Innovations

Capital Market Variables and Economic Growth in Nigeria: A Disaggregated Approach

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Abstract: *The quest to achieve economic progress in Nigeria cannot succeed without financial intermediation. This study therefore evaluated the impact of capital market development on the Nigerian economy using regression analysis. The variables of the study are gross domestic product (GDP), the value of stock market transactions, government stock capitalization, corporate bond capitalisation, and equity bond capitalisation, with gross capital formation and total labour force as control variables. The study used annual time series data for Nigeria for the period 1986-2022. The preliminary unit root test indicated that all the variables of the study are all stationary at the first difference based on the augmented Dickey-Fuller method. The result of the Johansen cointegration test revealed that the variables have a long-run relationship. The findings from the vector error correction mechanism (VECM)estimates are summarized as follows: the value of stock market transactions has a significant positive impact on the long-run economic growth with a regression coefficient of 0.24; government stock capitalization has a significant and negative impact on the long-run economic growth with a regression coefficient of -0.06; corporate bond capitalisation has a significant and positive impact on economic growth with a regression coefficient of 0.10; and equity bond capitalisation has a significant and positive impact on economic growth in Nigeria with a regression coefficient of 0.298.The study concludes that stock market development aimed at increasing the market capitalization will help to boost economic growth in Nigeria. Therefore, the federal government of Nigeria, through the relevant agencies like the Central Bank of Nigeria, should implement monetary policies aimed at increasing the value of stock market transactions to achieve economic growth in the long run.*

Keywords: *Stock market; Economic growth; Market capitalisation; Cointegration.*

1. Introduction

Finance is to an economy what oil or grease is to a machine. Aside from the social and institutional factors inhibiting the process of economic development in Nigeria, the bottleneck created by the dearth of finance to the economy constitutes a major setback to its development. The capital market therefore exists to provide the much-needed finance to propel economic activities. The capital market is a highly specialized and organized financial market and indeed essential agent of economic growth because of its ability to facilitate and mobilize saving and investment. To a great extent, the positive relationship between capital accumulation and economic growth has long been affirmed in economic theories (Anyanwu, 1993).

The capital market maintains the basic function of financial intermediation which are precursors for funds deployment from the surplus unit to the deficit unit which is a critical factor for increasing investment and a guarantee for economic growth (Anderu, 2020). The economy of every nation therefore requires a capital market that provides great avenues for the exchange of securities within investments, thus giving the populace a cause to invest in securities drives economic prosperity (Kamasa *et al*., 2023; Ubesie*et al*., 2020).

Even though the growth and prosperity of the economy follow the effectiveness of the several sectors in the real sector of the economy which includes the oil and non-oil sector; however, the performance of these sectors would be significantly constrained if the provision of finance is limited, this suggests the height of role that the capital market maintains especially in the economy of Nigeria (Umar, 2022; Yakubu, 2023).

The capital market considering the height of transactions carried out and listed securities provides corporate firms, government and households the chance to invest with the funds in the surplus unit; this guarantees circulation of funds of the economy which is critical for the growth of the economy (Dalvi & Baghi, 2014).However, considering the unimproved state of capital markets particularly in Nigeria, the potency of the market in such a country and its capacity of occasioning sustainable economic growth is almost in doubt; evidently, the role of the Nigeria capital market in commanding economic growth has attracted unending debates amongst policy makers, economics, scholars and stakeholders. Florence et al. (2017) and Olanrewaju et al. (2015) assert that the Nigerian capital market has not lived up to its expectation as the medium for corporate firms to obtain cheap funds towards attracting growth in their businesses. The availability of these funds makes certain the increased productivity and liquidity as well as causes firms to face reduced risk in their businesses and ensure the effective operation of these firms; this would, however, shoot up the national income of the country which will further enhance the availability of corporate finance useable for long term investments, boost ownership of new firms, provides risk capital to business owners and most importantly provides a cheap alternative for fundraising within the borders of the country, this would no doubt boost the output

of businesses which would ultimately improve the growth of the economy (Dalvi & Baghi, 2014).

