THE EFFECT OF THE LEVEL OF DIVERSIFICATION ON CORPORATE LIQUIDITY FOR FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

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OCTOBER, 2014
DECLARATION

I declare that this project is my original work and has not been submitted for examination in any other university.

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Supervisor

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

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DEDICATION

I wish to dedicate this project to my family especially to my kids who encouraged me when writing this project at the same time expecting their needs to be met. Shekynah, I want a watch, Ayanna doesn’t want to be sorried for while Baraka is going to step on you again.
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<tr>
<td>CAMEL</td>
<td>Capital Asset Quality Management earnings and Liquidity Sensitivity</td>
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<td>CBK</td>
<td>Central Bank of Kenya</td>
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<td>ICM</td>
<td>Internal Capital Markets</td>
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<td>NSE</td>
<td>Nairobi Securities Exchange</td>
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<td>SMEs</td>
<td>Small Micro Enterprises</td>
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<td>SSA</td>
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ABSTRACT

This study sought to establish the effect of the level of diversification of unrelated businesses on corporate liquidity for firms listed at the Nairobi Securities Exchange. To achieve the objective of this study, a descriptive research design study was used to establish the effect of the level of diversification on corporate liquidity for firms listed at the Nairobi Securities Exchange. The target population of this study was listed firms that have diversified into other businesses and investment. Stratified sampling was used to select a sample which consisted of 30 companies listed in the Nairobi Securities Exchange that has diversified. This sample was arrived at after taking into consideration the availability of the listed companies’ financial statements and the similarities that is associated with each sector they fall into. Diversification of unrelated businesses was measured as the total assets a company has on another company (in case of minority or majority holding), the amount of investment held in other institutions securities market, money market, bond market. The study reviewed secondary data for a period of five years (2008-2013). A multiple regression model was used to analyze the data. From the results of the regression, it was revealed that there was an indirect relationship between corporate liquidity and diversification index with the level of interest while the relationship between corporate liquidity and government deficit showed an inverse relationship. The study recommends that all firms listed at Nairobi Securities Exchange to diversify their portfolios through buying securities in the same asset class that are not affected by the same variables. Furthermore, there are metrics that policymakers can use to measure these key economic dimensions and ways that they can promote their nation’s long-term economic health and stability. The limitations of this study were that the researcher had to conduct this study within a limited time frame and resources which constrained the scope and depth of the study A comparative study can be carried out to establish whether the level of diversification in other countries is able to impact on corporate liquidity of listed firms focusing more on commercial and services, financials and investments, agriculture, financials and investments.
CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Liquidity management is a concept that is receiving serious attention all over the world especially with the current financial situations and the state of the world economy. The concern of business owners and managers all over the world is to devise a strategy of managing their day to day operations in order to meet their obligations as they fall due and increase profitability and shareholder’s wealth. Liquidity management, in most cases, are considered from the perspective of working capital management as most of the indices used for measuring corporate liquidity are a function of the components of working capital (Khanna and Palepu, 1997). The importance of liquidity management as it affects corporate profitability in today’s business cannot be over emphasis. The crucial part in managing working capital is required maintaining its liquidity in day-to-day operation to ensure its smooth running and meets its obligation (Eljelly, 2004).

Corporate liquidity is the ability to convert an asset into cash in a short amount of time. Less liquid investments in addition to traditional publicly traded stocks and bonds may increase portfolio diversification of unrelated businesses. Large institutional investors such as university endowments and pension funds, as well as high-net-worth individuals, have long benefited from this diversification of unrelated businesses strategy (Keister, 2000). For an individual investor who may need quick access to cash from his or her investments, especially those earmarked for a specific near-term purpose, a higher degree of corporate liquidity makes sense. However, not
all investors require 100% of their investments qualify as highly liquid (Hoskisson, Johnson, Tihanyi and White, 2005).

The reasons for adding less liquid investments to a portfolio include the potential for diversification of unrelated businesses into alternative assets with lower correlation to stocks and bonds, longer-term approach across market cycles and investment strategy using institutional-type asset classes. The firm can place an investment on a spectrum according to its level of corporate liquidity, with cash at one end and less liquid alternative investments at the opposite end (Johnson, 1996).

1.1.1 Corporate Liquidity

Corporate liquidity refers to the degree to which a corporation’s assets or security that can be sold or bought in the market without affecting the asset's price. Liquidity is characterized by a high level of trading activity. It measures how much cash a company has and how easily it is able to pay its debt. Assets in any firm are categorized into various classes. Liquid assets such as cash, cash equivalents and marketable securities constitute liquid assets. Liquid assets constitute a significant portion of a firm’s total asset. Financial managers pay due attention to the measurement and management of corporate liquidity failure to which may lead to severe shortage of liquidity leading to inability to meet its short and medium term obligations as and when they become due hence financial distress (Dittmaret, 2003).

The optimal amount of liquidity is determined by a tradeoff between the low return earned on liquid assets and the benefit of minimizing the need for costly external financing. The optimal investment in liquidity increases in the cost of external
financing, the variance of the future cash flows, and the return on future investment opportunities, while it is decreasing in the return differentiate between the firms physical assets and the liquid assets (Owolabi and Obiakor, 2011).

In most cases investors demand a premium for securities that have a longer maturity period, this entail a high risk since most investors prefer to hold cash which is less risky. Liquidity preference theory indicates that when an investment is more liquid, then it is easier for an investor to easily sell it at its full value this is because interest rates are volatile in the short term as compared to the long-term (Yego, 2008). The premium on short versus medium term securities will be higher than the premium on medium against long-term securities (Raheman et al, 2007). The proponents of this theory note that most people value money for both transactionary motive and as a store measure of value (Masaku, 2010). Most people opt to save their finances to earn interest in order to spend it now as a precaution. Conversely, when the rates of interest increases the market will be willing to hold less money for these purposes in order to secure a profit (Bhunia, 2010).

1.1.2 Level of Diversification of Unrelated Businesses

Unrelated diversification is when a business adds new, or unrelated, product lines or markets. For example, the same phone company might decide to go into the television business or into the radio business. This is unrelated diversification whereby there is no direct fit with the existing business. The reason why a firm may want to engage in unrelated diversification is to achieve cost efficiencies. The driver for this is to mitigate losses and increase profits through obtaining a low risk investment, with high potential for return. Firms that adopt unrelated differentiation are able to expand their
operation into markets or products beyond current resources and capabilities. This strategy is also sometimes referred to as the conglomerate strategy (Chaneta, 2012).

The unrelated diversification seems to be applicable and meaningful in at least two cases: Firstly, if the parent company is able to provide different businesses with managerial knowledge and expertise that strengthens the individual business, it will be very feasible to diversify into different markets that will potentially increase parent company profits. Secondly, unrelated diversification might give a company the opportunity of increasing the strength of the economy of different markets, and to develop competencies that can be shared between different markets and products (Chang, 2004).

The rationale diversification of unrelated businesses is to mitigate the risks involved in investing in one line of business, strategic diversification of unrelated businesses provides a strategic fit to gain competitive advantage, and then use competitive advantage to achieve the desired shareholder value. The reasons for diversifying into unrelated businesses, hinge almost exclusively on opportunities for attractive financial gain. Attention shifts from formulating strategy for a single-business enterprise to formulating strategy for a diversified enterprise. When a firm is diversifying its portfolio, it attempts to maximize the portfolio expected return for a given amount of portfolio risk or equivalently minimize the risk for a given level of expected return by choosing the proportions of assets (Hoskisson, Johnson, Tihanyi and White, 2005).

