

**THE EFFECT OF ACCOUNTING RATIOS ON FIRMS' VALUE:  
EVIDENCE FROM MALAYSIAN LISTED COMPANIES**

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**UNIVERSITI UTARA MALAYSIA**

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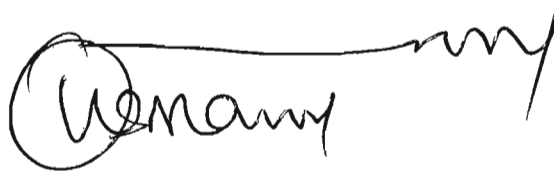
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**Project paper submitted to Othman Yeop Abdullah Graduate School of  
Business, Universiti Utara Malaysia, in Fulfillment of the Requirement for the  
Degree of Master of Science (International Accounting)**

**2013**

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## ABSTRACT

This study empirically examines the effect of accounting ratios on firms' value among Malaysian listed companies. The study utilized a sample of top 100 leading companies in Malaysia (Index Companies) for the period covering 2008 - 2012. Based on the extensive review of literature, conceptual framework was proposed and hypotheses were developed to examine the relationship between the variables of the study. A multiple regression analysis was used in analyzing the data collected. Findings from the study revealed that both liquidity and profitability ratios have a significant effect on firms' value. On the basis of the findings, the study concludes that there is increasing need for a more credible and comprehensive disclosure of accounting ratios in the annual reports of companies. On this ground, the study recommends that Malaysian regulatory authorities implement a policy or a guideline that will encourage a uniform and comprehensive disclosure of accounting ratios by companies. This in turn will avail investors and other users of financial information a better means of evaluating and making a qualitative judgment on companies' financial performance.

**Keywords:** Liquidity ratios, Profitability ratios, Financial Statement, Firms' Value, Malaysian Capital Market.

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# CHAPTER ONE

## INTRODUCTION

### 1.0 Background of the Study

Accounting is commonly termed as the language of business while finance is labeled as the lifeblood of every organization. Therefore, as a language of business, accounting encompasses the entire process of recording, classifying and summarizing data relating to economic activities of an entity and subsequent communication of output to intended users for the purpose of further analysis and interpretation (Osazevbaru, 2012).

Financial statements as spawn of accounting offer reliable and useful information to shareholders and other users of financial statement in decisions making. It also assists in predicting the outcomes of the past, present and future events as well as to correct or confirm previous expectations (Ahmed, 2012). Financial accounting reports are expected to provide a timely, relevant and reliable information to a wide range of users including shareholders, creditors, employees, management, suppliers, government agencies, stockbrokers and financial analysts for the purpose of making effective, prudent and efficient decisions.

According to Ikhatua (2013), accounting information is usually seen as the end result of accounting systems that consistently measure and disclose quantitative data regarding a firm's performance and financial position. Financial accounting information also constitutes the foundation of financial accounting reports to

shareholders and other users of accounting information. Therefore, financial accounting information invariably enhances the information environment of reporting entities.

Moreover, financial accounting information is regarded as the basic type of information to be provided to shareholders and therefore, financial ratios form part of such information. Financial ratios play a prominent part in evaluating the performance and financial condition of an entity. Financial ratios are extensively used for various purposes by practitioners and other researchers in the process of evaluating company's financial performance, in explaining investment decisions as well as in the studies of a company's performance efficiency (Chong, Yap & Mohamad, 2013). Hence, financial ratios provide the basic accounting information to a wide range of decision makers.

On the other hand, firms' value is a concept that has lately captured the attention of companies. As such, it is now prompting companies to strive hard to improve by way of improving their performance and also in term of creation of additional wealth for shareholders, enhance customers' satisfaction as well as other stakeholders (Oladipupo & Okafor, 2011). Therefore in today's globalized world, managers' principal goal is to enhance their firms' value by maximizing companies return for the benefit of those who have an ownership stake in the business (Scott, 1998). Hence, the idea behind emphasizing on firms' value is nowadays becoming imperative for most organizations which invariably propel them to get actively involved in the process.

Nevertheless, the quality and adequacy of financial information disclosed in financial statements differ across countries. In developing countries, the level of adequacy and reliability of information disclosed by companies in their financial reports is lagging behind compared to developed nations which can be attributed to ineffectiveness on the part of government regulators to drive the enforcement of existing accounting standards (Ali, Ahmed and Henry, 2004). Therefore, this situation increases information asymmetries among users of financial information.

In Malaysia, empirical evidence had confirmed the low disclosure level of accounting ratios in the annual reports of Malaysian listed companies (such as Mokhtar, Mustapha and Kamil, 2004; Awang, Mohamed Zain and Ibrahim 2004; Abdullah and Ismail, 2008). This situation is attributed to lack of standardized guidelines on disclosure of accounting ratios which is invariably motivating companies to disclose ratios that will positively portray their performance in the eyes of users of accounting information. Therefore, considering the usefulness of accounting ratios to different users of accounting information, this study will examine the effect of accounting ratios on firms' value in Malaysian capital market.

### **1.1 Statement of the Problem**

The quality and adequacy of financial information disclosed in annual reports differ across countries. In developed countries, information to be disclosed in companies' financial reports had been a topic of intensive research as compared to developing nations (Barako, 2007). Generally, the adequacy and reliability of financial information disclosed in annual reports in developing countries is lagging behind,

this is often attributed to the ineffectiveness on the part of government regulators to drive the enforcement of existing accounting standards which often increase information asymmetries among users of financial information and consequently result in the immature development of accounting practice in developing nations (Ali, Ahmed & Henry, 2004).

In the context of Malaysia, there is no regulation binding on companies with respect to the content of ratios or format of its presentation. For example, far back in 2004 Mokhtar et al. (2004) opine that Malaysian companies do not disclose a comprehensive financial ratios while others do. The researchers noted that, there is existing differences in the choice of accounting ratios as well as format of presentation among the sample companies. Thus, the absence of standardized guidelines on disclosure and presentation of financial ratios has the tendency of motivating the companies to present ratios that improve their performance in the eyes of the users.

In Malaysia, empirical studies have also provided evidence of low disclosure level of financial ratios in corporate annual reports despite its encouragement by the Malaysian Accounting Standard Board (MASB). Abdullah and Ismail (2008) conducted a study to examine 100 Malaysian listed companies in terms of extensiveness of disclosure of financial ratio and firm performance. Findings from the study evidenced low level of disclosure of ratios in corporate annual reports of the sampled companies. In another similar study conducted by Awang et al. (2004) on examination of corporate specific characteristics and extent of information provided



the study further confirms the low level of disclosure of financial ratios among the companies.

Considering the importance of accounting ratios to the constituent users of financial information that may perceive the presence of such information to be a signal of good performance, this study is desired to explore whether an association exists between firms' value and accounting ratios. Specifically, the ratios of liquidity and profitability of the top 100 leading companies (Index companies) for the period 2008 – 2012 will be utilized as a sample to represent the entire population of the listed companies in the market.

Nevertheless, the ratios of liquidity and profitability were used in this study because there are the most often used of all financial ratios and the most likely to be disclosed by companies in their annual financial reports (Williamson, 1984). Also, the two classes of ratios are chosen because of their usefulness to various constituent users of financial information, especially shareholders who require such information for investment decisions.

## **1.2 Research Questions**

1. Do liquidity ratios have effect on the value of firms' listed on the Malaysian stock market?
2. Do profitability ratios have effect on the value of firms' listed on the Malaysian stock market?

### **1.3 Objectives of the Study**

The research specifically outlined the following objectives:

1. To examine the effect of liquidity ratios on the value of firms' listed on the Malaysian stock market.
2. To examine the effect of profitability ratios on the value of firms' listed on the Malaysian stock market.

### **1.4 Significance of the Study**

Accounting information is usually seen as the end result of accounting systems that consistently measure and disclose quantitative data regarding a firm's performance and financial position and thus constitute the foundation of financial accounting reports to shareholders and other users of accounting information (Ikhatua, 2013). Financial accounting reports are expected to provide a timely, relevant and reliable information to a wide range of users including shareholders, creditors, employees, management, suppliers, government agencies, stockbrokers and financial analysts in making effective, prudent and efficient decisions.

In relation to the above assertions, this study is expected to provide a useful insight to the shareholders and other users of financial information as regards the extent of accounting information disclosure on corporate financial reports and how such information will assist the constituent users in the decision making process. Thus, the study will also be useful to stakeholders in Bursa Malaysia as it provides evidence of a relationship between accounting ratios and firms' value.

In addition, the study is also believed to be an added leverage to the fast eroding confidence of prospective shareholders (investors) in respect of reliance on accounting data in the course of making investment decisions. The study will also add to existing literatures on effect of accounting characteristics on firms' value as it provides additional empirical evidence that utilized accounting ratios to determine the firms' value.

Finally, the conclusion reached and result derived from this study will be useful to the nations standard setters in understanding the nature of the demands placed on the accounting information by various users of financial statements including the local investment community.

### **1.5 Scope of the Study**

The study provides an insight regarding the effect of accounting ratios on the value of firms' listed on Bursa Malaysia. Thus, the study is limited in scope in that, it only focuses on the ratios of liquidity and profitability of top 100 leading companies (index companies) in Bursa Malaysia for the years 2008-2012.

### **1.6 Outline of Chapters**

The study is broken down into five chapters, this current chapter carries the background of the study, followed by the problem statement and it also encompasses both research objectives and the research questions. Also, the scope and significance of the study were identified.

Chapter two of the study covers past review of related literature in the area of study. This comprises of the empirical reviews and the theoretical framework grounded in the study. The chapter also carries the hypotheses development that will be eventually tested in chapter four.

