THE RELATIONSHIP BETWEEN GOVERNMENT DOMESTIC DEBT AND STOCK PERFORMANCE IN KENYA

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Abstract

The economic performance of any country can be measured by real GDP growth rate, rate of inflation, exchange rate, fiscal position, debt position and many other variables, which can also serve as the major determinants of economic growth. The debt position of a country is determined by outstanding government debt. The essence of issuing government debt is to finance budget deficit, since a balanced budget is abnormal occurrence. Since government debt is issued to finance budget deficit, it implies government debt will increase alongside with financing of budget deficit. Thus establishing the relationship between government domestic debt and stock market performance could be of great significance in predicting optimum government domestic debt to gross domestic ratio whereby any debt changes do not have any negative impact on stock market performance. Therefore, this study aimed at determining the relationship between domestic government debt and stock market performance. The guiding specific objectives of this study were to establish the effect of treasury bonds, treasury bills, commercial bank advances to government and central overdraft on stock market performance in Kenya. The findings of the study showed that treasury bonds and treasury bills have negative but insignificant influence on stock market performance while the central bank overdraft to the government and commercial bank advance to the government has positive and significant influence on stock market performance. The overall model was found to be significant at 5% significance level. Since few studies have been done on government domestic debt when disaggregated into its categories, further studies need to be done to test the reliability of the findings of this study. Further similar study can done on categories of external debt.

Keywords: Government domestic debt, stock index, stock market, treasury bonds, treasury bills

1. INTRODUCTION

Background of the study

The economic performance of any country can be measured by real GDP growth rate, rate of inflation, exchange rate, fiscal position, debt position and many other variables, which can also serve as the major determinants of economic growth. Since the stock market reflects the economic fundamentals, stock market prices should be employed as a leading indicator of future economic activity (Pal & Mittal, 2011). The existence of a stock market is thus essential for the economy in general since it helps to allocate resources in an efficient way between firms seeking capital, and investors willing to provide their capital to firms in turn. In addition, investors carefully assess the performance of stock markets by watching the composite market index, before investing funds. It is well established that a long-run relationships exist between stock prices and economic variables (Chen, Roll, & Ross, 1986). According to Fama (1981), macroeconomic forces affect corporations' expected future cash flows, dividend payments, and discount rates, therefore, indirectly determine stock prices at the firm level. Therefore, investors should continuously analyse information on macroeconomic indicators that may affect stock prices and one of these indicators is government debt. In case the government debt ratio is very high, the investors may suddenly start fearing that the government will be unable to repay its debt. If this happens, the investor will demand high return from government securities or allocate their investments somewhere else. This will push the price of government securities down and there yield up, thus leading to reduction in stock prices.

Interaction between Government debt and macroeconomic variables.

Numerous studies have been done to capture the dynamic interaction between the government debt and some macroeconomic variables such as output, price level, interest rates and inflation. Wheeler (1999) investigated the macroeconomic impacts of government debt in US by applying variance decompositions and impulse response functions for the period of the 1980s and 1990s. The author tested the Ricardian- Equivalence hypothesis by examining the impact of government debt on output, price level and interest rates. The results of the study showed that government debt has a negative and significant impact on interest rates, price level and output. Bildirici and Ersin (2007) examined the relationship between domestic debt and inflation for those countries that have high inflation. The findings showed that the cost of domestic debt increases on account of inflation. Consequently, the increasing debt to GDP ratios led these countries to borrow at higher cost and with low maturity. The study concludes that the increasing cost of borrowing is due to non-Ricardian fiscal policies. Obi and Nurudeen (2009) made an effort to determine the effects of fiscal deficits and government debt on interest rates in Nigeria by applying a Vector Auto-regression approach for the period of 1981 to 2006. The interest rate in the model is a function of the fiscal deficit and government debt. The findings of the study showed that fiscal deficits and government debt have a positive impact on interest rates. Kannan and Singh (2009) examined the dynamic interaction of deficits and debt with macroeconomic variables such as inflation, interest rate, trade gap and output by applying a 2SLS simulation technique for the

