THE EFFECT OF MERGERS AND ACQUISITIONS ON THE
FINANCIAL PERFORMANCE OF PETROLEUM FIRMS IN KENYA

BY
STEPHEN NJUGUNA MBOROTO
D63/72503/2012

A RESEARCH PROJECT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

OCTOBER 2013
DECLARATION

I declare that this research project is my own work and it has not been submitted for any degree or examination in any other University.

Stephen Njuguna Mboroto
D63/72503/2012
Signature…………………… Date…………………………

This project has been submitted for examination with my approval as the university supervisor

Heric Ondigo
Lecturer
Department of Finance and Accounting
School of Business
University of Nairobi
Signature……………………… Date…………………………
ACKNOWLEDGEMENT

I would like to thank everyone who helped me in compiling of my research project, from the initial research to final documentation. I specially want to thank Mr. Herick Ondigo who supervised this study and gave valuable feedback and advice throughout the entire project. His assistance is greatly appreciated.

Further thanks to my friends, family and classmates for their unlimited support during my study of the entire Master of Science in Finance degree course.
DEDICATION

I would like to dedicate this research project to my grandmother, Mrs. Hannah Wambui Njuguna who has been with me through every step of my life. She has been a great motivation as well as an inspiration in making me not to give up on my dreams. I thank her for every sacrifice she made to enable me reach this far.
TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION ................................................................. 1
  1.1 Background of the Study ................................................................. 1
      1.1.1 Mergers and Acquisitions .................................................. 2
      1.1.2 Financial Performance ....................................................... 3
      1.1.3 Effects of Mergers and Acquisitions on Financial Performance .... 3
      1.1.4 Petroleum Companies in Kenya ........................................... 4
  1.2 Research Problem ................................................................. 4
  1.3 Research Objective ................................................................. 5
  1.4 Value of the Study ................................................................. 6

CHAPTER TWO: LITERATURE REVIEW ....................................................... 7
  2.1 Introduction .............................................................................. 7
  2.2 Theoretical Review ................................................................. 7
      2.2.1 Free Cash Flow Theory ....................................................... 7
      2.2.2 Oligopolistic Theory ......................................................... 8
      2.2.3 Size and Return to Scale Theory ......................................... 8
  2.3 Classification of Mergers & Acquisitions .................................... 9
      2.3.1 Horizontal Merger ............................................................ 10
      2.3.2 Vertical Merger ............................................................... 10
      2.3.3 Conglomerate ................................................................. 10
      2.3.4 Market Extension Merger ................................................. 10
      2.3.5 Product-Extension Merger ............................................... 11
  2.4 Motivations for Mergers and Acquisitions .................................. 11
      2.4.1 Synergy ........................................................................ 12
      2.4.2 Financial Strength .......................................................... 12
      2.4.3 Market Expansion and Strategy ......................................... 13
      2.4.4 Revamping of Production Facilities ................................... 13
      2.4.5 Strategic Purpose .......................................................... 14
      2.4.6 Cost Reductions ............................................................. 14
      2.4.7 Acquiring New Technology .............................................. 14
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4.8 Procurement of Supplies</td>
<td>14</td>
</tr>
<tr>
<td>2.5 Determinants of Financial Performance</td>
<td>15</td>
</tr>
<tr>
<td>2.5.1 Return on Equity (ROE)</td>
<td>15</td>
</tr>
<tr>
<td>2.5.2 Return on Asset (ROA)</td>
<td>15</td>
</tr>
<tr>
<td>2.5.3 Management Efficiency</td>
<td>16</td>
</tr>
<tr>
<td>2.5.4 Liquidity Management</td>
<td>16</td>
</tr>
<tr>
<td>2.5.5 External Factors/ Macroeconomic Factors</td>
<td>17</td>
</tr>
<tr>
<td>2.6 Empirical Review</td>
<td>17</td>
</tr>
<tr>
<td>2.7 Summary of Literature Review</td>
<td>20</td>
</tr>
<tr>
<td>CHAPTER THREE: RESEARCH METHODOLOGY</td>
<td>21</td>
</tr>
<tr>
<td>3.1 Introduction</td>
<td>21</td>
</tr>
<tr>
<td>3.2 Research Design</td>
<td>21</td>
</tr>
<tr>
<td>3.3 Population Size</td>
<td>21</td>
</tr>
<tr>
<td>3.4 Data Collection</td>
<td>21</td>
</tr>
<tr>
<td>3.5 Data Analysis</td>
<td>22</td>
</tr>
<tr>
<td>3.5.1 Analytical Model</td>
<td>22</td>
</tr>
<tr>
<td>CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION</td>
<td>25</td>
</tr>
<tr>
<td>4.1 Introduction</td>
<td>25</td>
</tr>
<tr>
<td>4.2 Data Analysis</td>
<td>25</td>
</tr>
<tr>
<td>4.3 Relationship among Study Variables</td>
<td>26</td>
</tr>
<tr>
<td>4.3.1 Correlation Analysis</td>
<td>26</td>
</tr>
<tr>
<td>4.4 Interpretation of Findings</td>
<td>28</td>
</tr>
<tr>
<td>CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS</td>
<td>30</td>
</tr>
<tr>
<td>5.1 Introduction</td>
<td>30</td>
</tr>
<tr>
<td>5.2 Summary</td>
<td>30</td>
</tr>
<tr>
<td>5.3 Conclusion</td>
<td>31</td>
</tr>
<tr>
<td>5.4 Recommendations for Policy</td>
<td>31</td>
</tr>
<tr>
<td>5.5 Limitations of the Study</td>
<td>32</td>
</tr>
<tr>
<td>5.6 Areas for Further Research</td>
<td>32</td>
</tr>
<tr>
<td>References</td>
<td>34</td>
</tr>
</tbody>
</table>
APPENDICES

APPENDIX 1: Pre Merger/Acquisition Ratio Results ................................................................. 37
APPENDIX 2: Post Merger/Acquisition Ratio Results ............................................................... 38
APPENDIX 3: Pre and Post Merger/Acquisition Ratio Results for Sampled Firms .............. 38
LIST OF TABLES

Table 4.1: Corellation of Variables .................................................................................. 26
Table 4.2: Regression Statistics Table ................................................................................ 26
Table 4.3: ANOVA Table .................................................................................................. 26
Table 4.4: Regression Coefficient Table ........................................................................... 28
Table 4.5: Ratio Analysis Table ........................................................................................ 26
LIST OF ABBREVIATIONS

M&A – Mergers and Acquisitions
ROA- Return on Assets
CR- Current Ratio
QR- Quick Ratio
GPM- Gross Profit Margin
TDR- Total Debt Ratio
TAR- Total Asset Ratio
ABSTRACT

The objective of this research project is to establish the effect of mergers and acquisitions on the financial performance of petroleum firms in Kenya. This is by conducting an industry analysis of the petroleum sector in Kenya. The study is limited to a sample of pair companies listed on the Kenyan market that merged/acquired between the years 2002-2012. Data were collected from the NSE Annual Statement of Accounts and Financial Reports of the firms. Comparisons are made between the mean of 3-years pre-merger/acquisition and 3-years post-merger/acquisition financial ratios, while the year of merging/acquisition is exempted.

Using financial ratio analysis and paired ‘t’ test, the study reveals that mergers/acquisitions have insignificant effect on the overall financial performance of petroleum firms in Kenya. Also, there is improvement in the firms’ performance after the merging/acquisition takes place. It recommends that merging and acquisition should not be used to keep failing business alive but to increase competitiveness and financial standing and management should also instill discipline upon itself so that the continued existence of the firm is not jeopardized.

