EFFECT OF CAPITAL STRUCTURE ON CASH HOLDINGS AMONG COMMERCIAL AND SERVICES FIRMS LISTED AT NAIROBI SECURITIES EXCHANGE

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DECLARATION

This research project is my own original work and has never been presented for a degree at any other university for examination.

Signature _____ Date _____

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This Research project has been presented for examination with my approval as the University Supervisor.

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DEDICATION

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ABBREVIATIONS

CBK	**:**	Central Bank of Kenya
CMA	**:**	Capital Market Authority
DFL	**:**	Degree of Financial Leverage
LTD	**:**	Limited
MM	**:**	Modigliani and Miller
NSE	**:**	Nairobi Securities Exchange
PLC	**:**	Public Limited Company
ROA	**:**	Return on Asset
ROE	**:**	Return on Equity
SPSS	**:**	Statistical Package for Social Science

ABSTRACT

The study aimed at establishing the connection between capital structure on cash holdings of commercial and services companies quoted at the NSE. This study used financial capital structure as the independent variable while a cash holding was used as the dependent variable. Firm size, profitability, and liquidity were used a control variables. The study targeted 11 commercial and services companies quoted at the NSE but obtained competed data from 10 quoted non-financial firms. The 10 firms generated a response rate of 91%, which was deemed sufficient to continue with the study. Various diagnostic tests such as the tests of normality, autocorrelation and multicollinearity tests were carried out. This research was founded upon three main capital structure theories which include; Agency theory, Pecking order theory and trade-off theory. Correlation analysis showed that debt equity ratio ($r=0.137$, $p=0.344$) had a positive but insignificant correlation with cash holdings. Size ($r=-0.040$, $p=0.781$) had a positive and insignificant correlation with cash holdings. Liquidity ($r=-0.035$, $p=0.811$) was negatively correlated with cash holdings. Profitability ($r=-0.101$, $p=0.486$) also had a negative but insignificant correlation with cash holdings. The regression summary statistics established that there was a strong linkage connection ($R= 0.794$) between cash holdings and the predictor variables. The study also established that the variables chosen explain 63.1% of the total variance in the cash ratio of commercial and services firms listed in Kenya. The ANOVA analysis exhibit that the regression model, is good predictor between dependent variable and independent variable. The coefficient results indicated that the association among debt ratio and cash holdings is positive but insignificant. The results also show that the connection between firm size and cash holdings is positive and significant. Finally, the results show that the connection among firm liquidity, profitability and cash holdings is negative but only firm liquidity is significant.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The choice of funding is crucial for every firm since an ideal structure of capital between equity and debt influences not only the firm's value, but also the cash holdings for funding of day to day business activities. Cash holding must be availed for the business to meet its working capital requirement and acquire the required fixed assets. The firm's capital structure decision is critical in every aspect of fixed asset investment as it affects the company's profitability (Obiero, 2016). The achievement or disappointment of an enterprise is significantly dictated by obligation financing. Thus, executives of a company got the opportunity to be cautious while settling on monetary choices (Kariuki, 2018).

Free cashflow theory states that if the firm's FCF happen to be in surplus of cash required for the projects exhibiting a positive NPV, it offers the executives an opportunity to benefit themselves (Jensen, 1986). Tradeoff theory argues that the main benefit of debt financingis tax savings while the costs associated with debt financing are the agency and potential bankruptcy costs (Kraus & Litzenberger, 1973). The Peckingorder theory was states that managers are in favor of internalfinancing as compared to external, and where internal fundsare insufficient, debt financing is given first priority to equity financing (Myers & Majluf, 1984).

The listed commercial and services firms are acquiring debts in order to fund their operations and expansion plans. The amassing of debt financing informs the firm's capital structure. Financing of operations in such a sector is very critical because unlike

other sectors like manufacturing, the commercial and services sector has to be closer to the customers in order to be in business since their delivery mode is personal in nature. This means that opening of regional stores and regional distribution points for most firms in the sector is inevitable. Given such endeavors require substantive cash holdings for expansions and subsequent operations; capital structure is increasingly sought after by these firms (Sifuna, 2018).

1.1.1 Capital Structure

Capital structureis the judicious mix of retained earnings, debts and equities used in finance investments in the company. It is the optimal level of debts and equities that maximize a firm's value while minimizing costs of capital (Adesina at al., 2015). A company's capitalstructure is very essential since it shows the firm's ability tomeet the stakeholders' needs. It explains the techniques used by a company in financing its operations and investment (Abor, 2005). It is a decision of how much debts and equities to use by the company to finance investments. Capital structure decisions are complex since they affect the overall operation of the business and the wealth of shareholders (Barakat, 2014).

Capital structure has both merits and demerits in the growth of companies and expansion of the economy. The choice involving debt and equity capital is a significant financial decision making facing firms. Equity refers to funding that is availed by the owners of the business for business. The combination of debt and equity provides an optimal capital hence maximizing firm value (Equity value plus debt value) or minimizes cost of capital weighted average (Pandey, 2002). On the other hand debt finance may take different forms such as borrowing from financial institutions like listed firms or from issuing

bonds, where all attract a return that is fixed. Jibran et al (2012) found that debt offers business enterprises a tax shield; hence firms are motivated to borrow more to reap maximum tax benefits which translate to higher profits. But, abnormal debt levels may force a firm into bankruptcy hence; managers should be keen to address risk factors, for instance, high debt-equity ratio which implies that a firm's bankruptcy risk is high (Kuria, 2010)

Debt ratio is used in measuring structure of capital . The debt ratio compares the total debt against the totalassets of a firm and is used to measure capital structure of a firm. If the debt ratio is low, it means that the firm relies less on borrowings and other forms of debt while a high ratio means a firm heavily relies on debt. Despite this measure, the most preferred method used to measure capitalstructure is the debt to equity ratio. This method is preferred since it exclusively addresses the constitutes of capital structure (Abor, 2005).

1.1.2 Cash Holdings

Gill andShah (2012) described cash holding as readily available cash that is invested in assets, distributed to investors in dividend form. In corporate cash holding is viewed as the cash or cash equivalentsthat can be easily converted to cash for corporations. Acharya et al 2007 states that cash holding is considered in terms of assets that have the highest total assets (TA) liquidity and is easily used to pay expenses. Vietnam standards for accounting and rules on recognizing financial statements cash holding is established as cash at bank, cash at hand and cash equivalents and cash items in the balance sheet.