period of 1971 to 2006. The study found that fiscal deficits and debt have an adverse impact on all the macroeconomic variables under consideration in the medium to long run. Gikandu (2012) studied the relationship between government domestic debt and economic growth in Kenya covering the period of 1999/2000 to 2010/ 2011 financial year. The study found that weak positive relationship exist between government domestic debt and economic growth in Kenya. Kibui (2012) examined the impact of external debt on public investment and economic growth in Kenya for the period of 1970 to 2007. The findings showed that debt servicing ratio is significant at explaining economic growth in Kenya. Mukui (2013) examined the effect of external debt on economic growth in Kenya for the period spanning 1980 to 2011. The findings of the study shows that external debt has negative effect on economic growth in Kenya. The same conclusion was arrived at by Muinga (2014) when examined the effect of external public debt and economic growth in Kenya for the period spanning 1970 to 2010. Matiti (2013) examined the effect of selected determinants on public debt in Kenya. The study covered ten years starting 2003 to the year 2012. The findings established that there was a direct relationship between public debt and exchange rates, balance of payments and budget deficit while there was an inverse relationship between public debt and total grants.

To the extent that government debt has impact on the state of economy, it will also have indirect impact on stock prices.

Trend of Government Domestic Debt in Kenya for the period: 2009-2015

The trend of government domestic debt from various categories for the period under study is shown in table 1.

Table 1: *Trend of Annual Government domestic debt (2009-2015)*

Debt Category	Year						
	2009	2010	2011	2012	2013	2014	2015
Treasury bond Sh. Million	402,688.35	529,871.50	633,549.35	716068.29	816289.14	995000.38	1072319.75
Treasury bill Sh. Million	174,160.70	165,104.75	137,873.40	226042.45	336089.95	318574.20	416,315.10
Commercial bank advance Sh. Million	129.60	1,546.08	2,639.49	3,407.60	2,439.21	3,089.51	5,446.31
Central bank overdraft Sh. Million	11,127.92	22,665.07	25,373.20	25,373.20	34,186.64	30,929.46	45,232.56

Total Domestic debt* Sh. Million	588970.31	720207.97	799880.06	971265.44	1189182.59	1307748.71	1540017.13
GDP(market prices) Sh. Million	2863664	3102339	3294026	3444067	3640156	3834244	4050848
Domestic debt as a % of GDP	20.6	23.2	24.3	28.2	32.7	34.1	38.0

* total domestic debt includes other domestic debts.

Source: Central bank of Kenya.

The treasury bonds increased from Ksh.402,688.35 million(68.4% of total domestic debt) in 2009 to Ksh.1,072,319.75 million(69.63 % of total domestic debt) in 2015. This is an increase of 166.29% over seven years period. The treasury bills increased from Ksh.174,160.70 million(29.6 % of total domestic debt) in 2009 to Ksh. 416,315.10 million(27.0% of total domestic debt) in 2015. This is an increase of 139.0 % over a period of seven years. The central bank overdraft increased from Ksh.11,127.92 million(1.89 % of total domestic debt) in 2009 to Ksh.45,232.56 million(2.9% of total domestic debt) in 2015. This is an increase of 306.5% over a period of seven years. The commercial bank advance increased from Ksh.129.6 million (0.02 % of total domestic debt) in 2009 to Ksh.5,446.31 million(0.9% of total domestic debt) in 2015. This is an increase of 4012.2% over a period of seven years. Total outstanding domestic debt increased from Ksh. 588,970.31 million ((20.6% of GDP) in 2009 to Ksh. 1,540,017.31 million (38.02 % of GDP) in 2015, showing an increase of 161.5% over the period of seven years.

