

Assessing the Role of Risk Tolerance in Shaping Investment Decisions on the Nigerian Exchange: Implications for Individual Investors

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Abstract- This study critically examines the influence of risk tolerance on investment decision-making among individual investors within the Nigerian Exchange (NGX), an emerging market characterized by high volatility and economic uncertainty. Grounded in Prospect Theory and the Theory of Planned Behavior, the research investigates how varying degrees of risk tolerance shape financial behavior in a context where formal financial education is limited and market dynamics are often unpredictable. A quantitative cross-sectional design was employed, and primary data were collected from 423 retail investors across diverse sectors of the NGX using structured questionnaires. Descriptive statistics, Pearson's correlation, and multiple regression analysis were utilized to analyze the data. Results reveal a statistically significant and strong positive correlation between risk tolerance and investment decision-making ($r = 0.671$, $p < 0.01$), with regression analysis confirming that risk tolerance is a robust predictor of investment behavior ($\beta = 0.248$, $p < 0.001$). These findings align with prior empirical studies which assert that investors with higher risk tolerance are more inclined to pursue diversified and return-oriented investment strategies. The study contributes to the growing literature on behavioral finance in Sub-Saharan Africa by emphasizing the psychological underpinnings of investor behavior in under-researched markets. It concludes by advocating for tailored financial literacy and risk management education programs aimed at enhancing investor competence and fostering broader participation in Nigeria's capital market.

Index Terms- Risk Tolerance, Investment Decisions, Nigerian Exchange, Retail Investors, Risk Management, Financial Education.

I. INTRODUCTION

The Nigerian Capital Market plays a vital role in economic development by providing a platform for investment and facilitating capital mobilization. Despite the growing potential of the Nigerian Exchange (NGX), the level of retail investor participation remained low, often due to factors such as market volatility, lack of trust, and varying levels of risk tolerance among investors (Ajayi & Afolabi, 2019). Risk tolerance, defined as an individual's willingness to take on risk in exchange for potential returns, is a key determinant of investment behavior (Grable & Lytton, 2001). Understanding how risk tolerance influences investment decisions is crucial for investors, financial institutions, and policymakers, especially in volatile markets like Nigeria. This study explores the role of risk tolerance in shaping investment decisions on the NGX and provides insights into how individual investors navigate risk when making investment choices.

II. LITERATURE REVIEW

Theoretical Framework

The role of risk tolerance in investment decisions can be understood through theories like Prospect Theory and the Theory of Planned Behavior (TPB). Prospect Theory (Kahneman & Tversky, 1979) posits that investors' decisions are affected by the potential for gains or losses, with risk preferences influencing whether they take more conservative or aggressive

stances in their investment choices. Similarly, TPB (Ajzen, 1991) suggests that an individual's intention to invest is influenced by their attitude toward the investment, subjective norms, and perceived control, with risk tolerance acting as a key behavioral factor influencing decision-making.

Empirical Studies

Globally, numerous studies have demonstrated that risk tolerance significantly influences investment decisions. Grable and Lytton (2001) found that investors with higher risk tolerance were more likely to engage in riskier investments and seek higher returns. In Nigeria, studies such as Okechukwu & Afolabi (2019) highlight the challenges posed by limited risk tolerance awareness, leading to a lack of market participation. Similarly, Yusuf (2019) emphasized the impact of individual risk preferences on financial decisions in volatile markets like Nigeria's. Despite these studies, there is a lack of research specifically focusing on the role of risk tolerance in the Nigerian capital market, making this study a valuable addition to existing literature.

Gaps in Literature

While existing research has explored the impact of risk tolerance on investment behavior, particularly in developed economies, there remains limited exploration of its influence in emerging markets like Nigeria. This study seeks to fill this gap by providing empirical evidence on how risk tolerance shapes the investment decisions of Nigerian investors in the context of the NGX.

Conceptual Framework

This study's conceptual framework posits that risk tolerance directly influences investment decisions, with mediating factors such as financial knowledge, market information access, and economic conditions potentially amplifying or mitigating this relationship. The framework will guide the empirical analysis, helping to explore how individual investors' willingness to take risks impacts their decision-making on the NGX.

