EFFECT OF GOVERNMENT DOMESTIC BORROWING ON FINANCIAL DEVELOPMENT IN KENYA

BY

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D61/85780/2016

A RESEARCH PROJECT PRESENTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

DECEMBER 2018

DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

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This research project has been submitted for examination with my approval as the University Supervisor.

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ACKNOWLEDGEMENTS

It is my honor and duty to express my gratitude to the Almighty God for giving me the strength, finances and the mental capacity not only to do this project but to complete the entire program. Special thanks to my supervisor Dr Mirie Mwangi for his support more particularly for his timely responses and precise instructions on areas that required improvements. My journey in finance can't have come without the motivation of my classmate Mr. Kingori and Mr. Harald Potner of McKinsey &Co who encouraged me to select Finance as a specialization; many thanks to the two gentlemen. Last but not least, my wife and children for giving me a conducive atmosphere to do the project and entire program.

DEDICATION

I dedicate this work to my wife Susan Atieno and my children Gian-Phil and Shekinah. Many thanks for your unwavering support, the many weekends I had to leave you as I went to the library , God bless you and keep you always.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CBK	Central Bank of Kenya
CIS	Credit Information Sharing
FMI	Financial Markets Infrastructure
GDP	Gross Domestic Product
GOK	Government of Kenya
IMF	International Monetary Fund
KNBS	Kenya National Bureau of Statistics
NFC	Near Field Communication

ABSTRACT

Many researchers are becoming are becoming more agitated to conduct studies on the determinants of financial development. The role of government domestic borrowing on financial development has both proponents and opponents. Proponents argue that the government bond sector plays a vital role in the development of local securities markets. Namely, the government bond is a safe asset for banks in many developing and transition countries which have observed low financial intermediation. The safety of government bonds facilitates financial development by serving to reduce risk for domestic banks. Opponents on the other hand argue that government debt could have negative effects on the development of financial markets. This study sought to determine the effect of government domestic borrowing on financial development in Kenya. The independent variable was government domestic borrowing as measured by quarterly government domestic borrowing in natural logarithm form. The control variables were interest rates as measured by central bank lending rate on a quarterly basis, economic growth as measured by quarterly GDP, trade openness as measured by percentage change in the difference between exports and imports and inflation rates as measured by quarterly CPI. Financial development in Kenya was the dependent variable which the study sought to explain and it was measured by the ratio of total credit to the private sector as a percentage of GDP on a quarterly basis. Secondary data was collected for a period of 10 years (January 2008 to December 2017) on a quarterly basis. The study employed a descriptive research design and a multiple linear regression model was used to analyze the relationship between the variables. Statistical package for social sciences version 21 was used for data analysis purposes. The results of the study produced R-square value of 0.590 which means that about 59 percent of the variation in financial development in Kenya can be explained by the five selected independent variables while 41 percent in the variation was associated with other factors not covered in this research. The study also found that the independent variables had a strong correlation with financial development (R=0.768). ANOVA results show that the F statistic was significant at 5% level with an F statistic of 9.798. Therefore the model was fit to explain financial development in Kenya. The results further revealed that individually, interest rates, economic growth, trade openness and inflation rates are not significant determiners of financial development in Kenya while government domestic borrowing has a significant effect on financial development. This study recommends that there is need for policy makers to manage government domestic borrowing levels prevailing in the country bearing in mind that they significantly influence financial development in the country.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Every government requires resources for its expenditure in order for it to run well. Among other sources, tax is the main one. Whenever taxes are not enough, government results in borrowing to bridge the gap between its receipts and expenditure. The borrowing may be sourced from either domestic or external markets (Abbas & Christensen, 2007). Despite the fact that debt brings resources to the economy, its accumulation may accrue large interests' overtime. Borrowings will in the long run affect the economy negatively if they are not utilized properly. This is because most of the resources will be diverted to repayment of these debts and less for recurrent government expenditures. Sharifi-Renania and Mirfatah (2012) noted that Public debt needs proper planning since increasing public debt volume is fundamental for an economies' strong and good financial structure. Therefore, proper utilization of public spending makes servicing of debt easy. Most of the developing countries, Kenya being one of them have had difficulty in curbing domestic debt growth in order to avail revenue after payment of debts to service vital government expenditures.

This study was guided by several theories such as the debt overhang theory, Keynesian theory of public debt and the crowding out effect theory that have attempted to explain the connection between government domestic borrowing and financial development. Debt overhang theory relies its argument on the fact that if debt will exceed the ability for a country to repay with some probability in the future, there is likeliness that the expected debt service will be an increasing function of the nation's output level thus will affect the financial development in the economy.

Keynesian theory of public debt opines that if public debt increases through multiple effects, it would lead to the national income rising and would therefore affect financial development. Keynes urged government to borrow for all reasons so as to increase employment and output. Crowding out effect is brought about clearly by the presence of deficit in the fiscal policy by governments which results in a reduction in the investment spending, an increase on the interest rate and a weakening of the stimulus of the fiscal policy.

According to Cytonn report (2018), the private sector in Kenya could be starved of much-needed capital, with the Government's appetite for domestic borrowing at an all-time high. Latest data from the KNBS (2018) shows that commercial banks' credit to the Government has almost doubled over the current financial year, crowding out the private sector. The findings are in tandem with a recent World Bank report that showed that the private sector's access to credit has been on the decline since 2015 partly due to the recent slowdown in the country's economic performance. Although the country's overall economic wellbeing is largely driven by a vibrant private sector, the sector has had to contend with increased competition from the Government, with commercial banks opting to lend more to the State, especially in the wake of a restrictive rate cap regime that has seen banks become more cautious in their lending patterns. Data from the statistics agency shows that outstanding public debt from commercial banks stood at Sh708 billion as at September 2017, up from Sh452 billion during a similar period in 2016 (KNBS, 2018).

1.1.1 Government Domestic Borrowing

Government domestic borrowing refers to the amount of funds raised by the government through borrowing from both the local institutions and its citizens over a

given time span (Makau, 2008). Domestic borrowing can also be defined as the total debt that the government owes the local investors in form of treasury bills, treasury bonds, government stock, and advances from Commercial banks and overdraft at the CBK (Akram, 2010).

Domestic public debt has been an existing practice in developing countries for long a long period of time. A study by Guidotti and Kumar (1991) investigated 15 emerging market nations and the findings reveal a rise in their domestic public debt-to-GDP ratio to 16 % in 1988 from 10 % in 1981. They also noted that, while the domestic debt to total public debt ratio remained rather constant at about 30 % over the period, major differences were noted in the process that led to both external and domestic debt accumulation. New borrowing resulted in higher domestic debt while accumulation of arrears led to domestic debt burden. This means had emerging market nations not been excluded from international capital market, they would have most probably accumulated more external as opposed to domestic debt. This this finding was in line with the one speculated by Borensztein, Cowan, Panizza and Eichengreen (2007), that the role of crises in the development of the domestic bond market is significant.

According to the Ricardian view, government debt basically implies to future taxes. Considering the fact that consumers are forward-looking and rational, the discounted sum of future taxes can be equated with current deficit. Therefore, the shift between deficits and taxes produce no aggregate wealth effects (Ariyo, 1997). Consumption is not affected by increase in government debt since a rational consumer experiencing current deficits saves more in anticipation of future rise in taxes and thus the economies' total savings are not affected. A reduction in government savings is

substituted by increase in private savings. From the perspective of untouched total savings, interest rates and investments are not affected and thus the national income (Klein, 1994). Domestic debt proponents depict its positive impact on growth, savings and inflation from a more complex capital markets which increase the efficiency and volume of private investments. They opine that moderate extents of noninflationary domestic debt positively influence economic growth thus enhancing financial intermediation and private savings which negatively affect interest rate (Matiti, 2013). In this study, government domestic borrowing will be measured by percentage change in total government domestic borrowing on a quarterly basis.