Statement of the Problem

Few studies cited in literature, have examined the effect of government debt (either domestic or external) on stock market performance. However, no single study has been cited in literature that has examined the effects of various categories of government domestic debt, whether domestic or external, on stock market performance. It is from this perspective, therefore this study attempts to examine how the various categories of government domestic debt affects stock market performance in Kenya. These categories are treasury bonds, treasury bills, central bank overdraft and commercial bank advances. Therefore, this study to the best of my knowledge will be among the first empirical studies to consider the relationship between government domestic debt from various categories and stock market performance. It will be able to fill the gap left by lack of empirical studies on this area.

Research objectives

The general objective of the study was to determine the relationship between government domestic debt and stock market performance in Kenya. The guiding specific

objectives of this study were to establish the effect of treasury bonds, treasury bills, commercial bank advances to government and central overdraft on stock market performance in Kenya.

2. EMPIRICAL LITERATURE REVIEW

Treasury Bonds and Stock Market Performance

Most of empirical studies cited in literature shows that treasury bonds have negative influence on stock markets. Connolly *et al.* (2005), examined the daily stock and treasury bonds from 1986 to 2000 and they concluded there is negative relationship between the uncertainly measures and future correlation between stock and bond returns. Baur and Lucey (2006) examined daily MSCI stocks and government bond return from selected European countries and the U.S. from 1995 to 2005 and using the method of dynamic conditional correlation and they found that there is negative correlation between the stock and bond market. Hsing (2011) examined the effect of macroeconomic variables on the stock market for Czech Republic using quarterly data range from 2002Q1 to 2010Q2. The macroeconomic variables were real gross domestic product, government borrowing, money supply, the inflation rate, CZK/USD exchange rate, and government deficit. Stock market index is positively related to real GDP and the German and US stock market index is negatively influenced by government borrowing, GDP, the domestic real interest rate, the CZK/USD exchange rate, the expected inflation rate and the euro area government bond yield.

In contrast, Anderssona *et al.* (2008) suggested that stock and bond prices move in the similar direction during periods of high inflation expectation. The authors were using the method of simple rolling window sample correlation and dynamic conditional correlation model to test the correlation between stock and bonds market in U.S. and German using from January 1991 to April 2004 and January 1994 to April 2004 daily data.

Treasury Bills and Stock Market Performance

Empirical studies have used treasury bill rates to examine the effects of treasury bills on stock returns. This because interest rates directly affect discount rate hence influencing stock prices. Maysami, Howe and Hamzah (2004) investigated the relationships between macroeconomic variables (CPI, industrial production and one-year government bond) and stock prices in Singapore. They applied a co-integration analysis and used the Johansen test and found that one-year government bond had negative influence on stock prices

Mutoko (2006), using GARCH, also studied the relationship between Treasury bill rates and stock prices using weekly data for the period 5 April 1996 to 21 Dec 2001 in Kenya. She found that during times of restrictive monetary policy or rising interest rates, the stock market performed poorly. Conversely, periods of loose monetary policy generally coincided with strong stock market performance. Ochieng and Oriwo (2012) examined the relationship between macroeconomic variables (such as Treasury bill rate, inflation rate, lending interest rate) and stock market performance using regression model for the period of 2008 to 2012. Their findings showed a negative relationship between Treasury bill rate and NASI.

Shoil et al, (2012) employed Johansen co-integration technique to examine the response of stock prices to macroeconomic variables i.e. consumer price index, money supply, industrial production index, real effective three months treasury bills rate, and exchange rate on three stock indices i.e. ISE10 index, LSE25 index, and KSE100 index relating three stock exchanges namely Lahore Stock Exchange, Islamabad Stock Exchange, and Karachi Stock Exchange respectively, using Monthly data range from November 1991 to June 2008. They found that Treasury bill rate and mixed effect on stock indices. Naik and Phadi (2012) investigated the relationships between five macroeconomic variables and Indian stock market Index (BSE Sensex), namely, wholesale price index, industrial production index, exchange rates, money supply, and treasury bills rates over the period 1994:04–2011:06. They used Johansen's cointegration and vector error correction model (VECM). The analysis showed that Treasury bill rate to be insignificant in influencing the stock prices.