The firms having cash holdings that are high have an advantage of increased opportunities for investment without restrictions on capital, they ensure adequacy in capital for opportunities that are unplanned and planned for such as expansion of business, financial crisis market opportunities, unexpected information bringing a stock down and business opportunities in real estate (Ogindipe & Ajao, 2012). Cash holdings availability allows facilitates taking advantage of the situations. Firms may make investment deals that are profitable and have positive effects on growth. Otherwise cash holdings decisions should be sound, logical and thorough such as to avoid negative effects of too much holding of cash (Elkinawy & Stater, 2007).

Past research on cash holdings have proposed similar discussions such as the static trade-off model of liquid assets as advanced by Miler and Orr (1966).States firms balance the marginal holding cash cost that would be an opportunity cost in holding non-interest bearing money against benefits of cash holding, mainly argued as protecting future investments from being prevented due to shortages in cash. The cash that is optimal can be set at the intercept of benefit and marginal cost. This is derived from existence of value that is optimum in cash holding such that cash policy can affect firm value (Miller & Orr.1966 as cited in Tiago & Joao 2014).furthermore with a financial market as such, its curious to assess cash policies and financing effects on firm value

1.1.3 Capital Structure and Cash Holdings

The controversy of optimal cash holding has been of great concern to the finance literature for many past decades ever since it was started. Maximizing shareholders wealth concept also argues that firms make use of the optimal debt mix to equity financing which fulfill the ultimate aims and objectives of the company. Debt finance results to benefits such as tax shield and the diminution of free cash flow problems by enhancing managerial behavior while the expenses of debt financing include agency expenses and bankruptcy cost. (Fama & French, 2002). On the other hand, the inability to meet such financial commitments may result in loss of collateralized asset or even bankruptcy (Bichsel & Blum, 2005).

Poor financing options can result in the collapse of a company, and at same time influence the valuation of a firm's securities in the securities market. Too much debt however becomes risky to the company. This is because its increases the risk perceptions of shareholders while raising financial costs in terms of interest and principal amount advanced at a specified terms. A company with too much debt is likely to default on repayment of the interest. This would ultimately result into bankruptcy proceedings and financial distress (Vatavu, 2015). Thus, this reveals how significant financing decisions are as they can define the going concern of a firm (Abubakar, 2015).

Amahalu et al., (2017) established that cash holdings are positively and statistically related. D'Mello et al. (2008) contended that monetary influence and money possessions are interrelated and every choice for each factor as a reason for choices for the other factor. In this point, the assurance of the measure of money included intimately with deciding monetary influence. This point was likewise created by Acharya et al. (2007)

and presumed that the degree of budgetary influence has the negative impact to the money property. According to Mujahid and Akhtar (2014) financial leverage brings about serious impacts on macroeconomic elements such as interest rates, pricing levels, securities market development and economic growth.

1.1.4 Commercial and Services Firms Listed at Nairobi Securities Exchange

NSE is a body corporate established in the Companies Act (CAP 486) of the Kenyan law and comprises of all licensed stock brokers. The NSE was privatized in 1988 when government of Kenya sold 20% of its holdings. The NSE market is structured in a way that its operations are carried out through Central Depository & Settlement Corporation. CMA of Kenya is the main regulator of all firms listed where the regulator ensures compliance of the listed companies (NSE, 2018).

According to NSE (2018) companies listed are categorised into fourteen economic sectors; Commercial and Services, Automobiles and Accessories, Agricultural, Telecommunication andTechnology, Banking, Real EstateInvestment Trust, Construction and Associations andPetroleum, Investment servicesand commercial and service firms. Commercial and service sector refers to a category of enterprises that provide services to commercial and retail customers. Some of the businesses listed under this category include Nationmedia group, Express LTD, Sameer Africa PLC, Standard Groupltd, Kenya Airways, TPS EasternAfrica (serena), Scangroup LTD, Longhorn Publishers, Atlantas Development, Deacons(East Africa) PLC and NairobiBusiness Ventures LTD

Services and commercial firms that manage capital structure efficiently aims to ensure an optimum balance between profitability and risk. Recent activities by these firms indicate

their awareness on role of structureof capital onperformance of the firm. To increase their profitability, commercial and services firms should efficiently manage their capital structure components in order to minimize costs and maximize profits in their operations. Debt financing decisions engage in a fundamental role in firm strategy with a view to maximize shareholder's wealth in services and commercial listed firms (Muchugia, 2015).

1.2 Research Problem

Past research on cash holdings have proposed similar discussions such as the static trade-off model of liquid assets as advanced by Miler and Orr (1966).States firms balance the marginal holding cash cost that would be an opportunity cost in holding non-interest bearing money against benefits of cash holding, mainly argued as protecting future investments from being prevented due to shortages in cash. The cash that is optimal can be set at the intercept of benefit and marginal cost. This is derived from existence of value that is optimum in holdings of cash such that cash policy can affect firm value. Otherwise, cash holdings pecking order should produce similar patterns as leverage, hence no level as target for optimum cash, as the cash buffers investment needs and retained earnings.(Ferreira & Vilela,2004).

Services and commercial companies listed in the NSE have embarked on massive use of debt to finance its capital structure with expectation of increasing their financial performances. Debt finance offers an opportunity for the firm to increase its performance by facilitating acquisition of the productive assets (Anyanzwa, 2015). Despite the adoption of optimal cash holdings, most Commercial and Services firms listed on NSE have successively recorded losses in their financial performance due to high borrowing.

Uchumi supermarket faced in recent times financial distress majorly due to not having sufficient cash that could cover short-term period cash needs(Gichaiya and Ishmail,2014).The outcomes are delayed salaries payment and delayed short-term liabilities clearing and rising costs of interest in the firms as a result of short-term loans increase. This has affected their ability to efficiently carry out operations, expand in other regions and their relationship with creditors because of low liquidity positions. Most of these firms are under risk of bankruptcy and pressure from creditors who demand to be paid their dues. If no intervention is put in place, the going concern assumptions and principles of these firms is threatened (Ahmed, 2013).

