

AN EMPIRICAL ANALYSIS OF LIQUIDITY, SOLVENCY, CAPITAL STRUCTURE AND FINANCIAL HEALTH OF SMALL AND MEDIUM ENTERPRISES IN MALAYSIA

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Abstract

Small and Medium Enterprises (SMEs) have been the backbone of Malaysian economy as they are generally deemed as the driving force of economic growth, job creation, and poverty reduction in the country. They have been the means through which accelerated economic growth and rapid industrialization have been achieved. While their contributions to development are generally acknowledged, Small and Medium Enterprises confront many obstacles that limit their short to long-term survival and development. To ensure Small and Medium Enterprises to survive, therefore, the purpose of this study is to carry out a financial diagnosis of Malaysian Small and Medium Enterprises financial performance by focusing on their liquidity, solvency, capital structure, and profitability positions using financial ratio analysis. The financial ratios used in this study are solvency ratio, debt-to-equity ratio, current ratio, return on equity ratio and return on asset ratio. Data for the study covered the period 2015 to 2020 and 100 private limited companies from different sectors registered under the SME Corporation website are selected randomly from the listing of SME100 Awards. Data collected through the analysis of key ratios are analyzed using multiple regression. Then, test and assess the Beta Coefficient followed by Multicollinearity test, with the aim to identify the extend of correlation between independent variables and dependent variables. The outcome of this study would provide some insights to internal and external stakeholders towards designing and implementing future strategies to enhance enterprises financial performance.

Keywords: Small and Medium Enterprises (SMEs), Liquidity, Solvency, Capital Structure, Profitability

Introduction

Profitability is the primary goal of all business ventures (Devi and Pant, 2020). Every enterprise from large scale to small scale has the same goal: looking for profit. Without profitability, the business enterprise will not survive in the long run (Tabash and Hassan, 2017). It provides overall performance of an enterprise and shows how efficiently the management can make profit by using all the resources available in the market (Svatosova, 2017).

A successful business is strived to have adequate cash balances as well as healthy profit figures, for which it should strive to be profitable and cash generative (Kamaluddin, Ishak and Mohammed, 2019).

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A healthy cash flow position result in liquidity of an enterprise which helps it sustain its operation resulting in generation of higher profits and prudent re-investment of the profits results in the growth of the enterprise (Nguyen and Nguyen, 2018).

Unlike larger enterprises, Small and Medium Enterprises (SMEs), small in nature, are affected in larger degree with limited source of funds and less likely to have access to formal financing channels (Omar, Ishak and Jusoh, 2020). In relation to this, according to the Ministry of Finance's (MoF) Economic Report 2019/2020, accessing to financing persist to be a challenge for SMEs and start-ups due largely to inadequate cash flow to meet repayments, insufficient collateral, and documentation, as well as non-viable and high risks related to business ventures (Tan, 2019). Given the relatively vulnerable financial position of SMEs, SMEs are hit with great force when an external crisis jeopardizes markets, such as the recent Covid-19 pandemic (Kottika, Ryden, Theodorakis and et. al., 2020).

Human Resources Minister of Malaysia revealed that the impact of Covid-19 has raised many concerns in Malaysia especially for SMEs as there is a real risk of insolvency since business is limited due to the closure of premises during the Movement Control Order imposed by the Malaysian Government, for which a total of 2,713 SME shuttered between March and October 2020 (Lee, 2021). Additionally, the Bank Negara Malaysia (BNM) statistics shows that the financial risks of SMEs are already visible during the third and fourth quarter of 2019, due to the average debt-to-equity ratio stood at 25% and profit margin of only 5.7% (BNM, 2020). Thus, the impact of immediate shocks scenarios on business stability are unavoidable (Eggers, 2020).

Therefore, this study is carried out to examine the influence of financial ratios against financial performance of SMEs in Malaysia. The specific objectives of the study are to examine the assets and liabilities of the enterprises, diagnosis their financial health, and analyze their financial performance.

Literature Review

Review of Profitability

Profitability is a key measure of a successful business (Chou and Buchdadi, 2018). A business that is not profitable may not survive while a business that is highly profitable could reward its owners with large returns on their investment (Hirnisia and Zariyawati, 2017). Profitability determines the survival and growth of a company and is the difference between revenue generated from the sale of output and expenses over a given period of time, for which, measures a company's ability to earn income or revenue in all its activities (Chou and Buchdadi, 2018). It thus, reveal how efficient a company is in resource management and is measured in the company's ability to utilise its assets in generating revenue (Hamzani and Achmad, 2018).

