THE EFFECT OF MERGERS AND ACQUISITIONS ON THE FINANCIAL PERFORMANCE OF LISTED PETROLEUM FIRMS IN KENYA: A CASE STUDY OF TOTAL KENYA PLC

BY

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UNITED STATES INTERNATIONAL UNIVERSITY – AFRICA

SUMMER 2019
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NATALIE KOKONYA

A Project Report Submitted to the Chandaria School of Business in Partial Fulfilment of the Requirements for the Degree of Masters in Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY – AFRICA

SUMMER 2019
STUDENT’S DECLARATION
I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University - Africa for academic credit.

Signed: ___________________________ Date: ___________________________
Natalie Kokonya (ID 654174)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: ___________________________ Date: ___________________________
Prof. George Achoki

Signed: ___________________________ Date: ___________________________
Dean, Chandaria School of Business
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ABSTRACT

The general objective of the study was to examine the effect of mergers and acquisitions on the financial performance of listed petroleum firms in Kenya using a case study of Total Kenya PLC. The specific objectives of the study were to evaluate the effect of asset management on the financial performance of listed petroleum firms, evaluate the effect of shareholder’s equity on the financial performance of listed petroleum firms and evaluate the effect of capital structure on the financial performance of listed petroleum firms.

The study adopted a descriptive research design, the event study approach and case study approach, because this design allowed the researcher to examine the effect that the acquisition event had on Total Kenya PLC’s financial performance, as well as evaluate the relationship between the variables before and after the acquisition event. The population of this study comprised of Total Kenya PLC. The study selected a census sample using the purposive method because it allowed the study to focus on characteristics of the population. Secondary data was collected from Total Kenya PLC’s audited financial statements. The data analysis methods that were employed by the study were descriptive and inferential in nature. Data was analysed using the Statistical Package for the Social Sciences (SPSS).

The findings revealed that asset management was positively correlated to financial performance at a statistically significant level of $r = 0.859$, meaning that asset management had a positive influence on Total Kenya PLC’s financial performance. The results of the effect of shareholders’ equity on financial performance revealed that shareholders’ equity was positively correlated to financial performance at a statistically significant level of $r = 0.913$, meaning that the shareholders’ equity had a positive influence on Total Kenya PLC’s financial performance. The results of the effect of capital structure on financial performance found that the capital structure was weakly and negatively correlated to financial performance at a level of $r = -0.054$, meaning that the shareholders’ equity had a positive influence on Total Kenya PLC’s financial performance.

The study concluded that there was a positive, statistically significant relationship between financial performance and asset management and that 89.8% of the variations in the financial performance of Total Kenya PLC could be explained by changes in the firm’s asset management. For the shareholders’ equity, there was a positive, statistically significant relationship between financial performance and shareholders’ equity and 96.5% of variations in Total Kenya PLC’s financial performance could be explained by changes.
in the shareholder’s equity. Lastly, there was a weak negative relationship between financial performance and capital structure, with 0.03% of variations in the firm’s financial performance being attributed to changes in capital structure.

The study recommended that in order to improve the return on assets ratio, the firm’s management should work on reducing operational costs. To increase the return on equity, the firm’s management can distribute idle cash by paying out dividends to shareholders and buying back shares. Also, to improve the firm’s debt to equity ratio, the firm’s management can take measures to reduce its liabilities. Finally, further studies should be undertaken to examine the effect of mergers and acquisitions on the financial performance of Kenyan firms to establish trends over longer periods of time, using different combinations of variables that are both qualitative and quantitative in nature.
ACKNOWLEDGEMENTS

Firstly, I would like to thank God for the gift of life and good health and for seeing me through the MBA program. Secondly, I would like to thank Professor George Achoki for taking his time to guide me through the thesis with wisdom and wit. Thirdly, I would like to thank my family for the immense support that they have shown me throughout the project and the entire course work, especially my siblings – Arnie and Nicole. Lastly, I’d like to acknowledge all those who cheered me through the program, and especially the project, and made sure I never gave up.
DEDICATION

This research project is dedicated to my family and close friends for their unconditional love and support.
# TABLE OF CONTENTS

STUDENT'S DECLARATION ................................................................. ii
COPYRIGHT ...................................................................................... iii
ABSTRACT ....................................................................................... iv
ACKNOWLEDGEMENTS .................................................................... vi
DEDICATION ....................................................................................... vii
TABLE OF CONTENTS ..................................................................... viii
LIST OF TABLES ................................................................................ x
LIST OF ABBREVIATIONS ................................................................. xi

CHAPTER ONE ................................................................................... 1

1.0 INTRODUCTION .......................................................................... 1

1.1 Background of the Problem ......................................................... 1
1.2 Statement of the Problem ............................................................. 6
1.3 General Objective of the Study ....................................................... 7
1.4 Specific Objectives of the Study ..................................................... 7
1.5 Importance of the Study ............................................................... 8
1.6 Scope of the Study ........................................................................ 8
1.7 Definition of Terms ...................................................................... 9
1.8 Chapter Summary ......................................................................... 9

CHAPTER TWO .................................................................................... 11

2.0 LITERATURE REVIEW ................................................................. 11

2.1 Introduction ................................................................................. 11
2.2 Effect of Asset Management on Financial Performance ............... 11
2.3 Effect of Shareholders’ Equity on Financial Performance ............. 15
2.4 Effect of Capital Structure on Financial Performance .................. 20
2.5 Chapter Summary ........................................................................ 25

CHAPTER THREE ................................................................................ 26

3.0 RESEARCH METHODOLOGY ......................................................... 26

3.1 Introduction ................................................................................. 26
3.2 Research Design .......................................................................... 26
3.3 Population and Sampling Design ................................................. 27
3.4 Data Collection Methods .............................................................. 28
3.5 Research Procedures ................................................................... 29
3.6 Data Analysis Methods ............................................................... 29
3.7 Chapter Summary ...........................................................................................................31

CHAPTER FOUR ..................................................................................................................32

4.0 RESULTS AND FINDINGS ..........................................................................................32

4.1 Introduction ....................................................................................................................32

4.2 General Information ......................................................................................................32

4.3 Effect of Asset Management on the Financial Performance of Total Kenya PLC . . . . .33

4.4 Effect of Shareholders’ Equity on the Financial Performance of Total Kenya PLC .................................................................38

4.5 Effect of Capital Structure on the Financial Performance of Total Kenya PLC .......42

4.6 Chapter Summary ........................................................................................................46

CHAPTER FIVE ....................................................................................................................47

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS ..................................47

5.1 Introduction ....................................................................................................................47

5.2 Summary .......................................................................................................................47

5.3 Discussion ......................................................................................................................48

5.4 Conclusions ...................................................................................................................51

5.5 Recommendations .......................................................................................................52

REFERENCES .....................................................................................................................54

APPENDICES .....................................................................................................................64

APPENDIX A: Secondary Data Collection Template ..........................................................64

APPENDIX B: Calculation of Ratios Template ................................................................64

APPENDIX C: Effect of Asset Management on the Financial Performance of Merged or
Acquired Petroleum Firms ..............................................................................................64

APPENDIX D: Effect of Shareholders’ Equity on the Financial Performance of Merged
or Acquired Petroleum Firms ........................................................................................65

APPENDIX E: Effect of Capital Structure on the Financial Performance of Merged or
Acquired Petroleum Firms ..............................................................................................65

APPENDIX F: National Commission for Science, Technology and Innovation
(NACOSTI) Licence ............................................................................................................66

APPENDIX G: Research Authorization Letters ................................................................67
LIST OF TABLES

Table 4.1: Overview of Total Kenya PLC’s Financial Performance.................................32
Table 4.2: Descriptive Statistics of the ROA Ratio..........................................................33
Table 4.3: Correlation Results of ROA and Financial Performance (NPM).....................35
Table 4.4: Pre-Acquisition Regression Results of ROA......................................................36
Table 4.5: Post-Acquisition Regression Results of ROA....................................................37
Table 4.6: Descriptive Statistics of the ROE Ratio.............................................................38
Table 4.7: Correlation Results of ROE and Financial Performance (NPM)......................39
Table 4.8: Pre-Acquisition Regression Results of ROE......................................................40
Table 4.9: Post-Acquisition Regression Results of ROE....................................................41
Table 4.10: Descriptive Statistics of the D/E Ratio.............................................................42
Table 4.11: Correlation Results of D/E and Financial Performance (NPM)......................43
Table 4.12: Pre-Acquisition Regression Results of D/E......................................................44
Table 4.13: Post-Acquisition Regression Results of D/E....................................................45
## LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANOVA</td>
<td>Analysis of Variance</td>
</tr>
<tr>
<td>ASE</td>
<td>Amsterdam Stock Exchange</td>
</tr>
<tr>
<td>D/E</td>
<td>Debt to Equity</td>
</tr>
<tr>
<td>DSO</td>
<td>Day’s Sales Outstanding</td>
</tr>
<tr>
<td>EBIT</td>
<td>Earnings Before Interest and Tax</td>
</tr>
<tr>
<td>EBITDA</td>
<td>Earnings Before Interest, Tax, Depreciation and Amortization</td>
</tr>
<tr>
<td>EPRA</td>
<td>Energy and Petroleum Regulatory Authority</td>
</tr>
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<td>EPS</td>
<td>Earnings Per Share</td>
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<td>ERC</td>
<td>Energy Regulatory Commission of Kenya</td>
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<tr>
<td>EVA</td>
<td>Economic Value Added</td>
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<tr>
<td>GARCH</td>
<td>Generalized Autoregressive Conditional Heteroskedasticity</td>
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<tr>
<td>IAS</td>
<td>International Accounting Standards</td>
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<tr>
<td>IDX</td>
<td>Indonesia Stock Exchange</td>
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<td>IFRS</td>
<td>International Financial Reporting Standards</td>
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<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
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<td>KSE</td>
<td>Karachi Stock Exchange</td>
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<tr>
<td>M&amp;A</td>
<td>Mergers and Acquisitions</td>
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<tr>
<td>NACOSTI</td>
<td>National Commission of Science, Technology and Innovation</td>
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<tr>
<td>NIM</td>
<td>Net Interest Margin</td>
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<td>NPM</td>
<td>Net Profit Margin</td>
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<tr>
<td>NSE</td>
<td>Nairobi Securities Exchange</td>
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<tr>
<td>OLS</td>
<td>Ordinary Least Squares</td>
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<tr>
<td>PLC</td>
<td>Public Listed Company</td>
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<tr>
<td>ROA</td>
<td>Return on Assets</td>
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<td>ROE</td>
<td>Return on Equity</td>
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<td>ROI</td>
<td>Return on Investment</td>
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<td>ROS</td>
<td>Return on Sales</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>TA</td>
<td>Total Assets</td>
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<tr>
<td>TSR</td>
<td>Total Shareholders’ Return</td>
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Problem

Mergers and acquisitions (M&As) are corporate strategies that fall under corporate finance. These corporate strategies are employed by merged and acquiring firms to create value and take advantage of investment opportunities (Wang & Xie, 2009). Mergers and acquisitions are an attractive expansion option for business executives because they give companies a competitive edge through a broader market share, minimization of risk by expanding the companies’ portfolio, penetrating new markets and geographies, as well as capitalizing on economies of scale, among other reasons (Kemal, 2011). Oloyede and Sulaiman (2012) define mergers and acquisitions as a corporate restructuring strategy that is useful in the achievement of increased market power, gaining competitive advantage and broadening their diversification and synergy. In the merger and acquisition process, two or more firms are combined and evolve to form a single entity.

Mergers and acquisitions are structural changes within an organization that revolve around ownership, business mix, assets and alliance. These changes are affected with the aim of improving performance and shareholder value. For companies that wish to rapidly expand their market coverage and modify their market position and identity, then a merger or acquisition would assist them in achieving their goals (Ogoti & Gekara, 2017). Companies are motivated to pursue mergers and acquisitions in order to create economic value for the company and shareholders over and above that of the sum of the two companies. Strong companies will act to buy other companies to create a more competitive, cost efficient company, and the companies will unite with the aim of gaining a broader market share and attaining higher levels of efficiency (Jallow, Masazing, & Basit, 2017).

A company’s economic value can be created through synergy, which is the combination of forces and resources towards one common goal. Financial growth is a common motivator for creating economic value, as well as increasing market share. Another method of increasing value is bootstrapping earnings, which occur when a company’s earnings increase in value as a result of the merger transaction itself, rather than as a result of economic benefits of the combination. Other potential areas of increasing value to the company and shareholder would be to take advantage of the tax benefits, to geographically
diversify the company, as well as acquiring advanced resources (Clayman, Fridson, & Troughton, 2012).

Mergers and acquisitions have gained popularity over the years because of the perceived value that companies gain from improved financial performance. Financial performance is a reflection of a company’s financial well-being. It’s a useful tool when comparing a company’s performance against its competitors’ (Ogoti & Gekara, 2017). In mergers and acquisitions, a firm’s financial performance is defined by parameters that include asset management, shareholder’s equity and capital structure. Asset management indicates the effectiveness of a firm in measuring its assets. If a company’s investment in assets is excessive, its operating capital will be high, which reduces its free cash flow, and ultimately, its stock price. Shareholder’s equity shows the firm’s operating success in relation to the shareholder’s investment. Capital structure refers to the composition of a firm’s capital in terms on equity and debt (Ogoti & Gekara, 2017).