In reference to modern portfolio theory, firms invest with the objective of selecting a collection of investments in assets that has a lower risk than the individual asset.
Through diversification of unrelated businesses firms are able to mitigate risks even if assets returns are not negatively correlated even if there is a positive correlation. A diversified firm is a collection of individual businesses but corporate strategy making is a bigger picture exercise than crafting strategy for a single-business company. A single-business enterprise, management only has to contend with one industrial environment and how to compete successfully in it. But in a diversified company, corporate managers have to craft a multi-business, multi-industry strategic action plan for a number of different business divisions competing in diverse industry environments (Teimet and Ochieng, 2011). Portfolio Diversification of unrelated businesses of any assets can be measured using the approach of integrating two polarities of quantifiable diversification of unrelated businesses, systematic diversification of unrelated businesses and idiosyncratic diversification of unrelated businesses. Using the outputs from this process the portfolio managers can better tune portfolio to maximize diversification of unrelated businesses and attain the optimal balance of risk, return and diversification of unrelated businesses (Hann, Ogneva and Ozbas, 2010).

Diversification of unrelated businesses on its part is a risk management technique that mixes a wide variety of investments within a portfolio. The rationale behind this technique contends that a portfolio of different kinds of investments will, on average, yield higher returns and pose a lower risk than any individual investment found within the portfolio. Such diversification of unrelated businesses requires resources which are mostly in form of cash and cash equivalent such are the liquidity that a company needs. Diversification of unrelated businesses strives to smooth out unsystematic risk events in a portfolio so that the positive performance of some investments will
neutralize the negative performance of others. Therefore, the benefits of diversification of unrelated businesses will hold only if the securities in the portfolio are not perfectly correlated (Colpan and Hikino, 2003).

1.1.3 Relationship between Level of Diversification of unrelated businesses and Corporate Liquidity

Diversification of unrelated businesses has a significant effect on the firm’s corporate liquidity; therefore it is important for the firm to consider the effect of corporate liquidity before making a decision to diversify its investments (Pelg, 2006). In a market with finite liquidity, both the benefits and the costs of diversification of unrelated businesses vary with the return and risk of the investment opportunities of the firm's divisions. Benefits accrue from a reduced liquidity discount in the stock price of the merged firm; this event occurs when shareholders anticipate less informed trading. (Chang, 2004). Diversified firms either exhibit inefficiencies in their allocation of internally generated funds, or that diversified firms suffer from poor capital allocations, due to agency problems (Rudolph, Johann and Helge, 2012).

Diversification of unrelated businesses also insulates corporate organizations from costs and rationing from external markets this increases the level of corporate liquidity of a firm. Diversification of unrelated businesses across various divisions within a firm leads to increased cash flow across divisions. When transfers across divisions are abundant, a corporate organization holds less cash. Increased transfers across business divisions leads to efficiency as cash is usually transferred to the divisions with good investment opportunities. The link between diversification of unrelated businesses and corporate liquidity is stronger in corporate organizational that are well governed. In these organizations, reduced cash holdings due to
diversification of unrelated businesses leads to efficiency and saves costs associated with cash holding. The impact of diversification of unrelated businesses on corporate liquidity is also evident during acquisitions. If there is low correlation between investment opportunities of the target and the acquirer, the latter will record reduced level of liquidity over time (Duchin, 2010).

The effects of diversification of unrelated businesses are heterogeneous across industries. That is, diversified firms might be valued at a discount in some industries, but trade at a premium in others (Becerra 2008). Several recent studies examine the value impact of diversification of unrelated businesses across the business cycle and conclude that corporate diversification of unrelated businesses becomes more efficient when external capital markets are relatively inefficient and when the various segments of a diversified firm would be financially constrained as single-segment firms (Hovakimian, 2011).

1.1.4 Nairobi Securities Exchange

The NSE is a securities market that has been characterized by humble beginnings and it has grown considerably over time. Ngugi and Njiru (2005) in their study stated that the NSE came into being in the 1920s when Kenya was a British colony. In 1954, the NSE was comprised as a voluntary organization of stockbrokers enrolled under the Societies Act. Trading of shares was restricted only to the resident of European community and Africans and Asians were not permitted to deal in securities. In 1963, Kenya became independent and Africans and Asians were permitted to deal in securities. In 1980, The Kenyan Government saw the need to design and implement policy transformation to promote the sustainability of economic growth with an efficient and steady financial system.
In August 2000, CFC Financial Services, the first licensed dealer on the NSE, started its operations. Because of the critical role in Kenyan economy and at large the East African Community most listed firms, this have shifted focus to diversification of unrelated businesses in order to mitigate their risks by investing in more than one business. The main objective of diversification of unrelated businesses by most firms is to increase their profits however, there are five corporate levels of diversification of unrelated businesses include: single business, dominant business, related diversification of unrelated businesses and unrelated diversification of unrelated businesses (Owolabi, Obiakor and Okwu, 2011).

Corporate liquidity plays a fundamental role in assisting the firm to meet its shorter and medium term obligations as and when they arise. This enables listed firms to manage working capital and optimize the surplus funds all in a rapidly changing regulatory environment. Diversification of unrelated businesses of firms has significantly reduced the amount corporate liquidity that most of these firms hold since more money is invested in different investments (Ngugi and Njiru, 2005). However there are a number of reasons why listed firms in Kenya diversify their portfolios.

Large firms have excess resources, capabilities, and core competencies that have multiple uses. Other listed firms experience diminishing growth prospects in present industry. Most medium sized firms diversify their portfolios as a way of cost saving opportunities in order to capture strategic fits and financial economies by spreading business risk leveraging their brand name. This has been attributed by the turbulent nature of the business environment that is characterized by risks and uncertainties.
(Hann, Ogneva and Ozbas, 2010). Through diversification of unrelated businesses firms are able to counter challenges of risks that might lead to financial losses as a result of relying on one line of business.

1.2 Research Problem

Corporate liquidity of listed firms determines the ability of the firm to meet its short term and long-term obligation as they fall due. Proper management of corporate liquidity enables firms listed by Nairobi Security Exchange firms to meet their financial obligations as and when they fall due. The payment obligations might include operating and financial expenses that are short term but maturing long term debt. The importance of corporate liquidity is that it enables most firms listed to be able to easily convert their assets into cash. Corporate liquidity is one of the most essential tools in policy decisions that management of firms has to make on a day to day basis. The decision made has great implications on the financial performance of the firm because it involves a tradeoff between costs and benefits of maintaining liquid cash. The significance of corporate liquidity of the firm includes its ability to take advantage of any unexpected profitable business opportunities (Subramaniam, Tang, Yue and Zhou, 2011).