A number of studies have assessed a connection between cash holding and capital structure in different contexts. Globally, Khan et al., (2019) found that that firm size and structure negatively affects significantly on firms' cash holdings. Nguyen and Le Minh (2017) found out a negative link between both short and debt that is long-term with cash holdings, whereas cash holding (ICR) had positive association for firm value. Amahalu et al., (2017) found that cashholdings are positively and statistically related. Caldeira and

Locally, Sifuna (2018) established that debt ratio and profitability produced positive statistically significant results while liquidity and firm size produced negative statistically insignificant results on stock return. Chepkwony (2018) established that capital structure positively affect ROA. Makworo (2018) revealed a relationship that is positive between capital structure and cash holdings. Hakima (2017) that liquidity and ratio of debt had a si positive significant relationship with financial performance. The relationship between firm size and ROA was negatively insignificant.

Lack of consensus on empirical studies relating to leverage and cash holdings and disagreement among important theories of capital structure is a reason enough to do further research. Also most of studies done in Kenya have concentrated on capital structure and financial performance relationship, making it impossible to give a convincing outcome and henceforth the need to do this study. Therefore this study seeks to add knowledge on the topic of the study and attempts to give an explanation to the question, what are effects of capital structure on cash holdings of commercial and services firms listed at the NSE?

1.3 Research Objective

To establish the effect of capital structure on cash holdings among commercial and services firms listed at Nairobi Securities Exchange.

1.4 Value of the Study

The findings of the study benefits industry practitioners involved in making financing decisions by affording them a vital reference point on the need by corporations to determine and maintain optimal financing framework necessary to improve financial performance. This could be achieved by identifying specific industry- based debt thresholds that would ensure that firms are not unnecessarily exposed to risk of financial failure that results to in adequate cash to support day to day operations.

The findings of this study are an important reference source for researchers, scholars and students who might be interested in undertaking research in this field. Significance of this study to the scholars stems from it being capable of helping ascertain research gap to guide them when carrying out further studies in this field. Identification of research gap is

critical in ensuring the field is enriched with knowledge depth as opposed to quantity of research works with limited depth.

The research findings w benefits current and potential investors of listed service and commercial firms, in understanding the impact of leverage level on value of the firm and make informed decisions before venturing into any investment. The study also benefits the managers of service and commercial firms in Kenya, in making best choice of cash holdings decision that may enhance firms' performance and maximize the wealth of stakeholders.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section presents the theoreticalliterature review and the determinants of cashholdings. Empirical literature from international and local studies, conceptual framework and summary based on the review is also discussed.

2.2 Theoretical Review

This research was founded upon three main capital structure theories which include; Agency theory, Peckingorder and tradeoff theory.

2.2.1 Free Cash Flows Theory

Jensen In 1986, a financial economist Michael Jensen came up with a theory of free cash flow. The theory indicates that in a case where a company's FCF is higher than what the firm requires for the projects with positive NPV, the executives will be faced with an opportunity to create an advantage for themselves. Jensen held a position that if a firm has spare cash; the executives may take on board business ventures with negative NPV with an intention of benefiting from the increase in size of the firm. FCF lures executives to enlarge the coverage of processes and the size of the firm, thus swelling executives' mandate and individual's remuneration. This is achieved by using the free funds in developments which possess negative NPVs. Thus, by raising the amount of dividend paid, FCF under executives control can be reduced and inhibit them from using the resources to invest in unbeneficial ventures. Investing in unprofitable projects goes against the principal aim of managers and directors, which is to enhance the

shareholders‟ value. By lowering the level of FCF, it may result in lower agency costs (Jensen and Michael, 1996).

In corroborating with the notion that dividend pay-out decrease FCF existing to follow their personal opportunistic ingestion and unprofitable investments, Donaldson (1997), contends that executives of companies with FCFs have a tendency to misemploy cash by taking unnecessary incentives or by undertaking unbeneficial investments. It is most probable that executives will utilize FCF to undertake investments that will result in an expansion in the size of the entity, rather than to paying dividends to owners or repurchase shares. Free cash flow theory is important in this study as it helps in understanding why managers are motivated to spend more in capital expenditure rather than giving out cash in form of dividends (Hansen, 1999).

2.2.2 Trade-off Theory

According to Kraus and Litzenberger (1973) the trade-off theory is applied in a situation where the firm works towards striking a balance between holding cash at given optimal level and the actual cost of the debt. Thus, a firm decides how much cash to hold based on gain or losses achieved by holding cash to given level. Companies will use debt but will be cautious of any risks that could come due to bankruptcy. Therefore, a firm determines its optimal financial mix through harmonizing the benefits of external financing (tax shield) and costs of holding cash financing (insolvency costs) and, the consequential agency expenses relating to equity verses agency costs relating to cash holdings (Jensen & Meckling, 1976).

However various scholars have criticized the trade-off theory. According to Luigi and Sorin (2009), trade-off theory was postulated after the deliberations over the MM irrelevance theorem when corporatation tax was added on the theory this created debt benefits in that it was a tax shield implying a 100% debt financing. Companies with high returns with tangible assets will use more debt than firms with low returns and consequently risky assets (Sheikh & Wang, 2011). The implication of this theory is that some of the firms may end up undertaking projects that do not have positive net present value because some of the securities to be issued may be mispriced giving rise to adverse selection costs. The choice of financing that a firm selects can reduce the adverse selection costs hence capital structure is vital in asymmetric information (Kemsley & Nissim). The theory is relevant to this study since its argument regarding variation in structure of capital of firms is evident in the structure of capital of service and commercial firms quoted.

2.2.3 Pecking Order Theory

This theory communicates that associations will lean toward inside assets sourcing rather than outer store sourcing (Myers and Majluf, 1984). It acknowledges that obligation proportion isn't supported by firms rather they lean toward outside wellsprings of assets of benefits when interior assets are inadequate. As such, there is no ideal predetermined combination of internal and external financing which can optimize a firm’s value. This theory argues that a firm ought to follow a given order when utilizing financing options so as to minimize on financing costs. It proposes that a firm needs to foremost utilize retained earnings, debt financing should be the second option and lastly, a firm can raise equity if need be. The theory capitalizes on limitation of the tradeoff theory of ignoring

information asymmetry. Due to this information asymmetry, the theory suggests that there exists conflict between insiders and outsiders in an organization. In addition to information asymmetry, the theory also considers signaling effect (Kraus and Litzenberger, 1973).

