

**PUBLIC DEBT AND THE FINANCIAL PERFORMANCE OF COMPANIES LISTED
ON THE NAIROBI SECURITIES EXCHANGE**

BY

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**A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS,
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DECLARATION

STUDENT'S DECLARATION

This study is wholly original with no contributions from any other university students.

Signature:

Date: ...28/05/2024

SUPERVISOR'S DECLARATION

As the University Supervisor, I certify that this research project was written with my consent and submitted for review.

Dr. Samuel Muthoga

Signature:

Date...28/05/2024

DEDICATION

I dedicate this research project to my devoted parents, Serphine Otieno and Nichanor Otieno. I also dedicate it to Willy, Chris, Dan, Sam, and Peninah, who have supported me unselfishly throughout my academic career.

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I give thanks to the Almighty God for helping me get through my academic career. I've made it thus far thanks to His mercies and blessings.

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My parents have been a huge support in my education from elementary school, and I am incredibly grateful to them. I appreciate your love, prayers, offerings, and patience. I would like to thank my siblings for setting the bar high for me. Your encouragement, help, and support have been tremendous.

My classmates, notably Joakim, Peter, Edwin, Aput, and Frecia, deserve a special thank you.

ACRONYMS

CBK: Central Bank of Kenya

GDP: Gross Domestic Product

GSE: Ghana Stock Exchange

IMF: International Monetary Fund

HIPC: Heavily Indebted Poor Countries

KNBS: Kenya National Bureau of Statistics

MDRI: Multilateral Debt Relief Initiative

ROE: Return on Equity

NSE: Nairobi Securities Exchange

OLS: Ordinary Least Squares

UK: United Kingdom

USA: United States of America

WB: World Bank

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Operational Definitions of Terms

Public debt: refers to the amount the government borrows in order to meet budget deficit.

Financial performance: is the quantifiable measurement used to determine the economic well-being of the companies listed on Nairobi Securities Exchange.

Crowding out effect: refers to a situation when increased interest rates lead to reduction in private spending.

ABSTRACT

The government borrows to fill the budget deficit. Since the government borrows both locally, and externally, the effects of borrowing may be positive, negative, or zero. For instance, the positive effects of borrowing include meeting deficits, developing infrastructure, economic development, and funding unforeseen circumstances. On the other hand, the negative effects include; inflation, chances of a debt trap, lack of money in the market, and reduction in the firm's profits as expected by the investors. Crowding-out effect of the private sector occurs when many investors shy off from investing in the companies listed on the Nairobi Securities Exchange. Debt crisis result in a crowding out effect which is expected to affect the consumption levels in the economy which in turn affects the financial performance of companies. Most previous researchers have not based their research on the debt crisis effect on the financial performance of Kenyan firms. Additionally, the previous researchers have not established a consensus in their theoretical and observational arguments on the effect of public debt on financial performance thus the urge to look further into the area of study. Therefore, this study aimed at examining the effect of public debt on the companies listed on the Nairobi Securities Exchange. The second objective of the study was to ascertain how factors affecting public debt and the financial success of companies listed on the NSE are related. This study will help in reviewing and adding onto the empirical and theoretical work done by the previous researchers. Most importantly, the study aimed at bringing a consensus on the results that other researchers have come up with on the effect of public debt on the financial performance of companies listed on Nairobi Securities Exchange. The target population for this study was the companies listed on Nairobi Securities Exchange. The study used secondary time series data from Central Bank of Kenya, Ministry of Treasury, and Kenya National Bureau of Statistics. The association between the variables were determined using Ordinary Least Squares because it is more precise and concise model for regression analysis. Afterwards, diagnostic tests such as autocorrelation, heteroscedasticity, multicollinearity, and normality tests were conducted to determine if the assumptions of the Ordinary Least Squares were adhered to. The study found out that public debt has mild negative effect on the financial health of companies listed on Nairobi Securities Exchange. Limitations of the study included challenges in accessing data, for instance, data from Nairobi Securities Exchange has to be bought. Additionally, mid-year and quarterly data of some variables are not available. Another limitation is that time taken in data collection is quite long. The recommendations from this study are that government should reduce the dependency on loans, policy makers can develop, and government can consider borrowing that is sustainable.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Statement

A country's economic performance can be determined by the interest rate, Gross Domestic Product (GDP), inflation rate, fiscal position, exchange rate, and debt position among other variables Muturi & Kimathi, (2016). Public debt is key in determining the performance of a country, especially the less developed countries like Kenya. Outstanding domestic government debt as well as outstanding external debts determine the debt position of a country.

Public debt, also known as national debt or government debt can be defined as an important source of resources that includes finances and capital that the government borrows to fulfill the budget deficit Panizza & Andrea (2012). Public debt, therefore, produces different effects on the growth of corporations as well as investments in the Nairobi Securities Exchange (NSE) depending on the source of the borrowing. These effects may be positive or negative. For instance, borrowing enables the government to finance its development projects and activities, meet the budget deficit, provide resources for urgent and immediate needs, and to create a conducive environment for investments. However, it is notable that the government affects firms as it increases its deficit while profits expected by firms are reduced. This leads to the crowding-out effect of the private sector.

Additionally, Krugman, (2010) suggests that the aftermath of government borrowing will be much felt by next generations. The aftermath comes in the form of a decrease in the income flow as reduced stores used stores in the private capital. The rise in government borrowing affects the rate of economic growth by discouraging private investments, increasing interest rates, and rising

levels of taxes which lead to a reduction in the competitiveness of the industries. Since most companies listed on NSE depend on private investments, the performance of these companies will be affected by public debt.

1.1.1 Public debt in developed and underdeveloped countries

Public debt has significantly increased across European countries by 100% of GDP in 2010 as recorded by IMF (2010). In the 1990s, these countries' public debt was 10% of GDP lower than what was experienced in the financial crisis that took place between 2007 and 2008. Notably, the significant change from 70% to 60% has led countries like Ireland, Greece, Spain, and Portugal to have major difficulties in financing their debts. (Eurostat 2017) records that the average debt ratio as seen in 2017 is 92.5% of GDP.

According to Eurostat (2016), in 2009 Greece's economy recorded the highest percentage of public debt, 172.6% from 105.5%. This increase in public debt was a result of inflexibility in the monetary policy, a lack of transparency on public debt, and a weak structural economy. It is important to note that between 2007 and 2011, the public debt in the Eurozone significantly increased. For instant, in the UK it rose from 38% to 74% while in Japan it rose from 82% to 130%. In the same period, the debt in the USA increased from 42% to 73% as recorded by IMF (2010).

According to (Kathrin 2019), long-term external and internal problems are the key causes of debt in underdeveloped countries. Half of these underdeveloped countries have been listed by both the World Bank and IMF as heavily indebted despite the efforts to relieve these countries from debts. The attempt to relieve these countries was done between the years 2000 and 2012 under the Heavily Indebted Poor Countries (HIPC) and Multilateral Debt Relief Initiative (MDRF) initiative. In the 1980s, there was a decrease in income per person of Sub-Saharan African countries at an average rate of 2.2%. Moreover, there was a 14.8% decline in per capita private consumption while

in the same period, exports were recorded to have a decline of 4.3%. Similarly, terms of trade reduced by 9.1% all as a result of the effects of public debt as outlined by IMF (2012). IMF (2018) report shows that the low-income economies' public debt grew from \$5.2 trillion to \$7.1 trillion which represents a 10% growth. Additionally, the report shows that there was a 200% increase in public debt in Zambia, Kenya, Uganda, Ethiopia, Ghana, and Cameroon between 2010 and 2017. Notably, Liberia's public debt increased by 140% during that period. Generally, the massive growth in public debt has been an area of interest on the impact imposed on investors in these countries.