The analysis and results show that petroleum firms performed better in the post-merger/acquisition era as compared to the pre-merger/acquisition era. This is supported by the fact that merging/acquisition had a significant impact on the ROA, which is the overall standard measure of financial performance due to the statistical significance it has on ROA as well as total asset ratio. On the other hand, merger/acquisition was seen to have an insignificant positive effect on the liquidity and solvency of the petroleum firms. This suggests that there was a significant improvement on the financial performance as reflected by the significant increase in ROA. It is therefore recommended that management should not only undertake mergers and acquisitions in order to improve operation and sustain failing businesses but also improve their competitiveness and financial standing. Management should come up with a sound strategy towards asset and liability management so as to avert the problem of mismatching investments and also the quality of assets should be enhanced.
CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Global markets have continuously experienced increased mergers and acquisitions over the last decade. Various reasons have driven firms to undertake in Mergers and Acquisitions. Growing business confidence, consumer demand and improving economic conditions in the region have whetted business executives’ appetite for firms in the technology, mining and financial services sectors. Mergers and Acquisitions (M&A) are continuously being adopted for progressive company competitiveness by expanding market share. M&A are used to diversify the company’s portfolio as a risk management strategy. Additionally, to enable companies penetrate to new geographical markets to support growth by capitalizing on economies of scale and increase on customer base among other reasons (Kemal, 2011). The logic behind any corporate merger is the synergy effect; two is better than one. Companies believe that by either merging or acquiring another company, the performance would be better than a single entity. This is attributed by the fact that shareholder value would effectively be maximized (Sharma, 2009). The reasons behind mergers and acquisitions are; increased market share and revenues, economies of scale, synergy, taxation, widen geographical areas and among other rationale.

Mergers and acquisitions decisions are critical to the success of corporations and their managers. Many corporations find that the best way to get ahead is to expand ownership boundaries through mergers and acquisitions. For others, separating the public ownership of a subsidiary or business segment offers more advantages. At least in theory, M&A create synergies, gain economies of scale, expand operations and cut costs. Investors may expect mergers to deliver enhanced market power. It is no secret that plenty of mergers do not work. In theory, M&A is great, but in practice, things can go awry. Various empirical results have revealed that many of mergers were disappointed, where the motivations that drive mergers can be flawed and efficiencies from economics of scale may prove elusive.
Corporations are undertaking various strategies in efforts to improve financial performance. Financial performance is paramount to the success of any organization as it reflects the financial health of companies in the market and the performance as compared to other players in the industry. Mergers and Acquisitions have been undertaken in efforts to improve organization performance due to the benefits they are believed to carry along. Improving financial performance through mergers and acquisition is mainly considered a management strategy. Management considers merger and acquisition to reduce costs and expenses and maximize shareholder value.

1.1.1 Mergers and Acquisitions

Mergers and Acquisitions refer to the change in ownership, business mix, assets mix and alliance with the view to maximize shareholders’ value and improve firm performance. One of the main elements of improving company performance is the boom in mergers and acquisitions (Pazarkis et al, 2006). Additionally, (Gaughan, 2002) defines a merger as the process in which two firms combine and only one endures and the merged entity cease to exist. (Nakamura, 2005) asserts that an acquisition takes place when a company attains all or part of the target company’s assets and the target remains as a legal entity after the transaction whereas in a share acquisition a company buys a certain share of stocks in the target company in order to influence the management of the target company.

Mergers and Acquisitions are important as they lead to combining corporate resources, but only if it results in a competitive advantage. Some of the benefits are rapid access to technology and products, an extended customer base, an enhanced market position and a stronger financial position. Another importance of mergers and acquisitions is access to an expanded installed base of customers. This not only provides an opportunity for sales of existing products to a larger group of customers, but also provides a greater base for future product sales. In addition, consolidated companies can own a greater share of market, which gives them a substantial competitive advantage. Mergers and acquisitions also benefit companies wanting to reposition themselves in the market. By adding capabilities to their product offerings, companies can rapidly expand their market coverage and modify their market position.
1.1.2 Financial Performance

Financial performance refers to the measure of how well a firm can use assets from its primary mode of business and generate revenues. In addition, Financial Performance is essentially a measure of an organization’s financial health over a given period of time, used to compare similar firms across the same industry or to compare industries or sectors in aggregation. In Mergers and Acquisitions, financial performance of firms is determined by evaluating the following: profitability, liquidity, and solvency. Profitability shows the extent to which a company has been efficient in its operations or gauges a company’s operating success over a given period of time. In this study, three measures of profitability are employed which include Return on Asset (ROA), Gross Profit Margin (GPM) and Earning before Tax (EBT).

Furthermore, Liquidity measures the ability of a firm to meet its short-term obligations in due course. Liquidity measures the ability of a company to pay its short-term debt and meet unexpected cash needs. Failure of a firm to meet its obligations as a result of lack of liquidity results into bad ratings and loss of creditors’ confidence among others. Moreover, Solvency indicates a company’s ability to meet long-term obligations when due and measures the long-term financial strength of a firm. In Mergers and Acquisition solvency is best conducted via Total Debt ratio (TDR) and Total Assets ratio (TAR).

1.1.3 Effects of Mergers and Acquisitions on Financial Performance

Mergers and Acquisitions are used in improving company’s competitiveness and gaining competitive advantage over other firms through gaining greater market share, broadening the portfolio to reduce business risk, entering new markets and geographies, and capitalizing on economies of scale (Saboo and Gopi, 2009). Mergers and Acquisitions agreement is taken not necessarily because of lack of corporate strength but an avenue to create synergy. Many corporations find the best way to get ahead is to expand ownership boundaries is through mergers and acquisitions (Ismail, Abdou and Annis, 2011).

The potential economic benefits of Mergers and Acquisitions are changes that increase value that would not have been made in the absence of a change in control (Pazarkis et
al., 2006). These changes in control are potentially most valuable when they lead in the redeployment of assets, providing new operating plans and business strategies. The motives behind mergers and acquisitions are to improve revenues and profitability, faster growth in scale and quicker time to market, and acquisition of new technology or competence. This is largely the reason why merger and acquisition are perceived as effective methods of improving corporate performance.

1.1.4 Petroleum Companies in Kenya

There are 70 companies in Kenya that are engaged in the oil and petroleum sector. Some of the major players include Shell Kenya, Total Kenya, Oilibya Kenya Limited, KenolKobil Kenya, National Oil Corporation, and Hass Petroleum among many others.

Some petroleum companies in Kenya that have been engaged in mergers and acquisitions include; takeover of Mobil Oil by Oilibya Kenya, Total Kenya acquisition of Chevron Kenya, the merger of Kenya Oil and Kobil Kenya to form KenolKobil. Additionally, Shell Kenya recently acquired BP Kenya, in a deal that saw the former take full ownership.

1.2 Research Problem

It is essential to study the effects that mergers and acquisitions have on financial performance of corporate organization. Rather than being used as strategic tool, it is important to establish the impact of M&A’s on liquidity, profitability and solvency. By analyzing the financial performance of petroleum firms in Kenya, the research will determine if M&A’s affect the ability of ability of these firms to meet their short term obligations. Additionally it is important to analyze if mergers and acquisitions have any effect on profitability efficiency of petroleum firms in Kenya over a given period of time. Also, the study will determine if M&A do have an impact on the ability of petroleum firms in Kenya firms to meet their long-term objectives, by a evaluating the solvency.

One of the common features among Kenyan quoted firms in the Nairobi Stocks Exchange is corporate mergers and acquisitions. The intent to improve firm value and profitability provides the basis for corporate mergers and acquisitions in the petroleum sector. The
improving in performance exercise has majorly surfaced in form of mergers and acquisitions. The primary argument in favor of mergers is that they are good for industrial efficiency without the threat of their companies being taken over and, in all likelihood, the loss of their jobs; managers would act more in their own interest than those of owner (Roll, 1986). This may give rise to agency problem arising from conflict between ownership and management.