1.1.2 Financial Development

According to World Bank (2012), financial development of the described as the advancement of the financial sector with respect to efficiency, debt, stability and accessibility (World Bank, 2012). Roubini and Bilodeau (2008) defined financial developments as enabling infrastructure (factors, institutions and policies) whose outcome is broad and deep access to capital and financial services and effective financial intermediation. A good financial development measurement is vital in assessing the advancement of financial sector and articulating its subsequent effect on poverty reduction and economic growth.

Levine et al., (2012) cites four conventional ways that could be used to measure financial development which are; The size and market of financial institutions i.e. financial depth, the extent to which individuals can use financial services i.e. access, the financial institutions' efficiency in mediation of resources and facilitation of financial transactions i.e. efficiency and the financial institutions' stability. It's against this background that various indicators of financial development were established.

Ayadi, Arbak and Naceur (2013) used the three indicators of financial development discussed to measure financial development. These included: 1) Credit to private sector (%GDP). 2) Bank Deposits (%GDP). 3) Stock Market capitalization (% GDP). While Standley (2008) in measuring financial market development in Sub-Saharan Africa used five indicators to measure financial development namely Credit to private sector (% GDP), Deposit money- bank assets (%GDP); Value traded, Turnover ratio and Market capitalization (%GDP). The current study will use credit assorted to the private sector by all financial institutions, banks included divided by GDP as the measure for financial development.

1.1.3 Government Domestic Borrowing and Financial Development

In theory, the size and composition of government debt influence the financial sector both directly and indirectly. The direction of impact is however ambiguous depending on the nature of government debt and the level of economic development. The emergence of local financial markets boosts domestic public debt thus lowering government borrowing costs (Özkan et al., 2010). However, the effect of public debt on the financial system is more complicated. On the one hand, the government bond sector plays a fundamental role in the development of local securities markets. Namely, the government bond is a safe asset for banks in many developing and transition countries which have observed low financial intermediation (Kumhof & Tanner, 2005). The safety of government bonds facilitates financial development by serving to reduce risk for domestic banks. Domestic banks and institutional investors mostly prefer government bonds because of providing a regular flow of earnings, privileged treatment and offering high liquidity.

On the other hand, government debt could have negative effects on the development of financial markets. First of all, excessive public debt may crowd out private investment. Advancing of bank credit by the private sector is a key financial development measure and therefore government borrowing is harmful for financial development. Caballero and Krishnamurthy (2004) provide empirical support that crowding out is systematically larger in emerging markets than in developed economies and rises significantly during crises. Crowding out effect is limited in open economies, but emerging markets are not as well integrated into the international markets (Claeys et al., 2012). Moreover, this effect is more harmful in developing countries because small- and medium-sized private companies heavily depend on bank financing (Bua et al., 2014). Emran and Farazi (2009) emphasize that in emerging markets the effect of government debt and budget deficit on the interest rate is not as large as in developed countries; therefore the quantity channel of crowding out is more important. The crowding out effect on private borrowing can lead to loss of benefit from the government bond as a pricing benchmark and hedging instrument (McCauley & Remolona, 2000).

Ostadiand Ashja (2014) suggested that, debt management affects stability of financial markets, stock of public debt through shocks, affects financial stability. Since it affects factors that influence the debt instrument value, when the level of debt is increasing it should trigger policies that will control possible higher inflation rates which should be mitigated through monetary and fiscal policies. Efficient financial markets is built by a well-functioning government debt market and a sound market allows savings of a country to be channeled into investment, individuals and companies are allowed to access long-term loans when the financial markets are efficient and effective. Banks hold adequate quantity of government paper to conserve

on equity capital funding cost and this shows the link between government finances and financial stability is symmetrical (IMF, 2010).

Rusike (2007), suggested that the impacts of public debt accumulation on investment and financial development of a nation are ever questioned. No consensus exists on how external debt contributes to financial development since it influences it both negatively and positively. Majority of experts hold that public debt positively affects financial development since it raises capital inflow. External debt accelerates financial market development when used for growth related expenditures. Apart from availing foreign capital to be used for industrial development, it also technology, managerial know-how, technical expertise and access to foreign markets to mobilize a countries' material and human resources.

1.1.4 Government Domestic Borrowing and Financial Development in Kenya

The Internal Loans Act (Cap 420) allows the cabinet secretary to National Treasury to borrow on the governments' behalf from the domestic market through Treasury bonds and issuance of Treasury bills issuance. Government overdraft at CBK is the only domestic debt borrowing component that is limited by law. However, the law does not provide any limitations for domestic borrowing through Treasury bills and bonds. This varies from external borrowing where the External Loans and Credit Act, CAP. 422 of Kenya law limits total indebtedness for up KES. 500 billion principal or anything higher than this unless approved by the National Assembly (Ochieng, 2013).

Kenya's domestic debt level has been increasing over the last twenty years. For instance, the domestic debt as at May 2018 stood at 2,447,618.88 million as compared to the 201,463.22 million recorded in the year 2000.As at end of December 2017, the stock of domestic debt was KES. 2,220,345.35 million. This represents an increase of

14.99 per cent from the outstanding stock of KES. 1,930,855.01 million by end of December 2016. The increase in the stock was driven by increased issuance of Treasury bills and bonds due to growing domestic borrowing needs. Overall, the level of domestic debt was partly offset by a repayment of KES. 1,117 million of the Pre-1997 Government Debt. The CBK Overdraft level increased by KES. 7,710 million to KES. 44,204 million by end June 2017 from KES. 36,494 million by end June 2016.The composition of domestic debt indicates that the stock of Treasury Bills and Bonds accounted for 32.4 per cent and 63.5 per cent of total domestic debt respectively as at end of June 2017 compared to 22.5 per cent and 72.9 per cent as at end June 2015 respectively (CBK, 2018).

Based on CBK (2015), the countries' financial sector has significantly grown both in size and complexity which has greatly boosted the overall growth of the economy. The sector mainly comprises of banking, insurance, capital markets, pensions, and credit and savings cooperatives. Other key players include money remittances companies, microfinance institutions, development finance institutions and foreign exchange bureaus. Resolution institutions and safety nets also exist and this includes the Insurance Policyholders 'Compensation Fund for the insurance subsector, the Kenya Deposits Insurance Corporation for commercial and microfinance banks and Investor Compensation Fund for Capital Markets subsector. These are backed by CIS platforms through Financial Markets Infrastructure (FMI) systems and Credit Reference Bureau and a vibrant consisting trading, custodial services platforms and payments and settlements. The total assets excluding capital markets were responsible for 83.27 % in 2017 while equities' market capitalization accounted for 32.93% of nominal GDP.

1.2 Research Problem

Many researchers are becoming are becoming more agitated to conduct studies on the determinants of financial development. The role of government domestic borrowing on financial development has both proponents and opponents. Proponents argue that the government bond sector plays a vital role in the development of local securities markets. Namely, the government bond is a safe asset for banks in many developing and transition countries which have observed low financial intermediation. The safety of government bonds facilitates financial development by serving to reduce risk for domestic banks (Kumhof& Tanner, 2005). Opponents on the other hand argue that government debt could have negative effects on the development of financial markets. First of all, excessive public debt may crowd out private investment. Bank lending to the private sector is a key measure of financial development and therefore government borrowing is harmful for financial development (Claeys et al., 2012).

Kenya's vision 2030 key elements were establishment of an international financial services' centre's and deepening of capital markets as flagship projects for attainment of growth targets (GOK, 2007).The Vision 2030 for financial sectors envisages a globally competitive and vibrant financial sector driving high levels of savings and financing Kenya's investment needs. One of the specific goals have been to increase bank deposits from 44% to 80% of GDP and decrease the share of population without access to finance from 85% to below 70%.Despite the improvements noted in the financial sector in Kenya, credit lending to private sector declined to about 14 % of GDP in 2017 while government domestic borrowing during the same period has been on the rise. It is therefore imperative to investigate whether the increased government domestic borrowing has an effect on financial development in Kenya.