Chapter three of the study presents research methods. This encompasses the research framework, variable measurement, research design, data analysis and techniques.

Chapter four presents the data analysis, including the descriptive statistics, the correlation and regression analysis. Hence, hypotheses are tested and the result is presented and discussed thereof.

Chapter five encompasses the conclusion and recommendations as well as limitations and frontier for further research.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter basically places the study in context by reviewing some of the previous research work performed on accounting ratios and firms' value. Therefore, for the purpose of assessing the relationship of accounting ratios with firms' value, the discussion in this chapter is divided into five sections. Section 2.1 gives an overview of the Malaysian Capital Market, 2.2 give a brief overview of Malaysian financial reporting. Section 2.3 reviews related literature on accounting ratios and firms' value, Section 2.4 explores some of the theories that are relevant in clarifying the relationship between accounting ratios and firms' value. Section 2.5 is on hypotheses development.

#### **2.1 Overview of Malaysian Capital Market**

The Malaysian Stock Exchange (Bursa Malaysia) is known to be one of the growing stock markets in the world. The historical antecedents of the market can be traced back to the political developments in the west Malaysia and Singapore. The market was initially established under the auspices of Singapore Stockbroker's Association in 1930. As of then, the market was a joint venture between Malaysia and Singapore. In 1937 Singapore Stockbroker's Association was re-registered to become Malayan Stockbroker's Association.

However, the Malayan Stockbroker's Association after some series of restructuring was renamed as Malaysian Stock Exchange in March 1960 and therefore commenced public trading of shares same year. Trading was centralized in November 1960 as a result of the introduction of the Trading Post System (TPS) which links the trading rooms in Singapore and Kuala Lumpur through direct telephone lines. As of 1962, there were only 20 stockbrokers firm operating in the market.

In 1964 the Stock Exchange of Malaysia was established and in 1973, the exchange splits into two entities as a result of the termination of the currency interchangeability agreement, hence the trading of the listed shares for the two countries was done using different currencies. The split led to the establishment of the Kuala Lumpur Stock Exchange (KLSE) in Malaysia and Stock Exchange of Singapore (SES) in Singapore. With the enactment of the Security Industry Act (SIA) in 1973 and in collaboration with the Companies Act 1965, the Kuala Lumpur Stock Exchange Berhad was incorporated.

In 1976, Kuala Lumpur Stock Exchange a company limited by guarantee was established to take over the operations of Kuala Lumpur Stock Exchange Berhad. In 2004, following demutualization exercise, KLSE was re-renamed to become Bursa Malaysia Berhad (BMB). The purpose of this change was to enhance the company's competitive positioning and to respond to the dynamic global trends in the exchange sector by making the market a customer-driven and a market-oriented. A year later, Bursa Malaysia was listed on the main board of Bursa Malaysia Securities Berhad. Hence, the organization had been transformed from a non-profit motive into a profit-driven organization.

As of today, Malaysian stock exchange is known to be one of the fastest growing exchanges in the region as it is striving to introduce the process of economic development through mobilization of long-term funds from investment in both private and public developmental programs. The exchange is equally promoting private enterprise through provision of capital investment expansion as well as serving as an initiative effort by the government to create an effective market that will supplement financial system to advance the economy.

## **2.2 Overview of Malaysian Financial Reporting**

The antecedent of Malaysian financial reporting dates back to 1997 when its financial reporting framework better known as Financial Reporting Act 1997 (FRA 1997) was formally passed (Susela, 1999). The reporting framework mandated Malaysian Accounting Standards Board (MASB) to issue accounting standards while the enforcement of the standards was entrusted to three regulatory agencies. Those agencies are the Security Commission (SC), Companies Commission of Malaysia (CCM) and the Central Bank of Malaysia (Bank Negara). Thus, The Security Commission was responsible for monitoring compliance with accounting standards among the public listed companies, the central bank focus on compliance by banks and other finance related companies. While, Companies Commission of Malaysia oversees compliance with the standards by all registered companies.

In 1998, the Companies Act 1965 was amended mandating all companies incorporated in Malaysia to comply with the approved accounting standards. Specifically, the Act enjoined companies' directors to prepare their companies' accounts in accordance with the accepted accounting standards and to declare that

the financial statement put forward by them is in conformity with the approved accounting standards and therefore show the true and fair view of the financial condition and performance of their company.

Moreover, in Malaysia prior to 2005, the accepted accounting standards is recognized as Malaysian Accounting Standard Board (MASB), but with the general convergence to International Financial Reporting Standards (IFRS) around the world and within European countries in particular, the Malaysian Accounting Standards was reconstituted to become Financial Reporting Standards (FRS) and therefore the standards were re-numbered to closely coincide with that of International Financial Reporting Standards. Hence, this move was the first step taken by the Malaysian Accounting Standard Board in its quest to converge with the widely acclaimed accounting standards.

From 2006 henceforth, effort has been made to ensure that Malaysian Financial Reporting Standards are identical to the International Financial Reporting Standards on a par standard basis (Abdullah & Minhat, 2013). In 2008, the Malaysian Accounting Standard Board set a target to achieve a full convergence with the International Financial Reporting Standards by January 2012. On January 1, 2012, the Malaysian Accounting Standard Board claimed to have achieved a full convergence with the International Financial Reporting Standards and since then, the Financial Reporting Standard was renamed to Malaysian Financial Reporting Standards (MFRS). According to Abdullah and Minhat (2013) Malaysian Financial Reporting Standards are now similar to the International Financial Reporting Standards (IFRS).



### **2.3 Literature Review**

In recent years, the relationship between accounting ratios and firms' value had been given a great deal of attention in the area of business and academia (Savsar&Karaca, 2013). Accounting ratios are regarded as the basic type of information provided to shareholders and other users of accounting information. As one of the basic information disclosed in financial statements, accounting ratios are considered as a tool for evaluating the performance and the overall financial well-being of companies (Awang et al., 2004). Accounting ratios are widely used for different purposes. Predominantly, they are used as a tool for evaluating entity's performance and financial condition, in forecasting business events, in predicting business failure as well as a tool for planning and controlling the activities of companies.

However, despite being a useful tool to different constituents of accounting information users, empirical evidence has emerged on the low disclosure level of accounting ratios by companies in developing countries. This scenario is closely linked to ineffectiveness on the side of regulatory agencies that accept responsibility for determining the content or format for presenting accounting ratios (Barako, 2007).

In this regard, Malaysia being a developing country faces a similar problem, there are no regulatory agency that takes responsibility for the content or a format for presenting accounting ratios. Far back 2004, Mokhtar et al., (2004), carry out a study to determine the disclosure of financial ratios in the annual reports of Malaysian listed companies. Findings from the study indicate that a sizeable number of Malaysian listed companies do not disclose a comprehensive financial ratios in

their annual report. While others that do, select accounting ratios and the format for presentation based on those that will favor and improve their performance in the eye of users.

Moreover, evidence of the low disclosure level of financial ratios among Malaysian companies was further confirmed by Abdullah and Ismail (2008). The researchers empirically found a low disclosure level of financial ratios in annual reports on sample companies in spite of its encouragement by the Malaysian Accounting Standard Board (MASB). Similarly, Awang, et al. (2004) conducted a study to examine the corporate characteristics and the extent of financial ratios disclosure on the annual report of Malaysian listed companies. Result emanating from the study indicates a low level of financial ratio disclosure in the annual report of the companies listed on the Malaysian Stock Exchange.

Therefore, looking at the usefulness of accounting ratios to various users of accounting information and recognition of such information as a signal for good performance, this study will examine the effect of accounting ratios on the value of firms listed on the Malaysian capital market. However, studies of this nature were also carried out in various parts of the world such as the study of Savsar and Karaca (2013) who examine the effect of financial ratios on the firm value of companies listed on a Turkish Stock Exchange for the period 2002 to 2009.

Similarly, Lin (2011) undertakes such study on companies listed on the Taiwan Stock Exchange for the period 2005-2009 using the panel data regression model.

Also, Chen and Chen (2011) investigate the relationship between accounting ratios (profitability ratios) and firm's value of the 647 companies listed on the Taiwan Stock Exchange for the period 2005 to 2009.

From the above reviews there is no doubt in the past researchers had studied the relationship between accounting ratios and firms' value and as such this study will utilize ratios of liquidity, profitability to determine their effect on the value of firms' listed on the Malaysian capital market.

### **2.3.1 Firms' Value**

Value is seen as an impressive word whose analysis is more of an art than science. (Nyiramahoro & Shooshina, 2001). Firm value refers to the total economic value of an entity including the sum of the value of its debts and its equity (Nyiramahoro & Shooshina, 2001).

In the past, various researches have been conducted to test the relationship between firms' value and other firms' characteristics such as firm size, financial leverage, corporate governance characteristics, board size using market-to-book ratio, return on assets or Tobin's-Q as a proxy for firms' value. For instance, the study conducted by Obradovich and Gill (2013) investigate corporate governance and financial leverage of 335 firms listed on the New York Stock Exchange (NYSE) for three years (2009-2011) using co-relational and non-experimental research design. The study established that financial leverage and other Corporate Governance Characteristics (CGC) have a positive impact on firm value.

Similarly, Adeyemi and Oboh (2011) examines the relationship between corporate capital structure and firms' value on 90 firms listed on the Nigeria Stock Exchange (NSE) for the years spanning 2005-2009 using both primary and secondary data. The researcher found a positive significant relationship between a firm's choice of capital structure and their market value.

