

**THE EFFECT OF CENTRAL BANK RATE ON COMMERCIAL  
PAPER YIELD FOR COMPANIES LISTED AT NAIROBI  
SECURITIES EXCHANGE**

**BY**

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## DECLARATION

I declare that this research project is my original work and has never been submitted for a degree in any other university or college for examination/academic purposes.

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## **DEDICATION**

I dedicate this project to my lovely wife GetrudeCheronoNgetich, my lovely sons GodrickKipkorir, Godwin Kipkemoi and all my friends whose prayers and encouragement and understanding kept me going all through the difficult moments as I undertook this research project.

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## **LIST OF ABBREVIATIONS**

<b>CBK</b>	Central Bank of Kenya
<b>CBR</b>	Central Bank Rate
<b>CMA</b>	Capital Markets Authority
<b>CP</b>	Commercial Paper
<b>CPY</b>	Commercial Paper Yield
<b>IOU</b>	I Owe You
<b>LIBOR</b>	London Interbank Offered Rate
<b>MPC</b>	Monetary Policy Committee
<b>NSE</b>	Nairobi Securities Exchange
<b>O/D</b>	Bank Overdraft
<b>OMO</b>	Open market operations
<b>SEC</b>	Securities Exchange Commission
<b>SPSS</b>	Statistical Package for Social Sciences
<b>TBY</b>	Treasury Bonds Yield
<b>TB</b>	Treasury Bills
<b>USA</b>	The United States of America
<b>VIF</b>	Variance Inflation Factor

## ABSTRACT

Economic decisions are affected by asset prices and yields of which are influenced by designed Central bank actions. Following the reforms in financial sector in Kenya, the Bank rate has emerged as an important indicator for signalling the stance of monetary policy for the market and guiding the interest rates to the desired trajectory. Commercial Paper (CP) has evolved as an important source of resource mobilization by the corporate during last few years. Like other money market rates, CP rates are also influenced by the changes in the Bank rate. The main purpose of this research was to determine the effect of Central bank rate on commercial paper (CP) yield for firms listed on the Nairobi Securities Exchange. The study used descriptive research design to meet the objectives of the study. The population of this study was listed companies at the NSE that had issued CP between January 2007 and December 2016. There was no sampling because the population was small and finite, data collected for this research was quantitative and secondary in nature which was sourced from CMA, NSE database and Annual Audited Financial Statements of selected companies. Regression and correlation analysis were used to determine the nature and strength between commercial paper yield (dependent) and Central bank rate (independent variables). The study found an insignificant positive and negative relationship between the central bank rate (CBR), Treasury bonds redemption yield (BRY) and the commercial paper yield (CPY) respectively. The study also found a positive and significant relationship between Treasury bill rate (TBR) the commercial paper yield (CPY). The study concluded that that the commercial paper yield for companies listed on the NSE is not significantly influenced by the central bank rate. The study recommended that the managements of firms listed on the NSE should enhance the usage of commercial paper by firms since their yield is not affected by the central bank rate.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

The imperative central bank price also known as the policy rate is recognized because the coverage fee plays a critical benchmark function that is used to signify the cost of finance. The coverage charge serves as a base price which business banks use in putting the charges or hobby charge for mortgage merchandise. The commercial banks reflect this in their transactions among themselves and the public (Addo&Seyram, 2013). almost all relevant banks commonly publicly announce coverage movements and provide complete records relating their policy meetings in minutes shape, press briefings, and so on (Moessner& William, 2008).

As of now, the CBK prices predicated on indiscreet interbank term borrowing and lending have emerged as important, partly due to the reality they facilitate the business enterprise of financial institution financing chance, however likewise because of the fact that they had been the primary classes of costs to be introduced and feature now pop out as market preferred over time.

Huge variations of hobby fees are on the whole averted through the important banks via preserving the zero certain on nominal hobby rates non-binding. To acquire policy goals at the equal time as preserving the low degree of interest rates, the critical bank price is normally used by principal banks (Srouf, 2001).A more reliable in addition to sturdy significant bank reference fee structure further has several capacity aids in phrases of

higher financial balance (Khan, 2003). First, a self-assurance loss in reference charges, on account that they were indicated to be undependable, may want to purpose the operation of the market to be disrupted, particularly as some agreements don't have sturdy fall-again preparations. Secondly, poorly perceived reference rates would possibly switch dangers, basically, those related to bank subsidy costs, in improper methods ( the financial institution for International Settlements, 2013).

In Kenya, the critical financial institution rate that the CBK lends to industrial banks and different monetary establishments and acts as a benchmark in figuring out the hobby quotes charged through banks and economic institutions from last borrowers. The CBK was founded below the central financial institution Act (CAP 481), 1966. The Act allotted CBK, the constitutional goals to help inside the growth in addition to maintenance of a legitimate economic, banking as well as credit score device in Kenya, beneficial to the systematic and stable economic expansion of the nation and the outdoors stability of the foreign money among different responsibilities. With such largely described targets referring most effective implicitly to fee energy, the CBK supposed to reinforce its monetary policy with controls on a fee of the hobby and the dimensions of credit score development by way of banking firms as its functioning targets deliver of cash in addition to its intermediate goal. The effective objectives were connected to the banks via techniques allotted day by day. There had been, although, no clean drawbacks for non- agreement (Durevall&Ndungu, 1999).

### **1.1.1 Central Bank Rate**

By definition, bank rate is the rate at which CBK rediscounts bills of trade introduced by the business banks. The price of the credit score of refinance and different economic lodging prolonged to business banks and other economic establishments are normally encouraged by way of the financial institution fee. The adequacy of the monetary organization rate as monetary approach gadget depends basically upon business budgetary Foundation's reliance at the CBK for value extend and the effect it welds on other intrigue cites. Inside the context of deregulation of interest rates, financial institution fee is operationalized as a reference rate for the entire financial system (Jayadev& Kumar, 2004). A discount in CBR decreases business enterprise fees or causes banks to relax their lending standards, raising credit score chance, leading to non-acting loans (Matsuyama, 2007; Dell' Ariccia& Marquez, 2006).

The principle goal of CBK is components and execution of fiscal coverage centered on attaining and sustaining constancy in the overall costs. The intention is to gain low-inflation and to preserve the foreign money cost. On the pinnacle of that, the CBK targets to guide management economic policy of financial development and occupation. The vital bank rate links payoffs in a financial agreement to money market interest fees, interest rates charged by using industrial banks additionally vary keeping money market conditions in consideration; which includes coverage charge changes (monetary coverage assertion, 2008). when coverage price is reviewed upwards, commercial banks additionally growth their transaction interest quotes, which have an effect on borrowing and saving decisions of purchasers and groups (Addo&Seyram, 2013). Decrease leisure activity expenses furthermore tend to make monetary forms deteriorate. Consequently,

the basic monetary organization needs to counter the deterioration by means of modifying the CBR up to make the charge of obtaining high and therefore make the credits ugly (Crowley, 2007).

The valuable bank price is set by using financial coverage Committee is charged on (overnight) brief-term credit score, which it extends to other banks to top off their liquidity shortfalls. In this regard, the principal financial institution exercises its function as lender of the closing lodge (Addo&Seyram, 2013). Modifications inside the CBR mirror the economic policy stance that the bank is pursuing. The CBR level in Kenya is revised and publicized by way of the financial policy organization at least every two months. Its activities each in magnitude and route alerts the stance of financial policy. The charge of the principal bank is the base for all monetary policy processes to improve precision and self-belief in financial coverage execution, CBK also broadcast the lowermost fee of interest it expenses on loans to banks (CBK, 2016).

### **1.1.2 Commercial Paper Yield**

Commercial Paper (CP) is a snappy day and age unsecured promissory note issued with the guide of organizations, which bear in mind it a low-value opportunity to financial institution loans and Overdrafts (O/D) (Fischer & Jordan, 2001). It is an I owe you (IOU) from a large, nicely- identified in addition to credit score-worthy company to a financier to pay back the main amount she or he lent and gathered interest, important issuers are generally marketplace leader agencies and internet well worth. It isn't always for small firms. Buyers have to be prepared to purchase them indiscreet predicated at the recognition of the firm in addition to the review of the firm's credit score risk evaluation.

CP has roots within the U.S. in the early nineteenth century; corporations that found themselves in “scarce” nations couldn’t borrow from business banks as a consequence resorted to borrowing from the open marketplace with a view to meet their monetary necessities. CP provides groups a cheaper supply of financing their current expenses. Many businesses had been positioned into receivership and plenty of more wound up because of their incapability to service their loans. A possibility for such businesses to source inexpensive funds by using issuing the paper can be explored. Corporations require cash to develop, expand to new places, up-grade gear or another makes use of capital.

Pedro and Pedro (2007) states that CP is an instrument of operating capital which constitutes an employer's assets with maturities less than a year, which incorporates a vast share of gadgets in the balance sheet used to fund quick-time period needs of the company. The Kenyan CP programs encompass American and European functions. As an example, they're authorized by Capital Markets Authority for working capital functions much like within the U.S. however, they're vended to buyers over dealers who must be registered with CMA as asset experts equal to European markets. The feature of CBK is presently limited to issuance of letters of no protestation to investors after evaluating their monetary position with CMA because of the controlling frame. The CMA reason that tenet is crucial to avoid statistics irregularity within the CP souk as well as a shielding device to buyers.

Firms troubling the paper, establish software that authorizes borrowing as much as a pre-detailed maximum. Once this system is hooked up, a company can borrow under it without any regulatory approval or disclosure. Setting up those packages generally,



entails significant prices. These include charges to credit score groups for obtaining and retaining a short-time period credit score rating, prices to banks for backup credit score facilities, and fees paid to sellers, all of which play a vital role in the business paper yield (CPY) deduction by means of the issuing firm or placement sellers. One impact of the low default risk is the truth that the issuers can borrow in this market at very low-interest prices (put up, 1992). CP gives investors quick-term possibilities of funding at yields above the prices of Treasury payments. The rate of interest paid on CP ought to be set above the rate of TB of the same adulthood because government debt is essentially more secure compared to non-public sector debt.

