

Determining the combined effect of financial system architecture, macroeconomic factors and governance on the development of local currency government bond market in Kenya

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Cite this article in APA

Odiga, J. A., & Abaja, P. O. (2023). Determining the combined effect of financial system architecture, macroeconomic factors and governance on the development of local currency government bond market in Kenya. *Journal of business and entrepreneurship*, 2(1), 17-22. <https://doi.org/10.51317/jbe.v2i1.424>



A publication of Editon
Consortium Publishing (online)

Article history

Received: 23.07.2023

Accepted: 04.10.2023

Published: 16.10.2023

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Abstract

This study sought to examine the current state of the local currency government bond market in Kenya to determine the effects of financial system structure, macro-economic factors and the country's governance on its development. The study used secondary data from the World Bank's WDI and DataStream databases for the period 1998 to 2019. Descriptive statistics - applying trend analysis, measures of central tendency and dispersion and documents analysis were employed to conduct a stocktaking of Kenya's government bond market development since its inception, while multiple linear time series regression using Ordinary Least Square (OLS) technique was employed to examine the determinants of the government bond market development in Kenya. In the findings, the combined model, corporate bond, political stability and general election were largely positively significant. Bank credit to the private sector and fiscal balance were positively significant, whereas inflation and interest capping were negatively significant at a 5 per cent confidence level. GDP_growth rate was significant at 10 per cent. The study thus recommends that the government's efforts should focus towards building the financial markets, controlling its micro and macro-economic factors and building a strong administrative structure in its quest to achieve its Vision 2030 objectives of financial independence. It is this structure that will encourage bond market growth and liquidity that will, in future, enable them to achieve financial independence.

Key terms: Bond issuance, debt, financial system structure, local currency, mutual funds.

INTRODUCTION

The economic transformation of a country requires an efficient financial system that can affordably finance economic activities in the public and private sectors. For governments, a well-developed financial system, among other functions, is a source of debt used to finance the budget deficit and accelerate the pace of economic growth. The domestic financial system consists of a private debt market that includes banks and other non-banking financial institutions (insurance companies, pension companies and mutual funds) and the public debt market, which consists of bond markets. In the Kenya Vision 2030 blueprint, the government emphasises the need to develop an efficient local capital market structure that enables the collection of capital critically needed for sustainable development. This study focuses on the public debt markets and examines the evolution of the local currency government bond market in Kenya, as well as the factors that determine the growth of this market.

A treasury bond market is a financial market where the government, both national and regional, issues debt securities called treasury bonds to raise money from individual and institutional investors. This market is called the local or domestic currency bond market if the debt securities issued are denominated in domestic currency and the foreign currency bond market if the issuances are denominated in foreign currency. The Central Bank issues Government bonds in the primary market by acting as a fiscal agent of the government. Each bond issuance is identified by its characteristics, such as maturity, coupon rate, yield, principal repayment terms, and bond provisions, if applicable. These characteristics are pegged on the credit quality of the country and credit market condition with the aim of attracting interest from investors. Investors who buy the bonds in the primary market can sell the securities in the secondary markets under the exchange trading rules. In Kenya, such trading takes place at the Nairobi Securities Exchange.

A decade ago, the treasury bond markets in emerging market economies (EMEs), including Africa, were small and somewhat irrelevant, and there was a huge doubt if the markets would ever develop (Burger et al., 2015). As the global financial crisis persisted, and the previously easy access to concessional loans and grants from the development partners declined, many

African countries found themselves compelled to turn to domestic capital markets. The first step was to undertake major financial sector reforms aimed at nurturing faster development of the local capital markets. The agenda was to have deeper, liquid and stable financial systems that could facilitate access to local currency credit.

Pushing for the reforms were international financial institutions such as the African Development Bank (AfDB), the International Monetary Fund (IMF) and the World Bank (WB). The motive was to provide a toolkit designed to help developing country governments analyse the state of their local currency bond markets and identify reform priority areas (Essers et al., 2014). The reforms renewed interest in the African financial markets landscape, paving the way for the establishment of local currency government bond markets in many African countries.

Existing studies on bond market development conduct cross-country analysis to determine the drivers of bond market development. These studies have general conclusions, which in some cases may not work for a specific country with their unique characteristics. Further time-invariant variables have been used, such as legal origin, land size and distance from the equator, which may not apply when studying a specific country. This study is based on one country, Kenya, and intends to test the extent to which the factors that drive the development of bond markets, as ascertained in the many cross-country studies, apply to an individual country.

Therefore, the aforementioned time invariant factors will be excluded while intermediating factors which are unique to individual countries, such as the effect of a general election and regulatory frameworks such as interest rate capping, will be tested. Besides, there has been some inconsistency in the literature on how some factors affect the development of bond markets, such as exchange rate variability and capital account openness. The differences are either reported on the level of significance of the explanatory variables or the nature of the relationship between one independent variable and the treasury bond market development. Other variables that have produced different results in previous studies include GDP at purchasing power parity, exports and fiscal

balance. This study contributes towards the debate by testing some of the variables with conflicting results using a different study approach: the individual country study. This will shed light on the extent to which factors that determine the development of bond markets are applicable to Kenya and the extent to which the moderating factors influence the development of the local currency government bond market in Kenya.

LITERATURE REVIEW

According to the neoclassical school of economics, capital is a primary factor of production as well as a crucial driver of value and economic growth. Intuitively, a well-developed capital market, more specifically in terms of depth, facilitates economic growth by providing firms with the capital needed to increase production. A sustained increase in productivity and expansion of firms can, in turn, lead to economic growth. Thus, there is undoubtedly a positive relationship between capital market development and economic growth. This hypothesis is supported by empirical evidence, which points out that well-functioning capital markets increase economic efficiency, investment, and growth in emerging economies.

