THE EFFECT OF LIQUIDITY AND SOLVENCY ON PROFITABILITY: THE CASE OF PUBLIC-LISTED CONSUMER PRODUCT COMPANIES IN MALAYSIA

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A thesis submitted in
fulfillment of the requirement for the award of the
Degree of Master of in Science of Technology Management

Faculty of Technology Management and Business
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JUNE 2017

DEDICATION

To my beloved family members,
Thank you for always being with me

ACKNOWLEDGEMENT

I thank God for His unceasing love in granting me the opportunity to pursue my master degree and the ability to successfully undertake the research.

I would like to express my special thanks and gratitude to my respectable supervisor, Dr Kamilah Binti Ahmad for her endless support encouragement and guidance during the research work. Furthermore, I would like to express my warm thanks to those who were directly and indirectly involved within the process of completing this research. I would like to thank the personnel of the Faculty of Technology Management and Business for their cooperation during my research.

Last but not least, I sincerely thank to my beloved family members and friends for their continuous support in all forms, both physically and mentally which has resulted in the completion of my research.

ABSTRACT

The optimal level of liquidity and solvency has been one of the key financial components essential for a smooth operation, particularly in maintaining firm performance. Successful companies will normally manipulate the two closely interrelated financial elements; liquidity and debt structure to maximize the firm's value as well for achieving an optimal hedging strategy. Subsequently a careful attention to these two elements will help companies to achieve a lower reduction in a bankruptcy costs and to reduce the likelihood of financial distress. The illiquidity problem, unless remedied, will lead to insolvency as the business liabilities exceed its assets. For larger organizations, maintaining a good level of liquidity can ensure the stability of the business. Thus, this study sought to examine the effect of liquidity and debt on the profitability among large firms in consumer product sector in Malaysia. In order to meet the objectives a quantitative panel data methodology was employed. The data were obtained from the audited financial statements of 116 firms in consumer product sector for the period of three years (2012 – 2015). The findings reveal that liquidity in term of quick ratio has positive and significant effect on profitability. While, current ratio has negative but insignificant effect on profitability. The result further reveals that solvency has no significant effect on profitability. The study recommends that the firms can improve their performance by increasing the level of liquidity and maintaining their optimal debt structure level.

ABSTRAK

Tahap optimum kecairan dan kesolvenan merupakan salah satu komponen kewangan yang penting bagi mana-mana organisasi untuk memastikan operasi yang lancar, terutamanya dalam mengekalkan prestasi syarikat. Syarikat-syarikat besar biasanya memanipulasi tahap kecairan dan hutang untuk memaksimumkan prestasi dan pulangan mereka. Kekurangan kecairan merupakan petunjuk krisis kecairan. Ketidakcairan, melainkan diperbaiki, akan menyebabkan ketidakmampuan untuk membayar dan akhirnya muflis kerana liabiliti perniagaan melebihi aset. Bagi organisasi yang besar, mengekalkan tahap kecairan yang baik dapat memastikan kestabilan perniagaan. Kajian ini bertujuan untuk mengkaji kesan kecairan dan solvensi kepada keuntungan antara syarikat besar dalam sektor produk pengguna di Malaysia. Dalam usaha untuk memenuhi objektif kajian ini kaedah panel data kuantitatif telah digunakan. Data diperolehi daripada penyata kewangan yang telah diaudit daripada 116 syarikat dalam sektor produk pengguna bagi tempoh tiga tahun (2012 - 2015). Dapatan kajian menunjukkan bahawa kecairan dari segi nisbah cepat mempunyai hubungan positif yang signifikan kepada keuntungan. Manakala, nisbah semasa mempunyai hubungan negatif tetapi tidak signifikan dengan keuntungan. Dapatan kajian juga menunjukkan bahawa solvensi tiada hubungan signifikan dengan keuntungan. Kajian ini mencadangkan bahawa syarikat boleh meningkatkan prestasi syarikat dengan meningkatkan tahap kecairan dan mengekalkan tahap hutang optimum.

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LIST OF ABBREVIATIONS

CR	-	Current Ratio
QR	-	Quick Ratio
DR	-	Debt Ratio
DER	-	Debt to Equity Ratio
ROA	-	Return On Asset
ROE	-	Return On Equity

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The financial performance of companies is a subject that has attracted a lot of attention, comments and interests from both financial experts, researchers, the general public and the management of corporate entities. The financial performance of a firm can be analyzed in terms of profitability, dividend growth, sales turnover, return on investments among others. However, there is still debate among several disciplines regarding how the performance of firms should be measured and the factors that affect financial performance of companies (Liargovas and Skandalis, 2008). According to Iswatia and Anshoria (2007) performance is the function of the ability of an organization to gain and manage the resources in several different ways to develop competitive advantage. Firms with high leverage have greater incentive to engage in hedging due to the tax incentives (Jin and Jorian, 2006). Thus, firm with higher profitability decrease the expected cost of distress and let the firms increase their tax benefits by raising leverage. On the other hand, firms with highly liquid assets have less incentive to engage in hedging because they are exposed to a lower probability of financial distress (Kim and Sung, 2005) and allows the firms to take advantage of future investment opportunity to generate profitability (Mello and Parson, 2000).

