorable and builds a positive perception of the product [45]. In addition to that business firm inform the customer about the newly introduced products and stimulate the demand of the products by avoiding competition [3].

Advertisement largely consider as promotional activities of the firm are designed to create awareness among the consumers about a particular brand where other objectives of promotional activities are making a favorable attitude about a particular brand, inducing buyer to repeatedly purchasing products. Finally, all the activities related with promotion are meant to increase sales thus increasing profitability [14].

2.3 Financial Distress and Its Impact over Business Firms

Distresses or crises are events always unwelcoming that hampers proper functioning of the management by limiting their capacity [24]. Out of all crises financial crisis is the one which have a profound impact on the decision makers both in economic and social way [32]. Financial crises can create an ambiguity about the forthcoming profitability of the firm and thus it sharply hurts the investment of the firms which reduces consumption and composition of the export [15]. When profitability of the business firm shrank for few consecutive periods, firm might eventually vanish from the market as profitability and investment are related with each other. At the worst case, profitability strikes the consumption at individual level and affects the export operation of businesses.

Conceptually financial distress refers to a particular condition of a firm being unable to meet liability obligations of the creditors. In most of cases failure of businesses is ascribed to financial distress, thereby eventually financial distress is likely to create a bankruptcy condition of a business firm [10] [37]. More elaborately, when a business firm becomes unable to meet the obligation of the creditors, the firm may declare itself bankrupt which help the firm to start in a new way either by liquidating assets to meet up the firm's debts or by adopting a repayment plan. Ray [39] defined financial distress as an experience of the firm where agreements of a loan are violated and firm suffer continual losses and obligations are not met at its due time [39]. Financial distress may worsen operating conditions in such a degree that

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put heavy financial burden on the firm subsequently firm become incapacitate to pay both preferential and unsecured creditors [9] [16]. Wesa and Otinga [44] stated that business firm experience two main difficulties in their statement of financial position when firm face with the burden of financial distress, firstly firm experience cash deficit that affect their asset side and secondly, unmet obligations affect the liability side. Thereby continued survival of the business firm is threatened largely as such pressure on financial position of the firm will make the investor aware about making further investment in future. Hence, financial institution like banks prefer a clean image to maintain so that they can attract investors in the long run which will ensure viability of the firm for infinite time period.

At times of financial distress of the financial institutional, advertisement largely consider as promotional expenditure might seem unpleasant for the firms to incur as this may add disadvantages for the financial institutions like banks [41]. Therefore, a disadvantageous position of the banks may put themselves in vulnerable position which ultimately affects the investor as their returns from the banks may be hampered as long as the vulnerability of the banks prevails. Considering the severe consequence of financial distress, Banks would prefer to avoid such distress even at the expense of advertisement effectiveness.

2.4 Impact of Advertising Expenditures over Financial Distress and Financial Performance of Banks

Generally advertising expenditure can also be termed as promotion expenditures and advertisement can create huge expenditure for the Bank as financial institutions like Banks spends a huge sum of money every year to promote their products among their customers [8]. Likewise, Jensen and Jepsen [23] Banks which are financial intermediaries in Bangladesh spends a significant amount of money as part of promoting their products among the consumers which ultimately ends up with profitability of the banks. The astonishing figure of advertising expenditure of Banks may puzzle any person at a glance without knowing the benefit of such expenditure.

The opponents of advertising expenditures claim that advertising expenditure can add up to cost and sometimes confuses the buyer. The opponent of advertising expenditure emphasizes more on that advertisement expenditure can increase the cost of goods and services [41]. Hence the emergence of understanding the relationship of financial distress and advertising expenditures arises. However, the effectiveness of advertisement can be gauged through calculating advertising to sales ratio simply by dividing advertisement costs with sales at a particular time period [26]. Relationships

of Advertising expenditures with firm's performance have been studied in various sectors in terms of profitability, sales and stock returns. Abdel-Khalik [1], Hirschev and Weygandt [18], Palda [33], Andras and Srinivasan [7], Graham and Frankenberger [17], Paton and Williams [35] and Chen [12] remarked advertising expenditure an investment working for maximizing the wealth of the financial intermediaries like banks as advertising expenditure promotes the services of financial intermediaries like banks which in turn increase the cash flow of the banks.

Particular study has been conducted by Molla and Rahaman [29] through taking evidence from Bangladesh to develop understanding of the consequence of advertisement expenditure over operating and market performance of financial institutions like banks. Thus, a better understanding regarding the connection between advertising expenditure and financial distress of the Banks in Bangladesh might be developed as the area is still untapped by the researchers according to the best of authors' knowledge.