Fang, Noe and Tice (2009) investigate the relationship between stock liquidity and firm value of 2642 sampled firms listed on the NYSE for the years 1993, 1995,1998,2000,2002 and 2004. The result of the study after controlling for idiosyncratic risk and endogenous liquidity using two-stage least squares and alternative measures of liquidity, indicates that a positive relationship exists between stock liquidity and firm value.

On the other hand, Gill and Mathur (2011a) examine the impact of board size on firm value of 91 sampled manufacturing firms listed on the Toronto Stock Exchange (TSX) for the years 2008-2010. The researchers established negative relationship between board size and firm value. Also, Mak and Kusnadi (2005) carry out similar studies on Singapore and Malaysian companies to determine the impact of corporate governance mechanism on firm value which is proxies by Tobin's-Q. The researchers found an inverse relationship between board size and firm value in both countries.

Rayan (2008) also undertakes a study in South Africa to evaluate the relationship between financial leverage and firm value of the 113 companies listed on the Johannesburg Stock Exchange (JSE) for the period 1998-2007. After performing

regression analysis, he found a negative relationship between financial leverage and firm value. While Cuong and Canh (2012), conduct similar study of a combination of Seafood processing enterprises listed on two Vietnams Stock Exchange market for a period 2005-2010. Result from the study indicates that the optimal debt ratio (total debt to total assets ratio) of less than 59.27% enhances firm value.

While Bhabra (2007) investigate the relationship between insider stock ownership and firm value on a sample of publicly traded firms in New Zealand for the period 1994- 1998 using two stage least squares, ordinary least squares, fixed effects regressions and seemingly unrelated regressions. Findings from the study indicate a curvilinear relationship between insider ownership and firm value.

### **2.3.2 Market-to-Book Ratio**

Market-to-Book Ratio is one of the fundamental ratios that have been subjected to an extensive empirical examination (Abdel-Azim & Eldomiaty, 2006). Market-to-Book Ratio is a ratio that is frequently used as a key measure of firm performance in terms of both efficiency and growth (Sharma, Branch, Chgawla & Qiu (2013). It is a ratio that indicates the value that the market places on the company's equity or net assets or rather is a reflection of the managers' ability to effectively manage their companies' assets to expand their business (Ceccagnoli, 2009; Lee & Makhija, 2009).

Market-to-Book Ratio had been broadly used as a measure of the premium that an investor is paying for a company's assets. It is perceived as a ratio of the market value of the company's assets compared to its book value (Muiruri, 2012). Thus,

Market-to-Book Ratio measures the amount by which the market value of a company or its stock-market capitalization exceeds the shareholders' equity.

However, Market-to-Book Ratio is mostly used for companies that compete on the same market, sector of activity and also employs the same type of fixed assets (Saenz, 2005). A Market-to-Book Ratio is assumed to be the most common measure of shareholder value and therefore involves the comparison between market value and book value per share. Therefore, when the market value exceeds the book value, it means shareholder value is created. But on the other hand, when the book value exceeds the market value this implies a reduction in shareholders' value.

Moreover, in the past, several researchers had used Market-to-Book Ratio to determine firms' value or firms' performance, starting with an earlier study by Fama (1992); Barber and Lyon (1997) both examine the relationship between firm size, market-to-book ratio, security return and financial leverage of companies.

Similarly, Pandey (2005) empirically examines the effect of profitability and growth in shareholders' value using Market-to-Book Ratio as the measure of shareholders' value. Also, Mukherjee and Mahakud (2012) investigate the role of Market-to-Book Ratio on determination of capital structure using a sample of 871 manufacturing companies for the years 1992, 1993, 2007 and 2008. Using a panel data analysis, the researchers found that market-to-book ratio has been a better proxy for growth opportunity than market timing and also plays a prominent role in determining capital structure.

Also, a study by Fang, Noe and Tice (2009) investigates the relationship between stock liquidity and firm performance using Market-to-Book Ratio as a proxy for firm performance. Marzo (2013) explores criticisms and advantages of the use of Market-to-Book Ratio gap as a symptom and metrics of intellectual capital. Dempsey (2010) examines the role of the market-to-ratio in the form of stock returns on 2975 firms listed on the Australian capital market for the period 1989-2007.

### **2.3.3 Liquidity Ratios**

The association between liquidity and firms' value had received a sizeable attention from financial economics. Liquidity ratios are set of ratios that measure companies' ability to meet their short-term obligations using their assets that are most convertible into cash within a short period of time (Chandra, 2011). Liquidity ratios are mostly used to evaluate the companies' solvency and their ability to meet their obligation that comes due in a current period. There are ratios that measure companies' ability to meet their payment obligation by way of comparing cash and near-cash with the payment obligations. Therefore, if the cash and near-cash are insufficient to cover payment obligations, it is an indication that a company might be faced with the difficulties of meeting its immediate financial obligations and as such, its operations will be affected (Saleem & Rehman, 2011). Liquidity depends on a firm's cash flow and the make-up of its current assets and current liabilities and is therefore a useful component of accounting ratio in predicting future performance. Hence, the most common measures of liquidity are current ratio, acid test ratio, cash and working capital ratio.

Current ratio measures a company's ability to meet its short-term obligation as they fall due and it is the most commonly cited ratio among liquidity ratios. Acid test ratio is a tougher measure of association between current assets and current liabilities. It is similar to the current ratio but differs in the sense that it excludes inventory which is considered as the least liquid current assets. While, cash ratio is a more conservative measure of liquidity because only cash and cash equivalents are compared with the current liabilities. Whereas, the net working capital ratio is the difference between current assets and current liabilities, it is often used to indicate whether a company has sufficient short-term assets to cover its short-term debt obligations.

Nevertheless, in the past, researchers have taken into cognizance the effect of liquidity on firms' value as well as the dependency of liquidity on firm value (Fang, Noe & Tice, 2009). Similarly, various theoretical models also predict that liquidity has a positive relationship with firm value. The theories often provide agency based stock price feedback and valuable evidence as to why liquidity positively impacts firms' value. For instance, the study of Wu and Liu (2011) whom examine the relationship between stock liquidity and firms' value of Taiwanese firms for the period 2005 to 2008 using an ordinary least squares and two-stage least squares methods. The researchers found a positive relationship between liquidity and firm value. Likewise, Lin (2011) also examines the relationship between liquidity and firms' value of listed firms on Taiwan stock exchange for the period 2005-2009 using the panel data regression model. Finding from the study shows a positive relationship between liquidity and firms' value. Fang, Noe and Tice (2009) also investigate the relationship between stock liquidity and firm performance of 3174 firms in the united states for the years 1990, 1993, 1995, 1998, 2000, 2002, and 2004



using two-stage least squares. The result after controlling for idiosyncratic risk and endogenous liquidity indicates that liquidity is positively related to firm value.

Additionally, Pourali and Arasteh (2013) examine theoretically the relationship between liquidity, corporate governance and firms' value. The result of the study after extensive review of literatures in these areas suggests that an improvement in a company's liquidity has a positive effect on the firm's value. Also, Hansen and Sunguk (2013) investigate the influence of stock liquidity to firms' value of 566 firms listed on the Indonesian Stock Market from 2009 to 2010. Using panel data analysis, the regression analysis indicates that higher stock liquidity leads to a higher firms' value.

On the other hand, Asle, Valahzaghari & Ahranjani (2013) examine the relationship between liquidity and value of firms listed on the Tehran stock exchange for the period spanning 2001-2010. Using ordinary least squares, the researchers found a negative relationship between liquidity and firms' value.

#### **2.3.3.1 Current Ratio**

This is one of the most frequently used liquidity ratio and therefore offers a general view of the company's liquidity (Bolek & Wiliński, 2012). The ratio measures the ability of a company to repay its short-term liabilities using its basic liquid assets such as cash, inventory and account receivables. Current ratio defines to what extent current assets cover short-term liabilities and therefore determines the potential ability of a company to pay all its current liabilities by way of liquidizing its resources of current assets (Bolek & Wiliński, 2012). Current assets are assets of a

short-term nature that are readily convertible to cash this include cash and cash equivalent, account receivables, inventories (including raw materials, finished goods and work in progress). While current liabilities are what companies currently owe their suppliers and creditors such as account payables, notes payable, accrued expenses, accrued payroll, prepayments and taxes.

Nevertheless, current ratio is the most commonly used measure of short-term solvency and it is assumed to be the best single indicator of the level to which the claims of short-term creditors can be covered by assets that are readily converted to cash in a period roughly corresponding to the maturity of their claims. Hence, current ratio is assumed to be the most basic liquidity test and also signifies a company's ability to meet its short-term liabilities with its short-term assets. A ratio of 2:1 is mostly considered as the benchmark, although this varies across industries or sectors. While, a ratio of less than 1 indicates that a company may not have sufficient resources to meet its short-term debt obligations as they fall due.

#### **2.3.3.2 Acid Test Ratio**

Acid test ratio which is also referred to as the quick ratio or liquid ratio is used to test a company's ability to pay its short-term debts. Acid test ratio measures the relationship between liquid assets and current liabilities. Therefore, it is a tougher test of liquidity than the current ratio. Unlike current ratio, quick ratio requires the elimination of some certain current assets such as inventory and prepaid expenses that are assumed to be more difficult in converting to cash. Therefore, quick ratio matches the most easily liquidated portions of current assets to current liabilities.

However, the intent of this ratio is mainly to see whether a company has sufficient assets that are readily convertible to cash. The key elements of current assets that are used to compute quick ratio include cash, account receivables and marketable securities.