Extra, CP fees of the hobby are set below the standard financial institution overdraft quotes since the money are raised from traders evading the intermediation of excessive price. Meaning, the issuer of CP desires to promote it at a hobby that is much less than the price at which bank could fee for overdraft cash. Therefore, TB charges set the ground of CP pricing, while the important overdraft fees are the maximum quantity. There are negative aspects to any specific financial device being tied to Treasury payments as well as fluctuating marketplace might be one such disadvantage for the paper.

The industrial paper is regularly issued at a reduction to a prearranged face price, which means buyers achieve CP at a charge lower than the face value and get the face cost at maturity. The variance among the rate of purchasing and the face value is the bargain this is, the hobby expected on CP. The yield on CP is cited on the premise of a cut price. the discount return to CP holders is the annualized % difference among the fee paid for the paper and the par value. the commercial paper yields are frequently on basis of 10 to 20

and above Treasury payments of comparable adulthood, mainly due to the fact the hobby made on commercial paper, one of a kind from T-bills, is not exempted from taxes. The business paper further has decreased liquidity in comparison to T-payments, wherein trading inside the secondary market is more energetic and narrower (Madura, 2008).

At a given point in time, the industrial Paper Yield (CPY) is slightly higher than the yield on TB with the equal adulthood due to the fact CP incorporates some credit chance and is less liquid. While a company is making plans to issue the paper, the yield to buyers is undefined. Consequently, the borrowing assets are indefinite until the paper is issued. CPY is diffused to plenty of factors both external and inner to the agency which has the talent to affect its behavior. Key amongst them is the economic coverage; standard hobby rates levels, inflation prices, fees of TB, as well as demand and delivery of the paper.

### **1.1.3 Relationship between Central Bank Rate and Commercial Paper Yield**

Bank rate is the base rate at which the national bank presents credits to the financial banks. It's likewise alluded to as the cut value rate. The saving money machine draws in a full-estimate measure of cash from the CBK at this charge. A large portion of this is drawn as renegotiate privilege in lieu of displaying shoddy back to exporters. There's a private connection between the bank charge and the other premium costs triumphing in the money markets. It goes about as a benchmark charge inside the money markets. Normally, a blast in bank expense results in mechanical banks developing their loaning charges. Modifications in bank value influence financial assessment approach through banks through modifying the estimation of credit. The effect of trade in bank charge can

be comprehended both as far as financing cost transmission instrument notwithstanding FICO rating channel transmission system. The CBR exchange usually causes a corresponding trade in commercial paper yields. At similar time likewise, buyers' commentary has a robust association with industrial paper produces. A trade in portfolio calls for could explain the countercyclical movement of hobby rate unfold among CP and CBR.

There are two rates of hobby risks associated with CP borrowing. First, the business enterprise faces market hobby charge hazard: the chance that the fee pays on CP will increase seeing that marketplace hobby fees stages will increase. A change in the charge of chance-loose price, will motive an equal change in all borrowing prices and CP. Secondly, an employer faces unique interest fee chance: the threat that CP buyers will call for a better price in that they see the organization's credit score risk to have up surged. With special threat, the fee on CP cans growth without an upsurge within the danger-unfastened fee or in other rates of CP. An industrial paper issuer can dispose of interest rate chance on the market by means of moving into a trade and agreeing to replace a fixed interest price disbursement for a variable hobby price. (Hahn, 1993).

Calomiris et al (1995), states that the issuance of business paper is restrained to organizations with stronger stability sheets in addition to high coins flows to fund the allowance of enterprise credit to lesser-satisfactory businesses. Groups with a more potent financial role provide commercial paper more so in the course of recessions into helping them amplify credit to different corporations. They act as financial mediators to different corporations demonstrating that CPY is extremely linked to variability's in CBR. Therefore, CPY is based on the investor's attractiveness for threat in addition to

willingness to participate in the market. A trendly lower in investor's easiness for threat shows that for any given produce, traders can be geared up to supply fewer money.

#### **1.1.4 Nairobi Securities Exchange**

The Nairobi inventory exchange management is located in Westland's Nairobi. It became based within the year 1954 as a voluntary affiliation of securities brokers and currently is the most energetic capital markets in the complete of Africa. As a capital market organization, the Securities exchange plays enormous function in monetary development. It mobilizes domestic savings as a consequence bringing about the restructuring of monetary sources from inactive to active managers.

The formation of NSE was to authorize businesses to participate in nearby and of their equity, consequently permitting Kenyans to own stocks. Gatherings can likewise enhance additional back essential for amplification and change. to raise spending plan, another backer distributes an outline, which offers every single germane specific about the operations and predetermination prospects and in the meantime, bringing up the charge of the issue. A securities exchange also improves the inflow of overall capital. They likewise can be valuable apparatuses for privatization programs, stock commercial center Furthermore upgrades the inflow of universal capital. They additionally can be useful gear for privatization programs ([www.nse.co.ke](http://www.nse.co.ke)).

Business Paper in Kenya is in its infancy as compared to foremost and advanced economies like U.S.A (united states of America) and EU nations. The preliminary problem was in 1994 and the interest increased in 1997. Before this, the CBK limited the issuance to groups registered inside the NSE. If credit score organizations in Kenya fail,

the CBK sincerely reasoned that investors would possibly get right of entry to the solvency of the issuers themselves as those registered published their fiscal statements once in a while (Kinyua, 2006).

CMA issued reviewed hints in 1997 that accredited several businesses to trouble CP no matter their registry function concern to meeting guidelines laid out inside the CMA pointers. As a controller, CMA proposes the minimum instances which are appeared shielding to buyers in the paper market. Issuers in Kenya use traders that are called placement arrangers or managers. There's no systematized secondary marketplace which has been established for CP in Kenya, because the year 1994, the corporations that have issued CP have grown to thirty-4. quite a few groups have voluntarily left the marketplace inside this time frame because of numerous causes(Nairobi Securities trade, 2013).every CP provider has to apply for regeneration as a minimum three months earlier than the expiry of the accepted length of twelve months from the registered date (CBK, 2013)

## **1.2 Research Problem**

Today's commercial enterprise environment is very competitive and companies must strategize so one can continue to be aggressive and worthwhile. cost slicing measure is the language in nowadays enterprise circles and therefore it has grown to be inevitable for corporations to supply for a less expensive supply of finance. In 1933, the Securities Act changed into set up which calls for that all securities presented to the public need to be registered with the SEC. despite the fact that the procedure may be beneficial in a few cases, it's miles very time eating and luxurious. Business paper issuers are lucky due to

the fact they are able to turn out to be exempt from registration as long as the safety meets three principal necessities (Hahn 108). However, the diploma of transmission of the critical financial institution fee depends on the degree of development and opposition within the economic system (Addo&Seyram, 2013).

In Kenya, business banks fee very high-interest charges on borrowing accordingly CP consequently gives a greater attractive financing choice than financial institution loans and overdraft (OD) and additionally their hobby costs are reasonable at +1% above treasury bill price(CBK 2016).

CP borrowing, therefore, substitutes for cash holdings and financial institution credit score strains. industrial Paper additionally offers 4 fundamental benefits to its issuers and investors: exemption from Securities and Exchange Commission (SEC) regulation, lower costs, competitive yields, and tailor-made securities to fulfill buyers' wishes (Hahn 107).presently, in Kenya industrial paper has been issued by numerous businesses in extraordinary sectors inclusive of mining, automobile, retail, safety, micro finance, hotels and banking not like earlier than while it turned into in particular issued with the aid of groups, coverage companies, business banks, and mutual price range. but, regulations on renewal for agencies issuing industrial paper are not tight as earlier than and there aren't any defaults instances said of past due(CBK 2016).

A examine by using Calomiris et al. (1995) mounted that there may be actually no econometric analysis of the traits of CP issuers or instances below which CPY rises or falls which is an omission given that it is the simplest shape of publicly traded short-time period debt placed by way of corporations. in their take a look at, Edelberg and Marshall

(1996) observed a huge, enormous reaction of bill rates to policy shocks, however handiest a small, marginally vast response for bond rates but the have a look at did not discover the relationship between CBR and CPY.

Addo and Seyram (2013) studied the relationship between valuable financial institution's coverage fee at the cost of borrowing from a few decided on commercial banks in Ghana and located a big sturdy effective relationship between policy rate and lending costs, however, the observe targeted on CBR and lending charges.

Karimi (2012) did a survey in Kenya on results of CP uptake on the NSE and hooked up that the equity turnover, proportion traded and the marketplace capitalization have an effect on CP and that most traders preserve the paper till maturity. Kinyua (2006) located the aspects deterring CP market growth in Kenya and commended that additional comprehensive observe ought to be achieved on specific segments of the economy.

Njogu (2003) additionally did a research on price affects of CP problem declarations and installed that organization which has taken the brave stride of replacing financial institution loans with CP experience widespread interest investments. but, despite the significance of CP as a financing mechanism most of the to be had local and worldwide research have now not examined the relationship among imperative financial institution rate and the economic paper yield. This ends in an empirical literature gap, which this study intends to fill by way of examining: what's the effect of CBR on industrial paper yield for organizations listed on the NSE?

### **1.3 Objective of the Study**

To establish the effect of central bank rate on commercial paper yield for companies listed on the NSE.

### **1.4 Value of the Study**

The look at will assist traders to understand the behaviour of CP with regards to valuable bank price adjustments and feature higher statistics to base their investment selections. similarly, it'd permit investors who interact in arbitrage trading to make higher selections and timing of buying CP.