2.5 Determination of Z score

The Altman Z-score is a model that gives a way for identifying whether a company is likely to fall in financial insolvency. The Altman Z-score model considers profitability, liquidity, leverage, activity ratios and solvency. Jaisheela [22] researched on Z-score analysis of 27 Indian leasing enterprises and shows that 22% of the samples were in the danger zone and 27% had a very high likelihood of being ill. Vaziri, Bhuyan and Manuel [43] analyzed on financial institutions, using 100 banks from Europe, the USA, and Asia as instances. To predict bankruptcy, they employed many models, including Z score.

According to their findings, all models can reliably predict bankruptcy before filing, although the z-score model was able to do so better than the other models. Distress analyses have been conducted in Bangladesh on a number of industries, including banking, the capital market, insurance businesses and SME [21], cement companies Hossain and Moudud-Ul-Huq [19] and some other industries. Ahmed and Alam [2] analyzed Z-score analysis of 15 commercial banks operating in Bangladesh reveals that the majority of them are in the distress zone.

Chowdhury and Barua [13] used the Z score model is used to predict the bankruptcy risk of DSE (Dhaka Stock Exchange) listed Z category companies, and their findings showed that 5 out of 53 companies are out of dangers and 41 companies were in the distress zone because of a lack of managerial strength and ineffective operational performance. They also talked about whether Bangladesh may use the z-score model. William H.

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Beaver was a pioneer in identifying modern corporate failure prediction models. Altman divides the businesses into two categories, bankrupt and non-bankrupt, which are mutually exclusive [4]. The first version of the Altman model was written as $Z=0.012X_1 + 0.014X_2 + 0.033X_3 + 0.006X_4 + 0.999X_5$. 94% of the unsuccessful businesses in Altman's sample could have been predicted to go bankrupt using this model, according to the Z Score [4]. Altman [5] and Altman et al. [6] continuously modified the Z score model to account for new characteristics and the shifting corporate landscape. The Z score was created by Altman in 1983 to be customized for individual businesses. $Z= 0.717X_1 + 0.847X_2 + 3.107X_3 + 0.420X_4 + 0.998X_5$ was the model's formula [5]. This was revised and further refined to produce the "Z" Score model [6].

This model is used to forecast business failures for companies in emerging markets, developing countries, and for non-manufacturers. The restriction that Z score was exclusively applicable to industrial businesses was then disproved. The sales/total assets activity ratio "X5" was not included in this model, which preserved the first four variables from the previous Z-Score model but did so in the following manner with various weighted coefficients: $Z= 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$ Where: X1: Working Capital/Total Assets X2: Retained Earnings/Total Assets X3: EBIT/Total Assets X4: Book Value Equity/Total liabilities.

The applicability of the Altman Z score is particularly evident in various research projects. According to Pustylnick [38], Altman Z score clearly shows the financial position of the firm in terms of its robustness and solvency. Nandi and Choudhary [31] conducted research with six years' data of Indian Banks and used Altman Z score model to design an internal credit rating by the banks so as to predict their future defaults. Later, to validate that the Altman Z score model can foresee future bank distress, a confirmatory study was carried out in 2013 with Euro Banks, in which Cheing [11] chose four distressed banks and used data from the previous five years. Stepanyan [41] found the model to be quite helpful in his analysis of the US airline industry.

The third version of Altman's Z-score models, which was examined in a study by Samarakoon and Hasan [40], was shown to have the highest overall accuracy rate. Although their general accuracy appears to be falling in the two years before to financial difficulty, Z-score models appear to have an exceptional potential for predicting financial distress of enterprises in developing economies. This study provides proof that Altman's Z-score model, used by businesses to anticipate financial trouble, is an appropriate analytical tool. Based on that finding, Nanayakkara and Azeez [30]

developed a model specifically for Sri Lanka that uses the "Altman's Z" score model to predict financial difficulty three years in the future [30]. In a study Pam [34] conducted on the Nigerian banking sector, it was discovered that the main factors that make up the Altman's Z-score—liquidity, profitability, operating effectiveness, and total assets turnover—are an important instrument for assessing a bank's financial difficulty.

3. OBJECTIVE OF THE RESEARCH

The study seeks to establish the effect of advertisement expenditure on Financial distress of private commercial banks in Bangladesh.

3.1 Research Hypothesis

Based on the given objective, the study attempts to test the following hypotheses:

- H_0 : Advertisement expenditure has no significant effect on Financial distress of private commercial banks in Bangladesh.
- H_1 : Advertisement expenditure has significant effect on Financial distress of private commercial banks in Bangladesh.

4. DATA AND METHODOLOGY

4.1 Research Design

This research is a quantitative research and analytical in nature. To conduct the study 19 conventional commercial banks in DSE are selected as sample. Non-probability convenience sampling is used to select 19 conventional commercial banks on the basis of availability of information and access to the information.

4.2 Data Collection

In this study, Secondary annual balanced panel data of selected conventional commercial banks for 5 years (2017-2021) has been used. For conducting this research, data is obtained from unconsolidated annual financial statements of selected conventional commercial banks. Where stand-alone statements were unavailable, consolidated financial statements have been used.