Most firms that are listed in Nairobi securities exchange have shown a keen interest on diversification of unrelated businesses of their investment in order to boost their returns from different sources. Some Listed firms have diversified their portfolios into new asset classes to boost returns and reduce risk; the asset classes they are turning to are often illiquid (Ngugi, 2005).
A number of studies have been done globally in relation to diversification of unrelated businesses and corporate liquidity: Duchin (2007) investigated on the link between corporate liquidity and corporate diversification of unrelated businesses, the results of the study showed that there was a positive relationship between diversification of unrelated businesses and corporate liquidity. From a practical point of view, diversified US firms hold a large fraction of total corporate cash. In 2004, for example, diversified firms held approximately 70 percent of aggregate corporate cash. Other researchers (Hann, 2010; Ogneva and Ozbas (2010), carried out studies in to investigate the effect of diversification of unrelated businesses on corporate liquidity and it was revealed that there was an inverse relationship between level of liquidity and diversification of unrelated businesses of portfolios.

Local studies have been done in relationship to diversification of unrelated businesses and corporate liquidity: Wangi (2013) found that agent banking was highly useful as a diversifying strategy among banks as banks used agent banks to expand geographical coverage and promote their products and services because they save time and they are efficient. Koech (2013) found that there was a very weak correlation between liquidity and returns for the listed firms at the Nairobi Securities Exchange Liquidity does not ensure any reaction to the profits and other returns in the firms listed in the securities exchange. A study was conducted by Teimetet, Ochieng and Away (2011), it was found that corporate diversification of unrelated businesses has a negative impact on corporate liquidity among commercial banks.

From the above studies little has been done in relation to diversification of unrelated businesses and corporate liquidity, therefore this study attempts to answer the following research question: what is the effect of the levels of diversification of
unrelated businesses on corporate liquidity for firms listed at the Nairobi securities exchange?

1.3 Research Objective

To establish the effect of the level of diversification of unrelated businesses on corporate liquidity for firms listed at the Nairobi Securities Exchange.

1.4 Value of the Study

The findings of the research study would be of significance to many people including the following; Listed companies and by extension private companies will find the findings of this study very informative in their decisions of investments that leads to diversification of unrelated businesses. Firms will use this study to establish whether they will diversify or not. They will make diversification of unrelated businesses decisions depending on their cash holding levels.

Financial consultants will find this research important, as they will be able to offer informed advice on diversification of unrelated businesses to their clients. Private practitioners such as auditors and liquidity management consultants may use the study findings to advice companies on the timings of diversification of unrelated businesses and financial planning to avoid liquidity crisis.

The finding of this study may inform theory building. Scholars of finance, Corporate and strategic management may find this piece of work a valuable addition to literature. They will use the information from the study to find more gaps to research on.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
The chapter explores the literature that focuses on the area of corporate liquidity management practices and the number of business divisions or diversification of unrelated businesses of firms. The chapter reviews empirical studies that discuss the link between corporate liquidity and diversification of unrelated businesses of firms. It also reviews a theory that informs the discussion on corporate liquidity in firms.

2.2 Theoretical Framework
The section covers the theoretical basis of this study; it is informed by three theories namely: Irving Fisher's Theory of Investment, Liquidity Preference Theory and modern portfolio theory. Researchers and scholars have discussed these theories in relation to the level of diversification of unrelated businesses and corporate liquidity.

2.2.1 Irving Fisher's Theory of Investment
Fisher’s theory of capital and investment was introduced in his Nature of Capital and Income (1906) and Rate of Interest (Keen, 2012). Growth, although it has its clearest and most famous exposition in his Theory of Interest (Bradford, 2000). In his theory, Fisher assumed that all capital was circulating capital. In other words, all capital is used up in the production process, thus a stock of capital, K did not exist. Rather, all "capital" is, in fact, investment (Tobin, 1997). Given that Fisher's theory output is related not to capital but rather to investment, then we can posit a production function of the form, \( Y = \bar{\alpha} \cdot (N, I) \). Now, Fisher imposed the condition that investment in any
time period yields output only in the next period. For simplicity, let us assume a world with only two time periods, \( t = 1, 2 \) (Schumpeter, 1951).

Proponents of this theory argue that investment opportunity is the opportunity to shift from one such option or optimal income stream to another (Tobin, 1997). The concept of investment opportunity rests on that of an option. An option is any possible income stream open to an individual by utilizing his resources. When we compare these two optional income streams and either may be preferable to the other according as one rate of interest or another obtained the two options would stand on a par if the right intermediate rate were used for calculating the present values of the two options. This hypothetical rate of interest which is used in calculating the present worth of the two options compared will equalize them, or their differences, may be called the rate of return over cost and here after this name was generally be employed. This new magnitude (or factor) in our study plays the central role on the investment opportunity side of interest theory (Keen, 2012).

2.2.2 Liquidity Preference Theory

According to Panico and Gauti, (2008), liquidity preference theory intimates the idea that investors demand a premium for securities with longer maturities, which entail greater risk, because they would prefer to hold cash, which entails less risk. The more liquid an investment, the easier it is to sell quickly for its full value (Shanken, 1995). Because interest rates are more volatile in the short term, the premium on short versus medium-term securities will be greater than the premium on medium- versus long-term securities. In this connection we can usefully employ the ancient distinction between the use of money for the transaction of current business and its use as a store
of wealth. As regards the first of these two uses, it is obvious that up to a point it is worthwhile to sacrifice a certain amount of interest for the convenience of liquidity. But, given that the rate of interest is never negative, why should anyone prefer to hold his wealth in a form which yields little or no interest to holding it in a form which yields interest (Shanken, 1992).

The demand for money is an asset was theorized to depend on the interest foregone by not holding bonds. Interest rates, he argues, cannot be a reward for saving as such because, if a person hoards his savings in cash, keeping it under his mattress say, he will receive no interest, although he has nevertheless refrained from consuming all his current income. Instead of a reward for saving, interest, in the Keynesian analysis, is a reward for parting with liquidity. According to Keynes, demand for liquidity is determined by three motives namely, the transactions motive: people prefer to have liquidity to assure basic transactions, for their income is not constantly available (Ross, 1998).

The amount of liquidity demanded is determined by the level of income: the higher the income, the more money demanded for carrying out increased spending. The precautionary motive: people prefer to have liquidity in the case of social unexpected problems that need unusual costs. The amount of money demanded for this purpose increases as income increases. The third motive is the speculative motive; this motive indicates that people retain liquidity to speculate that bond prices will fall. When the interest rate decreases people demand more money to hold until the interest rate increases, which would drive down the price of an existing bond to keep its yield in line with the interest rate (Rosenberg, Reid and Lanstein, 2005).
2.2.3 Modern Portfolio Theory

The Markowitz theory exploited the low correlation between two assets and demonstrates that as long as the correlation between the two assets is low, the risk component of a portfolio would be less than the average of the risk of the individual assets (Goslings and Petri, 1991). Portfolio could be reduced by spreading the amount of funds available for investments into a variety of opportunities, each in a different risk class. Institutional investors have over the years achieved portfolio diversification of unrelated businesses using property and equity as their prime investments (Reddy, 2001).

Modern Portfolio Theory (MPT) approaches investing by examining the entire market and the whole economy. The theory is an alternative to the older method of analyzing each investment’s individual merits. When investors look at each investment’s individual merits, they’re analyzing one investment without worrying about the way different investments will perform relative to each other. On the other hand, MPT places a large emphasis on the correlation between investments (Findlay and Hamilton, 1979). Portfolio and investment theory suggests that investors should diversify their investment portfolio in order to reduce total risk at a given level of return. Markowitz (1952) developed a basic portfolio model that demonstrated how risk could be reduced within a portfolio by combining assets whose returns demonstrate less than perfect positive correlation.