International studies on the factors influencing financial development revealed mixed findings and little evidence on growing nations (Quinn & Toyoda, 2008; Obstfeld, 2009; Kose et al., 2009; Quinn, Toyoda & Schindler, 2011). Dorrucci et al., (2009)

found that a high level of public debt could also have negative impacts on the development of local financial markets as the associated risk of government insolvency could increase interest rates. Similarly, Hauner (2009) opines that government borrowing from domestic banking sector increases the banks' profitability while simultaneously reducing efficiency in developing nations; therefore the growth rate of banking sectors that lend to the public sector is slower. On the other hand, Francisco and Azzimonti (2012) examined the association between government borrowing and liberalization of the financial market. The findings reveal that internationalization of financial markets increases' public debt.

Locally, existing studies have either considered public debt as a whole and its impact on other factors other than financial development or financial development separately. Kibui (2009) studied the effect of external debt on public investment and Kenya's economic growth (1970-2007). Onuonga (2014) explored the association between money related advancements and financial Kenya's financial development. Aduda, Murayi and Chogii (2014) explored the effects of capital market development on financial development in Kenya. Moki (2012) did an analysis of the association between public debt and economic growth in Africa. Mogaka (2017) studied on the influence of government domestic debt on development of the development of the East African Community financial market and found that government domestic debt has a significant positive effect on development of the East African Community financial market. However, this study was conducted in a different context. The current study focused on the effect of government domestic borrowing on financial development in Kenya by answering the research question: What is the effect of government domestic borrowing on financial development in Kenya?

1.3 Objective of the Study

The objective of this study was to determine the effect of government domestic borrowing on financial development in Kenya.

1.4 Value of the Study

The study's findings will be used for future reference by researchers, students and scholars who seek to undertake correlated or similar studies. The study will also benefit researchers and scholars in the identification of other fields of research by citing related topics that require further studies and empirical studies to determine study gaps.

To government and organizations such as the Capital Markets Authority and the Central Bank, in the formulation and implementation of policies and regulations governing that governs operations in the financial system. Good policies in terms of external government borrowing and other variables that will be found to have an influence on financial development will contribute to the advancement of financial development and improvement of the economy as a whole.

The findings of this study will also be beneficial to investors in the financial markets as they will get a deeper understanding on the role played by external government borrowing on financial development and take the necessary actions to maximize their returns. In addition, the study will contribute to theory in terms of government domestic borrowing and financial development.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter reviews theories that form the foundation of this study. In addition, previous empirical studies that have been carried before on this research topic and related areas are also discussed. The other sections of this chapter include determinants of financial development, conceptual framework showing the relationship between study variables and a literature review summary.

2.2Theoretical Framework

Theoretical framework provides a foundation for understanding the theoretically expected relationship among the study variables and in this case interest rate and lending levels. The theories selected for this study are the debt overhang theory, Keynesian theory of public debt and the crowding out effect theory.

2.2.1 Debt Overhang Theory

This theory originated from Krugman (1988) who argued that "debt overhang" is a situation where a country's expected external debt payment capacity falls below the contractual debt value. According to Cohen's (1993) theoretical model, foreign borrowing has a nonlinear impact on investment and this is supported by Clements et al., (2003) who purports that this association could arguably be extended to growth. Thus, foreign debt accumulation promotes investment up to a certain level after which debt overhang will begin injecting negative pressure on the willingness of the investor to make capital contributions. Similarly, the model proposed by Aschauer (2000) demonstrates a nonlinear effect of public capital on economic growth which could be extended to cover the effect of public debt. If the government debt is partly in

financing productive public capital, increasing debt would bring positive outcomes up to a certain level where negative effects begin to emerge.

The recent development of fiscal crises database has highly triggered the emergence of public debt overhang in recent years. This database was advanced by Reinhart et al., (2012) and before it was developed, no one knew that economic growth is affected by balance of public debt. For instance, Sala-i-Martin and Barro (1995) demonstrated empirically that the government consumption to GDP ratio negatively influences per-capita GDP. The impact of the amount of public debt was however not identified. Moreover, Fischer (1991) demonstrated empirically that a fiscal deficit negatively influences per-capita GDP but failed to confirm whether per-capita GDP is affected by the amount of public debt (Kobayashi, 2015). This theory is relevant to the study as it recognizes the effect of public debt on economic development and in essence financial development. If this theory was to apply, domestic public borrowing would affect financial development positively but beyond a certain level the impact would change to a negative one.

2.2.2 Keynesian Theory of Public Debt

This is a macroeconomic model developed by Keynes (1936) that is based on the Keynesian economics 'principles that is used in identification of equilibrium levels, analysis of disruptions and aggregation of incomes and production (King, 1993). According to this model, the aggregated equilibrium of production and income fall at the intersection of the aggregate expenditure line at 45-degree line. There are there three versions of Keynesian model. This categorization is done based on the number of macroeconomic sectors included which are two-sector, three-sector, and four sector respectively. This model is also presented in the form of leakages and injections apart

from the standard aggregate expenditures format. The Keynesian model is used in the analysis of many vital topics and issues, including business cycles, multipliers, monetary policy and fiscal policy.

Keynesian Model came about as a result of the Great Depression (1929-1939). Economist John Maynard Keynes noted that the economy was always operating below its maximum potential. Massive unemployment was witnessed during ring the Great Depression with many businesses failing and thus the economy was not at full employment.

The Keynesian Model was first pioneered by Keynes (1936). This model argues that Public Debt is not associated with any form of real burden and it has no effect on Economic Growth (Metwally & Tamaschke, 1994). The real burden during the period of expenditure execution: that's during consumption the consumption of real resources. Internal public debt is "debt we owe to ourselves". It is valueless to real resource base. Substitution of public debt for current taxation has an immediate effect on macro- expansion: a rise in public expenditure financed as a result of tax increases invokes a lower and different multiplier that is different from the debt- financed public expenditure and thus public debt invokes no contractionary forces (Savvides, 1992). This theory is relevant to this study as it recognizes internal debt and its effect on economic growth and financial development. If this theory was to apply, government domestic borrowing would have no effect on financial development as the theory argues that internal debt adds nothing to a country's resource base.

2.2.3 Crowding Out Effect Theory

Crowding effect is brought about clearly by the presence of deficit in the fiscal policy by governments which results in a reduction in the investment spending, an increase

on the interest rate and a weakening of the stimulus of the fiscal policy. McConnel and Brue (1990) state that the idea behind the crowding out effect is that, interest will be caused to increase by deficits in the fiscal policy with a reduction in investment spending, and weakening the stimulus of the fiscal policy. When the money market finances deficits in governments, the increase in demand for money raises the interest rates thus increasing the cost of borrowing money. Consequently, since investment spending varies with the interest rates thus some investment will be crowded out.

Ahmed and Miller (2000) applied fixed and random effect methods in the case of some developed and developing countries. They established in developing countries, the expenditure by government on transport and communication lead to crowding in-effect while expenditure on welfare and social security lead to a decline in private investment. This theory is relevant to the current study as it recognizes the fact that government borrowing for financing deficit budget is important for private investments since financial institutions are left with little finances to lend to private investors. If this theory was to apply, government borrowing would have negative impact in the long run financial development because it crowds out the private investment. Similarly, when there is increase in government spending by borrowing from banks, rate of interest might go up which badly affects the private investment and in essence financial development.

2.3 Determinants of Financial Development

Many variables are expected to have an influence on financial development in a given country. Majority of these factors have an effect on the economy which then has a spiral effect on the financial system and in essence financial development. The main variables expected to affect financial development are discussed in this section and

they include; public borrowings, institution quality, trade openness, financial openness, economic growth and government policy (Athanasoglou, Brissimis & Delis, 2005).