The findings would be beneficial to funding gamers in advising their clients approximately destiny prospects of holding CP. further, they might be in a higher function to predict the probable behavior of CPY following modifications in CBR. For coverage makers and regulators at NSE, CMA, and CBK, inventory market inefficiency is an issue of difficulty as it implies less-than-most desirable allocation of funding assets in the economic system. Final results of the examiner would shed more light on how monetary policies have an effect on companies' CP pricing selections.

To the academicians and students, this observes will add to the huge academia expertise in finance especially behavioural finance and marketplace efficiency. Researchers and academicians would find this take a look at beneficial for further discussion and research which will discover and further expand their research on CP pricing choices. The examine will allow the researcher to qualify for an award of MSC Finance whilst at the same time being on an aggressive facet inside the business international. The look at will even excite more interest within the study of the concern and reveal areas that need



greater research and exploration. Future studies research might also top off the distance inside the regions not covered and thereby make contributions to the frontier of understanding on this nevertheless developing vicinity, particularly in Kenya.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This part gives several famed kinds of literature connected to the studies' problem place to offer a base of emerging a growing and foundation appropriate scope in aligning targets to present information. The regions believed to be substantial for the literature review comprise the excessive the theoretic framework wherein hypothesis or theories which relate to the modern study were discussed. After that evaluation of empirical literature in which preceding researches by way of numerous scholars across the world and domestically on CBK price and CP are discussed.

#### **2.2 Theoretical Review**

Theoretical review will review the following theories; the loanable fund's theory, liquidity preference theory, market segmentation theory and Efficient Market Hypothesis.

##### **2.2.1 The Loanable fund's theory**

Loanable finances idea of hobby fee is computed on the idea of call for and supply of loanable coins existing inside the capital market. The loanable price range philosophy of interest supporters that each investment and savings are accountable for the figuring out the interest prices inside the long-run whereas quick-term costs of the hobby are computed on the premise of the economic conditions triumphing in each financial system. figuring out the charges of the side interest in the event of the loanable assets logic of the rate of intrigue is based on the openness of home loan amounts. The openness

of such credit is predicated on viewpoints comprising of the net upsurge in remote cash stores, a number of funds made, redness to enhance conceivable outcomes and coins adjust for the making of crisp Capitals (Bibow, 2000).

The ostensible pastime cost is chosen through the coordinated effort between the powers of conveying and request of loanable coins. keeping practically identical convey level, an upsurge inside the call for loanable coins may cause an upsurge inside the expense of leisure activity and the other way around. An upsurge in the supply of loanable trade would cause drop out the pastime charges. In the event that both the free market activity of the loanable coins trade, the accompanying pastime rate would depend such a great amount on the measurements and development of the call for and supply of the loanable fund. The loanable request stores are gotten from the request from the last creates, which is once more made out of the usage of capital that is funded by way of the loanable price range. The loanable price range demand is further comprised of the government (Bernake, 2000).

### **2.2.2 Liquidity Preference Theory**

This idea proposes that for any issuer, long term rates of the hobby have a tendency to be better in comparison to brief term rates due to the lower liquidity as well as better receptiveness to preferred hobby charge movement of longer-term securities. this is due to the truth that traders see less threat in short time period securities as compared to long term securities since short-term securities are more flexible (Khan, 2003).

Keynes (1935) proposed that for an issuer, lengthy-time period quotes of the hobby have a tendency to be more in comparison to brief-time period rates due to the lower liquidity

in addition to better responsiveness to normal hobby rate motion of longer-term securities. This happens on account that investors see less risk in short-term securities as compared to longer-time period securities because of short term securities are greater flexible. debtors are typically equipped to pay better rate for long-time period cash for the reason that they're saved the want to organize rollover of quick-term debt – can be at a higher price of a hobby. In typical, as an end result, longer maturities generally tend to call for better fees of a hobby as compared to shorter maturities (Khan, 2003).

Keynes also argues that "hobby quotes can't be a praise for saving as such due to the fact, if a person hoards his savings in cash, preserving it beneath his mattress as an instance, he will obtain no hobby, even though he has nonetheless avoided eating all his cutting-edge earnings. rather than a praise for saving, interest inside the Keynesian evaluation is a reward for parting with liquidity."

Keynes moreover proposed that people call for liquidity for the reason that they have three numerous motives. The theoretical purpose is the want to preserve merchantable securities to be capable of taking benefit of good buy acquisition at beneficial trade charge versions. For several agencies, the borrowing capability from the market like providing CP in addition to different marketable securities can satiate speculative reasons (Khan, 2003). The demand for the budget for speculative cause is elastic in interest. The precautionary motive is the capability of corporations to protect their destiny. This need of meting out protection stocks of marketable securities rise due to the fact these equipment are very liquid.

### **2.2.3 Market Segmentation Theory**

Notwithstanding meagre empirical assist, the segmented market speculation is a 3rd idea for the form of the yield curve which enjoys huge reputation amongst market practitioners. additionally referred to as the desired habitat, the institutional concept, or the hedging stress theory, it asserts that one-of-a-kind institutional traders have distinctive maturity wishes that lead them to confine their security choices to precise adulthood segments. that is, traders supposedly cognizance on quick-, intermediate-, or lengthy-time period securities. This concept contends that the shape of the yield curve ultimately is a feature of these particular funding choices of essential monetary establishments.

The segmented marketplace idea contends that the enterprise surroundings, together with the felony and regulatory boundaries, has a tendency to direct every sort of financial organization to allocate its resources to precise types of bonds with specific adulthood characteristics. In its strongest shape, the segmented market theory holds that the maturity possibilities of buyers and borrowers are so strong that traders never purchase securities outdoor their preferred maturity variety to take gain of yield differentials. As a result, the fast- and long-maturity quantities of the bond market are correctly segmented, and yields for a phase rely upon the delivery and demand. there is no substitution: e.g., the marketplace for five-12 months debt is determined absolutely through 5-12 months issuers and buyers, who ignore the prices on four- or 6-12 months bonds Modigliani and Sutch (1966).

### **2.2.4 Efficient Market Hypothesis**

The embodiment of the effective market speculation is that present financing costs mirror all accessible data. This suggests if capital markets are proficient and financing costs basically play out an irregular walk, at that point, advertise desires contain a neither backward nor extrapolative component which is in strife with Modigliani-Sutch proposition.

Fama (1970), states that in a proficient market, by and large, rivalry will cause the full impacts of new data on characteristic esteems to be reflected promptly in real costs. Numerous financial specialists attempt to distinguish securities that are underestimated, and are relied upon to increment in esteem later on, and especially those that will build more than others. Numerous financial specialists trust they can choose securities that will outflank the market and utilize an assortment of determining and valuation methods to help them in their venture choices. Fama additionally recognizes among three forms of productive market speculation i.e. the powerless shape, semi-solid frame and the solid shape.

### **2.3 Empirical Review**

Jayadev and Kumar (2014) considered the degree and nature of the effect of a statement of bank rate changes on Commercial Paper rates in India. It presumes that the time game plan data of CP rates and Bank rate are non-stationary at level. Regardless, these data plans are seen to be cointegrated. The Error Correction Model reveals that the modifications in Bank rate are not promptly reflected in the CP rates. The backslide conditions reveal that there is a quantifiable immense association between Bank rate and

CP rates. The result procured from using backslide examination for 30 days window period for each of the eight times when Bank rates have changed reveals that diverged from 2009-2010, the CP rates have ended up being more tricky to Bank rate changes in the midst of 2011-2013. The bank rate has in this way settled itself as a solid hailing rate for CP rates starting late.

Kashyap, Stein, and Wilcox (2013) found that the proportion of financial institution OD to financial institution OD except industrial paper is genuinely related to numerous monetary pastime measures. They recognize this as an evidence agencies circulate far from financial institution OD into CP for the duration of the squeezes of bank credit. The research likewise discovered that inventories stocks in addition to liquid running capital reduce investment obstacles in 2 methods. firstly, both are desired practices of security for financial institution loans. facts (in particular in raw materials shape, which incorporate the majority of inventories) are sincerely assessed and easily discharged. Secondly, companies with excessive prices of outside funding might use liquid working capital as a "self-insurance" stratagem.

Matthias et al. (2010) carried out an empirical research to expose the cause agencies use CP in addition to how its utilization is related to companies' investment techniques as well as their capital shape choices. They analyzed an extensive-ranging panel information set of all U.S. on CP issues ever for the reason that basis of CP grades inside the early Seventies and observed that corporations' involvement in the CP souk is determined with the aid of an alternate-off among finance desires for investment as well as the rollover chance related to CP funding. The borrowings of CP are clearly associated with investment specific from different varieties of debt. This proposes that CP is a big

funding source for concurrent funding. They determined that CP is normally applied as bridge funding for funding and is often refunded within the bond marketplace and gives a substitute for coins-holdings. corporations have a tendency to access the CP souk after coins-holdings have deteriorated and upsurge their cash holdings after they reluctantly go out the CP marketplace. They, in addition, imply that organizations choose the quantity of borrowing from bank and CP traces of credit based on an alternate-off among rollover chance contemplations and the likelihood of banks expropriation.

Gregory and Boghozian, (2010) call attention to that enterprises and government that approach the CP showcase or have preferable FICO assessments over their associates, might have the capacity to acquire arbitrage benefits by getting efficiently in the market and afterward utilize the assets to buy higher yield here and now interests in different markets. The yields out to one month were observed to be needy upon slacked advancement in the overnight market, which they finished up could be because of the relative size of the business sectors since most US CP advertise happens in the overnight market.

Kacperczyk and Schnabl (2010) states that in spite of the CP advertise disturbances before, the money related emergency of 2007-2009 delineated the biggest decrease in the market and most in good than the past scenes, it generally influenced paper issued by monetary establishments. The emergency demonstrated that the Federal Reserve is probably going to react forcefully to such decrease in the CP showcase. Truth be told, the size of a reaction was extraordinary and incorporated a sweeping certification of currency advertise venture worth \$3 trillion and direct buys of business paper of up to \$370 billion. Such expansive scale showcase intercessions raise worries about the future good peril of



paper guarantors, autonomous of whether these certifications will stay certain or not. The measure of CP exceptional is still low and loan cost spreads high, yet guarantors will recall for quite a while that CP was substantially more hazardous than they had initially accepted. What's more, speculators now know the paper can be more hazardous than they thought. They infer that the abnormal amounts of wariness on the two sides of the market propose it will likely reduce with respect to its size before the monetary emergency.

