



Corporate Performance in Nigeria: Insights from Economic-Specific Shocks

**Osaretin Kayode Omoregie^a
and Sodik Adejonwo Olofin^{b,c*}**

^a *Lagos Business School, Pan-Atlantic University, Lagos, Nigeria.*

^b *Obafemi Awolowo University, Ile-Ife, Nigeria.*

^c *Nigerian Economic Summit Group, Lagos, Nigeria.*

Authors' contributions

This work was carried out in collaboration between both authors. This research paper was collaboratively created by both authors. Both authors read and approved the final manuscript.

Article Information

DOI: <https://doi.org/10.9734/jemt/2024/v30i71220>

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/117752>

Original Research Article

Received: 23/03/2024

Accepted: 27/05/2024

Published: 07/06/2024

ABSTRACT

Aims: This study investigated the impact and contributions of macroeconomic factors to corporate performance by considering the contributions of three key market segments in the economy: international, money, and goods markets.

Methodology: This study concentrated on Nigeria, and the time series data span from January 1995 to December 2022. Given the mixed order of integration among the variables of interest, the analysis was based on the SVAR/HD estimations, which investigate shocks based on theoretical restrictions and generate each variable's contributions to corporate performance. Inferences are based on the impulse response, variance decomposition and historical decomposition.

*Corresponding author: E-mail: sodik.olofin@yahoo.com;

Results: Based on Structural One S.D. Innovations ± 2 S.E, the study's results underscore the vulnerability of Nigerian businesses to exogenous shocks and speculative markets (44.63%), with the international market exerting the most significant influence on corporate performance through exchange rate movements (32% of 44.63%), followed by the money market. Notably, the variables under consideration demonstrate varying relationships over different time periods. In the short-term, oil prices, government deficits, and inflation positively impact corporate performance, but this effect reverses to negative in the medium to long term. Conversely, the exchange rate initially has a negative effect but shows a positive long-term impact. Surprisingly, the impact of money supply and economic growth on corporate performance is found to be negligible. The study further reveals that firm-level endogenous shocks exert more influence on corporate performance development (55.37%) than exogenous macroeconomic factors (44.63%).

Conclusion: This study provides actionable insights for decision-makers. The research suggests that corporate managers can enhance firm performance by adopting strategic hedging strategies against adverse exogenous international market and money market factors while focusing more on endogenous factors and choices within their direct control, which accounts more for corporate performance outcomes than non-controllable exogenous factors. Policymakers should pursue policies that enhance the macroeconomic climate within which businesses operate, especially in the areas of stable exchange rate, interest rate and inflation targeting policies.

Keywords: Corporate performance; firm value; economic specific shocks; firm-specific shocks; macroeconomic shocks; structural VAR; historical decomposition.

JEL Code: E32, E44, F44, G11

1. INTRODUCTION

Evidence over the years has demonstrated the direct and indirect effects of oil prices and exchange rates on the economy [1] and their impact on corporate performance [2-8]. While an earlier study by Omoriegie and Olofin [9] affirmed similar conclusions, they, however, suggested that the importance attributed to oil prices and exchange rates as major drivers of corporate performance and economic activities in general may be exaggerated. They enunciated that economic-specific shocks regarding the characteristics and attributes of the economy, business conditions, policy framework, and firm-specific and industry-specific shocks account for most economic/performance fluctuations.

Various researchers have found that firms going concern and improved performance depend on economic and environmental viability and internally consistent strategies that drive performance [10-15]. Firms in recent times have operated in a rapidly and increasingly dynamic and uncertain business environment with continual changes in regulatory frameworks, international exposure, business climate, and customer taste that increase management complexity and risk [16,17].

Economic-specific factors are broadly divided into micro-macro factors [18,14,19,20,15]. Macroeconomic factors could refer to the general

economic and financial space that incentivises corporate performance and includes factors such as real-GDP growth, inflation, interest rate, exchange rate, treasury bill rate, and money supply. Microeconomic factors (or firm-specific variables) are the firms' characteristics and deliberate choices that drive corporate performance, including corporate strategy, financial policy, corporate governance, nature of industry, choice of products and services and production techniques, choice of customers, market segments and market share, scale and scope of operations, etc.

While microeconomic factors are endogenous and specific to the individual firm, macroeconomic factors are exogenous and not within the direct control of business managers. The implications for corporate performance range from positive to negative and apply similarly to businesses in the economy. The ability of firms to take advantage of favourable macroeconomic conditions and hedge against unfavourable ones depends on internal microeconomic (firm-specific) factors [21,12,20]. Conducive macroeconomic conditions enhance corporate performance. However, conduciveness is relative as it depends on how the firm/industry perceives and responds to the macroeconomic conditions [22].

In Nigeria, businesses face a volatile macroeconomic environment. Despite the soundness of the decision-making of business

managers, some adverse effects will be experienced. Therefore, what are the impacts of economic-specific exogenous shocks? In order to effectively respond to changes in exogenous macroeconomic factors, a proper understanding of the nature of their relationship and their specific influences on the corporate performance of particular firms is important to achieve corporate goals and strategies. This is because exogenous macroeconomic variables have different impact points and effects across different industries and on different firms within the same industry. Corporate managers, thus, have to develop the capacity to understand and anticipate the impact of these economic-specific shocks on their businesses in order to respond with proactive and effective risk-hedging strategies.

Therefore, this study seeks to identify some of these economic-specific factors as they contribute to changes in corporate performance following the Arbitrage Pricing Theory (APT) approach. This study also classified macroeconomic factors based on international-money-goods market segmentations. Given the fact that corporate performance translates to share price movement (firm value), corporate performance is proxied by the stock market index. Findings from this study will assist managers, investors and policymakers in making hedging choices that improve corporate performance, mitigate business risks, and identify the major market activity that affects corporate performance.

The remainder of this study is such that Sections Two, Three, Four, Five and Six present the literature review, methodology, empirical analysis, discussion and implication, and conclusions, respectively.

2. LITERATURE REVIEW

Researchers have adopted different approaches in studying economic-specific shocks, especially at the macroeconomic level. Some studies have focused on corporate performance indicators such as profitability, firm value, business exit, and corporate failure. Others have considered movement in share prices, stock indices, and market capitalisation.

In a study of macroeconomic uncertainties, Baum et al. [23] found evidence emphasising the importance of macroeconomic uncertainties on financial policy as external factors that influence financing decision-making and interact with corporate governance, with the effects varying across firms. Montes and Bastos [24], working on

macroeconomic policy, business confidence and industrial production in Brazil, found that monetary and fiscal policies alongside monetary regimes affect entrepreneurs' expectations for performance. With respect to regulation and infrastructure, Khanna and Sharma [17] found that total factor productivity is sensitive to public service delivery and socioeconomic and financial infrastructural facilities. However, no evidence supported the effect of law and regulatory institutions. These findings are, however, rather too focused on firm decision-making and the business environment.