While the primary purpose of a merger and acquisition is to elevate the profitability growth of a company, the merger and acquisition strategy experiences pitfalls including miscommunication and employee turnover during execution. If the merger and acquisition exercise fails, the company can spiral into a chaotic situation in aligning their goals and they stand to lose their positive performance. Companies that undergo mergers and acquisitions expose themselves to different styles of management and opinions and have difficulty in saving on costs. Therefore, effective preparation and planning, as well as open communication, can ease the merger and acquisition process, and ultimately make it successful (Yanan, Hamza, & Basit, 2016).

King, Dalton, Daily, and Covin (2004) employed meta-analytic techniques to assess the impact of post-acquisition performance of acquirer companies in the U.S. and found that there was a negative effect to a modest extent. They included a caveat that their study was limited to variables that consistently appear in existing empirical research. Andre, Kooli and L’Her (2004) conducted a study on the mergers’ and acquisitions’ performance on Canada’s stock market and found that on an equal-weighted basis, the sample firms underperformed three years after the mergers and acquisitions. While the study intended to be a long-run study, the researchers only focused on analyzing the financial performance of the firms three years after the merger and acquisition event.
Kruse, H. Y. Park, K. Park and Suzuki (2007) examined the long-term operating performance of sixty-nine manufacturing firms that were either merged or acquired and traded on the Tokyo Stock Exchange. While they found evidence of improvements in operating performance following the mergers, their study was primarily focused on mergers of firms with pre-existing relationships and diversifying mergers. Asimakopoulos and Athanasoglou (2013) examined the value creation of merger and acquisition deals in European banking and provided evidence of a positive effect on the banks’ financial performance. The study used the banks’ stock prices as a measure of financial performance, as opposed to the standard financial ratios.

Geluebcke (2014) compared the impact of foreign acquisitions and domestic acquisitions in the German manufacturing industry and concluded that there was a negative impact on productivity in the case of foreign acquisitions and a marginally negative impact in the domestic acquisitions. The researcher noted that the time period during which the study was conducted included the year in which the global financial crisis occurred, which could have had an effect on the results, particularly the financial performance of global acquirers and their domestic counterparts in 2008. Khanal, Mishra and Mottaleb (2014) used event analysis to explore the impact of mergers and acquisitions on the financial performance of publicly traded ethanol-based biofuel industry in the U.S. and found a positive impact on the firms’ financial performance. The drawback of this study was that the researchers could only collect the financial information of acquirer firms, because most of the target firms were private, for which stock returns were not available to the public.

Yanan et al. (2016) studied the effect of mergers and acquisitions on the financial performance of American registered firms and found a positive impact on their financial performance. However, the study only considered the acquirer firms in the evaluation and left out the target firms. Jallow et al. (2017) examined the financial performance of a sample of firms listed under the London Stock Exchange and found that mergers and acquisitions had no effect on their financial performance. The study used a small sample size due to the unavailability of data and conducted the study over a period of five months, a period which was too short to assess the impact of the merger or acquisition on the firms’ financial performance.

Ramaswamy and Waegelein (2003) studied the financial performance of Hong Kong’s production firms following mergers and concluded there was an improvement in a firm’s
post-merger operating financial performance measured by industry-adjusted return on assets. They acknowledged that while there are multiple ways of measuring operating financial performance, they only focused on industry-adjusted return on assets. Maditinos, Theriou and Demetriades (2009) conducted a case study of two merged Greek banks and reported a positive impact on the resulted bank’s profitability and competitiveness. The study limited itself to using performance ratios related to solvency, profitability and managerial efficiency.

Cortes, Garcia and Agudelo (2015) conducted a study of mergers and acquisitions in the Latin American airline industry, and presented evidence indicating that target companies recorded abnormal returns, while acquirer companies had inconclusive results. Due to the limited data available, the study notes that their findings may not be completely representative of the mergers and acquisitions in the airline industry. Duppati, Abidin and Hu (2015) studied the effect of mergers and acquisitions on acquiring firms in China, and discovered a positive effect in the short run, and varying effects in the long run. In particular, cross-border merger and acquisition deals have a marginally negative effect for long-term performance, while domestic merger and acquisition deals have a positive impact. The study did not consider the effect of mergers and acquisitions on the target firms. Sujud and Hachem (2018) analysed the effect of mergers and acquisitions on the performance of Lebanese banks and found that there was no significant impact. The study employed a small sample size due to the unavailability of data.

Mahesh and Prasad (2012) studied Indian airline companies that undertook the merger and acquisition exercise and reported that there was no improvement in their financial performance. The study only analysed pre- and post-merger and acquisition performance results for only two years. This time period does not truly capture the improvements in the airlines’ financial performance. The study also did not take into account the different accounting methods adopted by different companies in the sample. Neither did it employ any control groups for comparison, nor use a larger sample size, which begs the question of the results’ statistical validity.

M. Ahmed and Z. Ahmed (2014) studied the effect of mergers and acquisitions on the financial performance of Pakistani manufacturing firms and found that the impact varied for different industries within the manufacturing sector. The study limited itself to public limited corporations to reduce the confusion of unnecessary variables. Sami (2014)
conducted a case study of GlaxoSmithKline in the Indian pharmaceutical industry and reported that mergers and acquisitions had a generally positive effect on the firm’s financial performance. The study only analysed three years before the merger and three years after the merger and excluded the year in which the merger occurred from evaluation. This time period cannot be said to fully capture the effect of the merger on the firm’s financial performance.

Oloyede and Sulaiman (2012) studied mergers and acquisitions in the Nigerian food and beverage industry and found that there was a marginally positive effect of the merger and acquisition event on their financial performance. However, they only studied the financial performance of the firms three years before and three years after the merger and/or acquisition event. Oduro and Agyei (2013) sought to explain the effect of mergers and acquisitions on the performance of firms listed on the Ghana Stock Exchange between 1999 and 2010 and found that mergers and acquisitions had a negative effect on the profitability of firms. The researchers acknowledged that there haven’t been many mergers and acquisitions in Ghana, which could have an effect on their results, since the sample size is relatively small.

Temu and Andilile (2011) conducted a case study of the performance of merged banks and found no compelling evidence to support the assertion that mergers improved Tanzanian banks’ performance. The study’s limitation was that it used a three-year period to make a conclusion on the impact of mergers on banks’ performance, which was too short. Nagasha, Bananuka, Musimenta and Lulu (2017) conducted a study on the impact of mergers and acquisitions on firm performance and found that there was a significant association between mergers and acquisitions and firm performance. Additionally, shareholders earned abnormal returns after the announcement of the merger and acquisition event. The study noted that there was limited data available, particularly from privately owned firms.

Akenga and Olang (2017) sought to establish the effect of merger and acquisitions on commercial banks and found a positive effect on their financial performance. The study only considered three years pre-merger and three years post-merger during the analysis, which is not enough time to capture the effect of mergers and acquisitions on their financial performance, particularly after the interest rate cap was implemented by the Central Bank of Kenya (CBK) in 2016. Kainika (2017) undertook a case study of Sanlam Kenya in the insurance industry and reported a general insignificant effect on organizational
performance. The study covered three years pre-merger and three years post-merger. The time frame does not truly assess the impact of the merger on Sanlam’s financial performance. Ogoti and Gekara (2017) studied the effect of mergers and acquisitions on the financial performance of Kenyan petroleum companies and reported a positive effect on financial performance. The study was limited to the small number of petroleum firms that merged or were acquired.

With over 70 registered petroleum firms in the country, the Kenyan industry is dominated by firms such as Oilibya Kenya, Shell Kenya, KenolKobil PLC, Total Kenya PLC and National Oil Corporation. These are the firms holding a significant portion of the market share, leaving smaller firms like Astrol Kenya, Hass Kenya, Triton Kenya and the like with a smaller portion. The industry is governed by the Energy and Petroleum Regulatory Authority (EPRA), formerly the Energy Regulatory Commission (ERC), which provides licences to firms that store, transport and distribute petroleum, as well as regulate their activities. The commission also reviews the retail prices of fuel, monitors the quality of fuel in the market, ensures environmental health and safety in relation to petroleum and performs technical audits on the activities of petroleum firms (Mailanyi, 2014; Mboroto, 2013; Mulwa, 2015; Ogoti & Gekara, 2017).

The Kenyan petroleum industry was liberalized in 1994, which consequently saw the number of independent oil distribution companies in the country rise. Even with the increased competition, the dominant petroleum firms managed to maintain their large market share through mergers and acquisitions. In 2006, Shell Kenya (currently under the management of Vivo Energy) acquired BP Kenya and increased its market share. In 2007, Oilibya acquired Exxon Mobil. 2008 saw Kenol and Kobil merging to form KenolKobil PLC. Total Kenya PLC acquired Chevron Kenya (which traded as Caltex) in 2009. Another merger that occurred in 2009 was the merger between Raytec Metals Corporation and Lion Petroleum Inc (Mailanyi, 2014; Mulwa, 2015). This study used Total Kenya PLC as a case study, because it is listed on the bourse, and they store, transport, market and distribute petroleum on a national scale.

1.2 Statement of the Problem
With the increasing competition around the world and the economy heading towards globalization, corporations are presented with an opportunity to expand their economic activities and wealth, often through mergers and acquisitions (Mander & Goldsmith, 2014).
The Kenyan economy is not immune to mergers and acquisitions, as is evident from the companies listed on the Nairobi Securities Exchange (NSE). One common feature among the listed companies is mergers and acquisitions, particularly in the banking and insurance sectors. In this regard, a large number of studies, including Mwangi (2014), Gwaya and Mungai (2015), Kainika (2017), and Njambi and Kariuki (2018), have been undertaken to explain the effect of mergers and acquisitions on the financial performance of commercial banks, insurance companies and financial services.

However, the problem is that not enough studies have been undertaken to explain the impact of mergers and acquisitions in Kenya’s petroleum industry; the few that have been done have used varying dependent variables to measure financial performance, including return on equity, the earnings before interest, tax, depreciation and amortization (EBITDA) coverage and return on assets (Mailanyi, 2014; Mboroto, 2013; Mulwa, 2015; Ogoti & Gekara, 2017; Yusuf, 2016). Additionally, the independent variables used to measure the effect of the mergers and acquisitions are also varying across the board, with many studies leaving out the asset management, shareholder’s equity and capital structure combination. The ultimate result of the different variables is the inconsistent evidence of the effect of mergers and acquisitions on the financial performance of petroleum firms. Studies such as Mboroto (2013), Yusuf (2016) and Ogoti and Gekara (2017) provide evidence of a positive impact on petroleum companies that have undergone the merger and/or acquisition process, while other studies such as Mailanyi (2014) and Mulwa (2015) provide evidence of a contrary opinion. The aim of this study, therefore, was to attempt to narrow the gap that stems from inconsistency in evidence, as well as contribute to the knowledge gap.

1.3 General Objective of the Study
The general objective of this study was to examine the effect of mergers and acquisitions on the financial performance of listed petroleum firms in Kenya using Total Kenya PLC as a case study.

1.4 Specific Objectives of the Study
The specific objectives of the case study were to:
1.4.1 Evaluate the effect of asset management on the financial performance of merged or acquired listed petroleum firms in Kenya.
1.4.2 Evaluate the effect of shareholder’s equity on the financial performance of merged or acquired listed petroleum firms in Kenya.

1.4.3 Evaluate the effect of capital structure on the financial performance of merged or acquired listed petroleum firms in Kenya.

1.5 Importance of the Study

1.5.1 Petroleum Firms
This study is important for the listed petroleum firms that have either merged, been acquired or plan to merge or acquire. It may give financial insight as they plan to engage in merging and/ or acquisition.

1.5.2 Investors
Investors planning to invest in the listed petroleum firms that have either merged or acquired may know what to look out for, based on this study.

1.5.3 Policy Makers
Policy makers can use this study to fill in any loopholes within the petroleum industry, based on the merger and acquisition strategy implemented by the listed petroleum companies.

1.5.4 Scholars and Researchers
Scholars and researchers who wish to explore and understand the effect of mergers and acquisitions on the financial performance of listed petroleum firms in Kenya can also benefit from the study.

1.6 Scope of the Study
There are over 70 firms operating in the Kenyan petroleum industry (Mailanyi, 2014; Mboroto, 2013; Mulwa, 2015; Ogoti & Gekara, 2017). This study focused on the petroleum firms in Kenya that are listed on the Nairobi Securities Exchange and have either merged or undergone acquisitions between 2003 and 2017 – a period that saw an upheaval of mergers and acquisitions in the Kenyan petroleum industry. This research study used a case study as a sample of the entire population of petroleum firms that are listed on the bourse and have either merged or acquired.
1.7 Definition of Terms

1.7.1 Merger
A merger is the combination of two corporations in which one corporation is absorbed by another, and the absorbed corporation goes out of existence as a separate entity. The acquiring company takes control of the assets and liabilities of the acquired company. A merger differs from a consolidation, which is “the combination of two or more companies to form an entirely new company” (Gaughan, 2011; p.13).

