

# **Impact of Equity Issuance Digitalization on Capital Market Development in Nigeria**

**BEIDA, Philip Ozovehe**

Department of Accounting,  
Bingham University,  
Karu, Nasarawa State

E – Mail: philipbeida@yahoo.com, Phone No: +234 7037885439

## **Abstract**

*The paper seeks to understand the impact that automation of equity issuance has on the overall development of the capital market in Nigeria. In December 2021, The Nigerian Exchange Limited evolved an automation process for issuing shares. For the first time in the Nigeria Exchange's history, an offer for sale was made using a digital platform called 'Primary offer'. The offer of MTN Nigeria Communications Plc was the pivot for these feet. This achievement was part of a long-term plan for digitalising the capital market. The major objective of the study was to determine if the automation impacted the prize of MTN shares in the capital market and, by extension, whether this impact affected the capital market development in any significant way. Data was assembled pre and post subscription, and Ordinary least square (linear regression) was used to regress the data. The study's major limitation was the availability of sufficient data to act as proxies to manage the variables identified. While the result revealed an increase in the prize of shares subscribed and traded in the exchange following the automation, no significant effect on the prize was detected, making us conclude that digital automation, though an effective tool in improving the efficiency of the market but may not have impacted on the All-share index. The study therefore recommends more players needs to be encouraged to participate in the exchange in other to achieve the desired depth for the market and, by extension, develop the capital market.*

Keywords: Equity, Automation, Digitalisation, Nigerian Exchange Group (NGX)

## **INTRODUCTION**

The increase in data collection and analysis recorded in the global markets presents an opportunity for Nigeria's capital market to achieve key sustainable development targets across other sectors of the economy via digital transformation (Popoola, 2021). Therefore, it is a consensus that automation and digital identity have come to improve the efficiency of the Nigerian capital market. Today, capital market activities are driven by new technology that is expected to synchronise its operations with the global trend so that the Nigerian Capital Market can effectively compete in the global markets. (Odeleye, 2010). According to Popoola (2021), the Managing Director of The Nigerian Exchange, 'digital transformation is a required step for Nigeria's capital market to deepen financial literacy further and increase the contributions of the capital market to national development. He said, "Having a digitally inclusive capital market structure would save time and resources, sustain the symbiotic relationship and strengthen partnerships among stakeholders.

MTN Nigeria's offer to sell stock options available to investors via a digital platform is one of its kind concerning such innovation and or technological disruptions that can be available in deepening the financial framework and structure of the capital market. There has been a remarkable feet experienced with the MTN Nigeria offer for sale stock options recently experienced in Nigeria. The objective of the exercise is to enhance the share offerings for the company. Public reports available were that the stocks were oversubscribed. An indication that might mean that investors were happy with the process rather than the offer, as it is widely known that an offer for sale is less attractive than an offer for subscription. The fundamentals of the company drive the latter. The seminar paper seeks to determine if there is a causal relationship between the democratisation of shares issuance and the Nigerian Exchange (NGX) activities, as demonstrated in the traded price.

## **LITERATURE REVIEW**

### **Conceptual Framework**

## **Capital Markets**

Activities in the Nigerian Capital Market have been driven by disruptive technologies that are expected to align its operation with the international best practice so that the Exchange can favourably compete in the global markets to attract local and international investors (Odeleye, 2010). This section is a modest attempt to bring up to speed on these innovations. The literature review will explain the variables in the study. The major problem confronting most emerging economies includes the ‘lack of finance’ either for the construction of new enterprises facilitating economic development or carrying out expansion plans (UNCTAD, 2012). Several studies have defined Capital Market as a major and important factor in developing and growing any country, whether the economy is emerging or advanced. In his book, Lambe (2021) explained that the difference between Savings and investment in any economy is a measure of the economy’s growth. He explained that any economy seeking to improve the difference between its spending and its investment favourably must ultimately develop its capital market. One possible determinant of financing availability choices for economics is the level of development of financial markets, especially equity markets. (Adediran, 2015). According to Pant & Bishnoi (2003), most finance literature assumes the existence of liquid, well-functioning stock markets. However, economies without an expansion are more attractive; such an expansion could be financed either through additional debt or equity. A fourth possibility is that, by facilitating the flow of information and improving corporate governance, well-functioning stock markets may lower the cost of raising capital. In this case, external finance—both debt and equity— would become less costly, although it is not clear which would increase more. (Adediran et al., 2015)