2.3.1 Public Borrowings

Based on Karazijienė and Sabonienė (2009), public borrowing is fundamental for economic growth. It is a mode of stimulating economic growth by attracting funds from foreign investors and asset distribution among those with surplus and deficit funds for development of economic initiatives. Since treasury bills, state bonds and advancing loans to governments are considered as the safest financial instruments. However, it attracts a lower interest rate than public borrowing. This is useful to the economy and produces additional surplus when there is efficient control of public debt. Public debt is the most commonly used macroeconomic indicator and portrays the image of the country in the international markets.

Furthermore, since governments thrive mainly through issuance of securities, their interest rates, terms and overall debt financing costs significantly influence the economy, enterprises' future and social welfare for both the present and future generations. Martin (2009) argues that public debt also serves through delay of taxation and thus reduction of current distortions. The first model reveals higher taxes are a precursor of lower present consumption which shows a lag in economic growth and financial development.

Moreover, debt financing compels future generations to work harder to fulfill their debt obligations to maintain financial and economic stability. They will pay both the principal and other costs associated with debt financing, which includes costs of debt management and interest. This kind of debt is useful if it results in economic growth

and benefits that exceed the costs. Taking these factors under consideration, the government must maintain the equilibrium between debt financing and equilibrium to maintain long run financial and economic stability (Ribeiro et al. 2012).

2.3.2 Economic Growth

Economic growth is the increase in inflation-adjusted market value of commodities produced in a country over a period of time (IMF, 2012). Ideally, it is measured by determining the percent rise in real GDP and this is done on an annual basis. The economic growth rate refers to geometric annual growth rate in GDP at the beginning and end of a financial period. Undisputedly, this rate of growth is the average trend in GDP output across the period, which ideally neglects GDP fluctuations within the trend.

A scholarly article by Patrick (1966) depicts a dual causal association between the development of the financial sector and economic growth. The components of granger functioned simultaneously. He labeled the two associations as supply-leading and demand-following hypotheses .The demand-following approach however posited a causal association from economic growth to financial growth thus providing more evidence on the association. Economic growth grew and increased need for financial services boosted the growth of the financial sector. According to demand-following hypothesis, the financial markets developed and progressed as a result of increased demand for their services accruing from the expanding real economy. The development of financial markets was perceived as a mere response to an economy that is growing. The expansion and growth of the real sector generates new set of demands from the financial markets which in turn increases new financial services' demand thus increasing pressures to establish more sophisticated and large financial

institutions to upcoming demands for the services that make financial deepening a growth component in the economies' real sector.

2.3.3 Trade Openness

Trade openness greatly influences globalization in the modern world which in turn lead to financial development. Unconstrained trade combined with capital flows is a big incentive for financial and industrial incumbents to drive towards financial development (Rajan and Zingales, 2004). This was attributed with the decline of the role of the government in the financial sector which resulted in unregulated openness. This forced the financial and industrial incumbents to seek finance from unrestricted foreign markets for funding. Incumbents advocated for financial development since it attracted new opportunities from open financial markets thus generating higher profits that diluted the effects intensified competition. They therefore posit that trade openness is positively correlated with financial development.

Trade liberalization, which is opening domestic markets to foreign goods can influence financial development. Through this , as pointed by Rajan and Zingales (2004) in their book Saving Capitalism from the Capitalists, political power of entrenched business interest which may block instistutional changes can be weakened. Trade liberalization lowers the capital base of firms and increases firms' competitiveness thus increasing access from the external sources of capital. Therefore, they embrace the reforms that facilitate more efficient and deeper financial system. This concurs with the findings that a positive association exists between a deeper financial sector and trade openness (Svaleryd& Vlachos, 2002; Rajan &Zingales, 2004). Financial deepening is also promoted free trade as corruption practices are

minimal. Corruption prevails during high tariffs since importers exhibit incentives for payment of customs officials to evade tariffs through smuggling.

2.3.4 Interest Rates

Investments in developing countries are mainly spearheaded by the government and the main factor that affects investments is the real interest rate. Financial growth may be affected by interest rates which in turn lower the growth rate, when the rate of interest in the financial markets is high, it discourages many people from acquiring loans for investments and other development activities will be at stand still (Quinn & Toyoda, 2008).

However, no logical conclusion has been derived from studies on the association between interest rate, finance development and growth in most developing nations (Obstfeld, 2009; Kose et al., 2009; Schindler, Quinn & Toyoda 2011; Quinn & Toyoda, 2008). These diverse findings have mainly been attributed to differences in the type of interest rate measure, country coverage, the sample period, and methodologies employed.

2.3.5 Inflation

Effective allocation of financial resources is affected by inflation. A negative relationship exists between inflation and both equity and development markets. In low inflation countries having a great nominal equity return does not imply more inflation (Boyd, 2001). Huybensa (1999) found out that inflation is negatively correlated with the financial market activities. Economies with high rates of inflation also face the negative relationship in the long run.

2.4 Empirical Review

Although many empirical studies both locally and globally have been carried out on financial development of an economy, most of the studies have focused on other determinants of financial development without focusing on external government borrowing. The studies that address external government borrowing and financial development have been carried out in different contexts and their findings cannot be generalized in the local context.

2.4.1 Global Studies

Studies by Hussain (2009) explored the association between government expenditure and private investment in the long run and the results revealed that current government expenditures such as debt defense and debt servicing are the main cause of reduction in private investment and government expenditures which are used for development. The development expenditures facilitate health and education. Time series of between the time span 1975-2008 in Pakistan was used and the Johansen co integration technique was used.

A study by Rousseau and Demetriades (2010) examined the impact of government spending on England's financial development from 1960-2010. The analysis was spread over 84 countries and noted that government borrowing deters financial development in the short run. Furthermore, government borrowing is also crowded out by financial development. They concluded that in the long run, crowding in is highly vital for financial development. They also argued that countries with low income fail to show how financial development is increased by government spending.

Mun and Ismail (2015) examined the relationship between public domestic borrowing and financial development in Malaysia. Time series data was collected for 30 years on

an annual basis between 1980 and 2010. Autoregressive-Distributed Lag regression model was used for analysis purposes. Private to credit sector as a percentage of GDP was used to measure financial development while bank credit to government was used to represent government domestic borrowing. The results indicate that public domestic borrowing over time has a negative effect on financial development. Credit out effect was the reason given for the negative causation between the two study variables.

Khalfaoui (2015) undertook a study to identify the main determinants of financial development in growing economies. The findings identified institutional variables (financial and banking sector) and the degree of human and economic development as the core determinants while the core determinants of financial development in growing nations were identified as legal framework, economic stability and other components of the institutional framework. Financial development was measured using the level of lending advanced to the private sector while the variables employed for banking and financial sector included financial structure, inflation, non-performing loans, broad money, legal framework, market capitalization, trade openness, index for credit information and current account deficit.

2.4.2 Local Studies

Harmon (2012) examined the effect of public debt on GDP growth, inflation and interest rates in Kenya. The study period was from 1996-2011, secondary data was collected for the study. Using 3 linear regression models the study established between public debt and the inflation existence of a weak positive relationship. For the public debt and interest rate the study established a strong negative association. The study concluded that there were various relationships evidenced by some

variables showing a strong relationship like public debt and interest rates, while others showed a weak connection in the case of public debt and GDP and inflation.

A study by Waiyaki (2013) examined how financial development and economic growth contribute to poverty eradication in Kenya between the time span 1997-2012. The study's aim was to establish the association between financial development and economic growth and how economic growth is influenced by financial development in the Kenyan banking industry. The main variables were credit to private sector, broad money supply M3, bank deposits, stock market turnover, volume of stocks traded and stock market capitalization. The OLS technique falling under PARCH model. The results reveal that financial development variables including M3 and private sector credit lending don't result in growth while bank deposits were profitable across the period.