Liquidity and solvency are two important key indicators used to measures the efficiency of company. While there may be interrelations between liquidity and debt

based on the hedging theory, large companies normally manage the level of liquidity and debt to maximize their performance and returns. Hedging principle involves matching the cash flow generating characteristics of an asset with the maturity of the source of financing used to acquire the asset (Burrow et al., 2015). The activity of hedging is undertaken mainly for shielding the revenue streams, profitability and balance sheets of companies against adverse price movements and cyclical reversals (Ghosh, 2013). A good hedging practice, hence, encompasses efforts on the part of companies to get a clear picture of their risk profile, risk appetite and benefits from risk aversion by hedging (Ghost, 2013).

Liquidity refers to the balance of assets in the form of cash or readily convertible into cash (current assets) and current liabilities (Dahiyat, 2016) whereas, solvency is the ability of a firms to have enough assets to cover its liabilities (Murray, 2016). Liquidity can also be defined as the ability to provide cash to meet day-to-day needs as they arise (Walsh, 2008). Meanwhile Kesimli and Gunay (2011) argued that liquidity is an investment in current assets and current liabilities which are liquidated within one year or less and is therefore crucial for firm's day to day operations. This component is essential in all firms to meet expected and contingent liquidity demands (Dahiyat, 2016).

Liquidity is closely related to working capital which is the money needed to finance the daily revenue generating activities of the firm. According to Vahid et al. (2012) working capital management plays a significant role in determining success or failure of firm in business performance due to its effect on firm's profitability. Business success depends heavily on the ability of financial managers to effectively manage the components of working capital (Filbeck and Krueger, 2005). A firm may adopt an aggressive or a conservative working capital management policy to achieve this goal. Therefore, organization must be able to generate enough money to cover short-term obligations to become liquid organization.

Liquidity ratios are a set of ratios that are used to calculate the liquidity position of an entity. These ratios help to determine whether an entity will be able to meet its financial obligations in the short-term. Low liquidity level will cause an organization to struggle to meet the obligations of business operations and therefore is forced to seek debt financing to support its operations. Jenkinson (2008) noted that liquidity is an important financial indicator that measures whether the company has the ability to meet its short term liabilities or not without incurring undesirable losses. Due to

ineffective use of assets, liquidity risk may arise which is obviously a most challenging risk compared to other financial risks. Subhanij (2010) argued that liquidity risk has become more complex because of recent developments in financial markets. Moreover, a liquidity crisis of a single company can affect, directly or indirectly, all the companies operating in the same industry. A firm with adequate liquidity has greater financial flexibility so it can negotiate with suppliers and financiers (CPA Australia, 2010).

According to Bhunia (2010) liquidity plays a significant role in the successful functioning of a business firm. A firm should ensure that it does not suffer from lack-of or excess liquidity to meet its short-term demands. There are various methods for analyzing liquidity for a business enterprise. Liquidity ratios used in liquidity management by each organization in the form of a current ratio and quick ratio. Quick ratio has a significant effect in the course of operation in which high ratio level will enable the company to avoid immediate payment and non-payment of debt or dependence on debt. While the current ratio (containing cash and near-cash assets such as inventories) could be an indication of short-term debt repayment capability and long-term installment payment by an organization (Saleem and Rehman, 2011). Therefore both ratios provide good indicator for assessing level of liquidity management in an organization.

Solvency on the other hand indicates the ability to meet long term financial obligation (Dahiyat, 2016). Solvency is traditionally viewed as arising from financing activities: firms borrow to raise cash for operations (Dahiyat, 2016). Solvency ratios used in solvency management by each organization in the form of a debt ratio and debt to equity ratio. Debt ratio will be calculated as a measure of solvency through measuring debt level of a business as a percentage of its total assets. It is calculated by dividing total debt of a business by its total assets. If the percentage is too high, it might indicate that it difficult for the business to pay off its debts and continue operations (Walsh, 2008). Meanwhile, debt to equity ratio is intended to bring out relative importance of debt financing in the firm and the risks in such financing (Khidmat and Rehman, 2014). In addition, return on asset and return on equity are need calculated to measure the profitability. Return on asset indicates the net income produced by total assets during a period by dividing net income to the average total assets (Gibson, 2009). Return on equity is measured as the ratio of profit generated to the total investment capital provided by the owner of the firm (Khidmat and Rehman, 2014).

Optimal debt ratio is generally defined as the one which minimizes the cost of capital for the company, while maximizing the value of company. According to static trade off theory, optimal capital structure is obtained by balancing the tax advantage of debt financing and leverage related costs such as financial distress and bankruptcy, holding firm's assets and investment constant. In other words, the optimal debt ratio is the one which maximizes the profitability of company (Kebewar and Ahmed Shah, 2013). On the other hand, perking order theory suggest that firms make use of internal finance first and if it is necessary firms issue the safest security first in order to maximize the profit (Myers, 1984).

Therefore, liquidity and solvency can affect the profitability of a firm. Managers should strive to manage the effects of liquidity and solvency on the firm's profitability in order to maintain an acceptable productivity level. This will require effective planning that allows managers to be proactive and anticipate change, rather than be reactive to unanticipated change.

