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Research Article

Financial Distress Risk Levels of Listed Small and Medium Enterprises in the Philippines

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ABSTRACT

Small and Medium Enterprises (SMEs) play a significant role in the Philippine economy as to promoting entrepreneurship and technological innovation, encouraging local development and lower down poverty levels. However, SMEs are more susceptible to financial constraints and difficulties attributable to limited access to capital and weak financial management practices which lead to financial distress and insolvency in the long run. Based on the Early Bankruptcy Theory, a company's financial distress can be attributed to its inability to meet its obligations which stem from poor management, low profitability, inadequate cash flow, or excessive leverage, among others. Hence, the study aimed at describing and determining the financial distress risk levels of sample SMEs to provide valuable insights into the economic health and stability of these companies. Precisely, the study ascertained the nature, determinants and levels of financial distress risks using the Altman Z-Score Model (1968). Based on the result, sample companies at SAFE levels were deemed to have strong financial positions with good profitability, liquidity, leverage, and solvency. In contrast, sample companies at DISTRESS levels could experience financial difficulties with lack of liquidity, declining revenues, and reliance on debt financing from third parties. Future research can (1) expand the determination of financial distress risk levels into non-listed SMEs and other listed companies from critical sectors using a longer time frame to assess changes in the financial distress risk levels resulting from changes in economic conditions and (2) investigate the impact of financial ratios on financial distress risk while also considering corporate governance measures affecting it.

Keywords: *Financial Distress, Financial Statement Analysis, Financial Ratios*

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Introduction

SMEs in emerging economies, such as the Philippines, frequently experience financial distress (Singh & Rastogi, 2022) attributable to certain difficulties in obtaining access to capital and financing (Malakauskas & Lakštutienė, 2021). If SMEs experience persistent financial problems and are unable to alter their business practices, they will undoubtedly encounter challenges in responding to intense level of market competition. This can lead to losses and ultimately to financial distress (Susilowati et al., 2021).

One of the efficient ways to predict the financial health and stability of a company is through financial statements analysis which involves the use of various financial ratios related to profitability, liquidity, leverage, and solvency; by examining these ratios, insights can be obtained relative to the financial distress condition of a company (Maximillian & Septina, 2022). According to Finishtya (2019), financial ratio analysis aids in assessing the company's financial situation to determine whether its performance and condition have improved or worsened throughout the course of operations. Evaluating the financial health and stability of SME can be crucial for their survival and success in the Philippine Stock Market.

Although financial distress prediction has been considered a well-researched construct, there have been few studies on SME (Malakauskas & Laktutien, 2021), particularly in the Philippines. In this case, the study aimed at describing and determining the financial distress risk levels of listed SMEs in the Philippines for the year 2021 also provide valuable insights into the economic health and stability of these companies. Specifically, the study ascertained the nature, determinants, levels of financial distress risks.

The study was anchored on Alan Schwartz's Early Bankruptcy Theory (EBT) in 2005, which serves as a helpful framework for the evaluation of the economic health of companies and identifying the early warning signs of financial distress. According to this theory, a company's financial distress can be attributed to its inability to meet its obligations when they fall due. The failure can stem from various factors, such as poor management, low profitability, inadequate cash flow, or excessive leverage.

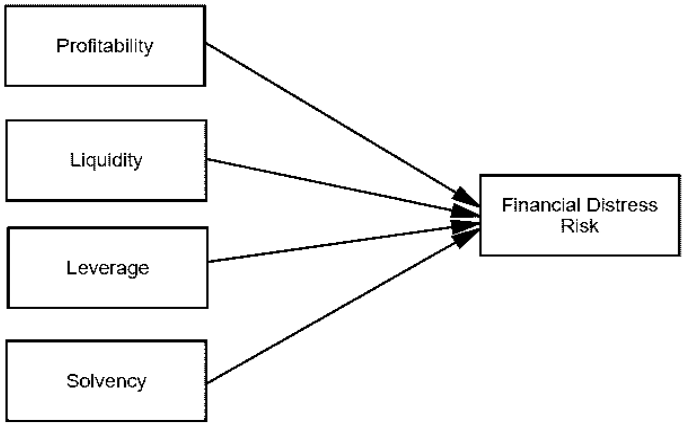

Figure 1. Conceptual Framework

Moreover, the financial distress can be explained by the Agency theory, which involves two related parties (agent and principal) doing business. Under the said theory, financial performance may suffer with respect to the possibility of financial distress may rise due to managers acting in their self-interest at the price of shareholder value. (Younas et al., 2021). As a result, there might not be adequate information sharing when the principal (owner) gives the agent (management) else the power to make decisions. Specifically, the agent might keep crucial information from the owner during tough financial circumstances. As a remedy, the principal can spot warning signals of financial distress by looking at financial metrics, including liquidity, profitability, leverage, and solvency. (Heniwati & Essen, 2020).