Just like the MM hypothesis, the theory also assumes existence of a perfect market. The theory assumes managers will be obliged to deal in the best interest of the investors since they know more about the company future growth opportunities (Tale, 2014). Also, it is assumed information asymmetry exists between them. This case may not be realistic in practice as it also ignores the problems that may occur when a firm's managers get more comfortable with the companies financials and become indiscipline (Kishore, 2009). The theory is significant to this study because firms to favour the argument of pecking order theory, because this firms maximizes on internal sources available(cash holdings) to fund their operations before seeking external funds.

2.3 Empirical Review

Several empirical studies, both international and local back the relationship between capitalstructure and cashholdings. However, these studies' findings are inconsistent because they have mixed results. Amahalu and Bwatrice (2017) did a study of insurance firms in Nigeria Stock Exchange to determine the outcome of cash holdings on ROA. Through Ex-post factor research design the study targeted 22 firms that had been actively trading for the last 5 years (2010-2015). Data obtained was from financial statements of each firm. Outcome indicated the structure of capital (leverage) had a significant positive effect on firms' ROA.

Khan et al., (2019) established the impacts of firm structure on corporates cashholdings of non-financialfirms that are listed on Karachistock exchange. The research study used secondary data. Exploratory research design methodology was used covering a 7 years period, 2006- 2013. Both independent and dependent variable data collected was tested using unit root test, multicollinearity, normality and hausman test, analysed on a multiple regression, correlation analysis and descriptive statistics on SPSS. That research found that firm structures and firm size have negative effects significantly on cash holdings of a firm. This study presents conceptual knowledge gap since the focus relation between financial leverage and stockreturn. This research therefore will link financial leverage and firm value.

Sifuna (2018) did a research on effects of capitalstructure on stock returns of commercial and service firmslisted at the NSE covering listed firms under the service and commercial sector of the NSE and a five year period data was analyzed; from 2013 to 2017. The study used a descriptive design for research using panel data. Data that is secondary was obtained fromaudited financial statement of the firms sampled. The study revealed that debt ratio and profitability produced positive statistically significant results while liquidity and firm size produced negative statistically insignificant results. The study presents conceptual knowledge gap since the focus is on capital structure and stock returns. This study therefore focused on structure of capital relationship and cash holdings of service and commercial firms listed at NSE.

Chepkwony (2018) did a study to ascertain structure of capital effects on financial performance of commercial and service firms quoted at the NSE. The population for the study was all the 12commercial and service offering companies quoted at the NSE.

Secondary data was collected (January 2013 to December 2017) annually. The cross-sectional research configuration was utilized for the exploration and the connection between factors decided utilizing different direct relapse examination. Information examination was finished utilizing the SPSS programming. The examination set up capital structure effectsly affects ROA. The examination presents calculated information hole since the attention is on capital structure and ROA. This exploration along these lines focused on connection between capital structure and money possessions.

Hakima (2017) researched on effects of capital structure on the financial performance of listed insurance firms at then NSE. The study used a descriptive research design. The population of the study was 6 listed insurance firms. Data collection was from reports released annually and financial statements of the quoted firms for period covering 2011-2016. Data analysis was through correlation analysis and multiple regression models. The finding indicated that liquidity and ratio of debt had a positive significant linkage with financial performance. The link between firm size and return on assets was negatively insignificant. The study creates a conceptual research gap which the current study seeks to fill because it focused on capital structure.

Nguyen and Le Minh (2017) researched on the how structure of capital and cash holdings impacted the firms value of listed Non-financial firms at Ho Chi Minh Stocks Exchange. In a period of 5 years since 2009 to 2014. 105 companies were selected for the study. Ex-post facto research design was applied in study. The study employed secondary data which was obtained from the financial statements of the 105 firms quoted at the Ho Chi Minh Stock Exchange Pearson correlation; descriptive statistics and regression were applied in the study. The study indicated a negative link between both short and long

term debt with cash holdings, whereas cash holdings (ICR) did indicate an association with value of a firm that was positive.

Caldeira and Loncan (2013) researched on effects of cash holdings on firms value of firms quoted in Brazil. The population under study was 288 firms listed from 2002 to 2010. The study used a descriptive research design. Data analysis was done using multiple regression model where relationship of independent variables (liquidity, firm size, cash holdings, long term andshort term and total debt anddependent variables (firm value) was shown. The results revealed a negative association of cash holdings, bank size, liquidity and short-term debt on firm value while, long-term debts showed a link positively on firms value. The research presents conceptual knowledge gap since the focus is on cash holdings and firmvalue. The study therefore focused on relationship between capitalstructure and cash holdings.

Mohohlo (2013) established the effect of capitalstructure on valueof firms quoted at the Johannesburg bourse. The researcherhad a sample size of 65 firms listed at the Johannesburg bourse but firms that are financial. The exclusion of financial firms was informed by South Africa's regulations which dictate such firms' capital structure. Secondary data was collected through Bloomberg for the years 2002 to 2011 and studied. The study presents conceptual knowledge gap since the focus is on capital structure and firms value. This study therefore focused on linkage in structure of capital andcash holdingsof service and commercial firms listed at NSE.

2.4 Determinants of Cash Holdings

The level of cash holdings is determined by both the internal and external factors. Each firm faces specific internal factors while external factors are general and result from prevailing industrial and macroeconomic conditions. Some of the factors affecting cash holdings include; Capital Structure, Firm Liquidity, Firm Profitability and Firm Size

2.4.1 Capital Structure

The capital structure gives the mix of an association's wellsprings of account which incorporate value and obligation. It gives a structure of how a firm funds its benefits either by obligation (long haul or present moment), value (normal or liked) or a half and half of the two. Capital structure is significant in clarifying how an association funds its development and activities by utilization of different wellsprings of assets. The association's proprietorship structure is a blend of its liabilities and it gives a mix of current liabilities, for instance, lenders and bank overdrafts and noncurrent liabilities, for instance, standard and inclination shares, debentures, convertible advances, banks credits (Saad, 2010).

2.4.2 Firm Liquidity

Liquidity in firms is the capability of firms to convert its assets into cash. Firms with high liquidity are able to leverage on the opportunities that will yield high returns and at the same time protect the firm from going bankrupt during financial distress times. With the pecking order theory, liquidity reserves are easily created from profits available as firms opt for funds generated internally than externally. Firms won't be required to look for outer assets if its benefits they have are fluid enough to fund the different ventures in the

firm. Liquidity of a firm is estimated utilizing the present proportion or speedy proportion. It brings out the capacity of a firm to meet its obligations that are immediate using the current assets available. A good current ratio indicates that a firm is capable of paying up its obligations using current assets (Mutegi, 2016).