1.7.2 Acquisition
“Acquisition is the process by which the stock or assets of a corporation come to be owned by a buyer. The transaction may take the form of a purchase of stock or a purchase of assets” (Reed, Lajoux, & Nesvold, 2007; p.4).

1.7.3 Financial Performance
Financial performance is a subjective indicator of a firm’s ability to utilize its assets to realize revenue in a manner that reflects the firm’s financial health and acts as a tool for benchmarking performance, in relation to other players in the market (Ogoti & Gekara, 2017).

1.7.4 Case Study
A case study is “the intensive study of a single case for the purpose of understanding a larger class of cases (a population)” (Gerring, 2013; p.6).

1.7.5 Synergy
Synergy is the combination of forces and resources towards one common goal (Clayman et al., 2012).

1.8 Chapter Summary
The general objective of this study was to examine the effect of mergers and acquisitions on the financial performance of listed petroleum firms in Kenya. This study is important to the petroleum industry stakeholders, particularly Total Kenya PLC, investors, policy makers and scholars. The scope of study specifically covered the case of Total Kenya PLC because it was listed on the bourse and undertook the acquisition exercise between 2003 and 2017.
Chapter two discusses the literature review from different authors related to mergers and acquisitions. Chapter three discusses the methodology this study used, while chapter four discusses the results and findings of the study. Finally, chapter five discusses the results, conclusions and recommendations of the study.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction
This chapter presents a review of literature on the effects of mergers and acquisitions on a firm’s financial performance, based on the specific research objectives of evaluating the effect of asset management on financial performance, evaluating the effect of shareholders’ equity on financial performance and evaluating the effect of capital structure on financial performance.

2.2 Effect of Asset Management on Financial Performance

2.2.1 Asset Management and Financial Performance
The ISO 55000 defines an asset as an entity of value to a firm. Asset management is therefore concerned with the balancing of costs, opportunities and risks against the desired performance of assets to realize a firm’s goals. One potential benefit of asset management is increased financial performance (International Organization for Standardization, 2014). McNeil, Tischer and DeBlasio (2000, p.21) define asset management as “a systematic process of maintaining, upgrading and operating physical assets cost-effectively. It combines sound business practices and economic theory as well as provide tools to facilitate a more organized logical approach to decision making”.

The primary objective of a firm is to maximize profits and shareholder wealth (McGuigan, Moyer, & Harris, 2013). These objectives are achieved based on the way a firm manages its assets. Managing assets can be done by maintaining a balance between a firm’s liquidity and profitability, as well as managing the various components of assets that contribute to a firm’s financial performance, including inventory, cash, receivables and fixed assets (Oluwaremi & Memba, 2016). Operating performance studies attempt to identify the sources of gains from mergers and acquisitions and to determine whether the expected gains at announcement are ever actually realized. If mergers and acquisitions truly maximize profits and create value for shareholders, the gains should eventually appear in the firms’ cash flows. These studies generally focus on accounting measures of profitability, such as return on assets and operating margins (Andrade, Mitchell, & Stafford, 2001).

A firm’s financial performance can be measured using the analysis of financial statements. Similarly, asset management can be measured using financial ratios. The asset management
ratios, also known as turnover ratios, efficiency ratios and activity ratios, indicate how efficiently and effectively a firm utilizes its assets to generate revenue. They include: inventory turnover, days inventory, days sales outstanding (DSO), fixed assets turnover, total assets turnover, accounts receivable turnover, accounts payable turnover and accounts payable turnover in days. Because asset management is believed to have an effect on the firm’s financial performance, profitability ratios can also be considered; specifically, the return on assets ratio. The reason for this is that the return on assets ratio measures the efficiency with which the merged and acquiring companies utilize its assets to generate profit (Ashfaq, 2014; Brigham & Ehrhardt, 2011; Casteuble, 1997; Kramer & Johnson, 2009). This study therefore used the return on assets ratio to measure Total Kenya PLC’s asset management.

2.2.2 Empirical Studies on Asset Management and Financial Performance

2.2.2.1 Developed Countries

Several empirical studies suggest that the management of assets have an effect on the financial performance of merged and acquired firms. Jallow et al. (2017) examined the effects of mergers and acquisitions on the financial performance of companies in 2011. A sample of 40 firms that underwent merger and acquisition deals were selected and analysed using the financial ratios: return on assets, return on equity, earnings per share and net profit margin. A paired sample t-test was performed on the data and recorded a decline in the return on assets. The results were indicative of mergers and acquisitions having a statistically significant negative impact on the return on assets ratio, and in turn a negative impact on the firms’ financial performance.

Sharma and Ho (2002) conducted a research study on the impact of acquisitions on operating performance in the industrial sector. A sample of 36 firms that were acquired between 1986 and 1991 were the focus of the study. Since cash flow operating performance indicators are not available in Australia, the researchers used a matched control firm to proxy for industry and economy-wide factors. The study found that on the basis of four accrual and four cash flow performance measures, particularly the return on assets ratio, corporate acquisitions had no significant impact on post-acquisition corporate performance.

Pazarskis, Alexandrakis, Vogiatzoglou and Drogalas (2018) used a bootstrapped approach in the analysis of financial statements to evaluate the short-run operating gains from mergers listed on the Greek bourse after the debt crisis. Using a sample of thirty firms, the
bootstrap t-test was applied to twelve financial ratios that measured the firms’ profitability, operational performance and structural performance, pre and post-merger. Of the twelve financial ratios, four can be said to measure asset management. Namely return on assets (ROA), net assets turnover, current ratio and liquidity ratio. The study found that there was no statistically significant change in the performance of the firms as a result of the management of assets.

Akben-Selcuk and Altiok-Yilmaz (2011) conducted a study whose aim was to investigate the impact of merger and acquisition deals on the performance of acquirer companies. A sample of 62 companies involved in merger and acquisition deals between 2003 and 2007 were studied using a stock market approach and accounting approach. An event study was conducted to measure whether any abnormal returns were earned by security holders in the bourse. Under the accounting approach, three profitability ratios were used to assess the changes in corporate performance: return on assets (ROA), return on equity (ROE) and return on sales (ROS). Statistical analysis showed that post-acquisition, the return on assets ratio was significantly lower than the pre-acquisition figures. This goes to show that the asset management of the Turkish companies had a negative effect on the financial performance, based on the return on assets ratio.

Lai, Ling, Eng, Cheng and Ting (2015) studied the financial performance of banks during the pre-merger period between 1999 – 2001 and the post-merger period between 2002 – 2010. The researchers performed a comparative analysis on financial ratios used to assess the performance of the banks’ profitability, cost reduction, liquidity, leverage and shareholder’s wealth. The ratios used to depict the impact of asset management on the firms’ financial performance were the return on assets (ROA), non-interest expenses to total asset ratio and loan to asset ratio. Overall, they found that the asset management made no significant improvement on the financial performance of the merged Malaysian banks.

2.2.2.2 Developing Countries
Al-Hroot (2016) conducted a research study whose aim was to analyse the post-merger impact on the financial performance of merger firms in the industrial sector. A sample of 7 industrial firms that merged between 2000 and 2014 were used in the analysis. The study applied paired sample t-test statistics on financial ratios that measured the firms’ market prospect, profitability, leverage, efficiency and liquidity. The ratios included in the study that can measure the management of assets were: return on assets, total assets turnover,
fixed assets turnover and the current ratio. The study found that the asset management ratios had no statistically significant effect on the financial performance of the merger firms.

Abbas, Hunjra, Azam, Ijaz and Zahid (2014) conducted a research study that aimed to evaluate the financial performance of banks after undergoing the merger and acquisition exercise between 2006 and 2011. Financial statements from a sample of ten banks were used to calculate profitability and efficiency, leverage and liquidity ratios to measure the financial performance, where pre and post-merger and acquisition analysis was done. The management of the banks’ assets was seen in the indicators used to calculate the profitability and efficiency and liquidity ratios: return on assets (ROA), net interest margin (NIM), spread ratio and cash equivalent to total assets. They found that mergers and acquisitions had a negative effect on the return on assets, a marginally positive effect on net interest margin, a negative effect on the spread ratio and a negative effect on cash and cash equivalent to total assets ratio. Overall, the management of the banks’ assets had no positive improvement on financial performance.

Rani, Yadav and Jain (2015a) studied the impact of mergers and acquisitions on the acquiring firm’s corporate performance between 2003 and 2008. The researchers used a sample of 305 Indian firms; 191 from the manufacturing sector, 95 from the services sector, 15 from the construction and real estate sector, 2 from the electricity sector, 1 from the mining sector and 1 from a diversified sector. Fourteen financial ratios were used to analyse the profitability, efficiency, leverage and liquidity of the firms pre and post-merger and acquisition. Of the fourteen ratios, four measure asset management. Namely operating profit margin based on assets, fixed assets turnover ratio, total assets turnover ratio and current assets turnover ratio. Analysis of the asset management ratios found that the operating profit margin based on assets only marginally improved the financial performance of the firms. The total assets turnover ratio and current assets turnover ratio did not have a significant effect on the firms’ financial performance. The fixed assets turnover ratio recorded a positive impact on the firms’ financial performance.

2.2.2.3 African Countries

Akinbuli and Kelilume (2013) conducted a research study whose objective was to investigate the effects of mergers and acquisitions on the efficiency, growth and profitability of corporate organizations in the post-consolidated environment of the banking industry. The researchers used a random sampling technique to select a sample of 10 banks
that underwent the merger or acquisition process between 2004 and 2008. The data collected was analysed using key financial ratios: net profit margin, return on total assets, return on equity, net interest margin, interest income/loans and advances, interest cost/total deposits and the operating cost margin. With respect to the return on total assets ratio, the study found that the banks initially declined before improving. Overall, the findings were that the return on assets ratio recorded a marginally positive impact on financial performance, post-merger and acquisition.

Ayako, Musyoki and Murungi (2015) analysed the post-merger financial performance of commercial banks listed on the Nairobi Securities Exchange. Secondary data was collected for 4 listed banks that merged between the period 2001 and 2014 and trend and paired t-test statistical analyses were carried out. The study used the return on assets and return on equity financial ratios to measure the banks’ financial performance. The ratio used to measure the banks’ asset management, return on assets, dropped below the industry average in the first three years, after which they rose above it. The results of the paired t-test on the return on assets ratio showed that the merged commercial banks do not outperform the Kenyan banking industry; specifically, the return on assets ratio had no statistically significant effect on the banks’ performance. Further, the study advised firms planning to merge to integrate a time lag structure on the expected benefits as they make their decisions.

2.3 Effect of Shareholders’ Equity on Financial Performance

2.3.1 Shareholders’ Equity and Financial Performance

According to the International Financial Reporting Standards (IFRS) of 2017, equity is simply the residual interest in the assets of an entity, less all the liabilities. Shareholders’ equity is, therefore, comprised of all capital contributed to the entity and the retained earnings. The International Accounting Standards (IAS) subdivides the shareholders’ interests into three categories: issued share capital, retained earnings and reserves (Bakker et al., 2017). Maximizing shareholder wealth is the most important goal for any profit seeking organization, making it critical for a firm to achieve higher profits, so as to improve its financial performance (Yahaya & Mahmood, 2011).

It was noted that when the merger or acquisition is implemented, the value of the shareholder between the companies will be increased (Pazarskis, Vogiatzoglou, Christodoulou, & Drogalas, 2006). Investment analysts consider the earnings per share ratio to be a powerful tool in measuring a firm’s financial performance. The firm’s
shareholder value is heavily influenced by the earnings per share, which is used to forecast future cash flows, as well as measure the firm’s financial performance in relation to the shareholder’s value, as the earnings per share ratio relates to every shareholder’s proportionate share in the firm’s earnings (Gwaya & Mungai, 2015; Jallow et al., 2017; Yanan et al., 2016).

The return on investment ratio, which is calculated as the net profit after tax divided by the total capital, measures the firm’s efficiency in utilizing invested capital. Simply, the ratio denotes a firm’s ability to generate the expected returns based on the use and management of the invested resources by the shareholders (Kabajeh, Al Nu’aimat, & Dahmash, 2012). Shareholders’ equity can be measured using financial ratios that denote a shareholder’s worth or value in a firm; namely the return on equity (ROE) ratio, the earnings per share (EPS) ratio, the return on assets (ROA) ratio, the total shareholders’ return (TSR) ratio and the economic value added (EVA) ratio (Ngoy, 2008; Shayan, 2013).