Empirical studies such as (Selvam et al 2009); (Kling, 2006) provide evidence on the positive impact of corporate mergers and acquisitions by merger on firms. However, it is crucial to note that merger and acquisition are capable of having adverse effect as suggested by (Yook, 2004), (Yeh and Hoshino, 2002), (King et al, 2004); (Ismail, Abdou and Annis, 2010). There have been research on effects of mergers and acquisition on performance of firms in the financial sectors in Kenya, i.e. banks and insurance companies. (Kithitu, et al, 2012) researched on the role of mergers and acquisitions on the performance of commercial in Kenya. The results reveal that mergers and acquisitions do add value to shareholders wealth. However these studies do communicate mixed reactions about the effect of mergers and acquisitions on the profitability of firms. Little has been conducted on the effect of mergers and acquisitions on performance of firms in the Petroleum sector and Manufacturing industries. These past studies have led to conflicting results that make the effect of merger and acquisition as a business strategy inconclusive. Therefore, the study will answer whether corporate mergers and acquisitions affect liquidity, profitability and solvency objectives which firms pursue. This research study will attempt to fill a gap in academia by investigating the effects of mergers and acquisitions on the profitability, liquidity and solvency of corporate organizations in the petroleum sector in Kenya.

1.3 Research Objective

To establish the effects of mergers and acquisitions on the financial performance of petroleum firms in Kenya.
1.4 Value of the Study

Theoretically, M&As are often seen as opportunities for knowledge exploration (Vermeulen and Barkema, 2001). This research will entail making use of, or exploring the knowledge residing in the mergers and acquisitions. Most research has focused on the effects of gaining access to market or country specific knowledge, or to technological and innovative capabilities through explorative M&As. Yet, the knowledge obtained from M&A experience also provides an interesting avenue to explore.

Empirically, this paper aims to examine the relationship between M&A’s and financial performance. In addition, the study will look at the interaction between target and acquirer experience and its effect on value creation. In addition, the research contributes to organizational learning by looking at the effect of gaining access to knowledge without direct experience – in this case, the potential effect of engaging in M&A deals for companies willing to venture to such deals and the effects on financial performance.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The subsequent literature review seeks to integrate issues regarding theories to be reviewed, classification of mergers and acquisitions, motivations for mergers and acquisitions, determinants of financial performance and the empirical review of related studies.

2.2 Theoretical Review

Corporate mergers and acquisitions are crucial strategies implemented to remain relevant in the business world. Various theories that lead to mergers and acquisitions revolve around free cash flow theory, oligopolistic reaction theory and size and return to scale theory. Mergers and Acquisitions, however, can arise from non-value maximizing behavior on behalf of the managers of the acquiring company. As they are not prompted by managerial discipline motives, these mergers do not usually cause the layoff of the target's incumbent management. However, such mergers are generally harmful to the shareholders in the interest of whom managers are supposed to act. Managers acting to maximize value for shareholders must distribute all free cash flow to them.

2.2.1 Free Cash Flow Theory

Diverting free cash flow from shareholders allows managers to avoid having to use capital markets when in need of new capital; i.e. it allows them to avoid the monitoring associated with new equity issues (Easterbrook, 1984). Moreover, by diverting free cash flow managers can increase the size of the company, thereby enhancing their power and their earning ability, and reducing take-over risk. There is a conflict of interest related to the distribution of free cash flow between managers and the shareholders they are supposed to represent (Jensen, 1986).

One way managers can divert free cash flows from dividends is by issuing debt and thus binding themselves to pay out future cash. This theory prompts the need to improve financial performance of firms through mergers and acquisitions. Return on shareholder
equity is affected when managers divert the free cash flow from dividends thus affecting the financial performance of a company. This is because return on equity measures a corporation’s profitability by revealing how much profit a company generates with the funds invested by shareholders.

2.2.2 Oligopolistic Theory

Within the framework of an oligopolistic market, mergers could also result from what that can be described as a behavior of “oligopolistic reaction”. (Knickerbocker, 1973) defines oligopolistic reaction as “a corporate behavior by which rival firms in an industry composed of a few large firms counter one another’s moves by making similar moves themselves” (Knickerbocker, 1973). Thus, if two firms in an oligopolistic industry merge, others might react by merging in turn (Cantwell, 1992), independently of whether shareholders will gain or lose as a result.

This behavior of oligopolistic reaction could cause a chain of mergers to take place, and therefore can then help explaining the empirical evidence that seem to show that mergers happen in waves. In the case of petroleum firms in Kenya, various industry players are engaging in mergers and acquisition in a bid to improve financial performance. Consequently, rival firms are engaging in mergers and acquisition deals as their competitors in order to realize these oligopolistic goals.

2.2.3 Size and Return to Scale Theory

Benefits of size are usual source of “synergies”. This refers to the positive incremental net gain associated with the combination of two firms through a merger or acquisition. Suppose firm A acquires firm B for cash. The synergy or total gain in value to the shareholders of A and B is Synergy = VAB - [VA + VB]. If the synergy is positive, then the combination of the two firms (VAB) is more valuable than the sum of the separate firms. As learnt from the first principles of finance, the value of an asset is the present value of its discounted Future cash flows. The cash flows from synergy are: ΔCFt = CFABt - [CFA*t + CFBt]. If positive, then the combined firm results in greater cash flow than the Sum of the separate firms. If no value is created through the combination of A
and B, i.e. synergy = 0, then the merger is a zero-sum game and the gain to B shareholders is equal to the cost to A shareholders. If \( V_{AB} > V_A + V_B \), then both parties may benefit.

In terms of economies of scale the average costs decline with larger size. Large firms are more able to implement specialization. A combined firm may operate more efficiently than two separate firms. A firm can achieve greater operating efficiency in several different ways through a merger or an acquisition. Economies of scale relates to the average cost per unit of producing goods and services. If the per unit cost of production falls as the level of production increases, then an economy of scale exists. When companies merge, overheads are reduced and operational efficiency is improved since there is a sharing of central facilities such as corporate headquarters, top management, staff and computer services. Through economies of vertical integration; vertical mergers make it easier to coordinate closely related operating activities.

### 2.3 Classification of Mergers & Acquisitions

Bowman and Singh (1999) classified mergers and acquisitions activities into three categories namely portfolio mergers and acquisitions, financial mergers and acquisitions and organizational mergers and acquisitions. Portfolio mergers and acquisitions: it entails significant changes in the asset mix of a firm or the lines of business which a firm operates, including liquidation, divestitures, asset sales and spin-offs. Financial mergers and acquisitions: It includes changes in the capital structure of a firm, including leverage buyouts, leveraged recapitalization and debt equity swaps. A common way for financial mergers and acquisitions is increasing equity through issuing of new shares. Organizational mergers and acquisitions: It involves significant changes in the organizational structure of the firm, including redrawing of divisional boundaries, flattening of hierarchic levels, spreading of the span of control, reducing product diversification revising compensation, reforming corporate governance and downsizing employment. Other categories commonly accepted include;
2.3.1 Horizontal Merger

This is a merger between companies in the same industry and shares the same product lines and markets. Horizontal mergers are common in industries with fewer firms, as competition tends to be higher and potential gains in market share are much greater for merging firms in such an industry. For instance; The ICEA LION Group was formed as a result of a merger between Insurance Company of East Africa Limited (ICEA) and Lion of Kenya Insurance Company Limited (LOK). The two companies are well known Insurance and financial services market in Kenya and Eastern Africa region. The merger has resulted in the creation of one of the largest insurance groups in the region. Also a merger between Coca-Cola and the Pepsi beverage division, for example, would be horizontal in nature. This would increase the market share as well as reduce costs.

2.3.2 Vertical Merger

A merger between two companies producing different goods or services for one specific finished product. A vertical merger occurs between two or more firms operating at different levels within an industry's supply chain. The logic behind these mergers is to increase efficiency.

2.3.3 Conglomerate

This is a merger between firms that have no common business areas. There are two types of conglomerate mergers: pure and mixed. Pure conglomerate mergers involve firms with nothing in common, while mixed conglomerate mergers involve firms that are looking for product extensions or market extensions. An example of a conglomerate merger is Citigroup's acquisition of Travelers Insurance. While both were in the financial services industry, they had different product lines.
2.3.4 Market-Extension Merger

This occurs between two or more companies that sell the same products but in different markets. The main purpose is to ensure that the merging companies can get access to a bigger market and a bigger client base.

