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UNCOVERING NEW EVIDENCE ON MARKET MICROSTRUCTURE EFFECTS ON STOCK RETURNS DYNAMICS IN THE NIGERIAN CAPITAL MARKETS

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Abstract: Market microstructure plays a crucial role in shaping the dynamics of financial markets, influencing trading mechanisms, price formation, and market efficiency. This paper presents an empirical examination of market microstructure in the Nigerian Capital market, providing fresh evidence and new perspectives, through the analysis of five key market microstructure variables, market size, idiosyncratic risk, trading volume, transaction costs, and trading behaviour, which reflects market abuse, including insider trading, market manipulation, as well as broker-client conflicts, and their impacts on stock returns. Firstly, the study conducts a decomposition/ disruptions analysis to examine the impact of market microstructure variables on stock returns variances. Next, a market microstructure asset returns model is estimated using the Generalized Method of Moment (GMM), which corrects for omitted variable bias, endoegeneity of regressors and simultaneity. The findings reveal that returns persistence, size, idiosyncratic risk, turnover and trading behaviour significantly influence stock returns. In the light of these findings, strengthening regulatory and institutional frameworks as well as deployment of innovative technology in trading processes are encouraged to promote capital market efficiency in Nigeria

JEL Classification: G10, G14, G15, 016

Keywords: Market microstructure, Idiosyncratic risk, Transaction cost, Capital market, efficiency.

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1. INTRODUCTION

There is growing theoretical and empirical research, as well as policy discussions on market microstructure. The increased interest in microstructure dynamics is spurred by three important factors, which stands out. First, accelerated advance in trading market activities, wherein microstructure variables play increasing role inter-temporal financial market dynamics models. Second, rapid innovations that have enabled an expansion into the study of the impact of market microstructure on the incidence or market abuse, e.g insider trading, market manipulation and broker client's conflict, and finally increased market-micro data, which have become available to empirical finance.

The microstructure of financial markets refers to the mechanisms and rules that govern the trading process, influencing price formation, liquidity, and market efficiency. Market microstructure examines how market participants, trading mechanism, and information flows interact to shspe market outcomes. The celebrated works oworks of Kyle, (1985), Glosten and Miilgrom (1985), and O'Hara's (1995) laid a solid basis for the study of market microstructure empirics. Other works include Harris (1999) and Lyons (2000), who examined the market microstructure of foreign exchange markets in a rigorous analytical framework. For example, Keim and Madhavan (1998) survey the literature on execution costs, focusing on institutional traders. Coughenour and Shastri (1999) provide a detailed summary of recent empirical studies in four select areas: the estimation of the components of the bid-ask spread, order flow properties, the NASDAQ controversy, and linkages between option and stock markets. For instance, in a model of inter-temporal asset prices under asymmetric information, Wang (1993) established that asset prices follow a dynamic path under conditions of information asymmetry. This view has been corroborated by Plerou et al (2010) in a model of economic fluctuations and anomalous diffusion.

A central idea in the theory of market microstructure is that asset prices need not equal full-information expectations of value because of a variety of frictions. In this direction, market microstructure is closely related to the field of investments, which studies the equilibrium values of financial assets. Nevertheless, while many regard market microstructure as a subfield of investments, it is also linked to traditional corporate finance because differences between the price and value of assets clearly affects financing and capital structure decisions. The analysis of interactions with other areas of finance offer a new and exciting dimension to the study of market microstructure. This paper conducts

a test of market microstructure, investigating how essential microstructure variables such as order flow, trading volume, and market volatility impact price dynamics and market performance. By analyzing empirical evidenc to the understanding of market microstructure, and the implications thereof, for investors, market participants, and regulatorse and carrying out relevant test/ investigation, this paper aims to contribute.