1.1.2 Kenya's External debt ratio to real GDP (2000-2019)

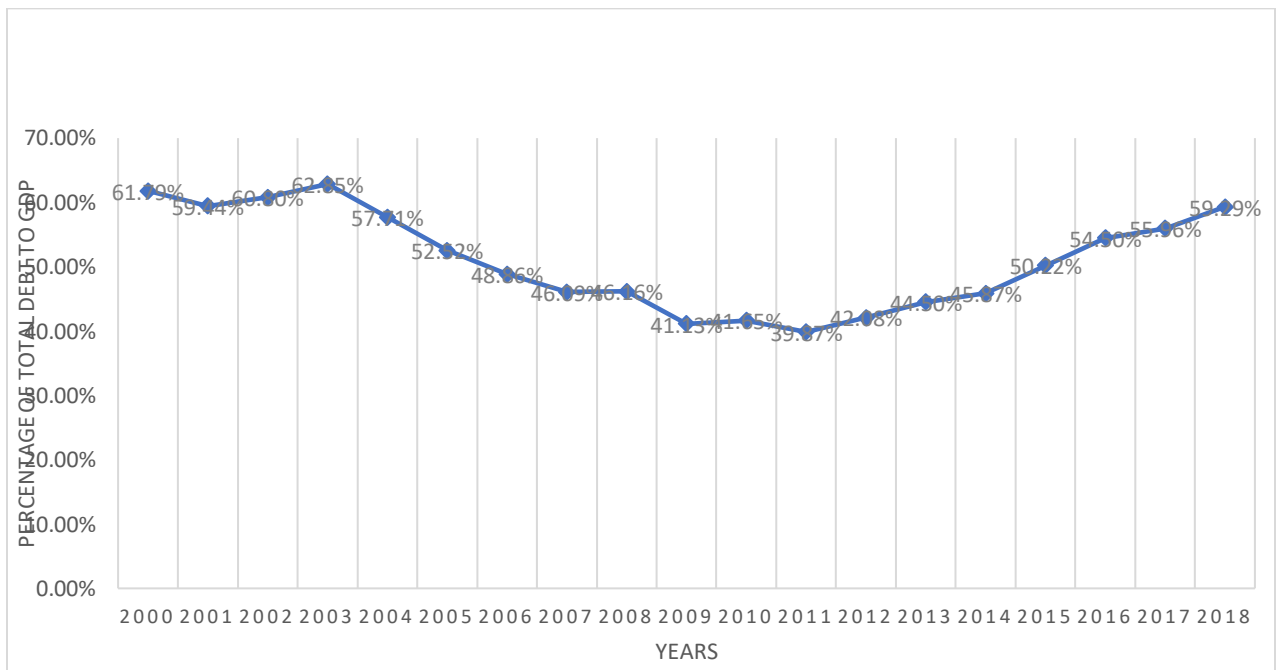
Kenya majorly finances its budget through tax collection and external debt. Public debt may be used for the funding of different investments and for improving infrastructural levels by the government Were, (2010). The government of Kenya keeps borrowing with the assumption that the financed projects will improve the economic health of the country, thus the country will be able to finance the debts. Table 1.1 shows a trend where the external debt falls and rises between the year 2000 to 2019.

Table 1.1: Kenya's external debt as a percentage of GDP ratio and the total debt

Year	%age Total debt to the GDP ratio	Percentage of external debt to total debt
2000	61.79%	67.78%
2001	59.44%	63.39%
2002	60.80%	58.73%
2003	62.85%	57.66%
2004	57.71%	59.83%
2005	52.52%	54.95%
2006	48.86%	51.43%
2007	46.09%	48.16%
2008	46.16%	53.11%
2009	41.13%	50.00%
2010	41.65%	45.44%
2011	39.87%	46.15%
2012	42.08%	45.84%
2013	44.50%	43.68%
2014	45.87%	47.24%
2015	50.22%	51.18%
2016	54.50%	49.55%
2017	55.96%	51.41%
2018	59.29%	51.66%
2019	62.10%	51.36%

Source: CBK 2020

Table 1.1 shows that the highest percentage of total debt to the GDP ratio was recorded in the year 2003 when the percentage was 62.85% while the lowest percentage of total debt to the GDP ratio was recorded at 39.87% in 2011. Kenya's percentage of public debt to the GDP ratio is seen to fluctuate over the years. For instance, between 2004 and 2011 the decline was from 57.71% to 39.87% which amounts to a 17.84% decline. This decline can be attributed to a sustainable macroeconomic environment as well as improved fiscal policy. It is noteworthy from the table that the percentage total debt to GDP ratio has a gradual increase from the year 2011 through 2019. This represented a positive growth rate of 22.23%.



Source CBK,2020

Figure 1.1 show trends in Kenya's total debt to the GDP ratio

Notably, the highest and lowest percentage of external debt to total debt was recorded in the year 2000 at 67.78% and the year 2013 at 43.68% respectively. Between the years 2004 and 2007, there is a decline in the percentage of external debt to total debt. This decline can be ascribed to the

limitation of access to external funds during that period. Moreover, the reduced percentage in external debt to total debt may be attributed to a growth in GDP. This amounted to an 11.67% decrease in the percentages. However, this decline was reversed in the subsequent years, 2008 and 2009 when there was a notable increase in the percentage of external debt to total debt.

1.1.3 Performance of companies listed on NSE

Financial investors majorly rely on information pertaining financial performance of companies to determine the profitability and effectiveness of ventures, the probability that these investors will be protected against any dangers, and that the borrowers are secured against resources Kajirwa (2015). An organization's financial performance changes from time to time. Similarly, the benefits changes from one organization to the other and from one period to the other. Additionally, different entities record different financial performances, that is, positive, negative, or zero.

There has been increased investment in the NSE over the past 20 years. Some of the companies listed during the period include Equity 2006, KENGEN 2006, Cooperative Bank 2008, Safaricom 2008, and, I & M 2013. The economic results of the listed firms have been of great interest to both local and foreign investors. The increased foreign participation of investors from 48.6% in 2013 to 68.6% in 2019 relates to the increased appetite of NSE stocks to global investors from expected a bullish performance.

The financial health of the listed firms has a mixed basket which is affected partly by macroeconomic variables and partly by microeconomic factors. NSE all-share indices which are captured daily on the date of the transaction measures the financial performance of stock. Other measures include the NSE-25 index of the top 25 firms according to their financial performance. The variables have had systematic and unsystematic results for the listed firms. For example, in 2017, the NSE all-share index declined after the nullification of the Presidential elections to

respond to the uncertainties in the market. The economic results posted by the listed firms has been rising year on year though some industries and sectors have reported poor performance. The all-share index closed at 4,500 points in 2010, which dropped to 3,200 in 2012, rose to 5,500 in 2015, and declined to 2,400 in 2019. The mix in performance is attributed to an array of macroeconomic variables including government borrowing. The public debt determines the government's capacity to invest and the taxation policy which directly affects the income streams of the firms listed in the bourse.

1.1.4 Relationship between the Public Debt and Performance of Listed Firms

Government borrowing influences an array of macro-economic factors that are crucial in determining the financial performance of corporations in an economy. Studies have shown that excessive government borrowing would result in increased debt interest payments, raising of taxes to cover the principal and interest payments, crowding out in the private sector, and increased inflation Cachetti & Zampolli, (2011). The high-interest payments on the government debt mean that a higher portion of the tax revenues is used for debt repayment rather than other economic agents in the country. Higher taxation increases the prices of commodities and services while lowering the aggregate demand which negatively affects the financial performance of corporations, reduces the income earned by corporations, crowding out the effect, and increased inflation. The high borrowing may push interest rates higher as investors demand higher premiums for the bond yields to compensate for the risk of default arising from excessive borrowing countries in the Eurozone during 2011/2012, interest rates were pushed higher as most governments borrowed through issuing bonds to the public rather than the Central Banks or Multinational

Development Banks. Interest rates rose as a result of fears over the ability of the governments to repay. Government borrowing from the private sector causes a crowding-out effect according to classical economists. Panizza & Andrea (2012) argue that by lending to the government, fewer funds to invest and spend remain in the private sector which would likely lower the productivity of corporations. Therefore, public debt is likely to produce a negative relationship with the financial performance of listed firms.

According to the Central Bank of Kenya, as of 2018, Kenya’s public debt stood at USD 49 billion which is 4.844 trillion Kenya shillings. This translates to 56.4% of the country’s GDP which is a rise from 42.8% in 2017. The Central Bank continues to report that more than half of the nation’s debt came from external sources. External debts are not dangerous for the economy. They can help improve economic growth. However, principal and interest refund for the external debt are done in foreign currency thereby depleting foreign exchange reserves.

Figure 1.2 shows the historical market value of equity as a percentage of GDP in the Nairobi Securities Exchange.

