Liquidity, Growth and Profitability of Non-financial Public Listed Malaysia: A Malaysian Evidence

Mazurina Mohd Ali[1], Nik Noor Ayu Nik Hussin[1] & Erlane K. Ghani[1]

[1] Faculty of Accountancy, Universiti Teknologi MARA, Puncak Alam, Malaysia

Correspondence: Erlane K. Ghani, Accounting Research Institute, Universiti Teknologi MARA, 40250 Shah Alam Selangor, Malaysia. Tel: 60-16-2388-429.

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Abstract

This study examines the relationship between liquidity, growth and profitability of non-financial firms listed on the Bursa Malaysia. Specifically, this study examines the relationship between liquidity and growth on profitability for 50 non-financial public listed firms in Malaysia. Using panel data technique on 250 observations across a five-year period, this study shows that liquidity has a strong positive relationship with profitability in terms of return on asset of the firms. However, liquidity in terms of quick ratio has no impact on profitability. This study also shows that firm growth in terms of sales growth has a negative relationship with profitability. However, this study shows that liquidity and growth in general do not influence profitability in terms of return on equity, although the result shows that sustainable growth rate has a positive relationship on profitability. This study highlights the importance of these measures in measuring performance. The findings in this study provide guidelines to the firms on the measures that best to be used in evaluating performance so that appropriate strategies can be adopted to increase performance.

Keywords: liquidity, growth, profitability, performance evaluation, public listed companies

1. Introduction

The main objective of setting up a firm is to make profit. To determine whether profit is achieved, a firm often evaluate its performance based on profitability and compare its actual performance with targeted goals. Often, a firm that has high profitability would grow whilst a less profitable firm is assuming to decrease in its share value (Coad, 2007). To increase profitability, a firm needs to have a strategic planning in managing its operations and cash flow (Ghani, Jamal, Puspitasari and Gunardi, 2018). However, the objective of achieving profitability can be deterred by many factors. Among the factors that have been identified in the literature are liquidity, ownership structure and firm growth (Asimakopoulos, Samitas and Papadogonas, 2009; Burja, 2011; Jang and Park, 2011; Bolek and Wiliński, 2012; Abdullah, Ali and Haron, 2017).

There is a long debate on the importance of liquidity and firm growth on profitability in terms of which of these two factors play a more dominant role in increasing the profitability of a firm. A review of the literature shows that there is no general agreement on how liquidity and firm growth relate to profitability. Billah and Jakob (2015) argue that liquidity ratio such as current ratio and quick ratio would assist investors to determine whether the firms have enough coverage in meeting near-term cash requirements and therefore, play an important role in influencing profitability. Cowling (2004) on the other hand, highlights the importance of firm growth on firm profitability and found that there is no identifiable growth-profitability trade-off.

This study aims to examine of the relationship between liquidity, firm growth and profitability of non-financial firms listed on the Bursa Malaysia. The results of this study provide guidelines to the firms on the best measurement to be used in evaluating their performance. The remainder of this paper is structured as follows. The next section, Section 2 provides the literature review. Section 3 presents the research framework and hypotheses development. This is followed by an outline of the research design of this study in Section 4. Section 5 presents the results of the data analyses. The last section concludes this study.

2. Literature Review

Profitability refers to the ability of a firm in generating profit. Firms that do not have constant profit would not be able to survive in the market. The management of a firm has to take all possible actions with regards to the economic

resources in facilitating the firm in generating profit. The economic resources can be obtained through internal sources such as capital or external sources such as loan. Firms often combine internal and external sources to fund their operations and increase their profitability (Ali, Abu Bakar and Ghani, 2018). Profitability is often measured by income and expenditure by way of using ratios. Two main ratios of profitability are return on asset and return on equity (Akoto, Awunyo and Angmor, 2013; Zygmunt, 2013; Zaid, Ibrahim and Zulqernain 2014). These studies used return on asset to act as proxy to profitability as it shows the actual positions of the firm. Studies have also used return on equity as proxy to profitability because it shows how a firm generates profit from the investors' investment (Zygmunt, 2013; Rehman, Zhan and Khokar, 2015; Aremu & Ediagbonya 2018).). In other words, these ratios manifest a firm's ability to generate earnings relative to sales, assets and equity. However, what actually influence profitability has yet to be thoroughly examined.