2.4.3 Firm Size

The size of a firm can be determined either through their capital base, market share or area of operational coverage like number of branches. Firm size has the ability to influence its investment decisions and as such, larger firms use their economies of scale in operations for investment in several sectors of the economy in order to maximize revenue and reduce costs. This is eventually impacts positively on firm's performance. Empirical evidence supports the link of positive association between the expenses of liquidation as a component of the estimation of the firm value. Rajan and Zingales (1995) established structure of capital is positivelyrelated to size of thecompany as seen by survey of all the G-7 countries, with exception of Germany, which exhibited a negative association. Okiro, Aduda & Omoro (2015) from this study revealed that firm size was positively associated with capital structure , however this association did not hold when short term debt only were considered.

2.4.4 Firm Profitability

Profitability refers to the ability of a firm to generate income and avoid loses. Profitability of firms may influence cash holdings level. A profitable firm uses less debt than unprofitable firm as urgued by Kemsley and Nissim (2002). Due to the fact that when a firm is making huge profits, it finances its operations using internal funds and it

will only opt to use external finds when there is need for additional finds. The level of profitability of a firm has an inverse effect on debt ratio which agrees on pecking order theory. Rationally managers and owners of small scale firms prefer to manage their firms. Therefore there are less chances of excessive investment. Majority of these firms do not support debt financing but instead opt to use internal financing for example use retained earnings other than external sources of financing business operations.

In contrast, Omondi (1996) in his research found out that Kenyans firms with high profits tend to borrow more compared to firms with less profits due to the reason that huge profits act as an incentive to a firm to invest more and also act as a security borrow more for business expansion. Therefore this indicates that most firms contradict with pecking order theory while making decision on the appropriate source of financing. However

2.5 Conceptual Framework

Empirical studies have shown different relationship between the variables. Khan et al., (2019) found that firm structures and firm size have negative relationship on cash holdings of a firm. Nguyen and Le Minh (2017) indicated a negative relationship between both short and long term debt with cash holdings, whereas cash holdings (ICR) did indicate a relationship with value of a firm that was positive. Rajan and Zingales (1995) established structure of capital is positively related to size of the company.

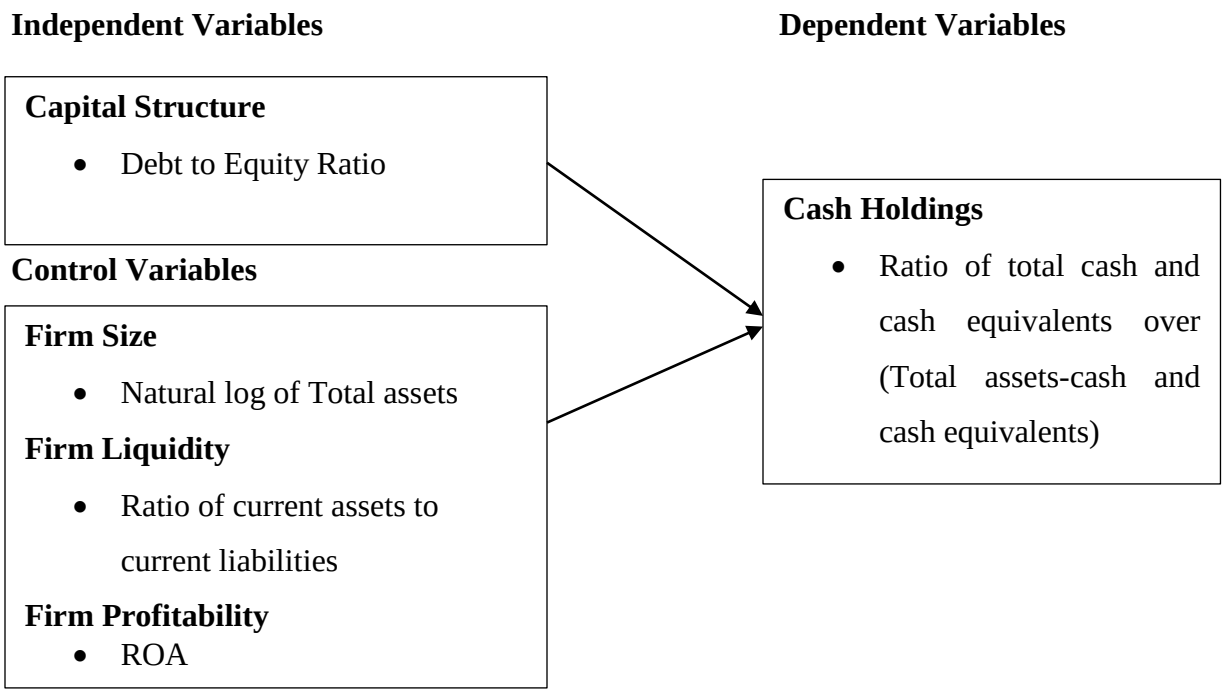

Figure 2. 1 Conceptual Model

Source: Researcher, 2019

From figure 2.1 it is evident that capital structure, firm size, liquidity and profitability have an impact on cash holdings.

2.6 Summary of Literature Review

This section outlines the existing literatures on capital structure and cash holdings, determinants of cashholdings and theories outlining relationship between the variables. Despite the empirical and theoretical studies that have been carried out on the cash holdings and capitalstructure, it is still not conclusive on the relationship between the two variables. The knowledge gap that exists on various works by researchers is also highlighted and the currentstudy seeks to fill the gap by adding on more knowledge on the area of study. Empirical review on global and local perspective on cash holdings and capital structure has also been done. However, most literature reviewed on the relationship between cash holdings and capital structure is on international markets with

very few carried out in the local market. In addition local researches have mainly concentrated on structure of capital and financial performance.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter describesmethods of research to be applied to objectively determine the relationship between the variables. It also includes researchdesign, the population and data used for the study and analysis criteria.

3.2 Research Design

Research design encompasses the data gathering techniques, sampling strategies and how time and cost constraints have been dealt with (Kothari, 2008). The study utilized a descriptive research design approach that entails collecting data for testing hypothesis. It also provides answers to questions relating to the existing status of the subjects in the study. A descriptive research tends to describes elements in a study the way they are naturally in their setting (Creswell, 2012).