2.3.5 Product-Extension Merger

Takes place between two business organizations that deal in products that are related to each other and operate in the same market. This type of merger allows the merging companies to group together their products and get access to a bigger set of consumers. This ensures that they earn higher profits. In addition there are two types of mergers that are distinguished by how the merger is financed. Each has certain implications for the companies involved and for investors: Purchase Mergers occurs when one company purchases another. The purchase is made with cash or through the issue of some kind of debt instrument. Acquiring companies often prefer this type of merger because it can provide them with a tax benefit. Whilst in Consolidation Mergers, a brand new company is formed and both companies are bought and combined under the new entity.

2.4 Motivations for Mergers and Acquisitions

The motives behind mergers and acquisitions stated by (Kinshore, 2004) involve revolution in information technology (IT) has made it necessary for companies to adopt new changes in the communication and information technology for improving corporate performance. Additionally, changed fiscal and government policies like deregulation or decontrol has led many companies to go for newer market and customer segments. Many companies divisionalized into smaller businesses. Wrong divisionalization strategy has led to companies revamping themselves. Product divisions which do not fit into the company’s main line of business are being divested. Global market concept has necessitated many companies to mergers and acquisitions because lowest cost producers only can survive in the competitive global markets. Improved productivity and cost reduction has necessitated downsizing of the workforce both at works and managerial level. Convertibility of domestic currency has attracted medium sized companies to
participate in the global markets. Mergers and acquisitions take place due to many reasons. The basic purpose of merges or business combination is to achieve faster growth of the corporate business. Below are some of the most common reasons for mergers and acquisitions.

2.4.1 Synergy

This refers to the positive incremental net gain associated with the combination of two firms through a merger or acquisition. Suppose firm A acquires firm B for cash. The synergy or total gain in value to the shareholders of A and B is Synergy = VAB - [VA + VB]. If the synergy is positive, then the combination of the two firms (VAB) is more valuable than the sum of the separate firms. As learnt from the first principles of finance, the value of an asset is the present value of its discounted Future cash flows. The cash flows from synergy are: ΔCFt = CFABt - [CFAt + CFBt]. If positive, then the combined firm results in greater cash flow than the Sum of the separate firms. If no value is created through the combination of A and B, i.e. synergy = 0, then the merger is a zero-sum game and the gain to B shareholders is equal to the cost to A shareholders. If VAB > VA + VB, then both parties may benefit.

2.4.2 Financial Strength

Mergers and Acquisitions improve liquidity and have direct access to cash resource. Additionally by asset backing a merger may be driven by the need of a company seeking another with substantial asset value. This is particularly so for ‘risky’ companies in the service industry such as consultancies, ICT, Research. Mergers and Acquisitions assist to dispose of surplus and outdated assets for cash out of combined enterprise. This is where a predator or acquirer company will buy an under-valued company, break it up into smaller pieces and then sell them separately to realize capital gains. Furthermore, Mergers and Acquisitions enhance gearing capacity; this is by borrowing on better strength and greater assets backing. To avail Tax benefits. Where a profitable company paying high corporation tax acquires a firm with accumulated tax losses the legislation may allow acquisition of a loss making company thus reducing the tax burden of the
merged company. Also tax can be reduced through utilization of unused debt capacity. Lastly the merged companies can reinvestment of surplus funds ("free cash flow") in non-taxable acquisitions as an alternative to paying dividends or repurchasing stock.

### 2.4.3 Market Expansion and Strategy

Mergers and Acquisitions enable to eliminate competition and protect existing market by obtaining new market outlets. This is through market power- where by one firm may acquire another to increase its market share and market power. In such mergers, profits can be enhanced through higher prices and reduced competition for customers. Diversifying products or services: Another reason for merging companies is to complement a current product or service. Two firms may be able to combine their products or services to gain a competitive edge over others in the marketplace. For example, in 2008, HP bought EDS to strengthen the services side of their technology offerings (this deal was valued at about US$13.9 billion). In terms of economies of scale, Mergers and Acquisitions also translate into improved purchasing power to buy equipment or office supplies when placing larger orders, companies have a greater ability to negotiate prices with their suppliers. Improved market reach and industry visibility where companies merge to reach new markets and grow revenues and earnings.

### 2.4.4 Revamping of Production Facilities

Mergers and Acquisitions are undertaken to enable companies to achieve economies of scale by amalgamating production facilities through more intensive utilization of plant resources. Additionally, M& A’s are undertaken to standardize product specifications, improvement of quality of product, expanding markets and aiming at customer’s satisfaction through strengthening after sales services. This enables companies to reduce cost, improve quality and produce competitive products to retain and improve market share. Additionally, companies are able to obtain improved production technology and know-how from the offered company.
2.4.5 Strategic Purpose

Mergers and Acquisitions help achieve strategic objectives through alternative types of combinations which may be horizontal, vertical, product expansion, market extensional or other specified unrelated objectives depending upon corporate strategies. This is an opportunity to take advantage of the competitive environment if certain things occur or, more generally, to enhance management flexibility with regard to the company’s future operation.

2.4.6 Cost Reductions

A combined firm may operate more efficiently than two separate firms. A firm can achieve greater operating efficiency in several different ways through a merger or an acquisition. Economies of scale relates to the average cost per unit of producing goods and services. If the per unit cost of production falls as the level of production increases, then an economy of scale exists. When companies merge, overheads are reduced and operational efficiency is improved since there is a sharing of central facilities such as corporate headquarters, top management, staff and computer services. Through economies of vertical integration; vertical mergers make it easier to coordinate closely related operating activities.

2.4.7 Acquiring New Technology

To stay competitive, companies need to stay on top of technological developments and their business applications. By buying a smaller company with unique technologies, a large company can maintain or develop a competitive edge.

2.4.8 Procurement of Supplies

Mergers and acquisition are undertaken to safeguard the source of supplies of raw materials or intermediary product. Moreover, to obtain economies of purchase in the form of discount savings in transporting costs, overhead costs in buying department, etc. M&A’s assist to share the benefits of suppliers economies by standardizing the materials.
2.5 Determinants of Financial Performance

Profit is the ultimate goal of all corporate organization. All the strategies designed and activities performed thereof are meant to realize this grand objective. However, this does not mean that companies have no other goals. Companies could also have additional social and economic goals. However, the intention of this study is related to the first objective, financial performance. To measure the financial performance of petroleum firms there are variety of ratios used of which Return on Asset and Return on Equity are the major ones (Murthy and Sree, 2003; Alexandru et al., 2008).

2.5.1 Return on Equity (ROE)

ROE is a financial ratio that refers to how much profit a company earned compared to the total amount of shareholder equity invested or found on the balance sheet. ROE is what the shareholders look in return for their investment. A business that has a high return on equity is more likely to be one that is capable of generating cash internally. Thus, the higher the ROE the better the company is in terms of profit generation. It is further explained by (Khrawish, 2011) that ROE is the ratio of Net Income after Taxes divided by Total Equity Capital. It represents the rate of return earned on the funds invested in the company by its stockholders. ROE reflects how effectively a firm management is using shareholders’ funds. Thus, it can be deduced from the above statement that the better the ROE the more effective the management in utilizing the shareholders capital.

2.5.2 Return on Asset (ROA)

ROA is also another major ratio that indicates the profitability of a company. It is a ratio of Income to its total asset (Khrawish, 2011). It measures the ability of the company management to generate income by utilizing company assets at their disposal. In other words, it shows how efficiently the resources of the company are used to generate the income. It further indicates the efficiency of the management of a company in generating net income from all the resources of the institution (Khrawish, 2011). (Wen, 2010), states that a higher ROA shows that the company is more efficient in using its resources.


2.5.3 Management Efficiency

Management Efficiency is one of the key internal factors that determine a company’s financial performance. It is represented by different financial ratios like total asset growth and earnings growth rate. Yet, it is one of the complexes subject to capture with financial ratios. Moreover, operational efficiency in managing the operating expenses is another dimension for management quality. The performance of management is often expressed qualitatively through subjective evaluation of management systems, organizational discipline, control systems, quality of staff, and others. Yet, some financial ratios of the financial statements act as a proxy for management efficiency. The capability of the management to deploy its resources efficiently, income maximization, reducing operating costs can be measured by financial ratios. The higher the operating profits to total income (revenue) the more the efficient management is in terms of operational efficiency and income generation. The other important ratio is that proxy management quality is expense to asset ratio. The ratio of operating expenses to total asset is expected to be negatively associated with profitability. Management quality in this regard, determines the level of operating expenses and in turn affects profitability (Athanasoglou et al. 2005).