Financial Distress

By nature, financial distress is a condition where a company faces financial difficulties (Kisman et al., 2019) and experiences a lack of cash flow to meet debt obligations (Amoa-Gyarteng, 2021) and a decline in profitability (Susilowati et al. (2021) and suffers financial pressure such as poor performance, loss in the income statement for some period (Handoko et al., 2020). According to Mulyaningsih et al. (2021), this refers to a situation that is confronted by companies when they suffer financial pressure, such as poor performance, loss in the income statement for some period and they had to struggle to pay their debt. In addition, companies that experience distress have suffered a decrease in equity because of continuous losses and sometimes cash shortage because it has been used up for operating expenses. Moreover, it can be considered as liquidation threat, where a firm is unable to pay short-term liabilities to its creditor and the interest on bonds as well as preferred dividends.

Financial distress can range from short-term to insolvent liquidity difficulties. Financial distress determinants can be shown from cash flow analysis, business policy analysis and company financial reporting. (Susilowati et al., 2021). As emphasized by Mulyaningsih et al. (2021), the causes of financial distress include, among others, failed business strategies, mismanagement of assets and wrong prediction of business opportunities. Companies experiencing financial difficulty may be driven into bankruptcy or liquidation. Companies in financial problems are unable to fulfill their financial obligations to creditors. Furthermore, uncontrolled growth, expansion with little working capital, inadequate cash flow forecasting methods and an inability to forecast and calculate cash flow all contribute to financial hardship situations. Financial distress causes various issues including low sales, expensive expenses, inflated budgets, and prices, a lack of cash flow to maintain efficient business operations, an inadequate account balance and bad debt management. (Younas et al., 2021)

As it is, to evaluate the financial distress of a company, an analysis of the financial ratio can be made with profitability, liquidity, leverage, and solvency, which can be used as significant determinants to assess financial distress.

Determinants of Financial Distress

Financially distressed companies frequently struggle with a variety of problems, such as a lack of liquidity, declining revenues, fewer retained earnings, and a reliance on debt financing from third parties; these companies might have little working capital, ongoing deficits, and subpar financial performance in general (Mulyaningsih et al., 2021). Each of the determinants of financial distress risk is explained as follows:

Profitability

Rafatnia et al. (2020) explained that a company's extreme survival is dependent on the profitability of its operations and profitability ratios show how successfully a company has run its business over the fiscal year. Maximillian & Septina (2022) pointed out that profitability shows how debt, asset management and liquidity affect operating results. It serves as a standard for assessing how effectively the business uses its current resources and capital. It is a sign of the business's capacity for profit. High profitability shows that the business can easily finance its operational activities. High profitability is a sign of a strong business and makes financial trouble less likely to occur. Furthermore, low, or negative profitability shows that the company has trouble funding operations and must consume retained profit, which increases the likelihood of the company experiencing financial difficulties. Indicators of profitability, most notably, serve as auxiliary indicators in assessing the state of the business's financial hardship and challenges. Heniwati & Essen (2020) emphasized that investors need to know a company's profitability as a foundation for analyzing how profitable it has become. Investors would receive a favorable signal from the company's higher level of profitability, which means they will see a positive return on their investment. It also showed how profitability and leverage had a big impact on the financial crisis.

The preceding suggests that profitability has specific impacts on financial distress prediction. As documented, profitability had a negative and significant influence on financial distress (Audia et al., 2020; Hanifah, 2020; Mahfud & Amanah, 2019; Rudiyanto & Nuranisa, 2021; Soekotjo & Hariansyah, 2019). In contrast,

profitability had a significant positive effect on financial distress (Ali et al., 2020; Atika et al., 2020; Yusbardini & Rashid, 2019). Companies with low profitability would get a low Z-score value which is indicative of its financial distress (Ali et al., 2020; Atika et al., 2020; Yusbardini & Rashid, 2019).