Beyond just decision-making, earlier evidence from Demirguc-Kunt and Huizinga [25] showed that inflation and interest rates have positive relationships with profitability and bank interest margins. This suggests that bank profitability increases more than the associated cost of inflation and interest rates. Also, the bank-concentration ratio and market capitalisation-GDP ratio positively affect interest margins and profitability. However, corporate income tax, official reserves rate, financial structure and institutional factors were shown to be detrimental to interest margins and profitability. The findings from this study might be contestable depending on specifics relating to the methods, the country of study and corporate responses, but it does confirm the impact of macroeconomic shocks on the performance of firms.

Tan and Floros [26] agree with Athanasoglou et al. [10] in finding that the business cycle and inflation influenced the banking sector's profitability. However, they observed an asymmetry in how output growth affects bank profitability; they are positively related only when output growth is above the trend. Similarly, Aviliani et al. [12], using a Vector Error Correction (VEC) framework on bank performance, revealed that the production index appears to have the highest correlation with bank performance in Indonesia, while the exchange rate has the lowest. Return on asset responds the most to macroeconomic shocks.

Bassegy et al. [27] agree with Kelilume [28] in reporting that exchange rate has a negative impact on quoted agro-based firms, while energy consumption per capita, installed capacity utilisation rate, and total commercial bank credit to small-scale industries impact their performance positively. Nanda and Panda [15] reported that the nominal exchange rate better explains profitability and emphasises the difference in the effect of

nominal and real exchange rates. Sikarwar [8] showed that, particularly after the Global Financial Crisis, exchange rate movement contributes immensely to firms' risk.

Banerjee and Majumdar [19] find that GDP, among others, affects the profitability of insurance companies in the UAE. However, findings from Gatsi and Gadzo [29] emphasised the inflation rate as the major macroeconomic variable that modulates financial performance in Ghana as against GDP and exchange rate. Similarly, Simbolon and Purwanto [30] demonstrated using composite analysis that exchange rate, interest rate and inflation influence stock performance.

Using economic value-added, Atanda et al. [18] revealed that capital-expenditure ratio and inflation negatively affect firm value-added while exchange rate, interest rate, and labour market positively affect firm value-added. Abushammala and Sulaiman [31] also demonstrated that GDP, credit spread, and government budget deficit positively influence corporate cash holdings. However, Egbunike and Okerekeoti [20], on Nigerian listed manufacturing firms, found interest rate and exchange rate insignificant to ROA, but GDP and inflation are significant.

Evidence from Audretsch and Acs [32] also emphasised that macroeconomic fluctuations influence start-ups in a similar way as they are positively motivated by macroeconomic growth. Start-ups are most incentivised by high unemployment and low capital costs. Bhattacharjee et al. [11] on firm exit demonstrated that stability in the exchange rate, inflation and long-term interest rate could motivate business exit, and the manner of effect varies. There are more acquisitions in a boom and bankruptcies in a downturn, and bankruptcy is common among newly listed firms in adverse economic climate and periods of instability. Similarly, Everett and Watson [33] reported that macroeconomic factors account for 30%-40% of small business failures. Relative to bankruptcy and discontinuance of ownership, interest and unemployment rates were positively related to business failure, with their increase associated with increasing business failure.

Likewise, Goudie and Meeks [34] find that the contributions of exchange rates to corporate failure are substantial, and the effect is asymmetric and non-linear. The relationship can be positive or negative and have a differing effect. Liu [35], in short-run and long-run analysis, found interest rate to be the most important factor

contributing to corporate failure alongside the availability of credit, profitability and product prices. Considering structural changes, Liu [36] emphasised that the influence of macroeconomic variables differs in the short and long run.

Kyereboah-Coleman and Agyire-Tettey [22] on Ghana showed that lending rates of deposit money banks have an adverse effect on stock performance and business growth. However, with lagged behaviour, inflation has a negative effect, and the exchange rate positively influences stock performance as investors benefit from currency depreciation. Ibrahim and Aziz [37] reported significant short-run and long-run relationships between macroeconomic variables and the stock index in Malaysia. Accordingly, industrial production and inflation influence stock performance positively, while exchange rate and money supply influence it negatively. This contradicts the findings of Mozumder et al. [4], who found that stock returns are positively related to the exchange rate. Similarly, Aurangzeb [38] showed in the South Asian context that foreign direct investment and exchange rates positively influence stock performance while interest rate has a negative effect. Panetta [39] finds to the contrary, reporting that the relationship between macroeconomic variables and stock returns of Milan Stock Exchange-listed companies is unstable. Gurloveleen and Bhatia [40] reported inefficiency in the Indian Stock Exchange as they found a weak relationship between macroeconomic variables and the stock index.

Further evidence from Gathogo [41] on market capitalisation suggested that the exchange rate positively influences the real sector's market capitalisation and negatively affects the finance/investment and commercial/service sectors. Inflation was reported to have a positive effect on investment, while the real sector, alongside commercial services and others, is affected negatively. The interest rate was also revealed to affect agricultural and commercial sector capitalisation and investment negatively.

Beyond macroeconomic factors, studies have also given particular attention to microeconomic factors that are industry or firm-specific in nature that could impact performance [10,11,13,14,15,19,20,29,42,43]. Despite the divergence in views in the literature regarding the kind of relationship that exists regarding the subject matter, corporate performance is responsive to changes in macroeconomic indicators [9]. However, studies on this

phenomenon had limitations in their attempt to explain the direction of the relationship.

Following from the literature, existing research work and results have not paid attention to which macroeconomic and exogenous variables take priority over the others and what the contributions of each of these variables are to corporate performance, especially in Nigeria. Accordingly, the study contributes to the literature by categorising economic-specific (macroeconomic) factors based on the international-money-goods markets to fill this gap. This novel investigation is an attempt by this present study to fill this gap, in addition to categorising the macroeconomic factors under investigation based on the international-money-goods markets. Therefore, contributions from each market and a priority market for risk hedging can be identified. This study appreciates that microeconomic factors contribute to changes in corporate performance.