One of the factors that could influence profitability is liquidity. Liquidity is a major concern to the internal and external users as it affects the financial cost or growth, changes in business and firm hazard level and consequently, firm profitability (Zygmunt, 2013 Aremu, 2018). According to Alshatti (2015), firms should determine the optimal amount of cash that enable them in achieving a balance between profitability and liquidity. This is because each level of liquidity has a different effect on the level of profitability. The problem arises when the firms try to maximise their profit at the expense of neglecting the liquidity effect, which may cause a technical and financial hardship (Eljelly, 2004).

A group of studies have examined whether liquidity influence profitability (Eljelly, 2004; Bolek and Wiliński, 2012; Zygmunt, 2013, Zaid et al., 2014; Alshatti, 2015). These studies show that liquidity impacts firm profitability. For example: Zygmunt (2013) and Amouzesh, Moeinfar and Mousavi (2011) prove the existence of a significant relationship between liquidity and profitability. Alshatti (2015) shows that quick ratio has a positive relationship with profitability. She also shows that current ratio provides significant relationship on profitability but the relationship is negative. Similarly, Zaid et al. (2014) also show that liquidity has a significant relationship with profitability among the public listed construction firms in Malaysia. However, Bolek and Wiliński (2012) and Eljelly (2004) found firm liquidity negatively influence firm profitability.

Studies that have examined liquidity have often used various proxies to measure liquidity. One of the proxies is current ratio. Current ratio communicates a firm's capacity to pay obligations in a certain period of time. A firm needs to ensure that its current resources are higher than its amount than current obligations. For example: Zygmunt (2013) used receivable transformation period, stock transformation period, accounts payables change period, and in addition money change period to measure firm liquidity. Another proxy that is often being used to measure liquidity is quick ratio (Zygmunt, 2013; Alshatti, 2015; Rehman et al., 2015). Quick ratio measures a firm's ability to pay debts within a short period of time. Rehman et al., (2015) found that quick ratio has a negative relationship with return on asset in their Saudi Arabia study.

A body of the literature has also examined the effect of firm growth on profitability (Markman and Gartner, 2002; Kouser, Bano, Azeem and Masood-ul-Hassan, 2012; Lee, 2014). It is also a source of the evolution and development of country's economics. Firm growth refers to an ongoing process or progressing, structured and orderly practice that affects profitability (Asimakopoulos et al., 2009; Aldulaimi & Abdeldayem 2018). It is often measured by the difference between the current and prior year's net sales divided by the prior year's net sales. Studies have shown that growth has also become an essential factor that reflects the success of a firm (Kouser et al., 2012). Coad (2007) shows that firms that are more profitable will continue to firm growth whilst firms with less profitability will lost their market share. Lee (2014) on the other hand, found that firm growth can be affected by profitability but the effect is only in the case of mature and old firms.

Another group of studies however, did not find conclusive evidence that firm growth influence profitability (Markman and Gartner, 2002). For example: Markman and Gardner (2002) found firms that have extraordinary high growth in terms of sales and number of employees does not influence firm profitability. Lee (2014) also shows that firm growth affects profitability positively but not the other way round. Kouser et al. (2012) suggest that firm growth has strong positive relationship with profitability. They suggest that increase in firm growth contributes to the breakdown of informal contacts established from time to time in the firms and that greater growth requires greater formality in relationships in the workplace. Of consequence, it reduces profitability. However, there is a lack of study that examined the relationship between growth and profitability using a Malaysian context.