In support to it, Maximillian & Septina (2022) found that profitability had a positive and significant influence on financial distress which implied that companies with low profitability had experienced financial distress. Amoa-Gyarteng (2021) also noted that profitability has a robust positive relationship with financial distress.

Liquidity

The ability of a business to fulfill immediate obligations is gauged by its liquidity. According to Maximillian & Septina (2022), firms with high liquidity ratios show that they have current assets available for use in meeting upcoming debt maturities. Companies with low liquidity, lacks the present to pay off their debts when they are due, leading to a default. This indicates that the company is in financial distress.

Heniwati & Essen (2020) explained that liquidity is a critical information used by the investors in making decisions. A higher value of the current ratio indicates that there are excess current assets or idle cash, meaning that companies cannot correctly manage it, thus causing less profitability. Conversely, the low value of the current ratio shows that the company has less capital to pay its short-term debt, meaning that companies experience financial distress, which provides a bad signal to investors and eventually delaying their decision to invest in the company. However, the liquidity value of liquidity does not mean that the firm is experiencing financial distress, as the type of industry influences the value. It does not preclude investors from investing their funds since they still believe in the ability of the firms to potentially grow.

Existing literatures provide that liquidity impacts financial distress. For example, Maximillian & Septina (2022) found that liquidity had a significant influence on financial distress, such that with low liquidity, companies have a high chance of experiencing financial distress. Amoa-Gyarteng (2021) also noted that liquidity had a significant relationship with financial distress. This was consistent with the findings of Ardi et al. (2020), Shidiq & Khairunnisa (2019) and Zhafirah & Majidah (2019). Hence, liquidity plays an essential role in the prediction of financial distress prediction (Rafatnia et al, 2020).

Leverage

Kismal et al. (2019) explained that the leverage ratio is a ratio that measures how far the company is financed by debt. This ratio measures a firm's ability to pay all its obligations, both long-term and short-term if the company is liquidated. The use of these funds would result in the company's obligation to repay the loan principal and interest. The size of the company's debt must be balanced with a good level of revenue. If not, it may lead to financial distress.

Finishtya (2019) emphasized that the financial leverage ratio helps the company to understand how far the company is financed by debt or from an outsider in running the company's operational activities. If the company often relies on debt to run its operational activities, it is thus vulnerable to financial difficulties. The lower the financial leverage that the company has then, the more manageable firm is to not be in a financial distress situation. On the other hand, a high financial leverage ratio means that the company uses high financial leverage to fund its operational activities.

With this, Heniwatin & Essen (2020) documented that profitability and leverage had significantly influenced financial distress. This result suggested that the higher the power, the higher the firm's potential to go in a state of distress. The high ratio of leverage provides the impression to investors that the firms could not efficiently manage their debts, thus increasing the firm's occurrence of financial distress. Similar finding was noted by Susilowati et al. (2021) wherein that leverage had a significant influence in predicting financial distress.

Solvency

A high solvency ratio indicates a high percentage of debt and a higher risk of default. Solvency is a statistic used to quantify the debt utilized to operate a business. Low solvency suggests a lower percentage of debt and a

lower risk of default, but high debt levels put firms at risk of financial trouble (Maximillian & Septina, 2022; Finishtya, 2019; Moch et al., 2019). Financial distress is more likely when there is a high solvency ratio (Schwartz, 2005; Shidiq & Khairunnisa, 2019).

Previous research found a significant impact of solvency on financial distress. For instance, Hanifah (2020) and Rudiyanto and Nuranisa (2021) found that solvency had a positive and significant effect on financial distress, indicating that companies with high solvency were less likely to experience financial distress (Maximillian & Septina, 2022). However, Amoa-Gyarteng (2021) noted that the relationship between solvency and financial distress was weak, despite being statistically significant. The results indicated a soft impact of solvency on financial distress.

Predicting Financial Distress

According to Mulyaningsih et al. (2021), the effects of financial hardship have a negative overall impact on the social and economic conditions of any nation. Therefore, it is necessary to propose suitable prediction tools. Due to its accuracy in assessing results and dependability in estimating the likelihood of financial trouble, the 1968-developed Altman Z-score model is regarded as the most effective method for predicting the financial health of publicly traded corporations (Younas et al., 2021). Due to its emphasis on insolvency risk, this model offers a reliable and objective assessment of financial distress (Heniwati & Essen, 2020). According to Ahmad (2020), Z-Score is a model that has been widely adopted and is utilized in many groundbreaking investigations.