Property investments were seen as low risk, long term and illiquid assets (Reddy, 2001). Property plays a significant role in investment portfolios as it is considered a secure income generating good capital growth investment. It is regarded as less
volatile investment than shares, providing a reliable hedge against inflation and offering diversification of unrelated businesses benefits. However, it suffers a shortfall because of its illiquidity factor (Friedman, 1970).

The proponents of MPT argued Property's high relative management costs are increased by a globally-scattered portfolio where no scale efficiencies can be obtained; there are additional costs in monitoring the local managing agents. Gordon (1991), as a result, the tendency would be to concentrate holdings on a small number of markets (and on larger units) thus sacrificing potential diversification of unrelated businesses gains. Market access may be problematic; particularly where the market capitalization is small in relation to the size of fund there may simply be no appropriately sized buildings available. Liquidity problems make it difficult to implement and actively manage a portfolio strategy (Brown, 1991).

2.3 Determinants of the Level of Corporate Liquidity

There various determinants of corporate liquidity that affects the firm namely: line of credit, liquidity index, the level of inflation, interest rates and government deficit.

2.3.1 Line of Credit

Line of credit is one of the key determinants of corporate liquidity; line of credit may be either secured or unsecured, it is an extended source of credit from a financial institution. It may take different forms for instance overdraft protection, demand loan, special purpose term loans, discounting, purchase of commercial bills (Chen and Mahajan, 2007). Line of credit is a source of funds that can be accessed from borrowers and interest earned is got when the money is withdrawn .In this case, the
borrower is required to pay an unused line fee which is mostly annualized percentage on the amount of money retained (Harford, Mansi and Maxwell, 2005).

2.3.2 Liquidity Index

Liquidity index is one of the determinants of corporate liquidity, the assets held by a firm the liquidity index will be measured using the amount of liquid assets cash and cash equivalent, receivables will be divided by the total assets held by the main company (Padachi, 2006). From the diversification of unrelated businesses data, the total assets (interest held) or investment held in other companies or businesses shall be divided by the total assets held by the main company business (Owolabi, Obiakor and Okwu, 2011).

This will indicate the degree of diversification of unrelated businesses hence forms a diversification of unrelated businesses index which is in form of a percentage; this will be provide a basis for determining the percentage of asset portfolio by a firm (Raheman and Nasr, 2007). Pelg (2006) argues that in order to measure if a portfolio is diversified enough, a technique is to push the assets correlation to 1.0 and compare the portfolio with the historical assets correlation and the portfolio with the assets correlation equal to 1.0 (Santalo and Becerra, 2008).

2.3.3 Level of Inflation

Inflation is another determinant of corporate liquidity, an increase in the level of inflation negatively impacts on corporate liquidity of a firm, this in return affects the level of diversification of unrelated businesses held by the firm. If the management of the firm is expecting high inflation in the near future, holding cash is costly and
management will reduce corporate liquidity (Chen and Mahajan, 2007). On the other hand, the cash held by the firm should increase if the management anticipates the economy will perform better in order to finance profitable projects in future (Hackbarth, Miao and Morrellec, 2005).

2.3.4 Interest Rates

Interest rates is a key determinant of corporate liquidity, if the management expects the interest rates to increase then it might decide to hold less cash and opt invest more in order take advantage of the expected higher returns. If the government incurs a deficit, this may signal a change in interest rates in the future. However, if the government deficit is high then the interest rates will increase and thus most firms will opt not to hold cash but invest in profitable investments hence affecting the firm’s corporate liquidity (Harvey, Lins and Roper, 2004).

2.3.5 Government Deficit

Government deficit is another determinant of corporate liquidity, an expected increase in government deficit signals a decline in GDP which leads to decrease in corporate liquidity due to the income effect (Hackbarth, Miao and Morrellec, 2005). The management will hold less cash due to rising government deficit. Thus, the management will hold less cash as a result of government deficit this negatively affects the corporate liquidity of the firm since the firm is not able to take advantage of profitable investments (Ferreira and Vilela, 2004).
2.4 Empirical Studies

Koech (2013) conducted a study to investigate on the link between liquidity and return of stock, a descriptive survey was carried out in all the listed firms at the Nairobi stock exchange, a regression model was used for data analysis, the results of the regression model showed a positive relationship between liquidity and return of stock at the Nairobi securities exchange. Mwangi (2013) conducted a study to establish the link between agency banking as a diversification of unrelated businesses strategy by commercial banks, a descriptive survey of all 43 commercial banks licensed under the Central bank of Kenya was conducted. The results of the study was done using a regression model, it was found that agent banking was highly useful as a diversifying strategy among banks as banks used agent banks to expand geographical coverage and promote their products and services because they save time and they are efficient.

Gitau (2012) carried out a study to establish the link between Liquidity and diversification of unrelated businesses of commercial banks in Kenya, a cross sectional survey of all commercial banks was carried out, data was analyzed through a regression model, the results of the study found that there was a significant positive correlation between corporate liquidity and diversification of unrelated businesses of asset portfolios in commercial banks in Kenya. Rudolph, Johann and Helge (2012) carried out a study to investigate on the relationship well-established forms of real estate investing (direct and listed), investors can also choose open-ended property funds (OPFs), which are considered a complementary real estate investment option. OPF fund managers generally provide daily liquidity, and these funds must maintain at least 5% liquidity. If liquidity falls below 5%, share redemptions will be
temporarily suspended, for a period of up to two years. During this time, investors can only sell shares on the secondary market (exchange), and are thus subject to significant liquidity risk. The objective of this paper is to examine the impact of OPFs as an investment vehicle on the risk and return profile. OPFs in principle have the same underlying as direct and listed real estate investments, but they are subject to a different regulatory regime.

This result holds independent of the holding period and whether in- or out-of-sample Monte Carlo portfolio simulations are used. However, these positive effects come at the cost of increased risk from temporary share redemption suspensions. During these periods, investors may have to accept an average 6% discount in the secondary market compared to the net asset value calculated by OPFs themselves. These discounts can go as high as 20% if investors fear that OPF management will not be able to ensure liquidity within the two-year time limit, and will have to “fire-sell” properties.

Wanja (2011) argues that though many studies on cash holding and diversification of unrelated businesses have been carried out in developed markets, very few studies if any have focused on the determinants of working capital management particularly in Kenya. Wanja (2011) in a survey of 205 SMEs and their financial statement found that companies with greater cash flow volatility had a high liquidity or cash holding trend compared to those with low volatility, which was meant to facilitate smooth operations in such firms. Wanja in the study found that companies with higher leverage tended to hold little cash, which was in accordance with the pecking order and other cash flow theories.
Teimet and Ochieng (2011) conducted a study to investigate on the relationship between diversification of unrelated businesses and financial performance of commercial banks in Kenya, a descriptive survey was conducted and analysis was done by use of a regression model, the result of the analysis established that there was an inverse correlation between Income Source Diversification of unrelated businesses and Financial Performance. A study was conducted by Subramaniam, Tang, Yue and Zhou (2011) to establish the relationship between firm structure and corporate cash holding in Shanghai China. A sample of 50 quoted Chinese banks was investigated. Data was analyzed using a regression model and the results of this study showed a positive correlation between firm structure and corporate cash holding.