## **Digital Innovations in the Nigerian Capital Market**

Nigerian Exchange (NGX), a wholly-owned subsidiary of the Nigerian Exchange Group (NGX Group), is a top listing and trading venue in Africa, with its history dating back to 1960. It is an open, professional, and vibrant exchange connecting Nigeria, Africa, and the world (Nigerian Exchange, 2022). The exchange deployed innovative capital market solutions that provide a globally competitive platform for Issuers to raise capital and investors to meet their financial objectives across markets and geographies. NGX is licensed under the Investments and Securities Act (ISA) and is regulated by the Securities and Exchange Commission (“SEC”) of Nigeria (Nigerian Exchange, 2022). The Nigerian Exchange is owned by shareholders and individual Nigerians of high integrity. The Nigerian Exchange has enjoyed increasing prominence since the country embraced a free market economic system upon independence. The Exchange provides a secondary market for investors to buy and sell securities (Odeleye, 2010). The trading mechanism that operated on the floor of the Exchange conformed itself to what is known as the “Call over the system”. Under this system, stockbrokers congregated each working day on the floor of the Exchange at the regular stipulated time, usually 11.00 a.m., prompt for business. (Odeleye, 2010). In April 1997, the Central Securities Clearing System (CSCS) was introduced for certificate depository preparatory. To improve the difference between its spending and its investment favourably) came into the scene in 1999. All listed securities have since then been traded individually through the computer system using the Nigerian Exchange price list. (Odeleye, 2010). A summary of innovation includes the setting up of the Central Securities Clearing System (CSCS), the computerisation of the Nigerian Stock Exchange, the introduction of the Reuters Electronic Contributor System, which beams the capital market operations to the world through the Reuters International Information Network.

## **Overview of MTN Nigeria**

MTN Nigeria is part of the MTN Group, i.e. a multinational telecommunications group which operates in 21 countries in Africa and the Middle East. The company has evolved from an ambitious start-up in 2001 into a market-leading communications provider. (MTN Nigeria, 2019). MTN Nigeria Communications Plc was listed on the Nigerian Exchange by introduction on May 16, 2019. MTN Nigeria became the first Mobile Network Operator listed on the Nigerian Stock Exchange. With an initial Offering of 20,354,513,050 Ordinary Shares of ₦0.02 Each at a premium prize of ₦90 per Share. The objective of the

listing at the time was to promote better liquidity of its ordinary shares in the secondary market and have access to a platform for raising long term capital from a wide range of local and international investors if and when required. (MTN Nigeria, 2019). On 31 December 2015, the Group acquired 100% share capital of Visafone Communications Limited, a company licenced to provide telecommunication service in Nigeria, operating Code Division Multiple Access (CDMA) network for a purchase consideration of N43.78 billion (MTN Nigeria, 2019). As of the 30th of March, 2022, the share price of MTN Nigeria on the exchange stands at ₦210 (Nigerian Exchange, 2022).

### **First Public Offer via Digital Platform in Nigeria**

Nwachukwu (2022) reported the offer on *businessday*, a business Newspaper. According to him, The MTN Public Offer marked the first time a digital application platform was used to democratise investing in a public offer, thus maximising investor participation. He reported that the Offer resulted in 114,938 new CSCS accounts, representing new market participants. The offer was to sell 575 million shares held by the MTN Group in MTN Nigeria (the Offer) to Nigerian investors. The Offer was implemented by way of a bookbuild to qualified institutional investors and a fixed price offer to retail investors.

661.25 million MTN Nigeria shares were allotted because the offer was oversubscribed; it activated the 15% oversubscription clause. A total of 126,720 retail investors submitted valid applications and received a full allotment. The offer also included the Nigerian pension funds administrators who subscribed on behalf of approximately 6.5 million Nigerian contributors.