1.2. Statement of the Problem

Knowledge of market microstructure is important as it shows how investor's latent or hidden demands are ultimately translated into prices and volumes. Behavioural finance has already proved that the capital market is not efficient and is characterized by imperfections, implying that some stocks are likely to deviate from their fundamental or intrinsic value. Empirical evidence is still mixed and fails to provide a convincing argument for the existence of the market microstructure in financial markets. The mixed findings may be due in part to the different proxies used to capture microstructure variables. In the light of the structural peculiarities of the Nigerian economy and by extension, the capital market, the battery of endogenous forces at play in market trading activities and participants' behavior may vary largely from what obtains in other climes. This implies that country-specific studies examining market microstructure are constantly important in the light of such episodic movements in the capital markets.

Existing Nigerian studies (see for instance, Kasimu & Osayi, 2019) predominantly focused on quantitative microstructure factors, overlooking the critical role of trading behavior, particularly insider abuse and market manipulation, in influencing stock returns. This study addresses the significant knowledge gap by investigating the impact of such behaviours on stock returns, thereby providing fresh insights into the market microstructure –stock returns nexus. Against this backdrop, the following pertinent research questions are formulated:

(i) Does market microstructure significantly explain security returns in the Nigerian Capital market?

(ii) Does trading behaviour significantly influence stock returns in the the Nigerian Capital market?

Following this introduction, the paper is organized as follows. Section two consists of literature review which considers key theoretical and empirical issues

associated with market microstructure. Section three contains methodology, model specification and data, which empirically seeks to test the market microstructure, while section four contains the empirical results and analysis. Section five contains the conclusion and policy recommendations.

2. LITERAURE REVIEW

2.1. Conceptual Issues

O' Hara (1987) defines market microstructure as ''the study of the process and outcomes of exchanging assets under explicit trading rules". Market microstructure deals with the dynamics, mechanisms and processes that govern the trading of securities, including interaction between buyers and sellers, order flow, price formation, market liquidity and transactions execution in financial markets. It examines the microstructure of markets, including the rules, institutions, and technologies that shape trading outcomes. In a more aggregative sense, market microstructure is concerned with the dynamics of how exchange or transactions take place in the markets. In this regard, it relates to the details of how exchange or transactions take place in the market, with respect to real financial assets, encompassing the rules, mechanisms, and processes that governs trading and price formation (see also O' Hara, 1995; O' Hara, 1995 & Saar, 2001).

Alternatively, market microstructure focuses on the intricacies of transaction processes and exchange mechanism in financial market, especially for real financial assets, examining how trades are executed and prices determined. Market microstructure can also be understood as the study of the dynamics of how the working processes of a financial market affect transaction costs, prices of securities, quotes, volume and trading behaviours of market participants (Madhavan, 2000). It is fundamentally concerned with the structure of exchanges and trading venues (e.g. displayed and dark), the price discovery process, determinants of spreads, and quotes, intraday trading behaviour and transaction costs (Plerou et al, 2010).

2.2. Theoretical Literature

2.2.1. Efficient Market Hypothesis

The literature on sell-functioning stock markets as it relates to the Efficient Market Hypothesis (EMH) is attributable to Samuelson (1965); Fama, (1970

and; Fama, (1991)). According to Fama, an efficient market is one in which securities prices respond quickly and fully reflect all available information. Building on this theory, the EMH is categorized into three forms: weak, semi-strong and strong form efficiency. In weak form efficiency, investors believe that the market prices already reflects all historical data, including past prices, trading volumes, and financial statements. e.t.c.

A market exhibits weak form efficiency when all participants have access to past market information, eliminating incentives for abnormal returns based on historical data. In a semi-strong form efficient, investors cannot earn excess returns using publicly available information as prices quickly reflect all public data (e.g. financial statements, earnings announcements, economic indicators, news release), making it impossible to capitalized on it for abnormal returns. In other words, in semi-strong form efficiency, all past (i.e. historical market data, prices, e.t.c) and current publicly available information (i.e. latest financial statements, earnings, announcements, news, e.t.c) is reflected in market prices, making it impossible to exploit the market. In a strong form efficient market, security prices reflect all public and private (insider) information, eliminating opportunities for abnormal returns (Ozekhome & Braimah, 2023).

