THE IMPACT OF GOVERNMENT BORROWING ON PRIVATE SECTOR CREDIT IN KENYA

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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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DEDICATION

This Research Project is dedicated to My Mom Anna Landi Mwakima with deep Love.

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LIST OF ABBREVIATIONS

ANOVA   –   Analysis of Variance

CBK   –   Central Bank of Kenya

GDP   –   Gross Domestic Product

GD   –   Government Debt

GB   –   Government Borrowing

IMF   –   International Monetary Fund

KBA   –   Kenya Bankers Association

T-Bills   –   Treasury Bills

T-Bonds   –   Treasury Bonds

SME   –   Small and Medium Enterprises

UK   –   United Kingdom

VAR   –   Value at Risk

VECM   –   Vector Error Correction Method

USA   –   United States of America

WB   –   World Bank

ABSTRACT

Kenya's National Debt is just over 3.77 Trillion-mark with Domestic Public debt reaching a level of KShs 444.7 billion in 2016. This project examined the impact of public domestic debt on private credit levels in Kenya over the period 2008-2016, an investment function with three independent variables, namely treasury bills, bonds, and central bank overdraft. The dependent variable is private sector credit. The secondary data obtained from Central Bank of Kenya (CBK) and Kenya National Bureau of Statistics (KNBS) was used.

SPSS Software was used in running linear regression. The results indicated that high levels of domestic borrowing have negatively affected private investment. The results also showed that the impact of public investment on private investment was not as significant as public domestic debt, variable suggesting that public investment has not been complementary on private investment. Variability in Interest rates have negatively impacted on private investments, while with regard to GDP, economic growth has induced more private investments.

The findings of this paper call for designing appropriate policies that deal with the ever-rising domestic public debt and the sale of domestic debt. The results have important implications for fiscal management in the context of the country's crying need to generate faster employment growth, meet the Millennium Development Goals, and attain the Vision 2030 goals. Research results are also of significant value to the academia in helping them design other longitudinal studies.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

All over the world, not only in the developing world, but also in the developed countries policy makers often face complex situations when figuring out on how to manage revenues and the economy. The current status is that borrowing by governments is on a rapid rise, for example, in UK, according to UK National Debt Analysis Statistics Report (2016), in 2005, the UK national Debt was less than 0.5 trillion pounds, after the infamous 2008 Financial Crisis, The national debt increased rapidly, and surpassed 1 trillion pounds mark in 2011. At end of the 2015-16 fiscal years, the 1.5 trillion pounds mark was eventually eclipsed. The trends holds in currently most countries in the world including in countries of very stable economies like the United states of America, whose debt is at just over USD 20 trillion up from USD 18 trillion by the end of financial year 2016. (National Debt Analysis Report, 2016). Kenya's national debt stands at Kshs 3.77 trillion up from Kshs 1.89 trillion in June 2013 (CBK, 2017).

Strictly speaking, government debt increases because of disproportionate government spending to receipts from tax and other receipts in general. The major way a government acquires the money it expends is through taxation. However, Niall continues to note that there are other ways that a government could use to raise money, for example, prior to the year 1933, USA, was on a Gold Standard, by this; the government restricted itself to printing limited amount of dollars based on the amount of gold in possession by the government. The limit on the number of dollars that the government could print and not the amount of gold possessed by the government at the particular time is what made the standard (Niall, 2008).

Niall (2008) in his book also noted other standards such as the Fresh water and Land standards limited the number of dollars that the government could print by the amount of land or fresh water respectively. Both standards would have the same effect. The value of the derivative serving as the standard is not important; the importance is underlined by the fact that the underlying derivative exists in a fixed quantity. Mussa (1997) asserts that if the government has to print as many desired dollars, then it effectively exacts an 'inflation tax'. If Government decides to print money intended for investment and by doing so, causes the commodity/property prices to shoot, the resulting hike in prices dilutes the value of money one owns. The government will have figuratively taxed its citizens to pay for the investment it did.

Nipun (2016) notes that inflation tax is subtle since it is generally unnoticed (when inflation is tolerable, people tend not to notice it and when they do, fail to perceive that it is indeed a tax).In addition, it is impractical to duck. Comprehending that inflation is actually a tax, leads us to basic truth that governments majorly acquire money through tax revenues. Other sources of revenue for governments include rates, fees, and commissions, surplus of the public sector units, penalties, and fines mainly done through state agencies and grants to the local and National government at large.

1.1.1 Government Borrowing

A government expends money and resources on several fronts ranging from public sector, capital expenditure, social welfare, to wages. Susan (2013) notes that in order to

finance expenditure, governments rely on the taxes and other revenues. While tax is the major source of revenue to a government, they are notoriously unpopular. For this reason, according to Susan (2013), Governments run frequently on deficits when the tax revenues raised from its citizens are less than the intended budget amount. In that case, a government will have three options; First, Tax increase, which bears the risk of investors being, whiffed away, Small ventures being pushed out of business, and the economy being driven into recession. Secondly, Expenditure budget being reduced. This may lead to lowering of the living standards, a spike in unemployment rate and retarded growth forecast; and thirdly, a government has the option to borrow from investors who are willing to lend.

Susan (2013) further notes that the third choice is the most convenient politically and is reasonably a sound economic choice because the alternatives have dire economic consequences. Susan continues to discuss that governments should after all borrow more than what they need to feed the deficit in order to take in extra funds to stimulate the economy. Borrowing is the best alternative as long as a government exhibits no default risk.

1.1.2 Private Sector Credit

According to International Monetary Fund (IMF) definition, Private sector credits described as financial resources that are provided to private sector by financial institutions. The resources can take the forms such as trade credits, on-equity securities, loans, and other accounts receivables that establish a claim for repayment. Bank credit to

private sector is defined as the credit offered by banking industry to the private sector only; for all firms and households. It excludes government lending.

Hofmann (2011) admits that credit is key to an economy. It's the spring of new developments and allows for property purchase by firms and households. Without a doubt, too much borrowing and lending can end up in a financial crisis but in principle credit, availability is good for an economy to develop. However, as earlier suggested, studies also show that financial crises are mostly credit bubble busts. Jorda et al (2013) show that a private credit bubbles during an expansion stage of an economy increases the probability of a financial crisis. In fact, after the global financial crisis in 2008, measures were proposed aimed to raise bank capital buffers during economic expansion with ultimate goal of slowing credit creation.

1.1.3 Government Borrowing and Private Sector Credit

In a general view, government borrowing leads to piling up of resources to the public leaving private sector with the smaller amount of resources. This is commonly referred to as crowding out of private investment (Majumder, 2007).Fayed (2008) explains that crowding out in the context of developed economies, narrows down to impact of borrowing by the government on the interest rate equilibrium to which the effects spill over to the private sector in their quest of acquiring credit and the ultimate cost of credit. The results to informative outcomes especially when the financial industry and more so banking sector becomes free and the interest rates are determined by equilibrium market. Fayed (2008) notes that empirical evidence, however, show equilibrium interest rate is

faintly related to government borrowing. This relation further weakens in developing countries where financial industry, mostly the banking sector, has from time to time witnessed government interventions, with Kenya serving as a current example where the interest rates are monitored by the central bank.