Ololchike (2013) tested the effect of Treasury bills charge on industrial paper (CP) yield for corporations quoted at the Nairobi Securities alternate among January 2007 and December 2011. The take a look at used Regression and correlation analysis to determine the character and power among business paper yield and Treasury bills. The examiner determined a strong, big, fine relationship between Treasury bills charge and commercial paper yield.

The research in addition additionally located that fourteen companies had a noteworthy performance index found out via the general assessment index nearest to five inside the Likert scale of a score and that yearly overall performance developed notably from 2007-2011 step by step. The research suggested that businesses have to don't forget issuing CP to fund their quick-term duties on account that clientele had been prepared to hold the mechanisms due to their high return fee. The studies, in addition, recommended that techniques governing CP marketplace ought to be more broadcasted to allow extra groups embody CP in meeting their brief-time period responsibilities rather than bank loans.

Njambi (2013) completed studies on fee outcomes on CP trouble declarations: A case of registered businesses, which have issued CP in Kenya. The take a look at populace made

out of all quoted groups that have issued CP from the year 2008 to 2012. The results of the studies established that organizations that controlled to alternative the profitable quick-time period financial institution loans with CP experienced extensive interest financial savings of 2.85 and 13.eighty five percent with a mean of five point eighty five percent. The research additionally hooked up the anticipation of the studies that abnormal returns surrounding the difficulty of CP announcements need to be drastically high-quality. organizations in the Nairobi stock change that changed financial institution overdraft with a CP experienced effective abnormal returns due to hobby savings. for this reason, the issue of CP declaration is deduced as proper information with the aid of traders. The investigator endorsed in addition has a look at being performed to establish different factors affecting on CPY apart from problem declaration.

Muriuki (2013) explored the function of CBK charge on profitable banks in Kenya. The studies common a descriptive research and collected records from the to be had money owed and monetary statements from the nine registered commercial banks in Kenya. The researchers observed that taking all elements (CBK charge) non-stop zero, industrial banks productivity in Kenya became 1.147. Likewise, taking all different self-governing variables at zero, a unit upsurge in CB price result in a 0.752 upsurge in business banks productiveness. The research mounted that there was an intense alternate in quotes of CBK in the course of 2007 to 2012. The upsurge in vital Banks rates has extended over the said duration 2007 to 2012. The research comments that the enterprise of profitable banks in Kenya ought to invent policies that mitigate the banks from radical adjustments in critical financial institution charge, which hinder their desirability to its consumers.

Ondieki and Nyakundi (2013) analyzed the huge causes that caused strictness of profitable banks' loaning charges in spite of fee-incentives from the CBK. The studies authorised a imaginative studies plan and recognized that regardless of focused efforts with the aid of the primary bank for the income making banks to lessen their loaning quotes, little benefit become made due to the fact fundamental dedication changed into reliant on stiff enterprise competition, non-overall performance loans, internal policy boundaries and channels of channels. The research recommended a combined technique to remedy both internally and externally brought about demanding situations to the commercial enterprise, which is vibrant to the nation's economic progression.

Musyoka (2012) had to make the link between CP funding as well as working capital factors. The causal layout was authorized and findings showed that majority of companies had a robust wonderful association among working capital and CP borrowings materials. From a populace of twenty-seven companies that had issued CP in Kenya, twenty-two companies indicated negative liaison between CP borrowings and cash-preserving. This shows that as ranges of cash-maintaining discount, CP borrowing upsurge. On the contrary, CP borrowings had a nice liaison with check in accretion and accounts receivable. In this reference, the pupil drew a deduction from the preceding proof that organizations difficulty CP in Kenya to fund will increase in records as well as debts receivable.

Karimi (2012) did an inquiry on results of CP uptake at the Nairobi stock exchange and observed that the market capitalization, fairness turnover and shares traded impacts the number of CP issued, the accredited CP quantity and the wonderful quantity of commercial paper. The research similarly located that many investors in the CP

marketplace collect the paper at preserve and issuance it till maturity. consequently, there may be little change of CP in secondary markets. due to the fact issuers frequently fund the compensation of maturing CP with freshly issued CP. despite the fact that, they want to roll over developing CP produces the risks that investors may not be prepared to finance maturing CP.

## **2.4 Determinants of Commercial Paper Yield**

Munywoki (2000) whilst investigating on factors affecting call for for industrial paper as a short term supply of finance for publicly quoted corporations stated that organisation's coins flow, interest on bank Overdraft (O,D) and the treasury invoice fee (T.P) appreciably determine CP Y, although bank O.D price changed into determined to have a bad courting with the CPY. Musyoka (2012) additionally stated that the cost of borrowing of all corporations studied reduced after engaging C.P.,T.B price become determined to affect the C.P interest price. In light of the research findings, which discovered that C.P is a low fee borrowing contraptions, it's far counselled that agencies with an awesome credit rating or groups with a sturdy financial base have to interact it to reduce the level of its home borrowing (which in a roundabout way makes credit high priced as a way to allow businesses get entry to cheap credit from banks and forestall the personal area crowding out.

Selden (2013) whilst investigating on call for and supply within the commercial Paper noted that marketplace bills and commercial paper fluctuate in liquidity, a degree of credit score chance, and versatility of maturities. The industrial paper is less liquid than payments because there is no secondary market in paper. Within the case of direct paper,

this downside is mitigated in a few degree via casual assurances on the part of debtors that they may repurchase the observe if the lender wishes his coins before maturity. From time to time, dealers, as well as direct debtors, repurchase paper they have got offered, however, the lender can't rely upon this. Adjustments in bill yields will bring about contrary shifts inside the supply of price range to the paper markets; this is, a fall (rise) in bill yields will set off an expanded (reduced) supply of funds to the direct paper and supplier paper markets

The researcher similarly stated that the cost of business paper finances includes three foremost additives: the yield presented the lender, the value of provider offerings, and the fee of imparting protection, inside the shape of open credit strains, in opposition to the contingency of an unanticipated decline in paper borrowings. by the same token, given any level of paper yields, a decline (rise) in bank interest quotes will result in an enormously sharp fall (upward thrust) inside the demand for a paper price range. The differential among borrowing expenses at banks and within the open marketplace is consequently a key determinant business paper yield. consequently, there may be the tendency for borrowers to shy away from the banks all through recessions, as the differential between bank charges and paper, yields widens.

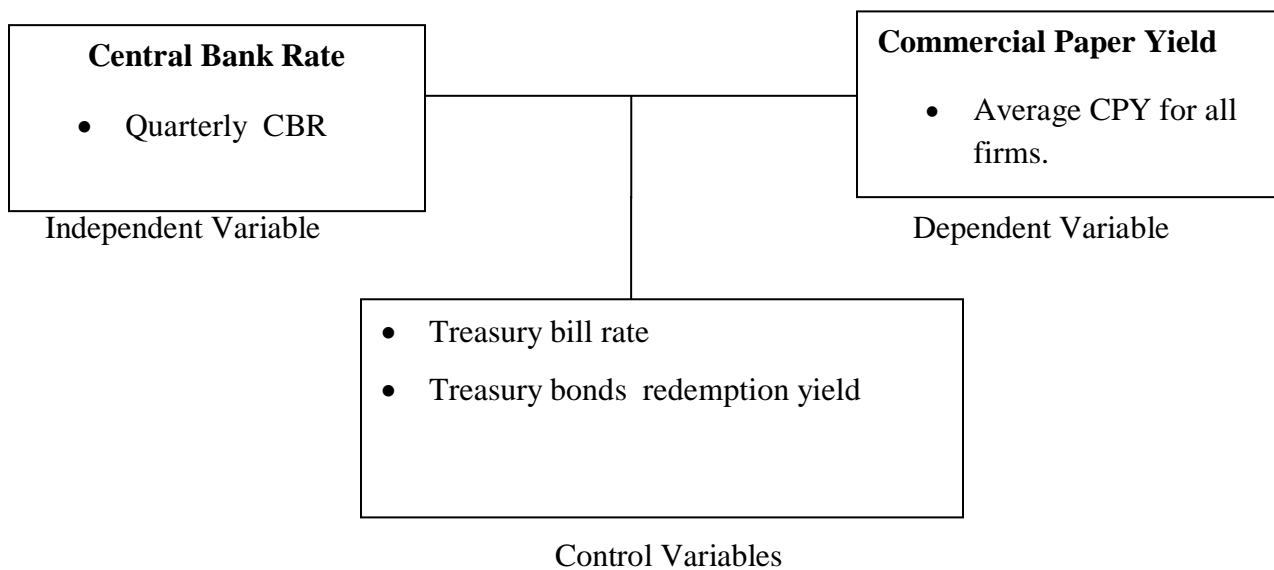
## **2.5 Conceptual Framework**

A conceptual framework helps the reader to quick See the proposed relationships been variables inside the study (Mugenda&Mugenda, 2003). The goal of this have a look at is to study the effect of crucial financial institution rate on commercial paper yield. The impartial variable can be significant financial institution price (CBR) while the structured

variable may be the yielded on commercial paper (CPY). Moreover, look at will combine the treasury bill rate and Treasury bond redemption yield as the control variables. The anticipated dating some of the variables is that the imperative financial institution price, Treasury bill price and coins and cash equivalents have incredible effect on CPY depicting terrible relationship whereas central financial institution rate indicates superb dating

### 2.5.1 Conceptual model

**Figure 2 .1 Conceptual model.**



The independent variable was the central bank rate (CBR) while the dependent variable was the commercial paper yield (CPY). Additionally, the study integrated the Treasury bond yield and Treasury bill rate as control variables

## 2.6 Summary of Literature Review

The have a look at could be underpinned on loanable finances theory, the rational expectations theory, Keynesian concept of money and market segmentation principle. Loanable funds concept is most appropriate for explaining long - time period hobby quotes, idea tries to pick out the approximate reasons of interest charge versions through analyzing the supply of and demand for credit. The idea derives from the notion that savers make a selection among consumption now and consumption inside the future. The rationale expectancies idea of hobby prices is based totally on the concept that people formulate expectations based totally on all of the statistics that are available on the market, concept holds that the first-rate estimation for destiny interest fees is the present day spot charge and that adjustments in interest charges are ordinarily because of sudden information or adjustments in economic elements.