#### **2.3.3.3 Cash Ratio**

This is a ratio of total cash and cash equivalents to its current liabilities. It is the least frequently used ratio being usually a supplement to other ratios. This ratio is commonly used as a measure of a company's liquidity and therefore determines how quickly a company can repay its short-term debt. Cash ratio is regarded as a more conservative measure of a company's ability to cover its liabilities than all other liquidity ratios. As such, it is an extreme liquidity ratio because only cash and cash equivalents are compared with the current liabilities.

In addition, cash ratio shows the ability of a company to settle its necessary liabilities and expenses using the funds it generate in the course of its day to day activities. Hence, the higher the cash ratio the better the solvency a company will be (Bolek & Wili'nski, 2012). In other words, a higher cash ratio alongside quick ratio that is in line with the industry benchmark suggests that a company is in better financial shape.

#### **2.3.3.4 Net Working Capital Ratio**

Networking capital refers to the difference between a company's current assets and current liabilities, which is regarded as a key source of internal finance and equally a good measure of a firm's liquidity (Eljelly, 2004). Thus, the net working capital ratio is a ratio that indicates whether a company has sufficient short-term assets to cover

its short-term debt obligations. Working capital ratio is quite useful because it shows whether a company can support itself with its current assets in spite of its current liabilities. Working capital ratio determines how long a company can sustain its level of spending using its net available assets. Therefore, a high working capital ratio indicates a better ability for a company to meet its ongoing and unexpected obligations. While, a lower ratio may be an indication for a company's facing a greater difficulty in meeting its short term commitments and therefore requires additional working capital to support the business.

#### **2.3.4 Profitability Ratios**

This is the ratios that indicate the overall firm's efficiency. It measures the earning capacity of a firm and is also considered as an indicator of the firm's growth, success and control (Kabajeh et al., 2012). Profitability ratio provides very useful information in making economic decisions. It is often used by investors, managers and financial analysts as a guide for making dividend payments and a tool for assessing management efficiency. Profitability ratio is also useful in attracting investors, that is, when a company's profitability ratio is high, investors will be keen to have a stake in such company which in turn will raise the company's stock price and increase its firms' value (Asih, 2013).

Profitability ratio is also used for predicting, evaluating and in decision makings (Saghafi & Aghaei, 1994). Profitability ratio offers different kinds of measures to assess the company's success at generating profit. Hence, the most common measures of profitability are return on equity ratio, return on assets ratio, return on investment ratio, gross profit margin ratio.

However, Return on equity ratio measures the volume of profit generated by a company through the use of its shareholders' equity. The ratio is perceived as one of the most significant ratio among the profitability ratios as it measures management's ability in the area of assets management, profitability and financial leverage. While, return on assets measures how effective the asset of a company is being utilized in generating profit. Return on investment ratio measures the overall profitability of a company in relation to its total investment. Whereas, the operating profit margin ratio indicates the operating efficiency of a business in terms of its ability in converting its sales into profit from its routine operating activities.

Nevertheless, in the past profitability ratio had been extensively used by researchers to determine firm value and firm performance such as the study of Kabajeh et al., (2012) empirically examines the relationship between profitability ratio (Return on assets ratio, return on equity ratio and return on investment ratio) together and separately with Jordanian insurance companies share prices for the period 2002 to 2007. Consequently, the result from the study indicates a positive relationship between the profitability ratios together with Jordanian insurance companies share prices.

Also, Nassirzadeh, and Rostami (2011) investigate the relationship between traditional and modern profitability ratios of 108 sampled companies listed on the Tehran Stock Exchange for the period 2002 to 2010. Similarly, Desoky and Mousa (2013) empirically investigate the influence of ownership concentration and identity on firm performance for a sample of 99 most actively traded firms on the Egyptian

stock exchange using profitability ratio (return on assets ratio and return on equity ratio) as a measure of firm performance. Using ordinary least square and two-stage least square regression analysis, the result indicates that both ROA and ROE and the overall ownership identity have a significant impact on firm performance.

Chen and Chen (2011) investigate the relationship between profitability and firm's value of 647 sample companies listed on the Taiwan stock exchange for the period 2005 to 2009. Consequently, it was found that profitability has a positive relationship with firm value. Based on the above review this study will examine the value of firms listed on the Malaysian stock exchange using the ratios of profitability as one of the determining factors.

#### **2.3.4.1 Return on Equity Ratio**

This ratio measures how effective a company is at utilizing its shareholders' equity to generate profit. Specifically, the ratio measures a company's ability to generate profit from its existing assets and also serve as an indicator of how well a company is turning around its resources to generate earnings growth. Hence, it is a measure of company's management efficiency.

However, the ratio of return on equity is viewed as one of the most significant financial ratio and profitability metrics because of its appeal on the information need of both existing and potential shareholders. A high value of return on equity ratio implies that a company is generating enough profit and therefore does not require much capital. It is also an indicator of how efficient a company's management is deploying the shareholders' capital. Thus, the return on equity differs among

industries, some industries have higher return on equity than others. As such, comparison of this ratio will be more meaningful among companies within the same industry.

#### **2.3.4.2 Return on Asset Ratio**

This is the ratio that measures how effective a company is utilizing its assets to generate profit (Katchova & Enlow, 2013). It is the ratio that provides an indication of a company's capital intensity and also helps to capture important ideas of making effort to convert a company's investment into profit. In other words, it is a measure of a company's earnings in relation to all its available resources (both shareholder's capital and long-term borrowed funds). Hence, it is viewed as the most stringent test of return to shareholders.

#### **2.3.4.3 Return on Investment Ratio**

This ratio is often used to evaluate the efficiency of an investment. Therefore, both existing and potential shareholders are interested in the anticipated return on their investment. Similarly, managers are concerned with earning satisfactory returns on the assets under their custody (Elio D'amato, 2010).

#### **2.3.4.4 Operating Profit Margin Ratio**

This ratio measures company's efficiency in using its raw-materials and labor during the production process. It indicates the percentage of the remaining part of company's sales revenue after deducting cost of goods sold (Elio D'amato, 2010). Gross profit margin ratio is a useful ratio that assists stakeholders in determining whether a company will have available fund to cover operating expenses such as

lease payments, employee benefits, advertisement etc. It is equally useful to investors who utilized it to compare a company's performance with that of other competitors. Thus, a higher gross profit margin implies that a company is very much efficient as such; it will be able to make a reasonable profit on sales.

## **2.4 Theoretical Framework**

The importance of interaction between theoretical and empirical work in social sciences had been recognized as evidence by some documentation in the literature (Jabar, 2010). The theories are essential as they assist in defining the interest areas, in differentiating similar and dissimilar phenomena, track changes in social and economic categories. Thus, in the following subsection, discussions are made on the theory that is adopted in the study.

### **2.4.1 Signaling Theory**

Signaling theory was a concept that was initially deliberated in the job and product market settings by Akerlof and Arrow and was later developed into a signal equilibrium theory by Spence (1973). The theory is of the view that, a good firm can differentiate itself from the bad ones by sending a plausible signal about its quality in the capital market. The signal can only be plausible if the bad firm is unable to imitate the good firm by sending a similar signal. However, if the cost implication of the signal is higher for the bad firm than the good firm, therefore the bad firm may not find it worthwhile to imitate and as such the signal sent by the good firm will be outstanding and recognized by investors.



In this context, it is envisaged that when companies disclosed financial ratio as part of the information to be presented in their annual reports, it is signaling its position to outside investor in order to encourage them to invest their funds into the business which in turn will increase the firm value.

Moreover, signaling theory also has a great impact on the liquidity and profitability of firms given that when a company is in a secured financial position, it will be keen to signal its financial performance to investors who will be encouraged to invest their funds into the business and by so doing, it will increase the firm value. Also, such a relationship is also possible because a company that records a high profitability will be encouraged to signal investors about the impressive performance. Therefore, based on the foregoing discussion, the researchers considered the appropriateness of signaling theory to be used in explaining the relationship between accounting ratios and firm value.

## **2.5 Hypothesis Development**

A hypothesis is understood as an unproven proposition that tentatively explain certain facts or phenomena. That is, it is a proposition that is empirically tested (Zikmund, 2003). According to Sekaran (2003), the main aim of building a research hypothesis is to help a researcher find and explain the relationship between factors that are proposed in his research model. In this study, the hypotheses are formulated to test the association between firms' value and accounting ratios. Two categories of accounting ratios are adopted, these include liquidity ratio and profitability ratio. Hence, the discussion on how the hypotheses are developed is as follows:

### **2.5.1 Liquidity Ratios**

These are set of ratios that measure the ability of a company to meet its short-term financial obligation as they fall due (Abdullahi & Ismail, 2008). In other words, liquidity ratios are frequently used to evaluate the company's solvency position through comparison of the company's cash and cash equivalent with its payment obligation. A higher ratio implies that a company is in a better position to meet its short term financial obligation. Therefore, this assertion is supported by the signaling theory which suggests a positive relationship will exist between liquidity and firm value. This is possible because, when a company is in a secured financial position, it will be keen to signal its position to outside investor in order to encourage them to invest their money into the business which in turn will increase the firm value.

However, the metrics of liquidity ratios include current ratio, acid test ratio, cash and net working capital ratio. Current ratio measures the company's short-term financial strength. That is, it measures the ability of a firm to meet its short-term debt obligations as they come due. The ratio utilizes cash and cash equivalent and other current assets such as account receivables and inventories. While, acid test ratio is a more rigorous measure of short-term solvency than the current ratio as it excludes inventory which is considered the least liquid and one that cannot be easily converted to cash.

Moreover, the cash ratio is the most conservative measure of a company's solvency than all other liquidity ratios. It is a ratio of total cash and cash equivalents to current liabilities. While, the networking capital ratio is a ratio that indicates whether a

company has sufficient short-term assets to cover its short-term debt obligations. It is determined by subtracting a company's current assets from its current liabilities.