2.2.2. Other Theories,

Beyond the Efficient Market Hypothesis (EMH), other theoretical frameworks that connect and offer valuable perspectives on market microstructure, shedding light on its dynamics, providing further insights into, and implications for stock returns, trading strategies and market design, include:

- **Noise Trade Theory**: Explains how irrational traders (noise traders) impact market prices and returns, potentially creating opportunities for informed trades (see Shleifer & Summers, 1990).
- **Behavioural Finance Theory**: Examines how psychological biases and heuristics influence investor decisions, affecting market outcomes (Kahneman & Tversky, 1979).
- **Agent-Based Modelling**: Studies complex dynamic systems and emergent behavior in financial markets, often incorporating heterogeneous agents with diametrically opposing strategies and information (see Epstein & Axtell, 1996).

- **Game Theory**: Analyzes strategic and competing interactions between market participants, such as traders, brokers, and exchanges in the analysis of market outcomes (see Nash, 1950)
- **Information Asymmetry Theory**: Explores how information discrepancies, quality of timing and other unequal market opportunities affect market interactions and outcomes (see Akerlof , 1971; Spence, 1973; Stiglitz, 1977).
- **Transaction Cost Economics Theory**: Investigates how trading transaction costs, such as fees, brokerage and slippage, influence trading decisions and market efficiency and outcomes (see Williamson, 1979).
- **Liquidity Preference Theory**: Examines how the demand for liquidity by market participants affect asset prices (Keynes, 1936).
- **Adaptive Market Hypothesis (AMH):** Suggests that markets adapt to changing situations, and participants learn from experience, influencing market efficiency and outcomes (see Low, 2004)

2.3. Empirical Literature

Madhavan and Smidt (1991), employ real and high –quality data on inventory to separate the dual impact of microstructure as well as the degree to which information asymmetry constitutes a factor in security pricing. The estimate of the market's conditional mean at time t s a weighted average of signals from order flow. The researchers find that buyers rely heavily on order flow to predict future value, separate from inventory influences. Their findings reveal indicate that information asymmetry plays a significant role in intraday price dynamics, whereas evidence for intraday inventory effects is weak, consistent with the findings of Hasbrouck and Sofianos (199). The findings by Manaster and Mann (1996) suggest that stronger inventory effects may exist on account of competitive dynamics or other factors.

Madhavan and Smidt (1993) suggest that weak intraday inventory effects may stem from indistinguishability between inventory and information. They propose a dynamic programming model that integrates inventory control, information asymmetry and target inventory adjustments The estimates indicate significant evidence of information effects; with quotes revisions

being negatively correlated with specialist trades and positively correlated with information from order imbalances.

Madhavan (2000)'s conceptual approach explores market microstructure emphasizing informational –related aspects of price formation as well as price discovery. He examines both static factors (e.g. terminal trading costs) and dynamic factors (e.g. how prices incorporate information overtime). His analysis covers market structure, trading protocols, information and disclosure, and the intersection of market microstructure with asset pricing, international finance, and corporate finance. He concludes that market microstructure has significant implications for market efficiency. Some other notable studies in market microstructure research include Hasbrouck (1999), Ane and Geman (2000), and Dufore and Engle (2000).

Derman (2002) investigates the interplay between time, risk and returns during speculative periods, revealing that time variation and risk are key drivers of security returns and volatility. Hasbrouck (2007) also find empirical evidence, within a holistic framework, that market microstructure is largely driven by fluctuations in security prices information. Goetler, Christine, and Uday (2005) explores equilibrium mechanisms in a dynamic order markets, using a model that incorporates information asymmetry to analyse market microstructure, The evidence show that efficiency and inefficiency levels drive stock market variability.

Gabaix,, Parmeswaran, Vasliki and Eugene (2006) investigates the impact of institutional investors on stock market volatility by means of a GARCH model. The empirical finding revealed that institutional investors as percentage of total stock investment is a market microstructure variable. Obizhaeva, (2009) investigates the portfolio transition and price dynamics nexus, utilizing evidence from multiple data sources. The results corroborate earlier findings and submissions that price dynamics and portfolio transition path are correlated.