A study by Onuonga (2014) investigated the relationship between currency related developments and Kenya's financial development between the time frame 1980–2011. The improvements related with money were ascertained using M2 and the substantial credits awarded to the private sector. Both Granger causality examination and autoregressive disseminated slack structure were used to establish the extent of the relationship. The findings revealed that a sustainable long-run relationship exists between, exchange sincerity, monetary developments and budgetary growth in Kenya. It was concluded from the study that there is a strong connection between fiscal expansion and economic growth in the country. The research findings implied that that financial extension and expansion of fiscal policies accelerated economic growth in Kenya.

A study by Aduda, Murayi and Chogii (2014) examined the effect of capital market development on Kenya's financial development. The study aimed at establishing the influence of extension of money related improvements by the Capital Market in Kenya. The exploration proposed five autonomous effects for extension of money by capital market extending and one factor for financial development. The study recommended that three out of the cited factors had a positive association with GDP and was therefore an asset showcase depicting a major impact on Kenya's monetary advancement. The discoveries were however rather unfulfilling and linking them with previous studies resulted to financial improvement. The scrutiny depicted a strong association between financial advancement injections of funds into the capital markets for potential investors.

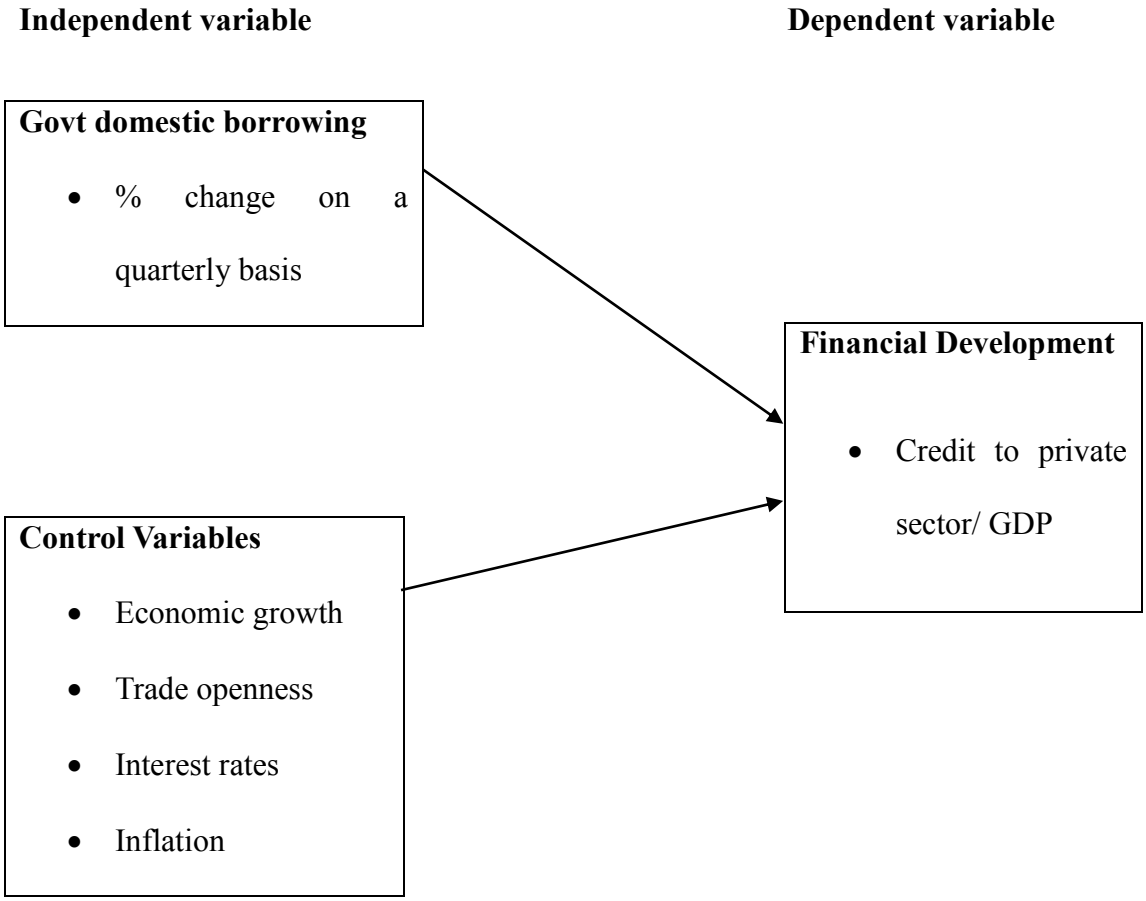
Mogaka (2017) explored the impact of domestic public debt on financial market development in the EAC Countries. The study used secondary data collected from World Bank website, Central banks websites, national treasuries and the Kenya Bureau of Statistics. The data was collected for period of 10 years (2007 to 2016). Descriptive research design was used in the study. The findings revealed that domestic public debt had a significant effect on the financial market development of the East Africa Countries.

2.5 Conceptual Framework

The expected relationship between the study variables is best explained using a conceptual model. The conceptual model developed below shows how government domestic borrowing and financial development in Kenya are related. The independent variable is government domestic borrowing as measured by percentage change in total government domestic borrowing on a quarterly basis. The control variables are

economic growth as measured by quarterly change in real GDP growth rate, trade openness as measured by the quarterly change in sum of exports and imports divided by GDP, interest rate as measured by real interest rate on a quarterly basis and inflation as measured by inflation rate on a quarterly basis. The dependent variable is financial development as characterized by percentage change in quarterly credit issued to the private sector by financial institutions divided by GDP.

Figure 2.1: The Conceptual Model



Source: Researcher (2018)

2.6 Summary of the Literature Review

This chapter has focused on the theories that form the foundation for this study. The theories discussed here are namely; debt overhang theory, Keynesian theory of public

debt and the crowding out effect theory. The chapter has also focused on some of the factors that are expected to determine financial development. There have been previous studies carried out either in this area and/or related areas and their findings have been discussed under empirical review. From the empirical review, it is noted that there's no local study done to establish the effect of government domestic borrowing on financial development in Kenya and this is the research gap the researcher leveraged on.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In order to establish the influence of interest rates on lending levels of commercial banks, a research methodology was necessary to outline how the research was carried out. This chapter has four sections namely; research design, data collection, diagnostic tests as well as data analysis.

3.2 Research Design

A descriptive research design was employed to establish the influence of government domestic borrowing on financial development in Kenya. Descriptive design was utilized as the researcher is interested in finding out the state of affairs as they exist (Khan, 2008). This research design was appropriate for the study as the researcher is familiar with the phenomenon under investigation but want to know more in terms of the nature of relationships between the study variables. In addition, a descriptive research aims at providing a valid and accurate representation of the study variables and this helps in responding to the research question (Cooper & Schindler, 2008).

3.3 Data Collection

Data was exclusively collected from a secondary source. The study used secondary data from KNBS publications as well as from the CBK website. The quantitative data collected included total private credit on a quarterly basis, equity and total assets of the banking sector on a quarterly basis, foreign financial assets and liabilities which was collected from CBK website. Data on government domestic borrowing, GDP, imports and exports was collected from KNBS on a quarterly basis. The secondary data was collected for a period of 10 years (January 2008 to December 2017) on a quarterly basis.

3.4 Diagnostic Tests

Linearity show that two variables X and Y are connected by a mathematical equation Y=bX in which b is a constant number. The linearity test was acquired using the scatterplot testing or F-statistic in ANOVA. Stationarity test is a process where the statistical properties such as mean, variance and autocorrelation structure do not change with time. Stationarity will be obtained from the run sequence plot. Normality is a test for the assumption that the residual of the response variable are normally distributed around the mean. This was determined by Shapiro-walk test or Kolmogorov-Smirnov test. Autocorrelation is the measurement of the similarity between a certain time series and a lagged value of the same time series over successive time intervals. It was tested using Durbin-Watson statistic (Khan, 2008).