Nevertheless, finding from prior researches on the association between liquidity and firms' value are so far inconsistent. A positive relationship was found by Fang, Noe and Tice (2009); Wu and Liu (2011); Lin (2011); Pourali and Arasteh (2013); Hansen and Sungbuk (2013). On the other hand, a negative relationship between liquidity and firm value was found by Asle, Valahzaghari & Ahranjani (2013). Based on the foregoing, this study will test the liquidity ratio in terms of the above stated metrics and on that basis the following hypotheses are formulated.

H<sub>1a</sub>: Current ratio has effect on firms' value of companies listed on the Malaysian Stock Exchange.

H<sub>1b</sub>: Acid test ratio has effect on firms' value of companies listed on the Malaysian Stock Exchange.

H<sub>1c</sub>: Cash ratio has effect on firms' value of companies listed on the Malaysian Stock Exchange.

H<sub>1d</sub>: Networking capital ratio has effect on firms' value of companies listed on the Malaysian Stock Exchange.

### **2.5.2 Profitability Ratios**

This ratio measures the earning capacity of a firm and therefore an indicator of the firm's growth, success and control (Kabajeh et al., 2012). In other word, it is the ratios that indicate a company's ability to earn a satisfactory profit and return on investment. Thus, a high profitability ratio indicates a company's ability to generate

high returns for its shareholders. Therefore with high profitability, a company will be able to attract more investors which in turn will raise the company's stock price and at the same time increase firm value (Asih, 2013).

However, the metrics of profitability ratio include return on equity ratio, return on assets ratio, return on investment ratio, gross profit margin ratio. Return on equity ratio and return on assets ratio both measures the overall firm's efficiency in managing its total investment in assets and also in generating returns to shareholders. Although, the two ratios are measures of firm's efficiency, they differ. Return on assets ratio indicates the amount of profit a company earned in relation to its level of investment in total assets. While return on equity ratio measures the amount of profit earned relative to the level of common shareholders.

Return on investment ratio is used to measure the benefit obtained from an investment. Therefore, it is commonly used to assess the profitability of a company or an operation within a company based on investment. The operating profit margin ratio measures a firm's overall operating efficiency. The ratio incorporates all of the expenses associated with ordinary business activities.

Moreover, various researchers have undertaken studies to on the association between profitability and firms' value such as the studies of Kabajeh et al. (2012); Nassirzadeh, and Rostami (2011); Desoky and Mousa (2013); Chen, and Chen (2011) who unanimously found a significant positive relation between profitability ratios and firms' value. While, Wallace and Naser (1995) report a negative association between profitability and firm value. Therefore, in relation to the

signaling theory, this study hypothesizes that firms' value has a positive association with profitability ratios and on this basis the following hypothesis are developed.

H<sub>2a</sub>: Return on equity ratios has effect on firms' value of companies listed on the Malaysian stock exchange.

H<sub>2b</sub>: Return on investment ratios has effect on firms' value of companies listed on the Malaysian stock exchange.

H<sub>2c</sub>: Return on asset ratios has effect on firms' value of companies listed on the Malaysian stock exchange.

H<sub>2d</sub>: Operating profit margin ratio has effect on firms' value of companies listed on the Malaysian stock exchange.

## **2.6 Summary**

This chapter encompasses five sections, section 2.1 holds overview of the Malaysian capital market. Section 2.2 contains an overview of Malaysian financial reporting, section 2.3 review prior study on the relationship between accounting ratios and firms' value. Hypothesis development is found in section 2.4 while section 2.5 is on theories that are grounded in the study. Hence, the study's framework is diagrammatically represented in the next chapter, the variable measurements, methods and analysis that are performed in the study are discussed in the subsequent chapter.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This study is intended to examine the relationship between accounting ratios and firms' value on companies listed on Bursa Malaysia. In order to achieve the stated objectives, this chapter discusses the procedures adopted in realizing these objectives which include the theoretical framework utilized in the study, the chapter also discussed the measurement of variables in the study, explanations is also made on the research approach/ design, the procedures for collecting the data as well as the techniques used in analyzing the data.

#### **3.1 Research Framework**

In recent years a sizeable number of literatures have evidenced the use of accounting ratios as a tool for analyzing financial statements by different constituents including shareholders, creditors, employees, management, suppliers, government agencies, stockbrokers and financial analysts. However, each constituent has a unique preference as regard ratios. Based on the foregoing, this present study will observe the effect of accounting ratios on firms' value, using liquidity and profitability ratios as the independent variables while market-to-book ratio being the proxy for firms' value is the dependent variable.

In addition, the process of selecting the appropriate variables for this study is in accordance with the previous empirical study of Savsar & Karaca (2012). Although

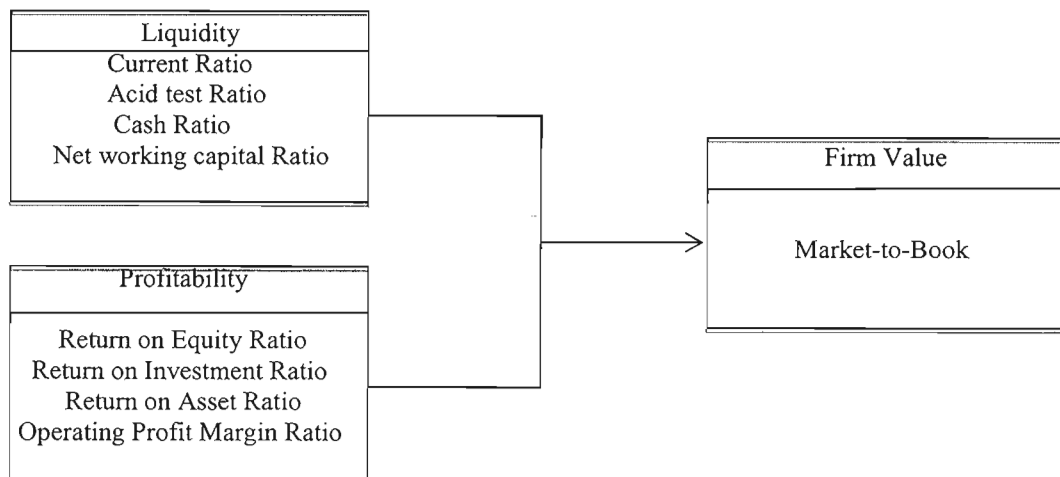
modification was made on the proxy of the dependent variable. That is, this study use market-to-book ratio as a proxy for firms' value instead of market value less total financial debt less liquid assets and marketable securities as was used by Savsar & Karaca (2012).

In essence, this study's framework includes two different classes of accounting ratios namely liquidity and profitability ratios as explanatory variables. Liquidity ratios comprise of the current ratio, acid test ratio, cash ratio and net working capital ratio. While, profitability ratios include return on equity ratio, return on investment ratio, return on assets ratio and operating profit margin ratio. On the other hand, the dependent variable which is firms' value is measured using market-to-book ratio. Figure 3.1 diagrammatically represents the study's framework indicating how the explanatory variables relate to the dependent variable.

**Figure 3.1 Research Framework**

**Independent Variables**

**Dependent Variables**



### **3.2 Variable Measurement**

Measurement refers to the assignment of numbers to objects or events in accordance to some rules or standards (Stevens, 1946). Hence, the following subsection discusses the measurement of both dependent and independent variables that are used to examine the effect of accounting ratios on value of firms listed in Bursa Malaysia for the years spanning 2008 to 2012.

#### **3.2.1 Dependent Variable**

The firm's value is the dependent variable in this study. Prior researchers had used different measures to determine firms' value. For instance, Tobin's Q was used in the studies of Kyereboah-Coleman (2007), Pattanayak (2008) and Obradovich and Gill (2013), while some researchers used ROA and ROE as a proxy for firms' value such as Abor and Biekpe (2009), Achy (2009), Kim and Berger (2008).

On the contrary, this study used market-to-book ratio as a proxy for firms' value due to its widely used as a measure of firms' value such as the studies of Pandey (2005), Fang, Noe and Tice (2009), Dempsey (2010), Mukherjee and Mahakud (2012) and Marzo (2013). In addition, Market-to-book ratio is also used because it is a key measure of firm performance in terms of both efficiency and growth (Sharma et al. (2013). Market-to-book ratio is computed as market price per share divided by book value per share, market price per share is based on Bursa Malaysia quotation at the end of the financial years, while book value per share is based on the value stated in the annual reports.



### **3.2.2 Independent Variables**

The study utilized two main categories of accounting ratios as independent variables. These variables are liquidity ratios (current asset ratio, quick ratio, cash ratio and net working capital ratio) and profitability ratios which include return on equity ratio, return on investment ratio, return on assets ratio and operating margin ratio.

#### **3.2.2.1 Liquidity Ratios**

These ratios measure the ability of a company to fulfill its short term obligations at the due time. In other words, it is the relationship between the cash which is to be given to a company and cash which the company need in a short time period (Talebi, 1997). Thus, this study utilized four metrics of liquidity ratios which include current ratio, cash ratio, net working capital ratio and acid test ratio.

Current ratio measures the company's short-term financial strength and is determined by dividing current asset over current liabilities, while the quick ratio (acid test ratio) also measures the company's financial health bit in the short-run. The later differs from the former because it excludes inventories which are not easily converted to cash. Cash ratio is a ratio of total cash and cash equivalents to its current liabilities and a more conservative measure of a company's ability to cover its liabilities than all other liquidity ratios.