Tong (2010) conducted a study on the effect of diversification of unrelated businesses on the value of corporate cash holdings on banks, a population of 125 banks was picked in Beijing, a descriptive survey of these banks was conducted and data was analyzed using a regression modality relationship between the two variables was tested and a strong positive relationship was established between firm diversification of unrelated businesses and the value of corporate cash holdings. Ann, Ogneva and Ozbas (2010), conducted a study on the relationship between corporate diversification of unrelated businesses and the cost of capital, a cross sectional survey was conducted in 67 banks in Europe, a multiple regression model was used for data analysis. The results for the analysis showed that there was a positive correlation between corporate diversification of unrelated businesses and cost capital.

Bates and Kathleen (2009) conducted a study to determine the link between corporate liquidity and diversification of unrelated businesses among firms in the US. During
the study, the researcher classified the firms into two categories; standalone firms and multi divisional firms. Diversification of unrelated businesses was measured directly by the number of different business segments or industries that the firm reported. The findings of this study indicated that diversified firms have imperfect correlation between investment opportunities and their cash flows hence hold low level of cash for precautionary purpose. The study revealed that multidivisional firms hold approximately half as much cash as that which is held by standalone firms and this difference can be attributed to diversification of unrelated businesses in investment opportunity and cash flow.

Duchin (2007), investigated on the relationship between cash holdings and corporate diversification of unrelated businesses in Netherlands’. This study involved 55 firms and a comparative study was conducted to establish whether there existed any relationship between corporate diversification of unrelated businesses and cash holdings. The key finding is that multi-division firms hold significantly less cash than standalone firms because they are diversified in their investment opportunities. Lower cross-divisional correlations in investment opportunity and higher correlations between investment opportunity and cash flow correspond to lower cash holdings, even after controlling for cash-flow volatility. The effects are strongest in financially constrained firms and in well-governed firms, and correspond to efficient fund transfers from low- to high-productivity divisions. Taken together, these results bring forth an efficient link between diversification of unrelated businesses in investment opportunity and corporate liquidity.
Berger and Eli (2005) conducted an investigation on the relationship between diversification of unrelated businesses’ effects and firm value, a descriptive survey of 100 commercial banks was conducted, with less attention having been devoted to the determinants of diversification of unrelated businesses. The study used probit and tobit model to examine the determinants of diversification of unrelated businesses of publicly listed firms in China from 1999 to 2005, especially explore whether internal control mechanisms can influence the level of diversification of unrelated businesses. The results indicate that there has been a growing trend toward industrial diversification of unrelated businesses for Chinese publicly listed firms; small or older firms have higher probability to engage in industrial diversification of unrelated businesses, while the level of diversification of unrelated businesses is positively related to managerial equity ownership and negatively related to ownership concentration.

2.5 Summary of the Literature Review

Most listed firms diversify their portfolios by investing in more than one line of business in order to mitigate risks and uncertainties in the contemporary business environment. The need to increase profits and shareholders wealth have drawn more focus on alternative means to expand and grow businesses through proper management of risks, this has been achieved through diversification of unrelated businesses and investments on profitable investments. Studies have been conducted locally and globally in relation to the level of diversification of unrelated businesses and corporate liquidity however, empirical evidence has shown that an inverse relationship exists between the level of diversification of unrelated businesses and corporate liquidity. This is supported by Bates and Kathleen (2009) who carried out a
study in the US in relation to corporate liquidity and diversification of unrelated businesses among firms. The study revealed that multidivisional firms hold approximately half as much cash as that which is held by standalone firms and this difference can be attributed to diversification of unrelated businesses in investment opportunity and cash flow. A local study by Wanja (2011) concluded that the level of diversification of unrelated businesses of the firm has an inverse relationship with corporate liquidity however little focus has been laid on listed firms since most studies have concentrated on commercial banks therefore, this study finds it necessary to determine the effect of the level of diversification of unrelated businesses on corporate liquidity for firms listed in the Nairobi Securities Exchange.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research method that was used in conducting the research. The layout of this chapter consisted of the research design, population and sampling procedures, data collection methods and data analysis.

3.2 Research Design

The study used a descriptive study aimed at highlighting a characteristic behavior on one variable because of another variable. A descriptive survey explains the relationship between variables (Kothari, 2005). This is because this study seeks to establish the effect of a company diversification of unrelated businesses and subsequent firm’s liquidity cash holdings. At the same time to what extent the effects go into influencing a firm’s liquidity or cash holdings. Secondary data was used for the study.

In this study, the independent variable in diversification of unrelated businesses index whereas the dependent variable is the liquidity index of the listed companies in the Nairobi Securities Exchange (NSE). The key assumption of these event study methodology is that the market must be efficient, whereby the effects of the event was reflected immediately in the financial performance of the company.
3.3 Population of the Study

In a research study, population refers to those who can provide the required information. A population therefore entails all the cases or individuals that fit specifically for being sources of the data required addressing the research problem. The target population is defined as that population to which a researcher wants to generalize the results of the study (Mugenda & Abel, 2003). The target population of this study was companies that have diversified into others businesses and investment listed in the Nairobi Securities Exchange. Currently there are 58 public companies. The list of these companies is attached in Appendix I.

3.4 Sample Technique

Stratified sampling was used to select a sample which consisted of 30 companies listed in the Nairobi Securities Exchange that has diversified. The companies were picked from the listed companies from each sector. This sample is arrived at after taking into consideration the availability of the listed companies’ financial statements and the similarities that is associated with each sector they fall into. Kothari (2005) explains that the 10% of the total population least acceptable sample that gives a true reflection of the entire population.

3.5 Data Collection Methods

The study used secondary data. Secondary data was obtained from financial statements of the sampled companies. Diversification of unrelated businesses was measured as the total assets a company has on another company (in case of minority or majority holding), the amount of investment held in other institutions securities market, money market, bond market. The study reviewed secondary data for a period of five years (2008-2013) depending on data availability and access.
3.6 Data Analysis

A multiple regression model was used to analyze the data. Diversification of unrelated businesses and liquidity indexes was calculated from the collected data. From the diversification of unrelated businesses data, the total assets (interest held) or investment held in other companies or businesses was divided by the total assets held by the main company business. This indicated the degree of diversification of unrelated businesses hence forms a diversification of unrelated businesses index which is in form of a percentage. The liquidity index was also calculated whereby the amount of liquid assets (cash and cash equivalent, receivables) was divided by the total assets held by the main company. This study sought to extend the model as advanced by Wanja (2011), the weakness of the model adopted by Wanja is that it did not focus on the determinants of diversification of unrelated businesses as indicated below:

3.6.1 The Analytical Model

The study used a multiple regression model to achieve the objective of this study as shown below:

\[ P_f = a + b_1x_1 + b_2x_2 + b_3x_3 + e \]

Where:

\( P_f \) = Corporate liquidity was measured liquid assets (cash and cash equivalent, receivables) was divided by the total assets held by the company.

\( x_1 \) = Diversification index of unrelated businesses was measured using the portfolio of assets invested in other firms divided by the total assets of the firm.
$X_2=$Level of interest rates measures the purchasing power of interest receipts it is calculated by adjusting the nominal rate charged to take inflation into account.

$X_3=$Government deficit was measured using the level of corporate liquidity of each firm expressed as a percentage of GDP

$\beta =$ Slope of the regression was used to measure the amount of the change in $Y$ associated with a unit change in $X$ or regression constants

$a =$Represents the minimum liquidity level that exists within a company regardless of the investment in other business or Regression constants

$\varepsilon =$Error term within a confidence interval of 5% was used.