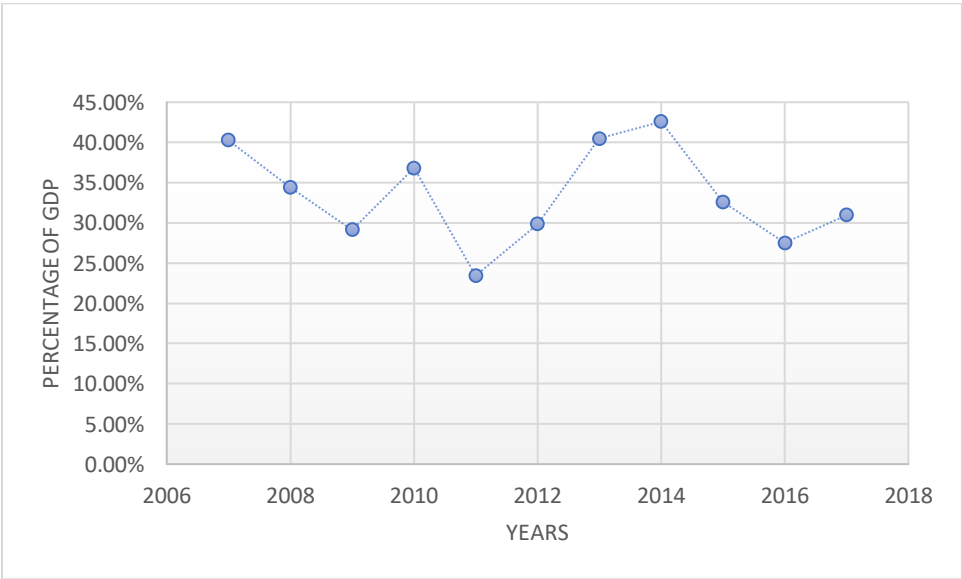


Figure 1.2 Market capitalization

Source: Author

The market capitalization of a corporation is defined as the value of the remaining shares of its stock. According to Asuncón, Albentosa, and Sandoval (2019), this value can be calculated by multiplying the current stock market value by the total number of outstanding business stock shares. A company's market capitalization can be used to estimate its size. The size of a corporation affects a variety of factors, including return on investment and risk, that may be of interest to investors. According to the aforementioned graph, 2011 saw the lowest market capitalization as a share of GDP.

Few researchers have looked into the impact of government debt on the internal or external stock market performance of companies. The information above demonstrates that market capitalization as a percentage of nominal GDP has been reducing in Kenya. In 2014, this value was 42.573, 27.504 in 2016, and 23.605 in 2018. Market capitalization was used in this study because it helps determine the value of a company.

Big companies have a high market capitalization. These are companies that have been around for quite some time and are major players in the industries that they are operating in, therefore, investing in large companies do not necessarily result in increased return on investment. However, due to their stability, large companies can reward investors with consistent increases in share value and consistent dividend payments.

The NSE 20-share index has also been on a downward spree. In December 2014, the NSE 20 share index was 5113 points. This reduced to 4041 in December 2015. The value was 3,186 points in December 2016. In December 2019, the NSE 20-share index was 2654.390 points reducing further to 2337.030 points in February 2020. This can be seen in the figure 1.3.

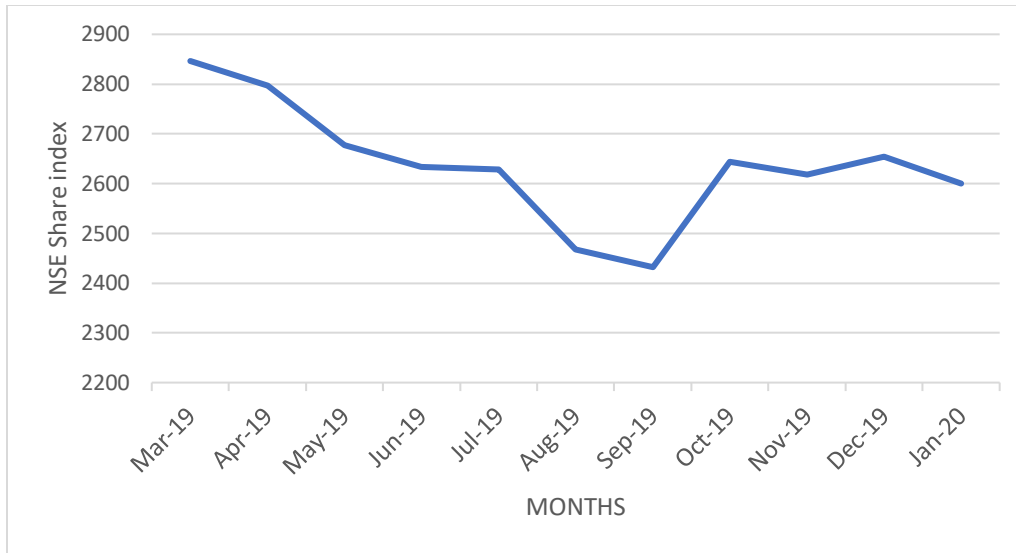


Figure 1.3 Market index

Source: Author

Figure 1.3 displays the NSE's performance from March 2019 to January 2020. It is noteworthy that Kenyan companies which cross list on regional stock exchanges are impacted by the NSE's performance. The Uganda Security Exchange, Rwanda Security Exchange, and Dar es Salaam Security Exchange are a few of these stock markets. Due to a decline in the market value of listed companies, both NSE and regional securities exchange investors experience financial losses.

1.2 Statement of the Problem

Government borrowing increases the amount of money circulating in a country by increasing the levels of investments and savings. Consequently, through these increases in money circulation; investors, stakeholders, financial institutions, and the government who invest in companies listed on NSE expect a rise in the economic results of these companies. Ngugi et al., (2009) argue that investors strive to provide a conducive environment for running businesses by availing all the financial requirements to run the business. Therefore, they expect excellent financial health results from these companies listed on NSE.

According to CBK, (2018) Kenya's public debt was 55.96% of GDP in 2017, 59.29% in 2018, and 62.10% in 2019. On the other hand, market capitalization as a percentage of GDP has been reduced from 42.57% in 2014 and 23.60% in 2018. Accordingly, the financial performance of companies listed on NSE will record either positive, negative, or constant results as a result of the public debt effect. This is because the debt crisis results in a crowding-out effect which is expected to affect the consumption levels in the economy which in turn affects the financial performance.

Studies by Almajali et al., 2012; Ayako, Kungu, & Guthui 2015; Liargovas & Skandalis, (2008) have concluded that factors such as the firm's size, capital structure, fixed assets investments, and level of risk as well as identifying that both external and internal factors affect the performance of these firms. Previous researchers have not focused on the crowding-out effect as a determinant of the economic performance of companies listed on NSE.

Additionally, Momanyi (2018) demonstrated a significant association between debt and the profitability of listed service and business enterprises. A statistically negligible and modest association between debt funding and dividend policy of companies listed on the NSE is found by Madeni (2017). According to Pradhan and Khadka (2017), short-term debt and bank profitability have a positive relationship while long-term debt has a negative relationship. Harelimana (2017) came to the conclusion that debt levels have a significant impact on bank profitability. Long-term borrowed finances and the financial success of businesses are found to be negatively correlated by Ikapel and Kajirwa (2017). Kwadwo, Nsiah, and Sekyere (2016) found a negative correlation between public debt and enterprises' financial performance.

Therefore, it is noteworthy that most studies are not on Kenyan firms to give incontestable results on the relationship between public debt and the financial performance of companies listed on the NSE. Furthermore, both local and international researchers have not established a consensus in

their theoretical and observational arguments on the effect of public debt on financial performance thus the urge to look further into the area of study.

1.3 Research Questions

The following research query will serve as the study's compass:

- i. How does public debt affect the financial health of companies listed on the NSE?
- ii. How does the level of public debt relate to the financial success of the companies listed on the NSE?

1.4 Study's Objectives

The general objective is:

To ascertain how public debt affects the financial health of the NSE-listed corporations.

The specific goals are:

- i. To determine how public debt affects the financial health of the companies listed on the NSE
- ii. To ascertain how factors affecting public debt and the financial success of companies listed on the NSE are related.