To improve the effectuality of the capital market, Structural Adjustment Programme (SAP) was introduced in 1986; although the development occasioned noticeable growth in the financial sector and considering the noticeable role played by the capital market in the first 25 banks that met up with the 25 billion Naira lowest equity adequacy and survived the amalgamation exercise in 2005, the capital market has certainly demonstrated tremendous support for corporate firms and government in seeking long-term financing for significant projects (Oladipo & Tunde, 2013). The SAP further caused a noticeable change in the transaction rate, trading volume and the total number of listed securities; though, after the SAP was ignored in 1994, the performance of the capital market cascaded thus increasing its inability to mobilise funds to very vital sectors that are capable of triggering the growth of the economy; much regard was given to firms in the oil sector due to their capacity of boosting the foreign reserve of the country (Udo et al., 2021).However, the main gain from the SAP appears to be the liberalisation of the Nigerian capital market which paved the way for innovative approaches aimed at developing the market.

2.0 Related Literature
2.1 Theoretical Framework

Neo-Keynesian, neo-classical and endogenous growth theories were considered to be the major theories of growth that were developed and commonly used. This study leveraged the endogenous growth theory, which is found in the work of Romer (1986), Lucas (1988), Rebelo (1991), who have contributed to its growth and development over the years. The authors examined the proposition that the stable growth rate is dependent in the long term on the levels of accretion of capital.

The recent interest in the relationship between financial development and economic growth springs largely from the insights and techniques of endogenous growth models. These have established that self-sustaining economic growth can exist without exogenous technical progress and that growth may be linked to technology, preferences, the distribution of income, and institutional systems (Pagano, 1993). According to Gronski (2001), several models have been developed based on the endogenous growth theory to try to explain the relation between stock market development and economic growth (Gronski, 2001).

There is a substantial literature on endogenous growth models. Their objective is to resolve some of the problems in neo-classical growth models, such as the assumption that the economy will cease growing at some point if it is not stimulated by exogenous technological progress (McCallum, 1996). Although endogenous, neo-classical and neo-Keynesian growth models provide diverse classifications for the process of growth, total factor productivity growth is a crucial factor of economic growth. Yet, the neo-Keynesian and neo-classical growth theories placed added importance on the basic factors (physical capital

stock, labour, human capital) and completely overlooked the part played by institutions, such as capital labour markets, banks, and government, in contrast to the theory of endogenous growth. The conceivable impact of capital market development on economic growth over the years has engendered much attention. Although there has been a reasonably limited effort at exhibiting the relationship, especially for developing economies.

2.2 Empirical Review

Olusegun and Ajao (2024) investigated the nexus between capital market development and economic growth in Nigeria from 2003 to 2022. The market capitalization rate was used as a proxy for stock market development, along with interest rates, and the real GDP as a measure of economic growth. The regression result indicates that while the stock market has a negligible impact on economic growth in Nigeria, it is positively correlated with it.

Olarinre, Oladunni, and Omobosola (2023) assessed how the capital market affected Nigeria's economic expansion. Specifically, the impact of the Nigeria stock exchange's total value of transactions (TVTs), all-shares index (ASIs) and stock market capitalisation (MCAP) on Nigeria's economic growth was evaluated for the period 1986–2021 Estimation method used in the study's analysis include descriptive statistics correlation analysis, ARDL co-integration analysis, parsimonious error correction model, variance decomposition and other post-estimation tests. Discoveries from the study showed that MCAP positively impacts economic growth in the long and short run. The ASI affects economic growth positively and insignificantly in the long and short runs, and the TVTs exerts a significant positive effect on the economic growth of Nigeria.