3. METHODOLOGY

3.1 Theoretical Framework

Arbitrage pricing theory: Sharpe [44] and Lintner [45] proposed the Capital Asset Pricing Model (CAPM), which expresses the expected return on an investment outlay as a function of the rate of returns on risk-free investment and risk premium for market speculations. As an advancement and alternative, the Arbitrage Pricing Theory (APT) proposed by Ross [46] rests on the assumption of one market price, as no two identical assets should command different prices; otherwise, investors will take advantage of arbitrage, eliminating price differences. In essence, returns should be similar for identical assets in a market. It proposes that actual return on investment (a reflection of corporate performance) is an unrestricted N-factor linear function of different factors that can influence it [47,48]. Therefore, return on investment is derived by a number of N -variables as expressed below;

$$R_i = E(R_i) + \beta_{1i}X_1 + \beta_{2i}X_2 + \dots + \beta_{Ni}X_N + \mu_i \quad (1)$$

where R_i is the actual return on investment, X_n denotes the N -factors capable of influencing return, $E(R_i)$ represents the expected return at zero changes in the value of X_N , and β_{Ni} represents the rate of responsiveness of return on

investment to each factor or risk premiums associated with each factor. A positive (negative) value of $E(R_i)$ shows that the return on investment is greater (lesser) than the expected market return. The risk premium, as represented by β_i is the responsiveness of returns to each factor. A β_i value greater (lesser) than unit shows that the expected return risk associated with each factor on an investment is more (less) than the expected market return risk. Therefore, Equation 1 is further re-expressed in equilibrium expected return for regression analysis as

$$E(R_i) = \delta_0 + \beta_{1i}\delta_1 + \beta_{2i}\delta_2 + \dots + \beta_{Ni}\delta_N + \varepsilon_i \quad (2)$$

In the interest of this study, the APT model is adopted to provide some guidance concerning corporate performance. The theoretical relaxation of conditions APT provides makes it more appealing [48]. Estimations of APT in the literature have been based on three different factor models: macroeconomic, fundamental, and statistical [47]. This study investigates the influence of economic-specific shocks on corporate performance, focusing on macroeconomic variables as causes of risk and uncertainty to corporate performance, which calls for adopting a macroeconomic model. Consequently, the econometric model specific to this study is expressed as follows:

$$LCCP_t = \delta_0 + \beta_1LOPR_t + \beta_2LEXR_t + \beta_3MPR_t + \beta_4LMS_t + \beta_5GDF_t + \beta_6LCPI_t + \beta_7EGT_t + \varepsilon_i \quad (3)$$

3.2 Data Properties

The data series used in this study spans January 1995 to December 2022, covering the period of independent monetary policy, oil price volatility cycles, and recent macroeconomic fluctuations. The macroeconomic variables considered include Oil Price (OPR) and Exchange Rate (EXR) to reflect the international market. Also, monetary policy rate (MPR) and aggregate money supply (MS) capture the money market while Government Deficit (GDF), Inflation (CPI) and Economic Growth (EGT) mirror the goods market. Nigerian Bonny Light and Nigerian Stock Exchange Index, respectively, proxy oil price and corporate performance (CPP). Data were sourced from the Central Bank of Nigeria database¹. Oil price, exchange rate, money supply, consumer price index, and corporate performance are adopted in their logged form, while others are in their natural form.

¹ <http://statistics.cbn.gov.ng/cbn-onlinestats/DataBrowser.aspx>

Table 1. Unit root tests

	Levels		1st Difference		Decision @ 5%
	ADF	PP	ADF	PP	
LOPR (C)	-2.1019	-1.8944	-13.374***	-14.942***	
LOPR(C/T)	-2.6858	-2.4074	-13.361***	-14.916***	I(1)
LEXR (C)	-1.5300	-1.5333	-17.739***	-17.740***	
LEXR (C/T)	-2.1185	-2.1989	-17.735***	-17.735***	I(1)
MPR (C)	-1.7916	-2.0510	-18.059***	-18.120***	
MPR (C/T)	-1.7021	-1.9984	-18.048***	-18.108***	I(1)
LMS (C)	-1.6549	-1.8979	-23.264***	-23.528***	
LMS (C/T)	-0.8572	-0.8383	-23.360***	-23.881***	I(1)
GDF (C)	-2.0729	-2.1105	-18.246***	-18.246***	
GDF (C/T)	-2.1183	-2.4924	-18.218***	-18.218***	I(1)
LCPI (C)	-0.6078	-0.9328	-12.702***	-12.613***	
LCPI (C/T)	-4.4837***	-4.8071***	-12.687***	-12.602***	I(0)
EGT (C)	-2.6523*	-2.7272*	-18.223***	-18.223***	
EGT (C/T)	-2.9215	-2.9910	-18.215***	-18.215***	I(1)
LCPP (C)	-2.5909*	-2.5751*	-14.975***	-15.561***	
LCPP (C/T)	-2.6051	-2.7626	-15.051***	-15.611***	I(1)

Note: ADF/PP critical values with intercept are -3.46(1%), -2.88(5%) and -2.57(10%); ADF/PP critical values with trend and intercept are -4.00 (1%), -3.43 (5%) and -3.14 (10%).

Source: Authors' Computation

Table 2. Cointegration test

ARDL Bound Test					
F-statistic (K=7)	1.3387	10%	5%	2.50%	1%
I(0) Bound		2.03	2.32	2.6	2.96
I(1) Bound		3.13	3.5	3.84	4.26

Source: Authors' Computation

Table 1 presents the Augmented-Dickey-Fuller (ADF) and Phillips-Perron (PP) unit-root tests to establish the order of integration of the variables. It reveals that all the variables are not stationary at levels but at the first difference I(1), except economic growth I(0). Given the mixed order of integration among the variables, the Autoregressive Distributed Lag (ARDL) Bound cointegration test is adopted. As presented in Table 2, it is revealed that there is no cointegration among the variables, given that the F-statistic falls below the I(0) critical bound.

3.3 Empirical Methodology

3.3.1 Structural vector autoregressive (SVAR) model

The SVAR model becomes an appropriate approach for this study given the mixed order of integration and absence of long-run cointegration among the variables. This follows the fact that the SVAR estimation is based on non-linear theoretical restrictions and result interpretations are based on structural impulse response without

parameter estimates [49,50]. The SVAR was developed as an alternative to the conventional VAR following criticism of the lack of theoretical economic ground. The SVAR establishes the effect of policy/macroeconomic changes and estimates partially overlapping relationships among macroeconomic variables [51]. The SVAR is estimated such that the restrictions on the VAR reflect established theoretical, intuitive and institutionally expected relationships among macroeconomic variables. The conventional VAR is thus transformed as

$$A\Pi(L)y_t = A\varepsilon_t, \quad A\varepsilon_t = B e_t, \quad A\Pi A' = B B' \\ E(e_t) = 0 \quad E(e_t e_t') = I_M \quad E(\varepsilon_t \varepsilon_t') = \Omega \quad (4).$$

