



The Performance of Companies Involved in Mergers and Acquisitions During Financial Global Crisis: Evidence from Malaysia

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ABSTRACT

This paper analyses the performance of company that involved in Merger and Acquisitions (M&A) activity in Malaysia by using Pooled Ordinary Least Square (OLS) and Breusch and Pagan Lagrangian Multiplier Test (BP). Using the data before the crisis year (year 2003-2006) and after (year 2008-2011), it is found that before M&A, the solvency shows a negative significant relationship and the operating performance shows positive significant relationship. On the other hand, after M&A, the operating performance and profitability shows significant relationship towards the performance of those companies except for liquidity and solvency. It is recommended that the government should consider legislation to regulate M&A especially during financial global crisis. Additionally, it is also recommended for future research to include political issue as a factor since it may have an impact on the acquiring companies that involved in series of M&A in multiple years especially during the financial global crisis.

KEYWORDS: Liquidity, Solvency, Profitability, Operating Performance, Mergers and Acquisitions, Malaysia.

INTRODUCTION

With the present competitive business environment, it forces companies to chase for the national champion at global level. In order to achieve such position, a good business strategy is vital which would allow the company not only to compete but also to keep growing and sustain its business at the global market. It aims to be the survival of the fittest due to the desire to increase market for corporate control by involving in merger and acquisition (M&A) activities despite the financial global crisis [1, 2].

Merger and Acquisitions (M&A) is an investment strategy that could boost the development of the company within short period [3]. The fact that firms need an effective approach to improve their ability to achieve better economies of scale and increasing liquidity by expanding their capital based [4] would as a result strengthen and sustain firms' position in the market. Therefore, it is recognised that M&A is a tool for market penetration tactics [5] and as agreed in previous studies, M&A is significantly important for market concentration [6].

However, the benefits derived from M&A activities are difficult to assess because of the problem in the select index evaluation. Regardless of the method of valuation used for proof performance in finance, M&A would not succeed. Therefore, the firm would not accept returns on just buying another company alone, without taking into account the value of the company. This scenario has been reinforced that lack of due diligence on the financial, asset management is one of the factors for such failure [7].

There are various evidences of M&A activities happening everywhere across the globe and Malaysia is not an exception [8, 9]. In Malaysia, the scenario of M&A activities can be seen through the active involvement of public firms with the aim to achieve growth. One of the factors that may contribute to the aggressive involvement of M&A by companies in Malaysia is due to the encouragement by the government in any sector namely banking, tourism, telecommunications, aviation/airlines, manufacturing, plantation and technology. Recent research in Malaysia on M&A has examined the technical efficiency of the acquiring companies [10, 11].

Many studies have been done on M&A banking industry but very few studies focus on other industries in Malaysia which involved in M&A especially during financial global crisis. One of the studies which have been done in Malaysia touched on the impact of the Asian financial crisis on corporate real estate acquisitions [12]. The present study would take into account the evidence in Malaysia by analyzing the performance of companies from various industries which involved in M&A during financial global crisis in 2007.

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METHODOLOGY

As have been mentioned above, this study focuses on various industries which involved in M&A activities in 2007. Successful M&A transactions selected are based on the announcement appeared on Bursa Malaysia unless otherwise noted for reasons of certainty and accuracy [13, 14].

The year 2007 is considered as the peak year for M&A activities in Malaysia due to global crisis. The year 2003-2006 is labelled as the period pre-M&A while the year 2008-2011 is labelled as the period post-M&A with the purpose to evaluate and compare the financial performance between the former and latter.

Nine companies chosen for the purpose of this study are N2N Connect Bhd, Nationwide Express Berhad, NI Hsin Resrcs. Berhad, Unisem (M) Berhad, Versatile Creative Berhad, Willowglen MSC Berhad, Far East Holdings Berhad, Fotronics Corp. Berhad and DKSH Holdings Berhad. However, NPC Resources Berhad, Wong Engineering Corporation Berhad and Freight Management Holdings Berhad are not included in the sample because the relevant data needed for this study is insufficient.