Udo et al (2021) examined the effect of capital market development on the economic growth of Nigeria using data on real gross domestic product as a proxy for economic growth while capital market variables constitute the independent variables. This includes market capitalization, all share index, number of listed securities and the number of listed companies. The study adopted an ex-post facto research design which utilized secondary data for the period 1983 -2016. While an Augmented Dickey-Fuller unit root test was used for preliminary analysis; an Autoregressive Distributed Lag (ARDL) was used for the model estimation. A combination of ARDL bounds test for co-integration, ARDL short and long run error correction models were used for estimation. All the tests helped to confirm the integrity of our models. The findings of the study indicate that, the number of listed Securities and All Share Index maintained a significant relationship with economic growth in Nigeria both in the short and long runs.

Ogbeide, Daniel, and Christopher (2019) examined the impact of the capital market on the economic growth of Nigeria. Data sample of 31years from 1985 to 2015 was extracted from the Central Bank of Nigeria Bulletin and the linear regression method of econometric analysis was used for the study. To capture the capital market, we employed market capitalization, all share index, trade volume

and trade value while GDP at current basic price was used as proxy for the Nigerian economy. The major findings of the research reveal that all predictors exhibit a significant relationship with economic growth in Nigeria at 5% level of significance and show a high degree of correlation with the dependent variable except number of deals and value of deals which displayed a fair correlation with the dependent variable.

Araoye, Ajayi and Aruwaji (2018) examined the impact of the Nigerian stock market development on the economic growth of Nigeria for the period 1985 to 2014. The results of their study suggested that the stock market was significant in determining economic growth in Nigeria. They recommended that policy makers should ensure improvement in the market capitalization, by encouraging foreign direct investment participation into the market. Taiwo, Adedayo and Eva were (2016) examined the contributions of capital market to the economic growth of Nigeria. The outcome of study indicated that market capitalization rate, total value of listed securities, labour force participation rate, accumulated savings and capital formation are significant macroeconomic determinants of economic growth in Nigeria.

Popoola *et al* (2017) investigated the short-run effect, long-run effect and causal relationship between stock market and economic growth in Nigeria. The Augmented Dickey Fuller unit root test, Ordinary Least Squares, Johansen co-integration test and Pairwise granger causality methods were applied to the variables. The OLS result showed that the all-share index had a significant but negative relationship with economic growth. The Johansen co-integration test showed that a long-run relationship exists between the stock market performance and economic growth in Nigeria in the long run while the Granger causality test results showed that stock market performance does not granger cause economic growth but economic growth granger causes stock market performance at 5 percent significance level.

Okoye, Modebe, Taiwo and Okorie (2016) investigated the connection between capital market advancement and financial growth for the period 1981-2014. Employing the econometric methodology of the vector mistake revision model, their examination showed that in the short run, market capitalization proportion and turnover proportion have significant negative impact on aggregate public yield (GDP). Result of their examination additionally showed beneficial outcome of significant worth exchanged proportion just as negative impact of swelling rate on GDP though not significant. Their long-run gauge showed that every one of the exogenous factors contrarily affect GDP and that changes in market capitalization proportion, esteem exchanged proportion and turnover proportion produce more than proportionate changes in GDP.

Ogunleye (2015) analyzed the effect of securities exchange advancement on monetary growth in Nigeria for the period 1970 and 2008. The cointegration analysis and error correlation mechanism were embraced as the estimating strategies to check the presence of long-run connection between securities

exchange improvement and monetary growth. The exact outcomes uncovered that there is presence of long-run connection between financial exchange improvement and monetary growth in Nigeria. In view of the findings of study government, should address the shortage of venture assets through powerful policy estimates that upgrade the exhibition of securities exchange in Nigeria and to reestablish certainty of the financial backers. Similar findings were reported in earlier studies by Enekwe (2014) and Yadirichukwu and Chigbu (2014).

