

Delisting and Market Performance of Nigerian Stock Exchange: (1998 – 2018)

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Abstract

This study evaluated the effect of delisting on the performance of the Nigerian Stock Exchange (NSE) by evaluating the effect of delisting on market capitalization; Stock Traded and All Share Index as market performance indices. Three research questions were raised and three hypotheses were formulated to guide the study. The study adopted a longitudinal research design using secondary data obtained through data capture sheet, extracted from the annual reports of the Nigerian Stock Exchange, for the period of 21 years ranging from 1998-2018. The data collected were analyzed using simple linear regressions with SPSS 20 software. All hypotheses were tested at 5% level of significance. Results from the data analyzed revealed that there is significant effect of delisting on market capitalization and stock traded but there is no significant effect on all share indexes. Based on the findings of the study, the following recommendations are made: Listed firms should be supported and given certain financial waivers so as to encourage them to be effective in the market and this would remove the constraints to growth in the Nigerian capital market and especially the stock market; alternative substitute measures to delisting should be employed by the NSE to enforce compliance, example; imposition of fine etc.

Keywords: Delisting, market capitalization, stock traded, all-share index

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1. Introduction

The Nigerian Stock Exchange (NSE) is highly organized institution dealing in stocks and shares and through the stock, shares and debentures, companies could raise capital. To get listed on the Nigerian stock exchange, a company must meet with the minimum requirements of the NSE (the Exchange) in addition to complying with the exchange's rules governing listing, comply with the relevant provisions of Companies and Allied Matters Act 2004 (as amended), the investment and securities Act 1999, rules and regulations made there under and other relevant statutory requirements (proshare, 2015). Stock exchanges have these requirements because their reputation rests on the quality of the companies that trades on them. Not surprisingly, the Exchange wants companies that have solid management and good track record. However, an exchange's duty to maintain its credibility does not end once a company becomes successfully listed. To stay listed, a company must maintain certain ongoing standards imposed by the Exchange. These requirements serve to reassure investors that any company listed on the exchange is a suitably credible firm, regardless of how much time has passed since the firm's initial listing (Cory & Jansen, 2014) and stocks of listed companies that are unable to maintain the requirements are delisted from the exchange. Until recently, there has been a hike in the number of companies being delisted from the NSE, even in the face of general downturn in economic activities in the country. (Financial watch, 2018). Delisting could either be voluntary or involuntary delisting also known as regulatory or compulsory delisting (financial watch, 2018). While delisting can be either regulatory or voluntary, the Nigerian bourse has recorded more of regulatory delisting than voluntary so far in 2015 (stock hub).

The Nigerian stock exchange witnessed 90 delisting between 2002 and 2017 (financial watch, 2018). This delisting were both voluntarily and compulsorily. In 2016, the NSE forcefully delisted 15 companies from the capital market on the heels of non compliance with post listing requirements of the (Nigerian news direct, 2016). However Companies that are delisted are not necessarily bankrupt and may continue trading over the counter if listing requirements are regularized. Seguin and Smoller (1997) examined the mortality of newly listed NASDAQ (National Association of Securities Dealers Automated Quotations) stocks. Based on a sample of 5896 delisted firms from 1974 to 1988, they distinguished between two primary determinants for the mortality of firms: market capitalization and stock price. Empirical results showed that mortality is related to the stock price: the death rate is higher for stocks with lower prices. After controlling for price, they concluded that market capitalization has additional explanatory power. This study therefore seeks to provide empirical evidence on the effect of delisting on market capitalization, stocks traded and All-share index, from Nigerian market perspective.

1.1. Objectives of the Study

The general objective of this study is to evaluate the effect of delisting on the performance of the Nigerian Stock Exchange. The specific objectives are;

1. To determine the effect of delisting on Market Capitalization

2. To ascertain the extent to which delisting affect Stock traded.
3. To assess the effect of delisting on All Share Index.

1.2. Research Questions

1. How does delisting affect Market Capitalization
2. To what extent does delisting affect Stock traded on NSE?
3. What is the effect of delisting on the All Share Index?

1.3. Statement of Research Hypotheses

To provide answers to the above questions, we utilized the following null hypotheses:

Ho: There is no significant effect of delisting on market capitalization

Ho: Delisting has no significant negative effect on All Share Index

Ho: Delisting has no significant effect on stock traded.