1.5 Significance of the Study

This study will contribute to the academic literature majorly in addressing the gap in the study of public debt. Existing empirical works of literature have focused on examining the effect of domestic public debt on the financial well-being of companies listed on the NSE. There has been limited research on the effect of external government debts on the performance of companies listed on the NSE. Therefore, researchers interested in this area of study will be able to use the findings to further their research or to form a basis for an argument.

The study will assist the investors and analysts know the negative effects of external borrowing and the effect on the economic health of companies listed on the NSE. This supports decisions on whether to hold or sell financial assets when there is a significant shift in public debt.

The study will be very resourceful to the ministry of finance, CBK, and policymakers. The empirical findings can be used by the policymakers in giving guidance on the best way to finance the government through borrowing while reducing the effect borrowing has on the performance of companies listed on the NSE.

1.5 Scope of the Study

The study examined how public debt impacts the financial performance of companies listed on NSE. The study used secondary data obtained from KNBS, CBK, and ministry of treasury. The study used time series data of the period between 2011-2021.

1.6 Limitations of the Study

This study experienced challenges in access to data as some data are not publicly available. For instance, in order to access data on financial performance of companies, they had to be bought from NSE. Secondly, time period in consideration, 2011-2021 is a constraint to getting a more robust view of how public debt affect the financial performance of companies listed on NSE. Actually, using a longer period would generate different results and trends. However, due to limited data accessibility and availability of data, the study was limited to the specified period of time.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Analyzing the theoretical and empirical theories on how public debt affects the performance of companies listed on the NSE is part of a literature study. This chapter will also provide a theoretical framework. Additionally, the theories' advantages and disadvantages will be discussed in order to clarify the knowledge gap. A summary of the reviewed literature will be provided in the chapter's conclusion.

2.1 Theoretical Literature Review

Several theories have been used in explaining the effects of public debt on the economy. Some of the theories that have been reviewed include:

2.1.1 Debt overhang theories

Sachs and Krugman developed this theory in 1988. Debt overhang is described as the decline of the economy as a result of an increase in public debt (Reinhart, Reinhart & Rogoff, 2012). According to this theory, both the accumulated public debt and how the debt is serviced discourage public investments or affect how the public spends thereby reducing economic growth budget get deficit increases when there is increased external interest rates payment which leads to reduced public savings if private savings fail to balance the difference. This in turn generates a crowding-out effect thus depressing economic growth.

Policymakers and private sectors are generally discouraged from investing by the presence of a debt overhang tax. This is because; due to the high levels of public debt, there is a need to service the debts through distortionary policies such as tax inflation and a reduction in investments (Agenor & Montiel 1995). As a result, private investors and policymakers may decide to venture

into higher risks or even invest in countries abroad. Another element of the theory suggests that decreasing the amount of external borrowing will lead to a reduction in government spending and a rise in investment.

This approach has the advantage of acknowledging how rising public debt inhibits private investment and influences how government policies are created. On the other hand, one of the goals of this research project is not achieved because the theory fails to highlight the connection between public debt and the financial performance of companies listed on NSE.

2.1.2 Keynesian theory of debt

John Maynard Keynes composed the Keynesian theory in 1930. This theory advocates for expansionary fiscal policy as the primary driving force for economic growth. That is, external public borrowing does not result in any societal or economic burden whereas it is invested in productive economic activities such as road construction, the building of health facilities, the building of schools, and community developments among others.

Keynes acknowledged that an economy finds a solution in boosting effective demand through deficit spending. Continuous deficit spending could result in an explosion of the national debt which in turn could lead to inflation in the future. However, according to Keynes, the government could address such problems by increasing taxes once profitability is attained.

This theory explains the importance of government borrowing. Nonetheless, the theory only captures the positive effects of borrowing and does not consider how the public debt brings about a crowding-out effect which affects the performance of companies listed on NSE.

2.1.3 The Crowding out effect neo-classist theory

Neoclassical economists believe that the major focus should be economic growth in the long run which will ensure that the short run takes care of itself. Therefore, the theories consider that

individuals operate in such a way that their consumption decisions are long-term decisions. According to Neoclassical schools, a rise in public debt increases interest rates. As a result, there is a “crowd out” as the private investors will reduce the amount borrowed due to the high-interest rates that are imposed. Moreover, the crowding-out effect reduces the growth of capital stock as compared to how it would have grown if private investments were being recorded. Less capital means that the economy will experience a lower growth both in output and marginal productivity of labor.

This theory is important as it acknowledges that a budget deficit results in a crowding-out effect which in turn affects the investors’ decisions to invest in firms listed on NSE. However, this theory does not link the consequences of public debt on the financial health of companies listed on the NSE.

2.1.4 Ricardian Equivalence

This theory is also known as the Barro-Ricardo equivalence proposition. This is because, it was first developed in the earlier 19th century by David Ricardo and in the late 19th century, Richard Barro expounded it further. According to this theory, financing the government either through future or current taxes will impact the general economy equivalently. This means that increasing government spending through public debt will deter investors and decision-makers from borrowing since they are aware that the debts will be paid later through future taxes. Therefore, they will save their current income to pay future taxes. In addition to that, the theory suggests that the major problem with public debt was the fact that the community would later be burdened as a result of the wastefulness of the public funds rather than the methods involved in acquiring such expenditure. Notably, the theory acknowledges that public debt would be a burden to the community later. Moreover, it points out that many investors and consumers will not invest much

since they will be saving the income, they get to pay future taxes. This is very important in explaining the results that both external and internal borrowing has on the economic performance of companies listed on NSE which is the major objective of this research. Nonetheless, the theory does not bring out the public debt effect on the GDP ratio.

2.2 Empirical Literature Review

Cohen (1993) makes the case that debt repayment programs may result in increased barriers to investment and growth. Because debt servicing consumes a sizable portion of the meager government revenues, there are fewer funds available to build infrastructure. Additionally, lower governmental savings brought on by debt repayment may affect the private sector. Due to the drop in government spending that results from inadequate debt servicing, which results in liquidity issues, debt servicing has a detrimental effect on economic growth.

Abor (2005) investigated how the debt-to-equity ratio of listed companies on the Ghana Stock Exchange (GSE) affected their profitability. For the years 1998 to 2002, the study used secondary data from 25 GSE-listed companies. We came to the conclusion that there is a strong positive link between ROE and the ratio of long-term debt to total assets. The research also indicated a favorable association between ROE and the ratio of total assets. The relationship between corporate capital structures and the financial results of companies listed on the NSE was examined by Omesa et al. in 2013.

Koech (2013) looked at how the debt-to-equity ratio of financial firms listed on the NSE affected their profitability. The study used secondary data collected over a long period of time. The financial firms listed on the NSE between 2008 and 2012 made up the sample population. Data analysis using the Statistical Packages for Social Sciences tool produced a descriptive analysis.

The study's findings demonstrated a negative correlation between capital structure and the NSE-listed companies' financial performance as shown by ROE.

A study on the capital structure and financial performance of companies listed on the NSE was undertaken by Maina and Ishmail in 2014. The gathered secondary data was examined using a regression model. As a result, it was discovered that debt and equity have a significant role in determining the financial performance of companies listed on the NSE. The findings indicated a poor correlation between capital structure and financial performance, which helped to explain why these companies' financial performance suffered anytime they adopted a more aggressive use of debt to fund their operations. A further finding of the study was that the majority of these businesses favored short-term debt to long-term debt.

Using data from non-financial companies listed on the NSE, Mwangi, Makau, and Kosimbei (2014) investigated the connection between capital structure and financial performance. The NSE share index was used to retrieve secondary data for the study. Additionally, 42 non-financial enterprises were included in the sample group. In this work, the panel model's characteristics were determined using the Hausman test in order to create a random effect model. The Feasible Generalized Least Square Method (FGLS) was employed to provide model estimate. According to the study's findings, there is a bad correlation between financial leverage and a company's financial performance.

Clements, Bhattacharya, and Tuan (2014) investigated how external debt impacted economic growth in less developed nations. The study examined secondary data from the Global Network Development program of the World Bank. The study covered the period 1970-1999. The study concluded that external debt had significant effects on the economic growth of a country as it is

seen to be leading to a crowding-out effect. Therefore, the study emphasized that external debt has detrimental effects only after attaining a certain threshold.