Ray and Sarkar (2014) examined the dynamic relation between the Indian stock market and the macroeconomic factors namely; money supply, 91-day Treasury bills, long-term Government bonds, exchange rate, industrial production, and wholesale price index using quarterly data over the period from 1991:01 to 2008:04. They employed the Johansen cointegration test, Vector error correction model and the innovation analysis. Their findings revealed that 91-day Treasury bills has negative influence on stock market.

Mutuku and Ng'eny (2015) investigated the dynamic relationship between macroeconomic variables and the stock prices in Kenya using quarterly data ranging from 1997Q1 to 2010Q4. They used Vector Autoregressive Model and Vector error correction Model. The variables used were consumer price index, nominal gross domestic product, and nominal exchange rate and Treasury bond rate. They found positive relationships between the stock price and the Treasury bill rate.

Central Bank Overdraft and Stock Market Performance

Few studies cited in literature show that central bank lending to government is inflationary (Ahmad, Sheikh and Tariq, 2012). Through this channel of inflation, the central bank lending to government is expected to influence stock prices. Empirical studies show that relationship between inflation and stock market performance can be negative, positive or mixed. used the Johansen and Juselius's co-integration test to examine the relationship between stock market returns and macroeconomic variables using data from Indian Stock market and reports, among other things, that inflation (proxied by wholesale price index) is negatively related to Indian stock market returns in the long run. The study, however, failed to establish short-run relationship between the Indian stock market and inflation. Sohail and Hussain (2009) investigated the relationships between Lahore Stock Exchange and macroeconomic variables in Pakistan using monthly data from December 2002 to June 2008. The study found a negative relation-ship between inflation (proxied by consumer price index) and stock returns. Naik and Padhi (2012) examined the relationship between stock index and five macroeconomic variables (industrial production index, Dasgupta (2012) wholesale price index, money supply, treasury

bills rates and exchange rates) from 1994:04 to 2011:06 in India and found, among other things, that short-term inflation is negatively and significantly related to stock market index.

3. RESEARCH METHODOLOGY

The study employed descriptive research design and used secondary data. The data was monthly time series data spanning the period of January 2009 to December 2015. The data was analysed quantitatively through multiple regression analysis using STATA version 12. The Augumented Dickey-Fuller (1981) unit root test was performed on time series data and only commercial bank advance was found to be non-stationary. The first difference of commercial bank overdraft was used.

4. RESEARCH FINDINGS AND DISCUSSION

Pre-testing of the Data

Non-Stationarity Test

ADF test was used to test the presence of a unit root for the time series data used in the study. The hyphothesis used for this test is;

Ho: there is a unit root for series (series in non-stationary)

Ha: there is no unit root for the series (series is stationary)

The Augumented Dicker-Fuller test results are provided in table 4.2.

Table 2: *Augumented Dickey-Fuller Test results*

Statistics	Variables			
	Treasury Bonds	Treasury Bills	Central Bank Overdraft	Commercial Bank Advance
Tau(observed value)	-4.317	-3.740	-3.535	-2.563
Tau(critical value)	-0.774	-0.774	-0.774	-0.774
p- value	0.004	0.022	0.032	0.281

From the in table 4.2, the p-values of treasury bonds, treasury bills and central bank overdraft are less than 5% significance level. Therefore, one should reject the null hypothesis for each of these variables and accept alternative hypothesis. This implies that treasury bonds, treasury bills and central bank overdraft are stationary time series data. For commercial bank advance to the government, the p -value is greater than 5% significance level and therefore one cannot reject null hypothesis. This implies that commercial bank advance to the government is non stationary data. To make it stationary, first difference would be used.

Normality Test

Initial test of skewness and Kurtosis indicate that data is nearly a normally distribution. However Jarque-Beta test is more conclusive test for normality. This test is based on the following hypothesis:

Ho: The data comes from a normally distributed population.

Ha:. The data does not come from a normally distributed population.

The summary of the results for normality test using Jarque-Beta are shown in table 3.