For orthogonality, it is required that the elements of matrix-A and matrix-B are such that $a_A + b_B \geq 2M^2 - M(M + 1)/2$. As such, there should be $M(M + 1)/2$ non-linear restrictions, and $2M^2 - M(M + 1)/2$ others should be generated. Equation 5 presents the theoretical identifications as the A-matrix identifies the relationships among the endogenous variables, and the B-matrix identifies orthonormal shocks in the model.

$$\begin{pmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ a_{21} & 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ a_{31} & a_{32} & 1 & 0 & 0 & 0 & 0 & 0 \\ a_{41} & a_{42} & a_{43} & 1 & 0 & 0 & 0 & 0 \\ a_{51} & a_{52} & a_{53} & a_{54} & 1 & 0 & 0 & 0 \\ a_{61} & a_{62} & a_{63} & a_{64} & a_{65} & 1 & 0 & 0 \\ a_{71} & a_{72} & a_{73} & a_{74} & a_{75} & a_{76} & 1 & 0 \\ a_{81} & a_{82} & a_{83} & a_{84} & a_{85} & a_{86} & a_{87} & 1 \end{pmatrix} \begin{pmatrix} \varepsilon^{OPR} \\ \varepsilon^{EXR} \\ \varepsilon^{MPR} \\ \varepsilon^{MS} \\ \varepsilon^{GDF} \\ \varepsilon^{CPI} \\ \varepsilon^{EGT} \\ \varepsilon^{CPP} \end{pmatrix} = \begin{pmatrix} b_{11} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & b_{22} & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & b_{33} & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & b_{44} & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & b_{55} & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & b_{66} & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & b_{77} & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & b_{88} \end{pmatrix} \begin{pmatrix} e^{OPS} \\ e^{EXS} \\ e^{MPS} \\ e^{MSS} \\ e^{GDS} \\ e^{IFS} \\ e^{EGS} \\ e^{CPS} \end{pmatrix} \quad (5)$$

As presented in Equation 5, the restrictions are imposed such that corporate performance, as the dependent variable of interest, is naturally expected to be influenced by the other variables in the system. At the same time, the international market runs to the money and goods markets. The money market receives impulses from the international market and can equally run to the goods market and corporate performance. The goods market also receives impulses from the international and money markets and runs to corporate performance.

3.3.2 Historical decomposition

The Historical Decomposition (HD) follows a counterfactual simulation method that generates uncorrelated structural shocks. It involves regenerating the actual data and splitting them into the contributions of each of the variables in the system alongside the base projection (trend). As such, based on the structural relationship imposed, the historical decomposition is used to generate the contributions of each variable in the SVAR system to corporate performance over time. Estimation of the historical decomposition is expressed as

$$Y_{T+j} = \sum_{s=0}^{j-1} \Psi_s \varepsilon_{T+j-s} + \left[\gamma X_{T+j} + \sum_{s=j}^{\infty} \Psi_s \varepsilon_{T+j-s} \right] \quad (6)$$

where $\sum_{s=0}^{j-1} \Psi_s \varepsilon_{T+j-s}$ is the deviations based on the trend of Y_{T+j} overtime, $\left[\gamma X_{T+j} + \sum_{s=j}^{\infty} \Psi_s \varepsilon_{T+j-s} \right]$ is the deviations in Y_{T+j} resulting from movements in the system's variables [49,52].

4. EMPIRICAL ANALYSIS

Analysis of the relationships is based on the impulse response, variance decomposition and historical decomposition. Fig. 1 presents the impulse response based on structural one standard deviation innovation ± 2 standard error. Findings on the international market as captured by oil price and exchange rate are congruent with Omoregie and Olofin [9]. Oil price shocks have a

short-run positive impact on corporate performance; however, the impact reverses to negative in the medium to long run. This reemphasises how transient the impact of an oil price boom could be on business performance as it has an immediate positive impact on businesses, turning adverse over the medium to long run [53,54].

Likewise, exchange rate shocks instantaneously motivate a negative impact on corporate performance; however, they reverse to a positive impact within the first four months, which is sustained over the medium to long run. This reiterates the flow-oriented approach, which suggests exchange rate shocks will have a depressing effect on businesses in the short run but will yield overall positive outcomes for corporate performance. The finding herein reflects the reality of businesses in Nigeria, especially in the manufacturing sector, which depends on imports for raw and intermediate inputs. As such, an exchange rate increase will immediately restrain business performance through an increase in the cost of inputs. However, corporate response and adjustments are usually geared towards finding internal efficiencies in operations to mitigate the effect of this input rate shocks, thus leading to a sustained reversal of the initial adverse effect to a positive one.

The impulse response analysis reveals that monetary policy shocks negatively influence corporate performance, suggesting increasing interest rates is inimical for business performance in Nigeria. Money supply shocks, however, have a nearly inconsequential impact on corporate performance. This implies that money growth does not have much influence on businesses. Government deficit shocks, as well as inflationary shocks, impact positively on corporate performance in the short run, which reverses over the long run. Contrary to theoretical thinking, economic growth negatively influences corporate performance. Meanwhile, corporate performance sustained a positive influence on self-shocks [55,56].