2.3 Gap in the Literature

The relationship between capital market development and economic growth has attracted much research interest. However, previous studies often used aggregate stock market variables, like total market capitalization. This fails to show the relative importance of the component variables for economic growth. This study will therefore disaggregate market capitalization into three components: government stock capitalisation, corporate bonds capitalization, and equities capitalization. This will ensure a more in-depth analysis. Therefore, the broad objective of this study is to examine the performance of the Nigerian capital market in relation to economic growth. Specifically, the study determined: whether the value of stock market transactions, government stock capitalization, corporate bond capitalization, and equity stock capitalization, hasa significant impact on economic growth in Nigeria.

3. Methodology

3.1 Empirical Model

The study used regression analysis to determine the impact of capital market capitalization on economic growth. The empirical model of the study is built on the neoclassical growth theory that recognizes growth enhancing factors as capital, labour, and technology. We therefore specified the following implicit model,

GDP = f (VALT, GVCAP, CBCAP, EQCAP, GCF, LBF)   1

Where, GDP = Gross domestic product (proxy for economic growth), VALT = Value of transactions at the stock exchange market, GVCAP = Government stock market capitalization, CBCAP = Corporate bond stock market capitalization, EQCAP = Equities stock market capitalization, GCF = Gross capital formation, and LBF = Total labour force. We transformed the data into growth rates using the log operator, ln, for easier interpretation. Thus, the econometric model becomes,

$lnGDP_t = \beta_0 + \beta_1 lnVALT_t + \beta_2 lnGVCAP_t + \beta_3 lnCBCAP_t + \beta_4 lnEQCAP_t + \beta_5 lnGCF_t + \beta_6 lnLBF_t + \mu_t$ 2

where: ln = natural log, $\beta_0 - \beta_6$ = regression parameters, t = time (year), and μ_t= error term, and the rest are as in Equation 1.

The study use annual time series data for the period 1986-2022. The data will be obtained from Central Bank of Nigeria (CBN) Statistical Bulletin 2022 (available at: www.cbn.gov.ng).

3.2 Data Discussion

(i) **Gross domestic product (GDP):** is real GDP measured in 2010 constant market price. Real GDP is nominal GDP adjusted for inflation. It shows the true picture of gross domestic product as a measure of economic growth and not the illusion of growth. In this study, we used the log of real GDP for the estimation.

(ii) **Value of stock traded:** is the total monetary value of the stock traded in the Nigerian stock exchange market for each year. It is in billion Naira but we used the log of the nominal values for the estimation.

(iii) **Market Capitalization:** This refers to the total value of a company's share of stock. It is calculated by multiplying the price of a stock by its total number of outstanding shares. Market capitalization allows investors to understand the relative size of one company versus another. Market capitalization measures what a company is worth on the open market as well as the market perception of its prospects, because it reflects what investors are willing to pay for its stock. Any exercise of warrants on a company's stock will increase the number of outstanding shares, thereby diluting its existing value. The data are in billion Naira but we will use the log of the nominal values for the estimation. In this study, we divided market capitalization into three components as reflected in the empirical model.

The a priori expectations of the variables in the model are summarised as follows: $\beta_0 > 0$, $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 > 0$, $\beta_5 > 0$, and $\beta_6 > 0$. The expected positive signs rest on the theoretical expectation that the capital market variables exert a direct and positive effect on the economic growth of Nigeria in the long run.

4.0 Results and Discussion

4.1 Unit Root Test Result

The study data were subjected to unit root test using the Augmented Dickey-Fuller (ADF) method. The summary of the results obtained are presented in Table 1.