Table 3: Normality Tests

Statistics	Treasury bond	Treasury bill	Central bank ovedft.	Comm. Bank adv.
JB(observed val.)	3.242	71.146	1.871	14.306
JB(critical val.)	5.9915.	5.991	5.991	5.991
p-value	0.198	<0.0001	0.392	0.001

From the results in table 3, the p-values for treasury bonds and central bank overdraft are 0.198 and 0.392 respectively. Since the values are greater than 5% significance level, the null hypothesis cannot be rejected, hence the data for treasury bonds and central bank overdraft is normally distributed. On the other hand, the p-values for treasury bills and commercial bank advances are less than 5% significance level, hence null hypothesis is rejected. This implies that data for treasury bills and commercial bank advances is not normally distributed.

Multicolinearity

According to Pallant (2007), multicolinearity should not exist because multicolinearity problem weakens the regression model. To test multicolinearity, the tolerance level must be greater than 0.10 and VIF must be greater than 10 (Pallant, 2007). Table 4.6 shows the summary of multicolinearity statistics.

Table 4: Multicolinearity Statistics

Statistic	NSEINDEX	Treasury Bond	Treasury bill	Central bank ovedraft	Comm. Bank adv.
R²	0.473	0.397	0.310	0.576	0.457
Tolerance	0.527	0.603	0.690	0.424	0.543
VIF	1.897	1.658	1.448	2.357	1.843

From the table 6, all the values of tolerance for the variables under study are greater than 0.10 and all the values of VIF for variables under study are less than 10. Therefore, no multicolinearity problem exists.

Heteroscedasticity

The heteroscedasticity was tested using White's test of heteroscedasticity. The test is based on the following hypothesis:

Ho: Residuals are homoscedastic (no heteroscedasticity)

Ha: Residuals are heteroscedastic

The summary of the results for White's test of heteroscedasticity are shown in table 5.

Table 5: White's test of heteroscedasticity

LM(observed value)	16.144
LM(critical value)	23.685
p-value(two-tailed)	0.305

From table 5, the p-value which is equal to 0.305 is greater than significance level at 5%, hence null hypothesis cannot be rejected. This implies that error terms are homoscedastic and therefore no heteroscedasticity problem exists. Since error terms are constant across observations, OLS estimators are best linear unbiased estimators (BLUE).

Autocorrelation

Breusch-Godfrey LM test was used to test for autocorrelation of error terms.

Ho: Error terms are uncorrelated (no autocorrelation)

Ha: Error terms are correlated (autocorrelation exists)

The summary Breusch-Godfrey LM test are shown in table 6.

Table 6: Breusch-Godfrey LM test for Autocorrelation

Lag(p)	Chi	Df	Prob > chi
1	4.231	1	0.0397

From table 6 the p-value chi-squared is greater than significance level at 0.05, the null hypothesis cannot be rejected at 5 % significance level. This implies that error terms are not correlated.

Regression Model

The study adopted multiple regression model as the econometric model for determining the relationship between dependent and independent variables under study. The adopted estimated multiple regression model is

$$NSEIDX_t = \beta_0 + \beta_1\,TBD_t + \beta_2 TBL_t + \beta_3 CBO_t + \beta_4 CBA_t + \varepsilon_t \dots\dots\dots\dots\dots\dots 4.1$$

Where: $NSEIDX_t$ = Nairobi Security Exchange 20 Share Index at time, t

TBD_t = Treasury bonds at time, t

TBL_t = Treasury bills at time,t

CBO_t = Central bank overdraft at time, t

CBA_t = Commercial bank advance at time, t

B_0 = Constant coefficient

$\beta_1,\, \beta_2,\, \beta_3,\, \beta_4$ =Partial coefficients for independent variables

ε = Residual error term.

Table 7 shows the model coefficients for a constant and independent variables.