### 3.6.2 Significance Testing

A t-statistic test was used to determine the significance of the independent variables on corporate liquidity among listed firms in Nairobi Securities Exchange. Coefficient of determination was used in indicating how well the data fit the statistical model. It is a statistic used in the context of statistical model whose main objective is to predict the outcome or testing the hypothesis. Analysis of variance was used to show whether there is any significance differences between the means of three or more independent variable or unrelated groups. The tests were performed at 95% level of confidence.
CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the analysis and findings of the study as set out in the research objective and research methodology. The study findings are presented below on the effect of the level of diversification of unrelated businesses on corporate liquidity for firms listed at the Nairobi Securities Exchange. The study used secondary data that was obtained from financial statements of the sampled companies from Nairobi Securities Exchange.

4.2 Response Rate

The study sought to collect data from 30 listed firms at the Nairobi Stock Exchange. The researcher managed to collect data from 30 listed firms in a period of five years between 2008 – 2013.

4.3 Descriptive Statistics

Descriptive statistics has been used to show the summary of the relationship of the two main study variables namely: diversification and corporate liquidity the study used descriptive statistics to establish this relationship as shown in below.
Table 4.1 Descriptive Analysis

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Y</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>30</td>
<td>.18</td>
<td>.15</td>
<td>1.3</td>
<td>.021</td>
</tr>
<tr>
<td>Maximum</td>
<td>30</td>
<td>.40</td>
<td>.34</td>
<td>12.1</td>
<td>.032</td>
</tr>
<tr>
<td>Median</td>
<td>30</td>
<td>.25</td>
<td>.26</td>
<td>10.1</td>
<td>.024</td>
</tr>
<tr>
<td>Mean</td>
<td>30</td>
<td>0.28</td>
<td>.23</td>
<td>8.0</td>
<td>.0253</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>30</td>
<td>.529</td>
<td>.479</td>
<td>2.828</td>
<td>.159</td>
</tr>
</tbody>
</table>

Y = the liquidity index denotes the level of liquidity held by listed firms.

X₁ = is the diversification index is the percentage of holding held by a firm in other firms.

X₂ = is the percentage purchasing power of interest receipts by listed firms.

X₃ = is the percentage the level of corporate liquidity of each firm expressed as a percentage of GDP.

In table 4.1 above, statistical analysis of corporate liquidity is shown in the table above. The maximum value of corporate liquidity index is 0.4 and the minimum value for corporate liquidity index is 0.18 while the average value of corporate liquidity index for the listed firms is 0.28. The standard deviation of corporate liquidity index was 0.529. The level of diversification index has a maximum value of 0.34 while its minimum value is exhibited as 1.3. Similarly; the average diversification index for the listed firms’ is 0.23 with a standard deviation of 0.479.
With respective to the nominal interest, the maximum value was found to be 12.1 while its minimum value is 1.3. The average nominal interest of the listed firms is 8.0 with a standard deviation of 2.828. In relation to government deficit, its maximum value as shown in the table above is 0.32 and the minimum value is 0.21. The results shows that the average for the industry as 0.253 with a standard deviation of 0.159.

4.4 Correlation Analysis

The study determined the relationship between the level of diversification and corporate liquidity to determine the strength of the relationship between the variables. Below are the findings indicted in the table 4.2 below:

Table 4.2 Correlation between the Study Variables

<table>
<thead>
<tr>
<th></th>
<th>Corporate Liquidity</th>
<th>Level of Diversification</th>
<th>Interest rate</th>
<th>Government Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Liquidity</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of Diversification</td>
<td>-.834</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest rate</td>
<td>-.754</td>
<td>.765</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Government Deficit</td>
<td>.544</td>
<td>-.699</td>
<td>-.635</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Research Findings

The strength of the association between the variables is defined by Pearson correlation scale where the values between 0.0 – 0.3 indicate that there is no correlation, 0.31 – 0.5 shows a weak correlation, 0.51 – 0.7 a moderate correlation and between 0.71 – 1.0 indicated that there is a strong correlation between the variables.

From the findings in the table 4.1 above, the results revealed that there is a strong negative relationship between the level of diversification and corporate liquidity. The findings further reveal that there is a strong negative relationship between the level of
diversification and interest rates with corporate liquidity as provided in the table above as follows: (R= -0.83 and R= -0.754) The significance values for this two variable is more than 5%.

Conversely, the results show a positive correlation between government deficit and corporate liquidity of listed firms. From the above table 4.1 the results are as follows (R=.544). Similarly it has a p-value =0.04 which is below 5% which shows that it is statistically significant.

**4.5 Regression Analysis and Hypothesis Testing**

Regression analysis is a statistical process for estimating the relationships among variables. To establish the relationship between independent variables and dependent variable, a multiple regression was conducted. The analysis applied the statistical package for social sciences (SPSS) to compute the measurements of the multiple regressions for the study. The findings were as shown in the table 4.1 below.

<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>.696(a)</td>
<td>.485</td>
<td>.757</td>
<td>.250</td>
</tr>
</tbody>
</table>

Source: Research Findings

To determine the percentage of variation in the dependent variable (Corporate liquidity) that is explained by the independent variables, the researcher used
coefficient of determination obtained from the model summary in table 4.1. Coefficient of determination which explains the extent to which changes in the dependent variable (Corporate liquidity) can be explained by the change in the independent variables or the percentage of variation in the dependent variable that is explained by all the three variables namely diversification index, level of interest rates and government deficit.

From the analysis, the independent variables (diversification index, level of interest rates and government deficit) in this study contributed to 48.5% of the variation in corporate liquidity as explained by adjusted R2 of 0.485%. The study conducted an analysis of variance, in order to test the significance of the model. The findings were as shown below:

### 4.5.1 Analysis of Variance

The study sought to establish the analysis of variance in order to test the impact of independent variables on the dependent variable in a regression analysis as provided in table 4.4 below.

**Table 4.4: ANOVA**

<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</td>
<td>Regression</td>
<td>4.057</td>
<td>3</td>
<td>1.3523</td>
<td>21.811</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>1.620</td>
<td>26</td>
<td>.062</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5.677</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source: Research Findings**

From the ANOVAs results, the probability value of 0.000(a) was obtained implying that the regression model was significant in predicting the relationship between the level of diversification and corporate liquidity as the independent variables used to
explain this relationship was more than $\alpha=0.05$. By use of the F-table, the F (5%, 3, 26) tabulated was 2.98 which was less than $F=21.811$ which as well indicated that the model was statistically significant.

**4.5.2 Test for Coefficients**

The study intended to test the coefficient to define the direction of the relationship between the level of diversification and corporate liquidity from the results as provided in the table 4.5 below:

**Table 4.5 Test for Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>0.130 0.02</td>
</tr>
<tr>
<td></td>
<td>Diversification index</td>
<td>-1.103 .415</td>
</tr>
<tr>
<td></td>
<td>Level of Interest rate</td>
<td>-0.214 .102</td>
</tr>
<tr>
<td></td>
<td>Government deficit</td>
<td>.413 .212</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.437 1.102 .004</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Corporate Liquidity

**Source: Research Findings**

The researcher conducted a regression analysis so as to determine how diversification index, level of Interest rate and government deficit (independent variables) contributes to corporate liquidity (independent variable). The following regression equation was obtained:

\[
CL = 0.130 - 1.103X_1 - 0.214X_2 + 0.413X_3
\]

From the regression model obtained above, holding all the other factors constant, the corporate liquidity is measured using liquid assets. A unit change in diversification index holding all the other factors constant will lead to a unit change in corporate
liquidity by -1.103. A unit change in the level of interest rates holding the other factors constant will lead to a unit change in corporate liquidity by -0.214 while a Unit change in government deficit holding all factors constant will lead to a unit change in corporate liquidity by 0.413. This implied that government deficit had the highest influence on the corporate liquidity followed by the level of interest rates and finally diversification index. The obtained regression equation further implied that there was an inverse relationship between the level of diversification and corporate liquidity.