1.1.4 Government Borrowing and Private Credit Sector in Kenya

Data from CBK (2011) shows that Kenya's budget deficit is on the rise and over time now ,the deficit has been financed through both Domestic and foreign borrowing. The government has witnessed budget deficit inclusive of grants. The budget deficit has been financed by both foreign and domestic borrowing..

In the wake of ambitious government budgetary planning which is in line with our millennial goals together with the aim of mapping Kenya as the hotbed and engineer of leading development not only in the region but across the developing world, massive borrowing by the government is inevitable (Vision 2030). CBK (2017) report narrates that the borrowing however is not only to finance the ever-growing deficit but also creates a surplus to stimulate and sustain economic growth.

The ever continuing and currently even more conspicuous credit squeeze is also raising concern over the health of banking sector itself. Kenya Bankers Association (KBA) Analyst Muhindi (2017) in his report believes the ongoing cut in lending to the private sector is not sustainable and has the potential of stifling growth and financial mediation in the economy. Standard Investment bank Quarterly report (2017)consolidates that while

banks showed signs of earning stability at the end of 2017 Quarter 1, continued credit rationing was bound to start weighing on margins and profits with a number of lenders already cutting jobs and closing branches as interest margins, which is a key source of income continue to fall. Bankers however insist that they have to change their business model if they are to survive under the rate cap regime.

The CBK (2016) report also shows that while sector growth has fallen, banks have significantly increased their lending to government. Credit to government grew by 7.1 percent on an annualized basis at the end of March 2017 recovering from growth in the second half of the year 2016.Credit to other public sector borrowers such as parastatals and local (county) governments units grew by 28.3 percent. Lending to governments as an alternative to the private sector has its limits; however, given that the treasury has set limit and domestic borrowing target each fiscal year, inevitably therefore, some banks will be crowded out of the public lending space, forcing them back to private sector loans.

1.2 Research Problem

Fielding (2007), notes that credit in a country, just like other macroeconomic variables, is important in evaluating a country's economic direction. The crowding out effect discussion is majorly based on the limited resources available to banks; if a public authority borrows a dollar from the banking industry, consequently , the private sector are left with a dollar less from what they could borrow from the banks. This leads to the banks responding to an increased borrowing orchestrated by the government and

subsequently optimally adjusting their loan portfolio subject to the risk-return appetite and characteristics. However, some factors (Essam 2008) criticize and argue that increased borrowing by the public authorities from the banking industry may have insignificant effect on banks' balance sheets and hence tend to not affect credit available to private sector thus may not crowd out in credit in the private sector.

Tanner (2005) used the illustration that when the deposit rate is high, banks experience a surge in deposit, which makes them liquid. This may lead to increased public authorities borrowing from the banking sector (which is in line with the millennial goals for our case study; Kenya) at this point may result in insignificant change of available credit to the private sector as a whole. On the contrary to Muhindi (2017), Tanner (2005) views this as an opportunity for banks in that the borrowing done by the public authorities might actually induce the banks to otherwise risky and adventurous credit issuance to the private sector. This mainly is because of the safe cushion in government assets in a bank's portfolio as governments loans have the least default risk and guaranteed income in terms of the expected revenue to be generated from the lending.

Empirical studies carried out on the emerging and developing economies have shown the existence of significant crowding out effect of borrowing by the government from the credit in private sector and banking sector domestically. These studies include Farazi et al 2008 who used Panel Data on 25 developing countries, others include Serven (2003),Emran (2007),Gale and Orszag (2004) and Guncavdia et al (1998). Other factors that bring in some weight in the intricate balance between government borrowing and

credit available to the private sector according to Subika (2008) include interventions by the governments to which are at times very extensive and the interest rates that are often set by the central banks especially of developing countries (Subika, 2008).

Muthama (2015) highlighted the importance of credit to private sector especially in developing countries like Kenya and the need to appreciate the balance between borrowing by governments and provision of credit to the private sector. Nduku (2017) gathered that there is some significant evidence as he showed some evidence of co movement between growth of credit by the government and credit to the private sector as a percentage to the GDP in Kenya.

Despite research by a number of scholars in determining effect of government borrowing on private sector credit growth, there is no consensus at the relationship between the two (either positive or negative relationships), therefore the research project sort to answer the question how domestic borrowing by the Government of Kenya influence the private credit sector within the country.

1.3 Research Objective

To establish the effect of government borrowing on private sector credit in Kenya.

1.4 Value of the Study

The study was helpful to governments in understanding how their borrowing actions will affect private sector credit growth. This effectively assisted in pinpointing the parameters that need strict monitoring in balancing the relationship so as to achieve a Governments main goal of creating enabling environment to the private sector as well as creating productive capacity and positively influencing growth of the economy and its citizen's welfare.

The research guided Policy Makers in understanding the relationship between fair government borrowing and private sector credit. Thus, for this reason, there is fine-tuned approach to formulating policies and monitoring their implementation while adjusting to the macro and micro economy demands to not only advise but also put in check the government while borrowing in bid to achieve its plans and ambitions as well as to drive credit growth in the private sector. The balance to which is vital in smooth economy growth.

The study helped researchers in understanding empirical and validated relationship between borrowing by the government and credit growth in private sector. The relationship has remained ambiguous given the sophisticated nature our economy and the developing world at large which has many factors that need to be addressed at so as to understand and impose a balance between borrowing by government and borrowing by the private sector.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter, a review of literature related to the study is discussed under the following themes: theoretical reviews done on the subject area, empirical reviews, and determinants of government borrowings together with determinants of private sector credit growth. The later sections of the chapter provides the conceptual framework upon which the study is based and a critical review of the literature. The chapter ends with a summary of literature review and identifies the research gaps to be addressed by the current study.

2.2 Theoretical Review

The purpose of theoretical review was reviewing what has been done by other scholars and researchers in relation to borrowing by governments and the influence the borrowing has to credit availability to the private sector. The section implores on theories such as Ricardian equivalence theory, crowding out effect theory and the credit channeling theory.

The Ricardian equivalence theory despite objections argues that consumers are rational and thus monitor government borrowing while anticipating that the government will have to tax them in future so as to repay the loans in future. This knowledge by the consumers in turn allows them to prepare and save for future tax and thus as the theory foundation that government borrowing will necessarily not influence the rational consumers given their preparedness.

The crowding out effect theory essentially dives into the outright relationship and tries to establish how government borrowing weighs in on the credit availability to private sector. The theory appreciates banks as the key providers of domestic credit to both private sector and the government. Credit channeling theory on the other hand discusses on how government actions affect private investment through the lending rate.