Kouladoum (2014) studied the impact of real exchange rates and external borrowing in Chad. When analyzing data from 1975 to 2014, the generalized technique of Moments was used. The study's findings showed that external borrowing had a favorable impact on the actual exchange rate. The GMM's tools, however, were not adequate to account for the differences amongst the variables (external debt, inflation, interest rate, and money supply).

The factors that affect the financial performance of companies listed on the NSE were studied by Ayako, Githui, and Kungu in 2015. In this study, panel data from the years 2003 to 2013 were used. According to the study's findings, neither firm size nor liquidity had an impact on how well NSE-listed companies performed.

The impact of loan capital on the financial performance of companies listed in South Africa was evaluated by Magaro and Abeywardhana (2017). For the years between 2011 and 2015, the study used a sample of 25 businesses that included both retail and wholesale businesses. Regression analysis was utilized in the study to assess secondary data. The findings demonstrated that debt capital has detrimental consequences on the financial performance of companies listed on the NSE, both in the short and long terms. The study suggested that in order to increase the wealth of the shareholders, investors, managers, and decision-makers should make financial decisions that guarantee profit is maximized and that costs connected with debt are reduced. The study has a contextual gap because it was centered on wholesale and retail firms in South Africa. However, the study did not consider the effects of public debt on the financial performance of companies listed on NSE, Kenya.

2.3 Overview of Literature Review and Research gap

Some of the theoretical and empirical literature reviewed need further examination. This is because while studying the literature there are a lot of doubts about the results as well as gaps that exist. Usually, the results are contradicting and conflicting hence non-satisfying different people. For instance, the Keynesian theory of debt postulates that public debt has a positive impact on the economy. This postulation does not consider the burden that borrowing has on the economy that negatively affects the financial performance of companies listed on the NSE.

Similarly, debt overhang theory acknowledges that accumulated public debt reduces inflation, capital flight, and investments, and is a disincentive to policymakers. This hurts the financial performance of companies listed on NSE since most of these companies rely on investments and incentives to investors for good performance. According to the neo-classical theory of crowding out, a rise in public debt increases interest rates leading to a crowding-out effect. This will affect the decision made by investors to invest in companies listed on NSE thus affecting the financial performance of the companies negatively. Ricardian equivalence emphasizes the negative effect of public debt on the decisions made by financial investors. This is because the investors are aware that the amount borrowed will be paid by future taxes and that the burden of the debt borrowed will be carried by the community in the next generation.

The empirical works of literature reviewed also give different results. It is noteworthy that researchers used different data sources, targeted different populations, different variables, and different methodologies. Moreover, the econometric tools used in analyzing data were inadequate in expressing a strong relationship among the macroeconomic variables. For instance, Omesa et al (2013) explored the relationship between the capital structure of firms and the financial performance of companies listed on NSE. The results showed a positive relationship among the

macroeconomic variables. Furthermore, Koech (2013) and Maina and Ishmael (2014) conducted the same study and concluded that there was a negative relationship among the macroeconomic variables. Similarly, Clements, Bhattacharya, and Tuan, (2014) emphasized that external debt had detrimental effects only after reaching a certain level.

Following the conflicting results from different studies and theories, it is difficult to conclude the general effect of public debt on the financial performance of companies listed on NSE as well as the direction of these effects. Most studies have focused on the factors that affect the financial performance of companies listed on NSE but have not considered financial performance as a factor that affects this performance. Moreover, most studies have analyzed the trend of debt to GDP ratio to show that there is both increase and decrease in the trend. However, this study will focus on the trend of debt between 2011 and 2020 which has generally been rising.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the approach used to determine the impact of public debt on the financial performance of companies listed on NSE. It has outlined the study's theoretical and analytical frameworks.

3.2 Research Design

Research design, according to Kothani (2005), is the entire approach one selects to gather, analyze, and interpret data in order to fully address the research challenge. In order to draw statistical inferences from the numerical data obtained for this study, a descriptive research approach has been used. The research question "what" in the project is addressed by descriptive design.

3.3 Theoretical Framework

The correspondence between the variables in this study is established using the Ricardian Equivalence theory. This idea contends that a deficit delays taxation, causing future generations to bear the cost of government borrowing. Therefore, it is critical to distinguish between the limited and eternal implications of public debt. There is a chance that borrowing will increase aggregate demand in the interim, but in the continuing, the effects will likely lead to less capital accumulation. However, as taxes have no impact on a person's lifetime budget restriction, they do not change how much they choose to consume.

The model can be derived as follows;

Consider a model of two periods: period 0 representing the current, and period 1 represents the coming times, which will take into account the historical conditions. We use the following symbols throughout: G stands for government expenditure, T for tax revenue, Y for non-asset income, B'

for public debt, B for private debt, C for nominal private consumption, and P for price levels. The little letters g, b, c, t, b', p, and y stand in for the real values of the nominal variables mentioned above.

$$G_0 - T_0 + iB_{-1} = B_0' - B_{-1} \dots\dots\dots 3.1$$

$$G_1 - T_1 + ioB_0' = -B_0' \dots\dots\dots 3.2$$

We consolidate equations 3.1 and 3.2 above by dividing equation 3.1 by P_0 and equation 3.2 by P_1 to yield:

$$g_0 + g_1(1 + r_0)^{-1} + (1 + r_1) b_{-1}' = + 7(1 + r_0)^{-1} \dots\dots\dots 3.3$$

whereby:

$$1 + r_0 (1 + io) (P_0/P_1) \text{ and } 1 + r_1 (1 + i1) (P_1/P_0),$$

According to Equation 3, the present value of current and future taxes must equal the total of the present value of current and future government spending as well as the starting stock of public debt. The budgetary limitations for the private sector are as follows for periods 0 and 1 in nominal terms:

$$C_0 = Y_0 + B_0 - (1 + i1) B_1 - T_0 \dots\dots\dots 3.4$$

$$C_1 = Y_1 - (1 + io) B_0 - T_1 \dots\dots\dots 3.5$$

After formulating equations 3.4 and 3.5 in real terms, we combine them to produce:

$$Y_0 + y_1(1 + r_0)^{-1} - T_0 - T_1(1 + r_0)^{-1} = C_0 + C_1(1 + r_0)^{-1} - (1 + r_1) b_{-1} \dots\dots\dots 3.6$$

According to Equation 3.3, the sum of the present value of times to come and present-day government spending and the beginning government debt must equal the present value of present-day and times to come taxes. As a result, equation 3.6 represents the intertemporal budget constraint of the private sector. In order to create the Ricardian equivalence model, we substitute

the expression for taxes in equation 3.3 for the intertemporal budget constraint of the government in equation 6 and obtain the following result: $C_0 + c(1 + r_0)^{-1} = Y_0 - g_0 + (Y_1 - g)(1 + r_0)^{-1} \dots 3.7$

In a closed economy, $b = -b'$, meaning that the public and private sectors' debt positions must be equal. Equation 3.7 illustrates the intertemporal budget constraint for the private sector under the presumption that the budget constraint for the governmental sector is completely used.

3.4 Estimating Model/ Model Specification

This study adapted and modified the above Ricardian equivalency regression model of the following form:

$$Y = X_0 + X_{1t} + X_{2t} + X_{3t} + X_{4t} + \epsilon \dots 3.8$$

in order to examine the aftermath of public debt on the financial well-being of firms listed on the NSE.

where financial performance is the dependent variable. $X_1 \dots X_n$ is a vector of explanatory factors that differs between studies. Governmental debt to GDP ratio, interest rate, exchange rate, inflation, public spending, private spending, and tax income will all be explanatory factors in this study. The time symbol t refers to the observation made at the specified time.

The results of public debt on the commercial performance of companies listed on the NSE are examined in this article using panel regression techniques. From equation 3.8;

Y = Financial well-being of companies listed on the NSE. It is the dependent variable that will be measured.

X_1 = Public debt to GDP ratio

X_2 = Exchange rate

X_3 = Inflation

X_4 = Public spending

X_0 = Constant term

ϵ = Error term. It is included because to bring out the difference between the theoretical value of the model and the actual observed results. If one or more of these independent variables affect variables are left out from the model, then the independent variables will not completely predict the effect of debt deficit on consumption.