Table 1: Summary of Augmented Dickey Fuller (ADF) unit root test results

Series	ADF Test Statistic @ level	5% critical value @ level	P-value @ level	ADF Test Statistic @ 1st Difference	5% critical value @ 1st Difference	P-value @ 1st Difference	Order of Integration
lnGDP	-0.147913	-2.957110	0.9354	-3.835936	-2.948404	0.0060	I(1)
lnVALT	-1.142518	-2.945842	0.6881	-5.152629	-2.948404	0.0002	I(1)
lnGVCAP	-0.211322	-2.948404	0.9278	-3.733571	-2.948404	0.0077	I(1)
lnCBCAP	0.922842	-3.639407	0.7686	-5.408788	-3.646342	0.0001	I(1)
lnEQCAP	-2.162920	2.945842	0.2227	-4.269889	-2.951125	0.0019	I(1)
lnGCF	-1.575277	-2.951125	0.4840	-10.39553	-2.951125	0.0000	I(1)
lnLBF	-0.737884	-2.951125	0.8236				I(1)

Source: Researchers' computations from E Views 12

The result in Table 1 presents a summary of the unit root test which was conducted using the Augmented Dickey-Fuller (ADF) method. The variables used in the analysis are log of real gross domestic product (lnGDP), log of value of transactions at the stock exchange market (lnVALT), log of government stock market capitalization (lnGVCAP), log of corporate bond stock market capitalization (lnCBCAP), log of equities stock market capitalization (lnEQCAP), log of gross capital formation (lnGCF), and log of total labour force (lnLBF).

The result in Table 1 shows that none of the variables is stationary at level because their ADF statistics are all less than the 5% critical values (in absolute terms), and their p-values are all greater than 0.05 at that level. However, all the series are stationary at first difference, where the p-values of the ADF statistics are now less than 0.05 each. From these results, all the variables are integrated of order one, I(1), at the 5% level of significance, as shown in the last column of the table. This means that we can use the cointegration test to check whether a long-run relationship exists among them. Therefore, we used the Johansen cointegration test for that purpose.

4.2 Johansen Cointegration Test Result

The results obtained from the Johansen cointegration test are summarised in Tables 2 and 3.

Table 2: Johansen cointegration test: Unrestricted Cointegration Rank Test (Trace)

| Hypothesized | | Trace | 0.05 | |
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.895877	198.4692	125.6154	0.0000
At most 1 *	0.759134	123.8172	95.75366	0.0002
At most 2 *	0.637161	76.84123	69.81889	0.0123
At most 3	0.465176	43.38595	47.85613	0.1234
At most 4	0.316805	22.73397	29.79707	0.2594
At most 5	0.236751	10.16182	15.49471	0.2685
At most 6	0.037059	1.246167	3.841465	0.2643
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level				

Source: Researchers' computations from E Views 12

The result in Table 2 shows that the Trace Statistics are greater than the 5% (0.05) critical values in the first three rows of the table, and the p-values in the last column are smaller than 0.05 for the first three columns as well. This means that the null hypothesis of 'No cointegrating equations' is rejected at the 5% level of significance, leading to the conclusion, that there are at least three cointegrating equations at the 5% level among the variables of the study, according to the trace test.

Table 3: Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.895877	74.65197	46.23142	0.0000
At most 1 *	0.759134	46.97600	40.07757	0.0072
At most 2	0.637161	33.45528	33.87687	0.0561
At most 3	0.465176	20.65197	27.58434	0.2978
At most 4	0.316805	12.57215	21.13162	0.4923
At most 5	0.236751	8.915655	14.26460	0.2932
At most 6	0.037059	1.246167	3.841465	0.2643
Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level				

Source: Researchers' computations from E Views 12

The result in Table 3 shows that the Maximum Eigenvalue Statistics in Column 3 are larger compared to the 0.05 critical values in column four for the first three

rows, and their p-values are all smaller than 0.05 for the first two rows implying that the results are significant at the 5% level. This means that the null hypothesis of 'No cointegrating equations' is rejected, leading to the conclusion that there are two (2) cointegrating equations among the variables in the model, according to the max-eigenvalue test.

4.3 Vector Error Correction Mechanism (VECM) Result
Given evidence of long-run relationship, we estimated the vector error correction model (VECM) and the result is presented below in Table 4.