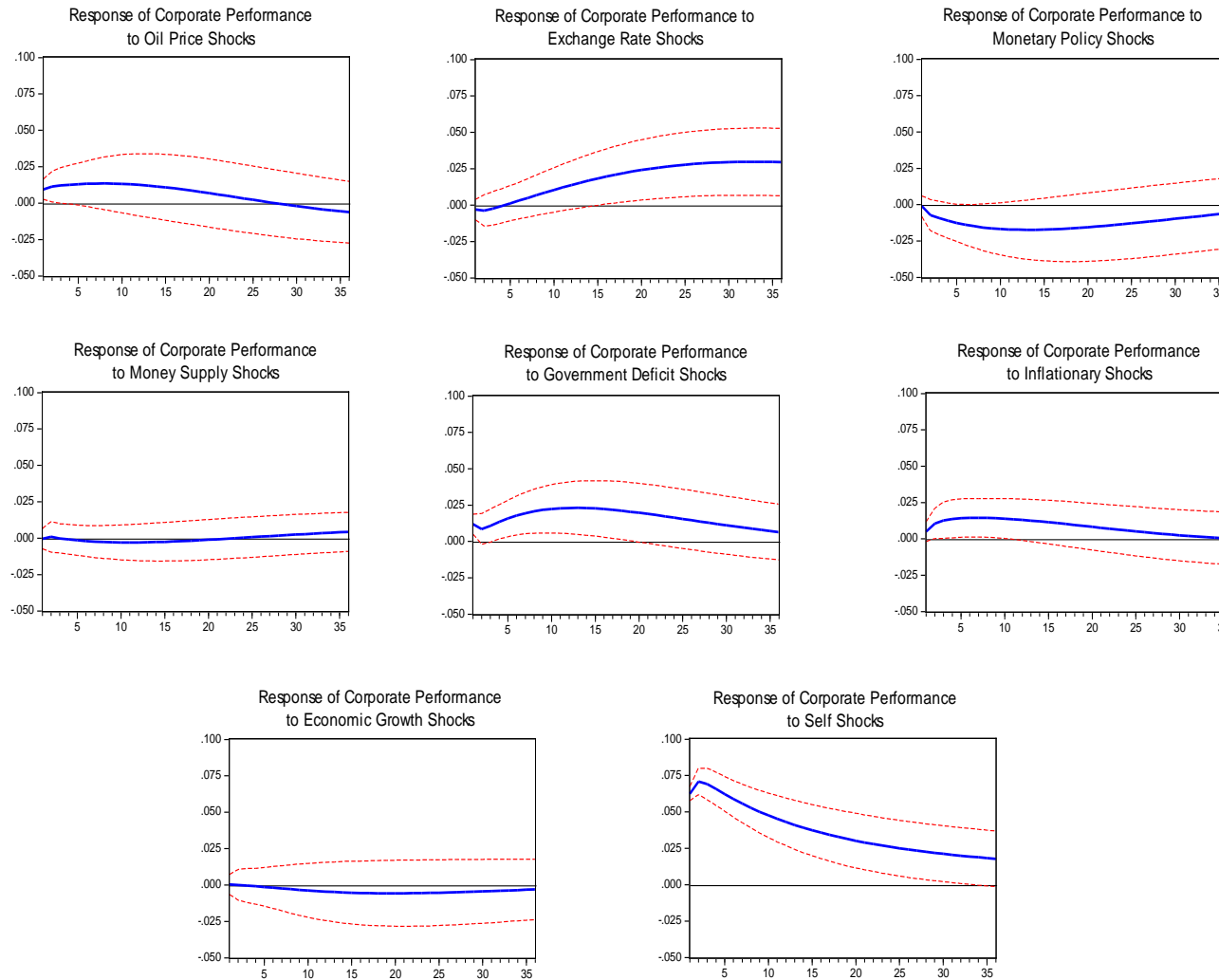


Fig. 1. Corporate performance response to structural one S.D. innovations ± 2 S.E

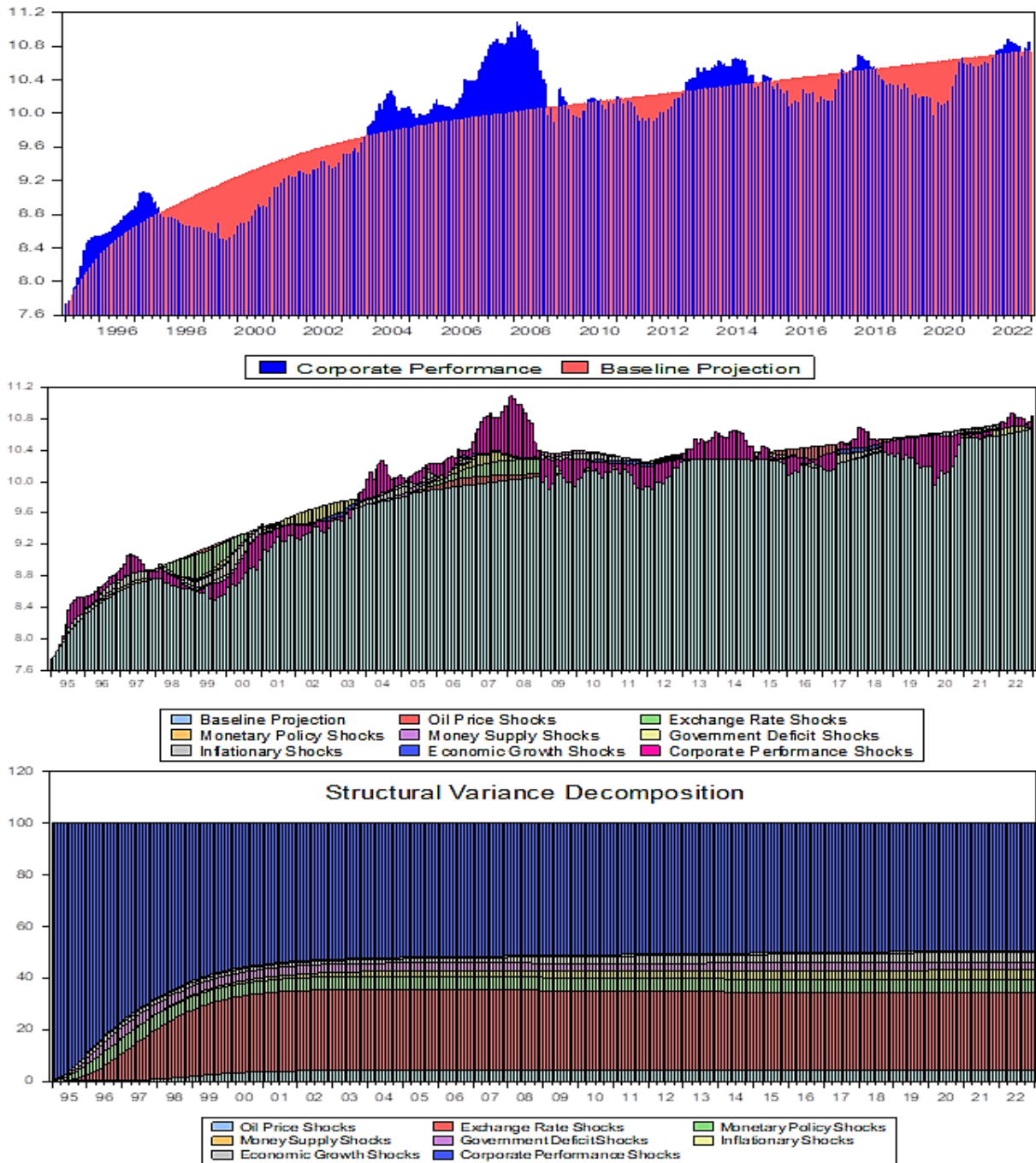


Fig. 2. Stack Graph of the Historical and Variance Decompositions

Fig. 2 presents panels that graphically display the historical decomposition and variance decomposition of corporate performance in Nigeria. The first panel presents the actual trend of corporate performance (in logged form) and the base projection of corporate performance. The deviations in the actual trend of corporate performance from the base projection are attributable to macroeconomic shocks, as indicated in the model of this study. The

predominance of adverse shocks from the macroeconomic indicators pressures corporate performance below the base projection, while positive shocks pressure corporate performance above the base projection.