2.2.1 Ricardian Equivalence Theorem

Bernheim (1987),states the Ricardian Equivalence theory (also known as the Ricardo de Viti Barro equivalence proposition) as an hypothesis of the economy that holds consumers are rational, focused, calculative and forward looking and thus effectively comprehend government's plans and budgets constraints during their firm and household consumption decisions. The theory therefore postulates to the result that for a given pattern of government financing and expending; does not affect consumption decisions of its people. This theorem is therefore used as a justification antagonistic to spending increases and tax cuts that are supposedly aimed to boost aggregate demand. The whole idea behind the theorem is that government can finance their deficit in fulfilling its budgetary plans either through increased taxes or by issuing bonds. However, since bonds are loans, they must eventually be repaid, perhaps by raising taxes in the future leading to the only question "tax now or tax later?"

Bittane (2013) asserts that In essence, Ricardian Equivalence theorem supports that increased government borrowing may have insignificant impact on consumer daily budgetary planning and consequently expending because consumers predict tax cuts or increased spending will lead to forthcoming tax increases to pay back the debt. The

proposition postulates that if the borrowing by the government is to fund a tax cut, rational consumers realize that there will be taxes in the future and that they will have to rise to finance the borrowing hence they will save the extra income at their disposal to pay off the future tax hike.

This, if true, according to Berheim (1987) will have implications on the fiscal policy, as it will declare the fiscal policy redundant. David Ricardo was the first to propose this possibility however; even Ricardo himself was suspicious of his findings in the sense that, Consumers are not rational. The idea that tax cuts is saved is misleading, Tax cuts can lead to boost in growth and thereby lead to reduction in borrowing and the most likely lack of crowding during recession period in an economic cycle; In a recession period, private sector, due to docile economic activities, tend to be cautious hence savings rise because of lack of confidence (Expansionary fiscal policy is a way of utilizing the private sector saving). It is urged that increased borrowing which definitely supports the expending done by governments, lower private spending, but, in fact, the government is not preventing private sector spending but using private sector savings to increase aggregate demand.

Berheim (1987) Barros Model assumed that capital markets are perfect, that is, all can borrow and lend at a single rate, the path of government expenditure is fixed, and families act as infinitely entities because of intergenerational selflessness. Among the conclusions, Berheimnoted, "In the case government bonds effect on marginal wealth is insignificant, fiscal effect that indulges changes in the relative amount of debt finance and

tax for a given amount of public expenditure would not affect interest rates capital formation and aggregate demand.

2.2.2 Crowding Out Effect Theory

Shetta et al (2014) asserts that Crowding out theory is an economic theory with the proposition that increase in public expending drives private sector expending. Although the crowding out effect is a general term, often, the terms used in reference to the crippling of private credit sector involvement where borrowing by government is high.

Shetta et al (2014), continues to discuss that the crowding out school of thought contends that government spending may drive down private spending. This mostly happens when borrowing by public authorities by itself being a major uptake of credit leaving a smaller percentage of credit availability in the economy. This by factors of demand push and pull causes a hike in interest rates. As a result, private businesses and individuals find costs restrictive to advance for credit to fund expansion and growth. This in turn can create a down turn in economy, which lowers tax revenue and thus increases the need for a government to borrow even more. This cutback in capital intensive projects can comparatively offset benefits brought about by the borrowing from the government, such as those of economic impetus.

2.2.3 The Credit Channel Theory

Sbrancia et al , (2011) discusses Credit channeling theory propositions and notes that in cardinality, borrowing by the government influences investment in the private sector

through the lending rate, Nevertheless, in economies that are oppressed, specifically in Low income countries which happens to be many developing countries, the equilibrium interest rate could be inelastic to market perceptions. Financial repressions measures are tweaks applied by regimes to direct resources to them, which in a market that is not regulated would go elsewhere. Government debt, may ultimately have no effect on interest rates, but on the contrary have a noteworthy effect on private credit issuers. This could be possible due to intervention by the government, such interest rates caps and other administrative controls pertaining the interest rates; a high legal reserve ratio; the existence of direct intervention on credit allocation; control of domestic banks and financial institutions; and barriers that limit other institutions seeking to enter the market (Reinhart and Sbrancia, 2011).Hence, private credit will not be allocated according to the expected returns on the projects, but according to the quality of collateral, loan size, political pressure, (King &Levine, 1993, p. 31).In this case, interest rate variability will have no or at best a weak relationship with government borrowing. Thus, if the interest rate channel is weak, the quantity channel will capture the influence of borrowing public authorities and the government.

2.3 Determinants of Private Sector Credit

There exist factors in the emerging economies that influence the availability of credit to the private sector as from the empirical studies. These factors include economic activities, property prices, and interest rates.

2.3.1 Economic Activities

Hofmann (2001) asserts that Economic prospects and conditions majorly dictate investment and consumption demand, and thus the ultimate credit demand. Supply of credit may also be determined by the economic activity of the state. Cash flow and income are well factored in the ability of firms and households to repay their debts, thus alteration of economic activities will affect the willingness of lenders to proffer credit.

Economic activities mainly supported by expansionary/ contractionary government expending will at a great length affect the cash flow and desire to satisfy the cash flow needs that arise. Expansionary government expending is normally correlated with a sprouting business activity and the economy and largely the private sector. Contractionary on the other hand leads to literally docile activities of the private sector.

2.3.2 Interest Rates

Hofmann (2001) continues to note that cost of financing, as represented by market interest rates, normally has inversely related relationship with the demand of credit. When interest rates rise, lending effectively becomes more expensive and loan demand thereby slows down. Besides, monetary stretching, as increase in interest rates positively identifies, may induce lenders to trade carefully in a risk averse angle, which will lead to reduction in general supply of credit.

A reduction in credit supply, in a risk averse angle, may lead to reduced creditworthiness of firms and households due to a deterioration in their financial positions following a

monetary tightening (balance sheet channel of monetary transmission). A strict observance of monetary policy as regulated by the central bank and run-through open market sales may also drain the banks' balance sheets and thus loanable funds from the banking industry. This will also cause a reduction of loan supply (bank lending channel of monetary transmission). Hofman (2001) adds that Property prices may also affect both credit demand and credit supply.

2.3.3 Property Prices

According to Hofman (2001), Property adjudges for a substantial share of assets, because lenders mostly prefer real estate as the collateral to be used against lending, thus, prices of property also have a significant effect on the borrowing capacity of the private sector. An increase in price of property generally sums up to an increase in the value increases the value of assets that can be used as security which connotes to improved credit-worthiness of firms and households due to the value of their underlying assets. As a result, financial institutions will be more than welcoming to borrowers seeking credit, so that credit supply to the private sector is increased.

On the other hand, Hofman (2001) continues to note a decrease of property prices will lead to a risk adverse approach to the market at large which will have a negative impact in the eyes of lenders especially on the creditworthiness and households default risk due to devaluation of preferred collateral. This as a result will lead to financial institutions to be reserved to borrowers seeking credit.