The best measurement tool considered by shareholders for financial performance is the return on equity ratio. It is said that a firm with a high return on equity is regarded as one capable of producing liquidity internally (Jallow et al., 2017). The return on equity is the ratio of net income divided by the total equity capital of the firm. This ratio is a reflection of how a company is effectively managing its shareholders funds. A higher return on equity is indicative of the efficient utilization of the shareholders’ capital (Khrawish, 2011). While the return on equity ratio is sensitive to changes in financial gearing, it contrasts a firm’s net income with its shareholder value to show a firm’s financial performance (Naba & Chen, 2014). This study therefore used the return on equity ratio to measure Total Kenya PLC’s shareholders’ equity.

2.3.2 Empirical Literature

2.3.2.1 Developed Countries

Empirical literature suggests that the shareholders’ equity has an effect on the financial performance of merged and acquired firms. Hassan, Patro, Tuckman and Wang (2007) purposed to analyse the effect of mergers and acquisitions on shareholder wealth in the pharmaceutical industry between 1981 and 2004. Using a sample of 405 mergers and acquisitions, the researchers used an event study, a market model with value weighted market index and the Fama-French three-factor model with a value weighted market index to estimate abnormal returns for shareholders. They separated mergers from acquisitions
and US-based from foreign-based merger and acquisition targets during analysis of financial ratios including return on equity, excess return on equity above equally weighted industry average and excess return on equity above value weighted industry average. Evidence of short and long-term abnormal returns were found for acquisitions, but not for mergers. Overall, the results suggested that acquisitions of US-based pharmaceutical companies have a positive impact on wealth creation for company shareholders, as well as financial performance.

Delaney and Wamuziri (2004) investigated the financial performance of 17 construction companies that have been involved in construction-related mergers and acquisitions and examined the impact of those mergers and acquisitions on shareholder wealth. The researchers employed an event study over a 41 working day period and concluded that in the construction industry, related take-overs generated significant positive gains for the target firm shareholders, while shareholders of the acquirer firms gained some small, but not statistically significant, value. Overall, the results indicated that related construction mergers create wealth for shareholders of the target firms and improved financial performance.

Kiesel, Ries and Tielmann (2017) conducted a research study to examine the impact of mergers and acquisitions on shareholders’ wealth in the logistics service industry. The researchers used an event study to analyse a sample of 826 mergers and acquisitions that took place between 1996 and 2015 and their performance effect in terms of short and long-term abnormal shareholder returns. The results revealed that although overall transactions exhibited significant positive abnormal returns for shareholders, post-merger performance for the acquirers differed considerably, according to the logistic services offered. Overall, diversifying transactions of established full-service providers outperformed focus-increasing transactions of specialized operators; or, mergers and acquisitions diversified firms and had a positive impact on shareholder wealth and financial performance.

van Frederikslust, van der Wal and Westdijk (2005) examined the effects of mergers and acquisitions on shareholder wealth using a sample of 101 merger events that are listed on the Amsterdam Stock Exchange (ASE). The period of analysis was from 1954 to 1997. The researchers applied regression models and ordinary least squares models to estimate the cumulative abnormal returns. The results showed that more than 50% of the acquirer firms had a positive response to share value at the announcement of the merger, while 82% of
the merger deals showed that share price performance for target firms improved. Overall, merger and acquisition deals had a positive impact on shareholder wealth and financial performance.

2.3.2.2 Developing countries
Cortes et al. (2015) analysed the effect of mergers and acquisitions on the way shareholders benefit from the announcements of selling and buying airlines in the airline industry. They used an event study, generalized autoregressive conditional heteroskedasticity (GARCH) model and ordinary least squares (OLS) model to analyse data for the period 1996 to 2013. Using a sample of 28 airlines, the study found evidence that some selling companies obtain abnormal returns that were statistically significant after the announcement of the merger or acquisition; this was when the merger or acquisition was strategic. When a merger or acquisition was not strategic, the companies presented statistically significant negative abnormal returns. The results were inconclusive when analysing the effect on the shareholders’ value of the buying company.

Rani, Yadav and Jain (2015b), evaluated the impact of mergers and acquisitions on the shareholders’ returns in the short run using a detailed event study. The event window was 20 days before and 20 days after the merger and acquisition announcement, while the estimation window was 255 trading days to ensure that the estimates of the normal return model were not influenced by the event-related returns. A sample of 522 firms was used to conclude that a market starts reacting prior to the announcement. The moment the announcement information became public, investors reacted and the stock price jumped high, which provided positive abnormal returns to the shareholders. On the other hand, post-announcement stock prices recorded a strong correction in the market price of the acquiring company and positive abnormal returns for shareholders were not sustained.

Ashfaq (2014) examined the impact of merger and acquisition activity on post-merger financial performance (relative and absolute) of companies engaged in the non-financial sector. A sample of 16 companies that engaged in mergers and acquisitions between the period 2000 and 2009 and are listed on the Karachi Stock Exchange (KSE) were selected. Questionnaires were used to obtain data for absolute performance and financial statements were used to obtain data for both relative and absolute performance. Financial ratios were used to analyse the financial performance of the firms. Namely return on equity (ROE), return on assets (ROA) and earnings per share (EPS). Descriptive statistics and a paired
sample t-test were performed on the data. The results of the descriptive statistics indicated that there was a significant decrease in earnings per share post-merger and acquisition, as compared to pre-merger. The results of the paired sample t-test also indicated that both absolute and relative financial performance deteriorated post-merger.

K. P. Sharma (2018) evaluated the effects of mergers and acquisitions on employees through questionnaires and effects on shareholders by analysing the financial performance of a sample of three banks that underwent the merger or acquisition exercise between 2009 and 2016. The study used financial ratios to analyse the financial performance of the merged or acquired banks. The profitability ratios used were the return on assets ratio, return on equity ratio, net profit margin ratio. The leverage ratio used was the debt to equity ratio (debt ratio) and the liquidity ratio used was the current ratio. The ratios the study used to measure the shareholders’ equity were earnings per share (EPS), market value per share and price/earnings ratio. The overall findings were that the earnings per share ratio, market value per share ratio and the price/earnings ratio all increased post-merger and acquisition, which indicated an increase in shareholders’ equity, as well as an increase in the firms’ financial performance.

2.3.2.3 African Countries

Badreldin and Kalhoefer (2009) conducted a research study that measured the financial performance of banks that underwent mergers or acquisitions during the period 2002–2007. They calculated the banks’ return on equity using the basic return on equity scheme and found that not all banks that underwent merger or acquisition deals showed significant improvements in financial performance and return on equity when compared to pre-merger or acquisition performance. Overall, mergers and acquisitions did not have a clear effect on shareholders’ equity in Egyptian banks.

Naba and Chen (2014) conducted a research study that examined the impact of mergers and acquisitions on the financial performance of 2 banks between the period 2003 and 2012. Data was collected from the banks’ annual reviews, and financial ratios, namely liquidity ratios, performance ratios (return on assets and return on equity) and investment valuation variables (earnings per share), were used. The study found that for the shareholders’ equity ratios: return on equity and earnings per share, there was a decline in financial performance in the short run, and an increase in financial performance in the long run.
Gwaya and Mungai (2015) analysed the effect that mergers and acquisitions had on the financial performance of banks. The research study used a sample of 14 banks that merged or acquired between the period 2000 and 2014. They distributed questionnaires and statistically analyse the collected data. The study examined the effect of mergers and acquisitions on the shareholders’ value by measuring the change in price of shares, change in demand for shares, change in earnings per share, change in dividends issued and the change in the frequency of issuing dividends. The results of the analysis recorded an overall increase in shareholders’ value through a raise in demand for shares, a raise in the price of shares and a raise in the earnings per share. There was no statistically significant effect on the number of dividends issued to shareholders or the frequency of issuing dividends.

2.4 Effect of Capital Structure on Financial Performance

2.4.1 Capital Structure and Financial Performance

Optimal capital structure has been the subject of many studies. A firm’s main objective is to maximize profits and shareholder wealth, while minimizing costs. As firms search for resources to finance its investments this objective is taken into consideration. The main sources that firms use to provide the necessary finance are the internal finance (equity) and external finance (debt). Most firms use a mix of both equity and debt, which forms the capital structure. Therefore, capital structure is defined as the mix between debt and equity that a firm uses in its operations (Nassar, 2016). Alternatively, it can be defined as a firm’s debt level relative to its equity on the balance sheet (Pandey, 1999).

In maximizing shareholders’ wealth, firms use more debt capital in the capital structure, as the interest paid is tax deductible and lowers the debt’s effective cost. Further, equity holders do not have to share their profit with debt holders, as the debt holders get a fixed return. However, the higher the debt capital, the riskier the firm, hence the higher its cost of capital. Therefore, it is important to identify the important elements of capital structure, the precise measurement of these elements and the best capital structure for a particular firm at a particular time (Abeywardhana, 2017).

It has been argued that profitable firms were less likely to depend on debt in their capital structure than less profitable ones. It has also been argued that firms with a high growth rate have a high debt to equity ratio. If a firm’s capital structure influences a firm’s performance, then it is reasonable to expect that the firm’s capital structure would affect the firm’s health and its likelihood of default (Zeitun & Tian, 2007).
Capital structure exerts an impact on firm value. In the trade-off capital structure theory, when firms reach an optimal capital structure, in which marginal benefits equals marginal costs of debt financing, they can achieve the minimum cost of capital, and therefore maximize the firm’s value. However, Modigliani and Miller’s theory points out that in a perfect market, firm value can be irrelevant to capital structure decision. The pecking order theory argues that firms facing financing demand will, firstly, consume internal funding, then raise debt and resort to issuing equity last, because of their respective informational costs. Jensen and Meckling’s agency theory addresses the conflict of interest between principals (shareholders) and agents (firm’s management), where the shareholders enact measures to ensure that the firm’s managers do not invest the free cash flow in unprofitable projects. Indeed, equity financing can be regarded by investors as a signal of firms’ overvaluation. Further, firms’ future growth favours a low debt level, since financial flexibility can facilitate potential investment. Despite various arguments around how to decide firms’ capital structure, most studies reach an agreement that firms are inclined to move towards their target capital structure in any way they can (Bouraoui & Li, 2014; Mota & Moreira, 2017; Mumtaz, Rauf, Ahmed, & Noreen, 2013; Nassar, 2016; Nhung, Lien, & Hang, 2017).

Capital structure is measured using the debt ratio (total liabilities/ total assets), the debt to equity ratio and the interest coverage ratio (earnings before interest and tax (EBIT)/ interest payment) (Nassar, 2016; Ong & Ng, 2012). This study used the debt to equity ratio to measure Total Kenya PLC’s capital structure.

2.4.2 Empirical Literature
2.4.2.1 Developed Countries
Empirical literature suggests that a firm’s capital structure has an effect on the financial performance. Bouraoui and Li (2014) examined the impact of adjustments in a firm’s capital structure on 850 American acquirers’ financial performance, for the period ranging from 2001 to 2011. The researchers considered both leverage changes and adjustments in leverage deficit as their dependent variables and used return on equity and return on asset ratios to measure post-merger financial performance. Their analysis provided evidence which showed that the capital structure of the acquirers with movements towards the target leverage ratio enjoyed better financial performance post-merger and acquisition, although the correlation is not significant in the long run. Therefore, high financial flexibility created
by low leverage is more essential to acquirers facing costly post-merger integration, than target leverage ratio that minimizes financing costs immediately. Overall, the capital structure of the acquirer firms had a positive impact on the financial performance in the short run.

Uysal (2011) used a two-step estimation approach to collect and analyse data from firms that merged or acquired between 1990 and 2007. The study examined the correlation between a firm’s target capital structure and merger and acquisition deals, especially the probability of the firm making an acquisition, as well as its choices of payment method and bid premiums. The firm’s financial performance was measured using the earnings before interest payments, taxes, preferred dividends, and amortization divided by total assets, (EBITDA/ TA) ratio. The empirical evidence suggested that overleveraged firms were less likely to make an acquisition. The deals made by overleveraged bidders presented significantly smaller average values and premiums; they were also less likely to use cash payments. These results support the argument that a firm’s capital structure, particularly the leverage deficit, impacts the financial performance and ability to make acquisitions.

Ong and Ng (2012) studied the capital structure of firms before and after mergers and acquisitions in the banking industry. The study focused on 7 pairs of anchor banks which merged or acquired smaller banks from 1999 to 2006. The researchers used descriptive statistics to compare the capital ratios and profitability ratios 5 years before and after the merger or acquisition to establish the impact. Beyond descriptive statistics, regression analysis was used to determine the relationship between independent variables and dependent variables. The overall result of the study proved that mergers and acquisitions in banks do not significantly increment the banks’ capital structure. However, the banks’ financial performance, measured using return on assets and return on equity, improved post-merger and acquisition. The study also acknowledged that financial performance was also affected by the acquirer and target banks’ conditions, economic conditions and other external factors.

Dissanayake, Anuranga and Jayarathne (2012) conducted a research study that investigated the impact of capital structure choice on a firm’s financial performance in microfinance institutions. The study used a sample of 136 microfinance institutions from the period 2006 to 2010 and recorded 680 observations. Multiple regression analysis and the Pearson correlation analysis were used to identify the most significant predictor variables and to
identify the relationship between capital structure and financial performance. The return on assets and return on equity ratios were used to measure the firms’ financial performance, while the debt/equity ratio is used to measure the independent variable, capital structure. To control for the differences in the firms’ operating environment, a control variable, firm size, was used. The findings of the study suggested a positive relationship towards financial performance from size and gearing of the firm. Also, a highly negative relationship was recorded between the firms’ financial performance and the capital structure of the firm.