Whereas the networking capital ratio indicates whether a company has sufficient short-term assets to cover its short-term debt obligations. It is a ratio that determines how long a company can sustain its level of spending using its net available assets. Hence, it is arrived at by subtracting current liabilities from current assets.

### **3.2.2.2 Profitability Ratios**

These ratios are basically indicators of firm's overall efficiency. Specifically, they measure the earning capacity of a firm. They are also considered as indicators of the firm's growth, success and control (Kabajeh et al., 2012). Profitability ratios offer different kinds of measures to assess the company's success at generating profit. Hence, the profitability measures used in this study are return on equity ratio, return on assets ratio, return on investment ratio, operating profit margin ratio.

Return on equity ratio and return on assets ratio both measures the overall firm's efficiency in managing its total investment in assets and also in generating returns to shareholders. Although, the two ratios are measures of firm's efficiency, they differ. Return on assets ratio indicates the amount of profit a company earned in relation to its level of investment in total assets. It is therefore derived by dividing net profit to total sales. While return on equity ratio measures the return to common shareholders (Fraser & Ormiston, 2004). It is derived by dividing net profit to equity.

Return on investment ratio is used to measure the benefit obtained from an investment. Therefore, it is commonly used to assess the profitability of a company or an operation within a company based on investment. It is measured as net-profit divide by the total investment. Whereas, the operating profit margin ratio measures companies' ability to translate their sales into profits at different level of measurement. That is, it measures the overall operating efficiency by incorporating all expenses associated with ordinary business activities (Fraser & Ormiston, 2004). Hence, the operating profit margin is computed as operating profit all over the sales.

### **3.3 Research Approach / Design**

This study employs quantitative research design to examine the effect of accounting ratios on firms' value. The study uses quantitative data which according to Saunders, Lewis and Thornhill (2000) is a data that is based on meanings derived from numbers comprising numerical and standard data which deals with conducted analysis using diagrams and statistics. In this regard, the study is specifically designed to examine the effect of liquidity and profitability ratios on the firms' value of companies listed on the Malaysian stock exchange.

### **3.4 Data Collection**

The data used in this study were collected from secondary sources (archival data). Archival data refer to the statistical materials that are not originated by the investigator himself but rather obtained from someone else records which in some instances can also serve as a primary data for other purposes at subsequent inquiry.

However, the data used in this study were collected from financial database of Thomson Reuters in the Data stream section of Sultanah Bahiyah library Universiti Utara Malaysia for the years spanning 2008 to 2012. Thus, the study utilized the top 100 leading companies in Malaysia (Index Companies) as a sample to represent the entire companies in the market.

Nevertheless, out of the 100 leading companies, 14 companies classified under the finance sector were excluded because of their additional reporting regulation which differs from other quoted companies in the market. Therefore, a total sample of 86 companies was used for the study.

Table 3.0 provides a summary of sample companies according to their sectors including the number of companies in each sector and also the percentage of each sector out of the total number of companies making the list of index companies.

From Table 3.0, it is noticed that the sample companies belong to nine different sectors in Bursa Malaysia. These include trading/services, industrial product, property, consumer product, plantation, construction, infrastructure, and technology and hotel sectors. Trading/ service has the highest number of companies within the index list. The sector has 33 companies, this represents 38.37%, closely followed by industrial products sector with 17 companies which represent 19.77%. Property and consumer product sectors have 10 companies each, representing 11.66%. Plantation sector has 5 companies while construction sector has 4 companies which represent 5.81% and 4.65% respectively. Infrastructure and technology sectors have 3 companies each representing 3.48%, while hotel sector has the least number with a company making the list of index companies in Bursa Malaysia and therefore represents 1.64%.

**Table 3.0: Index Companies and their various sectors**

<b>Sectors</b>	<b>No of company</b>	<b>Percentage</b>
<b>Trading / Services</b>	33	38.37
<b>Industrial Product</b>	17	19.77
<b>Property</b>	10	11.63
<b>Consumer product</b>	10	11.63
<b>Plantation</b>	5	5.81
<b>Construction</b>	4	4.65
<b>Infrastructure</b>	3	3.48
<b>Technology</b>	3	3.48
<b>Hotel</b>	1	1.64
<b>Total</b>	86	100.00

### 3.5 Data Analysis Techniques

In order to examine the effect of accounting ratios on firms' value, the study utilized quantitative analysis using appropriate statistical techniques. Initially, descriptive statistical analysis was used to provide a simple summary of the sample and measures. While, a pairwise correlation analysis was performed to indicate the direction of the relationship between the explanatory and dependent variables. Subsequently, a multiple regression analysis was employed to examine the panel data analysis using a regression model in the periods under study. Panel data were used in this study because it provides more degrees of freedom and also increases the variability in the data thereby reducing the chances of multicollinearity (Hsiao, 1986). Thus, Stata 11.0 was used for the analysis, both fixed effect and random effect regression test were performed, subsequently, a Hausman test was used to determine which of the two (fixed or random effect regression) will be used for the analysis.

Moreover, the regression model utilized in this study was adapted from a study of Savsar & Karaca (2012). Although, slight amendment was made to replace the proxy of dependent variable (firm value) that is, market value less total financial debt less liquid assets and marketable securities as was used in the study. This study used market to book ratio as the dependent variable because of its widely used as a measure of firms' value by various researchers. Hence, the model is represented below:

$$FV_{it} = \alpha + \beta_1 CR_{it} + \beta_2 ATR_{it} + \beta_3 CASH_{it} + \beta_4 NWCR_{it} + \beta_5 ROE_{it} + \beta_6 ROI_{it} + \beta_7 ROA_{it} + \beta_8 OPM_{it} + \epsilon_{it}$$

where:

$\alpha$  = the intercept estimates

CR=Current ratio

ATR=Acid-test ratio

CASH=Cash ratio

NWCR=Net working capital ratio

ROE=Return on equity ratio

ROI=Return on investment ratio

ROA=Return on asset ratio

OPM=Operating profit margin ratio

$\epsilon$  = Error term

### **3.6 Summary**

This chapter discussed systematically the methods and procedures employed by the researcher to achieve the study objectives. Thus, a conceptual model was adapted after extensive review of past literatures. The model comprises of one dependent variable and two main categories of independent variables. Therefore, on the basis of the conceptual model, two hypotheses were developed to facilitate the achievement of the study objectives. The hypothesis developed was operationally defined in order to set direction for the study. Consequently, procedures for collecting the required data were discussed which involve collection of ready computed ratios from financial database. The data collected were systematically analyzed using descriptive statistics, correlation analysis and a multiple regression analysis. Hence, the result of the various statistical analyses performed on the data is presented in the subsequent chapter.

## **CHAPTER FOUR**

### **DATA ANALYSIS AND FINDINGS**

#### **4.0 Introduction**

This chapter presents the results of the data analysis and findings of the study. The findings are in relation to the research objectives outlined in chapter one as well as the research hypotheses formulated in chapter two. Using several statistical methods, the study is aimed to examine at length the effect of accounting ratios on firms' value. Thus, to define the basic characteristics of the variables, descriptive statistics was used to give a visual depiction of the distribution of each variable. While the correlation statistics help to indicate the direction of the relationship between two variables, the multiple regression analysis is used in testing the theoretical model.

#### **4.1 Descriptive Statistics**

Descriptive statistics is basically the method used to describe, organize, display and explain a set of data using tables, graph and summary measures (Johnson & Christense, 2000). According to Coakes and Steed (2007), descriptive statistics are used to quantitatively describe, examine and summarize the key features of a collected data. Based on the aforesaid, this section provides a summary of the descriptive statistics which comprise of the number of observations, the minimum and maximum of each variable, the mean and standard deviation as summarized in Table 4.1.

However, in explaining the association between accounting ratios and firm's value, the dependent variable is represented by market to book ratio (MBR), while the explanatory variables include liquidity and profitability ratios. From Table 4.1, it can be depicted that there are a total of 430 numbers of observations and the mean score for the market to book ratio (MBR) is 4.1466, while its minimum value is .08, the maximum is 44.46 and the standard deviation is 7.3604. It was also observed that cash ratio as denoted by CR had a mean score of 2.0704, a minimum value of .72 and a maximum of 17.76 while its standard deviation is 1.2305. Also, acid test ratio which is depicted in the table as ATR had 0.09 as its minimum value and 5.76 as its maximum, its mean score is 1.5961 and a standard deviation of 1.1249. Cash ratio (CASH) and net working capital ratio (NWCR) had a mean score 1.0139 and 4.9948 respectively, while the standard deviation is 1.0358 for cash ratio and 2.0693 for networking capital ratio.

However, return on equity ratio (ROE) being a ratio of profitability had a mean score of 11.2369, a standard deviation 12.0775, a minimum value -40.54 and a maximum value 46.78. Return on investment (ROI) ratio based on table 4.2 has a standard deviation 8.2753, a minimum value -21.44, maximum value 46.78 and a mean of 8.5718. Return on Assets (ROA) had a mean value 6.6607, a standard deviation 7.40615, its minimum value is -29.97 and a maximum value is 52.83. Lastly, the operating profit margin ratio represented in the table as OPM had a minimum value of -1.72 and a maximum value 0.78.