1.2 Research Background

This study focuses on corporate large companies in consumer product sector due to funding decisions for either long term or short term is very critical and significant for large-sized businesses. Consumer product sector is a category of stocks and companies that relate to items purchased by individuals rather than by manufacturers and industries. The consumer products industry can be divided into four groups: beverages, food, toiletries and cosmetics, and small appliances. Most firms offer products that fit primarily into only one of these groups, although a firm may have a smattering of brands that cross the lines. Generally, all companies are similar in organizational structure, emphasis on brand management, and approach to business. Consumer products are the foundation of the modern, consumer economy. The industry itself not only generates an enormous portion of the Gross Domestic Product (GDP), it also pumps huge amounts of money into other industries, notably advertising and retail.

The consumer sector is a tertiary sector of industry involves the provision of services to other businesses as well as final consumers. Firms from this industry sell products and services directly to the consumer. Services may involve the transport,

distribution and sale of goods from producer to a consumer, as may happen in wholesaling and retailing, or may involve the provision of a service, such as in pest control or entertainment. The goods may be transformed in the process of providing the service, as happens in the restaurant industry. The retail sector is a major catalyst for economic development in Malaysia and has shown GDP growth over the past few years due strong purchasing power, supported by an expanding middle class and rising household income. As shown in the figure 1.1, retail sales have grown at a high single-digit rate for each of the past two years.

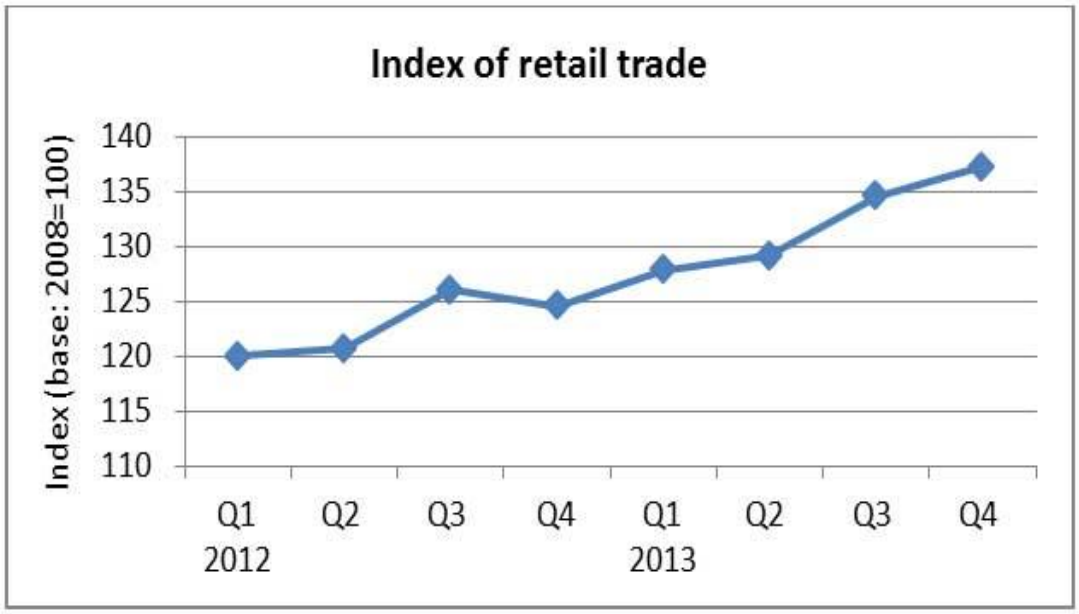

Figure 1.1: Index of retail trade

Source: Department of Statistics Malaysia 2012-2013

Growth in the sector was driven largely by strong domestic demand during 2011 to 2014 period. The wholesale and retail trade subsector grew at an average of 6.7% backed by strong household spending, high tourist arrival and rising income level. The wholesale and retail trade is one of the biggest subsectors in the economy, which contributes substantially to economic growth, provides employment and entrepreneurship opportunities as well as enhances social wellbeing. The subsector registered an average growth rate of 6.7% annually and its contribution to GDP increased from 13.9% in 2011 to 14.7% in 2013 (Department of Statistic Malaysia,

2013). The steady growth of the subsector, particularly retail trade, was largely attributed to the increase in private consumption and tourist spending. The steady growth in retail trade led to global recognition, whereby Malaysia was ranked 9th from 30 emerging economies in the 2014 (Global Retail Development Index, 2014). Malaysia's scores in the index indicate high level of market attractiveness and saturation. This signals stiffer competition in domestic market and the need for local players to venture abroad. The wholesale and retail trade sector contribute 13.9% to GDP in year 2011 while in year 2014, wholesale and retail trade sector has an increase 0.5% from 13.9% to 14.4% to GDP (Department of Statistic Malaysia, 2014). While in year 2016, retail sector recorded an increase in sales value of RM7.3 billion or 7.9 % as compared to the previous year. The increase was driven by Retail Sales of Food (10.8%), Retail Sale of Cultural and Recreation Goods in Specialised Stores (9.8%) and Retail Sale of Food, Beverages and Tobacco in Specialised Stores (8.9%) (Department of Statistic Malaysia, 2016).