2.4 Empirical Studies

Pickett (2006) elaborates that empirical evidence is a source of knowledge that is acquired by either the method experimentation or observation. A few of empirical studies have been conducted about government borrowing and private credit and evidence on less developed countries. This section highlights both international and local evidence of research done on Government borrowing and its effects including its effects on private sector.

2.4.1 International Evidence

Farazi et al (2008) examined the significance of crowding out effect of borrowing by government in domestic banking sector that affected the private sector in 25 major developing countries. The potential autocorrelation guided in not using the "best estimate" but rather a plausible range and used Pooled Mean Range (PMG).Shahe Imran et al went on to note that when a government borrows 1 dollar, it could crowd the private sector up to 70 to 80 dollar cents in the long run. Such evidence provided an important link in the analysis of effects of government policies on private sector investment in developing countries.

Osei-Assibey (2014) investigated the effect of borrowing by the government on rates of interests, investments in private sector and the ease of the private sector accessing funds and credit in Ghana. Using secondary data, Osei-Assibey was able to statistically analyze the relationship between borrowing by government and the credit available to private

sector and. He revealed that borrowing by the government influenced had a significant hit in crowding out the private sector in Ghana.

Kamaly et al (2014) using the hypothesis that borrowing by government leads to investment by private sector being crowded out through its dampening effect to credit available to private sector, Kamaly et al used VAR (Value at Risk) model while applying quarterly data that span to nearly 40 years. This led to discovery of interesting results such as, as governments issue more debt instruments, banks shifted towards the lesser free portfolio offered by the government shunning away from the private loans that were and still are considered riskier hence reduced investment by the private.

Erzen et al 2008 investigated the financial developments determinants together with credit in private sector using a panel data of 85 countries both industrialized and developing using annual data from 1980 to 2006.The outcome hinted that increase in central government debt and public sector credit lead low income countries recording a decrease in credit to the private sector. This trend albeit explained that there is true existence of financial crowding out.

Shijaku (2013) was focused in identifying and substantiating factors that determine credit by banks to the private sector over the long run in the case of Albania. Shijaku et al (2013) employed Vector Error Correction Method (VECM) technique having in mind indicators of supply and demand. The results indicated that lending is positively related to

economic growth. In addition to that, decreased domestic borrowing by the government and lower cost of borrowing would add to the borrowing incentives.

2.4.2 Local Evidence

Mukambi et al 2017 in their Kenya Bankers Association (KBA) working paper, they investigated the nexus of domestic bank lending to the Kenyan Government and Private sector credit taking into consideration the fiscal deficit environment characteristic of government debt accumulation. The main innovation of the study was to understand the depth at which borrowing by government crowds out (in) private sector credit after significant changes in fiscal regimes from 1966 to 2014.Markov switching model was used to identify fiscal policy regimes. The study established that fiscal policy regimes are key in explaining the relationship government debt-private sector credit. There was evidence that persistent increase in government debt crowds out private sector credit. The paper recommends prudential management of fiscal policy, which is fundamental in managing government domestic borrowing.

Kangara (2015) sought to determine how national debt impacts on an economy and its growth. In his descriptive research, secondary data obtained from Central Bank of Kenya (CBK) .A regression model and Correlation analyses were used for analyzing the data. The study concluded that national debt was negatively related to economic growth in Kenya. The regression model used the study was statistically insignificant in explaining the effect of national debt on economic growth in Kenya. Notably, An increase in

national debt, interest rates and inflation was found to impact negatively on economic growth.

Ngugi (2016) aimed at determining effect of borrowing by the government of Kenya on the Kenyan Economy. Ngugi noted the overreliance by the government on public debt, aide and grants as source of funds by the government which led up to the buildup on the level of public debt. The adopted hypothesis and theories include overhang hypothesis and the crowding out theory. Using the time series analysis, the study found out that public (government) borrowing lead to high cost of borrowing and crowding out of the private sector.

Erick (2014) sought to determine the contribution by Small and Medium Enterprises (SMEs) and their alternatives in sourcing of funds. The descriptive study found out that high interest rates that are heavily controlled by the central bank or through actions of the government acted as a major hindrance to SMEs accessing alternative financing. This consequently led for call to the government through its agencies to strive in creating an enabling environment.

Achieng (2012) investigated the relationship between budget deficit and domestic debt for Kenya for a 20-year period from 1991. The study in which only government revenue was considered and excluded the government expenditure however note an inverse relationship between the interest rates and the inflation rates against the domestic debt by

the government. Ngugi (2016) further supports this where it she notes that increased government borrowing led to higher cost of borrowing in terms of interest rates.

2.5 Conceptual Framework

In our study, the dependent variable will be the Private sector credit growth and the independent variables will be the different ways in which governments participate in the domestic borrowing, for example Treasury Bills and Notes, Treasury Bonds, Direct Borrowing and CBK overdrafts summarized as below:-