2.5.4 Liquidity Management

Liquidity is another factor that determines the level of a company’s financial performance. Liquidity refers to the ability of the bank to fulfill its obligations, mainly of depositors. According to (Dang, 2011) adequate level of liquidity is positively related with bank profitability. The most common financial ratios that reflect the liquidity position of a bank according to the above author are customer deposit to total asset and total loan to customer deposits. Other scholars use different financial ratio to measure liquidity. For instance (Ilhomovich, 2009) used cash to deposit ratio to measure the liquidity level of banks in Malaysia. However, the study conducted in China and Malaysia found that liquidity level of banks has no relationship with the performances of banks (Said and Tumin, 2011).
2.5.5 External Factors/ Macroeconomic Factors

The macroeconomic policy stability, Gross Domestic Product, Inflation, Interest Rate and Political instability is also other macroeconomic variables that affect the financial performance of companies. For instance, the trend of GDP affects the demand for banks asset. During the declining GDP growth the demand for credit falls which in turn negatively affect the profitability of banks. On the contrary, in a growing economy as expressed by positive GDP growth, the demand for credit is high due to the nature of business cycle. During boom the demand for credit is high compared to recession (Athanasoglou et al., 2005). The same authors state in relation to the Greek situation that the relationship between inflation level and banks profitability is remained to be debatable. The direction of the relationship is not clear (Vong and Chan, 2009).

2.6 Empirical Review

Various empirical studies on corporate mergers and acquisitions focused on the effect of merger and acquisition on firm performance. This is because Mergers & Acquisitions have been the commonest method of corporate strategy to improve firm performance. (Yeh and Hoshino, 2002) evaluated the effects of mergers and acquisitions on firms’ operating performance on the basis of its effect on efficiency, profitability, and growth. The study proxy total productivity as an indicator of the firm’s efficiency, return on assets and return on equity as measures of profitability, and sales and growth in employment to index for firm’s growth rate. Using a sample of 86 Japanese corporate mergers between 1970 and 1994, it was realized that there was insignificant negative change in productivity, significant decline in profitability, significant adverse effect on sales growth rate, and merger caused downsizing in the workforce.

(King et al. 2004) employed a meta-analysis technique to assess the impact of mergers and acquisition on firms using the findings of published research on post-acquisition performance. Their study revealed that merger and acquisition does not result to superior financial performance. It further showed that M & A has a moderate unfavorable effect on the long term financial performance of the acquiring firms and no evidence to support and explain variations in performance as a result of mergers and acquisitions using the
factors that were supported by the literature. (Jin et al, 2004) examined the impact of mergers and acquisitions on the operational aspects of the publicly traded firms in China. They used changes in revenue, profit margin, return on assets and the total asset turnover ratio before and after the mergers and acquisitions as proxies for firm performance and conducted tests to determine whether mergers and acquisitions resulted in significant changes. Their study showed that there were significant improvements in total revenue, profit margin, and return on assets following mergers and acquisitions but there was no evidence of any significant impact on asset turnover ratio. They also found evidence of significant market anticipation and over reaction to the mergers and acquisitions announcements.

(Pazarskis et al. 2006) examined empirically the impact of mergers and acquisitions (M & As) on the operating performance of Mergers & Acquisitions involved firms in Greece. Using financial, accounting and confidential questionnaire response data, the post-acquisition performance of fifty Greek companies listed on the Athens Stock Exchange that executed at least one merger or acquisition in the period from 1998 to 2002 is evaluated on the basis of certain non-financial characteristics and financial characteristics (a set of seven selected financial sectors). The study showed strong evidence that the profitability of a firm that performed M & As is decreased due to the merger/acquisition event.

(Saboo and Gopi, 2007) investigated the impact of mergers on the operating performance of acquiring firms by examining some pre-merger and post-merger financial ratios of these firms and determined the differences in pre-merger and post-merger financial ratio of the firms that went for domestic acquisitions and firms that opted for international/cross-border acquisitions. The results suggest that there are variations in terms of impact on performance following mergers, depending on the type of firm acquired-domestic or cross border. The main finding shows that merger have had a positive effect on key financial ratios of firms acquiring domestic firms while a slightly negative impact on the firms acquiring cross-border firms.
(Mantravadi and Reddy, 2008) evaluated the impact of mergers on the operating performance of acquiring corporate in different industries, by examining some pre-merger and post-merger financial ratios, with the sample of firms chosen as all mergers involving public limited and traded companies in India between 1991 and 2003. The results suggest that there are minor variations in terms of impact on operating performance following mergers, in different industries in India. Specifically, mergers seem to have had a slightly positive impact on profitability of firms in the banking and finance industry; the pharmaceuticals, textiles and electrical equipment sectors saw a marginal negative impact on operating performance in terms of profitability and returns on investment. For the chemicals and Agri-products sectors, mergers had caused significant decline both in terms of profitability margins and returns on investment and assets.

(Selvam et al., 2009) conducted a study on the impact of mergers on the corporate performance of acquirer and target companies in India. A sample of companies which underwent merger in the same industry during the period of 2002-2005 listed on the Bombay Stock Exchange. The study focused on comparing the liquidity performance of the thirteen sample acquirer and target companies before and after the period of mergers by using ratio analysis and t-test. It was found out that the shareholders of the acquirer companies increased their liquidity performance after the merger event.

(Ullah et al., 2010) examined whether merger delivers value, taking the case of Glaxo Smith/cline Merger. They analyzed the pre and post-merger performance of the firm by applying the net present value approach of valuation. The study found that mega pharmaceutical merger hasn’t delivered value. The stock prices underperform both in absolute and relative terms against the index. The merger resulted into substantial research and development reduction and downsizing instead of a potential employment haven. (Ismail et al., 2010) conducted a study to explore improvements in the corporate performance of firms involved in merger and acquisition. Using a sample of Egyptian companies in the period from 1996 to 2005 in the construction and technology sectors, their results show that merger and acquisition in the construction sector has contributed in
improving the profitability of firms while in the technology sector, no improvements were discovered. For both sectors, M & As did not improve efficiency, liquidity, solvency and cash flow positions.

(Mishra and Chandra, 2010) assessed the impact of merger and acquisition on the financial performance of Indian pharmaceutical companies over the period from 2000 – 01 to 2007 – 08. By applying panel data estimation techniques, they found that the profitability of a firm depends directly on its size, selling efforts and exports and imports intensities but inversely on their market share and demand for the products. Their empirical findings suggests that M & A does not have any significant impact on profitability of the firms in the long run possibly due to the resultant X-inefficiency and entry of new firms into the market.

2.7 Summary of Literature Review

The literature review encompasses the theories to be reviewed, the different classifications of mergers and acquisitions, the motivations for mergers and acquisitions, the determinants of mergers and acquisitions as well as the empirical review of related studies. The different categories of mergers and acquisitions include; horizontal mergers, vertical mergers, conglomerate mergers and product extension mergers. In addition, the various motivations for mergers and acquisitions such as; synergy, financial strength, market expansion and strategy, strategic purpose, cost reductions, acquiring new technology and procuring new supplies. Furthermore, for the determinants of financial performance revolve around; return on assets, return on equity, management efficiency, liquidity efficiency and external factors. In the final part, the literature review entails the related empirical review.
CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This research aims to establish if the operating and financial performance improve after Mergers and Acquisitions in Kenya’s Petroleum sector. The research methodology entails the descriptive research design to be employed, population and sample size of the study, data collection and analysis techniques, and the analytical model to be utilized in the study.

3.2 Research Design

The research will adopt a descriptive research design in order to determine the relationship between mergers and acquisitions and the financial performance of petroleum firms in Kenya. By using a descriptive study, the research will able to depict whether mergers and acquisitions do have an impact on the financial performance of petroleum firms in Kenya.