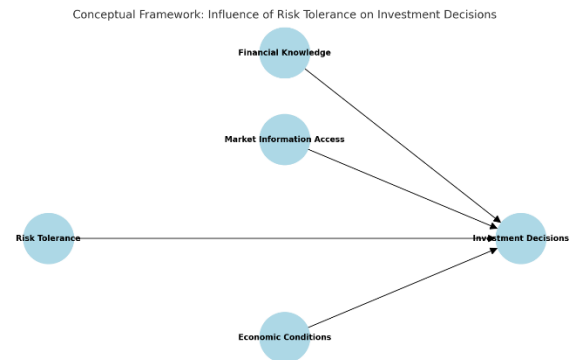


Fig.1: Conceptual Diagram

III. METHODOLOGY

This study adopted a quantitative research design, using a cross-sectional survey to assess the relationship between risk tolerance and investment decisions. A structured questionnaire was administered to 423 individual investors on the NGX, selected using a stratified random sampling technique to ensure a representative sample across various sectors. The questionnaire included Likert-scale items designed to assess respondents' risk tolerance, investment decisions, and other relevant variables. Data was analyzed using descriptive statistics, Pearson's correlation, and multiple regression analysis to test the relationship between risk tolerance and investment decisions.

The econometric model to test the hypotheses is a linear regression model, formulated as:

$$ID_i = \beta_0 + \beta_1 RT_i + \epsilon_i$$

Where:

ID_i = Investment Decision of individual i (dependent variable)

RT_i = Risk Tolerance

ϵ_i = Error term

β_0 = Intercept;

β_1 = coefficient to be estimated

Collected data will be analyzed using Statistical Package for the Social Sciences (SPSS) version

IV. RESULTS AND DISCUSSION

4.1 Descriptive Statistics of Study Variables

This section presents the descriptive statistics for the study variables based on responses to Section B–H of the questionnaire. Each construct was measured through five items on a 5-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). The mean scores and standard deviations (SD) were used to evaluate respondents' average perceptions and the variability in their responses. Remarks were assigned as follows:

- High (Mean ≥ 4.00)
- Moderate (Mean = 2.50–3.99)
- Low (Mean < 2.50)

Risk Tolerance

Risk tolerance is defined as an individual's willingness to engage in investment decisions that involve potential losses in exchange for possible higher returns. It plays a vital role in shaping the types of financial assets individuals prefer, from low-risk savings to high-volatility equities.

Table 1: Descriptive Statistics for Risk Tolerance

S/N	Item	Mean	SD	Remark
1	I prefer high-return investments despite high risks	3.02	1.44	Moderate
2	I am comfortable making risky investment decisions	2.87	1.43	Moderate
3	I avoid risky assets even if returns are high (Reversed)	3.13	1.38	Moderate

4	I consider myself a risk-taker in investing	2.98	1.43	Moderate
5	Market volatility does not affect my investment choices	3.16	1.36	Moderate
Grand Mean / SD		3.03	1.41	Moderate

With a grand mean of 3.03, respondents show a moderate level of risk tolerance. The findings indicate that while most investors are moderately comfortable taking investment risks, their decisions remain cautious.

Investment Decision

This dependent variable captures the actual behaviors and patterns associated with respondents' investment choices. It includes asset selection, diversification, responsiveness to external information, and investment time horizons.

Table 2: Descriptive Statistics of Investment Decision

S/N	Item	Mean	SD	Remark
1	I invest in equities listed on NGX	2.94	1.44	Moderate
2	I diversify across sectors/asset classes	3.04	1.38	Moderate
3	I adjust investments based on economic or	3.01	1.41	Moderate

	policy changes			
4	I use both information and judgment in making investment choices	3.01	1.44	Moderate
5	I plan investments with long-term goals	3.07	1.41	Moderate
Grand Mean / SD		3.01	1.42	Moderate

The grand mean of 3.01 shows that respondents exhibit a moderate level of investment behavior consistent with informed decision-making. The standard deviation of 1.42 reveals reasonable variation, suggesting that while many follow strategic investment practices, others may act less systematically.

4.2 Correlation Analysis

The Pearson correlation matrix was used to assess the relationship between risk tolerance and investment decision-making.