3.3 Population

This is a total collection of components from which a researcher obtains interpretations from. It is the bigger set of observations for of this study comprised of all the 11 commercial andservice firms listed at the NSE market. A list of these firms is provided in the appendixes section. A census technique is that system where all theelements of the population participate in the study. The advantage of census technique is that it improves the extent of accuracy and reliability. The census technique was applied in the study since all the 12 firms making up the servive and commercial listed firms are included in the sample (Mugenda, 2003).

3.4 Data Collection

The study used secondary data that was collected from annual published reports submitted to the NSE and CMA for a period of five years 2014-2018. Data on the variables was obtained from the annual reports. These data includes; total cash and cash equivalents, Total assets, total debt and shareholders' equity, current asset Current liabilities and net income was obtained from the financial statements of each firm.

3.5 Diagnostic Tests

Various diagnostic tests such as the tests of normality, autocorrelation and multicollinearity tests were carried out.

3.5.1 Normality Test

Normality test is done because it is impractical to achieve accurate and reliable deductions about the reality on whether the study population derived is normally distributed. The test for normality was conducted using the skewness and kurtosis statistics. The data in a series does exhibit a normal distribution if it has skewness that is the range of -0.8 to +0.8, and a kurtosis within the range of -3 to +3 (Ghasemi & Zahediasl, 2012).

3.5.2 Multicollinearity Test

To ensure the data collected is free from biasness and one variable data is not related to another variable data, the study conducted a multicollinearity test. Multicollinearity is detected when two variables have same linear relation. The variance of Inflation is used to test multicollinearity. VIF ranging from 1 to 10 indicated absent of multicollinearity while presence of multicollinearity is detected when VIF is more than 10 or less than 1.

When the test fails you should standardize the continuous variables by choosing on a standardization method on the regression dialog box. For instance you may choose variable centering approach (Cohen, West & Aiken, 2013).

3.5.3 Autocorrelation Test

Autocorrelation is tested to detect any similarity between time series at given a time interval which is carried out using Durbin-Watson. This test depicts a test statistic with a value of 0 to 4 where 2 no autocorrelation exists, where the statistic is less than two a positive autocorrelation exists and where greater than two, negative autocorrelation exists (Khan, 2012).

3.6 Data Analysis

This is a systematic process that applies statistics techniques to evaluate data through inspecting, changing and modeling data to derive fundamental information for sound decision making. The study used SPSS version 22 for data analysis. The study relied on various regression techniques in evaluating the correlation between the selected variables. The analysis also involves figuring out of the various coefficients of correlation in the model to determine the connection

The regression model applied in analyzing the interrelation of the predictor variables on the response variable is:

$\mathbf{Y_i} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + €$

Where;

α = constant

Y_i = Cash Holdings; measured by natural log of total cash and cash equivalents

X_1= Capital Structure; measured by (Total Liabilities/Total Assets)

X_2= Firm Size; measured using the natural log of Total assets

X_3= Firm Liquidity; measured as a ratio of current assets to current liabilities.

X_4= Firm Profitability; measured as a ratio of Net income to Total Assets

β_1, β_2, β_3, β_4 =co-efficient of the model

ϵ = the stochastic error term

3.6.2 Test of Significance

The test for joint significance of all coefficients was done using the F-test while the test for individual coefficient was done using the T-test.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND INTERPRETATIONS

4.1 Introduction

This section provides output of the fieldwork in form of a presentation, interpretation and discussion of the findings. The population was all the 11 listed Commercial and services firms. However, only 10 of the 11 firms whose data was readily accessible were analyzed.

4.2 Diagnostic Tests

The test for normality was conducted using the skewness and kurtosis statistics. The data in a series does not exhibit a normal distribution because if it has skewness that is the range of -0.8to +0.8, and a kurtosis within the range of -3to +3. In case the kurtosis and skewness conditions conflict, the kurtosis condition is preferred.

4.2.1 Normality Test

Table 4.1: Test of Normality

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Capital Structure	50	.904	.337	.928	.662
Firm Size	50	-.217	.337	-.179	.662
Firm Liquidity	50	.267	.337	-1.082	.662
Firm Profitability	50	-1.289	.337	1.307	.662

Source: Research Findings (2019)

4.2.2 Multicollinearity Test

It was important for the researcher to ensure that none of the variables used in the study were highly correlated with each other. This was achieved through the use of multicollinearity test as shown in Table 4.2.

Table 4.2: Test of Multicollinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	Capital Structure	.370	2.700
	Firm Size	.907	1.102
	Firm Liquidity	.706	1.416
	Firm Profitability	.388	2.575
a. DependentVariable: Cash Holdings			

Source: Research Findings (2019)

As shown inTable 4.2, all the values of the Variance of Inflation Factor (VIFs) were all within the range of 1-10. Based on this finding, it can therefore be inferred that there was no multicollinearity in the data

4.2.3 Autocorrelation

Table 4.3: Test of Autocorrelation

Model	Durbin-Watson
1	1.843[a]
a. Predictors: (Constant), Firm Profitability, Firm Size, Firm Liquidity, Capital Structure	
b. DependentVariable: Cash Holdings	

Source: ResearchFindings (2019)

From Table 4.3, the value of Durbin Watson is 1.843, which is approximately 2. Thus, it can be concluded that there was no autocorrelation in the data set.

4.3 Descriptive Statistics

Table 4.4: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Cash Holdings	50	.0020	5.2374	.199311	.7384632
Capital Structure	50	.0013	1.7640	.610733	.3928481
Firm Size	50	6.4129	12.3910	9.531037	1.5525136
Firm Liquidity	50	.0972	3.3896	1.513565	.9280526

Firm Profitability	50	-.5671	.1751	-.053997	.1716813
Valid N (listwise)	50				

The findings on the above table show that mean cash holdings of the listed commercial and services is 0.1993; minimum and maximum being 0.0020 and 5.2374 respectively. In the table, it is also revealed that the CS mean is 0.6107; mini and maxi values being 0.0013 and 1.7640 respectively. The average firm size for the firms measured using log of total assets was 9.5310 with the minimum log being 6.4129 with the maximum being 12.3910 respectively. The mean profitability for the firms measured using ROA was -0.0540 with the mini ROA being -0.5671 with the maxi being 0.1751 respectively. The mean liquidity ratio was 1.5136, while mini and maxi was 0.0972 and 3.3896 respectively.