3.3 Population Size

The population under study will consist of all the petroleum firms in Kenya. There are 70 petroleum firms in Kenya currently. Some of the firms in this sector have engaged in mergers and acquisitions in efforts to improve financial performance and maximize shareholder value. The main focus is on firms that have engaged in mergers and acquisitions in this sector between the years 2002-2012. These include; takeover of Mobil Oil by Oilibya Kenya, Total Kenya acquisition of Chevron Kenya, KenolKobil (Merger of Kenya Oil and Kobil Kenya) and the acquisition of BP Kenya by Shell Kenya.

3.4 Data Collection

The descriptive study will be based on secondary data to be obtained from available financial statements of petroleum companies in Kenya. These statements can be accesses through the respective company websites and the Nairobi Securities exchange. Data from financial statements includes; current assets, current liabilities, total liabilities, net worth
and total assets. Data from securities exchange include stock prices of petroleum listed in the Nairobi Stocks Exchange and have engaged in mergers and acquisitions.

3.5 Data Analysis

The estimation methods to be utilized are financial ratio analysis method and in order to determine and test the correlation ratio between the dependent variable and each independent variable the Statistic-t test are going to be calculated as well as the probability associated to each combination of variables. This will assist in estimating parameters of the regression model and testing the level of significance. This is by coming up with the coefficients of the regression model, standard errors, t test statistic value for each coefficient as well as value of the threshold of significance. Therefore, by analyzing the results from these findings of the t test and level of significance, it will be possible to depict the relationship of financial performance based on mergers and acquisitions.

3.5.1 Analytical Model

The research study will be centered on its main goal by developing a financial model to examine the relation existing between different indicators resulted from the firm’s financial statements and expressed through the financial performance. In other words, the analysis will be centered round the explanation of the financial performance depending on the evolution of main financial indicators available at the level of firms. In order to carry out such an analysis the research will use the multiple linear regression method. Briefly speaking, the goal of the multiple linear regressions is to point out the relation between a dependent variable and a great deal of independent variables. With the help of multiple linear regressions it is possible to determine to what extent a part of the total variation of the dependent variable is influenced by the variation of the independent variables. The following is the general form of the equation of the multiple linear regression model to be utilized;

\[ Y_i = \beta_0 + \beta_1 X_{i,1} + \beta_2 X_{i,2} + \beta_3 X_{i,3} + \beta_4 X_{i,4} + \epsilon \]
Where;

\( i = 1, 2, 3, 4 \ldots k \) are the number of observations from the sample;

\( Y_i \) = observation \( i \) of the dependent variable; i.e. Financial Performance in the study, estimated by Return on Assets (ROA)

**Return on Assets**: It is a standard measure of profitability in numerous studies. It shows the efficiency of company’s management in utilizing assets at its disposal to earn profit. It is calculated as:

\[
\text{ROA} = \frac{\text{Net Income or Profit after Tax}}{\text{Total Assets}}
\]

**Quick Ratio**: This is a preferable and better method to test for liquidity because it excludes stocks from current assets. This is because stocks may suffer obsolescence, damage and pilferage. It shows the extent to which a firm is able to meet its short term obligations from its liquid assets. The recommended bench mark for quick ratio 1:1 and it is calculated as;

\[
\text{QR} = \frac{\text{Current Assets} - \text{Inventories or Stocks}}{\text{Current Liabilities}}
\]

**Current Ratio**: This is one of the balance sheet financial performance measures of a company’s liquidity i.e. the level of safety provided by the excess of current assets over current liabilities. The conventionally acceptable current ratio is 2:1. It is calculated by dividing the current assets by the current liabilities that is;

\[
\text{CR} = \frac{\text{Current Assets}}{\text{Current Liabilities}}
\]

**Total Asset Ratio**: This relates the net worth of a firm to its total assets. It is given as;

\[
\text{TAR} = \frac{\text{Net Worth}}{\text{Total Assets}}
\]

**Total Debt Ratio**: It is the ratio of the total liabilities of a firm including all short and long term debts to its net worth. It is mathematically expressed as;

\[
\text{TDR} = \frac{\text{Total Liabilities}}{\text{Net Worth}}
\]

\( \beta_0 \) = constant free term of the equation

\( \beta_1, \beta_2, \beta_3, \beta_4 \) = coefficient of independent variable
\( \varepsilon = \) error term of equation

In order to determine improvements in the performance of firms after the merging or acquiring exercise, the study formulated the four null hypotheses stated thus;

\( H_1: \) There is no significant change in the quick ratio before and after the merger/acquisition of petroleum firms in Kenya.

\( H_2: \) There is no significant change in the current ratio before and after the merger/acquisition of petroleum firms in Kenya.

\( H_3: \) There is no significant change in the total asset ratio before and after the merger/acquisition of petroleum firms in Kenya.

\( H_4: \) There is no significant change in the total debt ratio before and after the merger/acquisition of petroleum firms in Kenya.
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter entails the data analysis, relationship among the study variables as well as results of the analysis. The data analysis method utilized is the ratio analysis, descriptive research design as well as the statistical t-test research design. In addition, the relation between variables is determined by performing a correlation between the variables and finally the results of the analysis are discussed.

4.2 Data Analysis

The estimation methods to be utilized are financial ratio analysis method and in order to determine and test the correlation ratio between the dependent variable and each independent variable the Statistic-t test are going to be calculated as well as the probability associated to each combination of variables. This will assist in estimating parameters of the regression model and testing the level of significance. This is by coming up with the coefficients of the regression model, standard errors, t test statistic value for each coefficient as well as value of the threshold of significance. Therefore, by analyzing the results from these findings of the t test and level of significance, it will be possible to depict the relationship of financial performance based on mergers and acquisitions.

In order to arrive at a logical conclusion, financial ratios in the pre-merger/acquisition and post-merger/acquisition era are compared. The selected financial ratios for each company in the sample over a 3-years period before Merging/Acquisition and 3-years after Merging/Acquisition, the Merging/Acquisition exercise are summed up, and the mean for each financial ratio are calculated the study excludes the year merger/acquisition took place because it usually includes recognition of a number of a typical event which distorts comparison.
In order to determine improvements in the performance of firms after the merging or acquiring exercise, the study formulated the four null hypotheses stated thus;

\( H_1 \): There is no significant change in the quick ratio before and after the merger/acquisition of petroleum firms in Kenya.

\( H_2 \): There is no significant change in the current ratio before and after the merger/acquisition of petroleum firms in Kenya.

\( H_3 \): There is no significant change in the total asset ratio before and after the merger/acquisition of petroleum firms in Kenya.

\( H_4 \): There is no significant change in the total debt ratio before and after the merger/acquisition of petroleum firms in Kenya.

### 4.3 Relationship among Study Variables

#### 4.3.1 Correlation Analysis

In order to establish the relationship among the different variables in the study, Pearson correlation analysis was conducted on the ROA and Quick Ratio, Current Ratio, Total Asset Ratio and Debt Ratio indicators. M&As demonstrate a statistically significant relationship to ratio indicators (Q.R, C.R, TAR & D.R) at the 95% confidence interval.