The Altman Z-score (1968) is computed as

$$Z = 1.2T1 + 1.4T2 + 3.3T3 + 0.6T4 + 1.0T5$$

Where:

T1 = Working Capital /Total Assets

It defines how much the firm has its liquid assets compared to its size to reflect the company's short-term financial strength for fulfilling its current liabilities, as generally, firms in distress face liquidity issues. Thai et al. (2014) explained that when there is insufficient working capital, the company is concerned that it will be unable to pay its short-term debt. Typically, companies that are facing financial difficulties will have shrinking assets which will cause them to be non-liquid and fail to pay their creditors.

T2 = Retained earnings /Total Assets

It helps in determining how much profit is retained in the company to finance its assets, as in financial suffering, companies will experience a reduction in profitability. Thai et al. (2014) explained that when the company has high profit with low investments, it has a relatively low chance of getting default. It is due to the dollar of investments that can generate a more significant amount of operating profit. Conversely, a lower income might not be enough to cover a firm's daily expenses.

T3 = Earnings before Interest and Tax / Total Assets

It reflects the earning power of the company, which is generated from the company's operations purely to show the operating efficiency of the company. Thai et al. (2014) explained that if this ratio is high, it means that there is sufficient funding for the firm to reinvest. If the resulting ratio is low, the company will borrow instead of retained earnings to finance its investment. It will increase the company's chance of being in default.

T4 = Market Value of Equity / Total Liabilities

It demonstrates how confident the public feels about the industry and its market position. A higher MVE suggests a better chance that the firm will continue to operate longer. This ratio calculates the rate at which a company's assets would deteriorate in the event of insolvency. It is based on market valuation rather than just the company's fundamentals. Thai et al. (2014) explained that a more excellent MVE ratio suggests a higher likelihood of sustainability during an economic slump and market capitalization measures the market's confidence in the company.

T5 = Sales/Total Assets

It shows how efficiently the business generates sales with a dollar of assets. Sales are earnings before costs, taxes and interest are considered. Thai et al. (2014) explained that when this ratio is high, it means that the organization can increase its market share given the number of assets at its disposal. A firm with low asset turnover may not have a bright future if the right approach is not used to increase sales.

Table 1. Interpretation of Z-score

Z-Score	Interpretation
Above 2.99	Safe
2.99 – 1.81	Grey
Below 1.81	Distress

The above table provides guidelines on how to interpret the z-score. Companies with a Z-Score above 2.99 have a strong financial position and a low risk of failure while those with a Z-Score below 1.81 are in the danger zone and at a high risk of failure. Companies with a Z-Score between 1.81 and 2.99 are in a gray area, where they could potentially move towards financial distress or remain in a safe zone soon.

The prediction model can help managers keep track of firm business activities, minimize the risk of failure, and make effective decisions. In addition, this model can also help investors become aware of any symptoms regarding financial distress and instability that can be experienced by companies. On the part of the creditors, this would serve as an essential tool to assess the risk of a company for new loan issuances. The financial distress risk levels can also warn the external auditor of a company to extensively monitor the financial performance, stability, and health of a company. (Mulyaningsih et al., 2021).

The succeeding section presents the methodologies used to determine the financial distress risk levels of sample companies using the Altman Z-score model. (Ahmad, 2020)

Methods

The study was both qualitative and quantitative.

Content Analysis

In determining the financial distress risk levels of sample companies, the study used audited financial statements (AFS) published on the Philippine Stock Exchange website (www.pse.com.ph).

Using the said AFS, the study performed content analysis to extract specific information such as the amount of working capital, total assets, retained earnings, earnings before interest and taxes, market capitalization, sales, and total liabilities.

Sampling Procedures

To emphasize, only those sample companies which had complete and available annual reports for the year ended December 31, 2021, were considered in the study. Based on the listed directory of listed companies published in the PSE website, there were the listed SMEs:

Table 2. Listed SMEs

Code	Listed SME
A	Haus Talk, Inc.
B	Italpinas Development Corp.
C	Kepwealth Property Phils., Inc.
D	Makati Finance Corporation
E	Merrymart Consumer Corp.
F	Xurpas, Inc.