Kyle and Obizhaeva (2013) study market microstructure, utilizing a meta -model based on a data set of 400,000 portfolio transition orders. The findings indicate that trading volume and stock return volatility significantly drive market microstructure invariance across different market conditions and trading scenarios. Matvos, Seru and Silva (2017) investigates the impact of market distortions and interruptions based on an augmented –developed

model. The results indicate that large, diversified publicly traded firms ten to expand their scope in periods of significant external capital market distortions.

Kasimu and Osayi (2019) investigate market microstructure dynamics in Nigeria, examining price formation and price discovery process, in connection with bid-ask spread of stock returns of United Bank of Africa (UBA) Plc. The results reveal that overall price level in the economy significantly influences order formation, price discovery, and to a degree, the promptness at which prices incorporate or reflect information.

Mohammed, Vijayalakshimi, Jahan and Sharma (2021) examines the impact of marker microstructure on India's economic performance, focusing on its effect on financial markets, trade and price discovery. Using disequilibrium and volatility analysis. They find that trading issues, market changes and imperfections contribute to price volatility and equilibrium price fluctuations Based on these findings, they recommend implementing market efficiency measures to promote financial market stability.

Ehiedu and Akunoma (2023) empirically investigate the effect of market microstructure on asset price valuation in the Nigerian capital market suing data covering the period 1986-2023 the Generalized Method of Moment (GMM) technique. The empirical findings demonstrate that market microstructure variables have significant impact on asset performance. The authors suggest strong regulatory and institutional measures to improve capital market operations in Nigeria

Said, Raza and Elshahat (2024) examines the effect of market microstructure on time-varying efficiency based on multi-factor analysis of five Asian emerging markets of China, India, and Malaysia, Pakistan and Turkey, utilizing the System Generalized Method of Moments (SGMM) techniques for the period 2001 – 2020. The empirical results indicate that market microstructure plays a vital role in the efficiency of emerging markets. The findings confirm that improvement inefficiency is robust after controlling for country-specific factors, such as economic growth, investment freedom, and uncertainty anticipation and stock-specific idiosyncratic risk.

2.3. Gap (s) in Literature

Building on the review of the pertinent literature, this study identifies a significant gap regarding the modeling of the effects of trading behavior on

security returns, particularly concerning incidents like market insider trading and speculative activities. Given the Nigerian capital market's evolving nature, in addition to the structural and economic peculiarities, this study aims to bridge this gap, providing new insights and contribution to the literature and policy.

3.1. Model Specification

The model for this study is an adapted version of the approaches previously utilized by Madavhan (2000) and Mohammed et al (2021). It regresses stock return on key microstructure variables of size (market capitalization), risk (RSK), turnover (TURN), trading transaction costs (TC) and behavioural trading dummy (DM), in the form:

$$SR_t = f(MKTMS) \quad (1)$$

SR represents stock returns

MKTMS is market microstructure

Decomposing model (1) into key market microstructure indicators/ dimensions,

$$SR_t = f(SZ, RSK, TURN, TC, BD) \quad (2)$$

The explicit model form is captured as:

$$SRt = \alpha_0 + \alpha_1 SZ + \alpha_2 RSK + \alpha_3 TURN + \alpha_4 TC + \alpha_4 BD + \varepsilon_t$$

3.2. Definition of Variables, Measurement Sources of Data

The definitions of the variables in the model, measurements, as well as the hypothesized signs are provided in Table 1.

Table 1: Definition of Variables and Data Sources

Variable	*Description/measurement*	*Apriori expectation*
Stock returns (SR)	$Rt = \left(\frac{P_t - Pt-1}{}\right) \times 100$ where *Rt* is stock returns at time t, *Pt* iscurrent stock price and P_{t-1} is previous stock price	
Size (SZ)	Total market size – measured by market capitalization as ratio of GDP percent	Positive (+)
Risk (RSK)	Stock price idiosyncratic risk i.e. riskiness of the security- measured as the volatility of the asset return using 3-month standard deviation of stock returns	Positive (+)

Variable	*Description/measurement*	*Apriori expectation*
Turnover (TURN)	Stock turnover - i.e. amount of securities traded as ratio of total value of listed shares (market capitalization) i.e. ratio of value of transaction to market capitalization	Positive (+)
Transaction cost	Transaction cost of trading –i.e. sum of execution and opportunity costs as ratio of total costs	Negative (-)
Behavioural dummy (BD)	Behavioural trading dummy to capture insider trading, abuses, manipulation and irrationality on the part of market participants/traders of securities trading, with 1 connotes insider trading and market manipulation, and 0 otherwise).	Negative (-)

Source: Authors' compilation.