**Table 4.1: Correlation of Variables**

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>Quick Ratio</th>
<th>Current Ratio</th>
<th>Total Asset Ratio</th>
<th>Debt Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quick Ratio</td>
<td>-0.3993</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Ratio</td>
<td>-0.45934</td>
<td>0.877595</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Asset Ratio</td>
<td>-0.48085</td>
<td>0.010932</td>
<td>0.196378</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Debt Ratio</td>
<td>0.128295</td>
<td>-0.63026</td>
<td>-0.51898</td>
<td>0.281032</td>
<td>1</td>
</tr>
</tbody>
</table>

*Source: Researcher’s own findings*
Table 4.2: Regression Statistics Table

The following is the output for the regression analysis, with significant importance on the $R^2$

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.623846</td>
</tr>
<tr>
<td>R Square</td>
<td>0.389183</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.26059</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.058506</td>
</tr>
<tr>
<td>Observations</td>
<td>24</td>
</tr>
</tbody>
</table>

Source: Researcher’s own findings

The above gives the goodness of fit measure:

$R^2 = 0.389183$

Correlation between $y$ and $y$ hat is 0.623846 (when squared gives 0.389183)

Adjusted $R^2 = R^2 - (1 - R^2) \times (K - 1) / (n - K) = 0.389183 - 0.610817 \times (4)/(19) = 0.26059$

$R^2 = 0.389183$ means that 38.92% of the variation of $y_i$ around $y$ bar is explained by the regressors $X_1$(quick ratio), $X_2$(current ratio), $X_3$(total asset ratio), $X_4$(debt ratio)

Table 4.3: ANOVA Table

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>4</td>
<td>0.041438</td>
<td>0.01036</td>
<td>3.026473</td>
<td>0.043451</td>
</tr>
<tr>
<td>Residual</td>
<td>19</td>
<td>0.065037</td>
<td>0.003423</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>0.106475</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Researcher’s own findings

The analysis of ANOVA (analysis of variance) table splits the sum of squares into its components

The total sum of squares = Residual (error) sum of squares + Regression sum of squares

Thus $\sum (Y_i - Y \text{ bar})^2 = \sum (y_i - y\hat{i})^2 + \sum (y\hat{i} - y\text{ bar})^2$ where $y\hat{i}$ is the value of $y_i$ predicted from the regression line and $y$ bar is the sample mean of Y.

$R^2 = 1 - \text{Residual SS} / \text{Total SS}$ (general formula for $R^2$)

$= 1 - 0.065037/ 0.106475$ (from data in the ANOVA table)

$= 0.389183$ (which equals $R^2$ given in the regression Statistics table).
Table 4.4: Regression Coefficient Table

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.251066</td>
<td>0.091268</td>
</tr>
<tr>
<td>Quick Ratio</td>
<td>-0.04028</td>
<td>0.057317</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>-0.01079</td>
<td>0.045225</td>
</tr>
<tr>
<td>Total Asset Ratio</td>
<td>-0.02709</td>
<td>0.012189</td>
</tr>
<tr>
<td>Debt Ratio</td>
<td>0.010968</td>
<td>0.123161</td>
</tr>
</tbody>
</table>

Source: Researcher’s own findings

Let $\beta_j$ denote the population coefficient of the jth regressor, then Column "Coefficients" gives the least squares estimates of $\beta_j$. i.e. coefficients to the independent variables quick ratio, current ratio, total asset ratio and debt ratio. Column "Standard error" gives the standard errors (i.e. the estimated standard deviation) of the least squares estimates $b_j$ of $\beta_j$.

4.3. 2 Results of Mean Ratios

Table 5: Ratio Analysis Table

<table>
<thead>
<tr>
<th>Financial Ratio</th>
<th>Pre-Merger/Acquisition</th>
<th>Post-Merger/Acquisition</th>
<th>T Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>0.12185</td>
<td>0.13383</td>
<td>2.750875*</td>
</tr>
<tr>
<td>Quick Ratio</td>
<td>0.9125</td>
<td>1.1625</td>
<td>-0.70275**</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>1.18</td>
<td>1.831666667</td>
<td>-0.23857**</td>
</tr>
<tr>
<td>Total Asset Ratio</td>
<td>2.43583</td>
<td>2.84167</td>
<td>-2.22215*</td>
</tr>
<tr>
<td>Debt Ratio</td>
<td>0.565</td>
<td>0.5813</td>
<td>0.089056**</td>
</tr>
</tbody>
</table>

Source: Researcher’s own findings

(*) denotes significance at 0.05 significance level

(**) denotes insignificant at 0.05 significance level

4.4 Interpretation of Findings

The results show that all the ratios (mean) improved as a result of Merging/Acquisition i.e. they conform to the a priori expectations, apart from the debt ratio. Thus the post-
merger/acquisition ratios are greater than the pre-merger/acquisition ratios. Return on Assets (ROA) increased from 0.12185 to 0.13383 after Merging/Acquisition and the increment can be regarded to be statistically significant. Overall, it can be deduced that Merging/Acquisition has had a significant effect on the financial performance of firms, thus accept the null hypothesis.

It can also be deduced that the liquidity of the firms improved in the post-Merger/acquisition era as shown by increment the current ratio and quick ratio. Nevertheless, the statistical measure reveal that the improvements were insignificant. Furthermore, total asset ratio have improved from 2.43583 to 2.84167 as the statistical measures reveal, this increment is however statistically insignificant. Total debt ratio was however expected to decrease in financial sense but it increased from 0.565 to 0.5813 which is also statistically significant.

The ROA significantly increased after merging/acquisition of the petroleum firms. This significant improvement shows that there is an increase in management efficiency in employing available assets to generate earnings. The importance of ROA means that any decrease in the management efficiency use of assets leads to a significant decline in profitability. Nevertheless, in this study ROA is the standard and proficient measure of financial performance, therefore Merging/Acquisition can be said to have significant positive effect on financial performance of petroleum firms in Kenya. In addition, Merging/Acquisition demonstrated an insignificant positive impact on the liquidity of the petroleum firms as quick ratio and current ratio significantly increased, this implies that the petroleum sector firms are strategically positioned and their ability to meet their short term obligations and any unforeseen contingencies have been improved. However, merging/acquisition have insignificant non beneficial effect on solvency of the firms, as the debt ratio is seen to have increased in the post-merger/acquisition era.
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction
This section entails the summary of the entire project. In particular, it provides a clear summary of the entire project i.e to establish the effect of mergers and acquisitions on the financial performance of petroleum firms in Kenya. In addition, it also entails the conclusion from the analysis of statistical results as well as future recommendations as observed from the study.

5.2 Summary
It is essential to study the effects that mergers and acquisitions have on financial performance of corporate organization. Rather than being used as strategic tool, it is important to establish the impact of M&A’s on liquidity, profitability and solvency. By analyzing the financial performance of petroleum firms in Kenya, the research determined if M&A’s affect the ability of ability of these firms to meet their short term obligations. Additionally it is important to analyze if mergers and acquisitions have any effect on profitability efficiency of petroleum firms in Kenya over a given period of time. Also, the study will determine if M&A do have an impact on the ability of petroleum firms in Kenya firms to meet their long-term objectives, by a evaluating the solvency.

The literature review encompasses the theories to be reviewed, the different classifications of mergers and acquisitions, the motivations for mergers and acquisitions, the determinants of mergers and acquisitions as well as the empirical review of related studies. The different categories of mergers and acquisitions include; horizontal mergers, vertical mergers, conglomerate mergers and product extension mergers. In addition, the various motivations for mergers and acquisitions such as; synergy, financial strength, market expansion and strategy, strategic purpose, cost reductions, acquiring new technology and procuring new supplies. Furthermore, for the determinants of financial performance revolve around; return on assets, return on equity, management efficiency,
liquidity efficiency and external factors. In the final part, the literature review entails the related empirical review.

The estimation methods utilized are financial ratio analysis method and in order to determine and test the correlation ratio between the dependent variable and each independent variable the Statistic-t test were calculated as well as the probability associated to each combination of variables. This assisted in estimating parameters of the regression model and testing the level of significance. This is by coming up with the coefficients of the regression model, standard errors, t test statistic value for each coefficient as well as value of the threshold of significance. Therefore, by analyzing the results from these findings of the t test and level of significance, it was possible to depict the relationship of financial performance based on mergers and acquisitions.

5.3 Conclusion

Corporate mergers and acquisitions are aimed at amplifying efficiency, enhancing competitive advantage, achieving synergy and improving firm value. Mergers and Acquisitions pursue the profitability, liquidity and solvency objectives of an organization. The study was carried out to determine whether improvements occur after the merger and acquisition are undertaken. The analysis and results show that petroleum firms performed better in the post- merger/acquisition era as compared to the pre-merger/acquisition era. This is supported by the fact that merging/acquisition had a significant impact on the ROA, which is the overall standard measure of financial performance due to the statistical significance it has on ROA as well as total asset ratio. On the other hand, merger/acquisition was seen to have an insignificant positive effect on the liquidity and solvency of the petroleum firms. This suggests that there was a significant improvement on the financial performance as reflected by the significant increase in ROA.