Studies that have examined firm growth have often used various proxies to measure firm growth (Markman and Gardner, 2002; Amouzeh et al., 2011; Jang and Park, 2011). One of the proxies is sustainable growth rate. These studies used sales growth as proxy since it is easier to obtain the sales figure to reflect users' demand for product and

services of the firms. This proxy was introduced by Higgins (1989) to demonstrate that the financial policies of many firms might be at variance with their growth objective. For example: Using 54 firms listed in the Iran financial market over a 4 year period from 2006 to 2009, Amouzeh et al. (2011) found that sustainable growth rate has a relationship with return on asset. Other studies have also used sales growth as a proxy of firm growth (Markman and Gartner, 2002; Jang and Park, 2011; Aremu,2018).

3. Research Framework and Hypotheses Development

3.1 Research Framework

Figure 1 depicts the research framework of this study. As shown in Figure 1, this study expects that there is a significant relationship between liquidity and firm growth, and firm profitability. Liquidity and firm growth are the independent variables and firm profitability is the dependent variable.

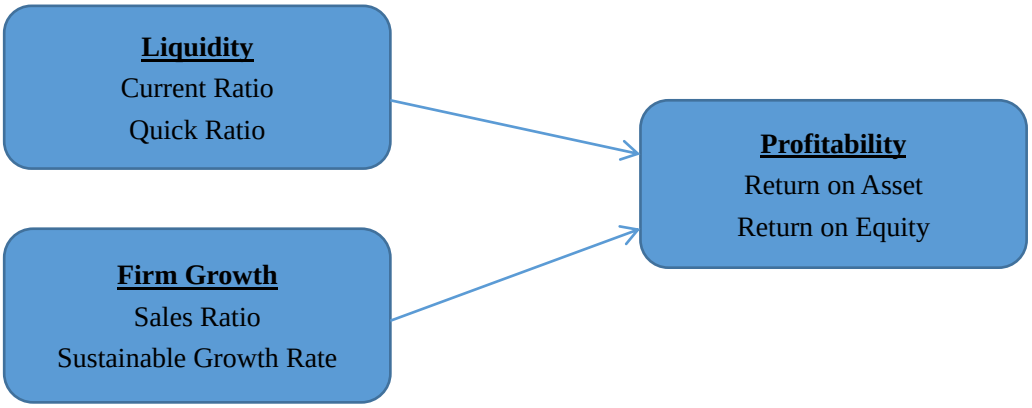

Figure 1. Research framework

3.2 Hypotheses Development

Studies that have examined the relationship between liquidity and profitability have provided mixed findings. There are studies that found significant positive relationship between liquidity and profitability whilst other studies found negative relationship between liquidity and profitability. For example: Rehman et al. (2015) examined the relationship between profitability and liquidity using current ratio on firms in Saudi Arabia. The result of the study shows that there is a positive significant relationship between return on assets and current ratio of the firms in Saudi Arabia. Similar results are found in Owolabi and Obida (2012) and Zygmunt (2013). However, Bolek and Wiliński (2012) found liquidity negatively influences firm profitability. The mixed findings led to the development of the following hypotheses:

H1: There is a positive relationship between current ratio and return on asset of the firms in Malaysia.

H2: There is a positive relationship between quick ratio and return on asset of the firms in Malaysia.

H3: There is a positive relationship between current ratio and return on equity of the firms in Malaysia.

H4: There is a positive relationship between quick ratio and return on equity of the firms in Malaysia.

A group of studies has also examined the relationship between firm growth and profitability. These studies generally show that firm growth in terms of sales growth has a positive relationship with profitability of the firm. A firm that has high sales output improves its revenues which consequently have more funds for further expansion. According to the Asimakopoulos et al. (2009), firm profitability is positively affected by sales growth. On the other hand, sustainable growth rate is the best tool for firms to fix a target growth rate using the internally generated funds. Raiyani (2011) examined how two companies use sustainable growth to take advantage of the fast growing information technology market and became successful. These studies indicate that firm growth is likely to impact profitability. Therefore, the following hypotheses are developed:

H5: There is a positive relationship between sales growth and return on asset of the firms in Malaysia.

H6: There is a positive relationship between sustainable growth rate and return on asset of the firms in Malaysia.

H7: There is a positive relationship between sales growth and return on equity of the firms in Malaysia.