The Keynesian idea of cash is primarily based on the idea that the extent of coins and marketable securities held by firms is determined by way of the reasons of keeping them. there's want of preserving vast amounts of money given that money marketplace devices are liquid and consequently firms want to have liquid operating capital like coins to settle bills and another recurrent expenditure like bills of salaries, alternate debts, taxes, and dividends. The literature overview display that most of the research performed by Jaya Dev and Kumar (2014), Kashyap, Stein and Wilcox (2013), Matthias et al. (2010), Gregory and Boghozian, (2010), Kacperczyk and Schnabl (2010) subject the advanced international, whose monetary footing isn't the same as that of Kenya. there may be

however plenty consistency within the research that business paper financing is mainly used to finance short time period investments.

Similarly, the local studies by way of Ololchike (2013), Njambi (2013), Muriuki (2013), Ondieki and Nyakundi (2013) and Musyoka (2012) have no longer thoroughly addressed any courting among commercial Paper yield and imperative bank price. further, many of the many academic courses and articles, there's nonetheless a first rate gap in this research vicinity that no study has been undertaken to this point in the context of the impact of vital financial institution fees on CPY. This look at consequently will contain the missing hyperlink among crucial bank price and CPY.



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter describes the research design, population, the data collection method, data analysis methods and diagnostic test and test of significance that were used in the course of this research. This section also indicates the research tools employed to collect data and carrying out the data analysis.

#### **3.2 Research Design**

The research design employed in this study was the descriptive survey method. The study was therefore; designed to establish the effect of Central Bank rate on commercial paper yield for companies listed at the NSE.

#### **3.3 Population of the Study**

The research population were the 34 listed companies at the NSE that issued CP between January 2007 to December 2016 as shown in (Appendix I). Thus, the study carried out a census since the population was small and finite.

#### **3.4 Data Collection**

This research used secondary data, which involved the collection and analysis of published material and information. Data on Treasury bill rate and the central bank rate were obtained from Central bank of Kenya as shown in (Appendix 2). Data on commercial paper yield was obtained from Capital Market Authority and Nairobi Securities Exchange database and Treasury bond

yield data was obtained from the Capital market authority data base as shown in (Appendix 3). The data covered a ten-year period from January 2007 to December 2016.

### **3.5 Data Analysis**

The data was summarized as shown in (Appendix 4) and analyzed using the Statistical Package for Social Sciences. Descriptive statistics included measures of central tendency like the mean, percentages and the standard deviation while inferential statistics entailed correlation and regression analysis. Correlation analysis was used to determine the strength of the relationship between the variables while regression analysis was used to establish the relationship between the study variables.

#### **3.5.1 Diagnostic test.**

Diagnostic test was used to test the assumptions of the study model. This study carried out a test on multicollinearity, normality and test of independence of observations (serial correlation). The Durbin Watson statistic was used to tests for serial correlation or autocorrelation while the variance inflation factors and tolerance levels were used to test for multicollinearity. Finally, normality was tested using measures of skewness and kurtosis

### 3.5.2 Analytical Model

The regression equation took the following form

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

$Y$  = Commercial paper yield which is the outstanding annual CPY yield at time  $t$   
for  $i = 1, 2, \dots, n+1$  firms

$X_1$  = Central bank rate, which is the quarterly CBR

$X_2$  = Treasury bill rate, which is the 364-day TBR on quarterly basis

$X_3$  = Treasury bonds redemption yield on quarterly basis

$\beta_1 - \beta_3$  = Regression Coefficients

$\beta_0$  = Constant

$\varepsilon$  = error term

### 3.5.3 Test of Significance

The model's test of significance included, Coefficient of determination (R square) – this was used to measure how well the regression equation fits the data or the proportion of variability in a data set that is accounted for by a statistical model. The t test – was used to determine whether any predictor variable had any influence on the response variable over and above the other

predictor variables. The P-values of results of the multiple regression analysis were used to test if there was any significant linear relationship between the variables. The F test was also used to test the significance of the model. Additionally, Multi-collinearity test was used to check whether explanatory variables were correlated to ensure the validity of multiple regression models predicting CPY using the variance inflation factors (VIF).

## CHAPTER FOUR

### DATA ANALYSIS, RESULTS AND INTERPRETATION

#### 4.1 Introduction

This chapter presents the results of the analysed data, the discussion and interpretation of the results. The chapter presents the summary descriptive statistics, correlation and regression analysis and finally an interpretation of the findings.

#### 4.2 Descriptive Statistics

Table 4.1 shows the descriptive statistics results

**Table 4.1 Descriptive Statistics**

	<b>CPY</b>	<b>CBR</b>	<b>TBR</b>	<b>BRY</b>
N	40	40	40	40
Mean	7.1245	9.4707	9.0985	13.1875
Std. Deviation	4.68925	2.88048	3.37671	1.79029
Skewness	1.846	1.589	.522	-.066
Kurtosis	3.135	2.711	1.986	.642
Minimum	3.14	5.83	1.96	8.62
Maximum	22.07	18.00	19.48	16.91

**Source: Research Findings**

Table 4.1 shows that the average commercial paper yield (CPY) was 7.1245 over the period under consideration with minimum and maximum values of 3.14 and 22.07 respectively. The table also shows that the central bank rate (CBR) had a mean value of

9.47 with minimum and maximum values of 5.83 and 18.00 respectively. Additionally, the table shows that the average Treasury bill rate (TBR) was 9.09 with minimum and maximum values being 1.96 and 19.48 respectively. The table further indicates that the mean Treasury bonds redemption yield (BRY) was 13.1875 with minimum and maximum values of 8.61 and 16.91 respectively. The skewness and kurtosis values were are within the range of 1 and 3 which that the data was normally distributed.

### 4.3 Correlation Analysis

The correlation analysis results are shown by table 4.2

**Table 4.2 Correlation Matrix**

	CPY	CBR	TBR	BRY
CPY	1			
CBR	.632**	1		
TBR	.693**	.620**	1	
BRY	.422**	.471**	.551**	1

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

#### Source: Research Findings

Table 4.2 shows that the commercial paper yield (CPY) had a strong and positive correlation with the central bank rate (CBR) and the Treasury bill rate (TBR) as indicated by correlation coefficients of 0.632 and 0.693 respectively. The table also shows that the commercial paper yield (CPY) had a weak positive correlation with the Treasury bonds redemption yield (BRY) as indicated by a correlation coefficient of 0.422. The

correlation coefficients are also below 0.75, which indicates that there was no problem of multicollinearity.

## 4.4 Regression Analysis

### 4.4.1 Model Summary

**Table 4.3 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.806 <sup>a</sup>	.649	.620	2.89054	1.838

a. Predictors: (Constant), BRY, CBR, TBR

b. Dependent Variable: CPY

#### **Source: Research Findings**

Table 4.3 indicates that the R square value is 0.649 thus an indication that the independent variables explain 64.9% of the variation in the dependent variable. The other 35.1% of the variation is explained by other factors, which have not been considered, by the model. The table also shows that R-value (correlation coefficient) is 0.806, which indicates that there is a strong correlation between the dependent and independent variables. The Durbin Watson value is 1.838, which is within the range of 1 and 4 which indicates that there is no serial correlation.

#### 4.4.2 Analysis of Variance

**Table 4.4 Analysis of Variance**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	556.787	3	185.596	22.213	.000 <sup>b</sup>
	Residual	300.788	36	8.355		
	Total	857.575	39			

a. Dependent Variable: CPY

b. Predictors: (Constant), BRY, CBR, TBR

**Source: Research Findings**

The ANOVA results on table 4.4 indicate that the F value is 22.213, which is an indication that the regression model is significant since the P value of 0.00 is less than the significance value of 0.05. This indicates that regression is a good predictor of the relationship among the considered variables.

#### 4.4.3 Regression Coefficients

**Table 4.5 Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-3.398	3.600		-.944	.352	
	CBR	.411	.281	.253	1.464	.152	.327
	TBR	.834	.254	.601	3.289	.002	.292
	BRY	-.073	.310	-.028	-.235	.815	.695

a. Dependent Variable: CPY

**Source: Research Findings**



Table 4.5 shows that there is an insignificant positive relationship between the central bank rate (CBR) and the commercial paper yield (CPY) whereas there is significant positive relationship between the Treasury bill rate (TBR) and the commercial paper yield (CPY). The tables also show that there is an insignificant negative relationship between the Treasury bonds redemption yield (BRY) and the commercial paper yield (CPY). All the variance inflation factors (VIF) are within the range of 1 and 10, which indicates that the multicollinearity assumption is not violated. The resulting regression equation can be written as follows

$$Y = -3.398 + 0.411X_1 + 0.834X_2 - 0.073X_3 + \varepsilon$$

#### **4.5 Interpretation of Findings**

The findings of the research found that the central bank rate (CBR) had an insignificant positive relationship with the commercial paper yield (CPY). This indicates that the central bank rate has no significant effect on the commercial paper yield of firms trading at the NSE. This finding however contradicts that of Kacperczyk and Schnabl (2010) who states that in spite of the CP advertise disturbances before, the money related emergency of 2007-2009 delineated the biggest decrease in the market and most in good than the past scenes; it generally influenced paper issued by monetary establishments. The results show that there is an insignificant positive relationship between the Treasury bonds redemption yield (BRY) and the commercial paper yield (CPY). This indicates that the treasury bonds redemption yield does not affect the yield of a commercial paper of firms trading at the NSE.