Following the successful completion of the Offer, MTN Group's shareholding in MTN Nigeria reduced by 3.25 percentage points, from 78.83% to 75.58%. MTN Group adopted a unique structure in this offering by determining a fixed price of N169 per share for the retail offer through a Bookbuild to Qualified I completed on 26 November 2021. The fixed price offer to Retail Investors was at a discount of 11% to the closing price of MTN Nigeria stock on the day the Bookbuild was completed. The Offer commenced on 1 December 2021 and was completed on 14 December 2021. Nigerian investors across the country supported the Offer through multiple channels - Receiving Agents, Issuing Houses and Primary Offer (a digital application platform). (Nwachukwu, 2022). Ralph Mupita, CEO of MTN Group, confirmed that the Offer was the first Nigerian public offer to use the digital application platform, PrimaryOffer, which enabled wider investor participation across Nigeria. It is pertinent to mention that this has come to broaden the inclusion of innovative technologies in the operations of the Nigerian Capital Market.

### **Empirical Framework**

In their study, Sioux & Hmaeid, 2003, *Impact of Automation on Liquidity, Volatility, Stock: Evidence from Tunisian Marke*, concluded that the electronic trading system uses a single screen for prices permits transparent price discovery, thus minimising the 'noise' associated with price determination. Odeleye {2010}, in citing the work of Green et al. (2002) and Ngugi et al. (2003), explained that their study on *The Impact of Microstructure Innovations in Emerging Stock Markets* provided evidence from Stock Markets in India and Africa, respectively, that shows that markets there with advanced trading technology have greater efficiency. Anderson & Vahid (2001) investigated the impact of electronic trading on the pricing efficiency of the London and Australian Stock Exchanges by using smooth-transition error-correction models. These two studies focus on the arbitrage between spot and futures markets of stock indices and report a significant decrease in transaction costs by arbitrageurs. Both conclude that these markets have become more efficient under electronic trading.

Ezirim et al. (2009) utilise the modified Gompertz technology diffusion model to investigate the effects of information and technology on the growth and development of the capital market in Nigeria. The results reveal that growth in the capital market is affected by the interaction between stockbrokers and investors brought about by ICT in the form of internet access, telephone (mainlines and mobile), and access to the websites of stockbrokers. Growth in the total volume and value of shares traded is significantly affected

by communication technology (telephones). Generally, Information Technology has contributed to the growth of the Nigerian Capital Market, with the effect mostly seen in the availability of information to investors and the improvements in the trading patterns of the Nigeria Stock Exchange. It should be noted that between the time of the study and the time of this study, significant innovations and improvements have taken place in the exchange beyond technologies used for communications to real-time automation. However, the study may be significantly true in its form.

## **Theoretical Framework**

### **Efficient Market Hypothesis**

The theory most relevant to this study is the Efficient Market Hypothesis. A market is said to be 'efficient' where large numbers of rational, profit-maximisers are actively competing, each trying to predict future market values of individual securities, and where important current information is almost freely available to all participants (Lambe, 2021). The efficient market hypothesis holds that when new information comes into the market, it is immediately reflected in stock prices; neither technical analysis (the study of past stock prices in an attempt to predict future prices) nor fundamental analysis (the study of financial information) can help an investor generate returns greater than those of a portfolio of randomly selected stock (Logue, 2003). The implications of the hypothesis are truly profound. Most people buy and sell stocks under the assumption that the securities that they are selling are worth less than the selling price (Lambe, 2021)

## **METHODOLOGY**

The study relied on secondary data to assess the impact of equity issuance digitalisation of the MTN Public offer in December 2021 on the capital Market Development In Nigeria. The study relied on the trend of daily prize level changes of the MTN Nigeria on the Market vis a vis the daily NSE all prize index pre and post the issuance. However, the Month of December 2021 was not analysed because it represents the month of Issuance between the 1st of December 2021 to the 15th of December 2021.