H8: There is a positive relationship between sustainable growth rate and return on equity of the firms in Malaysia.

4. Research Design

4.1 Sample Selection

This study uses the financial statements of 50 public listed firms in Malaysia as the sample study. A sample of 50 public listed companies on Bursa Malaysia with financial statements from 2011-2015 is selected and used to determine the relationships between liquidity, growth and profitability of the public listed firms. The sample is selected using simple random sampling for firms that have financial year ended by 31 December. The sectors that the firms are in are selected based on contribution of each sector to the Malaysian economy as a whole to represent an entire population of the Malaysian public listed firms. Such selection procedure follows the study by Rehman et al. (2015) and Billah and Jakob (2015). Table 1 presents the sample selection of this study.

Table 1. Sample selection

Sector	Number of Firms
Consumer products	13
Construction	11
Trading/Services	7
Properties	6
Industrial	9
Plantation	2
Technology	2
Sample firms used in this study	50

4.2 Variable Operationalisation

Table 2 shows the variable operationalisation for this study. The dependent variable is profitability whilst the independent variables are current ratio, quick ratio, sales growth and sustainable growth rate. These variables are similar to previous studies (Zygmunt, 2013; Alshatti, 2015; Rehman et al. , 2015; Akhir, et.al 2018). For example: Zygmunt (2013) examines liquidity and profitability relationships in Polish listed information technology firms in which the proxies to measure profitability are return on assets and return on equity, and return on sales ratio is used to measure profitability.

Table 2. Variable operationalisation

Variables	
Dependent Variable :	
Profitability	Return on Asset
	Return on Equity
Independent Variables:	
Liquidity	Current Ratio
	Quick Ratio
Growth	Sales growth
	Sustainable Growth Rate

4.3 Data Collection

This study uses secondary data to achieve the objectives of this study. The data was extracted from the financial statements of 50 public listed firms in Malaysia, this study uses a total of 250 firms-years data in which data was collected for five years from 2011–2015 (50 firms x 5 years financial statements). For each financial statement, this study extracted the data related to liquidity, firm growth and profitability. For example: Since the financial statements would not show the figure related to liquidity such as current ratio and quick ratio, this study has to calculate to determine the figure for the ratios. For current ratio, this study has to determine the total current asset divided by the total current liability. This study calculated each ratio for all the variables in this study. The data collection took about 3 months to complete. Table 3 shows how each of the ratios were determined.

Table 3. Variable measurement

Variable	Measurement
Profitability	Return on asset = $\frac{\text{Profit after tax}}{\text{Total Assets}} \times 100$
	Return on equity = $\frac{\text{Profit after tax}}{\text{Total Equity}} \times 100$
Liquidity	Current ratio = $\frac{\text{Current asset}}{\text{Current liabilities}} \times 100$
	Quick ratio = $\frac{\text{Current asset - Inventory}}{\text{Current liabilities}} \times 100$
Firm Growth	Sales growth
	Sustainable growth rate = ROE x (1 – Dividend Payout ratio)

5. Results

5.1 Descriptive Statistics

Table 4 reveals the descriptive statistics of the dependent and independent variables of 50 firms in Bursa Malaysia over a five year period. The descriptive statistics show the selected financial ratios as measured by return on assets, return on equity, current ratio, quick ratio, sales growth and sustainable growth rate have a positive mean value which ranges from 42.09% for sales growth to 2.81 in quick ratio. The highest standard deviation is revealed by sales growth and the least by current ratio. In relation to liquidity ratio, the result shows a range of current ratio and quick ratio respectively, from 0.00 to 58.80 with standard deviation of 7.396, from 0.00 to 58.10 with standard deviation of 7.404. Meanwhile, the average value of return on asset is 6.78, indicating the average return on asset and return on equity of a firm is 6.78 times and 7.04 times. This may vary from firm to firm as the value of the standard deviation 37.179 is showing that there is 37% variation is existed in the series of the return on asset and 19% variation for return on equity.