2.4.2.2 Developing Countries

Mumtaz et al. (2013) selected a sample of 83 firms from the Karachi Stock Exchange (KSE) 100 index to examine the relationship between capital structure and a firm’s financial performance in the context of large private companies. To quantify the relationship, the researchers used the debt/equity ratio to measure capital structure, and the earnings per share ratio, price/earnings ratio, operating profit margin ratio, return on asset ratio and return on equity ratio as proxies for financial performance. After applying descriptive statistics and regression analysis to the data collected from financial statements and annual reports, the study found that the financial performance of firms was significantly affected by their capital structure and their relationship was negative in nature. Moreover, a firm’s capital structure was negatively related to its market value and also increased its risk level as the share of debt increased in the capital mix.

Kumara (2017) studied the impact of mergers and acquisitions on the financial performance of acquirer firms between 2009 and 2015. Using a sample of 9 firms, descriptive statistics and financial ratios were performed on the collected data. The debt/equity ratio was used as a proxy for capital structure, while current ratio, quick ratio, financial leverage ratio, net profitability ratio, return on equity ratio and return on capital employed ratio were used as proxies for financial performance. Evidence of a negative relationship between the merged or acquired firms’ capital structure and the financial performance was presented.

Saputra, Achsani and Anggraeni (2015) investigated the effect of capital structure on a firm’s performance in the financial sector in the Indonesia Stock Exchange (IDX) from 2009 to 2013. Panel data analysis was applied to estimate the relationship between capital structure and firm performance. The results of the study showed that capital structure, measured by the debt/equity ratio, had a negative effect on a firm’s performance, measured by the return on assets ratio, which was consistent with the Pecking order theory. Capital
structure had a different effect on each financial sub-sector. Capital structure had a negative effect on securities companies, funding companies and other financial sub-sectors, while capital structure had a positive effect on banking and insurance sub-sectors. Further, the results showed that the financial sector used high leverage and the banking sector had the highest leverage, with 89% total debt to total assets.

### 2.4.2.3 African Countries

Ebaid (2014) investigated the impact of capital structure choice on financial performance of firms. Using a sample of 64 non-financial firms that were listed on the bourse between 1997 and 2005, multiple regression analysis was used to estimate the relationship between the level of leverage and a firm’s financial performance. To measure financial performance, accounting-based measures were used: return on equity, return on assets and gross profit margin. The results of the study revealed that the choice of capital structure generally ranged from a weak impact to no impact on a firm’s financial performance.

Admassu (2016) examined the impact of capital structure choice on the financial performance of a sample of 15 manufacturing PLCs. Using data from 2006 to 2012, the return on equity and return on assets ratios were used to measure financial performance, while the capital structure of companies was measured using leverage ratios of short-term debt to total asset ratio, long-term debt to total asset ratio total debt to total asset ratio, whereas firm growth, firm size, tangibility and liquidity were used as control variables. Two accounting-based measures of financial performance, that is return on assets and return on equity, were used as the dependent variables and purposive sampling method was employed in order to collect data. For the analysis of the collected data, descriptive statistics and random effect panel data regression model were employed. The results revealed a significantly negative relationship between capital structure ratios (short term debt, long term debt, and total debt ratios) and financial performance measured by return on assets and return on equity.

Ronoh and Ntoiti (2015) conducted a case study that examined the effects of capital structure on the financial performance of listed commercial banks. The study considered returns on assets and return on equity ratios as essential financial performance indicators. The effects of capital structure on commercial banks’ financial performance were measured using the variables: deposits, debts, retained earnings and equity. The researchers adopted a descriptive research design and used the financial statements of 230 branches, covering a
five-year period from 2009 to 2013. Multiple regression models were used to determine the relationship between capital structure and financial performance. The results of the study indicated that the capital structure of listed commercial banks was significant and affected the financial performance of commercial banks negatively.

2.5 Chapter Summary
This chapter reviewed literature according to the three specific research objectives. The chapter evaluated the views of various scholars on how financial performance of merged or acquired firms is affected by asset management, shareholders’ equity and capital structure of firms. Overall, the findings of the various scholars presented inconsistent results, with some recording positive effects and others negative effects on financial performance. Chapter three covers the discussion on the research methodology that this study employed.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction
This chapter systematically describes the methodology that the researcher adopted in obtaining information that related to the specific research objectives. The methodology entails the design of the research study, the population of the study, the sampling design that was used, the size of the sample, the method of collecting data, the research procedures and the method of analysing the collected data.

3.2 Research Design
A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. In fact, the research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. As such, the design includes an outline of what the researcher will do from writing the hypothesis and its operational implications to the final analysis of data (Kothari, 2009; Selltiz, Jahoda, Deutsch, & Cook, 1967).

The research design of this study was based on an ex-post facto approach, specifically the adoption of the descriptive research design, the event study approach and the case study approach, because this design allowed the researcher to examine the effect that the acquisition event had on Total Kenya PLC’s financial performance, as well as evaluate the relationship between the variables before and after the acquisition event. In this study, the descriptive design focused on evaluating the relationship between financial performance and Total Kenya PLC’s acquisition of Chevron Kenya in 2009. The descriptive research design reports on summary data such as measures of central tendency including the mean, median and mode; as well as measures of dispersion: standard deviation and variance; and percentages and correlation between variables (Knupfer & McLellan, 1996). Descriptive research is a fact-finding enquiry whose major objective is to describe the state of affairs as it exists at present (Kothari, 2009).

This study used the event study methodology to examine the effect of an acquisition on the financial performance of Total Kenya PLC before the acquisition event (pre-acquisition period) and the period after the acquisition event (post-acquisition period). The objective
of an event study is to assess whether there are any abnormal or excess returns earned by security holders accompanying specific events (Peterson, 1989). The case study approach was also used to explain the effect that an acquisition can had on Total Kenya PLC. A case study may be used to intensively study a single case for the purpose of understanding a larger class of cases, or population (Gerring, 2013).

The study used the net profit margin ratio as a dependent variable to measure the financial performance of Total Kenya PLC, the return on assets ratio to measure asset management, the return on equity ratio to measure the shareholders’ equity and the debt-equity ratio to measure the capital structure. Secondary data was collected from Total Kenya PLC’s audited financial statements and thereafter subjected to statistical tests including correlation and regression analysis; in addition to the descriptive statistics.

### 3.3 Population and Sampling Design

#### 3.3.1 Population

The population of this study comprised of Total Kenya PLC; a choice that was informed by its acquisition of Chevron Kenya (which traded as Caltex) in 2009. A population is the complete set of cases or group members about which we wish to make some inferences (Cooper & Schindler, 2014; Saunders, Lewis, & Thornhill, 2016). A population is a group of individuals or objects that have the same form of characteristics. They are the totality of cases that conform to certain specifications (Kiragu, 2014; O. M. Mugenda & A. G. Mugenda, 2003).

#### 3.3.2 Sampling Design

A sampling design can be defined as a procedure or plan drawn up before any data is collected to obtain a representative from a given population. It is also known as a sampling plan or survey design (Saunders et al., 2016). The sampling design is made up of the sampling frame, sampling technique and sample size.

#### 3.3.2.1 Sampling Frame

The sampling frame of this study was Total Kenya PLC. A sampling frame, also known as a working population, can be described as a set of source materials from which the sample is selected, and it provides a way for choosing specific elements of the population from whom data will be collected. Simply, a sampling frame is a list of elements from which a
sample can be drawn (Adams, Khan, Raeside, & White, 2007; Sreejesh, Mohapatra, & Anusree, 2014; Zikmund, Babin, Carr, & Griffin, 2009).

### 3.3.2.2 Sampling Technique

This study employed a purposive quantitative sampling technique to enable the researcher to focus on characteristics of the population, Total Kenya PLC, that are of interest to the study; including listing on the Nairobi bourse and having undergone an acquisition. A sampling technique is the process of selecting a sample that is representative of the characteristics of the total population (Cooper & Schindler, 2014; Kothari, 2009). The main goal of purposive sampling is to focus on characteristics of a population that are of interest, which then guides the researcher in achieving the study’s research objectives (Christensen, Johnson, & Turner, 2015).

Sampling techniques can either be based on probability sampling or non-probability sampling; where each population member in the former technique has a known, non-zero chance of selection; and the latter technique entails selection on the basis of personal judgement or convenience (Zikmund et al., 2009). The purposing quantitative sampling technique is a non-probability sampling procedure in which the judgement of the researcher is used to select the cases arbitrarily for their unique quantitative characteristics; so that they make up the sample of the study (Cooper & Schindler, 2014; Saunders et al., 2016).

### 3.3.2.3 Sample Size

This research study adopted a census sample, such that Total Kenya PLC was taken as a case study because it is a petroleum firm that is listed under the energy and petroleum sector on the Nairobi Securities Exchange (NSE) and underwent the acquisition exercise in 2009. The sample size refers to the number of items to be selected from the population, so as to constitute a sample (Kothari, 2009). According to O. M. Mugenda and A. G. Mugenda (2003), a census is appropriate when the subjects being studied are less than 100.

### 3.4 Data Collection Methods

A data collection method refers to the process a researcher undergoes to gather empirical data which will be used to achieve their research objectives. The methods of collecting data can either be primary or secondary (Christensen et al., 2015). This research was based on secondary data collected from the 2005 to 2013 audited financial statements of Total Kenya PLC available on their website (Total Kenya PLC, 2019). To ease the process, a secondary
data collection template was used to collect data for the return on assets, return on equity and debt-equity ratios for the merged/acquired firms, as shown in appendix A to E. In the data collection checklist, the ratio of net income to total assets was used as a proxy for asset management, the ratio of net income to total equity was used as a proxy for shareholders’ equity, the ratio of debt to equity was used as a proxy for capital structure and finally, the net profit margin was used as a proxy for financial performance.

3.5 Research Procedures
A research procedure is a sequence of clearly defined steps within a research study (Cooper & Schindler, 2014). A research permit from the National Commission of Science, Technology and Innovation (NACOSTI) was acquired, and further authorization to carry out the research study was granted by the County Commissioner and County Director of Education, both of Nairobi County, as shown in appendix F and G. The first step of this research study was developing the specific research objectives, followed by the identification of the sample data. The next step was obtaining financial statements from Total Kenya PLC’s website from 2005 to 2013. Thereafter, the information relevant to this study was extracted from the financial statements and entered into Microsoft Excel for cleaning and arrangement for analysis using SPSS.

3.6 Data Analysis Methods
Data analysis is the process of editing and reducing accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques (Cooper & Schindler, 2014). Data analysis facilitates the interpretation of data through descriptive statistics and inferential statistics. This study employed descriptive statistics such as frequencies, measures of central tendency (mean, median and mode) and measures of dispersion (standard deviation and variance) to describe the collected data. Inferential statistics such as correlation, regression and analysis of variance were also performed on the data.

This study also used ratio analysis to analyse the effect of asset management, shareholders’ equity and capital structure on the financial performance of Total Kenya PLC. One advantage of using ratio analysis is that it takes away existing inconsistencies among the research data (Abduh, Hasan, & Pananjung, 2013). Ratio analysis also helps the researcher to organize the data and analyse it in an orderly manner and it is suitable for analysing financial performance because it verifies the relationship between the variables in the firm’s
financial statements (Ali & Haque, 2014). Ratio analysis can be used to summarize large quantities of financial data to make judgements about a firm’s financial performance (Enekwe, Okwo, & Ordu, 2013).

The return on assets, return on equity and debt/equity ratios were the independent variables used as proxies for asset management, shareholders’ equity and capital structure respectively, to measure their effects on the financial performance, whose proxy was the net profit margin ratio, of Total Kenya PLC. To clearly bring out the relationship between the dependent and independent variables, a multiple linear regression model was used. It helped in determining to what extent the dependent variable was influenced by the independent variables. A generalized form of the multiple linear regression model that was used is as follows:

\[ Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \]

Where:

- \( Y_i \) = Observation \( i \) of the dependent variable, financial performance, which was measured by the net profit margin (NPM). The NPM is calculated by dividing a firm’s net income by the total revenue (also known as total sales) (Brigham & Ehrhardt, 2011).

- \( \beta_0 \) = The constant term of the equation.

- \( \beta_1, \beta_2, \beta_3 \) = The coefficient terms of the independent variables.

- \( X_1 \) = Asset management, measured by the return on assets (ROA) ratio. ROA is calculated by dividing a firm’s net income by the total assets (Kramer & Johnson, 2009).

- \( X_2 \) = Shareholders’ equity, measured by the return on equity (ROE) ratio. ROE is calculated by dividing a firm’s net income by the total shareholders’ equity (Subramanyam & Wild, 2009).