3.2. Data

Annual time series data covering the period 1990-2024 is utilized for the estimation. The data are obtained from the Securities and Exchange Commission Fact Book, Nigerian Exchange Limited (NGX)., and the World Bank World Development Indictors

3.3. Estimation Technique

Given the complex and dynamic relationships between stock returns and market microstructure variables, issues like endogeneity of regressors, measurement and specification errors, and simultaneity can arise (see Lee & Sung, 2005). To address these challenges, the Generalized Method of Moments (GMM) estimation approach is employed. The estimator effectively handles joint endogeneity, reverse causality, omitted variables, and measurement errors (Arellano & Bover, 1995; Blundell & Bond, 1998, Ozekhome, 2018). As an instrumental variable (IV) method, GMM outperforms other IV approaches by sufficiently combining moment conditions and utilizing suitable lagged variables as instruments (Ozekhome, 2019).

Generalized Method of Moments (GMM) Framework

The Generalized Method of Moments was initially developed by Hansen (1982). It is an estimation method, where the estimators are generated from called-moment-conditions. The technique permits non-linear estimation

of regression equations given concerns for heteroschedasticity and cross-correlational returns (Ozekhome, 2017).

A moment condition is captured in the form:

$$g(\theta_0) = E[f(wt, zt, \theta_0)] = 0 \tag{4}$$

where $g(\theta_0)$ represents the *moment condition,* θ denotes the parameter vectors to be estimated; f(·) signifies an *R* dimensional vector of (non-linear) functions; w_t comprises independent variables; while z_t represents the model instruments (.i.e. instruments of the model). It is not possible to calculate the expectation derived in equation (4) for a given sample. Hence, the empirical counterpart of the moment condition is estimated as given:

$$g_T(\theta) = \frac{1}{T}\sum_{t-1}^{T} f(w_t, z_t, \theta) \tag{5}$$

The GMM estimator is used to derive the estimator, $\hat{\theta}_{MM}$, which is the solution to $g_T(\hat{\theta}_{MM}) = 0$. The basic idea of Hansen (1982) GMM is to minimize a quadratic form of the objective function J_T given by

$$J_T = g_T(\theta)' \, W \, g_T(\theta)$$

where $g_T(\theta)$ is a set of *moment conditions,* and *W* is a matrix of arbitrary weight for the instruments. The GMM estimator $\hat{\theta}$ is given by

$$\hat{\theta} = \arg\min_{\theta} J_T = \arg\min_{\theta} g_T(\theta)' W_{gT}(\theta) \tag{6}$$

For the system to be identified, it should be noted that many moment conditions $[g_T(\theta)]$ must at least be present equally as parameters (θ). The estimator in equation (6) above, according to Hansen (1982) is not only consistent but likewise asymptotically efficient, if the weighting matrix W^{-1} is chosen. W^{-1} is the inverse of the asymptotic covariance matrix, and it is optimal given that it produces θ that has the smallest asymptotic variance.

Theoretically, the covariance matrix W is given by:

$$S = \sum_{j=-\infty}^{\infty} E[g_t(\theta) g'_{t-j}(\theta)] \tag{7}$$

where j is the lag length and $g'_{t-j}(\theta)$ is the moment estimates obtained from lagged variables (Ozekhome, 2019).

4. EMPIRICAL RESULTS AND DISCUSSION

4.1. Descriptive Statistics

Table 2 shows the descriptive statistics of the data of the variables. The mean stock return is 3.05 percent, with a median value of 2.12 percent. The maximum and minimum values are 6.88 percent and -0.72 percent, respectively, indicating marked divergence in stock return over the period, a reflection of instability in the market stock return. The standard deviation value of 3.12, further accentuates the variability of stock return in the market in the period under focus. The corresponding mean values for size of market (proxied by market capitalization), risk (proxied by volatility-indicated by 3-months standard deviation of stock returns), market turnover, and transaction costs are 9.25 percent, 7.95, 0.63 and 25.16 percent, respectively.