Scoring Procedures and Delimitations

The financial distress risk level of sample SMEs was determined using the Altman Z-score Model, as discussed in the preceding chapter. The study then performed a descriptive analysis based on the computed z-scores. Importantly, the study did not perform correlation and regression analyses due to the number of sample companies. Instead, the study focused on determining the financial distress risk levels among sample companies. Nevertheless, the performance of these is recommended for future research.

Based on the previous methodology, the following section presents the financial distress risk levels of sample companies and its related discussion and analysis of the Z-score to ascertain various implications.

Result and Discussion

*Table 3. Financial Distress Risk Level. *Indicates SAFE level, **denotes DITRESS level*

SME	T1	T2	T3	T4	T5	Z
A	0.59	0.71	0.03	3.14	0.13	3.82*
B	0.25	0.71	0.05	0.30	0.07	1.72
C	0.33	0.36	0.01	11.95	0.07	8.15*
D	0.05	0.54	0.02	0.84	0.16	1.56
E	0.26	0.58	0.01	2.23	0.61	3.10*
F	- 0.63	0.25	- 0.05	0.90	0.35	0.33

Conclusion

SMEs in emerging economies like the Philippines frequently experience financial distress due to difficulties accessing capital and financing. Financial statement analysis financial ratios are an efficient way to predict financial health and stability. However, there is a lack of research on SMEs in the Philippines. The study aimed to describe and determine the financial distress risk levels of listed SMEs in the Philippines for 2021, using the Early Bankruptcy Theory as a framework. Financial distress can also be explained by the Agency theory, which emphasizes the importance of monitoring financial metrics like liquidity, profitability, leverage, and solvency.

Financial distress is when where a company faces financial difficulties, lack of cash flow, decline in profitability, poor performance, loss in income statement and difficulty paying debts. Financially distressed companies struggle with problems such as lack of liquidity, declining revenues, and reliance on debt financing. The Altman Z-score model is regarded as the most effective method for predicting the financial health of publicly traded corporations as it offers a reliable, and objective assessment of financial distress.

Based on the results, sample companies at SAFE levels were deemed to have strong financial positions and lower risks of financial instability. Specifically, they have strong profitability, liquidity, leverage, and solvency which implies that they had good revenues, current assets available to meet obligations and the ability to settle long-term obligations if liquidated during the period. On the other hand, companies at the DISTRESS levels were deemed to have experienced financial difficulties such as lack of liquidity, declining revenues, and reliance on debt financing from third parties. These companies could have little working capital, ongoing deficits, and sub-par financial performance, leading to certain challenges funding operations and consuming retained earnings.

From a practical standpoint, the study benefits to SMEs, investors, creditors, and external auditors. Firstly, the Altman Z-score model used in the study can help SMEs in the Philippines assess their financial health and predict the likelihood of economic distress. It can aid managers in keeping track of their business activities, minimizing the risk of failure, and making effective decisions. Secondly, the study emphasizes the significance of financial ratios such as profitability, liquidity, and solvency, which are crucial for maintaining a healthy financial position and avoiding financial distress. Thirdly, investors can benefit from the use of the Altman Z-score model by becoming aware of any symptoms of financial distress and

instability that a company may be experiencing. Fourthly, creditors can use the financial distress risk levels as the tool to assess the risk of issuing new loans to a company. Lastly, the financial distress risk levels can serve as a warning to external auditors of a company which may prompt them to extensively monitor the financial performance, stability, and health of their respective clients.

Given that the study performed is limited to listed SMEs in the Philippines for the year 2021, given the availability of data, future research may expand the determination of financial distress risk levels to non-listed SMEs and also listed companies belonging to other sections such as Financial, Service, Real Property, Mining & Oil, Retail and Holding Firms for a significant period (e.g., 5-year, 10-year period). It is to ascertain whether financial distress risk levels change over time given the change of economic conditions in the Philippines every now and then. In addition, correlation and regression analyses may be performed to ascertain the impacts of profitability, liquidity, leverage, and solvency on financial distress risk.

While financial ratio ratios are vital for predicting financial distress among companies, non-financial determinants such as corporate governance measures in terms of board composition, ownership structure, management compensation, and personal characteristics can be used in predicting financial distress. It would surely strengthen the determination of financial distress risk levels among companies in the Philippines. Nevertheless, the study contributed to the growing literature on financial distress risk prediction among SMEs, specifically the Philippine setting.

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