Table 4: Vector Error Correction Model (VECM) result

Long-run			Short-run		
Variable	Coefficient	t-stat	Variable	Coefficient	t-stat
ln VALT(-1)	0.238418	3.22245	CointEq1/ECT	-0.248859	-3.19641
lnGVCAP(-1)	-0.056752	-2.23005	D(lnGDP(-1))	0.110773	0.58697
lnCBCAP(-1)	0.104710	3.40862	D(lnVALT(-1))	-0.000198	-0.01309
lnEQCAP(-1)	0.298357	2.30206	D(lnGVCAP(-1))	0.016714	1.14466
lnGCF(-1)	5.980680	11.6467	D(lnCBCAP(-1))	-0.004134	-0.55430
lnLBF(-1)	3.619638	5.19743	D(lnEQCAP(-1))	0.014419	0.66347
			D(lnGCF(-1))	0.125123	1.59610
			D(lnLBF(-1))	0.024344	0.06845
			C	0.026824	1.86741

Source: Researchers' computations from E Views 12

In the result in Table 4, a percentage increase in value of transactions at the stock exchange market (logVALT) results in an increase of 0.24 per cent in economic growth in the long run; a percentage increase in government stock market capitalization (logGVCAP) results in a decrease of -0.06 per cent in economic growth; a percentage increase in corporate bond stock market capitalization (logCBCAP) results in a 0.10 per cent increase in economic growth in the long run; and a percentage increase in equities stock market capitalization (logEQCAP) contributes to 0.30 per cent increase in GDP growth in the long run. Similarly, a percentage increase in gross capital formation (logGCF) and labour force (logLBF) leads to 5.98 and 3.62 percentage increase in long-run GDP growth in Nigeria. All the results are significant at the 5% level considering that the t-statistics are each greater than 2.0.

On the other hand, the short-run results are not significant at the 5% level, except that of the error correction term (ECT) which is -0.2489 (t = 3.1964). The result implies that the speed of adjustment of the model towards long-run equilibrium is about 25 per cent per annum in case of disequilibrium which implies a return to equilibrium in about four years after a period of disequilibrium.

4.4 Model Diagnostics

The model diagnostics are second-order tests used to check the robustness of the estimated regression result. In this study, two of such tests were performed, namely, autocorrelation and heteroscedasticity.

(i) Test for Autocorrelation

The researcher tested for autocorrelation using the Vector Error Correction (VEC) residual error correction test as presented below.

Table 5: VEC Residual Serial Correlation LM Tests

Null hypothesis: No serial correlation at lag h						
Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	42.16564	49	0.7445	0.804730	(49, 60.3)	0.7829
2	64.36119	49	0.0695	1.422024	(49, 60.3)	0.0964

Source: Researchers' computations from E Views 12

The result in Table 5 shows that the p-values of the results are greater than 0.05 at various lag lengths. This means that we accept the null hypothesis of 'No serial correlation' which is desirable. The result implies that there is no autocorrelation in the estimated model.

(ii) Heteroscedasticity Test

The researcher tested for heteroscedasticity using the VEC residual heteroskedasticity test as presented below.

Table 6: Heteroscedasticity test result

VEC Residual Heteroskedasticity Tests (Levels and Squares)			
Date: 02/07/25 Time: 18:56			
Sample: 1986 2022			
Included observations: 33			
Joint test:			
Chi-sq	Df	Prob.	
470.5918	448	0.2223	

Source: Researchers' computations from E Views 12

The result in the table shows that the p-value of the Chi-Square statistic is greater than 0.05, which means that the null hypothesis that there is no heteroskedasticity

in the regression residuals is accepted at the 5% level of significance. Consequently, we conclude that there is no heteroskedasticity in the estimated model.