- \( X_3 \) = Capital structure, measured by the debt/equity ratio. The ratio is calculated by dividing a firm’s total liabilities divided by the total shareholders’ equity (Palepu & Healy, 2013).

- \( \varepsilon \) = The error term that accounts for the variability in financial performance that cannot be explained by the linear effect of the independent variables (Anderson, Sweeny, Williams, Camm, & Cochran, 2015).
Microsoft Excel was used to enter and clean the collected data, while the Statistical Package for the Social Sciences (SPSS) software was used to perform inferential statistics on the data.

3.7 Chapter Summary
This chapter was a presentation of the research design used in the study. It described the population, the sampling procedure and the data collection methods that were used in the study. The main instruments of research in the study were the audited financial statements from the acquiring listed petroleum firms. The data collected was then analysed using Microsoft Excel and the Statistical Package for Social Sciences (SPSS) software. The analysed data was then used to obtain the descriptive, correlation and regression analyses to establish the effect of the mergers and acquisitions on financial performance of Total Kenya PLC. The results and findings are presented in chapter four.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter presents the results and findings of the data collected from Total Kenya PLC with the objective of explaining the effect of mergers and acquisitions on the firm’s financial performance. Specifically, the findings are analysed based on the effect of asset management on Total Kenya PLC’s financial performance, the effect of shareholders’ equity on the firm’s financial performance; and the effect of capital structure on the firm’s financial performance.

4.2 General Information

Based on the data collected from Total Kenya PLC’s financial statements, table 4.1 below provides a brief overview of the firm’s financial performance, before the acquisition (pre-acquisition) of Chevron Kenya, the year of acquisition and after the acquisition (post-acquisition).

Table 4.1: Overview of Total Kenya PLC’s Financial Performance

<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-acquisition period</th>
<th>Acquisition year</th>
<th>Post-acquisition period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005</td>
<td>2006</td>
<td>2007</td>
</tr>
<tr>
<td>Period</td>
<td>-4</td>
<td>-3</td>
<td>-2</td>
</tr>
<tr>
<td>NPM</td>
<td>1.58</td>
<td>1.59</td>
<td>1.51</td>
</tr>
<tr>
<td>ROA</td>
<td>4.93</td>
<td>3.17</td>
<td>4.19</td>
</tr>
<tr>
<td>ROE</td>
<td>11.51</td>
<td>10.42</td>
<td>11.03</td>
</tr>
<tr>
<td>D/E</td>
<td>133.36</td>
<td>229.12</td>
<td>163.34</td>
</tr>
</tbody>
</table>

Source: Data findings

The net profit margin (NPM) held at a steady pace up until the year of acquisition, when it started to drop and then plummeted two years after the acquisition. Four years post-acquisition, the NPM started increasing. The return on assets (ROA) ratio and return on equity (ROE) ratio followed a similar pattern, where the ROA fluctuated slightly pre-acquisition and then dropped during the year of acquisition. It rose again one year post-acquisition before plunging into a loss during the second and third years post-acquisition, before rising again in the fourth year. The ROE was also stable pre-acquisition. However,
during the year of acquisition, it declined before increasing one year after the acquisition. It then took a nose-dive during the second and third years post-acquisition, before increasing in the fourth year. The debt to equity (D/E) ratio fluctuated pre-acquisition, before escalating during the year of acquisition. The D/E ratio fluctuated again post-acquisition.

4.3 Effect of Asset Management on the Financial Performance of Total Kenya PLC

The return on assets (ROA) ratio is the independent variable that was used as a proxy in measuring the effect of asset management on Total Kenya PLC’s financial performance.

4.3.1 Descriptive Statistics on the ROA Ratio

Descriptive statistics are used to summarize data in an organized manner by describing the relationship between variables in a sample or population (Kaur, Stoltzfus, & Yellapu, 2018).

Table 4.2: Descriptive Statistics of the ROA Ratio

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Variance</th>
<th>Kurtosis</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Acquisition</td>
<td>4.285</td>
<td>0.81394103</td>
<td>0.6625</td>
<td>0.327336</td>
<td>-1.1601</td>
</tr>
<tr>
<td>Post-Acquisition</td>
<td>1.3725</td>
<td>2.062027724</td>
<td>4.251958</td>
<td>-5.72528</td>
<td>-0.02037</td>
</tr>
</tbody>
</table>

Source: Data findings

The mean is a measure of central tendency that is calculated by summing all the values and dividing them by the number of values (Groebner, Shannon, & Fry, 2014). In the case of Total Kenya PLC, the pre-acquisition mean ROA dropped from 4.285 to 1.3725 post-acquisition. The standard error is a measure of the spread of the sample mean around the population mean (Groebner et al., 2014). The standard error of the mean rose from 0.406971 during the pre-acquisition period to 1.031014 in the post-acquisition period.

Two measures of dispersion/ variation that incorporate all the values in a data set are the variance and the standard deviation. These two measures are closely related, in that the standard deviation is the positive square root of the variance. The standard deviation is a number that summarizes how far away from the average the data values typically are. Statistically, it summarizes the level of randomness in a data set; specifically, it measures the extent of randomness of individuals about their average (Siegel, 2016). Total Kenya
PLC’s standard deviation of the ROA before acquiring Chevron Kenya was 0.81394103, whereas the post-acquisition figure was 2.062027724. This indicates that the standard deviation of the ROA increased by 1.248086694 units after acquisition. Population variance is defined as the sum of squared deviations from the mean divided by the population size (Doane & Seward, 2016). Total Kenya PLC’s variance of the ROA pre-acquisition was 0.6625, while the post-acquisition variance came to 4.251958. The variance of the ROA increased after acquisition by 3.589458 units.

Kurtosis is a measure of shape whose coefficient measures whether a distribution is more or less peaked than a normal distribution (Jaggia & Kelly, 2013). Total Kenya PLC’s kurtosis of the ROA pre-acquisition was 0.327336, while the kurtosis post-acquisition was -5.72528. The pre-acquisition kurtosis coefficient is indicative of a distribution with a higher peak and fatter tails, because it’s greater than zero; while the post-acquisition kurtosis coefficient indicates a distribution with a lower peak and thinner tails, because it’s less than zero, as compared to a normal distribution. Skewness is a measure of shape that identifies the degree of symmetry of the data values about the central location measure (mean) (Wegner, 2016). The skewness of the ROA pre-acquisition was found to be -1.1601, whereas the skewness post-acquisition was -0.02037. Both figures are indicative of data that is skewed to the left, or negatively skewed.

### 4.3.2 Correlation Analysis Results of the ROA Ratio and Financial Performance

The Pearson coefficient of correlation is a number that indicates both the direction and the strength of the linear relationship between the dependent variable (in this case financial performance) and the independent variable (return on assets ratio) (Weiers, 2011). Results of the correlation analysis between financial performance and the ROA ratio are illustrated in table 4.3 below. With a data sample size of 9, the Pearson correlation coefficient ($r$) was 0.859, indicating a positive significant linear relationship between ROA and financial performance, as measured by the NPM ratio; $r(9) = 0.859, p<0.01$. 


Table 4.3: Correlation Results of ROA and Financial Performance (NPM)

<table>
<thead>
<tr>
<th></th>
<th>NPM</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPM</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.003</td>
</tr>
<tr>
<td>N</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>ROA</td>
<td>Pearson Correlation</td>
<td>.859**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.003</td>
</tr>
<tr>
<td>N</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

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

Source: Data findings

4.3.3 Regression Analysis on the Effect of the ROA Ratio on Financial Performance

Regression analysis is the process of constructing a mathematical model or function that can be used to predict or determine one variable by another variable (bivariate regression) or other variables (multiple regression) (Cortinhas & Black, 2012). Regression models identify the type of mathematical relationship that exists between a dependent and an independent variable. This can be done using an analysis of variance (ANOVA) test, which enables one to quantify the effect that a change in the independent variable has on the dependent variable (Berenson, Levine, & Szabat, 2015; Wegner, 2016). Table 4.4 below depicts the pre-merger results of the simple linear regression of the ROA, while table 4.5 thereafter displays the post-merger results of the ROA simple linear regression analysis.
Table 4.4: Pre-Acquisition Regression Results of ROA

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.064(^a)</td>
<td>.004</td>
<td>-.494</td>
<td>.0611</td>
</tr>
</tbody>
</table>

\(^a\) Predictors: (Constant), ROA

---

Pre-Acquisition ANOVA\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>.000</td>
<td>1</td>
<td>.000</td>
<td>.008</td>
<td>.936(^b)</td>
</tr>
<tr>
<td>Residual</td>
<td>.007</td>
<td>2</td>
<td>.004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.008</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Dependent Variable: NPM
\(^b\) Predictors: (Constant), ROA

Pre-Acquisition Coefficients\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.557</td>
<td>.196</td>
<td></td>
<td>7.960</td>
</tr>
<tr>
<td>ROA</td>
<td>.004</td>
<td>.045</td>
<td>.064</td>
<td>.091</td>
</tr>
</tbody>
</table>

\(^a\) Dependent Variable: NPM

Source: Data findings

The R\(^2\) in the model summary indicates that only 0.4\% of the variations in Total Kenya PLC’s financial performance pre-acquisition could be explained by the firm’s asset management. The goodness of fit ANOVA model displays the regression results of the pre-acquisition relationship between financial performance and asset management. There was no statistically significant difference between the means of financial performance and ROA, since \( F_{(1,2)} = 0.008 \) and \( p = 0.936 \). The standardized beta coefficient of 0.064
signified that there was a weak relationship between financial performance and the firm’s asset management. This means that changes occurring in one variable were not correlated to the changes occurring in the second variable.

Table 4.5: Post-Acquisition Regression Results of ROA

<table>
<thead>
<tr>
<th>Post-Acquisition Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

<sup>a</sup> Predictors: (Constant), ROA

<table>
<thead>
<tr>
<th>Post-Acquisition ANOVA&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>1 Regression</td>
</tr>
<tr>
<td>Residual</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<sup>a</sup> Dependent Variable: NPM

<sup>b</sup> Predictors: (Constant), ROA

<table>
<thead>
<tr>
<th>Post-Acquisition Coefficients&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
</tr>
<tr>
<td>ROA</td>
</tr>
</tbody>
</table>

<sup>a</sup> Dependent Variable: NPM

<sup>Source: Data findings</sup>

The R² in the model summary indicates that 89.8% of the variations in Total Kenya PLC’s financial performance post-acquisition can be explained by the firm’s asset management. The goodness of fit ANOVA model displays the regression results of the post-acquisition
relationship between financial performance and the firm’s asset management, and indicate that there was a statistically significant difference between the means of financial performance and ROA, since $F_{(1,2)} = 17.544$ and $p = 0.05$. The standardized beta coefficient of 0.947 signified that there was a strong relationship between financial performance and asset management post-acquisition. This means that changes occurring post-acquisition in one variable were correlated to the changes occurring in the second variable.

4.4 Effect of Shareholders’ Equity on the Financial Performance of Total Kenya PLC
The return on equity (ROE) ratio is the independent variable that was used as a proxy in measuring the effect of shareholders’ equity on Total Kenya PLC’s financial performance.

4.4.1 Descriptive Statistics of the ROE Ratio
Descriptive statistics were used to describe the pre-acquisition and post-acquisition values of the ROE ratio to determine whether or not there were any changes and how this affected Total Kenya PLC’s financial performance. The descriptive statistics of the ROE are illustrated in table 4.6 below.

<table>
<thead>
<tr>
<th></th>
<th>Mean Statistic</th>
<th>Standard Error</th>
<th>Standard Deviation</th>
<th>Variance</th>
<th>Kurtosis</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Acquisition</td>
<td>11.725</td>
<td>.7910</td>
<td>1.5819</td>
<td>2.503</td>
<td>1.525</td>
<td>2.547</td>
</tr>
<tr>
<td>Post-Acquisition</td>
<td>3.975</td>
<td>2.9412</td>
<td>5.8824</td>
<td>34.603</td>
<td>.021</td>
<td>-5.775</td>
</tr>
</tbody>
</table>

Source: Data findings

The mean ROE of Total Kenya PLC dropped from 11.725 pre-acquisition to 3.975 post-acquisition. The standard deviation rose from 1.5819 pre-acquisition to 5.8824 after the acquisition. The variance of the ROE rose from 2.503 before the acquisition to 34.603 post-acquisition. The kurtosis dropped from 1.525 pre-acquisition to 0.021 after the acquisition. This means that during both the pre and post-acquisition periods, the kurtosis coefficient of the ROE exhibited a distribution that was more peaked with fatter tails than a normal distribution, because both values are greater than zero. The skewness of the ROE pre-acquisition was found to be 2.547, indicating that the ROE was positively skewed, or skewed to the right; while the post-acquisition skewness was -5.775, indicating that the ROE was negatively skewed, or skewed to the left.
4.4.2 Correlation Analysis Results of the ROE Ratio and Financial Performance
Table 4.7 below shows the results of the correlation analysis between financial performance (NPM) and the ROE ratio. With a data sample size of 9, the Pearson correlation coefficient \( r \) is 0.913, indicating a positive statistically significant linear relationship between ROE and financial performance (NPM); \( r (9) = 0.913; p<0.01 \).