The data are drawn from the Daily Official List of the Nigerian Exchanges sourced from Trading Economics and Greenwich Sock Exchange Data reciprocity. Generally, financial research uses estimation techniques such as the GARCH model, ARCH model, VAR model, etc. This study employs the Ordinary Least Square (OLS) estimator. OLS estimator is preferred when estimating a problem characterised by linear regression based on its properties. The following models are specified:

$$\text{NSE ASI} = P(\text{Xit})$$

Where:

$$\text{NSE ASI} = 2 \text{ Months Before the use of Automation}$$

$$P(\text{Xit}) = \text{Prices of shares of MTN Nigeria, 2 Months before Automation.}$$

and;

$$\text{NSE Asia} = P(\text{Xita})$$

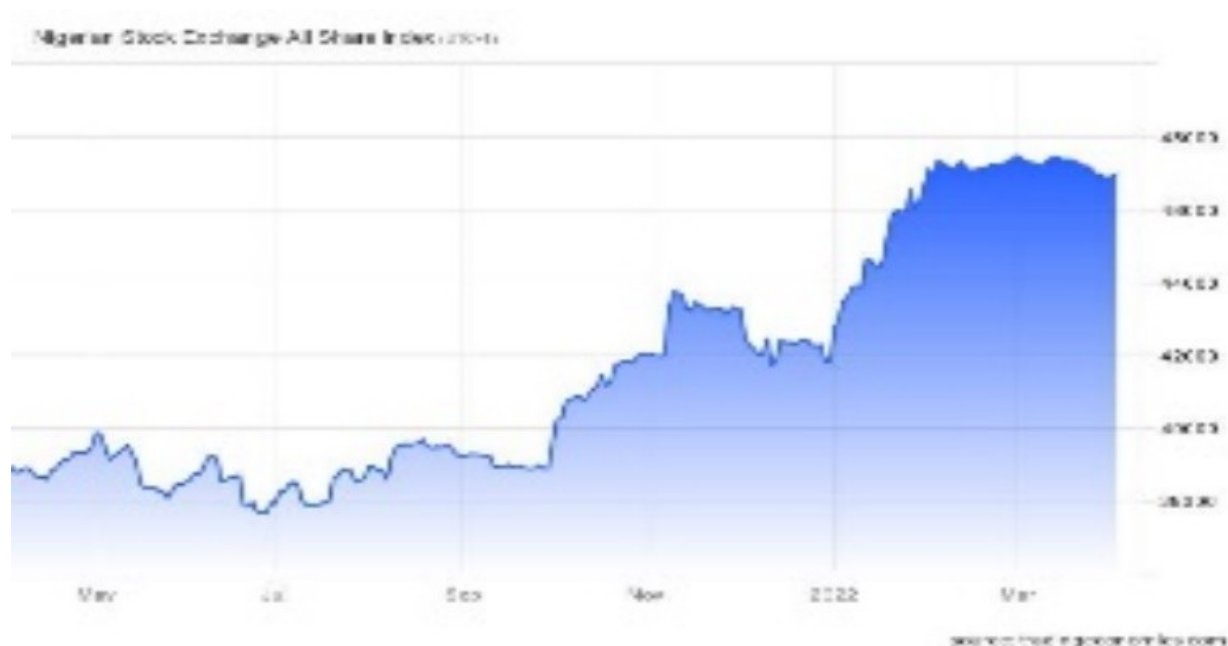
Where:

$$\text{NSE Asia} = 2 \text{ Months after the use of Automation}$$

$$P(\text{Xita}) = \text{Prices of shares of MTN Nigeria, 2 Months after Automation.}$$

**RESULT AND DISCUSSION**

This section begins with a presentation of the summary of the Data analysed. Afterwards, it attempts to explain the empirical results and their analysis. Data are arranged in Pre-Automation (October and November 2021) and Post-Automation (January and February 2022) eras. Detailed results have been provided as an Appendix to this study. Below is a chart that illustrates the linear curve of the growth of the capital Markets All Share Index



**Summary statistics: Post Automation**

**Table 1:** Summary of Secondary Data

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
MTN N Share Prize (post)	39	0	39	185.500	202.500	195.262	4.909
NSE-All Share (post)	39	0	39	43607.940	47482.730	46247.824	1248.427

This table summarises the data analysed, showing the Minimum values, Maximum values, and the extent to which the data deviates from the mean values.

**Table 2:- Correlation matrix Post-Automation**

	NSE-All Share (post)	MTN N Share Prize (post)
NSE-All Share (post)	<b>1</b>	0.538
MTN N Share Prize (post)	0.538	<b>1</b>

This table demonstrates how the all-share index and MTN Shares are correlated. A 54% correlation is observed between the All-share price index and The Prize of MTN Post Automation.