4.5 Test of Hypothesis
There are four null hypotheses tested in this study, as follows.

4.5.1 Hypothesis One
H_{01}: The value of stock market transactions has no significant impact on economic growth in Nigeria.

Decision Rule: Reject H_{01} if the estimated T-statistic of the long-run coefficient of the stock market transactions (lnVALT) variable is greater than the 5% critical value, and the p-value is less than 0.05; otherwise, do not reject H_0.

Result: The result of the VECM model presented in Table 4 shows that the long-run regression coefficient of lnVALT is 0.238 with a T-statistic equal to 3.222. Since the t-statistic is greater than 2.0, it means the result is statistically significant at the 5% level. Therefore, the null hypothesis one under consideration is rejected. The conclusion is that the value of stock market transactions has a significant positive impact on the long-run economic growth in Nigeria.

4.5.2 Hypothesis Two
H_{02}: Government stock capitalization does not significantly affect economic growth in Nigeria.

Decision Rule: Reject H_{02} if the estimated T-statistic of the long-run coefficient of the Government stock capitalization (lnGVCAP) variable is greater than the 5% critical value, and the p-value is less than 0.05; otherwise, do not reject H_0.
Result: The result of the VECM model presented in Table 4 shows that the long-run regression coefficient of lnGVCAP is -0.06 with a T-statistic equal to -2.23. Since the t-statistic is greater than 2.0 in absolute terms, the result is statistically significant at the 5% level. Therefore, the null hypothesis two under consideration is rejected. The conclusion is that government stock capitalization has a significant and negative impact on the long-run economic growth in Nigeria.

4.5.3 Hypothesis Three
H_{03}: Corporate bond capitalisation has no significant impact on economic growth in Nigeria.

Decision Rule: Reject H_{03} if the estimated T-statistic of the long-run coefficient of the Corporate bond capitalization (ln CBCAP) variable is greater than the 5% critical value, and the p-value is less than 0.05; otherwise, do not reject H_0.

Result: The result of the VECM model presented in Table 4 shows that the long-run regression coefficient of lnCBCAP is 0.105 with a T-statistic equal to 3.41. Since the t-statistic is greater than 2.0, it means the result is statistically significant at the 5% level. Therefore, the null hypothesis number three under consideration is rejected. The conclusion is that corporate bond capitalisation has a significant and positive impact on economic growth in Nigeria.

4.5.4 Hypothesis Four

H_{04}: Equity stock capitalisation does not have a significant impact on economic growth in Nigeria.

Decision Rule: Reject H_{03} if the estimated T-statistic of the long-run coefficient of the Equity stock capitalization (lnEQCAP) variable is greater than the 5% critical value, and the p-value is less than 0.05; otherwise, do not reject H_0.

Result: The result of the VECM model presented in Table 4 shows that the long-run regression coefficient of lnEQCAP is 0.298 with a T-statistic equal to 2.30. Since the t-statistic is greater than 2.0, it means the result is statistically significant at the 5% level. Therefore, the null hypothesis number four under consideration is rejected. The conclusion is that equity bond capitalisation has a significant and positive impact on economic growth in Nigeria.

5   Conclusion

The main findings of this study from the four research hypotheses tested are as follows: the value of stock market transactions has a significant positive impact on the long-run economic growth, government stock capitalization has a significant and negative impact on the long-run economic growth, that corporate bond capitalisation has a significant and positive impact on economic growth, and that equity bond capitalisation has a significant and positive impact on economic growth in Nigeria. The findings imply that stock market development is crucial to economic growth in Nigeria. Based on the findings summarised above, the study concludes that stock market development aimed at increasing the market capitalization will help to boost economic growth in Nigeria. The study recommends that the federal government of Nigeria, through the relevant agencies like the Central Bank of Nigeria, should implement monetary policies aimed at increasing the number and value of stock market transactions because it will contribute to economic growth in the long run.The Securities and Exchange Commission in Nigeria should ensure the listing of more firms in the capital market because an increase in corporate bond capitalisation contributes to economic growth in the country.