Independent variables   **Dependent variable**

```
┌─────────────────────┐
│  Treasury Bills and │
│        Notes        │
└─────────────────────┘

┌─────────────────────┐                    ┌───────────────────────────────┐
│   Treasury Bonds    │                    │ Private Sector Credit Growth  │
└─────────────────────┘                    └───────────────────────────────┘

┌─────────────────────┐
│   CBK Overdraft     │
└─────────────────────┘
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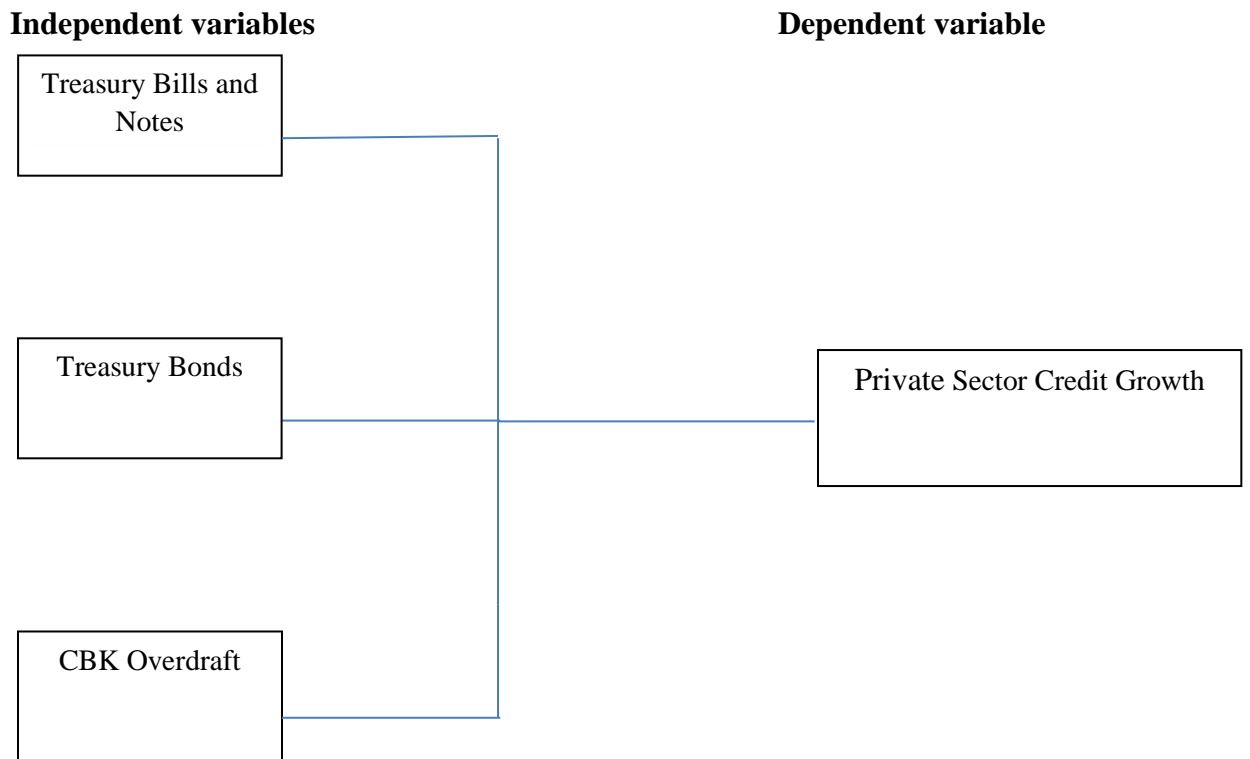
Figure 2.1: Conceptual Framework

Source: Author (2017)

Central Bank of Kenya Overdrafts

This happens when the government through the Treasury borrows in the short term from the CBK (KRA account), mainly to cater for arising recurrent expenditures that ought to be met with urgency through an overdraft(CBK Report, 2017).Only short term needs get priority as for development funding can be acquired using long-term arrangements such as T-Bonds. CBK overdraft can be being measured in absolute values or as a ratio.

Treasury Notes and Treasury Bills

A Treasury bill also known as T-Bills is an obligation but with a lesser period that is backed by the Central Government of Kenya (less than a year). They are mainly measured by nominal values and the yield to maturity (CBK, 2017).

Treasury Bonds

Treasury bond (T-Bond) is a marketable, fixed –interest government debt security with a maturity of more than a year. Treasury Bonds are measured in nominal values and the yield (CBK 2017)

2.6 Summary of Literature Review

The literature review indicates that government borrowing, despite it being prevalent, especially among developing countries, which nearly always run on a fiscal deficit and consequently outsource funding to not only fill in the gap for its intended expenditure, but also evoke positive economic stimulus, is a green area that needs to be keenly looked at. It is evident to note that this stands in the balance of millennial goals achievement and a retarded economy if economic policies applied are redundant.

A significant relationship has been noted between government debt and downgrading economy. Other factors affecting the private sector credit include inflation, cost of credit itself in terms of the lending interest and the risk appetite of lenders especially in the rate capping regime where lenders choose to lend more to government and few borrowers who have less default risk. This is adversely affecting both firms and households that fall in the category of high default risk borrowers since with the capping of interest; they end up having no other incentive to offer to the lenders to lure them in accessing their coffers as compared with willing borrowers with low default risk. This is at large putting the economy at risk in the long run as the level of investments will continue the downward trend in the long run and economy will be bound to downsize.

While we acknowledge that there has been study to substantiate the relationship between the government borrowing and private sector credit growth, mostly in the developed world, little attention has been given to the effects of government borrowing in Kenya and how it is and will continue to influence the private credit sector.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter described the Study design and Study methodology used in the Study. This is organized in sections under subheadings containing Study design, target population, sample for the Study, data collection and data analysis.

3.2 Research Design

A research design is regarded as presentation of the setting/setup for collection and analysis of data in a manner that aims to combine relevance with research purpose (Kombo & Tromp, 2006). It makes up the layout for collection, measurement and analysis of data (Kothari, 2004). Nachmias and Nachmias (1996) describe a research design as the blueprint that enables the investigator to develop solutions to the research problems and guides him in the various stages of the research.

The study adopted descriptive research design. Best and Khan (2009) propound that descriptive research is aimed at describing characteristics of variables in a situation and is concerned with conditions or links that exist, standpoints that are held, practices that are going on, effects that are evident or trends that are developing. Descriptive studies are not only restricted to fact-findings, but also may result in formulation of important principles of knowledge and solution to significant problems (Kombo & Tromp, 2006).A quantitative descriptive study is the appropriate design as it is exploratory in the capacity of establishing the truth and the existing relationship of how government borrowing couple with private sector credit.

3.3 Population; Case Study of Kenya

A population is described as the set of data that includes all items with the characteristic one wish to understand (Mugenda, 2008). The population of the study will be the statistics on governments borrowing; which will lead to indicative data such as the percentage of deficit to overall budget, percentage of borrowing relative to Gross Domestic Product (GDP), and ultimately Private sector borrowing relative to GDP.

The targeted population in our study will be the government of Kenya and the Kenyan private sector in terms of their borrowing levels year to year.

3.4 Data Collection

Secondary data on Government of Kenya on government borrowing and private sector credit between 2008/2009 to 2016/2017 and will mainly focus on the Government of Kenya as the target population. Other fundamental information for our study include the Treasury bills and notes, Treasury bonds, CBK Overdrafts, Direct borrowing and the general National debt that will be measured semi-annually in a time series trend analysis for a 9 year period from 2008 to 2016.

3.5 Data Analysis

Ema-Or (2011) posits that Data Analysis, also, analysis of Data is the process of inspecting cleansing and modeling of Data with the goal of discovering useful information, conclusion suggestion and supporting decision-making. Collected Data will be collocated by use of descriptive statistics by mostly trend analysis features such as

distribution tables and percentages and spread graphs between the variables in view of explicitly broadcasting the trends.

3.5.1 Analytical Model

In our study, the main method of data analysis will be the simple regression model and In our effort to achieve that, we will use the following model to guide us through the analytical model as below:-

$$Y = a + BX_1 + BX_2 + BX_3 + E$$

Where

Y= Dependent variable and in our case will be the private sector credit in Kenya. It will be measured absolute values and as a percentage to GDP

a= the constant term, that is, the credit that the private sector will acquire irrespective of the factors that affect it. The constant term in the regression model

BX_i= Treasury bills and notes which will be measured by absolute values

BX_2= Treasury Bonds will also be measured by absolute values

BX_3= Central Bank Overdrafts which will also be measured in absolute values

E= the error term in the regression model.

3.5.2 Test of Significance

The coefficient of determination, denoted as R^2wasused to indicate how well data fit into the statistical model. F-statistics (also known as fixation indices) was used to test the expected level of heteroscedasticity in the target population Analysis of Variance

(ANOVA) was used in the analysis of experimental data to test the variables for statistical significance.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter discusses the major findings, which were analyzed using secondary data that was obtained from Central Bank of Kenya. The secondary data covered a period of nine years (2008-2016). The analysis includes descriptive statistics, correlation analysis, and regression analysis. This was done in line with the objective of this study, which was to determine the impact of government borrowing on private sector credit in Kenya.