4.4 Correlation Analysis

Correlation analysis was employed to determine how predictor variables and cash holdings were correlated. The findings are shown in Table 4.5.

Table 4.5: Correlation Analysis

		Cash Holdings	Capital Structure	Firm Size	Firm Liquidity	Firm Profitability
Cash Holdings	Pearson Correlation	1				
Capital Structure	Pearson Correlation	0.137				
Firm Size	Pearson Correlation	-.040	-.169	1		
Firm Liquidity	Pearson Correlation	-.035	-.526**	-.005	1	
Firm Profitability	Pearson Correlation	-.101	-.766**	.270	.445**	1

Source: Research Findings (2019)

The debt equity ratio (r=0.137) had a positive relationship with cashholdings. Size (r=-0.040) had a positivecorrelation withcash holdings. Liquidity (r=-0.035) had a negative

correlation on cash holdings. Profitability (r=-0.101) had a negativecorrelation on cash holdings.

4.5 Regression Analysis

In order to determine how capital structure affected cash holdings, the researcher employed regression analysis. Table 4.6 presentsthe findings on the model summary.

4.5.1 Model Summary

Table 4.6: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.794[a]	.631	.598	.0156808
a. Predictors: (Constant), Firm Profitability, Firm Size, Firm Liquidity, Capital Structure				

The average R^2 of the model was 0.631 showcasing that 63.1% of the changes in cash holdings are explained by predictor variables (capital structure (debt ratio), profitability, liquidity and firm size (log of assets). 36.9% of the change in cash holdings remains unexplained by the factors considered in the study.

4.5.2 Analysis of Variance

Table 4.7: Analysis of Variance

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.019	4	.005	19.245	.000[b]
	Residual	.011	45	.000		
	Total	.030	49			
a. Dependent Variable: Cash Holdings						
b. Predictors: (Constant), Firm Profitability, Firm Size, Firm Liquidity, Capital Structure						

The study findings indicates a p value (p that the<0.05) and critical value of 2.64 was obtained from the F-Test tables. The Fstatistic indicated in the study findings is more than the criticalvalue hence the model fits and significant

4.5.3 Distribution of Coefficients

In order to determine the significance of each individual variables of the study, the researcher used p values.

Table 4.8: Distribution of Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.013	.017		.753	.455
	Capital Structure	.015	.009	.242	1.626	.111
	Firm Size	.005	.002	.340	3.576	.001
	Firm Liquidity	-.015	.003	-.548	-5.089	.000
	Firm Profitability	-.008	.021	-.058	-.398	.692

The coefficient results on the abovetable indicate that theassociation among debt ratio and cash holdings is positive but insignificant. The results alsoshow that the connection betweenfirm size and cash holdings is positive and significant. Finally, the results show that the connection among firm liquidity, profitability and cash holdings is negative but only firm liquidity is significant.

The resultant equation becomes;

$$Y = 0.013 + 0.015X_1 + 0.005X_2 - 0.015X_3 - 0.008X_4$$

Where,

Y = Cash Holdings

X_1= Capital Structure

X_2= Firm Size

X_3 = Firm Liquidity

X_4 = Profitability

The estimated regression model above shows that if predictor variables were equal to zero, cash holdings would be equal to 0.013. The study reveals that an increase in capital structure and firm size leads to increase of cash ratio by 0.015 and 0.005 units respectively. The results also showed an increase in liquidity and ROA leads to a decrease in cash ratio by 0.015 and 0.008 units respectively.

4.6 Discussion of Research Findings

The aim was to find out to what extent does capital structure affect cash holdings. The independent variables considered in the study included capitalstructure, profitability, size of thefirm and firm liquidity. The study established that there was a strong linkage connection (R= 0.794) between cashholdings and the predictor variables. The study also established that the variables chosen explain 63.1% of the total variance in the cashratio.

The study found that there is positive connection linking structure capital and cash holdings. This means that capitalstructure has no significant impact on cash holdings of commercial and services companiesquoted at the NSE. The results are consistent with peckingordertheory which contends that obligation proportion isn't supported by firms rather they favor outer wellsprings of assets when inner assets are insufficient. However, the finding contradicts Khan et al., (2019) who analysed how capital structure influenced corporates cash holdings and indicated that capital structure resulted into negative influence to firms' cash ratios.

The study further established that firm liquidity and ROA negatively influences cash holdings. This finding is in line with Nguyen and Le Minh (2017) who critically assessed how liquidity affected cash holdings of listed Non-financial firms at Ho Chi Minh Stocks Exchange and indicated that liquidity ratio hadnegative and significantinfluence of cash ratio generated by firms.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter gives asummary of the findings while presenting conclusions. The chapter also recommends and suggests areas which future studies need to be conducted in.

5.2 Summary

The studyaimed at establishing the connection between capitalstructure on cash holdings of commercialand services companies quoted at the NSE. This study used financial capital structure as the independent variable while cash holding was used as the dependentvariable. Firm size, profitability, and liquidity were used a control variables. The study targeted 11 commercial and services companies quoted at the NSE but obtained complete data from 10 quoted non-financial firms.

The regression summary statistics established that there was a strong linkage connection (R= 0.794) between cashholdings and the predictor variables. The study also established that the variables chosen explain 63.1% of the total variance in the cashratio. The ANOVA analysis exhibit that the regression model, is good predictor between dependent variable and independent variable. The coefficient results indicated that the association among debt ratio and cash holdings is positive but insignificant. The results also show that the connection between firm size and cash holdings is positive and significant. Finally, the results show that the connection among firm liquidity, profitability and cash holdings is negative but only firm liquidity is significant.

5.3 Conclusion

The study found that there is positive connection linking capital structure and cash holdings of commercial and services companies quoted at the NSE. The study thus concludes that firms with high debt ratio tend to hold more cash compared with firms with low leverage ratio. The research also found that firm size is positively connected to cash holdings therefore it can be concluded that the larger the firm size the more there is available cash for day to day operations.