Yearly data has been collected from the company's annual report and data stream database. The raw data obtained have been converted into Microsoft Excel for the reasons of convenience, consistent and satisfy the requirements of the panel data regression analysis. Excel data are arranged by sequence starting from the year, the company code, the dependent variable and the independent variables and further analysis by using STATA software.

The objective of the study is to determine the relationship between independent variables and the significance of liquidity (current ratio), solvency (debt-equity ratio), operating performance (operating profit margin) and profitability (return on equity) of the company's overall performance pre- and post M&A. The performance of the company is associated with the net profit margin by determine the difference before and after the merger occurred [15]. In order to determine whether mergers and acquisitions are the best option to save the organization from the financial crisis is to analyse using financial ratios of liquidity ratio [16]. In addition, to compare pre-merge and post-merge is by using independent variables such as operating profit margin (OPM), return on equity (ROE) and debt to equity ratio (DER) [17]. Financial data for merger firm is analysed through parameter solvency which debt to equity is calculated [18]. Thus, the following hypotheses have been developed to fulfil the objective of this research.

Hypothesis 1

Ho: There is no significant relationship between the Current Ratio and Net Profit Margin

H1: There is significant relationship between the Current Ratio and Net Profit Margin

Hypothesis 2

Ho: There is no significant relationship between the Debt to Equity and Net Profit Margin.

H1: There is significant relationship between the Debt to Equity and Net Profit Margin.

Hypothesis 3

Ho: There is no significant relationship between the Operating Profit Margin and Net Profit Margin.

H1: There is significant relationship between the Operating Profit Margin and Net Profit Margin.

Hypothesis 4

Ho: There is no significant relationship between the Return on Equity and Net Profit Margin.

H1: There is significant relationship between the Return on Equity and Net Profit Margin.

Model Specification

The panel data model specify in this study is as the following structure.

$$Y_{i,t} = \alpha_i + \beta_1 X_{1\ i,t} + \beta_2 X_{2\ i,t} + \beta_3 X_{3\ i,t} + \beta_4 X_{4\ i,t} + \varepsilon_{i,t} \quad (1)$$

where:

Y = Performance: Net Profit Margin (npm)

α = is the vertical intercept (constant value)

b1 = is Y/X1, the marginal effect of Current Ratio on Net Profit Margin

b2 = is Y/X2, the marginal effect of Debt to Equity on Net Profit Margin

b3 = is Y/X3 the marginal effect of Operating Profit Margin on Net Profit Margin

b4 = is Y/X4 the marginal effect of Return on Equity on Net Profit Margin

X1 = independent variable: Current Ratio (cr)

- X2 = independent variable: Debt to Equity (de)
- X3 = independent variable: Operating Profit Margin (m)
- X4 = independent variable: Return on Equity (roe)

The equation above would be converted into a single equation which is known as log-log model. All variables namely ln(NPM), ln(CR), ln(DE), ln(OPM) and ln(ROE) are entered as quantitative variables. The general log-log model is as the following.

$$\ln(\text{npm}_{i,t}) = \beta_1 \ln(\text{cr}_{i,t}) + \beta_2 \ln(\text{de}_{i,t}) + \beta_3 \ln(\text{m}_{i,t}) + \beta_4 \ln(\text{roe}_{i,t}) + \varepsilon_{i,t} \tag{2}$$

where npm represents the Net Profit Margin, cr represents the Current Ratio, de represents the Debt to Equity, m represents the Operating Profit Margin and roe represents the Return on Equity. Besides, t-sign represents the time trend, β represents the coefficient value and ε represents the random error term.

In order to study the performance of the selected companies, the researchers have used the independent variables namely liquidity (current ratio), solvency (debt to equity ratio), operating performance (operating profit margin) and profitability (return on equity). The analysis involved three types of models which are OLS (pooled ordinary least square), REM (random effects model) and FEM (fixed effects model). The panel data regression analysis is made twice because there are two different times period labelled as mentioned above which are before and after the M&A. In order to determine the suitability of those models for this study, the Breusch and Pagan Lagrangian Multiplier test has been used and as a result, the OLS model is the most suitable and regarded as the final model.