Table 4. Descriptive statistics

Statistics	Mean	Median	Std. Deviation	Minimum	Maximum
Return on Asset	6.78	3.87	37.179	-29.22	576.10
Return on Equity	7.04	5.47	19.010	-72.46	154.94
Current Ratio	3.41	1.70	7.396	0.00	58.80
Quick Ratio	2.81	1.25	7.404	0.00	58.10
Sales Growth	42.09	5.04	322.058	-97.95	3807.33
Sustainable Growth Rate	3.97	3.84	16.711	-72.46	154.94
Valid N (listwise)	250				

The results indicate that the higher the ratio, the more liquid the firm is. If the current ratio is less than 1 (minimum 0.00), it shows that the position of the firm's liquidity is weak. On the other hand, even the data has a high maximum current ratio (58.80), it does not signify good signal in terms of liquidity as it shows the firm is generally considered to have good short-term finance. The excess amount of cash or inventory tends to harm e firm performance and thus, reduce profitability. The firm should use excessive cash to pay liabilities, buy assets or invest in other project in order to generate more income. The results also show that the mean score of current ratio is 3.41. This indicates a good liquidity position for most of the firms. The highest standard deviation in this study is revealed by sales growth (322.06) and the least is by current ratio (7.39).

5.2 Relationship Between Liquidity, Firm Growth and Return on Asset

Table 5 shows that the results for determining the relationship between liquidity, firm growth, and return on asset as a proxy of profitability. The results show that the return on asset is positively and weakly correlated with current ratio (r = 0.285; p<0.01) and quick ratio (r = 0.289; p<0.01). The results also show that return on asset is positively and moderately correlated with sales growth (r = 0.419; p<0.01) and positively but highly correlated with sustainable growth rate (r = 0.850; p<0.01). The results indicate that to a small extent, an increase in current ratio and quick ratio increases return on asset. There is also to a moderate extent, an increase in sales increases return on asset and to a high extent, an increase in sustainable growth rate increases return on asset or vice versa.

Table 5. Liquidity, firm growth and return on asset

Variable	Return on Asset	
	Spearman Coefficient of Correlation (*r*)	*p*-value
Current ratio	0.285	0.000**
Quick ratio	0.289	0.000**
Sales growth	0.419	0.000**
Sustainable growth rate	0.850	0.000**

** Significant at 0.01

5.3 Relationship Between Liquidity, Firm Growth and Return on Asset

Table 6 presents the results of determining the relationship between liquidity, firm growth and return on equity as a proxy of profitability. The results show that return on equity is positively and weakly correlated with current ratio (r = 0.185; p<0.01) and quick ratio (r = 0.231; p<0.01). The results also show that return on equity is positively and moderately correlated with sales growth (r = 0.433; p<0.01) and positively but highly correlated with sustainable growth rate (r = 0.910; p<0.01). The results indicate that to a small extent, an increase in current ratio and quick ratio increases return on equity. There is also to a moderate extent, an increase in sales growth increases return on asset and to a high extent, an increase in sustainable growth rate increases return on equity or vice versa.

Table 6. Liquidity, firm growth and return on equity

Variable	Return on Equity	
	Spearman Coefficient of Correlation (*r*)	*p*-value
Current ratio	0.185	0.000**
Quick ratio	0.231	0.000**
Sales growth	0.433	0.000**
Sustainable growth rate	0.910	0.000**

** Significant at 0.01

5.4 Regression Analyses

As regression analysis requires that data to be normally distributed, the observation values were initially converted to its natural logarithmic equivalents (LN) and then subjected again to the skewness and kurtosis test of normality. Table 7 shows that the skewness values for LN return on asset, LN return on equity, LN current ratio, LN quick ratio, LN sales growth and LN sustainable growth rate are between -2 to 2. That is, the observation values of return on asset, return on equity, current ratio, quick ratio, sales and sustainable growth rate in its natural logarithmic equivalents are now normally distributed, hence satisfying the assumption of regression analysis.