Multi-collinearity is said to occur when there is a nearly exact or exact linear relation among two or more of the independent variables. This was tested by the determinant of the correlation matrices, which varies from zero to one. Orthogonal independent variable is an indication that the determinant is one while it is zero if there is a complete linear dependence between them and as it approaches to zero then the multi-collinearity becomes more intense. Variance Inflation Factors (VIF) and tolerance levels were also be carried out to show the degree of multi-collinearity (Burns & Burns, 2008).

3.5 Data Analysis

The data collected from the different sources was organized in a manner that can help address the research objective. SPSS version 22 was utilized for data analysis purposes. Both descriptive and regression analyses were carried out. In descriptive statistics, standard deviation, mean, the minimum,, skewness maximum and kurtosis

were computed for each variable. In inferential statistics, both regression and correlation analysis were carried out. Correlation analysis involved determining the extent of relationship between the study variables while regression analysis involved establishing the cause and effect between the independent and dependent variables. A multivariate regression analysis was employed to establish the connection between the dependent variable (financial development) and independent variables: government domestic borrowing, economic growth, trade openness, interest rates, inflation.

3.5.1 Analytical Model

To establish the relative significance of each of the explanatory variables in relation to financial development in Kenya, a multivariate regression model was applied.

The study employed the following multivariate regression model;

$$\mathbf{Y = ß_0 + ß_1X_1 + ß_2X_2 + ß_3X_3 + ß_4X_4 + ß_5X_5 + ε}$$

Where:

Y was financial development as measured by total credit issued to the private sector divided by GDP on a quarterly basis.

$ß_0$ was the regression constant (parameter of the function)

$ß_1$, $ß_2$, $ß_3$, $ß_4$ and $ß_5$ are the coefficients of independent variables,

X_1 was government domestic borrowing as measured by percentage change in total government domestic borrowing on a quarterly basis

X_2 was economic growth as measured by GDP growth rate on a quarterly basis

X_3 was trade openness as measured by natural logarithm of total exports minus imports on a quarterly basis

X_4 was interest rate as measured by real interest rate on a quarterly basis

X_5 was inflation as measured by inflation rate on a quarterly basis

ε was the error term

3.5.2 Tests of Significance

The researcher carried out parametric tests to establish the statistical significance of both the overall model and individual parameters. The F-test was applied to determine the significance of the overall model and it was obtained from Analysis of Variance (ANOVA) while a t-test was used to establish statistical significance of individual variables.

CHAPTER FOUR
DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

This chapter represents the results and findings of the study based on the research objective. It concentrated on the analysis of the data obtained CBK and KNBS to investigate the influence of government domestic borrowing on financial development. Using descriptive statistics, correlation analysis and regression analysis, the results of the study were presented in form of tables for easy interpretation.

4.2 Diagnostic Tests

The researcher carried out diagnostic tests on the collected data. The research assumed a 95 percent confidence interval or 5 percent significance level (both leading to identical conclusions) for the data used. These values helped to verify the truth or the falsity of the data. Thus, the closer to 100 percent the confidence interval (and thus, the closer to 0 percent the significance level), the higher the accuracy of the data used and analyzed is assumed to be. To test for normality, the null hypothesis for the test was that the secondary data was not normal. If the p-value recorded was more than 0.05, the researcher would reject it. The results of the test are as shown in Table 4.1.

Both Kolmogorov-Smirnova and Shapiro-Wilk tests recorded o-values greater than 0.05 which implies that the research data was normally distributed and therefore the null hypothesis was rejected. The data was therefore appropriate for use to conduct parametric tests such as Pearson's correlation, regression analysis and analysis of variance.

Table 4.1: Normality Test

Financial development	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Government domestic borrowing	.177	40	.300	.880	40	.722
Interest rates	.180	40	.300	.894	40	.790
Economic Growth	.176	40	.300	.892	40	.784
Trade openness	.180	40	.300	.894	40	.790
Inflation rates	.173	40	.300	.918	40	.822
a. Lilliefors Significance Correction						

Source: Research Findings (2018)

A test of Multicollinearity was undertaken. Tolerance of the variable and the VIF value were used where values more than values less than 10 for VIF implies that there is no multicollinearity. For multiple regressions to be applicable there shouldn't be strong connection among variables. VIF Statistics was used in measuring multicollinearity. Based on the results, all the variables VIF values are <10 as shown in Table 4.1 revealing that statistically significant multicollinearity doesn't exist among the independent variables.

Table 4.2: Multicollinearity Test for Tolerance and VIF

	Collinearity Statistics	
Variable	**Tolerance**	**VIF**
Government domestic borrowing	0.352	1.356
Interest rates	0.360	1.382
Economic growth	0.392	1.463
Trade openness	0.646	1.434
Inflation	0.398	1.982

Source: Research Findings (2018)

Autocorrelation tests were run in order to check for correlation of error terms across time periods. Autocorrelation was tested using the Durbin Watson test. A durbin-watson statistic of 1.960 indicated that the variable residuals were not serially correlated since the value was within the acceptable range of between 1.5 and 2.5.

Table 4.3: Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.768[a]	.590	.530	.0492392	1.960

a. Predictors: (Constant), Economic growth, Government domestic borrowing, trade openness, Interest rate, Inflation rate

b. Dependent Variable: Financial development

Source: Research Findings (2018)

4.4 Descriptive Analysis

Descriptive statistics gives a presentation of the mean, maximum and minimum values of variables applied together with their standard deviations in this study. Table

4.3 below shows the descriptive statistics for the variables applied in the study. SPSS software was used to obtain an analysis of all the variables for the period of ten years (2008 to 2017) on a quarterly basis. Financial development had a mean of 0.0705 with a standard deviation of 0.0718. Government domestic borrowing recorded a mean of 28.622 with a standard deviation of 0.522. Interest rate had a mean of 15.810 and a standard deviation of 1.955. Economic growth resulted to a mean of 6.215 with a standard deviation of 3.488. Trade openness resulted to a mean of 0.0145 with a standard deviation of 0.2372 while inflation had a mean of 8.556 and standard deviation of 3.721.

Table 4.4: Descriptive Statistics

Parameter	Units	N	Minimum	Maximum	Mean	Std. Deviation
Financial development	(%)	40	.0016	.3029	.070493	.0718278
Government domestic Borrowing	(Ln)	40	27.874	29.585	28.62165	.521503
Interest rate	(%)	40	13.653	20.213	15.80990	1.954510
Trade openness	(%)	40	-1.000	.558	.01450	.237236
Inflation rate	(%)	40	4.030	16.830	8.55850	3.720589
Economic growth	(%)	40	.300	12.500	6.21500	3.487895
Valid N (listwise)		40				

Source: Research Findings (2018)

4.4 Correlation Analysis

Pearson correlation was employed to analyze the level of association between financial development and the independent variables for this study (government domestic borrowing, interest rates, economic growth, foreign trade openness and inflation rates). From correlation analysis, the study showed the existence of a strong positive and significant correlation between government domestic borrowing and Financial development into the country ($p=.683$, $p<.05$). This goes to show that the level of government domestic borrowing in a country has a significant association with financial development into the country.

The relationship between economic growth and Financial development was found to be weak, positive and insignificant ($p=.096$, $p>0.05$). This implies that movement in economic growth is positively correlated to financial development but not in a significant manner. It was also established that there is a weak negative and insignificant correlation between trade openness and Financial development ($p=-.180$, $p<.05$). This shows that trade openness have a weak negative association with financial development but the association is not significant. The relationship between inflation and financial development was found to be strong and negative ($p=-.553$, $p<0.05$). This implies that movement in the inflation rate is negatively correlated to financial development and in a significant manner.

The relationship between interest rate and financial development was found to be weak, positive and significant ($p=.542$, $p<0.05$). This implies that movement in interest rates is positively correlated to financial development and in a significant manner.