Several aspects and formulas in past studies had been used in measuring profitability of an enterprise. A study by Chou and Buchdadi (2018) stated that profitability or financial performance of an enterprise can be scaled with the proxies like return on equity (ROE) and return on assets (ROA). ROA is a widely used ratio to show the results (return) on the amount of assets used in the company, while ROE is used to describe the performance of the company in terms of the use of profits for the benefit of the company's owners (Devi and Pant, 2020). The higher the two profitability ratios, the better as this implies that

resource usage has been minimized (Ozili, 2017). This in turn is supplemented by the study of Kamaluddin et. al. (2019) that different classes of profitability ratios can be measured through the results stated on the income statement to balance sheet information, for which to probe with which management can generate profits, in comparison to the amount of equity or assets at their disposal.

The formulas of profitability ratio are as follows.

i) Return on Assets= Net Income/Total Assets

ii) Return on Equity= Net Income/Shareholder Equity

In the literature, determinants of profitability can be categorized between those that are internal and those that are external (Kamran, Zhao and Ambreen, 2017). Studies dealing with internal determinants employ variables such as capital ratio, operating expenses, liquidity ratio, size, ownership structure, characteristics of the boards of directors and quality of assets (Sam, Li and Ismail, 2018). On the contrary, external determinants are the macroeconomic factors that concerned with those factors outside the influence of the enterprise, for example political environment, GDP and inflation (Kamran et. al., 2017).

Review of Liquidity

Liquidity and profitability are two important variables which give information about the performance of any business enterprise, with that, for long-term survival and healthy growth both liquidity and profitability should go parallel to each other (Hassan, Khan and Paltrinieri, 2019). Liquidity refers to the management of current asset and current liability of an enterprise that playing key role in defining, whether a firm is able to effectively manage its short-term obligations using its most liquid assets (Tabash and Hassan, 2017). Ibrahim (2017) further explained that maintaining a balance liquidity level is necessary for the effectiveness and profitability of an enterprise, and thus, enterprise needs to determine the optimum level of the liquidity in order to ensure high profitability. This is aligned with a study by Baimwera and Muriuki (2016), clarified that liquidity should neither be too low nor too high as an enterprise with low current assets will face a problem for the continuous operations whereas if an enterprise has excess liquidity assets rather than certain requirements, it is also badly affected for the profitability purpose. Ibrahim (2017) indicated that strong liquidity helps small enterprise to generate funds internally and the large enterprise avoid insolvency.

Therefore, current ratio is adopted to measure the extent to which current asset of a company is able to meet its short-term obligations on time (Yendrawati and Mahendra, 2018). Current ratio means a company's ability to pay off short-term liabilities with its short-term assets, however, inventory is included in the current assets which can sometimes be an illiquid form of assets (Baraja and Yosya, 2019).

The formula of current ratio is as follows.

Current ratio= Current Assets/Current liabilities

The analysis of liquidity provides the base of relevant information necessary for efficient liquidity management (Yendrawati and Mahendra, 2018). According to Ibrahim (2017), a company with high level of liquidity has lower risk of repayment failure over its short-term debt. Hence, liquidity management is essential with the aim for improving performance of the company and its value enhancement (Ibrahim, 2017).

Review of Solvency

An enterprise's ability to repay long-term debts including principal payments and its benefits can be reflected by measuring the level of solvency of the enterprise (Robinson, Henry, and Pirie et. al., 2020). In relation to this, solvency ratio is adopted to measure the extent to which an enterprise's ability to implement its long-term liabilities (Palamalai and Britto, 2017). This is supported by Moreira (2016) that solvency ratio is a key metric used to measure an enterprise's ability to meet its obligations, and this ratio indicates whether an enterprise's cash flow is sufficient to repay its short-term and long-term liabilities.

Solvability analysis focuses on reactions in the balance sheet show the ability to pay off both current liabilities and non-current liabilities (Yendrawati and Mahendra, 2018). Based on a study by Bruwer (2018), solvency is the comparison between the total size of assets and total liabilities, for which, if a business company's total assets are greater than its total liabilities it is deemed to be solvent; otherwise, it is deemed as insolvent.

The formula of solvency ratio which is as follow.

Solvency ratio = (After Tax Net Profit + Depreciation)/Total liabilities

Tanaka, Higashide, and Kinkyō et. al. (2019) stated that a higher solvency ratio indicates an ability of a bank to meet its financial obligations, while a lower ratio shows a higher risk of default on debt obligations, hence a greater risk to banks and creditors. This finding is aligned with Singh (2017), stated that overall companies with higher solvency ratio are viewed as more likely to fulfil their financial obligations, whereas those with lower scores as seen as posing a greater risk to banks and creditors.