The analysis was undertaken at 5% significance level. The criteria for comparing whether the predictor variables were significant in the model was through comparing the corresponding probability value obtained and α=0.05. If the probability value was less than α, then the predictor variable was significant but from the above analysis, diversification index the level of interest rates were insignificant in the model as their corresponding predictor variables were 0.117 and 0.112 respectively while the government deficit was significant in the model since its p-value=0.04 is below 5%.

4.6 Discussion of Research Findings

The results of the descriptive analysis revealed that, the maximum value of corporate liquidity is 0.4 and the minimum value for corporate liquidity is 0.18 and the average value for the listed firms is 0.28. The level of diversification index has a maximum value of 0.34 while its minimum value is exhibited as 1.3. With respective to the nominal interest, the maximum value was found to be 12.1. The average of the listed firms is 8.0 with a standard deviation of 2.828. In relation to government deficit, the results show the average for the industry as 0.253 with a standard deviation of 0.159.
The findings are in line with a study conducted by Mwangi (2013) who did a descriptive study of 43 commercial banks in Kenya. The results of this study found that agent banking was highly useful as a diversifying strategy among banks as banks used agent banks to expand geographical coverage and promote their products and services because they save time and they are efficient. Teimet and Ochieng (2011) did a descriptive survey and analysis was done by use of a regression model, the result of the analysis established that there was an inverse correlation between Income Source Diversification of unrelated businesses and Financial Performance.

The results reveal that there was an inverse relationship between diversification and corporate liquidity over the period of study as revealed by the findings in the figure 4.1 above. This was an indicator that as firms continues diversifying their portfolios in other firms their levels of liquidity declines significantly since more money is channeled in investments.

The regression analysis the results of the regressions shows that predictor variables were significant in the model was through comparing the corresponding probability value obtained and $\alpha=0.05$. Diversification index the level of interest rates were insignificant in the model as their corresponding predictor variables were 0.117 and 0.112 respectively while the government deficit was significant in the model since its p-value=0.04 was less than 5%. These findings are consistent with Teimet and Ochieng (2011) who investigated on the relationship between diversification of unrelated businesses and financial performance of commercial banks in Kenya and the result of the analysis established that there was an inverse correlation between Income Source Diversification of unrelated businesses and Financial Performance.
A study by Bates and Kathleen (2009) to determine the link between corporate liquidity and diversification of unrelated businesses among firms in the US found that diversified firms had imperfect correlation between investment opportunities and their cash flows hence hold low level of cash for precautionary purpose. This contravene a study was conducted by Subramaniam, Tang, Yue and Zhou (2011) to establish the relationship between firm structure and corporate cash holding in Shanghai China that showed a positive correlation between firm structure and corporate cash holding.

Duchin (2007) investigated on the relationship between cash holdings and corporate diversification of unrelated businesses in Netherlands and found that there was an inverse relationship between the level of diversification and corporate liquidity. Most of the empirical evidence concludes that there exists an inverse relationship between the level of diversification and corporate liquidity of firms. From the regression analysis, the results confirmed that there was an inverse relationship between the level of diversification and corporate liquidity of firms listed in the Nairobi Securities Exchange. This means that the hypothesis is confirmed.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussions drawn from the data findings analyzed and presented in the chapter four. The chapter is structured into summary of findings, conclusions, recommendations and areas for further research.

5.2 Summary of Findings

The main concerns were to establish the relationship between the level of diversification and corporate liquidity of firms listed at the Nairobi Securities Exchange. From the findings presented above in the figure 4.1, the study established that there was an inverse relationship between the level of diversification and corporate liquidity in the period of study (2009-2013). This was evident from the results indicated in figure 4.1, the findings revealed that corporate liquidity gradually decreased over the study period from 2009 to 2013 from the ratio of 0.4 to 0.18. This inverse relationship could be as a result of diversification by most of the listed firms.

With regard to government deficit, the study established that there was a positive relationship between government deficit and corporate liquidity. From the findings of the study in the figure 4.2 above, the findings of the study found that from year 2009, the level of government deficit stood at 0.031. Towards the end of year 2012 the level of government deficit increased rapidly to 0.21 in year 2013 by a margin of 0.1894. This is an indication that an increase in government deficit leads to a corresponding increase in corporate liquidity since the rates of borrowing are
increased this discourages borrowers from borrowing money to invest and thus firms hold more cash.

The study findings established that there was a strong inverse relationship between corporate liquidity and the independent variables under study and that they greatly affected the level of diversification. The study findings established that there was an indirect relationship between corporate liquidity and diversification index with the level of interest while the relationship between corporate liquidity and government deficit showed a direct relationship.

5.3 Conclusion

Findings from the results of regression indicate that all corporate liquidity measures reveal an inverse linear relationship with the level of diversification of firms listed at Nairobi Securities Exchange. Diversification index shows an inverse relationship with corporate liquidity. From the results of this analysis, listed firms that diversify their portfolios tend to hold less cash since more cash is channeled to investments.

The findings from the regression analysis showed that there was a strong inverse relationship between the level of interest rates and corporate liquidity. Therefore, the study further concludes that when the government spends more than it can raise from its taxes it borrow finances from domestic firms this leads to an increase in the cost of borrowing making firms to hold less cash.

The findings of this study further found that government deficit has an inverse relationship with corporate liquidity of the firm. When the government lacks sufficient funds for development from taxes, it borrows credit from local firms this leads to an
increase in interest rates and thus discouraging local firms from accessing credit since the cost of borrowing is high. Therefore, firms hold less cash this negatively affects the corporate liquidity of the firm.

The results of the regression analysis show that an inverse relationship exists between the two main variables of this study between the level of diversification and corporate liquidity of listed firms. These findings are supported by Wanja (2011) concluded that the level of diversification of unrelated businesses of the firm has an inverse relationship with corporate liquidity. The Findings these findings contradict with the study conducted by Berger and Eli (2005) who did an investigation on the relationship between diversification of unrelated businesses’ effects and firm value. The results of the study indicated that the level of diversification of unrelated businesses is positively related to managerial equity ownership and negatively related to ownership concentration.

The study finally concludes the diversification is an important tool in enhancing performance of firms. From the findings, it is evident that most listed firms that diversified their portfolios recorded better returns through investing in gainful ventures. These findings are in line with the recommendations of Colpan and Hikino (2003) who lends credence that diversification of unrelated businesses strives to smooth out unsystematic risk events in a portfolio so that the positive performance of some investments will neutralize the negative performance of others. Therefore, the benefits of diversification of unrelated businesses will hold only if the securities in the portfolio are not perfectly correlated.
5.4 Recommendations

The study recommends that all firms listed at Nairobi Securities Exchange to diversify their portfolios through buying securities in the same asset class that are not affected by the same variables. For instance, entertainment companies, utilities, grocery stores, and airlines are completely different businesses. Furthermore, there are metrics that policymakers can use to measure these key economic dimensions and ways that they can promote their nation’s long-term economic health and stability.