3.5 Definition and Measurement of Variable

Financial performance is the quantifiable measurement used to determine the economic well-being of the companies listed on NSE. It will be measured using NSE share index. Data will be retrieved from KNBS and the National treasury

The public debt to GDP ratio refers to the ratio of a country's debt to its economic output. The country's debt is measured in a unit of currency while the economic output is measured in units of currency per year. Data on the country's public debt has been retrieved from KNBS while data on economic output will be retrieved from CBK.

Inflation refers to a steady rise in the price of services and goods, and a decrease in the purchasing value of money. It will be measured by the annual change in the Consumer Price Index. Data on inflation are drawn from CBK.

Exchange rate refers to an expression of a domestic currency with respect to a foreign currency. It will be measured. It is measured by dividing domestic currency by foreign currency.

Public spending refers to the amount available from investments, tax revenue collection, donors, and borrowing among others that the public uses to acquire public goods and services. It has been measured by summing up the number of available resources for use. Data will be drawn from the National Treasury.

3.6 Population

The target population for this research project are firms listed on NSE as of 2020. The target population is composed of 63 firms listed on NSE as of December 2021.

3.7 Types and Sources of Data

This study used annual secondary data that cover the period 2011-2021 to explain the trend analysis of the debt in Kenya. Data on public debt, GDP, tax revenue, interest rate, and private wealth are obtained from the Ministry of Treasury, CBK, and KNBS. The study used time series data.

The dependent variable, the financial performance of companies, are measured using ROE.

3.8 Data Processing and Analysis

The primary goal of the study was to ascertain how public debt affects the financial performance of companies listed on the NSE. It includes two other purposes as well. The association has been assessed using linear regression analysis. The Ordinary Least Squares (OLS) approach was used in this study to analyze the data and come to conclusions. Since this study has used time-series data, non-stationary variables calculated have generated results that are disguised by having high t-statistics and R^2 values.

3.8.1 Test for Stationarity

To prevent erroneous findings from non-stationary variables, this test has been run. The time-series data is subjected to an augmented Dickey-Fuller (ADF) unit root test to identify the variables that are not stationary. A table structure was used to present the findings.

3.8.2 Correlation Test

This study has used correlation analysis to determine the relationship between the variables as well as Multicollinearity between the predictor variables. According to (Williams, 2008) multicollinearity occurs when two variables have a Pearson correlation value greater than 0.8. The greater value will show that two or more variables are highly correlated with one another.

3.8.3 Heteroscedasticity Test

Since OLS assumes that the value of the residual should be constant across time. This will explain homoscedasticity. However, heteroscedasticity occurs when variances of the error term are not constant. Notably, estimated estimators have variances that are not minimum. This test is carried out to prove whether using the regression model in OLS was adequate for the data set in the study.

3.8.4 Autocorrelation Test

Another assumption of the OLS is that there should be no correlation between the residuals over time. This means that if the residuals are correlated, then there exist two problems. One is a first-order autocorrelation problem, and two is a serial correlation problem. (Brooks,2008) emphasizes that the consequences of heteroscedasticity and autocorrelation are similar. Consequently, a serial correlation test was performed to confirm whether it is satisfactory to use a regression model in OLS in analyzing the set of data collected.

3.8.5 Normality Test

OLS additionally assumes that residuals of a multiple regression model should be distributed normally. Therefore, a normality test is carried out using two approaches, that is, the graphical method has been used in the first approach, followed by Jarque-Bora Test which is more detailed than the graphical presentation.

CHAPTER FOUR

EMPERICAL RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter entails the findings of the research study, that is, the data analysis, interpretation of the results, and finally the discussions. It is divided into the following sub-sections: descriptive statistics, diagnostic tests, and interpretation and discussions of the results.

4.2 Descriptive Statistics

Descriptive statistics is important as it aids presentation of data in a meaningful and understandable way, thus, interpretation of data is made easy. Additionally, descriptive analysis is useful in detecting outliers and any typos that may be present in the data and permits one in determining similarities among variables. Generally, it is an important analysis that prepares you to be ready for other statistical analyses.

Table 4.1 gives a summary of the descriptive analysis for this study.

Table 4.1 Descriptive statistics

	AV_ROE	DEBT_TO_GDP_RATIO	EX_RATE	EXP_TO_GDP	INFLATION_RATES
Mean	0.221388	0.838755	97.70931	1.197867	7.127273
Median	0.145030	0.556984	101.1305	1.185206	5.920000
Maximum	1.425781	5.701033	113.1265	1.822718	18.93000
Minimum	0.031939	0.395673	84.23330	0.667639	3.200000
Std. Dev.	0.284310	1.102398	8.992330	0.455749	3.539672
Skewness	3.694953	4.161411	-0.2323	0.075584	2.119431
Kurtosis	16.12243	18.88680	1.723775	1.173704	7.265563
Jarque-Bera	207.9080	294.8549	1.690870	3.078358	33.14940
Sum	4.870539	18.45261	2149.605	26.35308	156.8000
Sum Sq. Dev.	1.697477	25.52090	1698.102	4.361852	263.1148

Source: Author's computation

The results from the above calculations indicate that the average ROE had a mean of 0.221388 and standard deviation of 0.284310. This shows that the data series for this variable are spread out over a wide range since the value of the standard deviation is greater than the mean value McPherson (2001). The minimum and maximum for this variable are 0.031939 and 1.425781 respectively. Debt to GDP ratio had a mean and standard deviation of 0.838755 and 1.102398 respectively. Since the value of the standard deviation is greater than the mean value, the implication is that the data points of this variable are spread out. The variable had a maximum of 5.701033 and a minimum of 0.031939. Exchange rate as a variable had a mean of 97.70931 and a standard deviation of 8.992330 which shows that the series are close to the mean. The maximum of this

variable was 113.1265 and this was the highest maximum across all variables. The minimum of this variable was 84.23330.

Expenditure to GDP ratio exhibited a mean of 1.197867 and a standard deviation of 0.455749 which implies that the data sets are close to the mean. The maximum and minimum for this variable were 1.822718 and 0.667639 respectively. Inflation rates had a mean of 7.127273 and a standard deviation of 3.539672 which implies that the data points are close to the mean. Maximum of this variable was 5.9200 and minimum was 18.9300.

To test if the data distribution is symmetrical, skewness and kurtosis were included. Ross & Sheldon (2017) implies that for a normally distributed the mean, the median, and the mode coincide and the coefficient of skewness is 0 (zero). Additionally, kurtosis range for a perfect symmetry should range between -3 and +3. The above results, exchange rates and expenditure to GDP had their skewness between -1 and +1. Additionally, all other variables apart from exchange rates and expenditure to GDP had kurtosis outside the range of -3 and +3 which indicated that there were outliers which is a clear indication that these variables, average ROE, tax GDP, inflation rate and debt_to_GDP experience a lot of alterations as a result of socio-political and economic factors such as debt availability, new economic policies, change of government, and country's economic and political stability.

Jacque-Bera test statistics is an important indicator of skewness and kurtosis of data as it demonstrates if the data matches a normal distribution. If the result of Jacque-Bera is small or equal to 0.05, the data is said not be normally distributed. From the above calculations, all the variables are normally distributed at 5% confidence level which implies that the values are in a symmetric fashion.

4.3 Diagnostic tests

4.3.1 Stationarity Test

According to Khan & Gill (2009), time series data in macroeconomics are vulnerable to non-stationarity, which leads to multiple of errors in regression results. Therefore, it is important to test stationarity of all the variables in order to avoid the issue of non-stationarity. Augmented Dicky Fuller (ADF) test is conducted to detect whether the variables are stationary or not. ADF is most preferred because in case there is autocorrelation, it will be taken care of according to Brooks (2008).

Table 4.2 Unit root test

Variables	LEVEL		1 st DIFFERENCE	
	Intercept	intercept & Trend	Intercept	Intercept & Trend
Average_ROE	0.0038	0.0085	0.0002	0.0010
Debt to GDP ratio	0.0018	0.0076	0.0000	0.1497
Exchange rate	0.9560	0.1122	0.0111	0.0503
Expenditure to GDP	0.8951	0.0545	0.0010	0.007
Inflation rates	0.0630	0.1976	0.0001	0.0005
Tax GDP	0.0014	0.0085	0.000	0.0001

Source: Author's computation

Table 4.2 presents results for the unit root test.