In particular this study scrutinize the effect of liquidity and solvency of a company on profitability of the firms. Liquidity and solvency play a big role for enhancing firm's profitability. However, there is less evidence in view of whether the level of liquidity and solvency of a firm can influence the level profitability of a firm particularly from the perspectives of the Malaysian firms.

1.3 Problem Statement

One of the major objectives of a firm is to maximize the wealth of owners or shareholders of the firm. The profitability of companies is a subject that has attracted a lot of attention, comments and interests from both financial experts, researchers, the general public and the management of corporate entities. The profitability of the company is affected by liquidity and solvency. One of the problem that affect the profitability of the company is liquidity risk. Liquidity risk occurs when a company is not able to meet its business obligations (Jenkinson, 2008). Muranaga and Oshawa (2002) defined liquidity risk as the risk of being unable a position timely at a reasonable prices. It occurs due to failure in the funds, or also due to the unfavorable economic situation. Furthermore, mismatches of current assets and liabilities are also

among the causes of liquidity problems that would lead to drastic liquidity crisis (Mishkin et al., 2006; Goodhart, 2008).

Good liquidity management is therefore an important objective for all companies since illiquidity may lead to insolvency (Goodhart, 2008) and poor financial performance. Illiquidity, unless remedied, will give rise to insolvency and eventually bankruptcy as the business liabilities exceed its assets. The fact that it is impossible for firm to survive without making profits cannot be over emphasized. As a result, the company does not meet its business operation and will decrease the performance off the company. A company should maintain adequate liquidity to face unexpected conditions such as seasonal demand because it may not be able to acquire funds from external sources and it could affect the income and capital of the company. For example, if a liquidity shortfall arises, the company may not be able to meet obligations to suppliers, causing suppliers to stop delivery of raw materials which will hinder the production process, economies of scale cannot be achieved and cost of production will be increased. Therefore, a company may lose its market share due to scarcity of its product in market.

The solvency problem tends to be more long-term than the previously described liquidity issue. Mehdi and Mohammed (2014) opined that the difference between liquidity and solvency lies in the fact that a liquid firm does not imply that it is solvent while a solvent firm does not imply that it is liquid. Goodhart (2008) remarked that an illiquid firm can rapidly become insolvent, and an insolvent firm illiquid. Illiquidity is a sufficient but not a necessary condition for default. Ultimately, capital must cover the losses. But in the meantime, sufficient liquidity can be the single most decisive factor in firm ability to survive a crisis.

Therefore firm must have optimal liquidity as well optimal debt level (Kebewar and Ahmed Shah, 2013) in order to enhance firm performance. The importance of liquidity can be seen when shortage of liquidity occur, the firm suffers various problems in order to maintain the day-to-day operational activities (Karmakar, 2016). In addition, due to the shortage of liquidity, a shareholder may have to lose his control of ownership which even ultimately invite lower profit-abilities. Moreover, a shareholder may not be paid his dividend in time due to shortage of liquidity (Karmakar, 2016). Therefore, the important of liquidity to the firm cannot be ignored because it will affect the day to day operation as well the firm performance. On the other hand, the importance of solvency is it can help ensure firm financial

performance. A poor solvency ratio may suggest that the company were unable to meet its obligations in the long term. Fortunately, most companies can take steps to improve their solvency ratios and boost profitability in the long term by selling assets to reduce overall debt. In addition, a company may opt to reorganize its business structure, increase owner equity or reinvest money and assets in the business (Maguire, 2016). Finally, companies should also strive to improve sales, as this will ultimately boost both profitability and solvency (Maguire, 2016).

There are substantial empirical evidences concerning factor affecting the profitability of the firms studies by many researchers (Dang, 2011; Olweny and Shipho, 2011; Gakure. 2012; Ongore and Kusa, 2013; Lartey et al., 2013; Zulqernain et al., 2014; Dahiyat, 2016). These factors include liquidity, solvency, asset quality, firm size and growth. The results of their effect on profitability have been mixed. For instance, Dang (2011) found out that adequate level of liquidity is positively related with bank profitability whereas Gakure (2012) concluded that there was a negative relationship between the level of liquidity and profitability. The review of empirical studies both in Malaysia and internationally have had mixed conclusions as to how liquidity affects profitability. For example, Zulqernain et al. (2014) found a positive relationship between liquidity and profitability of construction firms in Malaysia. Lartey et al. (2013) concluded that there was a very weak positive relationship between the liquidity and the profitability of the listed banks in Ghana. While Ongore and Kusa (2013) reported insignificant relationship between liquidity and profitability of banks.

While there are various studies on the effect of liquidity and solvency on profitability, there are few studies have been conducted in the context of firms listed at the Bursa Malaysia. Previous studies have also either concentrated on liquidity effects on performance or solvency effects on performance but not both variables effect on performance in the same study. Results of existing literature give mixed conclusions as some show negative relationship, others positively significant relationship and others no relationship at all. It is also clear from the literature review that no exhaustive study has been undertaken in Malaysia on how liquidity and solvency affect profitability of consumer product sector firms. To the knowledge of the researcher, no specific study has been carried out in Malaysia on how liquidity and solvency affect profitability of consumer product sector firms. There is therefore a gap in literature which the present study seeks to bridge to fill in the research gap and to contribute to the body of knowledge in area of liquidity, solvency and profitability.