Review of Capital Structure

As presented in some research papers, the attraction of capital has played a significant role in improving the financial performance of corporate enterprises irrespective of their industry (Jaisinghani and Kanjilal, 2017). According to Nguyen (2020), the relationship between capital structure and profitability cannot be ignored as the long-term survivability of enterprise largely depends upon the improvement in the profitability of the enterprise. This is further explained by Musah (2017), since the interest paid on debt is tax deductible payments, thus the addition of debt in the capital structure will improve the profitability of the enterprise.

Capital structure is simply defined as the combination of debt and equity capital that composite an enterprise's financing its assets, while financing is referred to as a process of generating cash which can be used for acquisition of assets, current operations, or any expected growth (Nguyen, 2020). Enterprises are facing competitive pressures in the marketplace and are aware of well managing capital structure through financing their business activities are critical for them to survive and maximize the enterprise value or wealth of shareholder, and hence, optimal capital structure is important to achieve this objective (Ali, Ullah, and Shah et. al., 2016). Contrarily, enterprise may fail to enjoy benefits of leverage if a sound debt-equity composition in its capital structure is omitted (Musah, 2017).

Capital structure can be measured by debt-to-equity ratio (Yeo, 2016). Debt-to-equity ratio is selected to measure a company's financial leverage and indicates the proportions of equity and debt that a company uses to finance its assets (Mselmi, Lahiani and Hamza, 2017). According to Zorn, Esteves, and Baur et.

al. (2018), debt-to-equity ratio depicts how much the holders leveraged their equity in the business.

The formula of debt-to-equity ratio is as follows.

Debt-to-Equity ratio = Total Debt/Total Equity

Data and Methodology

The Data

The data collection method is via the use of secondary data. The financial statements are derived from the Commission of Companies in Malaysia (CCM). The data is taken from financial statements to compare the ratios for six financial years, from 2015 to 2020. The collected data from this source has been compiled and used with due care as per the requirement of the study.

The Methodology

This is a descriptive based study which focusing on establishing the relationship between variables and profitability of Small and Medium Enterprises in Malaysia. Three independent variables, namely liquidity which is measured by current ratio, solvency which is measured by solvency ratio and capital structure which is measured by debt-to-equity ratio are used in this study. The dependent variable, which is profitability is measured by return of assets and return of equity. These ratios are selected based on the popularity of their usage in performance assessment in past studies. In relation to this, correlation design approach is applied in this research.

This research is deemed as non-contrived and it will be conducted with zero interference from the researcher as the data obtained from the analysis are from secondary sources, for which the secondary data is derived from annual report of Malaysians Small and Medium Enterprises that submitted in Commission of Companies in Malaysia (CCM), an autonomous body that functions as a one-stop center for corporate information, regulation, and development of conducive business environment.

The population of this study comprised of Small and Medium Enterprises that are based in Malaysia from 2015 to 2020. The samples come from 100 private limited companies from different sectors registered under the SME Corporation website over the 6 years period.

The selection is done randomly from the listing of SME100 Awards, which is a premier regional award for Small and Medium Enterprises that served as the pinnacle of trust and benchmark of reliability among business owners. The Awards identify and recognize Small and Medium Enterprises based on a basket of quantitative and qualitative criteria with a focus on growth and resilience, including history of business, viability and sustainability based on financial reports, credibility and reputation of the business owner and overall growth of the company. The reason of selecting samples from SME100 Awards is to identify Small and Medium Enterprises with healthy financial performance as most of the failed enterprises do not submit their financial reports when the winding-up period approached, which may lead to insufficient financial information for measurement.

In this section, it is first start with pulling out the data by extracting all the financial ratios, followed by organizing the extracted data appropriately and accordingly. The financial ratios used in this study are return on equity, return on assets, current ratio, solvency ratio and debt-to-equity ratio.

In hypothesis testing, it will first start with multiple regression testing to gauge the extend of the model fit. Then, test and assess the Beta Coefficient followed by Multicollinearity test, with the aim to identify the extend of correlation between independent variables and dependent variables. The test of significance of overall multiple regression models was made through F-test. This test was conducted to verify the validity of each of the regression model. With the aim of evaluating the significance of regression coefficients vis-à-vis establishing validity of the model, F-test was performed at 0.05 level of significance.

Correlation analysis is done to study the interrelationship between different sets of independent and dependent variables. In addition, Breusch-Pagan Test is performed once the regression model is fit. This test produces a Chi-Square test statistic and a corresponding p-value. Stata was used for analyzing the data.

Lastly, panel data is adopted to conduct data analysis in this study as the used of panel data provides the repeated observation data of enterprises at different time points in time.