The second panel shows the historical decomposition of corporate performance, while the third panel presents the structural variance decomposition of corporate performance.

Evidence from these panels shows that the characteristics of corporate performance (firm-specific characteristics of businesses that make up the economy) contribute the most to changes in corporate performance. Across the various points of deviations of corporate performance from base projection (see the second panel), corporate performance shocks, which can be inferred to be firm-specific shocks, have been the major contributors to changes in corporate performance. Likewise, the variance decomposition (see the third panel) over the study period reveals that corporate performance contributes an average of 55.37% to changes in itself. In other words, the firm-specific endogenous and controllable factors, which are a direct result of managerial choices, decisions and actions, contribute far more (55.37%) to corporate performance outcomes, as compared to the effects of exogenous uncontrollable macroeconomic variables of international-money-goods markets, such as oil price, exchange rate, monetary policy rate, aggregate money supply, government deficit, inflation, and economic growth.

In a bit of departure from Omoregie and Olofin [9], which attributed more weight to the impact of oil price than the exchange rate, exchange rate shocks have the most impact on corporate performance of all the macroeconomic variables and across all the dimensions of this study. However, the contribution of oil price shocks is significantly lower. Apart from 1997-2000, when exchange rate shocks contributed negatively to corporate performance, they contributed positively to corporate performance over the years. Besides, the variance decomposition analysis reveals that exchange rate shocks contribute an average of 27.63% to changes in corporate performance over the years. Meanwhile, the contribution of oil prices to changes in corporate performance stood at an average of 4.37% over the study period. Positive oil price contributions to corporate performance were noticeable in 2005-2009. Meanwhile, negative oil price contributions were observable from 1997-1999 and 2015 through 2017. Nonetheless, the contributions of oil prices to corporate performance trail periods of sharp movements in oil prices.

Another important variable that contributes to changes in corporate performance after the exchange rate is the monetary policy rate. Likewise, its negative or positive contributions trail the ups and downs in monetary policy rate (MPR).

It motivated declines in corporate performance in 1996/1997, 1999, 2001-2003, 2011/2012, and 2021/2022, which were associated with rate hikes. It, however, contributed positively to corporate performance in 2006-2008 and was associated with the decline in policy rate from 14% in 2006 to 6% in 2009. Based on the variance decomposition, the contribution of money supply to corporate performance is meagre, averaging 2.26%. The contributions of money supply to changes in corporate performance are noticeable in 1999, 2004/2005 and 2009/2010. Government deficits contribute negatively on most occasions (1998-2001, 2003-2005 and 2016-2018) to corporate performance as they mean an increase in bond market yields and sometimes reflect the level of uncertainty in the country. Nevertheless, it contributed positively in 1997 and 2009-2011. Meanwhile, inflation and economic growth marginally contribute to corporate performance. By implication, goods market indicators contribute the least to corporate performance.

5. DISCUSSION AND IMPLICATION

Contrary to expectation, results from this study strongly suggest that the international market and the money market indicators predominantly influence corporate performance more than the goods market. This study emphasises the short-run positive impact of oil prices. It shows that it has much lower contributions to corporate performance as more indicators and dimensions are captured in the study. Managers, thus, need to be cautious as oil price increases come with a short-run positive spike in corporate performance, which reverses in the near term. Inadequate hedging against associated risk can make businesses suffer value loss/erosion when the short-run positive impact is reduced, especially with positive changes. Exchange rate shocks have a short-run negative and, counterintuitively, a long-run positive influence, with a much higher contribution to corporate performance than the oil price.

By implication, given that Nigeria has a high import dependence rate, exchange rate depreciation will lead to declining corporate performance in the short-run as rising exchange rate leads to increased cost of production inputs. However, in the long run, the illiquidity created by an excess demand for foreign exchange would be cleared, managers would strive for structural and operational efficiencies to mitigate the impact of the increase in the cost of production, and corporate performance would consequently

improve. Also, exchange rate appreciation will lead to a short-run reduction in the volume and value of import bills, but associated long-run illiquidity will dampen corporate performance. By introducing more variables and indicators to the model of corporate performance, the analysis amplifies the importance of exchange rates on corporate performance. Therefore, managers should hedge appropriately and seek internal structural and operational efficiencies to mitigate exchange rate risk.

Findings on monetary policy are quite intuitive and theoretical in terms of the relationship; increasing the policy rate has a negative effect on corporate performance while decreasing the policy rate has a potentially positive effect on corporate performance. This is evident in its contributions to changes in corporate performance as it also moves in a similar direction to changes in the policy rate. However, this study reveals quite clearly that money supply has very little impact on corporate performance. Therefore, managers should hedge appropriately against interest rate risk, especially in their financial policy/capital structure decisions.

The study also reveals that government fiscal deficit, which has a crowding-out effect on private investment, has a short-term positive effect on corporate performance with medium to long-run negative influence. This suggests that the government, in an attempt to spend more than its revenue, influences corporate performance positively and in pursuance of fiscal surplus, corporate performance declines. However, a prolonged fiscal deficit will crowd out capital for private businesses, drive up interest rates and operating costs, and inhibit corporate performance. A short-run positive impact is reported for inflation, which turns negative in the medium to long run. This suggests that firms can enjoy immediate benefits from increased output prices. Given the structural nature of the drivers of inflation in Nigeria, especially from the supply side, the drivers of inflation permeate into the operating costs and suppress corporate performance. This could also be traced to the real rate of returns pass-through, whereby as inflation increases, the real rate of returns falls. However, the findings on economic growth are against intuitive expectation as they negatively influence corporate performance. This could have resulted from the data structure because it was converted from annual data to monthly and smoothed. Nevertheless, it could indicate immiserising growth, though this is less likely given the

structure of the Nigerian economy, or it could be due to imperfect linkage between the capital and goods markets. Therefore, managers should not be too carried away by the growing economy but focus on implementing strategies and hedging policies to ensure improved corporate performance.

In summary, this study has demonstrated the importance of the international market for corporate performance, as its indicators (oil price and exchange rate) account for about 31.3% of the changes in corporate performance. On the other hand, the money market contributed about 7.2% to changes in corporate performance. Meanwhile, the contributions of the goods market stand at 6.12%. Managers should, therefore, pay attention to movement in international and money market indicators without neglecting the goods market.

Furthermore, and perhaps most importantly, this study has revealed that beyond the macroeconomic factors that could affect the performance of businesses, endogenous firm-level characteristics such as corporate structures, nature, scale and scope of operations, market segments and market share, corporate responses and hedging strategies to macroeconomic shocks, and nature of industry, in other words, the firms' strategies and how this is operationalised, have far more reaching impact on corporate performance than exogenous factors and macroeconomic shocks. This is reflected by the 55.37% contribution of corporate performance shocks to corporate performance outcomes. These factors, which can be referred to as firm-specific factors, constitute firm-specific shocks to corporate performance. These firm-specific factors may be reactive responses to exogenous pressures and proactive and deliberate choices about opportunities to pursue, industry choices, strategies to adopt, responses to competitors, consumers, operations, financing decisions, etc.