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Appendix I: Data

YEAR	GDP(₦'B)	VALT(₦'B)	GVCAP(₦'B)	CBCAP(₦'B)	EQCAP(₦'B)	GCF(₦)	LBF (Unit)
1986	17,007.77	0.50	2.70	0.40	3.70	6046097722200	22163926
1987	17,552.10	0.38	4.20	0.30	4.00	5662953524400	24742712
1988	18,839.55	0.85	4.50	0.40	5.10	6032673130500	26900123
1989	19,201.16	0.61	4.20	0.60	8.00	6442006488200	29472701
1990	21,462.73	0.23	3.40	0.80	12.10	7337049466300	31936586
1991	21,539.61	0.24	3.30	1.40	18.40	7241486325800	32839292
1992	22,537.10	0.49	3.20	1.80	26.20	7279151811800	33747996
1993	22,078.07	0.80	3.60	2.10	41.80	7829609830400	34697305
1994	21,676.85	0.99	3.20	2.10	61.00	7637483838800	35674973
1995	21,660.49	1.84	3.20	2.10	175.10	7135119420700	36656320
1996	22,568.87	6.98	3.00	3.00	279.80	7622603879300	37675613
1997	23,231.12	10.33	2.80	2.80	276.30	8070616586100	38710630
1998	23,829.76	13.57	2.70	3.10	256.80	8185649393500	39762797
1999	23,967.59	14.07	2.40	3.10	294.50	8406954920700	40824008
2000	25,169.54	28.15	2.10	4.10	466.10	9020918406700	41892032
2001	26,658.62	57.68	8.30	5.80	648.40	6964796422900	43015209
2002	30,745.19	59.41	12.70	3.50	748.70	7682716510100	44142710
2003	33,004.80	120.40	25.20	8.40	1,325.70	9335692675500	45276846
2004	36,057.74	225.82	178.10	7.90	1,926.50	7544845461900	46434996
2005	38,378.80	262.94	366.73	9.83	2,523.50	7790272005400	47613325
2006	40,703.68	470.25	890.28	3.49	4,227.13	10964329301300	48846710
2007	43,385.88	1,076.02	2,984.42	16.98	10,180.29	8601544017800	50110483
2008	46,320.01	1,679.14	2,589.11	16.41	6,957.45	8418883869500	51407935
2009	50,042.36	685.72	2,031.40	10.05	4,989.39	9224109584200	52748866
2010	54,612.26	799.91	1,948.09	56.37	7,913.75	9591062086600	54154359
2011	57,511.04	638.93	2,400.49	1,341.29	6,532.58	8831928625000	55649284
2012	59,929.89	808.99	4,425.05	1,400.43	8,974.45	9128669680800	54750499
2013	63,218.72	2,350.88	4,457.14	1,394.00	13,226.00	9842214337000	53710835
2014	67,152.79	1,338.60	5,247.96	144.96	11,477.66	11120361367900	55758900
2015	69,023.93	978.05	6,942.87	205.89	9,850.61	10949730125200	57867585
2016	67,931.24	577.82	6,652.03	281.97	9,246.92	10438536552400	60073637
2017	68,490.98	1,078.49	7,236.23	276.50	13,609.47	10247558113600	62423461
2018	69,799.94	1,203.37	9,920.63	256.56	11,720.72	11209212855000	64865191
2019	71,387.83	931.48	12,559.23	355.82	12,968.59	11917739193400	67373495
2020	70,014.37	1,086.18	16,994.14	507.76	21,056.76	10261399452900	68632665
2021	72,393.67	953.87	19,026.10	718.30	22,302.75	10712076865200	70620041
2022	74,639.47	1,168.53	22,156.22	1,058.50	27,965.74	12228128131300	73163027

Sources: CBN Statistical Bulletin (2023) and World Bank Development Indicators (2023)