



ASSESSING THE FINANCIAL SOUNDNESS OF TRUST MERCHANT BANK/DRC: AN APPLICATION OF ALTMAN'S BANKRUPTCY PREDICTION MODEL

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Abstract

A robust banking system is obviously one of the pillars of the financial system of any economy. The banking system ensures a sustainable economic development and welfare by forming adequate capital and allocating funds efficiently for investment projects, payment services, strong financial systems. This study strove to assess the financial soundness of Trust Merchant Bank/DRC for the period 2013-2017. The analytical tool used in the study is the Altman's bankruptcy prediction model. The results showed that Trust Marchand Bank is not financially healthy since the Z score values are less than 2.6. This situation can lead to bankruptcy. Therefore, TMB should take corrective actions in order to avoid bankruptcy.

Keywords: Z-score, bankruptcy, financial distress, Trust Merchant Bank, financial soundness

INTRODUCTION

A robust banking system is considered as one of the pillars of financial system of any economy. The banking system ensures the sustainable economic development and welfare by forming adequate capital and allocating funds efficiently for investment projects, payment services,

strong financial systems (Rahman, 2017). Financial institutions and banks in particular bring together those who require funding with those who possess surplus funding (Kumari, 2017; Choudhry, 2018).

In developing countries, banking sector is even much more important. Researchers suggest that greater financial inclusion can have a positive impact on the lives of the poor (Sandip, Kumar, & Mollika, 2015). However, financial inclusion is still far from being a reality in most African countries and Sub-Saharan African countries in particular. Research shows that less than a quarter of sub-Saharan Africa's population has access to a formal bank account (Nyantakyi & Sy, 2015), an indication that there is less financial inclusion.

In the Democratic Republic of the Congo (DRC), financial inclusion has remained shallow over the years. A study conducted by Deloitte DRC (2017) suggests that the financial inclusion rate is as low as 6% (by far lower than the African average which is 25%). This situation may be attributed to both low income and lack of public confidence in the banking sector. Indeed, in recent years, a couple of banks operating in the country have gone through hardship, triggering public distrust.

Notwithstanding its importance in the economy, a bank requires a sound management to live up to expectations. It turns out that asset and liability management is the very heart of banking. Therefore, to be successful as a bank there is need to have professional asset and liability management processes (Choudhry, 2018). Moreover, financial health appraisal of financial institutions and banks in particular is critical (Mwawughanga & Ochiri, 2017). Indeed, financial distress has much more disastrous consequences in the banking sector than it has in the mainstream business sector.

As far as assessing the financial strength of a business firm is concerned, there are lots of techniques available. However, Altman's Z-score has been proven to be a reliable tool (Mohammed, 2016). Although Edward Altman's Z-Score model has been used widely to predict financial distress, corporate failure and bankruptcy, it is also used to assess the financial soundness of enterprises (Mwawughanga & Ochiri, 2017; Mohammed, 2016; AlAli, 2018). This study aims at appraising the financial health of Trust Merchant Bank (TMB) operating in DRC.

The concept of Altman's Z-score model

Over the years, Edward Altman developed several variants of Z-Score model. The Z-Score model takes into account discriminant variables working capital, retained earnings, earnings before interest and tax, equity, total assets and total book debts (Pam, 2013). The following Z-score model has been widely used to assess the financial soundness of banks (Veni & Jyoth, 2018; Chotalia, 2014): $Z = 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$

Table 1: Variables of the Altman's Z-score model

Variables	Formula	Interpretation
X1	Ratio Working capital/Total Asset	The ratio is a measure of the net liquid assets of the firm relative to the total capitalization (Altman, 1968). Working capital is defined as the difference between current assets and current liabilities (Altman & Hotchkiss, 2006). Liquidity & size characteristics are explicitly considered. Ordinarily, a firm experiencing consistent operating losses will have shrinking current assets in relation to total assets
X2	Ratio Retained Earnings/ Total Assets (RE/TA)	The ratio measures the cumulative profitability over the life of the company. The age of a firm is implicitly considered in this ratio (Altman & Hotchkiss, 2006). In addition, the RE/TA ratio measures the leverage of a firm. Those firms with high RE relative to TA have financed their assets through retention of profits and have not utilized as much debt. This ratio highlights the use of either internally generated funds for growth (low-risk capital) or external money (higher-risk capital).
X3	Earnings before Interest and Taxes/ Total Assets (EBIT/TA)	This is a measure of the productivity of the firm's assets, independent of any tax or leverage factors. Since a firm's ultimate existence is based on the earning power of its assets, this ratio appears to be particularly appropriate for studies dealing with credit risk (Altman & Hotchkiss, 2006).
X4	Market Value of Equity/Book Value of Total Liabilities (MVE/TL)	Equity is measured by the combined market value of all shares of stock, preferred and common, while liabilities include both current and long-term obligations. The measure shows how much the firm's assets can decline in value (measured by market value of equity plus debt) before the liabilities exceed the assets and the firm becomes insolvent (Altman & Hotchkiss, 2006).

The result of Altman Z-score can be interpreted as follows (Chotalia, 2014):

Z-score above 2.6: The company is considered to be in the safe zone.