1.4 Research Question

Two research questions were developed which as follows:

I. What is the level of liquidity, solvency and profitability among public-listed consumer product companies in Malaysia?
II. Is there any significant relationship between liquidity and solvency and profitability of public-listed consumer product companies in Malaysia?

1.5 Research Objective

The following research objectives were developed which as follows:

I. To examine the level of liquidity, solvency and profitability among public-listed consumer product companies in Malaysia.
II. To determine any significant relationship between liquidity and solvency and the profitability of public-listed consumer product companies in Malaysia.

1.6 Research Scope

The financial data retrieved from the financial statements in the period of the last 3 years (2013-2015) of 116 companies listed on Bursa Malaysia in the consumer sector are the scope of the study. The data obtained is in the form of secondary that gain through the Bursa Malaysia website. Consumer sector as firms involved in the production of food, clothing, and electronics typically involve a high sales turnover, cash and debt management is an important component to cover routine business operations.

1.7 Research Significance

The purpose of this study is determine the effect of liquidity and solvency on firm's profitability. It is expected that the result of this study concerning liquidity and solvency in the consumer product sector firms contributes to current knowledge on the performance of the firms. Efficient financial management requires the existence of some objectives or goals. This is because judgment as to whether or not a financial decision is efficient must be made in light of an appropriate management of liquidity and solvency while at the same time sustaining good returns to the shareholders. This study is greatly benefit to financial managers and chief executive officers of firms in consumer product sector in Malaysia. By understanding the relationship between liquidity and solvency and profitability, finance managers would be able to plan their working capital strategies to enhance profitability.

Moreover, this research provides information on the impact of the liquidity on firm profitability as well as the impact of solvency on firm profitability to a company more closely by investigate whether the relationship positively or inversely proportional. Finally, this research adds the evidence in the field of knowledge and research by focusing on areas of cash management. Researchers could extend their knowledge through the empirical findings of the relationship between liquidity and profitability as well relationship between solvency and firm profitability.

1.8 Operationalization of Term Definition

Martin et al. (2013) stated that the operational definition or research definition is the definition of the concept which its properties or operations can be measured through observation. For non-observable operational definition, their events, presence or absence behavior can be measured by inferring to the behavior that can be observed (Martin et al., 2013). This study uses dependent variables which is profitability comprises of return on asset and return on equity. The independent variables used in this research is liquidity measured by current ratio and quick ratio and solvency measured by debt ratio and debt to equity ratio. Table 1.1 show the summary of variable used in this research and its definitions.

Table 1.1: Operationalization Term

Term	Definition
Liquidity	Liquidity refers to the available cash for the near future, after taking into account the financial obligations corresponding to that period. It is the amount of capital that is available for investment and spending (Qasim and Ramiz, 2011).
Current ratio	Current ratio is a gross measure of liquidity in that simply compares all liquid assets with all current liabilities (Khidmat and Rehman, 2014).
Quick ratio	Albrech et al. (2008) stated that the quick ratio is the company's ability to repay short-term debt quickly without relying on stocks or ending inventory.
Solvency	Solvency indicates the ability to meet long term financial obligation (Dahiyat, 2016).
Debt ratio	Debt ratio will be calculated as a measure of solvency through measuring debt level of a business as a percentage of its total assets. It is calculated by dividing total debt of a business by its total assets, if the percentage is too high, it might indicate that it difficult for the business to pay off its debts and continue operations (Walsh, 2008).
Profitability	Profitability is a measure of the net revenue and expenses (Muthoni, 2013)
Return on asset	Return on Asset is measured as the ratio of profits generated to the total assets under the responsibility of management (Khidmat and Rehman, 2014).
Return on equity	Return on equity is measured as the ratio of profit generated to the total investment capital provided by the owners of the company (Khidmat and Rehman, 2014).

1.9 Structure of Thesis

This thesis divided into five chapters which are structured specifically to achieve the objective of the study. The following subsection describes in detail the structure of the content of each chapter

1.9.1 Chapter 1 (Introduction)

In this chapter is divided into eight sub topic that is research introduction, research background, problem statement, research question, research objective, research scope, research significance and operationalization terms. This study is conducted to determine the relationship liquidity and solvency on profitability of companies in the consumer product sector using the company's annual financial statements as the scope of the study. The consumer product sector is used as a research scope because most previous studies focused on industrial companies from industry sectors and a very few researchers used consumer product sectors as their unit of analysis. Therefore this research attempt to fill in the research gap and to contribute to the body of knowledge respectively.

1.9.2 Chapter 2 (Literature Review)

This chapter discusses the basic theory of liquidity, solvency and profitability, which includes definitions and concepts associated with the topic. In addition this chapter also discuss the measurement of liquidity, solvency and profitability. In this chapter, the previous studies were discussed to further strengthen researcher heading the study. Lastly, conceptual framework also included in this chapter to show the liquidity through its current ratio and quick ratio and solvency through debt ratio and debt to equity ratio as independent variables and their effect on the profitability measured by return on asset and return on equity of the dependent variable.