Null hypothesis states that if the value of p is smaller or equal to 0.05, we reject the H_0 .

H_0 : There is a unit root.

The study conducted unit root test for each variable in two different categories whereby first category was at level and the other at 1st difference. However, under both categories, the study conducted the test at both intercept and intercept and trend thus the results indicate probability of each variable in four different capacities.

From the above results, exchange rates, expenditure to GDP, and inflation rates variables become stationary at 5% confidence level after removing the first difference. All other variables, average ROE, tax GDP, and debt to GDP ratio are stationary both at level and first difference at 5% confidence level. Therefore, the time series data in this case is stationary.

4.3.2 Co-integration test

The long-term relationship between the dependent and the independent variables is conducted using the Johansen Co-integration test. Johansen co-integration test is most recommended in this study because its results are more accurate, Brooks (2008).

The results obtained are as in the table 4.3

Table 4.3 Unrestricted Co-integration Rank Test (Trace)

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.009934	211.4420	95.75366	0.0000
At most 1	0.029603	111.0720	69.81889	0.0000
At most 2	0.018606	65.79447	47.85613	0.0005
At most 3	0.042718	35.34211	29.79707	0.0104
At most 4	0.000391	14.75751	15.49471	0.0644
At most 5	0.0101196	2.133797	3.841466	0.1441

Trace test indicates 0 co-integrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: Author's calculations

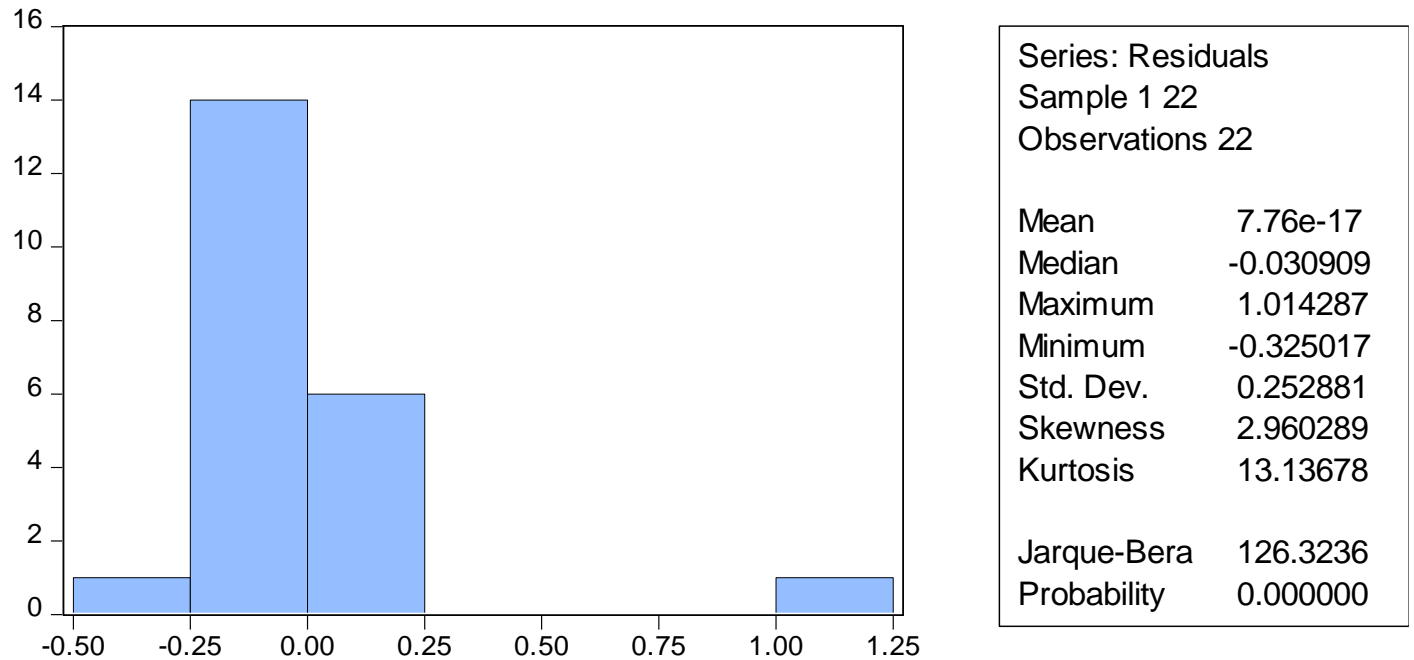
The study used Eigenvalue in decision making.

The null hypothesis is that there is no co-integration. The null hypothesis is rejected if the absolute probability of the Eigenvalue is greater than 5%. The results from table 4.3 show that the null hypothesis is rejected as the results were less than the critical value 0.05. Therefore, the study can proceed to run OLS regression analysis since there exists no co-integration among the variables.

4.3.3 Normality Test

Jarque-Bera test is most preferred in testing normality in this study because it tests whether the data have kurtosis and skewness matching a normal distribution.

The results are as follows:



Null hypothesis is rejected if the probability is smaller or equal to 0.05.

H_0 The distribution is not normal

The results indicate a Jarque-Bera value of 126.3236 and probability statistic of 0.0000. Since the probability of 0.0000 is smaller than 0.05, the data is said to be normally distributed.

4.3.4 Heteroskedasticity

This study determined the existence of heteroscedasticity or homoscedasticity using Breusch-Pagan-Godfrey Test where null hypothesis is rejected if the statistical value is smaller than the critical value as provided in table 4.5

Table 4.5 Heteroskedasticity test

F-statistic	1.006490	Prob. F(5,16)	0.445
Obs*R-squared	5.263955	Prob. Chi-Square(5)	0.3845
Scaled explained SS	16.89586	Prob. Chi-Square(5)	0.0047

Source: Author's calculations

From the above results, probability chi-square 0.0047 indicates that there is no heteroscedasticity since it is smaller than 0.05.

4.4.1 Correlation

Correlation matrix was used in this study to prove the existence of an association between two variables. This is shown when there is a strong negative correlation or a perfect positive correlation.

Table 4.6: Correlation matrix

	AVERAGE ROE	DEBT- TO-GDP RATIO	EXCHANGE RATE	EXPENDITURE- TO-GDP	INFLATION RATES
AVERAGE ROE	1				
DEBT-TO- GDP RATIO	-0.13321	1			
EXC RATE	-0.3773	0.082771	1		
EXP TO-GDP	-0.04974	0.187271	0.075643	1	
INFLATION RATES	-0.02807	-0.01817	-0.40605	-0.04552	1

Source: Author's calculations

The results from table 4.6 show that there is negative correlation between debt to GDP ratio and average ROE. Since it is 13.21%, it indicates that the negative effects are weak. Similarly, other variables such as exchange rate, expenditure to GDP, and inflation rates exhibit a negative relationship that indicates that the variables affect the financial performance of companies negatively, however, the effects are mild. Most importantly, the variables with the highest correlation of -0.13321 was debt to GDP ratio and average ROE. This points out that the two variables are negatively associated and in general it can be said that debt to GDP ratio has a negative effect on the financial performance of companies listed on NSE.

A correlation coefficient that is greater than 0.8 indicates severe multicollinearity. From the results in the table above, it is important to note that debt to GDP ratio, exchange rate, expenditure to

GDP and inflation rates have correlation coefficient less than 0.8. This tells that there is no existence of multicollinearity among the variables.

4.4.2 Regression analysis

The study conducted a Regression analysis to establish how explanatory variables influence the independent variable.

The following results were obtained:

Table 4.7

Dependent Variable: AVERAGE_ROE

Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.779977	0.814443	2.185515	0.1105
DEBT_TO_GDP_RA				
TIO	-0.025305	0.057407	-0.440795	0.005861
EXCHANGE_RATE	-0.014421	0.007579	-1.902682	0.001505
EXPENDITURE_TO_GDP				
GDP	-0.004160	0.138780	-0.029975	0.086391
INFLATION_RATES	-0.017298	0.019174	-0.902188	0.00622
R-squared	0.191544	Mean dependent var	0.221388	
Adjusted R-squared	0.001319	S.D. dependent var	0.284310	
S.E. of regression	0.284123	Akaike info criterion	0.517894	
Sum squared resid	1.372336	Schwarz criterion	0.765859	
Log likelihood	-0.696839	Hannan-Quinn criter.	0.576307	
F-statistic	1.006932	Durbin-Watson stat	2.376754	
Prob(F-statistic)	0.431247			

Source: Author's computation

From the results obtained above, the relationship between the dependent and independent variables are explained by the values of probability. That is, if the probability of the independent variable is less than 0.05, then the independent variable explains the dependent variable in a good way and vice versa. From the above results, it is notable that all the variables save for expenditure to GDP ratio are significant at 5% confidence level.