4.2 Descriptive Statistics

Descriptive statistics has been used to give a summary of the results in form of mean, standard deviation, minimum and maximum values in the period of study (2008-2016). It shows a trend analysis of how the variables performed over the period of study. The findings have are presented in the Table 4.1 below:

Table 4.2 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Private sector credit	36	5	6	5.43	.504	.305	.441	-2.060	.858
Treasury Bills	36	5	6	5.96	.189	-5.292	.441	28.000	.858
Treasury Bonds	36	6	7	6.21	.418	1.473	.441	.176	.858
Overdraft at Central Bank	36	4	9	5.04	.838	3.995	.441	20.122	.858
Valid N (list wise)	36								

Source: Research Findings (2017)

The above findings in Table 4.1, the minimum amount was 4 while the maximum value was 9 within the study period (2008-2016), Amounts on Bonds decreased gradually from 2008 to 2016. The findings revealed that private sector credit increased over the study period (2008-2016) however; there was a rapid increase in government borrowing. This was the highest percentage in the study period. This implied that Kenya's economies largely depended on debt to finance its capital projects. Treasury bills, Bonds and Central bank overdraft have been increasing over the years however the rate of increase of government borrowing has surpassed that of the private sector borrowing. This implied that the public investments were performing poorly.

Bonds increased rapidly in the study period which was an indication that government borrowing impacted negatively on the private sector credit in Kenya. The rate of amount borrowed using bonds as a debt instrument fluctuated over the study period. The government borrowing was highest in 2016 this rate of borrowing was significantly high and was attributable to poor private sector credit in Kenya.

4.3 Pearson's Product Moment Correlation Coefficient

The study conducted a Pearson's correlation coefficient to determine the association between variables. The correlation scale is defined as follows: values between 0.0 to 0.3 indicate that there is no correlation, between 0.31 to 0.5 shows a weak correlation, between 0.51 to 0.7 a moderate correlation and between 0.71 to 1.0 indicates that there is a strong correlation between the study variables

Below are the results the Table 4.2 below:

Table 4.3 Pearson's Correlation Coefficient Private Sector Credit

	Private sector credit	Treasury bills	Bonds	Central bank overdraft
Private sector credit	1			
Treasury bills	.305	1		
Bonds	-.192	.542**	1	
Central bank overdraft	-.906**	-.359*	.088	1

Source: Research Findings (2017)

4.4 Regression Analysis and Hypothesis Testing

A linear regression model was used to test the hypothesis for this study which had predicted a negative relationship between government borrowing and private sector credit in Kenya.

4.4.1 Model Summary

The model summary gives information on regression line's ability to account for the total variation in private sector credit. The results are presented in the Table 4.3 below as follows:

Table 4.4 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.723[a]	.834	.731	0.481

a. Predictors: (Constant), Overdraft at Central Bank Treasury bills, Bonds

Source: Research Findings (2017)

The coefficient of determination was .834 this implied that government borrowing only explained 83 percent of the variability in private sector credit in Kenya. This was an indication that the model was significant.

4.4.2 Analysis of Variance

The study did a regression analysis to determine whether there was a statistically significant relationship between the variables as shown in Table 4.4:

Table 4.4 Analysis of Variance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.143	3	.381	1.644	.199[b]
	Residual	7.413	32	.232		
	Total	8.556	35			

a. Dependent Variable: Private sector credit
b. Predictors: (Constant), Overdraft at Central Bank, Treasury Bills, Bonds

Source: Research Findings (2017)

The regression model was statistically significant since the probability value .000>5 percent which means that the model is statistically significant. These findings are consistent with the hypothesis of this study which predicted a statistically significant relationship between government borrowing and private sector credit in Kenya.

4.4.3 Model Coefficients

This table gives a summary of the results of the regression equation. The values in column B represent the extent to which the value of that independent variable contributes to the value of the dependent variable. The other column shows the level of significance of the study variables. Below are the results in the Table 4.5 below:

Table 4.5 Model Coefficients

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.502	3.985		1.883	.069
	Treasury Bills	-.564	.528	-.190	-1.068	.293
	Bonds	.058	.233	.044	.248	.806
	Overdraft at Central Bank	.182	.101	.297	1.804	.081

a. Dependent Variable: Private sector credit

a. Dependent Variable: Private sector credit

The regression model for this study is as follows:

Private Sector Credit = 7.502—.564x1—0.058 x2 -0.182x3+€

Central bank overdraft, treasury bills and Bonds had an inverse relationship with private

sector credit in Kenya. This implied that a unit increase in these variables would result into a corresponding decrease in private sector credit in Kenya. On the other-hand, all the components of domestic government borrowing had an inverse relationship with private sector credit in Kenya. This implied that a unit decrease in these variables resulting into a corresponding increase in private sector credit in Kenya.

The findings revealed all the variables under investigation these are: Treasury bills, Bonds and Central bank overdrafts were statistically significant in explaining the effect of government borrowing on private sector credit in Kenya. This is because their p-values were above 5 percent as follows: .980, .371, .091, .974 and .974 respectively. This conforms to the hypothesis of this study which had predicted a negative relationship between government borrowing and private sector credit in Kenya.

4.5 Discussion and Findings

The findings revealed that private sector credit increased over the study period (2008-2016) however; there was a rapid increase in government borrowing. This was the highest percentage in the study period. This implied that Kenya's economies largely depended on debt to finance its capital projects. Treasury bills, Bonds and Central bank overdraft have been increasing over the years however the rate of increase of government borrowing has surpassed that of the private sector borrowing. This implied that the public investments were performing poorly.

Bonds increased rapidly in the study period which was an indication that government

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borrowing impacted negatively on the private sector credit in Kenya. The rate of amount borrowed using bonds as a debt instrument fluctuated over the study period. The government borrowing rose steadily as at 2016 this rate of borrowing was significantly high and was attributable to poor private sector credit in Kenya.

Correlation analysis found that there was correlation between private sector credit and treasury bills, central bank overdraft and Bonds. The correlation scores were as follows: +0.991, +0.991 and+0.991 respectively. These findings are consistent with Mukambi et al 2017 in their Kenya Bankers Association (KBA) working paper; they investigated the nexus of domestic bank lending to the Kenyan Government and Private sector credit taking into consideration the fiscal deficit environment characteristic of government debt accumulation.