Consequently, managers should seek to understand the specific potential impact of exogenous economic-specific shocks on their businesses and respond more proactively to hedge the adverse impacts while taking advantage of the positives. They however, need to worry less about these largely uncontrollable exogenous pressures while improving their capacities to improve the quality of strategic business choices and consequential operational and financial decisions. Policy choices should be more proactive rather than reactive, should be

based on extensive analysis of the objectives, impact assessment and execution imperatives, and should involve extensive expert consultation and stakeholder engagement. Future research should be positioned to investigate and dimension the nature, scope and interactions of these endogenous firm-specific shocks and their specific impact on corporate performance. This investigation is also important to aid a better understanding of the interactions between exchange rates and other macroeconomic indicators as it assumes more responsibility in determining corporate performance as more variables are considered. Policy makers should also focus on policies that engender a stable macroeconomic environment for businesses, such as stable exchange rates, interest rates and moderate inflation regimes.

6. CONCLUSION AND LIMITATIONS

Following Omoregie and Olofin [9], this study investigated the effect of some macroeconomic factors on corporate performance. It argued for three macroeconomic factor categories: international, money and goods markets indicators. The analysis was based on the Structural Vector Autoregressive/Historical Decomposition estimations. The findings revealed how much the various markets contributed to corporate performance. It was revealed that the international market contributes the most, followed by the money market. This reflects the susceptibility of Nigerian businesses to speculative risks that characterise indicators such as oil price, exchange rate, and interest rate.

It was revealed that oil price has a short-run positive influence on corporate performance, and its contributions to corporate performance trail the oscillatory nature of oil price. The exchange rate, however, has a transient negative impact on corporate performance and a long-run positive impact with the most substantial contribution. Therefore, the major international contributor to corporate performance is movements in exchange rates. In the money market, the monetary policy rate negatively influences corporate performance, with its contributions also directly trailing movements in the policy rate. However, the money supply has a negligible impact on corporate performance, with its contributions also trailing money growth. The goods market contributed the lowest to corporate performance, with major input from the government deficit. Government deficit positively influences corporate performance, though with a

negative medium to long-run effect. Inflation also positively influences corporate performance in the short run and negatively in the long run. Nevertheless, economic growth rate has a negative influence on performance. Decision-makers are, therefore, admonished to hedge strategically in view of the findings of this study. Future studies should investigate the company and industry-specific factors.

The study, however, is limited in scope as it is based on aggregate data. Meanwhile, the findings emphasise the importance of specific characteristics at the firm or industry level that impact corporate performance. Therefore, future research should be positioned to investigate and dimension the internal factors that most impact corporate performance. Besides, further research on the interactions between exchange rates and other macroeconomic indicators is important as it assumes more responsibility in determining corporate performance as more variables are considered.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Goyal A, Kumar A. The effect of oil shocks and cyclicalities in hiding Indian twin deficits. *Journal of Economic Studies*. 2018;45(1): 27-45.
2. Ulku N, Demirci E. Joint dynamics of foreign exchange and stock markets in emerging Europe. *Journal of International Financial Markets, Institutions and Money*. 2012;22(1):55-86.
3. Adetunji Babatunde M, Adenikinju O, Adenikinju AF. Oil price shocks and stock market behaviour in Nigeria. *Journal of Economic Studies*. 2013;40(2):180-202.
4. Mozumder N, De Vita G, Larkin C, Kyaw KS. Exchange rate movements and firm value: Evidence from European firms across the financial crisis period. *Journal of Economic Studies*. 2015;42(4):561-577.
5. Yildirim Z, Ivrendi M. Exchange rate fluctuations and macroeconomic performance: Evidence from four fast-growing emerging economies. *Journal of Economic Studies*. 2016;43(5):678-698.
6. Liu J, Klinkowska O. The use of copulas in hedging oil and market price risk for us oil

- and gas investors: Empirical investigation; 2017. Available at SSRN 3006002.
7. Simakova J. The impact of exchange rate movements on firm value in Visegrad countries. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*. 2017;65(6).
 8. Sikarwar E. Exchange rate fluctuations and firm value: Impact of global financial crisis. *Journal of Economic Studies*. 2018;45(6): 1145-1158.
 9. Omoregie OK, Olofin S. Corporate performance in Nigeria: The effect of oil price and exchange rate fluctuations. *International Journal of Economics and Financial Issues*. 2020;10(1):170-179.
 10. Athanasoglou PP, Brissimis SN, Delis MD. Bank-specific, industry-specific and macroeconomic determinants of bank profitability. *Journal of international financial Markets, Institutions and Money*. 2008;18(2):121-136.
 11. Bhattacharjee A, Higson C, Holly S, Kattuman P. Macroeconomic instability and business exit: Determinants of failures and acquisitions of UK firms. *Economica*. 2009;76(301):108-131.
 12. Aviliani A, Siregar H, Maulana TNA, Hasanah H. The impact of macroeconomic condition on the bank's performance in Indonesia. *Bulletin of Monetary Economics and Banking*. 2015;17(4):379-402.
 13. Alomari MW, Azzam IA. Effect of the micro and macro factors on the performance of the listed Jordanian insurance companies. *International Journal of Business and Social Science*. 2017;8(2):66-73.
 14. Alarussi AS, Alhaderi SM. Factors affecting profitability in Malaysia. *Journal of Economic Studies*. 2018;45(3):442-458.
 15. Nanda S, Panda AK. The determinants of corporate profitability: An investigation of Indian manufacturing firms. *International Journal of Emerging Markets*. 2018; 13(1):66-86.
 16. Goddard J, Molyneux P, Wilson JO. The profitability of European banks: A cross-sectional and dynamic panel analysis. *The Manchester School*. 2004;72(3):363-381.
 17. Khanna R, Sharma C. Do infrastructure and quality of governance matter for manufacturing productivity? Empirical evidence from the Indian states. *Journal of Economic Studies*. 2018;45(4):829-854.
 18. Atanda FA, Asaolu T, Adewale A. Macroeconomic variables and value creation in the Nigerian quoted companies. Atanda FA, Asaolu TO & Oyerinde AA. Macroeconomic variables and Value Creation in the Nigerian Quoted Companies. *International Journal of Economics and Finance*. 2015;7(6):252-262.
 19. Banerjee R, Majumdar S. Impact of firm specific and macroeconomic factors on financial performance of the UAE insurance sector. *Global Business and Economics Review*. 2018;20(2):248-261.
 20. Egbunike CF, Okerekeoti CU. Macroeconomic factors, firm characteristics and financial performance: A study of selected quoted manufacturing firms in Nigeria. *Asian Journal of Accounting Research*. 2018;3(2):142-168.
 21. Higson C, Holly S, Kattuman P, Platis S. The business cycle, macroeconomic shocks and the cross-section: The growth of UK quoted companies. *Economica*. 2004;71(282):299-318.
 22. Kyereboah-Coleman A, Agyire-Tettey KF. Impact of macroeconomic indicators on stock market performance: The case of the Ghana Stock Exchange. *The Journal of Risk Finance*. 2008;9(4):365-378.
 23. Baum CF, Chakraborty A, Liu B. The impact of macroeconomic uncertainty on firms' changes in financial leverage. *International Journal of Finance & Economics*. 2010;15(1):22-30.
 24. Montes GC, Monteiro GGDV. Monetary policy, prudential regulation and investment: evidence from Brazil considering the Bank lending channel. *Journal of Economic Studies*. 2014; 41(6):881-906.
 25. Demirgüç-Kunt A, Huizinga H. Determinants of commercial bank interest margins and profitability: Some international evidence. *The World Bank Economic Review*. 1999;13(2):379-408.
 26. Tan Y, Floros C. Bank profitability and inflation: The case of China. *Journal of Economic studies*. 2012;39(6):675-696.
 27. Bassey NE, Okeke CC, Edet ME. Empirical link between macroeconomic policy variables and the performance of quoted Agro-Based firms in Nigeria. *Agricultural Science*. 2015;3(1):21-30.
 28. Kelilume I. Exchange rate volatility and firm performance in Nigeria: A dynamic panel regression approach. *The Journal of Developing Areas*. 2016;50(6):161-174.
 29. Gatsi JG, Gadzo SG. Firm level and macroeconomic effects on financial