From the findings, the study came up with the following model:

$$Y = 1.779977 - 0.025305X_1 - 0.014421X_2 - 0.004160X_3 - 0.017298X_4$$

Where:

Y is the financial performance

X₁ is debt to GDP ratio

X₂ is exchange rate

X₃ is expenditure to GDP

X₄ is inflation rates

From the results above, when all other variables are held constant, a unit change in X causes a 1.779977 change in Y. Consequently, a one-unit increase in debt to GDP ratio decreases the financial performance of companies by 2.5305%. A one-unit increase in exchange rate decreases financial performance of companies by 1.4421%. Similarly, a one-unit of expenditure to GDP decreases the financial success by 0.4160% and a one-unit increase in inflation decrease the financial performance by 1.7298%.

The regression coefficients between the variables indicated that there is negative and substantial significant relationship between debt to GDP ratio and financial performance of companies listed on NSE. An increase in the debt to GDP ratio increases a country's risk to debt default. This would further lead to financial panic in international and local markets, Meme & Muturi (2016). The

association between exchange rate and financial performance is weak and negatively significant to the financial performance of companies listed on NSE. According to Fatas et al. (2019), foreign exchange rates affect a company's expenses, assets, revenues, and liability which leads to a significant impact on company's financial statement. The study also showed that there exists a weak and negative insignificant relationship between expenditure to GDP ratio and the financial performance of companies listed on NSE. The relationship between inflation rates and financial performance of companies listed on NSE was found to be weak and negatively significant. High rates of inflation interferes with financial activities of companies in the long-run which leads to intermediaries reducing their lending amounts and allocate capital less effectively, and markets will be smaller and less liquid, Barro (2013).

R-squared and adjusted r-squared explain how fit the model is. The R-squared value from this result explains 19.15% relationship between dependent and independent variable. Therefore, the rest of the variations in the financial performance of companies is explained by 80.85% of variables not included in this model.

The aim of the study was to determine how public debt affects the financial performance of companies listed on NSE and also to ascertain the relationship among factors affecting public debt and the financial success of companies listed on NSE. The variables used met all the conditions for normality and stationarity, therefore, there was no need of transforming the data.

The study found out that debt to GDP ratio has a negative and significant effect on the financial performance of companies listed on NSE. Abor (2005) investigated how debt to equity ratio of the companies listed on GSE affected their profitability and concluded that there was a positive relationship. This contradicts the findings in this study that debt to GDP ratio has a negative and significant relationship with the financial health of companies listed on NSE.

Similarly, Magaro and Abeywardhana (2017) conducted a study on the impact of loan capital on financial performance of companies listed on South Africa. The study established that debt has detrimental effects on the financial health of companies. This is in agreement with this study as both postulates a negative relationship between debt and financial performance of companies.

Kouladoum (2014) studied the impact of real exchange rates and external borrowing in Chad. The study found out that real exchange rates has positive effects on the external borrowing thus positively affects the financial success of companies. This is contrary to the findings in this study that exchange rates had a negative significant effect on the financial performance of companies listed on NSE.

Ayako, Githui, and Kungu (2015) studied the factors that affect the financial success of companies listed on NSE. They conclude that neither the size of the firm nor liquidity affected the financial performance of companies listed on NSE. This contradicts the results of this study that found out that exchange rate and inflation rates have a negative and significant effect on the financial health of the companies listed on NSE.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND POLICY IMPLICATIONS.

5.1 Introduction

The chapter provides the a summary and conclusions of the study. Furthermore, the limitations of the study are covered in this chapter. Policy implementations and recommendations are also covered in this chapter. Lastly the areas of further research are provided in this chapter.

5.2 Summary

This study focused on establishing the relationship between public debt and the financial performance of companies listed on NSE. This study was prompted by the rise in public debt over the years and the shifts in public debt variables as a result of economic and socio political factors, changes in economic policies, and shifts in government among others.

The following objectives were adopted for this study; to determine how public debt affects the financial health of the companies listed on NSE and to ascertain how factors influencing public debt and the financial performance of companies listed on NSE relate. The study adopted Ricardian Equivalence theory.

This study adopted a descriptive research design. Secondary half year time series data of period 2007 to 2021 was collected from CBK and KNBS. However, for some variables only annual data was available, therefore, to obtain half year data, the annual data was extrapolated in excel. This was an important step in ensuring strong estimations and to avoid feigned results.

Several tests were conducted to obtain realistic and strong results. The study used descriptive statistics to present the data in a more simplistic way that enabled meaningful understanding and interpretation of the data. Secondly, stationarity test was conducted to determine whether the data had a unit root or not. Augmented Dicky Fuller test was carried out at level for intercept and

intercept and trend. Consequently, first difference for both intercept and trend and intercept were done. From the results obtained, it was evident that the time series data in this case was stationary. Thirdly, co-integration test was conducted to demonstrate the long-term relationship between the independent and dependent variables. Johansen co-integration results indicated that there was co-integration among the variables.

Fourthly, normality tests were carried out to establish if the time series data in this study was normally distributed or not. Jarque-Bera test was used to exhibit if the skewness and kurtosis of the data equated a normal distribution. The results of this study showed that the time series data was normally distributed at 5% confidence level. Fifthly, heteroscedasticity test was carried out using Breusch-Pagan-Godfrey test and the results showed that there was no homoscedasticity. To prove that there exists an association among variables or not, correlation analysis was conducted. Multicollinearity occurs when the results are greater than 0.8, thus from the results it was established that there was no multicollinearity among the variables.

Lastly, regression analysis is carried out and the results indicate that the dependent variable is explained by the independent variables.

5.3 Conclusions

From the results and analysis, the outcome shows that public debt has a mild negative effect on the financial performance of companies listed on the Nairobi Securities Exchange. If extrapolated to the entire economy generally, public debt would have negative results on the performance of the economy. Generally, an economy cannot do without public debt since CBK would be making monetary intervention to reign on inflation and raise revenue for investment in government projects like infrastructural developments, responding to emergencies like natural calamities, among others Dagar (2014). Significantly, high debt to GDP ratio would result in a strain in the

performance of profit making entities and generally the economy Makau (2008). Additionally, higher debt to GDP ratio poses higher financial risks thus have a negative substantial impact on the financial performance.

Furthermore, the study found out that other macroeconomic variables such as inflation, exchange rates have a mild negative effect on the financial performance of companies listed on NSE.

5.4 Policy Implications and Recommendations

The study recommends that the government should reduce the dependency on loans. This can be achieved by raising money through bond issuance. Therefore, when the government gets to a financial crisis, they can buy back the bonds. Bond issuance also facilitates public spending thus stimulates the economy by theoretically raising taxes from taxpayers and business people.

Secondly, the government should seek for alternative revenue raising models. This is because sudden increment in taxes has negative effects on the financial performance of companies listed on NSE. Taxation increases inflation, reduces consumer spending, discourages foreign investments, increases tax avoidance and evasion, and discourages innovation and entrepreneurship.

Thirdly, policy makers should encourage the government to reduce cost of operations like funding bankrupt corporations, and corruption. Debt is inevitable, but the government can consider public borrowing that is sustainable.

Lastly, future studies on the topic when more observation data are available. This will enhance the statistical tests to show the relationship among the variables in the data set.

5.5 Limitations of the study

The study encountered the following challenges. Quarterly data available for the main independent variables public debt covered the period from 2011. The sample size is thus limited.

5.6 Areas for further research

The study recommends further research on the impact of public debt on the financial performance of companies listed on NSE while isolating foreign components from local currency debt. Secondly, the study recommends a further research on the effect of public debt on the financial wellbeing of companies factoring in other variables different from what the study used.

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