There are five levels of analysis involved namely pooled ordinary least square (OLS), Breusch and Pagan Lagrangian Multiplier test, Random Effects Model (REM), Hausman Fixed Test and Fixed Effects Model (FEM). OLS is a panel data regression analysis and it is the basic method to study the simultaneous effect of several independent variables on the dependent variable.

Statistic Breusch and Pagan Lagrangian Multiplier test has been conducted to determine the OLS and REM by view the value p-chi2. If the null hypothesis (Ho) is accepted, then the OLS are used and on other hand, if the null hypothesis (Ho) is not accepted, then REM would be used. The next stage is to select the REM with FEM by using Hausman Fixed Test. For this purpose, if the null hypothesis (Ho) is accepted, then REM is chosen to analyze the data. On the other hand, if the null hypothesis (Ho) is not accepted, then the FEM would be used to analyze the data. After analyzing the data for the two periods of time pre- and post-M&A, the result for Breusch and Pagan Lagrangian Multiplier test shows that the probability chi2 is insignificant. Thus, the researchers accept null hypothesis (Ho) which OLS has been chosen as the final model.

FINDINGS AND DISCUSSION

The results and data analysis of this study are performed using STATA 10.1. The results obtained to clarify the significant relationship between the independent variables with the dependent variable in two different periods of pre- and post-M&A. Thus, the discussion begins with descriptive statistics, correlation coefficient analysis and multiple regression analysis.

Descriptive Statistics

Table 1: Descriptive statistics mean

Variable	Pre-M&A	Post-M&A
Performance~npm	7.360278	-3.1925
Liquidiy~cr	6.486562	4.482778
Solvency~de	64.01375	29.91833
Operating~m	9.836389	-3.361944
Profitability~roe	10.405	-9.830277

Table 1 shows the pre-M&A used by the researchers and as a result, highest mean value is debt to equity where the value is 64.01375% and the lowest value is current ratio where the amount average is 6.486562 times. The mean value for net profit margin is recorded 7.360278%, operating profit margin is 9.836389% and the mean value for return on equity is 10.405%. However, referring to post-M&A, the mean value net profit margin is -3.1925% represent that the companies have obtained loss. Similarly, the operating net profit margin is -3.361944% and return on equity is -9.830277%. The current ratio and debt to equity provided an average of 4.482778% and 29.91833%.

Correlation Coefficient Analysis

Table 2: Multicollinearity problem using Variance Inflation Factor (VIF)

Pre-M&A	Post-M&A
3.32	4.08

Table 2 shows the result mean VIF for pre-M&A is 3.32, while post-M&A is 4.08. Both values are less than 5 (< 5). Therefore, it can be concluded that there is no problem of Multicollinearity between variables. In addition, it shows that the two independent variables are not closely related to each other.

Furthermore, there is no serious correlation exists between independents variables under Multicollinearity Problems using Correlation Matrix for pre and post-M&A.

Table 3: Heteroskedasticity problems

PROB > chi2	
Pre-M&A	Post-M&A
0.0246	0.4482

Table 3 shows that the probability chi2 for the pre-M&A is 0.0246 and post-M&A is 0.4482. Therefore, it can be concluded that, there is no heteroskedasticity problem occurred between variables and it shows that the value of net profit margin is fitted.

Multiple Regression Results

The researchers tested the data for regression using the STATA Program (Static Panel Data Regression Analysis). In Tables 4, 5 and 6 show the results under the pooled ordinary least square (OLS).

Table 4: Result of model summary: R-squared

Model Summary	Pre- M&A	Post- M&A
R-squared (R ²)	0.8481	0.9336
Adjusted R-squared (Adj. R ²)	0.7975	0.9070

The R-squared (R²) explain on the performance of the company influenced by level of liquidity, leverage, operating performance and profitability. The value or R² is depending on how one measures it. Refer to Table 4, before M&A, R² is 84.81% and adj. R² is 79.75% which indicate that the regression line is perfectly fit the data.

Meanwhile, under post- M&A, the R² for the OLS shows 0.9336 which means the performance of the company has been explained by 93.36% from liquidity, leverage, operating performance and profitability. The adjusted R² attempts to yield more honest value to estimate and the result shows 90.70% which is near to 1.0 and this shows that the regression line fits the data well.