**Table 3: Regression of variable MTN N Share Prize (post):**

Goodness of fit statistics (MTN N Share Prize (post)):

Observations	39
Sum of weights	39
DF	37
R <sup>2</sup>	0.289
Adjusted R <sup>2</sup>	0.270
MSE	17.598
RMSE	4.195
MAPE	1.807
DW	0.454
Cp	2.000
AIC	113.791
SBC	117.118
PC	0.788

This table shows the results of the regression. It indicates that the variables are not significantly regressed. This May signify that the Prize of MTN N post automation does not significantly impact on the All Share Prize Index.

**Summary statistics: Pre Automation**

**Table 4:** Summary of Secondary Data

**Summary statistics: Pre Automation**

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
<b>MTN N Share Prize (pre)</b>	<b>41</b>	<b>0</b>	<b>41</b>	<b>169.900</b>	<b>201.000</b>	<b>181.451</b>	<b>9.082</b>
<b>NSE-All Share (pre)</b>	<b>41</b>	<b>0</b>	<b>41</b>	<b>40243.050</b>	<b>43730.550</b>	<b>42210.466</b>	<b>1054.848</b>

This table gives a summary of the data analysed, showing the Minimum values, Maximum values, and the extent to which the data deviates from the mean values

**Table 5 - Correlation matrix: Pre Automation**

	NSE-All Share (pre)	MTN N Share Prize (pre)
NSE-All Share (pre)	1	0.855
MTN N Share Prize (pre)	0.855	1

This table demonstrates how the all-share index and MTN Shares are correlated. An 86% correlation is observed between All share prize index and The Prize of MTN Post Automation.

Regression of variable MTN N Share Prize (pre):

Goodness of fit statistics (MTN N Share Prize (pre)):

Observations	41
Sum of weights	41
DF	39
R <sup>2</sup>	0.731
Adjusted R <sup>2</sup>	0.724
MSE	22.790
RMSE	4.774
MAPE	2.006
DW	0.543
Cp	2.000
AIC	130.129
SBC	133.556
PC	0.297

This table shows the results of the regression. It indicates that the variables are indeed significantly regressed. This may signify that the MTN N post automation Prize significantly impacts the All Share Prize Index.

### **Discussion of Findings**

The regression suggests well the price of the shares of MTN Nigeria impact the general improvement of the Capital Market (proxied by the All-share index) when the Automation of the Equity Issuance was introduced. At face value, the All share price index was not significantly regressed towards the share prize level of MTN Nigeria Post Automation, especially when compared to the same data and period pre- Automation. However, in interpreting Linear regression, it is important to understand that the values indicate how much of the model can be explained by the data provided., A 29% regression may suggest that we can only explain 29% of the data and that 71% of the data cannot speak to the impact Equity issuance via automation has on the capital market in the period Post automation. Therefore, results suggest that other factors need to be considered in determining if the digitalisation of Equity issuance improves the overall efficiency of the capital market.

### **CONCLUSION AND RECOMMENDATIONS**

Equity Issuance Digitalisation is a new innovation and a worthwhile development in the Nigerian Capital Market. Its first happened in Nigeria on 1st of December 2021. Noteworthy is the fact that the identities of new subscribers are tracked digitally, and as such, the development is pioneering in the history of the Nigerian Capital Market. The use of the application 'Primaryoffer' brought wide publicity and awareness to the market, thus credibility. This is an indication that the introduction of Equity Issuance Digitalisation is contributing to the growth of the Market. Therefore, it is recommended that further studies be conducted into measure this growth holistically. This would improve the general knowledge as to the impact of Digitalisation on the capital Market Development in Nigeria.