The study recommends that depending on the country's economy, one or more of these industries might tend to perform better than the others. If you build a portfolio that includes securities from a number of sectors, chances are that one or more would always be doing better than average. The study recommends that policy makers should set policies that encourage listed firms to diversify their portfolios. This is because diversification of unrelated businesses enables a nation to reduce its economic volatility and increase its real activity performance.

From the findings of the study, it is evident that listed firms that had largely invested in unrelated business had a significant growth in net assets, the study therefore recommends that the listed firms should diversify their portfolios in unrelated businesses in order to mitigate their financial losses and take advantage of profitable investments that promise high returns in future. The study further recommends that investors should consider lower cross-divisional correlations in investment opportunity and higher correlations between investment opportunities in order to achieve an efficient link between diversification and corporate liquidity since cash flow correspond to lower cash holdings, even after controlling for cash flow volatility.
These findings of this study provide a firm reminder to policymakers worldwide that one key to building a strong, sustainable economy is building a diversified economy one that is not overly dependent on a single commodity and that has a strong external as well as internal focus. The study finally recommends that policy makers should enact rules that encourage listed firms to diversify their portfolios in order to mitigate risks of financial losses by investing in unrelated businesses.

5.5 Limitations of the Study

The Nairobi Securities Exchange works under very strict confidentiality in order to secure any unauthorized access to information pertaining to the study variables. The annual financial statements are also prepared under the fundamental assumptions and concepts which are subjective and therefore not be uniformly applied especially in terms of provisions and estimates.

The financial statements are reaffirmed in the preceding years meaning that material misstatements of firms’ performance can create a window of opportunity for prior year’s adjustments and this may not be brought to the attention of the public. This means the pattern depicted may affect the relationship established.

This study was carried out within a limited time frame and resources which constrained the scope and depth of the study. This necessitated the adoption of a sample design hence these findings cannot be used to make generalizations on the effects of the level of diversification on corporate liquidity of all the firms listed at the Nairobi Securities Exchange.

The study utilized secondary data, which had already been obtained and in the public domain. Unlike the primary data which is first hand information, despite that the
secondary data was tested for precision and remained relevant since it reflected
current macroeconomic conditions and financial soundness in the republic of Kenya.

The study limited itself to three independent variables (Level of diversification,
interest rates and government deficit) and the dependent variable (Corporate
liquidity). It is important to note that there other macro-economic variables that affect
liquidity of firms. Therefore it would be beneficial to incorporate more independent
variables in future and determine whether the results are consistent.

5.6 Suggestions for Further Research

A comparative study can be carried out to establish whether the level of
diversification in other countries is able to impact on corporate liquidity of listed
firms focusing more on commercial and services, financials and investments,
agriculture, financials and investments. Thus enabling comparison with the Kenyan
experience and provide concrete facts upon which reliable conclusions can be made.

A study should be conducted to establish the relationship between the level of
diversification and corporate liquidity in other sectors in order to find out whether
there are areas of commonalities or unique factors. Another study can also be
conducted to test the relationship between corporate liquidity and the level of
diversification in other firms establish whether there are similarities with the findings
obtained from commercial and services, financials and investments, agriculture and
financials and investments.

The other limitation of this study is that it limited itself into a sample of 30 firms only,
therefore the findings, conclusions and recommendations drawn in this study cannot
be used as generalizations for all the 61 firms listed in Nairobi Securities exchange.
Therefore future researchers should conduct a study on the effect of the level of diversification and corporate liquidity of all firms listed in the Nairobi Securities exchange then findings can be compared concrete facts can be drawn.
REFERENCES


Investment Technology Group (2010). ITG and Instinet Sign Reciprocal Liquidity Agreement in Asia: *Hong Kong and Australia*.


APPENDICES

APPENDIX I: Data for Government deficits and interest rates

| Table 1: Key Macroeconomic Indicators Underpinning Vision-2030 and the Medium-Term Plan |
|-----------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| National accounts                             |         |         |         |         |         |         |
| Real GDP                                      | 5.7     | 6.2     | 8.3     | 9.1     | 9.7     | 10.0    |
| Corporate Liquidity                           | 0.18    | 0.19    | 0.2     | 0.21    | 0.2     | 0.21    |
| (In percent of GDP)                           |         |         |         |         |         |         |
| Standardized Government Deficit               | 0.032   | 0.031   | 0.0241  | 0.0231  | 0.0206  | .021    |
| Nominal Interest Rates                        | 4.6     | 11.9    | 1.3     | 12.1    | 10.1    |
APPENDIX II: List of Firms as at December 2013

1. Agriculture Sector
   a) Eaagads Limited
   b) Kakuzi Limited
   c) Kapchorua Tea Company Limited
   d) Rea Vipingo Plantations Limited
   e) Limuru Tea Company Limited
   f) Sasini Tea and Coffee Limited
   g) Williamson Tea Kenya Limited

2. Commercial and Services
   a. Accesskenya Group
   b. Car and General (Kenya) Limited
   c. CMC Holdings Limited
   d. Express Kenya Limited
   e. Kenya Airways Limited
   f. Marshalls (East Africa) Limited
   g. Nation Media Group Limited
   h. Safaricom Limited
   i. Scangroup Limited
   j. Standard Group Limited
   k. TPS (Tourism Promotion Services) Eastern Africa Limited (Serena Hotels)

3. Financials and Investments
   a) Uchumi Supermarkets Limited
   b) Barclays Bank of Kenya Limited
   c) CFC Stanbic Bank (Formerly CFC Bank)
   d) Diamond Trust Bank (Kenya) Limited
   e) Equity Bank Limited
   f) Housing Finance Company Limited
   g) Centum Investment Company (ICDCI) Limited
   h) Jubilee Holdings Limited
i) National Bank of Kenya Limited
j) Kenya Commercial Bank Limited
k) Kenya Reinsurance Corporation Limited
l) NIC Bank Limited
m) Olympia Capital Holdings Limited
n) Pan Africa Insurance Company Limited
o) Standard Chartered Bank Kenya Limited
p) Cooperative Bank of Kenya
q) British – American Investment Company (Kenya) Limited
r) I & M holding Limited
s) Liberty Insurance Group Limited
t) Trans – century Limited

4. Industrial and Allied Sector

a) Athi-River Mining Limited
b) Bamburi Cement Company Limited
c) British American Tobacco Kenya Limited
d) Crown-Berger Kenya Limited
e) East African Cables Limited
f) East African Portland Cement Company
g) East African Breweries Limited
h) Eveready East Africa Limited
i) Kenya Oil Company Limited
j) BOC Kenya Limited
k) The Kenya Power & Lighting Co. Limited
l) Kenya Electricity Generating Company (Kengen)
m) Total Kenya Limited
n) Mumias Sugar Company Limited
o) Sameer Africa Limited
p) Unga Group Limited
q) Carbacid Investment Limited
r) Kenya Orchards Limited
s) A Baumann Company Limited
## APPENDIX III: Data for diversification and corporate indexes

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