Table 2: Descriptive Statistics

	Mean	*Median*	*Max.*	*Min.*	*Std. Dev.*
SR	3.05	2.12	6.88	-0.72	3.12
SZ	9.25	8.50	62.25	5.25	7.30
RSK	7.95	7.62	21.25	3.50	5.22
TURN	0.63	0.48	0.77	15.50	0.17
TC	25.16	21.70	32.50	2.26	5.21

Source: Authors' computation

4.2. Disruption Decomposition

A decomposition and disruption analysis of market microstructure, prior to the main analysis is conducted in this section, and reported in Table 3. This is necessary to understand the extent of the idiosyncratic composition of microstructure on stock returns in the period under study.

Table 3: 5-year Decomposition-Disruption Results

	Period						
	1990-1994	*1995-1999*	*2000-2004*	*2005-2009*	*2010-2014*	*2015-2019*	*2020-2024*
P_1	-0.04	-0.006	-0.105	-0.111	0.013	-0.097	-0.312
P_2	-0.211	-0.03	-0.138	-0.213	0.012	-0.213	-0.152
P_3	-0.017	-0.03	-0.125	-0.224	-0.153	-0.116	-0.312
P_4	-0.108	-0.024	-0.163	-0.244	0.128	-0.092	0.051

Source: Authors' computation

The results from the disruptions and decomposition in stock market due to market microstructure in Table 2 indicate that microstructure contributed considerably to market distortions, leading to imperfections such as information asymmetry (information disparities), transaction costs, liquidity constraints, order flow imbalances and market manipulation. These imperfections led to price inefficiencies, volatility, and distortions in market outcomes. These distortions potentially manifest in several ways, including price discovery issues (inefficient price discovery), exorbitant trading costs, price discrepancies, diminished market liquidity, high volatility and non-synchronous trading. As can be observed, the degree of distortions in the market became pronounced beginning from in the 2005-2009 and 2015-2024 periods, encompassing external vulnerabities in the global economic and financial environment due the global financial recession (2007 - 20009), the recessionary phase in Nigerian in the latter part of 2014, and the COVID-19 (2019 - 2020), as well as other domestic and international social upheavals, with the attendant detrimental effects on domestic and international capital markets. Such huge disruptions significantly affected asset returns, leading to massive financial contagion and herd's behavious and thus asset price volatility and decline.

4.3. GMM Results

The results from the GMM estimation depicting microstructure variables and stock return is shown in Table 4.

Table 4: Market Microstructure - Stock Return Model

Two-Step -GMM Estimates

Variable	*Coefficient*	*t-Stat.*
SR (-1)	0.074**	2.011
SZ	0.733**	2.1116
RSK	-0.821***	-2.322
TV	0.143**	2.163
TC	-0.093	-1.124
BD	-0.212**	-2.217
Post-Diagnostics		
Mean VIF	2.32	
J-Stat	5.25 (0.77)	
AR (1) AR(2)	-3.242 (0.002) *** -0.73 (0.65)	

*, **, *** denotes statistical significance at the 10% and 5% and 1 significance level, respectively
Source: Authors' computation

Lagged stock returns is positively related with stock returns and significant at the 5 percent level, justifying the dynamic nature of the model; an indication of stock return persistence. The implications of this is that stock return follows a dynamic trajectory in which a battery of microstructure factors tend to perpetuate its pattern. This finding is in consonance with Obizhaeva (2009) and Plerou et al (2010).

Idiosyncratic risk is negatively signed and significant at the 1 percent level. This implies that market participants are highly risk-averse and tend to diminish their investment during a bearish market. Such risk tends to induce volatility in the market due to uncertainty and destructive speculative behaviour by market participants. A unit percent increase in stock-specific idiosyncratic risk is associated with a decrease in stock return by 0. 82percent.