Results and Discussion

Regression Analysis

The summary of regression model in measuring the relationship of the three independent variables, namely liquidity which is measured by current ratio, solvency which is measured by solvency ratio and capital structure which is measured by debt-to-equity ratio against the dependent variable, which is profitability that measured by return of assets and return of equity for the period of 2015 to 2020 is presented in the below tables.

Table 1: Model Summary for Dependent Variable

Measurement	Obs	Parms	RMSE	R-sq	F	P
ROE	405	4	205.32	0.50	133.84	0.00
ROA	405	4	2.09	0.01	1.72	0.16

In case of Return on Equity (ROE), the result of the analysis shows that RMSE stands at 205.32; while Return on Asset (ROA) recorded at 2.09. This implies that ROA is better fit of the model. In addition, the result of R sq shows that both ROE and ROA are fit to the model, recorded at 0.50 and 0.01, respectively.

Further, the p-value for ROE is lesser than 0.05, recorded at 0.00, indicating that this variable is significant. Along with the result of F-test, the result for ROE indicates this variable is significant, stands at 133.84. Whereas in the case of ROA, the p-value is recorded at 0.16 which is more than 0.05 level of significance. This implies that ROA is insignificant.

Correlation Analysis

The correlation analysis between different measures of profitability is presented in Table 2.

Table 2: Correlation Analysis between Independence Variables and Dependent Variables

Measurement	ROE	ROA	Current Ratio	Solvency Ratio	Debt-to-Equity Ratio
ROE	1.00				
ROA	0.08	1.00			
	-				
Current Ratio	0.01	-0.09	1.00		
Solvency Ratio	0.00	0.06	0.01	1.00	
Debt-to-Equity Ratio	0.71	0.04	0.00	0.00	1.00

The correlation matrix shows the relationship among the variables. From the above tables, it can be concluded that the positive linear correlation between residuals of ROE and ROA is insignificant. This also concludes that residuals of both variables are independent.

In addition, results showed that the correlation between Current Ratio and Profitability Ratio as measured by ROE and ROA is essentially zero. This implies that there is no linear correlation between these two variables. However, a negative correlation exists between ROE and Current Ratio (-0.01), which is very close to zero, therefore, there is almost no linear correlation between the variables. This also indicates that it would not cause any effect on the regression assumptions. It is also observed that the correlation between ROA and Current Ratio (-0.09) is negative but insignificant at 5% level (>0.05).

Moreover, table shows that Solvency Ratio is not correlated to ROE, ROA and Current Ratio and Debt-to-Equity Ratio, ranging from 0.00 to 0.001, and therefore they would not cause any bias in the regression results in the case. Additionally, Solvency Ratio (0.06) is positively correlated to dependent variable, ROA.

The correlation of Debt-to-Equity Ratio (0.71) is positive and significant for ROE at 5% level (>0.05), but it does not play a significant role for other variables (<0.05). Therefore, it can be concluded that the Debt-to-Equity Ratio has significant linear association with ROE and no linear association with ROA (0.04), Current Ratio (0.00) and Solvency Ratio (0.00).

Conclusion and Recommendation

Small and Medium Enterprises (SMEs) have been the backbone of Malaysian economy as they are generally deemed as the driving force of economic growth, job creation, and poverty reduction in the country. To ensure Small and Medium Enterprises to survive, therefore, the objective of this study is to carry out a financial diagnosis of Malaysian Small and Medium Enterprise financial performance by

focusing on their liquidity, solvency, capital structure and profitability position. Data for the study covered the period 2015 to 2020 and 100 private limited companies from different sectors are analysed. Having seen the results and the relationships existing between the variables on the regression table, this section of the chapter made conclusions based on the outlined objectives viz-a-viz the hypotheses formulated to test the said objectives.

Liquidity and profitability are two important aspects of an enterprise's financial health. Although the ultimate goal of an enterprise is to gain profit and maximize the wealth of shareholder, liquidity management still is deemed as paramount especially in times of crisis. The reason being is that if the company could not even fulfil its short-term obligations and survive, generating profit and maximizing its shareholders wealth are out of question. Therefore, a financial manager must find the right balance between liquidity to ensure the survival of an enterprise and keep profitability maintained in order to give the optimal return for its shareholder. The results in this study reveal that there is indeed inverse relationship between liquidity and profitability of Malaysian SMEs, even though the relationship is proved to be weak.

Conflicts arise always between cash flow of an enterprise and its profitability. The conflict arises because the maximization of enterprise's returns could seriously threaten the cash flow and on the other hand, the pursuit of cash flow tends to dilute returns. The study therefore recommends that liquidity, solvency, capital structure and profitability of Malaysian Small and Medium Enterprises should be given key attention in view of their connection with the company's shareholders wealth maximization necessary for the long-term survival, stability, and sustainability.

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