The results also show that the Treasury bill rate (TBR) has a significant positive relationship with the commercial paper yield (CPY). This indicates that the Treasury bill rate significantly affects the commercial paper yield of firms trading at the NSE. This finding is similar to that of Selden (2013) who noted that treasury bills and commercial paper fluctuate in liquidity, a degree of credit score chance, and versatility of maturities. Musyoka (2012) also pinpointed that the cost of borrowing of all corporations studied reduced after engaging C.P.T.B price become determined to affect the C.P interest price.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This section provides a summary of the research findings, the conclusions and recommendations of the research, the research limitations and the areas, which might require additional investigation.

#### **5.2 Summary**

The objective of this research was to assess the effect of central bank rate on commercial paper yield for companies listed on the NSE. A descriptive research design was employed to aid in establishing the relationship among the variables. The research focused on the commercial paper yield as the dependent variable while the central bank rate formed the independent variable. Moreover, the treasury rate and Treasury bond redemption yield were incorporated as the control variables and the study targeted the firms, which had issued commercial paper at the Kenyan securities market NSE.

The summary statistics findings indicated that the average commercial paper yield (CPY) in the period under consideration was 7.1245 whereas the central bank rate (CBR) had a mean value of 9.47 while the mean Treasury bill rate (TBR) was 9.09. The results further indicated that the mean Treasury bonds redemption yield (BRY). The skewness and kurtosis values were within the range of 1 and 3 which that the data was normally distributed. The correlation analysis findings established that the commercial paper yield (CPY) had a strong and positive correlation with the central bank rate (CBR) and the

Treasury bill rate (TBR) but a weak positive correlation with the Treasury bonds redemption yield (BRY).

The regression results indicated that R square value was 0.649 which meant that 64.9% of the variation in the dependent variable was explained by the independent and control variables. The correlation coefficient value was 0.806, which meant that there was a strong correlation between the dependent and independent variables. The ANOVA findings established that regression model was significant and a good predictor of the relationship among the considered variables. Finally, the study found an insignificant positive and negative relationship between the central bank rate (CBR), Treasury bonds redemption yield (BRY) and the commercial paper yield (CPY) respectively. The study also found a positive and significant relationship between Treasury bill rate (TBR) the commercial paper yield (CPY).

### **5.3 Conclusions**

The research found an insignificant positive relationship between the central bank rate (CBR) and the commercial paper yield (CPY) for companies listed on the NSE. The research thus makes the conclusion that the commercial paper yield for companies listed on the NSE is not significantly influenced by the central bank rate.

Secondly, the research established a significant positive relationship between the Treasury bill rate (TBR) and the commercial paper yield (CPY) for companies listed on the NSE. The research thus makes the conclusion that the commercial paper yield for companies listed on the NSE is significantly influenced by the Treasury bill rate.

Finally, the study revealed an insignificant negative relationship between the Treasury bonds redemption yield (BRY) and the commercial paper yield (CPY) for companies listed on the NSE. The research thus makes the conclusion that the commercial paper yield for companies listed on the NSE is not significantly influenced by the Treasury bonds redemption yield.

#### **5.4 Recommendations**

As per the conclusion that the central bank rate has no significant effect on the yield of commercial paper for companies listed on the NSE. This study recommends that the managements of firms listed on the NSE should enhance the usage of commercial paper by firms since its independent of the central bank rate.

The study also made a conclusion that the yield of a commercial paper for companies listed on the NSE is influenced by the treasury bill rate. This study recommends that the management of firms issuing commercial papers should take into account the rate at which treasury bills have been issued at before they issue commercial papers.

The research also concluded that the Treasury bonds redemption yield does not significantly affect the yield of commercial papers of companies listed on the NSE. This study thus recommends that the management of firms listed at the NSE should enhance their issuance of commercial papers since their yield is not influence by government bonds redemption yield.

## **5.5 Limitations of the Study**

This study considered quarterly data for a period of 10 years to carry out the analysis. The quarterly data may not represent the effect of the central bank rate on commercial paper yield for the period not covered by the study. This study also focused on the 364-day Treasury bill however; there are other rates on short-term government securities like the 91-day and 181-day Treasury bill rates.

## **5.6 Suggestion for Further Research**

The coefficient of determination for the study established that the independent variables which included that central bank rate (CBR), the Treasury bills rate and Treasury bonds redemption yield (BRY) explain 64.9% of the variation in the dependent variable (commercial paper yield). The research therefore recommends an additional research on other factors that might affect the yield on commercial papers. The study also recommends an additional research using other treasury bill rates like the monthly treasury bill rates, the 91 day treasury bill and also the 181 days treasury bills.

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## APPENDICES

### Appendix I: Companies that have issued Commercial Paper

Companies which have issued CP from 1994-2016 Number and Year of Subsequent Renewal

	Issuing Company	Issue Value Kshs Million	Year of Initial Issue	1st	2nd	3rd	4th	5th	6th	7th	8th	Years in Market
1.	Agip Kenya	380	1998	1999	2005							2
2.	Athi River Mining Limited	180	1998	2000	2003	2005	2006	2007	2008 Expired	2013	2015	8
3.	Bidco Oil Company	400	1999	2001	2008	2012						7
4.	BAT Limited	750	1996	2008	2012							15
5.	Brook Bond	1000	1994									1
6.	Caltex Oil	600	1995	2000	2001	2007						5
7.	Centum Limited	700	2000	2005	2008	2012	2015	2016				17
8.	CMC Holdings	250	1999	1999	2000	2001	2002	2007	2008	2009	2011	17
9.	Consolidated Bank	300	2002	2006	2009	2013	2015	2016				7
10.	Cooper Kenya Limited	200	2004	2005	2007	2008	2009	2013	2014			7
11.	Crown Berger Limited	250	2000	2001	2002	2004	2005	2006	2007	2009	2015	17
12.	Davis & Shirliff Limited	200	2008	2011	2014							10
13.	EastAfrica Industries (Unilever)	650	1999	2000	2001	2002	2008	2013				4
14.	Ecta Kenya	80	2000	2001	2002	2004	2005	2007	2008	2009	2013	10
15.	Express Kenya	200	1999	2000	2006	2009						5
16.	General Motors Kenya	600	1999	2000	2001	2010						8
17.	Industrial Promotion Services	150	1999	2000	2006	2012						9
18.	Kenya Hotel Properties	200	2000	2001	2002	2004	2005	2006	2007	2009	2014	7

19.	Kenya Kazi Limited	280	2011	2013	2016							12
20.	Kenya Oil Company (Kenol Kobil)	700	2001	2003	2004	2005	2006	2007	2008	2009	2010	8
21.	Kenya Power	1800	1999	2000	2006	2010						7
22.	Kenya Shell	1050	1999	2000	2001	2008	2012					7
23.	KK Securities Limited	250	2011	2013								10
24.	K-Rep Bank	500	2007									10
25.	Lonrho Motors	1500	1999									11
26.	Mabati Rolling Mills	500	1997	1999	1999	1999	2001	2002	2008	2013	2015	8
27.	Motor Mart Kenya	1800	1995	2000	2008	2012						7
28.	Nation Media Group	1000	1999	2001	2010	2012	2015					5
29.	Pan Africa Paper Mills	1000	2000	2001	2002	2008	2013	2016				6
30.	PTA Bank	400	2009	2011	2013	2014	2016					9
31.	Rhone Poulec	350	2009	2013	2014	2016						7
32.	Synergy Industrial	180	2006	2007	2008 Expired	2009	2012	2015				5
33.	Total Kenya Limited	1800	1999	2006	2010	2015						6
34.	TPS Serena	160	1999	2000	2001	2002	2006	2010	2012	2014		9

## Appendix 2: Central Bank Rates Data

Date	Rate	Average	Date	Rate	Average
18/09/2017	10				
17/07/2017	10				
27/03/2017	10				
30/01/2017	10				
01/11/2016	10				
01/10/2016	10				
01/09/2016	10	10			
01/08/2016	10				
01/07/2016	10.5				
01/06/2016	10.5	10.33333			
01/05/2016	10.5				
01/04/2016	11.5				
01/03/2016	11.5	11.16667			
01/02/2016	11.5				
01/01/2016	11.5	11.5			
01/12/2015	11.5				
01/11/2015	11.5				
01/10/2015	11.5				
01/09/2015	11.5	11.5			
01/08/2015	11.5				
01/07/2015	11.5				
01/06/2015	10	11.2			
01/05/2015	8.5				
01/04/2015	8.5	9.625			
01/03/2015	8.5				
01/02/2015	8.5				
01/01/2015	8.5	8.5			
01/12/2014	8.5				
			01/11/2014	8.5	
			01/10/2014	8.5	8.5
			01/09/2014	8.5	
			01/08/2014	8.5	
			01/07/2014	8.5	8.5
			01/06/2014	8.5	
			01/05/2014	8.5	
			01/04/2014	8.5	8.5
			01/03/2014	8.5	
			01/02/2014	8.5	
			01/01/2014	8.5	8.5
			01/12/2013	8.5	
			01/11/2013	8.5	
			01/10/2013	8.5	8.5
			01/09/2013	8.5	
			01/08/2013	8.5	
			01/07/2013	8.5	8.5
			01/06/2013	8.5	
			01/05/2013	8.5	
			01/04/2013	9.5	8.833333
			01/03/2013	9.5	
			01/02/2013	9.5	
			01/01/2013	9.5	9.5
			01/12/2012	11	
			01/11/2012	11	
			01/10/2012	13	11.66667
			01/09/2012	13	
			01/08/2012		16.5