- performance of insurance companies in Ghana. *International Journal of Business Administration and Management*. 2013; 3(1):1-9.
30. Simbolon L, Purwanto. The influence of macroeconomic factors on stock price: The case of real estate and property companies. In *Global tensions in financial markets*. Emerald Publishing Limited. 2018;19-39.
 31. Abushammala SN, Sulaiman J. Impact of macroeconomic performance on corporate cash holdings: Some evidence from Jordan. *Asian Economic and Financial Review*. 2014;4(10):1363.
 32. Audretsch DB, Acs ZJ. New-firm start-ups, technology, and macroeconomic fluctuations. *Small Business Economics*. 1994;6:439-449.
 33. Everett J, Watson J. Small business failure and external risk factors. *Small Business Economics*. 1998;11:371-390.
 34. Goudie AW, Meeks G. The exchange rate and company failure in a macro-micro model of the UK company sector. *The Economic Journal*. 199;101(406):444-457.
 35. Liu J. Macroeconomic determinants of corporate failures: Evidence from the UK. *Applied Economics*. 2004;36(9):939-945.
 36. Liu J. Business failures and macroeconomic factors in the UK. *Bulletin of Economic Research*. 2009;61(1):47-72.
 37. Ibrahim MH, Aziz H. Macroeconomic variables and the Malaysian equity market: A view through rolling subsamples. *Journal of economic studies*. 2003;30(1):6-27.
 38. Aurangzeb D. Factors affecting the performance of stock market: Evidence from south Asian countries. *International Journal of Academic Research in Business and Social sciences*. 2012;2(9):1-15.
 39. Panetta F. The stability of the relation between the stock market and macroeconomic forces. *Economic Notes*. 2002;31(3):417-450.
 40. Gurloveleen K, Bhatia BS. An impact of macroeconomic variables on the functioning of Indian stock market: A study of manufacturing firms of BSE 500. *Journal of Stock & Forex Trading*. 2015;5(1):1-7.
 41. Gathogo PM, Mungatu JK, Mulyungi P. Effect of macro-economic variables on market capitalization of firms listed in Nairobi stock exchange. *European Journal of Business and Social Sciences*. 2017;6(06):182-194.
 42. Dunne P, Hughes A. Age, size, growth and survival: UK companies in the 1980s. *The Journal of Industrial Economics*. 1994;115-140.
 43. Öhman P, Yazdanfar D. Organizational-level profitability determinants in commercial banks: SWEDISH evidence. *Journal of Economic Studies*. 2018; 45(6):1175-1191.
 44. Sharpe WF. Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance*. 1964; 19(3):425-442.
 45. Lintner J. The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets: A reply. *The Review of Economics and Statistics*. 1969;222-224.
 46. Ross SA. The arbitrage theory of capital asset pricing. In *Handbook of the fundamentals of financial decision making: Part I*. 2013;11-30.
 47. Sun C, Zhang D. Assessing the financial performance of forestry-related investment vehicles: capital asset pricing model vs. arbitrage pricing theory. *American Journal of Agricultural Economics*. 2001;83(3):617-628.
 48. Dhankar R, Singh R. Arbitrage pricing theory and the capital asset pricing model-evidence from the Indian stock market. SSRN; 2008.
 49. Sims CA. Comparison of interwar and postwar business cycles: Monetarism reconsidered. *American Economic Review*. 1980;70(2):250-287.
 50. Sims CA, Stock JH, Watson MW. Inference in linear time series models with some unit roots. *Econometrica: Journal of the Econometric Society*. 1990;113- 144.
 51. Sims CA. Are forecasting models usable for policy analysis? *Quarterly Review*. 1986;10(Win):2-16.
 52. Doan TA. RATS handbook for vector autoregressions. Estima, Evanstone; 2010.
 53. Carlin W, Soskice D. German economic performance: Disentangling the role of supply-side reforms, macroeconomic policy and coordinated economy institutions. *Socio-Economic Review*. 2009; 7(1):67-99.
 54. Central Bank of Nigeria. CBN Online Database; 2023. Retrieved from Available:<http://statistics.cbn.gov.ng/cbn-onlinestats/DataBrowser.aspx>
 55. Sanwal K, Ismail S. A study of interlinkages among exchange rate and stock price for

- India. S. Asian J. Soc. Stud. Econ. 2022, Oct. 18;16(1):33-42. [cited 2024 May 17]
Available:<https://journalsajsse.com/index.php/SAJSSE/article/view/603>
56. Andersen TG, Bollerslev T, Diebold FX, Labys P. The distribution of realized exchange rate volatility. Journal of the American Statistical Association. 2001, Mar 1;96(453):42-55.

© Copyright (2024): Author(s). The licensee is the journal publisher. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:

<https://www.sdiarticle5.com/review-history/117752>