**Table 4.1 Descriptive Statistics**

VARIABLE	OBS	MEAN	STD. DEV.	MIN	MAX
MBR	430	4.1466	7.3604	0.08	44.46
CR	430	2.0704	1.2305	0.72	17.76
ATR	430	1.5961	1.1249	0.09	5.76
CASH	430	1.0139	1.0358	0.02	5.01
NWCR	430	4.9948	2.0693	0.00	8.82
ROE	430	11.2369	12.0775	-40.54	77.54
ROI	430	8.5718	8.2753	-21.44	46.78
ROA	430	6.6607	7.40615	-29.97	52.83
OPM	430	0.1460	0.20712	-1.72	0.78

Note: MBR = Market-to- book ratio, CR = Current ratio, ATR = Acid test ratio, CASH = Cash ratio, NWCR = Networking capital ratio, ROE = Return on equity, ROI = Return on investment, ROA = Return on assets, OPM = Operating profit margin.

## 4.2 Correlation

Correlation is a measure of strength of association between observed variables. For this study, a pairwise correlation was used to determine the relationship between the dependent variable (MBR) and the independent variables which include current ratio (CR), acid test ratio (ATR), cash ratio (CASH), net working capital ratio (NWCR), return on equity (ROE), return on investment (ROI), return on assets (ROA) and operating profit margin (OPM). According to Cohen (1998), a correlation between 0.10 to 0.30 is considered as weak, between 0.30 to 0.50 is regarded as moderate and a correlation above 0.50 is viewed as strong.

From Table 4.2, the output of the pairwise correlation indicates a positive correlation between all the variables. Specifically, a significant moderate relationship exists between MBR and OPM ( $r = 0.4223$ ,  $p < 0.01$ ). Also, a significant weak association

was observed between MBR and CASH ( $r = 0.1207$ ,  $p < 0.05$ ) and also between MBR and ROA ( $r = 0.1832$ ,  $p < 0.01$ ). However, other variables do not indicate a significant relationship with the dependent variable (MBR). On the other hand, a strong and significant relationship exists between ATR and CR ( $r = 0.9103$ ,  $p < 0.01$ ), CASH and CR ( $r = 0.7771$ ,  $p < 0.01$ ) while the strength of correlation among most of the other independent variables are moderate.

In addition, the correlation analysis does not suffer from multicollinearity problem as it can be seen from Table 4.2, most of the correlations between the explanatory variables are moderate except for the correlation between ATR and CR that is 0.9103, between CASH and CR which is 0.771, While ATR and CASH is 0.8965. Therefore, all other values are below 0.5 which is the benchmark.

**Table 4.2 Correlation Matrix**

MBR	CR	ATR	CASH	NWCR	ROE	ROI	ROA	OPM
MBR	1.000							
CR	0.0514	1.000						
ATR	0.0455	0.9103**	1.000					
CASH	0.1207*	0.7771**	0.8965**	1.000				
NWCR	0.0679	0.2726**	0.2691**	0.1947**	1.000			
ROE	0.0876	0.1037*	0.1338**	0.1523**	0.0331	1.000		
ROI	0.0604	0.0911	0.0888	0.1484**	0.0451	0.2693**	1.000	
ROA	0.1832**	0.0703	0.0648	0.0985*	0.0813	0.1828**	0.3772**	1.000
OPM	0.4223**	0.2081**	0.3089**	0.4108**	0.0603	0.2344**	0.2682**	0.1560** 1.000

\* Correlation is significant at the 0.05 level (2 tailed)

\*\*Correlation is significant at the 0.01 level (2 tailed)

### 4.3 Multiple Regression Analysis

This study focused on the effect of accounting ratios on the firms' value of Malaysian listed companies and therefore employed panel data analysis for this purpose. Panel data analysis is among the single equation multivariate statistical analysis and is often considered as an efficient analytical method of analyzing econometric data (Kheradyar, Ibrahim & Nor, 2011).

In order to successfully run the regression analysis, both the fixed effect and random effect regression analysis were performed and subsequently a Hausman specification test was applied to recognize the most appropriate method to be used in the estimation of the panel data model. Hence, the outcome of the Hausman test indicates that the random effect method is more appropriate for the analysis (see note 1 below for details).

**Table 4.3 Regression Analysis**

Variables	Coef.	Std. Err	t-values	p-values
CR	0.5645	0.2138	2.64	0.008***
ATR	-1.1923	0.3427	-3.48	0.001***
CASH	0.2134	0.1249	1.71	0.088*
NWCR	0.07767	0.5410	1.44	0.151
ROE	-0.0016	0.0510	-0.03	0.974
ROI	-0.1441	0.5449	-2.65	0.008***
ROA	0.1610	0.0522	3.26	0.001***
OPM	0.4608	0.0495	9.30	0.000***
_CONS	109.7942	16.8347	6.52	0.000***

Significance at: \* $p \leq 0.1$ ; \*\*  $p \leq 0.05$ ; \*\*\*  $p \leq 0.01$

Note 1: According to Green (1997), from the result of Hausman test, if the p-value is insignificant that is,  $\text{Prob}>\chi^2$  is greater than .05, it is safe to utilize the random effects. On the other hand, if the p-value is significant, the fixed effect regression should be used. Therefore, in this study, the  $\text{Prob}>\chi^2$  is 0.1707, as such it is not significant. In this case, the random effect is used.

#### 4.4 Model Summary

The output of the analysis shown in Table 4.4 indicates that the model is statistically significant at less than 1% (0.000) with F-value 15.38. The adjusted  $R^2$  is moderate at 0.2163 indicating that, 21.63 percent of variation in the firms' value can be explained by the model.

**Table 4.4 Model Summary**

NUMBER OF OBS	PROB. F	F-VALUE	$R^2$	ADJUSTED $R^2$
431	0.000	15.83	0.2309	0.2163

#### 4.5 Hypothesis Testing

Hypothesis testing is perceived as a method used for testing a claim or a parameter in a population using data measured in a sample. In this study, two hypotheses were formulated to test the effect of accounting ratios on the firms' value. However, in this section the hypothesis earlier developed in chapter two are tested below;

H<sub>1a</sub>: Current ratio has effect on firms' value of companies listed on the Malaysian stock exchange.

To assess whether the current ratio has effect on firms' value, Market-to-book ratio which is a proxy for firms' value is regressed to the current ratio. The outcome of the random panel regression model in Table 4.3 reveals that, current ratio (CR) is positive and significant at 1% ( $t = 2.64$ ,  $p = 0.08$ ). This suggests that current ratio has a positive and significant effect on the firm's value and therefore implies that an increase in current ratio will lead to increase in firm value. Based on the foregoing, the Hypothesis (H<sub>1a</sub>) is accepted.

H<sub>1b</sub>: Acid test ratio has effect on firms' value of companies listed on the Malaysian Stock Exchange.

The acid test ratio (ATR) was also regressed against market-to-book ratio, the result of the regression analysis as shown in Table 4.3 indicates that the acid test ratio is negatively significant at 1% ( $t = -3.48$ ,  $p = 0.001$ ). This implies that an increase in the acid test ratio will lead to a decrease in firm value. Therefore, on this basis the above stated hypothesis is accepted.

H<sub>1c</sub>: Cash ratio has effect on firms' value of companies listed on the Malaysian Stock Exchange.

From Table 4.3, the result of the multiple regression analysis indicates that cash ratio (CASH) is positive and significant at 10% ( $t = 1.71$ ,  $p = 0.088$ ). This suggests that, an increase in the value of cash ratio will lead to an increase in the value of firms listed on Bursa Malaysia. Therefore, based on the above reported result, this study accepts the hypothesis 'cash ratio has an effect on the value of firms' listed on the Malaysian Stock Exchange'.

H<sub>1d</sub>: Networking capital ratio has effect on firms' value of companies listed on the Malaysian Stock Exchange.

As evidenced in Table 4.3, the networking capital ratio was also regressed against the market-to-book ratio which is the proxy of firms' value. The result of the regression analysis indicates that the networking capital ratio does not have a significant relationship with the firms' value. Hence, the above stated hypothesis is rejected. That is, networking does not have an effect on value of firms listed on the Malaysian Stock Exchange.

Overall, the above analysis reveals that current ratio and cash ratio are positively and significantly related to the firms' value. On the other hand, the acid test ratio is negative and significant with firms' value. While the net working capital ratio indicates no significant relationship with the firms' value. In this regard, this study concluded based on the three hypotheses (current ratio, cash ratio and acid test ratio) that were significant with the firms' value. In summary, it is therefore established that the liquidity ratio has a significant relationship with firms' value of companies listed on Bursa Malaysia. The finding in this study is supported by previous findings of Fang, Noe and Tice, 2009; Wu and Liu, 2011; Hansen and Sunguk, 2013.

H<sub>2a</sub>: Return on equity ratios has effect on firms' value of companies listed on the Malaysian stock exchange.

As evidenced from Table 4.3, return on equity ratio (ROE) was regressed against market to book ratio which is the proxy for firm value. The result of the multiple regression analysis indicates that return on equity ratio (ROE) does not have a significant relationship with firms' value. On this ground, the study rejects the hypothesis (H<sub>2a</sub>).

H<sub>2b</sub>: Return on investment ratios has effect on firms' value of companies listed on the Malaysian stock exchange.

Return on investment ratio (ROI) is also regressed against the market-to-book ratio. The result of the analysis as shown in Table 4.3 indicates that a significant, but a negative relationship exists between return on investment ratio and firms' value at 1% significance level ( $t = -2.65$ ,  $p = 0.008$ ). This entails that an increase in ratio of

return on investment will lead to a decrease in firms' value. At this juncture, this study accepts the above stated hypothesis.

H<sub>2c</sub>: Return on asset ratios has effect on firms' value of companies listed on the Malaysian stock exchange.