Table 5: Result of coefficients (Pre-M&A)

lperforman~m	Coef.	Std. Err.	t	P> t
lliquiditycr	-.1519128	.3489392	-0.44	0.671
lsolvencyde	-.3439983	.1572072	-2.19	0.049
loperating~m	.4898062	.1950934	2.51	0.027
lroe	.2414833	.2324081	1.04	0.319
_cons	1.338207	.8591335	1.56	0.145

In order to explain the OLS, researchers need to determine the p-value of the variables. There is a significant relationship if variables is not less than 0.05 (< 0.05). The p-value for the variables need to be tested with 1%, 5% and 10% in order to identify either there is a significant relationship or vice versa. By using the OLS, the result for the pre- M&A shows that there is a significant value for debt to equity and operating profit margin at 5%. Table 5 shows that debt to equity has significant p-value which is 0.049 and operating profit margin is 0.027. Both variables have p-value less than 0.05 (< 0.05) and this shows that both variables have significant value. However, the p-value of current ratio and return on equity show insignificant value.

Table 6: Result of coefficients (Post-M&A)

lperforman~m	Coef.	Std. Err.	t	P> t
lliquiditycr	.654573	.3470526	1.89	0.089
lsolvencyde	-.0094599	.1150886	-0.08	0.936
loperating~m	1.05468	.1906374	5.53	0.000
lroe	.4581052	.1558682	2.94	0.015
_cons	-1.870418	.7655683	-2.44	0.035

Table 6 shows the result of OLS for post-M&A. There are significant values for current ratio, operating profit margin and return on equity. The operating profit margin is significant at 1%, return on equity is significant at 5% and current ratio is significant at 10%. The present research findings are supported by previous study which stated that the current ratio is affected by the events of M&A. This indicates that liquidity has significant positive influence on operational performance after the M&A [19, 16].

The results show that operating profit margin has significant p-value which is 0.000 and return on equity is 0.015. Both variables have p-value less than 0.05 (< 0.05) and it tells that both variables have significant value. An empirical evidence [20] found; supported the present findings which show significant positive of return on equity post-M&A. The present finding on operating profit margin is also supported by other former empirical study [21] which demonstrates significant positive result. Meanwhile, the p-value of debt to equity shows insignificant value. The debt to equity showed no interest which is similar to some studies made formerly [22].

In summary, the earlier hypothesis for debt to equity ratio H_0 is accepted. It shows there is no relationship between debt to equity and net profit margin. For liquidity ratio, H_0 is not accepted. Meaning that, there is significant relationship between current ratio and performance of the company proxy by net profit margin. However, based on the OLS result, current ratio is significant at 10%. Furthermore, operating profit margin and return on equity show significant relationship between performances of the company at 5% and 95% confidence interval. Therefore, H_0 is not accepted.

CONCLUSION AND RECOMMENDATIONS

This paper analyses the performance of company that involved in Merger and Acquisitions (M&A) activity in Malaysia. The findings reveal that the debt to equity and operating profit margin have a significant relationship for pre-M&A. Comparatively for post-M&A, operating profit margin and return on equity have significant relationship to the net profit margin. However, the current ratio shows significant relationship is only at 10%.

Following this study, several suggestions are pointed by the researchers for better future research in this area. For those companies that involved in M&A, it is suggested that these companies to make extra effort to gain profit that enable them to sustain their performance after M&A. One of the strategies that they could adopt is by managing properly the companies' finance. An operational restructuring is needed in order to increase competitiveness and sustain financial position of the companies that involved in M&A. Additionally, companies should create products or/and services by using the media or by optimizing the budget next income to improve the profit gain. For pre-M&A companies, it is advisable that they keep sufficient current assets to protect their current liabilities as well as running proper due diligence process of the other company that they wish to combine with. In addition, managers should practice ethical decision making [23, 24] to manage the companies' finance.

Furthermore, government should play an important role in enhancing the competitiveness of companies [25]. Financial Services Act 2013, which governing the M&As in the banking sector, should be extended to other sectors [26] in order to prevent companies from recklessly getting involved in M&A especially during global financial crisis which may be detrimental to shareholder interests. Thus, the government should consider legislation regulating M&As [1, 2, 14].

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