### **References**



- Adediran, O. A., Adeyemo, K. S., & Alalade, S. (2015). Globalisation, Capital Market and Economic Development in Nigeria. *Journal of Governance and Regulation, Volume 4*(Issue 1), 57 - 62.
- Anderson, H. M., & Vahid, F. (2001). Market Architecture and nonlinear Dynamics of Australian Stock and Futures Indices. *Australian Economic Papers, 40*(No 4), 541-566.
- Erasmus, E. G., Nkiru, O. A., & Ifeanyi, O. G. (2021, April). Capital Market Indicators And Economic Growth In Nigeria. *European Journal of Accounting, Finance and Investment, Vol. 7*(No.4). [https://www.researchgate.net/publication/351359978\\_CAPITAL\\_MARKET\\_INDICATORS\\_AND\\_ECONOMIC\\_GROWTH\\_IN\\_NIGERIA](https://www.researchgate.net/publication/351359978_CAPITAL_MARKET_INDICATORS_AND_ECONOMIC_GROWTH_IN_NIGERIA)
- Ezirim, C. B., Adebayo, R. U., Elike, U., & Muoghalu, M. I. (2009). Capital Market growth and Information Technology: Empirical Evidence from Nigeria. *International Journal of Business and Economics Perspectives, Volume 4*(Number 1). 10.1.1.476.3815 This paper utilises the modified Gompertz technology diffusion model to investigate the effects of information and technology on the growth and development of the capital market in Nigeria. The results reveal that growth in market capitalisation
- Lambe, I. (2021). *Essentials of Financial Management (Theory and Practice)* (Second Edition ed.). Kajolam Fruitful Ventures.
- Logue, A. C. (2003). *Summary of 'Efficient Market Hypothesis: Validity & Criticisms'*. CFA Institute. Retrieved March 31, 2022, from <https://www.cfainstitute.org/en/research/cfa-digest/2003/11/the-efficient-market-hypothesis-and-its-critics-digest-summary>
- MTN Nigeria. (2019, May 15). *Listing Memorandum by Introduction on the Board of the Nigerian Stock Exchange*. Home - MTN Online. Retrieved March 30, 2022, from <https://www.mtnonline.com/>
- Nigerian Exchange. (n.d.). *Equities Price List - Nigerian Exchange Limited*. Nigerian Exchange Group. Retrieved March 30, 2022, from <https://ngxgroup.com/exchange/data/equities-price-list/>
- Nigerian Exchange (NGX). (n.d.). *About Us - NGX Real Estate Limited*. Nigerian Exchange Group. Retrieved March 30, 2022, from <https://ngxgroup.com/about-us/>
- Nwachukwu, I. (2022, February 1). MTN Nigeria public offer oversubscribed by 139.47%. *Businessday.ng*. <https://businessday.ng/companies/article/mtn-nigeria-public-offer-oversubscribed-by-139-47/>
- Odeleye, A. T. (2010, December). The effect of Automation on Price and Volume of Stocks in the Nigerian Capital Market. *Finance & Banking Review, Volume 3*(1 & 2). [https://www.researchgate.net/publication/323586995\\_THE\\_EFFECTS\\_OF\\_AUTOMATION\\_ON\\_PRICE\\_AND\\_VOLUME\\_OF\\_STOCKS\\_IN\\_THE\\_NIGERIAN\\_CAPITAL\\_MARKET/link/5a9ef68baca272d448ada8eb/download](https://www.researchgate.net/publication/323586995_THE_EFFECTS_OF_AUTOMATION_ON_PRICE_AND_VOLUME_OF_STOCKS_IN_THE_NIGERIAN_CAPITAL_MARKET/link/5a9ef68baca272d448ada8eb/download)
- Pant, B., & Bishnoi, T. R. (2003). Testing Random Walk Hypothesis for Indian Stock Market Indices. *Citeseerx*. 10.1.1.460.8341
- Popoola, T. (Executive Producer). (2021). *Digital platforms: A new frontier for capital market inclusion* [TV series]. Securities and Exchange Commission (SEC). <https://www.youtube.com/watch?v=yTUBJ-pyTbg> (Original work published 2021)
- Sioud, O., & Hmaeid, D. (2003). The Impact of Automation on Liquidity, Volatility, Stock : Evidence from Tunisian Market. *Working Paper Institut des Hautes Etudes Commerciales de Tunis*.
- UNCTAD. (2012). *Entrepreneurship Policy Framework II and Implementation Guidance*. UNCTAD. Retrieved March 30, 2022, from [https://unctad.org/system/files/official-document/diaeed2012d1\\_en.pdf](https://unctad.org/system/files/official-document/diaeed2012d1_en.pdf)