Table 4.7: Correlation Results of ROE and Financial Performance (NPM)

<table>
<thead>
<tr>
<th></th>
<th>NPM</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPM</td>
<td>Pearson Correlation</td>
<td>.913**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>ROE</td>
<td>Pearson Correlation</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>9</td>
</tr>
</tbody>
</table>

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

Source: Data findings

4.4.3 Regression Analysis on the Effect of the ROE Ratio on Financial Performance
The pre-acquisition results of the regression analysis are displayed in table 4.8 below; thereafter, the post-acquisition results are presented in table 4.9.
### Table 4.8: Pre-Acquisition Regression Results of ROE

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.306(^a)</td>
<td>.093</td>
<td>-.360</td>
<td>.0583</td>
</tr>
</tbody>
</table>

\(^a\) Predictors: (Constant), ROE

---

#### Pre-Acquisition ANOVA\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig. (^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>.001</td>
<td>1</td>
<td>.001</td>
<td>.206</td>
<td>.694</td>
</tr>
<tr>
<td>Residual</td>
<td>.007</td>
<td>2</td>
<td>.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.008</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Dependent Variable: NPM

\(^b\) Predictors: (Constant), ROE

---

#### Pre-Acquisition Coefficients\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>B</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1.462</td>
<td>.251</td>
<td>5.819</td>
<td>.028</td>
</tr>
<tr>
<td>ROE</td>
<td>.010</td>
<td>.021</td>
<td>.306</td>
<td>.454</td>
</tr>
</tbody>
</table>

\(^a\) Dependent Variable: NPM

Source: Data findings

The \(R^2\) in the model summary indicates that only 9.3% of the variations in Total Kenya PLC’s financial performance pre-acquisition are explained by the shareholders’ equity. The goodness of fit ANOVA model displays the regression results of the pre-acquisition relationship between financial performance and the shareholders’ equity. There was no statistically significant difference between the means of the pre-acquisition financial performance and ROE, since \(F_{(1,2)} = 0.206\) and \(p = 0.694\). The standardized beta coefficient
of 0.306 signified that there was a weak relationship between financial performance and shareholders’ equity. This means that changes occurring in one variable pre-acquisition were not correlated to the changes occurring in the second variable.

Table 4.9: Post-Acquisition Regression Results of ROE

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.982&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.965</td>
<td>.947</td>
<td>.1794</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), ROE

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1.756</td>
<td>1</td>
<td>1.756</td>
<td>54.569</td>
<td>.018&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Residual</td>
<td>.064</td>
<td>2</td>
<td>.032</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.820</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: NPM

b. Predictors: (Constant), ROE

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-.017</td>
<td>.114</td>
<td>-.149</td>
</tr>
<tr>
<td>ROE</td>
<td>.130</td>
<td>.018</td>
<td>.982</td>
<td>7.387</td>
</tr>
</tbody>
</table>

a. Dependent Variable: NPM

Source: Data findings

The $R^2$ in the model summary indicates that 96.5% of the variations in Total Kenya PLC’s financial performance post-acquisition are explained by the shareholders’ equity. The goodness of fit ANOVA model displays the regression results of the post-acquisition
relationship between financial performance and return on equity. There was a statistically significant difference between the means of the post-acquisition financial performance and ROE, since \( F_{(1,2)} = 54.569 \) and \( p = 0.018 \). The standardized beta coefficient of 0.982 signified that there was a strong relationship between financial performance and shareholders’ equity. This means that changes occurring in one variable post-acquisition were correlated to the changes occurring in the second variable.

4.5 Effect of Capital Structure on the Financial Performance of Total Kenya PLC
The debt/ equity (D/E) ratio is the independent variable that was used as a proxy in measuring the effect of capital structure on Total Kenya PLC’s financial performance.

4.5.1 Descriptive Statistics of the D/E Ratio
Descriptive statistics were used to describe the pre-acquisition and post-acquisition values of the D/E ratio to determine whether or not there were any changes and how this affected Total Kenya PLC’s financial performance. The descriptive statistics of the D/E ratio are presented in table 4.10 below.

Table 4.10: Descriptive Statistics of the D/E Ratio

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
<th>Kurtosis</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Acquisition</td>
<td>178.825</td>
<td>20.3019</td>
<td>40.6037</td>
<td>-.357</td>
<td>.307</td>
</tr>
<tr>
<td>Post-Acquisition</td>
<td>198.075</td>
<td>33.2956</td>
<td>66.5913</td>
<td>-1.233</td>
<td>.624</td>
</tr>
</tbody>
</table>

Source: Data findings

The mean D/E of Total Kenya PLC rose from 178.825 pre-acquisition to 198.075 post-acquisition. The standard deviation rose from 40.6037 pre-acquisition to 66.5913 after the acquisition. The variance of the D/E rose from 1648.663 before the acquisition to 4434.396 post-acquisition. The kurtosis dropped from -0.357 pre-acquisition to -1.233 after the acquisition. This means that during both the pre and post-acquisition periods, the kurtosis coefficient of the D/E exhibited a distribution that was less peaked with thinner tails than a normal distribution, because both values are less than zero. The skewness of the D/E pre-acquisition was found to be 0.307, indicating that the D/E was positively skewed, or skewed.
to the right; while the post-acquisition skewness was 0.624, indicating a rise in the D/E, and that it was also positively skewed.

4.5.2 Correlation Analysis Results of the D/E Ratio and Financial Performance
Table 4.11 below displays the results of the correlation analysis between financial performance (NPM) and the D/E ratio. With a data sample size of 9, the Pearson correlation coefficient \( r \) is -0.054, indicating a weak negative linear relationship between D/E and NPM; \( r(9) = -0.054; p < 0.01 \).

Table 4.11: Correlation Results of D/E and Financial Performance (NPM)

<table>
<thead>
<tr>
<th></th>
<th>NPM</th>
<th>D/E</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPM</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>9</td>
</tr>
<tr>
<td>D/E</td>
<td>Pearson Correlation</td>
<td>-0.054</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: Data findings

4.5.3 Regression Analysis on the Effect of the D/E Ratio on Financial Performance
The pre-acquisition results of the regression analysis are displayed in table 4.12 below; thereafter, the post-acquisition results are presented in table 4.13.
The R² in the model summary indicates that only 6.5% of the variations in Total Kenya PLC’s financial performance pre-acquisition are explained by the firm’s capital structure. The goodness of fit ANOVA model displays the regression results of the pre-acquisition relationship between financial performance and the firm’s capital structure. There was no statistically significant difference between the means of the pre-acquisition financial performance and D/E, since \( F_{(1,2)} = 0.139 \) and \( p = 0.745 \). The standardized beta coefficient of 0.255 signified that there was a weak relationship between financial performance and
Total Kenya PLC’s capital structure. This means that changes occurring in one variable pre-acquisition were not correlated to the changes occurring in the second variable.

**Table 4.13: Post-Acquisition Regression Results of D/E**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.019a</td>
<td>.0003</td>
<td>-.499</td>
<td>.9538</td>
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</table>

*a. Predictors: (Constant), D/E*

**Post-Acquisition ANOVAa**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>.001</td>
<td>1</td>
<td>.001</td>
<td>.001</td>
<td>.981b</td>
</tr>
<tr>
<td>Residual</td>
<td>1.819</td>
<td>2</td>
<td>.910</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.820</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a. Dependent Variable: NPM*  
*b. Predictors: (Constant), D/E*

**Post-Acquisition Coefficientsa**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td>.544</td>
<td>1.706</td>
<td>.319</td>
<td>.780</td>
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<tr>
<td>D/E</td>
<td>.000</td>
<td>.008</td>
<td>-.019</td>
<td>-.027</td>
</tr>
</tbody>
</table>

*a. Dependent Variable: NPM*  
*b. Predictors: (Constant), D/E*

**Source: Data findings**

The $R^2$ in the model summary indicates that only 0.03% of the variations in Total Kenya PLC’s financial performance post-acquisition are explained by the firm’s capital structure. The goodness of fit ANOVA model displays the regression results of the pre-acquisition relationship between financial performance and the firm’s capital structure. There was no
statistically significant difference between the means of the post-acquisition financial performance and D/E, since \( F_{(1,2)} = 0.001 \) and \( p = 0.981 \). The standardized beta coefficient of \(-0.019\) signified that there was a weak negative relationship between financial performance and Total Kenya PLC’s capital structure. This means that changes occurring in one variable post-acquisition were not correlated to the changes occurring in the second variable.

**4.6 Chapter Summary**

This chapter discussed the results and findings of the study based on the specific objectives: to evaluate the effect of asset management on the financial performance of Total Kenya PLC, to evaluate the effect of shareholder’s equity on the financial performance of Total Kenya PLC and to evaluate the effect of capital structure on the financial performance of Total Kenya PLC. The study used the return on assets (ROA) ratio to measure Total Kenya PLC’s asset management, the return on equity ratio (ROE) to measure Total Kenya PLC’s shareholders’ equity and the debt to equity (D/E) ratio was used to measure Total Kenya PLC’s capital structure. The results and findings were presented in a tabular format. Chapter five will cover the discussion, conclusions and recommendations of the study.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
This chapter presents the summary of the study, discussion of the results and makes conclusions based on the findings. Recommendations for improvement and further studies have also been discussed.

5.2 Summary
The general objective of this study was to examine the effect of mergers and acquisitions on the financial performance of listed petroleum firms in Kenya, using Total Kenya PLC as a case study. The study was guided by the following specific research objectives: to evaluate the effect of asset management on the financial performance of merged or acquired listed petroleum firms in Kenya; to evaluate the effect of shareholders’ equity on the financial performance of merged or acquired listed petroleum firms in Kenya; and to evaluate the effect of capital structure on the financial performance of merged or acquired listed petroleum firms in Kenya.

The study adopted a descriptive research design, the event study approach and case study approach, because this design allowed the researcher to examine the effect that the acquisition event had on Total Kenya PLC’s financial performance, as well as evaluate the relationship between the variables before and after the acquisition event. The population of this study comprised of Total Kenya PLC. The study selected a census sample using the purposive method because it allowed the study to focus on characteristics of the population. Secondary data was collected from Total Kenya PLC’s audited financial statements. The data analysis methods that were employed by the study were descriptive and inferential in nature. Data was analysed using the Statistical Package for the Social Sciences (SPSS).

Secondary data, four years before and four years after the event were retrieved from Total Kenya PLC’s audited financial statements, published on their website (Total Kenya PLC, 2019). An analysis of the data was performed through the use of the Statistical Package or Social Sciences (SPSS) version 24 software. Descriptive, correlation and linear regression analysis methods were used to examine the effect of mergers and acquisitions on the financial performance of Total Kenya PLC.
In relation to the findings of the study, the return on assets (ROA) ratio in this study was used to measure the effect of asset management on the financial performance of Total Kenya PLC. The results revealed a statistically significant positive relationship between ROA and financial performance ($r = 0.859$); meaning that asset management had a positive influence on Total Kenya PLC’s financial performance. The return on equity (ROE) ratio was used to measure the effect of shareholders’ equity on the financial performance of Total Kenya PLC. The findings also revealed a statistically significant positive relationship between ROE and financial performance ($r = 0.913$); meaning that the shareholders’ equity had a positive influence on Total Kenya PLC’s financial performance. The debt to equity (D/E) ratio was used to measure the effect of capital structure on the financial performance of Total Kenya PLC. The results showed a negative relationship between D/E and financial performance ($r = -0.054$); meaning that the capital structure has a negative effect on Total Kenya PLC’s financial performance.

5.3 Discussion

5.3.1 The Effect of Asset Management on the Financial Performance of Merged or Acquired Listed Petroleum Firms

Based on Total Kenya PLC’s results, asset management is positively correlated to financial performance at a statistically significant level of $r = 0.859$; meaning that asset management had a positive influence on the financial performance of merged or acquiring petroleum firms. Based on the regression model, only 0.4% of the changes in financial performance could be explained by asset management, pre-acquisition. After the acquisition, 89.8% of the changes in financial performance could be explained by Total Kenya PLC’s asset management; meaning that mergers and acquisitions do have an effect on the financial performance of petroleum firms, based on their asset management.

According to the ANOVA results, there was no statistically significant difference between the means of the financial performance and ROA, during the pre-acquisition period ($F_{(1,2)} = 0.008; p = 0.936$), while there was a statistically significant difference during the post-acquisition period ($F_{(1,2)} = 17.544; p = 0.05$); meaning that since the pre-acquisition sig. value ($p$) is greater than 0.05, the variations in financial performance are not likely to be as a result of asset management. Whereas since the post-acquisition sig. value ($p$) is equal to 0.05, the variations in financial performance are as a result of asset management. Therefore,
Total Kenya PLC’s return on assets ratio showed a statistically significant improvement in financial performance after the acquisition of Chevron Kenya in 2009.