The main innovation of the study was to understand the depth at which borrowing by government crowds out (in) private sector credit after significant changes in fiscal regimes from 1966 to 2014. Markov switching model was used to identify fiscal policy regimes. The study established that fiscal policy regimes are key in explaining the relationship government debt-private sector credit. There was evidence that persistence increase in government debt crowds out private sector credit. The paper recommends prudential management of fiscal policy, which is fundamental in managing government domestic borrowing.

Ngugi (2016) aimed at determining effect of borrowing by the government of Kenya on the Kenyan Economy. Ngugi noted the overreliance by the government on public debt, aide and grants as source of funds by the government which led up to the buildup on the level of public debt. The adopted hypothesis and theories include overhang hypothesis and the crowding out theory. Using the time series analysis, the study found out that public (government) borrowing lead to high cost of borrowing and crowding out of the private sector. This is consistent with the findings on this paper as the private sector credit went down.

Erick (2014) sought to determine the contribution by Small and Medium Enterprises (SMEs) and their alternatives in sourcing of funds. The descriptive study found out that high interest rates that are heavily controlled by the central bank or through actions of the government acted as a major hindrance to SMEs accessing alternative financing. This consequently led for call to the government through its agencies to strive in creating an enabling environment. This evident in the findings of this paper as the private sector credit level went up but not at the rate of the government borrowing through the treasury bills, Bonds and Central bank overdraft.

The regression results found that the coefficient of determination explained 83.4 percent of the variability in private sector credit. The linear regression model adopted for this study was statistically significant because the probability value was .000>5. These findings are consistent with the hypothesis of this study which predicted a statistically significant relationship between government borrowing and private sector credit in

Kenya.

These findings are also consistent with a study by Moki (2012) who concluded that the regression model was statistically significant. National debt, interest rates, inflation, net exports and consumption were statistically significant in explaining the effect of national debt on economic growth in Kenya. Likewise to this model the findings show that the regression model was statistically significant.

This is because their p-values were above 5 percent as follows: .980, .371, .091, .974 and .974 respectively. These findings are consistent with Muinga (2014) who concluded that net exports and consumption were statistically significant in explaining the effect of External public debt and economic growth in Kenya.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter consists of the major findings that were drawn from chapter four of this study. This chapter consists of the summary of the findings, conclusion, recommendations, and suggested areas for further studies.

5.2 Summary of Findings

The findings revealed that private sector credit in Kenya increased over the study period (2008-2016), which implied that private sector credit performed poorly. Government borrowing increased rapidly for the last nine years. Kenya's economies largely depended on debt to finance its capital projects. Treasury bills and bonds increased over the years, this was an indication that the private sector credit was declining.

The government borrowings have increased over the years over the study period. The highest level of government borrowing that was recorded in the study period was the year 2016. Bonds, treasury bills and central bank overdrafts increased rapidly in the study period which implied that private sector credit impacted negatively due to the increase in domestic government borrowing. The mean value of consumption was estimated at percent; this rate of consumption was significantly low and was attributable to poor economic growth in Kenya. Correlation analysis found that there was correlation between private sector credit and government borrowing. Further, it was revealed that there was a strong correlation between treasury bills, Bonds and Central bank overdrafts in Kenya.

Coefficient of determination explained 69 percent of the variability in private sector credit in Kenya. The linear regression model adopted for this study was statistically significant because the probability value was above 5 percent, .000 less than 5. These findings are consistent with the hypothesis of this study which predicted a statistically significant relationship between government borrowing and private sector credit in Kenya. Treasury bills, Bonds and Central bank overdrafts were statistically significant in explaining the effect of government borrowing on private sector credit in Kenya.

5.3 Conclusion

The study concluded that domestic government borrowing was negatively related to private sector credit in Kenya. This implied that an increase in government borrowing impacted negatively on private sector credit in Kenya. When a country borrows more to invest in capital projects it is more likely to impact negatively on private sector credit of a country in the long-run. The regression model used in this study was statistically significant in explaining the effect domestic government borrowing on private sector credit in Kenya.

The study further concluded that Treasury bills, Bonds and Central Bank overdrafts contributed negatively to private sector credit, this implied that an increase in government borrowing led to a decrease in private sector credit. It was also concluded that an increase in government borrowing might impact negatively on economic growth and that the private sector lack alternative source of financing.

5.4 Recommendations

Domestic government borrowing was found to have a negative relationship with private

sector credit. This implies that an increase in government borrowing leads to a significant reduction in resources in the private sector which might be exposed to more taxes to pay interest on debt. This highly discourages private investments and impacts negatively on economic growth. It is however important for the government to find an optimal level of debt which promotes both the private investments and economic growth.

The study recommends that the Kenya government should find ways of increasing alternative sources of financing to both the government and the private sector so as to steer further its economic growth. This is also supported by the findings of this study which has proved that an increase in government borrowing results into a corresponding decrease in private sector credit.

The government should look for alternative means of raising revenues other than use of debt either internally or externally. This country should try and raise adequate revenues through taxes, treasury bills and bonds and privatization to mitigate national debt and borrowing in order to boost economic growth. The study recommends that Kenya needs to adopt and implement strategies to reduce debt, stock and problems associated with debt service. The government should lay more focus on debt management profile particularly for its expenditure items. This can be achieved by putting borrowed funds into productive projects and programs which will boost economic growth.

The empirical findings concluded that there exists a negative relationship between government borrowing and private sector credit. The study therefore recommends that the government should set policies that create a platform for increased avenues to raise finances to finance capital projects like construction of roads and other infrastructural developments