Table 01: Altman Z-Score and its Application in Financial Distress.

Z-Score	$Z=6.56X_1 + 3.26X_2+6.72X_3+1.05X_4$
Where:	

Z-Score = Financial default index (emerging market companies for non-manufacturers),

X_1 = Working capital/Total assets,

X_2 = Retained earnings/Total assets,

X_3 = Earnings before Interest and Taxes/Total Assets,

X_4 = Book value of equity/Total liabilities.

Zones of discrimination: $Z > 2.99$: Safe zone, $1.81 < Z < 2.99$: Zone of ignorance or

Grey zone, $Z < 1.81$: Default zone.

Source: Altman, Hartzell and Peck (1995).

The main reason for choosing the Z” Score as a statistical model is due to its high predictive ability that it produced for banks over years. The weightings of the variables did not change for our study as the objective was to use the original existing model to verify its validity as a predictor for the private commercial banks in Bangladesh.

Regression Model: The regression equation is written as $Y = a + bX + e$

Where

Y is the value of the Dependent variable (Y), what is being predicted or explained

a or Alpha, a constant; equals the value of Y when the value of $X=0$

b or Beta, the coefficient of X; the slope of the regression line; how much Y changes for each one-unit change in X.

X is the value of the Independent variable (X), what is predicting or explaining the value of Y

e is the error term; the error in predicting the value of Y, given the value of X (it is not displayed in most regression equations).

5. ANALYSIS AND FINDINGS

Table 02: Descriptive Statistics for the periods 2017 to 2021.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Z Score	95	-1.6668	3.2750	.384122	.8073407

Advertisement expenditure	95	5168331	1270060367	154164342	237453678
Valid N (list wise)	95				

Table 2 reveals that the average Z score of the sampled banks over the periods 2017 to 2021 is 0.384122 which indicates that all the sampled banks are in Financial distress over the study periods. The average Advertisement expenditure of the sampled banks over the periods 2017 to 2021 is Tk. 15,41,64,342.

Table 03: Correlation between the variables for the periods 2017 to 2021.

Correlations			
		Z Score	Advertisement expenditure
Z Score	Pearson Correlation	1	-.057
	Sig. (2-tailed)		.581
	N	95	95
Advertisement expenditure	Pearson Correlation	-.057	1
	Sig. (2-tailed)	.581	
	N	95	95

Table 3 reveals the association between the Z score and Advertisement expenditure of the sampled banks over the years 2017 to 2021. It has been found that there is a very negligible negative correlation between the Z score and Advertisement expenditure of the sampled banks as the correlation coefficient is -.057.

Table 04: Simple Linear Regression.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.057 ^a	.003	-.007	.8103347
a. Predictors: (Constant), Advertisement expenditure				

Table 4 provides the R and R^2 values. The R value is .057, which indicates a very low degree of correlation. The R^2 value is 0.003, which indicates only 0.3% of the total variation in the Z score has been explained by the Advertisement expenditure.

Table 05: Analysis of Variance.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.201	1	.201	.307	.581 ^b
	Residual	61.068	93	.657		
	Total	61.269	94			
a. Dependent Variable: Z Score						
b. Predictors: (Constant), Advertisement expenditure						

The regression model in the table 5 predicts the significant relationship of the dependent variable with independent variable. The significant coefficient (i.e. P value) is 0.581 that is much higher than 0.05 and indicates that there is no significant impact of Advertisement expenditure on financial distress, so alternate hypothesis is rejected.

Table 06: Coefficients.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.414	.099		4.172	.000
	Advertisement expenditure	-1.949E-10	.000	-.057	-.554	.581
a. Dependent Variable: Z Score						

The **Coefficients** table provides us with the necessary information to predict Financial distress (Z score) from Advertisement expenditure, as well as determine whether Advertisement expenditure contributes significantly to the model. Here p value 0.581 indicates that Advertisement expenditure cannot significantly predict financial distress where other factors except Advertisement expenditure may significantly impact the financial distress.

6. CONCLUSIONS

From the given analysis it can be concluded that all the sampled banks have been in the “Default” zone as the average Z score 0.384122 is less than 1.81.

It has been found that there is a very negligible negative correlation between the Z score and Advertisement expenditure of the sampled banks as the correlation coefficient is -0.057 . It has been found that there is no significant impact of Advertisement expenditure on Financial distress, so alternate hypothesis is rejected. It has also been found that Advertisement expenditure couldn't significantly predict Financial distress where other factors except Advertisement expenditure may significantly impact the Financial distress. In the further research, the association of financial distress risks of private commercial banks with macro-economic variables, world-wide economic crisis and corporate governance compliance can be addressed..