1.9.3 Chapter 3 (Research Methodology)

Research methods used to provide guidance in the process, steps, procedures and techniques for the assessment of the success of the data. In addition, the methodology is fundamental and rooted in the achievement of the objectives. This chapter discusses the following specifications covering the design of the study, a flow chart of the methodology, the sample population, data collection and data analysis. This study used correlation analysis to find relationships between the liquidity and the firm profitability as well relationship between solvency and firm profitability of 116 companies in the consumer product sector. Specifically, the analysis of the ratio of the financial statements used to focus the analysis of liquidity indicators, solvency indicators and profitability indicators of the company. Moreover, panel data analysis will also be used in a study to test the effect of liquidity and solvency on profitability. While descriptive statistics analysis was used to assess the level of liquidity, level of solvency and profitability level.

1.9.4 Chapter 4 (Data Analysis and Findings)

Generally this chapter will discuss the research findings that obtain through data analysis method using panel data analysis. In this chapter, the chapter is divided into five part consists of descriptive analysis, correlation analysis, assumptions of ordinary least square, diagnostic test and multiple regression analysis using E-VIEW version 9.1.

1.9.5 Chapter 5 (Conclusion and Recommendations)

This section relates to the discussion, conclusions and recommendations. Discussion and conclusion of the study was refer to any objectives set before the study was conducted. The discussion was conducted whether the objectives are achieved or not.

In addition, conclusions on the results of the study will be made. This in turn will makes the recommendations for further research purpose.

1.10 Summary of Chapter

This study is conducted to determine the relationship between the liquidity and solvency on the profitability of companies using the company's annual financial statements as the scope of the study. The next chapter discusses the literature that include definitions and theoretical literature on liquidity, solvency and profitability of the company as well as previous studies.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter discusses about the literature review of the study. Operational definitions of each term are explained more specifically in this chapter. Section 2.5 present the theoretical review which is used in this study. In this chapter, the previous studies were discussed to further strengthen researcher heading the study in section 2.6. Finally, section 2.7 present the conceptual framework that used in this research.

2.2 Details on Operationalization of Term Definition

This section discuss in more detail regarding the concept of liquidity, solvency and profitability

2.2.1 Working Capital Concept

The concept of working capital management addresses companies managing of their short-term capital and the goal of the management of working capital is to promote a satisfying liquidity, profitability and shareholders' value. Working capital management is the ability to control effectively and efficiently the current assets and current liabilities in a manner that provides the firm with maximum return on its assets and minimizes payments for its liabilities (Makori and Jogongo, 2013). In addition, working capital management refers to the way that firms are managing their current assets and their current liabilities. If the companies are using the right working capital management through finding the optimal balance between current assets and current liabilities, they are likely to increase their profitability and have a continual flow of cash (Maness and Zietlow, 2005). Every organization whether, profit oriented or not, irrespective of size and nature of business, requires necessary amount of working capital. Working capital is the most crucial factor for maintaining liquidity, survival, solvency and profitability of business (Mukhopadhyay, 2004).

Working capital management is one of the most important areas while making the liquidity and profitability comparisons among firms (Eljelly, 2004), involving the decision of the amount and composition of current assets and the financing of these assets. The greater the relative proportion of liquid assets, the lesser the risk of running out of cash, all other things being equal. All individual components of working capital including cash, marketable securities, account receivables and inventory management play a vital role in the performance of any firm. For this research, the liquidity has been prioritized. The following subsection elaborates more about the liquidity ratio.

2.2.1.1 Liquidity Concept

Liquidity is vital key in ensuring the stability of a company. Albrech et al. (2008) noted that liquidity is an important factor in any type of company. In addition, Albrech et al. (2008) also noted that liquidity can be defined as the ability or the ability of a company to settle current liabilities (short-term) on demand. If a company is unable to meet the demand, this will make the company difficult to survive for the long term. Liquidity refers to the available cash for the near future, after taking into account the financial

obligations corresponding to that period. It is the amount of capital that is available for investment and spending (Qasim and Ramiz, 2011).

A company that cannot pay its creditors on time and continue not to honor its obligations to the suppliers of credit, services, and goods can be declared a sick company or bankrupt company. Inability to meet the short term liabilities may affect the company's operations and in many cases it may affect its reputation too. Lack of cash or liquid assets on hand may force a company to miss the incentives given by the suppliers of credit, services, and goods. Loss of such incentives may result in higher cost of goods which in turn affect the profitability of the business. Liquidity management is very important for every organization that expects to pay current obligations on business, for example operating and financial expenses that are short term. Liquidity therefore, not only helps ensure that a person or business always has a reliable supply of cash close at hand, but it is a powerful tool in determining the financial health of future investments as well. Under critical conditions, lack of enough liquidity even results in firm's bankruptcy (Khidmat and Rehman, 2014). Liquidity ratio that been highlighted for this research is current ratio and quick ratio.