Ibrahim and Alagidede (2018a) examine economic growth in a case where the growth in the finance and real sectors of the economy are disproportionate. The evidence from 29 sub-Saharan African countries over the period from 1980 to 2014 shows that the positive effect of financial development on economic growth largely depends on the simultaneous growth of real and financial sectors of the economy. Ibrahim and Alagidede (2018b) observe that while financial development is significantly and positively associated with economic growth, below a certain level, finance is becoming insensitive to growth while influencing economic activity significantly for nations above the thresholds. Thus, a higher level of financial development is a necessary condition for long-run growth.

Batuo et al. (2018) investigated the link between financial development, economic growth, financial liberalisation, and financial instability in 41 African countries between 1985 and 2010. The result suggests that financial liberalisation and financial development

have positive impacts on financial instability. The study findings also reveal that financial instability is reduced by economic growth, and the magnitude of reduction is higher in the period of pre-liberalisation compared to the post-liberalisation period. Diao and McMillan (2018) reveal that financial market growth explains the patterns of growth across Africa.

Wong and Zhou (2011) study the relationship between financial market development and the growth of the economy in Hong Kong, China, Japan, the US and the UK in a bid to support the proposal that stock market development is a crucial economic growth driver in developed and developing countries. The study concluded that stock market development has a strong positive correlation with industrial production, which results in economic growth. Similarly, Hossain et al. (2017) studied the link between economic growth and financial sector development in Bangladesh between 1988 and 2013, focusing on four variables: financial depth, financial access, financial efficiency, and financial stability. The results showed that financial sector development does not significantly cause per capita GDP growth. However, they observed that there is a two-way relationship between the selected variables: financial depth and stability, financial efficiency and accessibility and vice-versa.

Ngugi et al. (2006) studied the effects of financial deepening on economic growth in Kenya. They observe that there is a significant positive connection between economic growth and capital market development. More specifically, there was a highly significant positive relationship between bond markets and the banking sector development and economic growth. Burger et al. (2015) concur with Mu et al. (2013) and Levine (2005) that bond markets have a positive effect on economic growth, financial stability, and inclusion. They observe that the Asian economy remained resilient during the latest global financial crisis due to the well-developed bond markets that minimised dependence on the bank and foreign-sourced financing. They argue that sizeable fiscal balance leads to massive domestic borrowing, thus facilitating the growth of government bond markets in line with the findings of Abbas and Christensen (2010) and Adelegan and Radzewicz-Back (2009), but contradicts (Didier & Schmukler, 2014).

Table 1: Linear Regression Financial System Architecture, Macro Economic Factors and Governance on the Development of Local Currency Government Bond

VARIABLES	(1) Local C.Treasury bond
Corporate bond	-1.471 (5.092)
Stock Market Development	-0.0278 (0.105)
Bank credit to private sector	0.769** (0.334)
GDP growth rate	-0.750* (0.397)
Inflation rates	-0.415** (0.180)
Fiscal balance	1.636** (0.531)
Corruption index	15.75 (12.83)
Political stability	-15.65 (9.548)
Interest rate capping	-11.69** (4.389)
General election	-0.370 (2.072)
Constant	-7.938 (11.58)
Observations	20
R-squared	0.830

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The results presented in Table 4.6 show that the model is generally significant at 5 per cent level of significance, the overall R-Square statistic (R= 0.82, p-value <0.05) and F test statistic (F=10,9). This also implies that 82.99 per cent of the variations in the Local Currency Bond market were explained by composite variables, and the difference of 5.36 per cent was explained by other variables not included in the model. In the model, Bank Sector- bank credit to private sector and fiscal balance were positively significant, whereas Inflation and Interest rate capping were negatively significant at 5 per cent significance

level. On the other hand, the GDP growth rate was negative significant at 10 per cent.

The above analysis revealed that (composite model) has a positive significant effect on the development of the Local currency bond market ($\beta = -7.937546$, $t = -0.69$, p-value <0.05), as shown in the table above.

Joint Effect of Financial System Architecture, Macroeconomic Factors and Governance Factors on Development of Local Currency Government Bond Market

From the regression results, the joint effect of the variables was positive and highly significant in explaining the joint effect of the variables on determining the development of local currency bond market development. The overall model, therefore, remained largely significant on every addition of the variables. This gave an indication the selected were key when explaining the effect on local currency bond market development.

The effect of financial architecture, macroeconomic factors and governance indicated that 82.99 per cent of the variation in local currency bond market development was explained in the model. Although the influence of joint effect is not a direct one, there was evidence that the three variables (financial architecture, macroeconomic factors and governance) in combination increased the explained variation in the development of the local currency treasury bond

market, and this was evidence that they each had a contribution to financial performance. The significant joint effect of financial architecture, macro-economic factors and governance on the development of the local currency treasury bond market was implied by a p-value of less than 5 per cent significance level ($p\text{-value} < 0.05$), thus failing to accept the null hypothesis.

CONCLUSION AND RECOMMENDATION

Conclusion: This study concludes that the integrated model not only enriches the existing academic framework of the determinants (financial system factors, macroeconomic and country governance) but also offers a new way to further integrate other important mediating factors into models.

Recommendation: The study recommends that developing countries' need for additional finance has never been quenched, and information provided by the research will be paramount in informing decision-makers what to improve on in order for them to enjoy the perks that come with developing a local currency bond market in Kenya and also provide data for comparability.

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