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APPENDIX: 1

List of Commercial Banks and their Z scores over the years included in the Study

Banks Name	Year				
	2017	2018	2019	2020	2021
1. Arab Bangladesh Bank Limited	0.51	0.55	0.50	0.50	0.55
2. Bank Asia Limited	0.62	0.71	0.63	0.63	0.63
3. United Commercial Bank Limited	0.88	0.87	0.84	0.76	0.45
4. Dhaka Bank Limited	0.06	-0.41	-0.29	-0.80	-0.92
5. Dutch Bangla Bank Limited	0.53	0.59	0.74	-0.55	0.62
6. Eastern Bank Limited	1.34	1.09	1.18	1.06	1.21
7. IFIC Bank Limited	0.65	0.29	0.44	0.37	0.15
8. Jamuna Bank Limited	0.87	0.79	0.29	0.09	-0.31
9. Mercantile Bank Limited	-0.41	0.81	0.71	0.68	0.57
10. Mutual Trust Bank Limited	0.49	0.45	0.45	0.49	0.44
11. National Bank Limited	-0.28	1.37	0.44	0.46	-0.02
12. NCC Bank Limited	0.28	0.57	0.70	0.91	-0.80
13. One Bank Limited	0.50	0.57	0.60	-0.58	-0.78
14. Prime Bank Limited	0.41	3.28	1.02	1.02	0.71
15. Southeast Bank Limited	0.88	0.12	0.28	0.61	0.10

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16. The City Bank Limited	0.79	0.24	-0.20	-0.09	-0.04
17. Premier Bank Limited	-1.50	-1.28	-1.07	0.20	-0.80
18. Trust Bank Limited	0.44	-1.38	-1.24	-1.67	-0.93
19. Uttara Bank Limited	1.87	1.68	2.23	1.94	1.61

APPENDIX: 2

Advertisement expenditure over the years of the selected commercial banks included in the Study

Name of the Banks	Year	Advertisement Expenditure (Amount in Tk.)
Arab Bangladesh Bank Limited	2017	34,095,358
	2018	21,693,963
	2019	9,496,866
	2020	11,900,530
	2021	14,539,879
Bank Asia Limited	2017	28,881,248
	2018	28,918,417
	2019	26,510,466
	2020	27,942,729
	2021	27,467,376
United Commercial Bank Limited	2017	447,546,643
	2018	989,765,359
	2019	995,014,379
	2020	1,270,060,367
	2021	1,073,061,912
Dhaka Bank Limited	2017	58,602,653
	2018	75,233,309
	2019	62,441,685
	2020	87,107,302
	2021	99,838,712

Dutch Bangla Bank Limited	2017	396,577,573
	2018	439,211,723
	2019	438,700,667
	2020	256,032,369
	2021	161,179,533
Eastern Bank Limited	2017	50,799,617
	2018	56,943,238
	2019	48,707,228
	2020	38,745,592
	2021	36,801,813
IFIC Bank Limited	2017	371,194,397
	2018	315,789,403
	2019	390,631,644
	2020	293,012,611
	2021	293,518,545
Jamuna Bank Limited	2017	56,152,566
	2018	60,481,729
	2019	76,584,926
	2020	71,622,347
	2021	73,889,826
Mercantile Bank Limited	2017	60,695,674
	2018	72,947,348
	2019	75,781,129
	2020	68,311,755
	2021	57,801,868
Mutual Trust Bank Limited	2017	39,700,117
	2018	58,344,737
	2019	63,531,733
	2020	23,944,322
	2021	35,834,230
National Bank Limited	2017	16,194,218
	2018	36,272,769

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	2019	97,965,105
	2020	69,354,623
	2021	105,974,772
NCC Bank Limited	2017	22,813,123
	2018	37,335,822
	2019	36,379,260
	2020	24,878,353
	2021	27,709,962
One Bank Limited	2017	147,546,744
	2018	235,034,058
	2019	329,991,480
	2020	168,259,259
	2021	77,337,228
Prime Bank Limited	2017	70,930,679
	2018	71,374,016
	2019	38,966,223
	2020	7,303,963
	2021	38,966,223
Southeast Bank Limited	2017	53,340,450
	2018	47,979,807
	2019	46,477,610
	2020	47,447,329
	2021	52,054,191
The City Bank Limited	2017	84,000,639
	2018	95,366,822
	2019	87,327,845
	2020	78,106,631
	2021	207,981,116
Premier Bank Limited	2017	361,551,106
	2018	444,743,480
	2019	430,926,644

	2020	400,948,173
	2021	543,299,359
Trust Bank Limited	2017	5,168,331
	2018	8,290,596
	2019	13,735,691
	2020	9,594,830
	2021	14,403,552
Uttara Bank Limited	2017	12,787,883
	2018	13,454,384
	2019	12,447,377
	2020	19,392,907
	2021	20,608,484