Table 7: *Model coefficients for a constant and explanatory variables.*

Model	Unstandardized coefficient		Standardized Coefficient		
	B	Std. error	Beta	t	Sig
Constant	3274.742	148.618		22.035	.000
Treasury bond	.003	.008	-.044	-.416	.678
Treasury bill	.004	.004	-.109	-1.122	.265
Central bank overdt.	.037	.007	.571	5.300	.000
Comm. Bank adv.	.111	.050	.238	2.210	.030

a. Dependent variable: NSE 20 share index

Therefore using the model coefficients in table 7, the estimated regression model becomes,

$$NSEINDX_t = 3274.74 \; -0.044TBD_t - 0.109TBL_t + 0.571CBO_t + 0.235CBA_{t-1} + \varepsilon_t$$

Treasury Bond and Stock Market Performance

H_O: β_1 = 0(no significant linear relationship exists)

Ha: $\beta_1 \neq 0$ (significant linear relationship exists)

The beta coefficient of treasury bond is -0.044 as indicated in table 4.7, where the negative coefficient implies that treasury bonds have negative effect on NSE 20 share index. From table 4.7, the p-value of t-statistic is equal to 0.678 which is greater than critical value of 5% significance level. This means the null hypothesis cannot be rejected at 5% significance level, hence treasury bond is not statistically significant in influencing stock market performance.

The findings of this study supports the findings from studies done by Connolly *et al.* (2005), Baur and Lucey (2006), Pilinkus (2010) and Hsing (2011) who found that a negative relationship exist between government bond and stock market performance. However, the findings is contrary to that of Anderssona *et al.* (2008) who suggested that stock and bond prices move in the similar direction during periods of high inflation expectation.

Treasury Bills and Stock Market Performance.

H_O: β_2 = 0(no significant linear relationship exists)

Ha: $\beta_2 \neq 0$ (significant linear relationship exists)

From table 7, the beta coefficient of treasury bill is -0.109, which implies that the treasury bills hav negative influence on NSE 20 share index. However, the p-value t-statistic which is equal to 0.265 is greater than 5% significance level, which means the null hypothesis cannot be rejected hence treasury bill is not statistically significant in influencing stock market performance.

This finding is coherent with findings of the studies done by Maysami, Howe and Hamzah (2004), Mutoko (2006), Ochieng and oriwo (2012) and Ray and Sarkar (2014) who found that negative relationship exist between treasury bill and stock market performance. However, this finding contradicts that of Mutuku and Ng'eny (2015) who found positive relationships between the stock price and the Treasury bill.

Central Bank Overdraft and Stock Market Performance.

H_O: β_3 = 0(no significant linear relationship exists)

Ha: $\beta_3 \neq 0$ (significant linear relationship exists)

From table 7, the beta coefficient of central bank overdraft to the government is 0.571. The positive coefficient implies that central bank overdraft to the government has positive influence on NSE 20 share index. The p-value which is equal to 0.000 is less than 5% significance level which implies the null hypothesis should be rejected in favour of alternative hypothesis. Therefore, central bank overdraft to the government is statistically significant in influencing stock market performance.

This finding of the study is in agreement with a study by Owusu-Nantwi and Kuwornu (2011) who reported that there is a positive statistically significant relationship between central bank advance and stock returns. However, this finding contradicts studies done by Dasgupta (2012),

Sohail and Hussain (2009) and Naik and Padhi (2012) who found a negative relationship between central bank overdraft and stock market performance.

Commercial Banks Advances and Stock Market Performance

$H_{O:}$ β_4 = 0(no significant linear relationship exists)

Ha: $\beta_4 \neq 0$ (significant linear relationship exists)

From table 7, the beta coefficient of commercial bank advances to the government is 0.238 which implies that commercial bank advances to the government has positive influence on NSE 20 share index and therefore, commercial bank advances to the government has positive relationship with stock market performance. The p-value which is equal to 0.030 is less than 5% significance level, hence null hypothesis is rejected in favour of alternative hypothesis. Therefore, commercial bank advances to government are statistically significant in influencing stock market performance.