Date	Rate	Average
01/07/2012	16.5	15.33333
01/06/2012	18	
01/05/2012	18	
01/04/2012	18	18
01/03/2012	18	
01/02/2012	18	
01/01/2012	18	18
01/12/2011	18	
01/11/2011	16.5	
01/10/2011	11	15.16667
01/09/2011	7	
01/08/2011	6.25	
01/07/2011	6.25	6.5
01/06/2011	6.25	
01/05/2011	6	
01/04/2011	6	6.083333
01/03/2011	6	
01/02/2011	5.75	
01/01/2011	5.75	5.833333
01/12/2010	6	
01/11/2010	6	
01/10/2010	6	6
01/09/2010	6	
01/08/2010	6	
01/07/2010	6	6
01/06/2010	6.75	
01/05/2010	6.75	
01/04/2010	6.75	6.75
01/03/2010	6.75	
01/02/2010	7	
01/01/2010	7	6.916667

Date	Rate	Average
01/12/2009	7	
01/11/2009	7	
01/10/2009	7.75	7.25
01/09/2009	9	
01/08/2009	7.75	
01/07/2009	7.75	8.166667
01/06/2009	8	
01/05/2009	8	
01/04/2009	8.25	8.083333
01/03/2009	8.25	
01/02/2009	8.5	
01/01/2009	8.5	8.416667
01/12/2008	8.5	
01/11/2008	9	
01/10/2008	9	8.833333
01/08/2008	9	
01/07/2008	9	9
01/06/2008	9	
01/05/2008	8.75	
01/04/2008	8.75	8.833333
01/03/2008	8.75	
01/02/2008	8.75	
01/01/2008	8.75	8.75
01/12/2007	8.75	
01/11/2007	8.75	
01/10/2007	8.75	8.75
01/09/2007	8.75	
01/08/2007	8.75	
01/07/2007	8.5	8.666667
01/06/2007	8.5	
01/05/2007	10	

# Appendix 3: Treasury Bonds Data



## BONDS WEEKLY STATISTICS

ISSUE NO.	ISIN CODE STATUS	ISSUE DATE	MATURITY DATE	ISSUED VALUE IN MILLIONS	COUPON (%)	HIGHEST YIELD (%)	THIS WEEK LOWEST YIELD (%)	AVERAGE TRADED YIELD (%)	TOTAL VALUE (kshs)
<b>GOVERNMENT OF KENYA FIXED RATE TREASURY BONDS</b>									
<b>WEEKLY BONDS MARKET STATISTICS FOR THE WEEK-ENDING FRIDAY SEPTEMBER 01, 2017</b>									
<b>TWO YEAR BONDS</b>									
FXD 1/2016/2Yr	K16010100000000000000	25-Jan-16	23-Jan-18	20,153.75	15.760				1,600,000
FXD 2/2016/2Yr	K16020100000000000000	23-May-16	21-May-18	30,218.35	12.020	10.6985	10.6985	10.6985	500,000,000
FXD 3/2016/2Yr	K16030100000000000000	19-Dec-16	17-Dec-18	25,477.55	12.509	11.0000			500,000,000
<b>FIVE YEAR BONDS</b>									
FXD 1/2012/5Yr	K12010100000000000000	28-May-12	22-May-17	31,079.55	11.855				1,200,000
FXD 1/2013/5Yr	K13010100000000000000	29-Aug-13	23-Aug-18	20,240.75	12.802	10.6049	10.6049	10.6049	1,200,000
FXD 1/2013/5Yr	K13010100000000000000	1-Jun-13	26-Jun-18	26,340.05	11.305				66,900,000
FXD 3/2013/5Yr	K13030100000000000000	25-Nov-13	19-Nov-18	26,638.69	11.962	11.1255	10.1878	10.1878	66,900,000
FXD 1/2014/5Yr	K14010100000000000000	28-Apr-14	22-Apr-19	25,733.70	10.870	13.1800	100.5312	96.6491	5,000,000
FXD 2/2014/5Yr	K14020100000000000000	23-Jun-14	17-Jun-19	29,381.17	10.934	11.3000	11.3000	11.3000	500,000,000
FXD 1/2015/5Yr (Re-opened)	K15010100000000000000	29-Jun-15	23-Jun-20	30,956.05	13.193	11.9500	11.9500	11.9500	10,000,000
FXD 2/2015/5Yr	K15020100000000000000	30-Nov-15	23-Nov-20	30,673.85	13.002	12.1000	11.9948	12.2474	68,500,000
FXD 1/2016/5Yr	K16010100000000000000	25-Apr-16	19-Apr-21	19,544.20	14.334	12.0250	11.9500	12.0983	500,000,000
FXD 2/2016/5Yr	K16020100000000000000	25-Jul-16	19-Jul-21	24,395.30	14.069	12.2800	12.0000	12.1386	401,500,000
FXD 3/2016/5Yr	K16030100000000000000	26-Sep-16	20-Sep-21	23,051.95	13.112	12.3000	12.3000	12.3000	500,000,000
FXD 1/2017/5Yr	K17010100000000000000	28-Aug-17	22-Aug-22	12,112.20	12.465				
<b>TEN YEAR BONDS</b>									
FXD1/2007/10Yr	K07010100000000000000	29-Oct-07	16-Oct-17	9,308.80	10.750	8.4500	8.1480	8.2990	1,061,000,000
FXD1/2008/10Yr	K08010100000000000000	29-Oct-07	12-Feb-18	2,892.75	10.750				
FXD2/2008/10Yr (Re-opened)	K08020100000000000000	28-Jul-08	18-Jul-18	13,504.70	10.750	11.1445	10.8312	11.0662	137,800,000
FXD3/2008/10Yr	K08030100000000000000	29-Sep-08	17-Sep-18	22,018.52	10.750				
FXD1/2009/10Yr	K09010100000000000000	27-Sep-09	15-Sep-19	27,354.16	10.750				
FXD1/2010/10Yr	K10010100000000000000	28-Apr-10	13-Apr-20	19,384.16	8.750				
FXD2/2010/10Yr	K10020100000000000000	1-Nov-10	19-Oct-20	18,849.90	9.307	11.9729	11.9729	11.9729	5,700,000
FXD1/2012/10Yr	K12010100000000000000	30-Jun-12	13-Jun-22	35,273.50	12.300	11.3700	11.3700	11.3700	19,000,000
FXD1/2013/10Yr	K13010100000000000000	1-Jul-13	19-Jun-23	39,248.20	12.371	12.0700	12.0700	12.0700	1,000,000
FXD1/2014/10Yr (Re-opened)	K14010100000000000000	29-May-15	19-Jun-24	35,852.15	12.180	13.3200	12.2700	12.7950	12,000,000
FXD1/2016/10Yr	K16010100000000000000	29-Aug-16	17-Aug-26	16,508.45	15.038	12.9000	12.4000	12.8857	1,300,000,000
FXD1/2017/10Yr	K17010100000000000000	31-Jul-17	19-Jul-27	17,849.25	12.966	12.9750	12.2000	12.5538	521,000,000
<b>ELEVEN YEAR BONDS</b>									
FXD1/2006/11Yr	K06010100000000000000	25-Sep-06	11-Sep-17	4,031.40	13.750				
<b>TWELVE YEAR BONDS</b>									
FXD1/2006/12Yr	K06010100000000000000	28-Aug-06	13-Aug-18	3,300.95	14.000				
FXD1/2007/12Yr	K07010100000000000000	28-May-07	13-May-19	4,864.60	13.000				
<b>FIFTEEN YEAR BONDS</b>									
FXD1/2007/15Yr	K07010100000000000000	28-May-07	7-Mar-22	3,654.60	14.600	12.6099	12.3000	12.4574	600,000,000
FXD2/2007/15Yr	K07020100000000000000	25-Jun-07	6-Jun-22	33,646.84	13.500	12.3194	12.3194	12.3194	400,000,000
FXD3/2007/15Yr (Re-opened)	K07030100000000000000	26-Nov-07	7-Nov-22	32,908.10	12.500				
FXD1/2008/15Yr	K08010100000000000000	31-Mar-08	13-Mar-23	7,820.90	12.500				
FXD1/2009/15Yr	K09010100000000000000	26-Oct-09	7-Oct-24	9,401.45	12.500				
FXD1/2010/15Yr	K10010100000000000000	29-Mar-10	19-Mar-25	22,326.25	10.250				
FXD2/2010/15Yr	K10020100000000000000	27-Dec-10	8-Dec-25	13,513.10	9.000				
FXD1/2012/15Yr	K12010100000000000000	24-Sep-12	6-Sep-27	27,093.60	11.000				
FXD1/2013/15Yr (Re-opened)	K13010100000000000000	23-Feb-13	7-Feb-28	42,138.45	11.250				
FXD2/2013/15Yr	K13020100000000000000	29-Apr-13	10-Apr-28	27,051.25	12.000				
<b>TWENTY YEAR BONDS</b>									
FXD1/2008/20Yr (Re-opened)	K08010100000000000000	30-Jun-08	5-Jun-28	38,145.10	13.750	12.9000	107.6241	104.8288	250,000,000
FXD1/2011/20Yr	K11010100000000000000	30-May-11	5-May-31	9,365.80	10.000	13.5227	13.3779	13.4545	540,000,000
FXD1/2012/20Yr (Re-opened)	K12010100000000000000	26-Nov-12	1-Nov-32	44,581.65	12.000	13.3806	13.3000	13.3602	36,200,000
FXD1/2016/20Yr (Re-opened)	K16010100000000000000	26-Sep-16	1-Sep-36	12,761.20	14.000	13.3720	13.3720	13.3720	60,000,000
<b>TWENTY FIVE YEAR BOND</b>									
FXD1/2010/25Yr	K10010100000000000000	28-Jun-10	28-May-35	20,182.50	11.250				
<b>THIRTY YEAR BOND</b>									
SDB 1/2011/30Yr	K11010100000000000000	28-Feb-11	21-Jan-41	28,144.70	12.000				
<b>INFRASTRUCTURE BONDS</b>									
IFB 1/2011/12Yr	K11010100000000000000	3-Oct-11	18-Sep-23	43,447.35	12.000				
IFB 1/2009/12Yr	K09010100000000000000	23-Feb-09	6-Feb-21	19,738.85	12.500				
IFB 2/2009/12Yr	K09020100000000000000	7-Dec-09	22-Nov-21	18,897.65	12.000	12.0000	12.0000	12.0000	5,100,000
IFB 1/2010/8Yr	K10010100000000000000	1-Mar-10	19-Feb-18	15,908.05	9.750				
IFB 2/2010/8Yr	K10020100000000000000	30-Aug-10	19-Aug-19	32,871.55	6.000				
IFB 1/2013/12Yr	K13010100000000000000	30-Sep-13	15-Sep-25	38,383.70	11.000	11.3602	11.2500	11.2750	720,300,000
IFB 1/2014/12Yr	K14010100000000000000	27-Oct-14	12-Oct-26	35,480.90	11.000	11.2000	10.3500	10.8000	174,400,000
IFB 1/2015/12Yr	K15010100000000000000	30-Mar-15	15-Mar-27	51,182.20	11.351	11.7580	11.2000	11.4190	2,650,000,000
IFB 1/2015/9Yr	K15010100000000000000	14-Dec-15	2-Dec-24	25,119.55	11.000	10.4300	10.4300	10.4300	26,600,000
IFB 1/2016/9Yr	K16010100000000000000	23-May-16	12-May-25	36,303.20	12.500	11.3000	10.4500	10.8675	245,000,000
IFB1/2016/15Yr	K16010100000000000000	24-Oct-16	6-Oct-31	40,026.65	12.000				
IFB1/2017/12Yr	K17010100000000000000	27-Feb-17	12-Feb-29	14,330.40	12.450	12.0000	11.8000	11.9000	40,000,000
MABY/2017/2	K17020100000000000000	9-Feb-17	6-Apr-20	150.00	10.000	10.0000	10.0000	10.0000	626,918
<b>SECURITIZED BONDS</b>									
<b>CENTUM BOND SENIOR UNSECURED FIXED RATE AND EQUITY LINKED NOTES</b>									
CTNB.BD.18.09.17/13.50 (Senior unsecured fixed rate notes)	K18091701000000000000	26-Sep-12	18-Sep-17	2,817.12	13.500				
CTNB.BD.18.09.17/12.75 (Senior unsecured equity linked notes)	K18091702000000000000	26-Sep-12	18-Sep-17	1,250.80	12.750				
CTNB.BD.08.08.20/13	K08082001000000000000	15-Jun-15	8-Jun-20	3,899.22	13.000				
CTNB.BD.08.08.20/12.5	K08082002000000000000	15-Jun-15	8-Jun-20	2,100.77	12.500				
CTNB.BD.08.08.20/12.5V	K08082003000000000000	15-Jun-15	8-Jun-20	2,100.77	12.500				
<b>CONSOLIDATED BANK OF KENYA LTD. MEDIUM TERM NOTE PROGRAMME</b>									
CON.BD-FXD(SN)/2012/7Yr	K12070100000000000000	30-Jun-12	24-Jul-19	1480.60	13.250				
CON.BD-FXD(SBN)/2012/7Yr	K12070200000000000000	30-Jun-12	24-Jul-19	1965.00	13.600				
CON.BD-FR(SN)/2012/7Yr	K12070300000000000000	30-Jun-12	24-Jul-19	1.00					
<b>SHELTER AFRIQUE MEDIUM TERM UNSECURED NOTES</b>									
FXD (Shelter Afrique) /2013/5Yr	K13050100000000000000	30-Sep-13	28-Sep-18	4,239.70	12.750				
FR (Shelter Afrique) /2013/5Yr	K13050200000000000000	30-Sep-13	28-Sep-18	780.30	11.000				
<b>MRM</b>									
FR (MRM) 2008/8Yr	K08080100000000000000	27-Oct-08	3-Jan-17	13.785					
FXD (MRM) 2008/8Yr	K08080200000000000000	27-Oct-08	3-Jan-17	8.215	13.000				
<b>STANBIC BANK SENIOR &amp; SUBORDINATED BOND ISSUE</b>									
FR (CFC Stanbic) 2009/7Yr	K09070100000000000000	7-Jul-09	7-Jul-16	9.790					
FXD (CFC Stanbic) 2009/7Yr	K09070200000000000000	7-Jul-09	7-Jul-16	24,620	12.500				
<b>KENGEN PUBLIC INFRASTRUCTURE BOND OFFER 2019</b>									
FXIB 1/2009/10Yr	K09010100000000000000	2-Nov-09	31-Oct-19	15,628.00	12.600				
<b>HOUSING FINANCE MEDIUM TERM NOTE</b>									
FXD (HFCK) 02/2012/7Yr	K12020100000000000000	22-Oct-12	14-Oct-19	2,989.10	13.000				
FR (HFCK) 2010/7Yr	K10070100000000000000	26-Oct-10	2-Oct-17	1,187					
FXD (HFCK) 2010/7Yr	K10070200000000000000	26-Oct-10	2-Oct-17	5,884	8.500				
<b>I&amp;M MEDIUM TERM NOTE</b>									
FRN I&M-01/13/5.25	K13050100000000000000	13-Dec-13	8-Mar-19	3,429	(182.2%)				
FXD I&M-01/13/5.25	K13050200000000000000	13-Dec-13	8-Mar-19	226	12.800				
<b>BRITAM MEDIUM TERM NOTE</b>									
BRTB.BD.22/07/19-0037-13	K19072201000000000000	22-Jul-14	15-Jul-19	6,000	13.000	13.0000	13.0000	13.0000	50,300,000
<b>UAP HOLDINGS MEDIUM TERM NOTE</b>									
UAP.BD.22.07.2019	K19072202000000000000	28-Jul-14	22-Jul-19	2000.00	13.000				
<b>NIC MEDIUM TERM NOTE</b>									
NIC.BD.09/09/19-0039-12.5	K19090901000000000000	9-Sep-14	9-Sep-19	5514.00	12.500				
<b>CIC INSURANCE GROUP LTD. MEDIUM TERM NOTE</b>									
CIC.BD.2.10.2019	K1910020100000								