The study also established that firm liquidity and ROA negatively influences cash holdings of commercial and services companies quoted at the NSE. Thus it can be concluded that liquidity is inversely related to cash holdings. This means that firms tends to use available cash to pay short-term obligations. The study also found that financial performance has an inverse relationship to cash holdings and therefore it is concluded that firms with high ROA ratio tends to hold less since cash generated is invested in buying non-current assets.

5.4 Recommendation for policy and practice

The study recommends that the management team of all commercial and services firms listed in Kenya should be cautious on the amount of debts and equities in the capital structures. This is because too much reliance on debts would adversely affect financial performance of their companies. The study established that there was a positive influence of firm size on cash holdings of commercial and service firms quoted at the NSE though significant. This study gives a recommendation that sufficient strategies ought to be established by managers of these firms for enhancement and growth of their financial performance by increasing their assets.

The study found out that a positive relationship exists between financial performance and liquidity position. This study recommends that a comprehensive assessment of listed commercial and service firm's immediate liquidity position should be undertaken to ensure the company is operating at sufficient levels of liquidity that will lead to improved financial performance of firms. This is because a firm's liquidity position is of high importance since it influences the firm's current operations.

5.5 Limitations of the Study

The extent of this examination was for a long time 2014-2018. It has not been resolved if the outcomes would hold for a more drawn out examination period. Moreover it is unsure whether comparable discoveries would result past 2018. A more extended examination period is progressively dependable as it will consider significant happenings not represented in this investigation.

The investigation was constrained to auxiliary information that was gathered utilizing information assortment sheet. Information was gathered from income proclamations, articulations of money related position and pay explanations of the contemplated firms. In any case, the confinement of utilizing auxiliary information is that it isn't the direct wellspring of data not at all like essential information. Moreover the exploration was just constrained to business and administrations firms cited at NSE. In this manner, the speculation of the outcomes was constrained and ought to be conveyed with alert.

5.6 Suggestions for further Research

This study focused on a five year period 2014 to 2018 owing to the fact that it was the most recent annual data for services and commercial firms quoted at NSE. Further studies in this area may use data for longer periods for example data from over a 5 year period

would be helpful in supporting or refuting the outcomes of this study. Since the focus of the current study was on commercial and services firms quoted at NSE, future studies should focus on non-listed firms or in other sectors and industry for example in banking sector or the manufacturing sector.

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APPENDICES

Appendix I: Listed Commercial and Services Firms in Kenya

1. Atlas African Industries Ltd
2. Express Kenya Ltd
3. Hutchings Biemer Ltd
4. Kenya Airways Ltd
5. Longhorn Publishers Ltd
6. Nairobi Business Ventures Ltd
7. Nation Media Group Ltd
8. Standard Group Ltd
9. TPS Eastern Africa Ltd
10. Uchumi Supermarket Ltd
11. WPP Scangroup Ltd
12. Deacons (East Africa) PLC

Appendix II: Data Collection Form

VARIABLE	DESCRIPTION	YEARS				
		2014	2015	2016	2017	2018
Cash Holdings	Total cash and cash equivalent					
Liquidity	Current Assets					
	Current Liabilities					
Firm Size	Total Assets					
Profitability	Net Income					
	Total Asset					
Capital Structure	Total Debt					
	Total Equity					

Appendix III: Data

Y	X1	X2	X3	X4
0.0020	0.6229	8.6794	0.5926	-0.1619
0.0088	0.7282	8.6453	1.1256	-0.1360
0.0063	0.9389	8.5793	0.8521	-0.2554
5.2374	1.1866	8.5562	0.5974	-0.2510
0.0099	1.4264	8.5064	0.6187	-0.2171
0.1034	0.3424	6.5863	2.5238	-0.0174
0.1562	0.3356	6.5742	2.2050	-0.0042
0.0419	0.4423	6.5173	1.5805	-0.1982
0.0418	0.3812	6.4727	1.5485	0.0044
0.0186	0.5635	6.4129	0.9038	-0.2045
0.0816	0.8101	11.1722	0.5229	-0.0228
0.0183	1.0326	11.2602	0.3863	-0.1414
0.0314	1.2291	11.1922	0.2509	-0.1648
0.0663	0.9671	11.1692	2.5193	-0.0450
0.0494	1.0182	11.1356	2.9108	-0.0572
0.2107	0.4190	8.8736	1.7522	0.1270
0.0176	0.4482	8.8384	1.5002	0.1041
0.1314	0.4925	9.2711	1.4880	0.0557
0.0112	0.4912	9.2692	1.3700	0.0720
0.2110	0.5682	9.3816	1.2090	0.0763
0.0165	0.7626	7.8077	1.9766	0.1210
0.0073	0.5936	7.9157	1.9838	0.0333
0.0079	0.6793	8.0291	2.7345	0.0414
0.0642	0.6869	8.0051	2.9902	-0.3247
0.0065	0.6925	8.0092	2.9123	-0.2690
0.2093	0.0013	12.3910	2.3651	0.1234
0.3180	0.0017	12.3469	2.0954	0.1751
0.1242	0.0021	12.2276	2.0727	0.1387
0.1758	0.0024	12.1175	2.0176	0.1158
0.0839	0.0030	12.0482	1.9536	0.0998
0.0079	0.4617	9.6130	1.2192	0.0538
0.0080	0.5689	9.6390	0.9537	-0.0665
0.0073	0.5287	9.6439	1.1693	0.0451
0.0078	0.5817	9.6493	0.8473	-0.0473
0.0046	0.5821	9.6699	0.9120	0.0642
0.0182	0.3467	10.2025	0.8038	0.0172
0.0281	0.3923	10.1939	1.0404	-0.0177
0.0947	0.4419	10.2249	1.6347	0.0071
0.0401	0.4759	10.2427	1.0788	0.0068

0.0122	0.4808	10.2455	0.4338	0.0102
0.0364	0.5176	9.8400	0.5740	0.0527
0.0218	0.8674	9.7995	0.3431	-0.5429
0.0377	1.7640	9.6992	0.1067	-0.5671
0.0363	1.4249	9.6362	0.1072	-0.3884
0.0373	1.4589	9.6141	0.0972	-0.3412
0.4001	0.3569	10.1233	2.9919	0.0471
0.5009	0.3099	10.0958	3.3896	0.0384
0.4189	0.3469	10.1299	2.8860	0.0341
0.3360	0.3484	10.1386	2.8737	0.0347
0.4425	0.4115	10.1591	2.6562	0.0424