that requires a huge capital investment.

5.5 Limitations for the Study

Due to time and funding constraints the study limited itself to Kenya. It would be more appropriate for the researcher to conduct a comparative study in East Africa and other neighboring countries that are of similar in terms economic power and demographics and then compare findings and draw conclusions based on more facts.

The study confined itself to a period of nine years which is this period short when determining the effect of government borrowing on private sector credit of a country. This is because the effect of this relationship could vary fundamentally depending on period. How the variables manifest themselves and their implications could affect this relationship in the short-run and in the long-run. Therefore, the results obtained herein are not conclusive.

The study also limited itself to three variables which are: treasury bills, Bonds and Central Bank overdraft. Private sector credit is affected by a myriad of factors other than the ones discussed in this study like technology, politics and infrastructure among other factors. It is imperative to consider incorporating other factors that affect private sector credit in order to find out whether this relationship will hold.

The study adopted a linear regression model which is a statistical model which is often inappropriately used to model non-linear relationships. This model is limited to predicting numeric output. It is advisable to test the variables using other financial econometrics model like Chi square among other models. This will assist to drawn more plausible and reliable conclusion which is more accurate.

The study utilized secondary sources of data for a period of nine years. This kind of data is historical in nature and might not all the time reflect the actual needs of the researcher; this might affect the validity and reliability of the results obtained and impact negatively on the findings and the conclusion drawn in this study.

5.6 Suggestions for Further Research

The study was conducted within a limited time and scope. This however necessitated the need to study a period of nine years only. It would have been appropriate to conduct the study for a period of more than seven years in order to obtain more detailed and conclusive results that can be used to make generalization in another middle income country like Kenya that is similar in terms of size, economic power and demographics.

The study was limited to: domestic government borrowing that includes treasury bills, bonds and central bank overdrafts and private sector credit. It is worth noting that a country's private sector credit is affected by macro-economic variables that might affect the relationship between government borrowing and private sector credit. Future researchers should incorporate other variables like advances from commercial banks among other factors that influence private sector credit.

A comparative study should be conducted to include countries in East Africa or Africa that are similar in terms of size. This will increase the scope of the study and provide room for more accurate and reliable results.

The findings revealed that treasury bills, bonds and central bank overdrafts all have a negative impact on private sector credit. Therefore a comparative study should be conducted between consumption and interest rates versus government borrowing, inflation and interest rates. This will provide more insights in shaping and guiding the direction towards realizing improved private sector credit.

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APPENDIX 1 – DATA COLLECTION FORM

Year/Performance measure	2008	2009	2010	2011	2012	2013	2014	2015	2016
CBK Overdraft									
Treasury Bills and Notes									
Treasury Bonds									
Total Government Borrowing									

APPENDIX 11: COMPUTED FIGURES

Year	Treasury Bills	Treasury Bonds	Overdraft at Central Bank	Total government borrowing
2008	1,711,020	3,965,891	95,711	5,772,622
2009	2,220,697	5,570,149	175,698	7966544
2010	3,027,562	7,486,332	224,067	10,737,960
2011	5,871,110	14,484,171	425,208	20,780,487
2012	11,551,797	28,509,067	834,908	40,895,772
2013	22,912,327	56,569,519	1,652,166	81,134,012
2014	45,624,909	112,695,603	3,299,095	161,619,608
2015	91,040,916	224,948,851	6,597,082	322,586,849
2016	181,887,773	449,460,227	13,187,621	644,535,620

	Year	Private sector credit	Natural logs	Treasury Bills	Natural logs	Treasury Bonds	Natural logs	Overdraft at Central Bank	Natural logs	Total Domestic Debt
2016	Quarter 4	1008314	6.003595	1931748.65	5.28595	3728147.5	6.571493	42599.58	4.62941	5722258.85
	Quarter 3	463579	5.666123	1851869.6	6.26761	3578123.96	6.553655	30605.7	4.4858	5479126.93
	Quarter 2	232189	5.36584	1725856.05	6.237	3377251.68	6.528563	133312.51	5.12487	5254836.53
	Quarter 1	150233	5.17676	1358933.15	6.133198	3271200.74	6.514707	125699.26	5.09933	1646527.48
2015	Quarter 4	900569	5.9545	1169998.2	6.068185	3213665	6.507	118600.86	5.07408	4511197.99
	Quarter 3	511775	5.709079	931738.4	5.96929	3136901.61	6.4965	133682.7	5.12608	4209930.74
	Quarter 2	245756	5.3905	1081125.85	6.033876	3067823.89	6.48683	87358.65	4.94131	4243794.23
	Quarter 1	140469	5.14758	2112324.65	6.32476	6013395.28	6.77911	186442.01	5.27054	8322434.05
2014	Quarter 4	836360	5.92239	959912.35	5.98223	2830798.59	6.4519	65717.37	4.81768	3866025.44
	Quarter 3	468180	5.670412	983994.5	5.99299	2747453.93	6.43893	96409.79	4.98412	3838412.95
	Quarter 2	284200	5.453624	935734	5.97115	2676335.22	6.42754	110547.8	5.04355	3733128.03
	Quarter 1	116019	5.064529	1021623.4	6.00929	2538462.27	6.404571	90847.14	4.95831	3650932.81
2013	Quarter 4	505297	5.703546	1015863.6	6.006835	2411491.77	6.38229	96352.96	8.98386	3534018.08
	Quarter 3	465032	5.66748	926910.7	5.967038	2345931.93	6.37032	82393.63	4.91589	3363395.58

Year	Quarter									
	Quarter 2	178055	5.250554	870672.15	5.93985	2232048.76	6.3487	75372.08	4.87721	3178092.99
	Quarter 1	93112	4.969	643798.9	5.80875	2165925.2	6.33564	76119.6	4.88149	2885843.7
2012	Quarter 4	418016	5.62119	622946.7	5.79445	2149059.49	6.33225	76119.6	4.88149	2859025.74
	Quarter 3	361486	5.55809	517276.4	5.71372	2101597.34	6.32255	68464.38	4.83546	2696290.98
	Quarter 2	127054	5.103988	507524.75	5.70546	2069455.3	6.31586	58002.9	4.76344	2643923.08
	Quarter 1	65041	4.81318	486062.45	5.68669	2001488.6	6.30135	76119.6	4.88149	2563670.65
2011	Quarter 4	453694	5.65676	444001.05	5.64738	1855549.9	6.26847	76119.6	4.88149	2398339.96
	Quarter 3	200425	5.30195	438344.3	5.64182	1796311.4	6.25438	70839.9	4.85027	2322840.22
	Quarter 2	91036	4.959213	427065.75	5.63049	1755539.65	6.24441	53423.14	4.72773	2246257.59
	Quarter 1	56543	4.75238	489829.75	5.69004	1667475.1	6.22206	60281.86	4.78019	2217586.71
2010	Quarter 4	422065	5.62538	509602.75	5.70723	1545803.9	6.18915	65553.13	4.81659	2127789.6
	Quarter 3	131098	5.11759	555574.85	5.74474	1449000	6.16107	58997.73	4.77084	2070553.54
	Quarter 2	52033	4.71628	599914.7	5.77809	1334406.1	6.12529	23996.06	4.38014	1964144.06
	Quarter 1	32287	4.50903	555605	5.74477	1240938.9	6.09375	27151.32	4.43379	1824733.25
2009	Quarter 4	302066	5.51449	509602.75	5.70723	1545803.9	6.18915	65553.13	4.81659	1952430.25
	Quarter 3	101299	5.00648	555574.85	5.74474	1449000	6.16107	58997.73	4.77084	1857964.23
	Quarter 2	43033	4.71628	599914.7	5.77809	1334406.1	6.12529	23996.06	4.38014	1756836.47
	Quarter 1	22176	4.50903	555605	5.74477	1240938.9	6.09375	27151.32	4.43379	1625879.25
2008	Quarter 4	213132	5.51449	509602.75	5.79445	1545803.9	6.18915	65553.13	4.81659	1856362.35
	Quarter 3	91300	5.00648	45897.85	5.71372	1449000	6.16107	58997.73	4.77084	1564322.11
	Quarter 2	23066	4.71628	599914.7	5.70546	1334406.1	6.12529	23996.06	4.38014	1471122.78
	Quarter 1	20032	4.50903	555605	5.68669	1240938.9	6.09375	27151.32	4.43379	1258378.33