Table 4.5: Correlation Analysis

		Financial development	Government domestic borrowing	Interest rate	trade openness	Inflation rate	Economic growth
Financial development	Pearson Correlation	1					
	Sig. (2-tailed)						
Government domestic borrowing	Pearson Correlation	.683**	1				
	Sig. (2-tailed)	.000					
Interest rate	Pearson Correlation	.542**	.389*	1			
	Sig. (2-tailed)	.000	.013				
trade openness	Pearson Correlation	-.180	-.276	.051	1		
	Sig. (2-tailed)	.266	.085	.755			
Inflation rate	Pearson Correlation	-.553**	.650**	.201	-.239	1	
	Sig. (2-tailed)	.000	.000	.214	.138		
Economic growth	Pearson Correlation	.096	.032	.367*	.146	-.092	1
	Sig. (2-tailed)	.556	.844	.020	.369	.571	

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

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Research Findings (2018)

4.5 Regression Analysis

Financial development was regressed against five predictor variables; government domestic borrowing, interest rates, economic growth, trade openness and inflation rates. The study obtained the model summary statistics as shown in table 4.6 below.

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.768[a]	.590	.530	.0492392	1.960

a. Predictors: (Constant), Economic growth, Government domestic borrowing, trade openness, Interest rate, Inflation rate

b. Dependent Variable: Financial development

Source: Research Findings (2018)

From the outcome in table 4.6 above, the value of R square was 0.590, a discovery that 59 percent of the deviations in financial development into the country are caused by changes in government domestic borrowing, interest rates, economic growth, trade openness and inflation rates. Other variables not included in the model justify for 41 percent of the variations in financial development to the country. Also, the results revealed that there exists a strong relationship among the selected independent variables and financial development as shown by the correlation coefficient (R) equal to .768. A durbin-watson statistic of 1.960 indicated that the variable residuals were not serially correlated since the value was more than 1.5.

From the analysis of variance, the significance value is 0.000 which is less than p=0.05. This implies that the model was statistically significant in predicting how government domestic borrowing, interest rates, economic growth, trade openness and

inflation rates affect financial development in the country. Given 5% level of significance, critical value from the table is 2.74, table 4.5 above shows computed F value as 9.798. This is a confirmation that overall the multiple regression model is statistically significant, in that it's a sufficient prediction model for explaining how government domestic borrowing, interest rates, economic growth, trade openness and inflation rates affects financial development in the country.

Table 4.7: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.119	5	.024	9.798	.000[b]
	Residual	.082	34	.002		
	Total	.201	39			

a. Dependent Variable: Financial development

b. Predictors: (Constant), Economic growth, Government domestic borrowing, trade openness, Interest rate, Inflation rate

Source: Research Findings (2018)

The study applied t-test to determine the significance of individual variables applied in this study as predictors of financial development in the country. The p-value under sig. column was used to indicate the significance of the relationship between the dependent and the independent variables. At 95% confidence level, a p-value of less than 0.05 was interpreted as a measure of statistical significance. As such, a p-value above 0.05 indicates a statistically insignificant relationship between the dependent and the independent variables. The results are as shown in table 4.8.

Table 4.8: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-5.020	1.823		-2.755	.009
	Government domestic borrowing	.178	.068	1.293	2.608	.013
	Interest rate	.008	.006	.219	1.411	.167
	trade openness	.002	.037	.005	.045	.964
	Inflation rate	-.014	.009	-.726	-1.579	.124
	Economic growth	.002	.003	.094	.758	.453

a. Dependent Variable: Financial development

Source: Research Findings (2018)

From the above results, it is evident that of the five selected independent variables, only government domestic borrowing is a significant determiner of financial development as shown by a p value less than 0.05. The other independent variables are not significant determiners of financial development as shown by high p values.

The following regression equation was estimated:

$Y = -5.020 + 0.178X_1$

Where,

Y = Financial development

X_1 = Government domestic borrowing

On the estimated regression model above, the constant = -5.020 shows that if selected dependent variables (government domestic borrowing, interest rates, economic growth, foreign trade openness and inflation rate) were rated zero, financial development would be -5.020. A unit increase in government domestic borrowing would lead to an increase in financial development in the country by 0.178. The rest of the selected independent variables (interest rates, economic growth, foreign trade openness and inflation rate) do not have a significant effect on financial development.

4.7 Discussion of Research Findings

The researcher was seeking to establish the influence of government domestic borrowings on financial development in the country. The independent variable was government domestic borrowing as measured by natural logarithm of total government domestic borrowing on a quarterly basis. The control variables were interest rates as measured by quarterly CBK lending rate, economic growth as measured by quarterly GDP growth rate, trade openness as measured by quarterly percentage change in exports minus imports and inflation rates as measured by quarterly CPI. FDI inflow was the dependent variable which the study sought to explain and it was measured by quarterly financial development in Kenya. The effect of each of the independent variables on the dependent variable was analyzed in terms of strength and direction.

The Pearson correlation coefficients between the variables revealed existence of a strong positive and significant correlation between government domestic borrowing and financial development into the country ($p=.683$, $p<.05$). The relationship between economic growth and financial development was found to be weak, positive and insignificant ($p=.096$, $p>0.05$). It was also revealed that there is weak negative and insignificant correlation between trade openness and financial development ($p=-.180$,

p>.05). The relationship between inflation and financial development was found to be strong and negative (p=-.553, p<0.05). The relationship between interest rate and financial development was found to be weak, positive and significant (p=.542, p<0.05). This implies that movement in interest rates is positively correlated to financial development and in a significant manner

The model summary revealed that the independent variables: government domestic borrowing, interest rates, economic growth, trade openness and inflation explains 59% of shifts in the dependent variable as revealed by the R^2 value meaning this model doesn't include other factors which account for 41% of changes in financial development in Kenya. The model was found to be fit at 95% level of confidence since the F-value of 9.798 is higher than the critical value. This implies that overall the multiple regression model is statistically significant, in that it is a suitable prediction model for explaining financial development in Kenya.

The findings of this study are in agreement with Mogaka (2017) who explored the impact of domestic public debt on financial market development in the EAC Countries. The study used secondary data collected from World Bank website, Central banks websites, national treasuries and the KNBS. The data was collected for period of 10 years (2007 to 2016). Descriptive research design was used in the study. The findings revealed that domestic public debt had a significant effect on the financial market development of the East Africa Countries.

This study differs with Mun and Ismail (2015) who examined the relationship between public domestic borrowing and financial development in Malaysia. Time series data was collected for 30 years on an annual basis between 1980 and 2010. Autoregressive-Distributed Lag regression model was used for analysis

purposes. Private to credit sector as a percentage of GDP was used to measure financial development while bank credit to government was used to represent government domestic borrowing. The results indicate that public domestic borrowing over time has a negative effect on financial development. Credit out effect was the reason given for the negative causation between the two study variables.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter shows the summary of research findings, the conclusions made from the results, and the recommendations for policy and practice. The chapter also discusses a few limitations encountered as well as suggestions for future research.

5.2 Summary of Findings

The study sought to investigate the effect of government domestic borrowing on financial development in Kenya. The independent variables for the study were government domestic borrowing, interest rates, trade openness, economic growth and inflation. The study adopted a descriptive research design. Secondary data was obtained from CBK and KNBS and was analyzed using SPSS software version 21. The study used quarterly data covering a period of ten years from January 2008 to December 2017.

From the results of correlation analysis, a strong positive and significant correlation was found to exist between government domestic borrowing and financial development in Kenya as indicated by a p value of less than 0.05. The relationship between the control variables (trade openness and inflation) and financial development in Kenya was found to be negative while interest rates had a strong positive and significant relationship with financial development in Kenya. Economic growth exhibited a weak positive and insignificant correlation with financial development as shown by a p value that was more than 0.05.

The co-efficient of determination R-square value was 0.59 which means that about 59 percent of the variation in financial development in Kenya can be explained by the five selected independent variables while 41 percent in the variation of financial development in Kenya is associated with other factors not covered in this research. The study also found that the independent variables had a strong correlation with financial development in Kenya (R=0.768). ANOVA results show that the F statistic was significant at 5% level with a p=9.798. Therefore the model was fit to explain the relationship between the selected variables.