Table 7. Summary statistics of Skewness and Kurtosis: test of normality

Variable	Skewness-value	Kurtosis value
1. LN Return on Asset	-0.836	1.590
2. LN Return on Equity	-1.641	5.971
3. LN Current Ratio	0.334	0.286
4. LN Quick Ratio	-0.250	2.598
5. LN Sales growth	0.384	3.442
6. LN Sustainable Growth Rate	-1.393	4.333

The regression equation is statistically significant at 0.01 (p<0.01), implying that there is an association between return on asset and any or all of the independent variables. The R-square value being 0.646. This indicates that the four independent variables as a whole account for 65% of the variation in the dependent variable (return on asset). Hence, the effect of current ratio, quick ratio, sales growth and sustainable growth rate as a whole on audit detection performance is moderately high. Looking at the individual regression coefficient, one finds that the coefficient of LN current ratio and LN sustainable growth rate are statistically significant at 0.01 (p<0.01) whilst sales growth is significant at 0.05 (p<0.05). However, the quick ratio is not statistically significant at 0.05 (p<0.05). The results showing the coefficient of LN current ratio (0.719) and LN sustainable growth rate (0.481) indicate that an increase in current ratio and sustainable growth rate, increases the return on asset, whilst the coefficient of LN sales growth (-0.081) indicates that increase in sales would reduce return on asset. However, LN quick ratio has no impact on return on asset at all.

Table 8 presents the summary statistics of the estimated regression equation. The results show that the regression equation is statistically significant at 0.01 (p<0.01), implying that there is an association between return on equity and any or all of the independent variables. The R-square value is 0.752. This indicates that the four independent variables as a whole account for 75% of the variation in the dependent variable (return on equity). Hence, the effect of current ratio, quick ratio, sales growth and sustainable growth rate as a whole on audit detection performance is high. Based on the individual regression coefficient, the result indicates that only the coefficient of sustainable growth rate is statistically significant at 0.01 (p<0.01), whereas those of current ratio, quick ratio, and sales growth are not. The coefficient of sustainable growth rate being positive (0.805) means that an increase in sustainable growth rate increases return on equity, while changes in the other three variables have no impact at all on return on equity.

Table 8. Estimated regression equation

Variable	Coefficient	*t*-value	*p*-value
1. LN Current ratio	0.377	1.901	0.060
2. LN Quick ratio	-0.031	-0.180	0.8585
3. LN Sales growth	-0.051	-1.284	0.202
4. LN Sustainable growth rate	0.805	17.790	0.000**
F	87.731		0.000**
R^2	0.752		

** Significant at 0.01

6. Conclusion

This study examines the relationship of liquidity and firm growth on the profitability for the firms listed on Bursa Malaysia. This study used 50 firms listed in Bursa Malaysia over a five year period 2011 to 2015. The results in this study show that liquidity has a significant relationship on profitability of the firms in Malaysia. Such finding is consistent with Rehman et al. (2015), Owolabi and Obida (2012) and Zygmunt (2013). This study also shows firm growth influence profitability. This finding is consistent to Fonseka et al. (2012), Ale, (2018). In addition, this study shows that between liquidity and firm growth, liquidity plays a more dominant role in influencing the profitability of the firms. The findings in this study are consistent with Abbasi & Malik (2015) and Asimakopoulos et al. (2009). Hence, the findings in this study signify the importance of liquidity and firm growth in influencing profitability of the firms.

This study is not without limitations. First, this study focused solely on top 50 firms in selected sectors of Bursa Malaysia, thus may affect the generalizability of this study. Consequently, the findings may not apply to other sectors of Bursa Malaysia. Secondly, this study used two ratios each from liquidity and growth. Future study can be benefitted by using a greater number of liquidity and growth ratios. Future study can also employs more sectors from many firms from Bursa Malaysia to compare the liquidity performance using traditional ratios and cash flow ratios. Moreover, further research may include liquidity and growth assessment of specific industry (e.g. customer product industry) of a developing country with those of a developed country by using more ratios. The findings in this study provide guidelines to the firms on the measures that best to be used in evaluating performance so that appropriate strategies can be adopted to increase performance.

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