Z-score less than 2.6 but above 1.1: The company is considered to be in grey zone.

Z-score less than 1.1: The company is considered to be in distress zone.

EMPIRICAL LITERATURE REVIEW

Across the world, so many studies have been conducted on the financial health of commercial banks. Chotalia (2014) examined the financial health of Indian private sector banks using Altman's Z-score model. He concluded that the private sector banks under study fell in 'Grey Zone' as per Z-score criteria and the risk of financial distress was looming on selected banks.

Veni and Jyothi (2018) conducted a comparative study of financial solvency and stability of four Indian private banks using Altman's Z-score model. The findings ascertained that all four selected banks were financially robust and far away from bankruptcy. Indeed, the study demonstrated that the Altman's Z-score value of all selected banks lied in Safe Zone since the Z-score was greater than 2.6.

Mwawughanga and Ochiri (2017) attempted to measure financial performance of Kenyan commercial banks using Altman's Z-score model. It turned out that most Kenyan banks were on grey zone.

In 2014, Ezejiofor, Nzewi, and Okoye used Altman's Z-score model to predict the potential bankruptcy of Nigerian banks. Conclusions demonstrated that the model was capable of determining truthfully the failure potential of sound and healthy banks. Further, the research showed that Altman's bankruptcy prediction model could have successfully predicted the collapse of the banks that eventually suffered corporate failure in Nigeria.

Samanhya, Oware, and Anisom-Yaansah (2016) studied financial distress and bankruptcy prediction in Ghanaian selected listed banks. Using Altman's Z-score model, the authors found out that, individually, 80% of the selected banks have their average Z-score between 1.1 to 2.6 and therefore classified in the grey zone. These banks were found to be neither financially distressed nor classified as safe. On the other hand, 20% of the selected bank have been found to be in the distress zone.

Across the world, so many other studies have been conducted on both assessment of banks' financial soundness and the application of Altman Z-score model. However, despite the key role that financial system ought to play in DRC, researchers have not paid enough attention to that area. At the best of the researchers' knowledge, very few researches have been conducted on application of bankruptcy prediction models in assessing banking sector's performance in DRC. This study seeks to fill in that gap.

METHODOLOGY

This paper adopts an analytical research design based on secondary data drawn from approved audited financial statements of the selected bank. The researcher used financials of TMB for the period 2013-2017 to produce the appropriate ratios composing the Altman's Z-score model. The rationale behind selecting this data series (2013-2017) is that during this time, financial soundness of TMB has been questioned by the public.

ANALYSIS AND RESULTS

Table 2: Z-score model's variables

Ratios	2013	2014	2015	2016	2017
X1 (Ratio Working capital/Total Asset)	0.018	0.038	0.038	0.041	0.058
X2 (Ratio Retained Earnings/Total Assets (RE/TA))	0.029	0.026	0.041	0.054	0.047
X3 (Earnings before Interest and Taxes/Total Assets (EBIT/TA))	0.02	0.028	0.015	0.002	0.016
X4 (Market Value of Equity/Book Value of Total Liabilities (MVE/TL))	1.445	0.111	0.114	0.12	0.134

Table 2 shows that the liquidity position to total assets varies between 1.8 and 5.8%. This situation could be an indication that TMB had been experiencing consistent operating losses leading to shrinking current assets in relation to total assets. The ratio RE/TA ranges from 2.6 to 5.4. This ratio highlights the use of either internally generated funds for growth (low-risk capital) or external money (higher-risk capital). The results suggest that TMB been used relatively little internally generated funds. The ratio EBIT/TA varies between 1.5% (minimum level) and 2.8% (maximum level). This ratio measures the productivity of the firm's assets, independent of any tax or leverage factors. Results point at a poor productivity of TMB's assets. Table 2 points out that the ratio MVE/TL had declined over the years under investigation.

Altman Z-Score Results

According to Chotalia (2014), a Z-score above 2.6 would imply that a company is in the safe zone, while a Z-score less than 2.6 but above 1.1 would be an indication that the company is in grey zone. When the Z-score is less than 1.1, the company is considered to be in distress zone.

Table 3: Z-score model's variables

	2013	2014	2015	2016	2017
Z-SCORE	1.86	0.64	0.60	0.58	0.78
Average Z-SCORE	0.89				

Table 3 suggests that Trust Merchant Bank's performance has been deteriorating over the years. Indeed, the bank has been in distress zone between 2014 and 2017. Therefore, it can be inferred that TMB/DRC has not been safe for the period under scrutiny.

CONCLUSION

It can be concluded that Trust Merchant Bank is not showing a sound financial health since the Z score values are less than 2.6. This situation can lead to bankruptcy. However, in spite of that situation the bank is still operating satisfactorily. Veni and Jyoth (2018) suggest that investors and depositors should not only rely on this Z score model. They further posit that factors like political, economic, social, technological, business, international and legal environments also influence the financial performance of the banks. However, Z score is regarded as a useful tool to provide a quick analysis of a specified bank compared to its competitors. Therefore, TMB should take corrective actions in order to avoid bankruptcy. Further studies in the same area shall be conducted in order to appraise the overall financial health of the Congolese financial sector.

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