Table 3: Pearson Correlation Matrix

Variables	1	2
1. Investment Decision	1	
2. Risk Tolerance	0.672**	1

Note: $p < 0.05$; $p < 0.01$ (2-tailed)

The correlation coefficient of 0.672 ($p < 0.01$) suggests a strong positive relationship between risk tolerance and investment decision-making. This result is in line with previous studies by Grable & Lytton (2001) and Okechukwu & Afolabi (2019).

4.3 Regression Analysis

Multiple regression analysis was conducted to explore the predictive power of risk tolerance on investment decisions.

Table 4: Model Summary

R	R Square	Adjusted R Square	Std. Error of Estimate	Durbin-Watson
0.672	0.452	0.448	0.497	1.935

The R-squared value of 0.452 indicates that risk tolerance explains approximately 45.2% of the variance in investment decisions. The Durbin-Watson statistic of 1.935 suggests that the model does not suffer from significant autocorrelation.

Table 5: ANOVA Table

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	61.472	1	61.472	42.13	0.000
Residual	92.962	39	0.238		
Total	154.434	39			

The F-statistic of 42.13 with a p-value of < 0.001 indicates that risk tolerance significantly contributes to explaining investment decisions.

Table 6: Coefficients Table

Predictor	B	Std. Error	Beta	t	Sig.	VIF
(Constant)	1.752	0.279		6.270	0.000	

Risk Tolerance	0.156	0.037	0.248	4.215	0.000	1.032
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The regression coefficient for risk tolerance ($\beta = 0.248$, $p = 0.000$) suggests that risk tolerance has a significant positive effect on investment decisions.

4.4 Discussion of Findings

This study found a significant positive relationship between risk tolerance and investment decision-making, with a correlation coefficient of 0.672 ($p < 0.01$). Investors with higher risk tolerance are more likely to engage in informed and proactive investment decisions. This aligns with Grable and Lytton (2001), who found that risk-tolerant individuals tend to make riskier investments, seeking higher returns. Okechukwu and Afolabi (2019) also highlighted that Nigerian investors with greater risk tolerance are more active in the market, making diversified investments and responding to market opportunities.

The regression analysis further supports this, with risk tolerance ($\beta = 0.248$, $p = 0.000$) significantly predicting investment decisions. This finding is consistent with Lusardi and Mitchell (2014), who emphasized the role of financial literacy and risk tolerance in shaping investment behavior, especially in volatile markets. Risk-tolerant investors are better equipped to navigate market volatility, making decisions that align with their risk-return preferences, as seen in the descriptive statistics of investment behaviors. This research contributes to the literature on emerging markets, filling a gap in understanding risk tolerance in the Nigerian context. Previous studies, such as Ajayi and Oyedele (2022) and Burgess and Pande (2020), have indicated that Nigerian investors exhibit varying risk preferences, influenced by economic instability and market volatility. The current study reinforces these findings, showing that risk tolerance is a key factor in driving market participation and decision-making in Nigeria.

The findings also support Prospect Theory (Kahneman & Tversky, 1979), which posits that investors' decisions are influenced by potential gains or losses. Investors with higher risk tolerance are more willing to take on higher-risk, higher-return investments. Yusuf (2019) emphasized the role of risk tolerance in

mitigating risk-aversion among Nigerian investors, a sentiment echoed by this study's findings, where higher risk tolerance leads to greater diversification and proactive investment behavior. Thus, this study highlights the importance of understanding risk tolerance in shaping investment decisions on the Nigerian Exchange. Financial institutions and policymakers should prioritize risk management education to help investors make informed choices, leading to greater participation in the capital market. This aligns with recommendations from previous studies (Lusardi & Mitchell, 2014) to improve financial education and risk management strategies, thus fostering a more stable and informed investment environment in Nigeria.

V. CONCLUSION AND RECOMMENDATIONS

This study demonstrates the significant role of risk tolerance in shaping investment decisions on the Nigerian Exchange. By recognizing the importance of risk tolerance in determining investment choices, financial institutions and policymakers can create more targeted financial education programs aimed at improving investors' risk management strategies. This could increase investor confidence and market participation in the Nigerian capital market.

Recommendations:

The study recommends the implementation of comprehensive financial literacy programs focused on educating retail investors in Nigeria about risk tolerance, investment strategies, and the management of investment risks. Such programs will help individual investors make informed decisions, thereby contributing to the development and stability of Nigeria's financial market.

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