Market size- measured by market capitalization is positively related to tock returns and statistically significant at the 5 percent level. Thus, the larger the market capitalization, the greater the stock returns, in line with the market size hypothesis. Given such large market size, investors are attracted to the market with a resultant increase in liquidity. Without doubt, well capitalized economy tends to have greater investment, credibility and confidence which, stimulates market activities. A 1 percent increase in market size corresponds to an increase in stock return by 0.73 percent.

Market turnover- captured as atio of value of stock transaction to market capitalization, indicating stock market activity is positively signed, and significant at the 5 percent level. Thus, the greater the stock turnover, higher the buzz in the market and the higher the expected security return. Invariably, increased investment participation in diversified portfolio, given greater confidence in the market in line with the line with positive expectation hypothesis, engenders greater stock return. The result is however at variance with the findings of Madhavan (2000). A 1 percent rise in market turnover induces stock returns by approximately 0.14 percent.

Transaction cost is negatively related to stock return but fails the significance test. This is an implication that although high transaction costs have detrimental impact on stock market activities, the impact is not significant given the expectation of higher returns on investment, in line with the market expectation and marginal efficiency theories of investment. The result corroborates the findings of O' Hara and Saar (2001) and in contrast to

that of Matvos et al. (2017).

Finally, trading behaviour –captured by market behavioural dummy is negatively related to asset returns and statistically significant at the 5 percent level. This implies that market manipulation, such as insider trading, fraudulent and deceitful activities, as well as information hoarding tend to cause the disruption of stock returns from their fundamental equilibrium or intrinsic value. Market abuse and insider trading in the form of uneven playing field significantly disrupts returns by distorting market prices, reducing investor confidence, undermining market integrity and reducing investors' confidence. This finding is consistent with the findings of Mohammed (2021) and Said et al (2024). A 1 percent rise in insider trading another market abuse and sharp practices is associated with a decrease in stock returns by 0.21 percent.

Based on the significance of the microstructure variables, there is thus clear evidence of market microstructure in the Nigerian capital market. The post diagnostic test of robustness and validity of results show a mean variance inflation factor (VIF) of 2.32, indicating the absence of multicollinearity in the model results, and Hansen -J over-identification statistic of 5.25, with a corresponding probability value of 0.77, which fails the null hypothesis of the existence of endogenmeity and over-identifying restrictions. The instruments used are therefore, valid and robust. The post-estimation evidence also confirms the rejection of the null hypothesis of no serial correlation at order 2 {i.e. *AR* (2) = –0.73 (0.65)}. The model is therefore robust and consistent for policy formulation and implementation purposes.

5. CONCLUSION

Market microstructure dynamics is important to appropriate price determination of securities in the market. It is specific about the mechanism and specific market variables used to accomplish trading. As such, it impinges on market efficiency, securities values, liquidity, market transparency and transaction costs. This study provides fresh empirical evidence and new insights into market microstructure dynamics and its impact on asset returns in Nigeria, highlighting the importance of understanding trading mechanisms, liquidity and information asymmetry in shaping market outcomes, and offering valuable insights for investors, policy makers, and market regulators seeking to enhance market efficiency and stability.

Specifically, the findings revealed that market microstructure factors have significant impact on asset returns. The recognition that microstructure dynamics significantly impact market transaction costs, prices of assets, quotes, volumes and trading behavior, and ultimately asset return is critical to efficient investment analysis. Based on the findings, it is recommended that a combination of robust regulatory frameworks, enhanced institutional capacity, and innovative and technological solutions be implemented to promote market efficiency, transparency, and stability in Nigeria's stock market.

Directions for Further Study

Future studies should investigate why traders prefer continuous to intermittent trading systems or equivalently; why network externalities do not unify markets, as well as empirical explanation for diversity in trading mechanisms across assets and markets. Investigating the impact of other behavioural finance phenomena, such as herd behavior, and specific psychological biases, including, anchoring, confirmation bias, hindsight bias, loss aversion, and calendar effects, on asset returns is also a promising area for further investigation.

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