As shown in Table 4.3, return on asset ratio (ROA) was regressed against market to book ratio which is the proxy for firm value. From the analysis, return on assets (ROA) has a positive and significant relationship with firms' value at 1% ( $t = 3.26$ ,  $p = 0.001$ ). In this regard, an increase in return on asset ratio will lead to increase in value of firms' listed on the Malaysian Stock Exchange. Therefore on this basis, the above stated hypothesis is accepted.

H<sub>2d</sub>: Operating profit margin ratio has effect on firms' value of companies listed on the Malaysian stock exchange.

The operating profit margin ratio (OPM) also indicates a positive and strong significant relationship with the firm value at 1% significance level ( $t = 9.30$ ,  $p = 0.000$ ). Therefore, OPM has a significant effect on firm value. The implication of this finding is that, any increase in OPM will lead to increase in firms' value.

From the above analysis, given that three of the metrics of profitability ratio (return on investment ratio, return on asset ratio, operating profit margin ratio) indicate a strong and significant relationship with the firms' value. On this ground, this study concludes that "Profitability ratios have effect on firms' value of companies listed on the Malaysian stock exchange". The result of this study is in agreement with prior study of Kabajeh et al., 2012; Nassirzadeh and Rostami, 2011; Chen and Chen, 2011.

the Malaysian stock exchange". The result of this study is in agreement with prior study of Kabajeh et al., 2012; Nassirzadeh and Rostami, 2011; Chen and Chen, 2011.

#### **4.5 Summary**

This chapter presents and discusses the results of various analyses performed on Malaysian listed companies' data retrieved from financial database of Thompson Reuters in Data stream of Sultanah Bahiyah library, Universiti Utara Malaysia. In order to answer the research questions, two hypotheses were formulated and tested statistically using a multiple regression model. Thus, the outcome of the regression on liquidity ratios evidenced a significant positive relationship between current ratio, cash ratio and firm value. While a significant negative association was observed between acid test ratio and firms' value. Hence, the net working capital ratio did not indicate a significant relationship with the dependent variable.

On the side of profitability ratios, return on assets ratio and the operating profit margin ratio showed a significant positive relationship with firms' value. While return on investment ratio indicated a significant negative relationship with the firms' value. Return on equity does not have a significant relationship with the firms' value. Overall, the findings statistically supported the formulated hypothesis. Thus, the next chapter encompasses further discussion of results presented in this chapter as well as conclusions and recommendations of the study.



## CHAPTER FIVE

### CONCLUSION AND RECOMMENDATIONS

#### 5.0 Introduction

This study aims to examine the effect of accounting ratios on the firm's value among Malaysian listed companies. In order to achieve this objective, the study utilizes some of the ratios that are usually disclosed by companies listed on the Malaysian capital market. The ratios are liquidity and profitability ratios. Hence, in this chapter, the study focuses on discussions based on the findings presented in chapter four, a conclusion is drawn and recommendations for future research are proffered.

#### 5.1 Discussions of Result

The objective of this study is to examine the effect of accounting ratio on the value of firms listed on the Bursa Malaysia. The study employs ratios of liquidity which include current ratio, acid test ratio, cash ratio and networking as well as the ratio of profitability which comprises of return on equity ratio, return on investment ratio, return on assets ratio and operating margin ratio as independent variables. Whereas firms' value proxy by market to book ratio was used as the dependent variable.

The result of regression analysis in support of the research questions was in detail presented in the preceding chapter. Therefore in this section, the research findings are discussed to answer the research questions. From Table 4.3, the outcome of the regression test undertaken evidenced the relationship between accounting ratios and firms' value. Specifically, the outcome of the analysis in Table 4.3 indicates a positive relationship between the current ratio and the firms' value at a significant

level of 1% ( $t = 2.63$ ,  $p = 0.08$ ). This implies that current ratio has a strong effect on firms' value. Cash ratio indicates a positive relationship with the dependent variable at 10% significance level ( $t = 1.71$ ,  $p = 0.088$ ), this suggests that cash ratio had also a significant relationship with the firms' value. From the above analysis, it entails that an increase in value of both current and cash ratio will result to increase in firms' value.

On the other hand, acid test ratio indicates a strong but negative relationship with firms' value at a significance level of 1% ( $t = -348$ ,  $p = 0.001$ ). This entails that an inverse relationship exists between acid test ratio and firms' value. Hence, an increase in value of the acid test ratio will result in a decrease in firms' value. While, net working capital ratio did not indicate a significant relationship with the firms' value as such it has no effect on firms' value.

From the above analysis, it can be inferred that liquidity ratio has an effect on firms' value given that three ratios of liquidity (current ratio, cash ratio and acid test ratio) indicate a significant relationship with the dependent variable. This result is in agreement with previous studies of Wu and Liu (2011), Lin (2011), Pourali and Arasteh (2013) and Hansen and Sungasuk (2013) who equally found a positive relationship between liquidity ratios and firms' value. On this basis, it is concluded that, liquidity ratio has an effect on the value of firms' listed on the Malaysian Stock Exchange and on this note the hypothesis formulated in chapter two is accepted.

Furthermore, the output of regression analysis as shown in Table 4.3 reveals that profitability ratios had effect on firms' value. In detail, the result shows that the

return on asset ratio had a strong positive relationship with firms' value at 1% significance level ( $t = 3.26$ ,  $p = 0.001$ ). The operating profit margin ratio also had a strong positive relationship with firms' value at 1% significance level ( $t = 9.3$ ,  $p = 0.000$ ). From the above analysis, both return on assets and operating profit margin ratios had a strong association with the firms' value and as such, an increase in the value of these ratios will lead to increase in firms' value.

On the contrary, return on investment ratio has a negative strong relationship with firms' value at a significant level of 1% ( $t = -2.65$ ,  $p = 0.008$ ). This suggests that an increase in return on investment ratio will lead to a decrease in firms' value, whereas return on equity ratio has no significant relationship with firms' value. At this point, since three variables had shown a significant relationship with the firms' value, the study concludes that profitability ratios have an effect on value of firms. This conclusion is supported by previous research such as Nassirzadeh and Rostami (2011), Chen, and Chen (2011) whom equally found a positive and significant relationship between profitability ratios and firms' value. On this backdrop, the second hypothesis is accepted.

## **5.2 Research Implication**

This study examines the effect of accounting ratios on firms' value of Malaysian listed companies. It is anticipated to provide a useful insight to various users of financial information on the extent and usefulness of information that are disclosed on the annual reports and how such information will assist them in their decision making processes. Thus, the study is also expected to be an added leverage to

existing literature on effect of accounting ratios on firms' value given that it provides additional empirical evidence on the effect of accounting ratios on firms' value. The study is also expected to give more confidence to investors (prospective shareholders) on the essence of utilizing accounting ratios in making their investment decisions.

The conclusion reached and result derived from this study will be useful to the nations standard setters in understanding the nature of the demands placed on the accounting information by various users of financial statements including the local investment community.

### **5.3 Conclusion and Recommendations**

The main objective of this study is to examine the effect of accounting ratios on firms' value of Malaysian listed companies using 100 top leading companies in Malaysian capital market for the period 2008 to 2012. With regards to this objective, a panel data analysis was used to test the relationship between accounting ratios and firms' value. Therefore in carrying out the analysis, firms' value proxy by market-to-book ratio is the dependent variable while the explanatory variables are liquidity and profitability ratios.

However, the result of the regression analysis as shown in Table 4.5 indicates a significant relationship between liquidity ratios and firms' value. Specifically, current ratio and cash ratios were significant and positive. On the other hand, acid test ratio is negative and significant. The net working capital ratio indicates no

relationship with the firms' value. On this basis, the study concludes that liquidity ratios have effect on firms' value. Therefore, this finding aligns with the studies of Wu and Liu (2011); Lin (2011); Pourali and Arasteh (2013) and Hansen and Sung suk (2013) who unanimously found a positive relationship between liquidity ratio and firms' value and as such, hypothesis (H<sub>1</sub>) is accepted.

Similarly, the study empirically found a significant relationship between profitability ratios and firms' value. From Table 4.5, the summary of the regression analysis indicates both return on assets and operating profit ratios to be positive and significant. While return on investment ratio is negative and significant. Lastly, return on equity ratio indicates no significant relationship with the firms' value. On this ground, the study concludes that profitability also has an effect on firms' value. Hence, this result is consistent with previous studies of Nassirzadeh and Rostami (2011); Chen, and Chen (2011); Kabajeh et al (2012) who found a similar relationship between the profitability ratio and firms' value and on this basis the second hypothesis is accepted.

Based on the aforesaid, the study concludes that accounting ratios have a significant effect on the value of firms' listed on the Malaysian capital market and on this backdrop, there is increasing need for a more credible and accurate accounting information that will serve the changing needs of shareholders and other users of financial information. Therefore, the adequacy and quality of accounting information will boost shareholders' confidence and also force management to properly account for the resources under their custody.

Based on the reviews and conclusion reached, the study recommends that Malaysian regulatory authorities should implement a policy or a guideline that will encourage a uniform and comprehensive disclosure of accounting ratios by companies in order to avail investors and other users of financial information a better means of evaluating and making a qualitative judgment on companies' financial performance.

#### **5.4 Limitations and Suggestion for Future Study**

The study is limited as it only concentrates on the top 100 leading companies. Therefore, it is suggested that future research should extend these findings by using a much larger sample in order to provide a more accurate and generalizable result.

Moreover, the study covers five years financial statements from 2008-2012. Therefore, utilizing a longer time frame will not be a bad idea in order to substantiate the finding of this study and possibly obtain a more robust result. Also, the study does not include other categories of accounting ratios such as leverage and efficiency ratios. It is therefore recommended that future research should include other categories of accounting ratios in order to have a broader view of the effect of accounting ratios on firms' value.

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