The regression results show that when all the selected dependent variables (government domestic borrowing, interest rate, economic growth, trade openness and inflation) are rated zero, financial development in Kenya would be -5.020. A unit increase in government domestic borrowing would lead to an increase in financial development in the country by 0.178. The rest of the selected independent variables (interest rates, economic growth, and foreign trade openness and inflation rate) do not have a significant effect on financial development.

5.3 Conclusion

Based on the study outcome, a conclusion is made that financial development in Kenya has a positive association with government domestic borrowing. The study therefore concludes that higher government domestic borrowing lead to improved financial development in the country and to a significant extent. Economic growth was also found to be positively related to financial development in the country and therefore an increase in economic growth leads to an increase in financial development in the country. The study found that inflation rate and trade openness had a negative correlation with financial development in the country and we can therefore conclude that higher inflation rates and trade openness tend to discourage

financial development in Kenya. Interest rates were found to have a positive influence on financial development and therefore this study concludes that high interest rate levels leads to financial development.

This study concludes that independent variables selected for the study government domestic borrowing, interest rates, economic growth, trade openness and inflation influence financial development in the country to a significant extent as they account for 59 percent of the changes in financial development in the country. The fact that the five independent variables explain 59% of changes in financial development in Kenya imply that the variables not included in the model explain 41% of changes in financial development in the country. The overall model was found to be significant as explained by the F statistic. Thus, it's adequate to draw a conclusion that these variables greatly affect financial development in the country as indicated by the p-value in ANOVA summary.

This finding concurs with Mogaka (2017) who explored the impact of domestic public debt on financial market development in the EAC Countries. The study used secondary data collected from World Bank website, Central banks websites, national treasuries and the Kenya Bureau of Statistics. The data was collected for period of 10 years (2007 to 2016). Descriptive research design was used in the study. The findings revealed that domestic public debt had a significant effect on the financial market development of the East Africa Countries.

5.4 Recommendations

The study established that there is a positive influence of government domestic borrowing on financial development in the country, which is statistically significant. This study recommends that there is need for policy makers to regulate the domestic

debt levels prevailing in the country bearing in mind that they influence financial development in the country. Economic growth was also found to have a positive effect on financial development and therefore this study recommends that policy makers should develop measures to boost economic growth as it attracts financial development.

The study found that trade openness has a negative influence on financial development in the country. This study recommends that policy makers should work on boosting the country's exports to reduce current account deficit as an increase in the deficit was discovered to have a negative influence on financial development. Inflation rates had a negative relationship with financial development in the country. The prevailing rate was however found to be an insignificant determinant of financial development in the country. This study recommends that policy makers should pay attention to the prevailing rate of inflation as it can negatively affect financial development in the country.

5.5 Limitations of the Study

The scope of this research was for ten years 2008-2017. It has not been determined if the results would hold for a longer study period. Furthermore it is uncertain whether similar findings would result beyond 2017. A longer study period is more reliable as it will take into account major economic conditions such as booms and recessions.

Data quality is one of the study limitations. From this research, it is hard to conclude whether the results present the true facts about the situation. The data that has been used is only assumed to be accurate. The measures used may keep on varying from one year to another subject to prevailing condition. The study used secondary data that had already been obtained and was in the public domain, unlike the primary data

which is first-hand. The study also considered selected determinants and not all factors affecting financial development mainly due to limitation of data availability.

For data analysis purposes, the researcher applied a multiple linear regression model. Due to the shortcomings involved when using regression models such as erroneous and misleading results when the variable values change, the researcher cannot be able to generalize the findings with certainty. If more and more data is added to the functional regression model, the hypothesized relationship between two or more variables may not hold.

5.6 Suggestions for Further Research

This study focused on government domestic borrowing and financial development in Kenya and relied on secondary data. A research study where data collection relies on primary data i.e. in-depth questionnaires and interviews covering the different players in the financial sector is recommended so as to complement this research.

The study didn't exhaust the independent variables influencing financial development in Kenya and a recommendation is given that more studies be carried out to incorporate other variables like money supply, cost of labour, technological advancement, education levels, political stability and other macroeconomic variables. Establishing the effect of each variable on financial development will enable policy makers know what tool to use when controlling financial development.

The study concentrated on the last ten years since it was the most recent data available. Future studies may use a range of many years e.g. from 1970 to date and this can help confirm or disapprove this study's findings of. The study limited itself by focusing in Kenya. The recommendations of this study are that further studies be

conducted on other contexts such as other East Africa countries. Finally, due to the limitations of regression models, other models like Vector Error Correction Model (VECM) should be applied in explaining the various relationships between variables.

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APPENDICES

Appendix I: Research Data

Year	Quarter	Financial development	Government domestic borrowing	Interest rate	Trade openness	Inflation rate	Economic growth
2008	1	0.0016	27.874	13.893	-0.101	5.870	3.100
	2	0.0017	27.890	13.993	0.558	5.390	3.500
	3	0.0017	27.893	13.740	-0.067	5.380	0.400
	4	0.0019	27.968	14.440	-0.168	5.040	3.700
2009	1	0.0019	28.063	14.773	0.066	4.710	5.600
	2	0.0021	28.079	14.883	-0.027	4.560	5.400
	3	0.0019	28.093	14.763	0.260	4.160	10.100
	4	0.0021	28.122	14.797	-0.179	4.030	7.700
2010	1	0.0022	28.094	14.920	0.244	6.010	5.700
	2	0.0023	28.129	14.477	0.049	6.390	7.300
	3	0.0022	28.175	14.150	0.102	6.400	10.400
	4	0.0023	28.217	13.890	0.081	6.430	12.500
2011	1	0.0026	28.267	13.903	0.098	6.470	12.500
	2	0.0029	28.350	13.957	0.225	6.480	4.200

Year	Quarter	Financial development	Government domestic borrowing	Interest rate	Trade openness	Inflation rate	Economic growth
	3	0.0028	28.469	14.417	0.008	6.590	2.300
	4	0.0029	28.430	15.573	-0.131	6.660	0.300
2012	1	0.0031	28.337	15.620	0.113	6.670	0.300
	2	0.0032	28.418	15.977	-0.007	6.780	2.200
	3	0.0029	28.482	16.083	0.021	6.830	7.200
	4	0.3029	28.531	16.403	0.006	6.840	1.200
2013	1	0.1099	28.536	16.540	-0.087	6.980	10.700
	2	0.1146	28.544	16.677	0.137	7.240	10.000
	3	0.1229	28.606	16.947	0.047	7.260	7.100
	4	0.1315	28.633	16.960	-0.248	7.720	5.200
2014	1	0.1185	28.660	17.000	0.261	7.850	7.300
	2	0.1262	28.728	17.347	0.250	8.150	7.200
	3	0.1338	28.815	17.430	-0.098	8.320	8.500
	4	0.1421	28.840	17.900	-0.222	8.630	10.200
2015	1	0.1214	28.950	17.920	0.217	9.020	10.100
	2	0.1271	29.046	17.927	-0.135	10.300	8.800
	3	0.1359	29.147	18.147	-0.229	10.700	11.800

Year	Quarter	Financial development	Government domestic borrowing	Interest rate	Trade openness	Inflation rate	Economic growth
	4	0.1427	29.172	18.323	-0.056	11.920	7.000
2016	1	0.1298	29.234	20.003	0.353	12.780	8.100
	2	0.1149	29.274	20.053	0.042	13.390	7.900
	3	0.1192	29.327	20.213	-0.008	14.300	6.800
	4	0.1346	29.349	13.687	0.169	15.220	4.000
2017	1	0.1111	29.447	13.653	0.010	15.830	4.700
	2	0.1029	29.526	13.660	0.110	16.830	3.500
	3	0.1072	29.566	13.680	-0.084	16.290	1.700
	4	0.1262	29.585	13.677	-1.000	15.920	2.400