The findings of this study supports the findings from studies done by Aye *et al*(2013) and Balcilar and Tören (2015) who found that government spending by borrowing from commercial banks does not affect real house price index but generates positive and significant effect on stock index. However, other studies contradict this finding such as studies done by Afonso and Souza (2011) and Namini and Nasab (2015) who found that stock market response to increase in government spending by borrowing from commercial banks is negative.

Overall Significance of the Model

H_{O}: $\beta_1 = \beta_2 = \beta_3 = \beta_4$= 0(No linear relationship)

Ha: $\beta j \neq 0$, for j=1, 2,3,4 (at least one independent variable affects dependent variable)

Table 8 provides analysis of variance results which can be used to establish overall significance of the mod

Table 8: Analysis of Variance (ANOVA[b])

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1.976E7	4	4941027.034	17.709	.000[a]
Residual	2.204E7	79	279004.500		
Total	4.181E7	83			

a. Predictors: (Constant), Commercial bank advance, Treasury bills, Treasury bond, Central bank overdraft

b. Dependent variable: NSE 20 Share Index

From the results in table 8, the p-value of F-statistic is 0.000. This value is less than 5 % significance level and therefore the null hypothesis is rejected and alternative hypothesis accepted. This implies that at least one of the independent variable has significant influence on dependent variable. Therefore, treasury bonds, treasury bills, central bank overdraft to government and commercial bank advance to government have combined significance influence on NSE20 Share index.

The model summary is provided in table 9.

Table 9: *Model summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.688ᵃ	.473	.446	528.20877

a. Predictors: (Constant), Commercial bank advance, Treasury bill, Treasury bond, Central bank overdraft.

As indicated in table 9, the R-square is 0.473 which implies that 47.3 % of the variations in stock performance can be explained by explanatory variables of the model, while the remaining 52.7% is explained by variables not captured in the model. The adjusted R-square   which is the modified version of R-square shows that 44.6 % of variations in stock market performance can be explained by independent variables in the model that really affects the dependent variable.

5. CONCLUSION

Based on the findings of the study the following conclusions were made. Treasury bonds constitutes one of the category of government domestic debt from which government raises substantial amount of its domestic debt. The findings of the study shows that a negative insignificant relationship exist between treasury bonds and stock market performance in Kenya. The other category of the government domestic debt that the government uses in raising substantial amount of the domestic debt is treasury bills. The findings of this study shows that a negative but insignificant relationship exist between stock market performance and treasury bills in Kenya. Central bank overdraft to the government is another category of government domestic debt that Kenyan government relies on in raising its domestic debt. The maximum amount that the government can borrow using this facility is set out in the law. This is because using central overdraft in raising domestic debt is considered to be inflationary. The findings of the study shows that central bank overdraft to the government has significant positive relationship with stock market performance in Kenya. Finally, with regard to commercial bank advances to the government, the findings of the study shows that positive significant relationship exist between stock market performance and commercial bank advances to the government.

Recommendations

The findings of this study has some implications on the fiscal policy formulation by the government. Government raises substantial amount of domestic debt through treasury bonds and treasury bills in order to finance budget deficit. From the findings of the study, these two instruments have negative but insignificant influence on stock market performance. Therefore, the study recommends that, as the government continues relying on these instruments to raise

domestic debt, it should do so this within debt levels whereby any debt change does not have negative significant impact on stock market performance.

For the central bank overdraft to the government, the study has found that a positive significant relationship exist between stock market performance and central bank overdraft. Despite this finding, the study recommends that government continue to adhere to maximum limit set out in the law, since uncontrolled use of this facility is inflationary as it is equivalent to printing of money.

Finally, on commercial bank advance to the government, the study has showed that this category of domestic debt has positive significant influence on stock market performance. This may be due to crowding in rather than crowding out effect of government borrowing on private investments. However, despite this findings the study recommends that government should not increase debt levels on this facility due to high interest rates charged by commercial banks.

6. ACKNOWLEDGEMENT

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