5.4 Recommendations for Policy

Based on the findings of the study, it is essential to give recommendations in order to reap more gains from merger/acquisition. It is recommended that;
Management should instill discipline upon itself by ensuring good corporate governance, promote technological progress and increase its paid up capital regardless of the statutory requirements so that the continued existence of the firm is not jeopardized after undergoing mergers and acquisition. Management should not only undertake mergers and acquisitions in order to improve operation and sustain failing businesses but also improve their competitiveness and financial standing. Management should come up with a sound strategy towards asset and liability management so as to avert the problem of mismatching investments and also the quality of assets should be enhanced. Management should put into consideration the degree of transferability and marketability of assets invested in so that these assets can provide liquidity to the firm with ease.

5.5 Limitations of the Study

The main limitation on this study is the fact that not many petroleum companies in have undergone mergers and acquisition during the study period. This lead to selection of a small sample size, thus the results may not be very conclusive and also some companies do not publicly avail their financial statements. This made the data collection a bit hectic as well as time consuming. Another limitation involves the inaccuracies in the financial statements as some figures vary from year to year. This made estimation process of the financial ratios in some of the petroleum companies difficult to calculate. This can be attributed to the fact that some companies manipulate their figures as well as use of various accounting methods to prepare these financial statements. Finally, the post-merger results are based on a few years of analysis which may have affected the results; a longer period of time on the post-merger could have prompted a different conclusion. This is because most mergers/acquisitions have taken place in the last four to five years.

5.6 Areas for Further Research

Further research in other sectors that have engaged in mergers and acquisitions should be embarked on so as to obtain further insights. This is because the type of industry may make a difference to the pre-merger/acquisition and post-merger/acquisition financial performance of firms. Extensive research has been already been carried out on effect of mergers and acquisition on the financial performance of the banking sectors and thus it is
important to look into other sectors such as; insurance companies, manufacturing companies, IT and communications firms to enable to determine whether mergers and acquisitions do have a significant impact on the financial performance of firms. In addition, it is important to study the effect of mergers and acquisitions on shareholder value of the stated firms and also petroleum firms.
References


Energy Regulatory Commission (2011 Annual Report); petroleum pricing regulations stakeholders forum paper


APPENDICES

APPENDIX 1: Pre Merger/Acquisition Ratio Results

Table A1: Pre Merger/Acquisition Ratio Results

<table>
<thead>
<tr>
<th></th>
<th>Pre-Merger Financial Ratios</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROA</td>
<td>Quick Ratio</td>
<td>Current Ratio</td>
<td>Total Asset Ratio</td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
<td>-------------</td>
<td>---------------</td>
<td>------------------</td>
</tr>
<tr>
<td>1</td>
<td>0.16</td>
<td>1.34</td>
<td>1.45</td>
<td>4.48</td>
</tr>
<tr>
<td>2</td>
<td>0.059</td>
<td>1.23</td>
<td>1.33</td>
<td>3.25</td>
</tr>
<tr>
<td>3</td>
<td>0.066</td>
<td>1.3</td>
<td>1.44</td>
<td>3.89</td>
</tr>
<tr>
<td>4</td>
<td>0.175</td>
<td>0.85</td>
<td>1.13</td>
<td>1.42</td>
</tr>
<tr>
<td>5</td>
<td>0.143</td>
<td>0.92</td>
<td>1.15</td>
<td>1.4</td>
</tr>
<tr>
<td>6</td>
<td>0.154</td>
<td>0.89</td>
<td>1.2</td>
<td>1.36</td>
</tr>
<tr>
<td>7</td>
<td>0.0694</td>
<td>0.61</td>
<td>1.17</td>
<td>2.48</td>
</tr>
<tr>
<td>8</td>
<td>0.0768</td>
<td>0.82</td>
<td>1.26</td>
<td>3.53</td>
</tr>
<tr>
<td>9</td>
<td>0.096</td>
<td>0.81</td>
<td>1.24</td>
<td>3.77</td>
</tr>
<tr>
<td>10</td>
<td>0.154</td>
<td>0.7</td>
<td>0.91</td>
<td>1.02</td>
</tr>
<tr>
<td>11</td>
<td>0.164</td>
<td>0.73</td>
<td>0.94</td>
<td>1.22</td>
</tr>
<tr>
<td>12</td>
<td>0.145</td>
<td>0.75</td>
<td>0.94</td>
<td>1.41</td>
</tr>
<tr>
<td>Mean</td>
<td>0.12185</td>
<td>0.9125</td>
<td>1.18</td>
<td>2.4358333</td>
</tr>
</tbody>
</table>

*Source: Researcher’s own findings*
APPENDIX 2: Post Merger/Acquisition Ratio Results

Table A3: Post Merger/Acquisition Ratios Results

<table>
<thead>
<tr>
<th>Post-Merger Financial Ratios</th>
<th>ROA</th>
<th>Quick Ratio</th>
<th>Current Ratio</th>
<th>Total Asset Ratio</th>
<th>Debt Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.122</td>
<td>0.62</td>
<td>1.3</td>
<td>3.09</td>
<td>0.63</td>
</tr>
<tr>
<td>2</td>
<td>0.132</td>
<td>0.71</td>
<td>1.38</td>
<td>3.16</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>0.143</td>
<td>0.49</td>
<td>1.22</td>
<td>4.63</td>
<td>0.746</td>
</tr>
<tr>
<td>4</td>
<td>-0.131</td>
<td>2.34</td>
<td>3.34</td>
<td>4.24</td>
<td>0.38</td>
</tr>
<tr>
<td>5</td>
<td>0.117</td>
<td>1.22</td>
<td>2.11</td>
<td>2.69</td>
<td>0.37</td>
</tr>
<tr>
<td>6</td>
<td>0.145</td>
<td>1.66</td>
<td>2.85</td>
<td>2.93</td>
<td>0.41</td>
</tr>
<tr>
<td>7</td>
<td>0.177</td>
<td>0.6</td>
<td>1.18</td>
<td>2.61</td>
<td>0.68</td>
</tr>
<tr>
<td>8</td>
<td>0.167</td>
<td>0.58</td>
<td>1.1</td>
<td>3</td>
<td>0.74</td>
</tr>
<tr>
<td>9</td>
<td>0.187</td>
<td>0.53</td>
<td>1.3</td>
<td>3.63</td>
<td>0.57</td>
</tr>
<tr>
<td>10</td>
<td>0.198</td>
<td>1.5</td>
<td>1.9</td>
<td>1.12</td>
<td>0.54</td>
</tr>
<tr>
<td>11</td>
<td>0.174</td>
<td>1.8</td>
<td>2.1</td>
<td>1.4</td>
<td>0.43</td>
</tr>
<tr>
<td>12</td>
<td>0.175</td>
<td>1.9</td>
<td>2.2</td>
<td>1.6</td>
<td>0.48</td>
</tr>
<tr>
<td>Mean</td>
<td>0.13383</td>
<td>1.1625</td>
<td>1.831666667</td>
<td>2.841666667</td>
<td>0.58133</td>
</tr>
</tbody>
</table>

Source: Researcher’s own findings
APPENDIX 3: Pre and Post Merger/Acquisition Ratio Results for Sampled Companies

Table A 5: Total Kenya Financial Ratios Movement (Year of Merging/Acquisition=2009)

![Graph of Total Kenya Financial Ratios Movement]

Source: Researcher’s own findings

Table A 6: Shell Kenya Financial Ratios Movement (Year of Merging/Acquisition=2007)

![Graph of Shell Kenya Financial Ratios Movement]

Source: Researcher’s own findings
Table A 7: KenolKobil Kenya Financial Ratios Movement (Year of Merging/Acquisition = 2008)

Source: Researcher's own findings

Table A 7: Oilibya Kenya Financial Ratios Movement (Year of Merger/Acquisition= 2007)

Source: Researcher's own findings