## Appendix 4: Data summary sheet

Year	Quarter	Average CPY	CBR	TBR	Bonds Redemption Yield (BRY)
2016	Q4	5.04	10.00	9.66	13.45
	Q3	5.01	10.17	9.80	14.53
	Q2	4.05	10.83	9.64	13.41
	Q1	4.82	11.50	11.74	15.29
2015	Q4	9.55	11.50	15.26	14.40
	Q3	17.09	11.50	12.98	15.67
	Q2	10.56	9.00	9.86	13.07
	Q1	6.89	8.50	9.88	12.31
2014	Q4	6.83	8.50	9.36	12.19
	Q3	9.08	8.50	9.52	13.34
	Q2	7.27	8.50	9.90	12.33
	Q1	8.62	8.50	9.96	12.44
2013	Q4	10.20	8.50	10.47	12.12
	Q3	8.10	8.50	9.14	12.86
	Q2	7.39	8.83	9.64	13.39
	Q1	7.91	9.50	9.46	13.76
2012	Q4	7.48	11.67	9.88	14.22
	Q3	10.05	15.33	11.80	13.42
	Q2	16.80	18.00	13.18	15.82
	Q1	20.49	18.00	19.48	12.62
2011	Q4	22.07	15.17	15.95	16.64
	Q3	9.32	6.50	10.32	16.51
	Q2	4.21	6.08	6.08	13.15
	Q1				

		4.98	5.83	2.84	12.83
2010	Q4	3.62	6.00	2.39	10.64
	Q3	4.00	6.00	1.96	8.62
	Q2	3.68	6.75	4.33	9.79
	Q1	4.75	6.92	6.48	9.86
2009	Q4	3.60	7.25	7.59	13.42
	Q3	3.97	8.17	7.73	11.96
	Q2	4.57	8.08	7.91	13.54
	Q1	3.14	8.42	7.98	12.86
2008	Q4	3.46	8.83	8.52	11.89
	Q3	3.59	9.00	8.25	12.49
	Q2	4.49	8.83	8.13	16.91
	Q1	3.69	8.75	7.54	12.82
2007	Q4	3.83	8.75	7.63	11.60
	Q3	3.35	8.67	7.30	13.28
	Q2	3.46	9.50	7.18	12.80
	Q1	3.97	10.00	7.22	15.25

Compiled by researcher.

## Appendix 5: Introductory Letter

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# UNIVERSITY OF NAIROBI

## COLLEGE OF HUMANITIES & SOCIAL SCIENCES

### SCHOOL OF BUSINESS

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Telegrams: "Varsity" Nairobi  
Telex: 22095 Varsity

P.O. Box 30197  
Nairobi, KENYA

22<sup>nd</sup> September, 2017

**TO WHOM IT MAY CONCERN**

Dear Sir/Madam,

**INTRODUCTORY LETTER FOR RESEARCH**  
**NGETICH GEOFFREY ILETAACH – REGISTRATION NO. D63/84099/2015**

This is to confirm that the above named is a bona fide student in the Master of Science in Finance (Msc. Finance) option degree program in this University. He is conducting research on ***"The Effect of Central Bank Rate on Commercial Paper Yield For Companies Listed at Nairobi Securities Exchange"***

The purpose of this letter is to kindly request you to assist and facilitate the student with necessary data which forms an integral part of the research project. The information and data required is needed for academic purposes only and will be treated in **Strict-Confidence**.

Your co-operation will be highly appreciated.

Thank you.

  
**Jane Muturi**  
For: Msc. Finance Co-Ordinator,  
School of Business

JK/nwk