2.2.1.1.1 Current Ratio

Current ratio is one of the measurement used to measure liquidity management. According to Gowthorpe (2003), the current ratio is used to evaluate the relationship between current assets and current liabilities. Albrech et al. (2008) stated that the current ratio is a ratio that is often used to measure the liquidity of the asset when compared with current liabilities. The current ratio formula is as follows:

Current Ratio: Current Assets / Current Liabilities

2.2.1.1.2 Quick Ratio

Quick ratio also is the company's ability to repay short-term debt quickly without relying on stocks or ending inventory. Here's a quick ratio formula.

$$\textbf{Quick ratio: } \frac{\textbf{Current assets - Inventories}}{\textbf{Current liabilities}}$$

Quick ratio shows the extent of cash and other current assets that are readily convertible into cash in comparison to the short term obligations of an organization. A quick ratio of 0.5 would suggest that a company is able to settle half of its current liabilities instantaneously. Quick ratio differs from current ratio in that those current assets that are not readily convertible into cash are excluded from the calculation such as inventory and deferred tax credits since conversion of such assets into cash may take considerable time.

2.2.2 Solvency Concept

Solvency measures the amount of debt and other expense obligations used in the firm business relative to the amount of owner equity invested in the business (Langiemer, 2004). Solvency ratios provide an indication of the business's ability to repay all financial obligations if all assets were sold, as well as an indication of the ability to continue operations as a viable farm business after a financial adversity. Solvency is a necessary condition for a business to operate. If a company is unable to meets its obligation, it is said to be insolvent and must undergo bankruptcy in order to either liquidate or restructure. Too much debt can be dangerous for a company and its investors. Uncontrolled debt levels can lead to credit downgrades or worse. On the other hand, too few debts can also raise questions. Therefore, debt ratio and debt to equity ratio is used as indicator to measure the solvency of the company to make the company financial in stable position.

2.2.2.1 Debt Ratio

The debt ratio represents the fraction of total assets financed by creditors to generate profit. According to Albrech et al. (2008) debt ratio is measured by dividing total liabilities by total assets. In addition, the debt ratio is used to measure a company's ability to meet obligations to creditors. Here's a quick ratio formula:

Debt ratio: Total Liabilities/ Total Assets

2.2.2.2 Debt to Equity Ratio

This ratio is used to determine the composition of financing for a company that consists of debt and equity. Equity refers to the shares held by the shareholders. A high ratio will affect the confidence of shareholders. The formula for the ratio of debt to equity is as follows:

Debt to Equity Ratio: Total Debt / Total Equity

2.2.3 Financial performance Concept

Alanazi et al., (2011) state that the financial performance is a subjective measure of how well a firm can use assets from its primary mode of business to generate revenues. Financial performance in a broader sense refers to the degree to which financial objectives being or has been accomplished and is an important aspect of finance risk management. It is the process of measuring the results of a firm's policies and operations in monetary terms. It is used to measure firm's overall financial health over

a given period of time and can also be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Kilama, 2011). There are several indicators to measures the financial performance such as liquidity, efficiency and leverage but for this research, the profitability ratio has been prioritized. The following subsection elaborates more about the profitability ratio.

2.2.3.1 Profitability Concept

Profitability is a measure of the net revenue and expenses (Muthoni, 2013). Revenue refers to increases in owner's equity resulting from sale of goods or performance of services in the ordinary course of business (Muthoni, 2013). It consists of cash, or a promise to receive cash in the future (accounts receivable). Expenses are decreases in owner's equity resulting from the costs incurred in order to earn revenue. They may involve immediate cash payment or promises to pay in the future. Profitability is a key measure of a successful business. A business that is not profitable may not survive while a business that is highly profitable has the ability to reward its owners with large returns on their investment (Kithii, 2008). Profitability ratio is one of the financial ratios that will be used in measuring company financial performance. The successful selection and use of appropriate financial ratio is one of the key elements of the firm's financial strategy (Innocent et al., 2013). Firm size may affect a firm's capability to achieve increased competitiveness and financial performance. Garmestaniet al., (2006) found that periods of uncertainty have significantly greater effect on survivability of small firms than large firms. Larger business units tend to have a larger market size and greater control over the competitive environment, combined with access to resources that are not as available to a smaller firm. Profitability ratio consists of various ratios to calculate the income or financial performance for the company for certain time. Profitability ratio that been highlighted for this research is return on assets and return on equity.

2.2.3.1.1 Return on Asset (ROA)

Return on Asset is measured as the ratio of profits generated to the total assets under the responsibility of management (Khidmat and Rehman, 2014). Thus, return on asset reflects the net impacts of management decisions and actions along with the businesses environment of the company during a period of time. Since it reflects the efficiency of all the assets under the control of management, return on asset is an intuitively understanding measure of performance. Within the company, return on assets is most common expression of the return on investment (ROI) idea applied to performance. Below is the formula of ROA:

Return on Asset = Net Income / Total Assets

2.2.3.1.2 Return on Equity (ROE)

Return on equity is measured as the ratio of profit generated to the total investment capital provided by the owners of the company (Khidmat and Rehman, 2014). Thus, return on equity measures the profitability with which the owner's money was managed. Below is the formula for ROE:

Return on Equity = Net income / Shareholder equity

2.3 Theories Related to Liquidity and Solvency on Profitability

In this section, two theories were highlighted for explaining how liquidity and solvency affect the firm's profitability. These theories are Static trade off Theory and Perking Order Theory. The detail explanation for each theories are explained in the next subsection

2.3.1 Static Trade-off Theory

According to the static trade-off hypothesis, a firm's performance affects its target debt ratio, which in turn is reflected in the firm's choice of securities issued and its observed debt ratios (Hovakimian et al., 2004). This theory also states that optimal capital structure is obtained by balancing the tax advantage of debt financing and leverage related costs such as financial distress and bankruptcy, holding firm's assets and investment constant. According to Myers (1984), firms adopting this theory could be regarded as setting the target debt ratio and gradually moving towards achieving it. The static trade-off theory also suggests that higher profitable firms have higher target debt ratio. Higher profitability firms ensure higher tax savings from debt, lower probability of bankruptcy and higher over-investment and these require a higher target debt ratio.

According to this theory, higher profitability decreases the expected costs of distress and let firms increase their tax benefits by raising leverage; therefore, firms should prefer debt financing because of the tax benefit. As per this theory firms can borrow up to the point where the tax benefit from an extra dollar in debt is exactly equal to the cost that comes from the increased probability of financial distress (Ross et al., 2008).

It states also that firms seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress. Apart from the tax advantage of debt, agency and bankruptcy costs may encourage highly profitable firms to have more debt in their capital structure. This is because highly profitable firms are less likely to be subjected to bankruptcy risk because of their increased ability to meet debt repayment obligations. Thus, they will demand more debt to maximize their tax shield at more attractive costs of debt. For these considerations, the trade-off theory predicts a positive relationship between leverage and profitability.

2.3.2 Perking Order Theory

The pecking order theory of Myers and Majluf (1984) argues in the contrary of static trade-off theory. Within this theory it is suggested that firms make use of internal finance first and if it is necessary firms issue the safest security first. They start with debt, then hybrid securities such as bond, then as a last resort equity (Myers, 1984). This suggests that there is a certain level of hierarchy in the capital structure of firms. The reason why firms deploy retained earnings as a source of financing investment is to avoid issue cost. The reason for debt being preferred over equity is related to the high cost of issuing equity as well as fear of losing control of the firm when new equity is issued. It advocates also that the firm will borrow, rather than issuing equity, when internal cash flow is not sufficient to fund capital expenditures. Thus the amount of debt will reflect the firm's cumulative need for external funds. It concludes a negative association between leverage and profitability because high profitable firms will be able to generate more capitals through retained earnings and then have less leverage. Therefore, it is expected that there is negative relationship between leverage and profitability ratio.

The implications of the pecking order theory is that companies with few investment opportunities and substantial free cash flow will have low (or even negative) debt ratios because the cash will be used to pay down the debt. It also suggests that high-growth firms with lower operating cash flows will have high debt ratios because of their reluctance to raise new equity (Barclay and Smith, 2005). Many financial managers adopt a conservative approach when it comes to financing. In terms of this approach, an existing business is first funded by retained earnings, then debt and lastly the issue of share. This approach is consistent with the Pecking Order theory as described above which was developed by (Myers and Majluf, 1984).

2.4 Findings in Literature Review

Studies on the relationship between liquidity and solvency and firm profitability are discussed in this section.

2.4.1 Relationship between liquidity and profitability

Liquidity based research can be traced from studies on working capital management (WCM) and firm profitability. Although prior studies produce mixed results, most of studies conclude there is a negative relationship between WCM and firm profitability. The studies reviewed have used various variables to analyze the relationship, with different methodology such as linear regression and panel data regression.

Rehman et al. (2015) investigate the liquidity-profitability relationship encompasses 99 listed companies in Tadawul. The overall results revealed that there is only one positive significant relationship between return on assets and current ratio of the companies in Saudi Arabia. Further, it is revealed that there is negative but insignificant relationship between the return on assets and quick ratio and cash ratio of the companies in Saudi Arabia. Likewise in the case of return on equity, there is insignificant relationship with the three selected independent variables, namely, current ratio, quick ratio and cash ratio.

Malik and Ahmed (2013) investigate the association among corporate financial strategies related to liquidity management and corporate performance. The study use purposive sampling with 30 firm covering year 2002 to 2011. The result reveals that current ratio, inventory turnover and receivable turnover has positive significant relationship with performance while quick ratio has negative relationship with firm's performance.

Bolek (2013) examined the liquidity-profitability relationship and risk in promising companies. The results indicate that current ratio has a significant positive association with return on assets. The results of the study proved that each profitability ratio is influenced by different factors relating to liquidity and risk but the associations are similar and can expect the growth of profitability when free cash flow is increasing and the cycle of cash conversion is in declining pattern. Assets' structure ratio, in each model, was considerable signifying that the higher this ratio is the higher the profitability signifying the conservative approach to working capital. Manyo and Ogakwu (2013) investigated the impact of liquidity on return on assets of 46 quoted firms listed on the Nigerian Stock Exchange from 2000-2009. The finding show that liquidity has a significant positive impact on Return on Assets (ROA), implying that a unit change in liquidity will result into a corresponding increase in ROA.

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