Similar studies conducted by Pazarskis et al. (2018), D. S. Sharma and Ho (2002) and Lai et al. (2015) on the effect of mergers and acquisitions on the financial performance of firms, used the return on assets ratio as a measure for asset management and found that there was no statistically significant improvement in the firms’ financial performance after the merger or acquisition. However, Akben-Selcuk & Altiok-Yılmaz (2011) found that post-acquisition, the return on assets ratio was significantly lower than the pre-acquisition figures. Abbas et al. (2014), Al-Hroot (2016) and Rani et al. (2015b) also found that asset management ratios had no statistically significant effect on the financial performance of merger firms in the developing countries. Ayako et al. (2015) observed that the return on assets ratio had no statistically significant effect on financial performance. Akinbuli and Kelilume (2013) recorded a marginally positive impact that the return on assets ratio had on financial performance, a conclusion similar to that of this study.

5.3.2 The Effect of Shareholders’ Equity on the Financial Performance of Merged or Acquired Listed Petroleum Firms

The results of the return on equity (ROE) ratio, used to measure Total Kenya PLC’s shareholders’ equity, revealed that shareholders’ equity is positively correlated to financial performance at a statistically significant level of $r = 0.913$; meaning that shareholders’ equity had a positive influence on the financial performance of merged or acquiring petroleum firms. Based on the regression model, only 9.3% of the changes in financial performance could be explained by asset management, pre-acquisition. After the acquisition, 96.5% of the changes in financial performance could be explained by Total Kenya PLC’s asset management; meaning that mergers and acquisitions do have an effect on the financial performance of petroleum firms, based on the shareholders’ equity.

According to the ANOVA results, there was no statistically significant difference between the means of financial performance and ROE during the pre-acquisition period ($F_{(1,2)} = 0.206; p = 0.694$), while there was a statistically significant difference during the post-acquisition period ($F_{(1,2)} = 54.569; p = 0.018$); meaning that since the pre-acquisition sig. value ($p$) is greater than 0.05, the variations in financial performance are not likely to be as a result of shareholders’ equity. Whereas since the post-acquisition sig. value ($p$) is less than 0.05, the variations in financial performance are as a result of shareholders’ equity.
Therefore, Total Kenya PLC’s return on equity ratio showed a statistically significant improvement in financial performance after the acquisition of Chevron Kenya in 2009.

Kiesel et al. (2017) and Rani et al. (2015b) noted that while shareholders exhibited positive returns, the post-merger financial performance differed considerably. Cortes et al. (2015) recorded a positive effect on financial performance post-merger and acquisition, if the merger or acquisition is strategic. If not, the firm’s financial performance was recorded to be negative. Naba and Chen (2014) observed that the effect of shareholders’ equity on financial performance in the short run declined and then increased in the long run. Badreldin and Kalhoefer (2009) observed that mergers and acquisitions did not have a clear effect on shareholders’ equity or the firms’ financial performance. Ashfaq (2014) noted that the effect of shareholders’ equity on financial performance deteriorated post-merger.

Studies conducted by Hassan et al. (2007), Delaney and Wamuziri (2004), van Frederikslust et al. (2005), K. P. Sharma (2018), Gwaya and Mungai (2015) and Ogoti and Gekara (2017) found that the shareholders’ equity proxy had a statistically significant positive influence on the financial performance of firms. The findings of these studies are in accord with those of this study.

5.3.3 The Effect of Capital Structure on the Financial Performance of Merged or Acquired Listed Petroleum Firms

The debt to equity (D/E) ratio was used to measure Total Kenya PLC’s capital structure. The results showed that the capital structure is weakly and negatively correlated to financial performance at a level of $r = -0.054$; meaning that capital structure had a weak, negative influence on the financial performance of merged or acquiring petroleum firms. Based on the regression model, only 6.5% of the changes in financial performance could be explained by capital structure, pre-acquisition. After the acquisition, only 0.03% of the changes in financial performance could be explained by Total Kenya PLC’s capital structure; meaning that mergers and acquisitions have a negative effect on the financial performance of petroleum firms, based on the capital structure.

The ANOVA results show that there was no statistically significant difference between the means of financial performance and D/E, during both the pre-acquisition period ($F_{(1,2)} = 0.139; p = 0.745$) and post-acquisition period ($F_{(1,2)} = 0.001; p = 0.981$); meaning that since the sig. value ($p$) for both the pre-acquisition and post-acquisition periods are greater than
the variations in financial performance are not likely to be as a result of the firm’s capital structure. Therefore, Total Kenya PLC’s debt to equity ratio showed a decline in financial performance after the acquisition of Chevron Kenya in 2009.

According to Bouraoui and Li (2014) the capital structure of the acquirer firms have a positive effect on the financial performance in the short run after the merger or acquisition. Ong and Ng (2012) and Ebaid (2014) found that the capital structure of a firm that had either merged or acquired had no significant impact on their financial performance after the event. These findings did not concur with those of the study.

Studies conducted by Mailanyi (2014), Admassu (2016), Dissanayake et al. (2012), Kumara (2017), Mulwa (2015), Mumtaz et al. (2013), Ronoh and Ntoiti (2015), Saputra et al. (2015) and Uysal (2011) noted that there was a negative relationship post-merger or acquisition between capital structure ratios and the financial performance of firms that had merged or acquired. Their findings were similar to those of this study.

5.4 Conclusions
5.4.1 The Effect of Asset Management on the Financial Performance of Merged or Acquired Listed Petroleum Firms

On the effect of asset management, the study concluded that there is a statistically significant positive relationship between a listed petroleum firm’s asset management and its financial performance post-merger or acquisition, at $r = 0.859$. The results of the regression test indicated that 89.8% of the variations in the financial performance of Total Kenya PLC could be explained by changes in the firm’s asset management. Therefore, asset management, measured by the return on assets ratio, had a positive effect on the financial performance of Total Kenya PLC.

5.4.2 The Effect of Shareholders’ Equity on the Financial Performance of Merged or Acquired Listed Petroleum Firms

In relation to the effect of shareholder’s equity, the study concluded that there is a statistically significant positive relationship between a listed petroleum firm’s shareholders’ equity and its financial performance post-merger or acquisition, at $r = 0.913$. The findings of the regression test indicated that 96.5% of the variations in the financial performance of Total Kenya PLC could be explained by changes in the firm’s shareholders’
equity. Therefore, shareholders’ equity, measured by the return on equity ratio, had a positive effect on the financial performance of Total Kenya PLC.

5.4.3 The Effect of Capital Structure on the Financial Performance of Merged or Acquired Listed Petroleum Firms
On capital structure, the study concluded that there is a weak negative relationship between a listed petroleum firm’s capital structure and its financial performance post-merger or acquisition, at $r = -0.054$. The results of the regression test showed that only 0.03% of the variations in the financial performance of Total Kenya PLC could be explained by changes in the firm’s capital structure. Therefore, capital structure, measured by the debt to equity ratio, had a negative effect on the financial performance of Total Kenya PLC.

5.5 Recommendations
5.5.1 Recommendations for Improvement
5.5.1.1 The Effect of Asset Management on the Financial Performance of Merged or Acquired Listed Petroleum Firms
A low return on assets signifies that a company is not raking in sufficient profits, or is overinvested in assets that are not profitable. To improve a firm’s return on assets, the management can work on reducing operational costs by downsizing facilities or relocating to more affordable premises. Another alternative would be to either lease or sell off the assets that are not being used.

5.5.1.2 The Effect of Shareholders’ Equity on the Financial Performance of Merged or Acquired Listed Petroleum Firms
The firm’s management should strive to efficiently utilize the shareholders’ funds at their disposal. This will encourage the shareholder to invest more in the petroleum firms. To increase the return on equity, the firm’s management can increase its financial leverage, increase the profit margins, improve asset turnover, distribute idle cash by paying out dividends to shareholders and buying back shares.

5.5.1.3 The Effect of Capital Structure on the Financial Performance of Merged or Acquired Listed Petroleum Firms
A high debt to equity ratio indicates that a firm uses more debt than equity to finance its operations and meet its liabilities. Whereas a negative debt to equity ratio, as in this case, indicates that the petroleum firm’s liabilities outweigh its equity. The firm’s management
can take measures to reduce its liabilities by increasing the sales revenue, restructuring the firm’s debt, efficiently managing the firm’s inventory and seeking new investors, in an effort to make the debt to equity ratio positive and attractive to investors and lending institutions.

5.5.2 Recommendations for Further Research
Further studies should be undertaken to examine the effect of mergers and acquisitions on the financial performance of Kenyan firms to establish trends over longer periods of time and capture new opportunities in the different industries in Kenya. Additionally, different combinations of variables should be used; not only the asset management, shareholder’s equity and capital structure combination, because there are many factors that affect a firm’s financial performance. Since there are many techniques that can be used to measure a firm’s performance, future studies should use various variables that are both qualitative and quantitative to develop more concise and accurate conclusions.
REFERENCES


Oluwaremi, E. V., & Memba, F. (2016). Relationship Between Asset Management and


https://doi.org/10.1036/0071403027


https://doi.org/10.1007/978-3-319-00539-3


### APPENDIX A: Secondary Data Collection Template

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<th>Net income</th>
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### APPENDIX B: Calculation of Ratios Template

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<th>NPM</th>
<th>ROA</th>
<th>ROE</th>
<th>D/E</th>
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</table>

### APPENDIX C: Effect of Asset Management on the Financial Performance of Merged or Acquired Petroleum Firms

<table>
<thead>
<tr>
<th>Firm</th>
<th>Return on Assets (ROA)</th>
</tr>
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<tr>
<td>Total Kenya PLC</td>
<td>-4 -3 -2 -1 0 1 2 3 4</td>
</tr>
</tbody>
</table>
APPENDIX D: Effect of Shareholders’ Equity on the Financial Performance of Merged or Acquired Petroleum Firms

<table>
<thead>
<tr>
<th>Firm</th>
<th>Return on Equity (ROE)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-4</td>
</tr>
<tr>
<td>Total Kenya PLC</td>
<td></td>
</tr>
</tbody>
</table>

APPENDIX E: Effect of Capital Structure on the Financial Performance of Merged or Acquired Petroleum Firms

<table>
<thead>
<tr>
<th>Firm</th>
<th>Debt/Equity Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-4</td>
</tr>
<tr>
<td>Total Kenya PLC</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX F: National Commission for Science, Technology and Innovation (NACOSTI) Licence

THIS IS TO CERTIFY THAT:
MISS. NATALIE OYIMBO KOKONYA of UNITED STATES INTERNATIONAL UNIVERSITY - AFRICA, 0-200 Nairobi, has been permitted to conduct research in Nairobi County

on the topic: THE EFFECT OF MERGERS AND ACQUISITIONS ON THE FINANCIAL PERFORMANCE OF LISTED PETROLEUM FIRMS IN KENYA: A CASE STUDY OF TOTAL KENYA PLC

for the period ending: 5th July, 2020

Applicant’s Signature

Director General
National Commission for Science, Technology & Innovation

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, mining and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

National Commission for Science, Technology and Innovation
P.O. Box 30623 - 00180, Nairobi, Kenya.
TEL: 020-440 7604, 0713 788787, 0735 404545
Email: dg@nacost.go.ke, registry@nacost.go.ke
Website: www.nacost.go.ke

Serial No. A 258003

CONDITIONS: see back page
APPENDIX G: Research Authorization Letters

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION
Telephone: +254-20-2213471, 2241349,3310571,2219420
Fax: +254-20-318245, 318249
Email: dg@nacost.go.ke
Website: www.nacost.go.ke
When replying please quote

Ref: No. NACOSTI/P/19/87404/31453

Date: 9th July 2019

Natalie Oyimbo Kokonya
United States International University
P.O. Box 14634- 00800
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “The effect of mergers and acquisitions on the financial performance of listed petroleum firms in Kenya: A case study of Total Kenya plc.” I am pleased to inform you that you have been authorized to undertake research in Nairobi County for the period ending 5th July, 2020.

You are advised to report to the County Commissioner, and the County Director of Education, Nairobi County before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit a copy of the final research report to the Commission within one year of completion. The soft copy of the same should be submitted through the Online Research Information System.

DR. MOSES RUGUTT, PhD, OGW.
DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County.
Ref: RCE/NRB/GEN/1/VOL. 1

DATE: 17th July, 2019

Natalie Oyimbbo Kokanya
United States International University
P.O. Box 14634-00800
NAIROBI

RE: RESEARCH AUTHORIZATION

We are in receipt of a letter from the National Commission for Science, Technology and Innovation regarding research authorization in Nairobi County on "The effect of mergers and acquisitions on the financial performance of listed petroleum firms in Kenya: A case study Total Kenya plc."

This office has no objection and authority is hereby granted for a period ending 5th July, 2020 as indicated in the request letter.

Kindly inform the Sub County Director of Education of the Sub County you intend to visit.

RHODA MWEI
FOR: REGIONAL DIRECTOR OF EDUCATION
NAIROBI

C.C.
Director General/CEO
National Commission for Science, Technology and Innovation
NAIROBI