2. Literature review

2.1. Conceptual framework

2.1.1. The Nigerian Stock Exchange

The Nigerian Stock Exchange (NSE) was established in 1960 as the Lagos Stock Exchange. In 1977, its name was changed from the Lagos Stock Exchange to the Nigerian Stock Exchange. The Securities and Exchange Commission (SEC) is the apex regulatory institution of the Stock Exchange that provides the platform for issue of shares and other securities to the public, including stock trading. It also monitors and controls the capital market and ensures compliance with post-listing requirement (www.sec.gov.ng). Just like in other climes, before a company is listed on the Nigerian Stock Exchange (NSE), there are certain requirements they must meet. Then after listing, there are also standard requirements they must meet. These include among others, regular dissemination of information about the financial performances and any changes that can affect their operations. However, over the years, many quoted companies have been violating this important obligation, thereby keeping investors in the dark about their financial health among others.

2.1.2. Delisting and the Nigerian stock exchange

Delisting refers to the removal of a security from active trading. It generally occurs when a company goes private, is bought out, declares bankruptcy or fails to meet listing requirements (Investopedia, 2018). Delisting is the process by which a listed security is removed from the exchange on which it trades. A company can voluntarily ask to be delisted to become privately traded. Otherwise, a particular stock may be removed from an exchange because the company for which the stock is issued is not in compliance with the listing requirements of the exchange (Investopedia, 2018). Getting and staying listed to trade on a major exchange such as the Nigerian stock exchange (NSE) requires companies to meet many complex rules. There are also significant legal and compliance costs associated with a listing. As such, in some cases, companies choose to be delisted and, in more frequent cases, are forced to be delisted. The below table presents, the history of NSE delisting, and reasons for delisting of the companies.

Table 1: Delisted Firms 2002- February 2019

S/N	COMPANY	DATE DELISTED	REASON FOR DELISTING
1	IMPRESIT BAKOLORI PLC	2002	Voluntary
2	DUMEZ NIGERIA PLC	2002	Regulatory: NSE
3	CFOA NIGERIA PLC	2007	Voluntary
4	ACEN INSURANCE PLC	2008	Regulatory: NAICOM
5	ATLAS NIGERIA PLC	2008	Regulatory: NSE
6	CERAMICS MFG. COY. PLC	2008	Regulatory: NSE
7	AMICABLE INSURANCE PLC	2008	Regulatory: NAICOM
8	BAICO INSURANCE PLC	2008	Regulatory: NAICOM
9	BEVERAGES (WA) NIG. PLC	2008	Regulatory: NSE
10	ENPEE PLC	2008	Regulatory: NSE
11	TATE INDUSTRIES PLC	2008	Regulatory: NSE
12	MAUREEN LAB. PLC	2008	Regulatory: NSE
13	RIETZCOT NIGERIA PLC	2008	Regulatory: NSE
14	INTRA MOTORS NIG. PLC	2008	Regulatory: NSE
15	AVIATION DEV. COY. PLC	2008	Regulatory: NAICOM
16	GROMMAC INDUSTRIES PLC	2008	Regulatory: NSE
17	ONWUKA HI-TEK. PLC	2008	Regulatory: NSE

S/N	COMPANY	DATE DELISTED	REASON FOR DELISTING
18	NIGERIAN LAMPS PLC	2008	Regulatory: NSE
19	NIGERIAN YEAST & ALCAHOL MFG. PLC	2008	Regulatory: NSE
20	SECURITY ASS. PLC	2008	Regulatory: NAICOM
21	SUN INSURANCE PLC	2008	Regulatory: NAICOM
22	NIGERIAN TEXT. MILLS PLC	2008	Voluntary
23	FOOTWEAR MFG. PLC	2009	Regulatory: NSE
24	FERDINAND OIL MILLS PLC	2009	Regulatory: NSE
25	CHRISTLIEB PLC	2009	Regulatory: NSE
26	BCN PLC	2009	Regulatory: NSE
27	LIZ-OLOFIN & COY. PLC	2009	Regulatory: NSE
28	OLUWA GLASS COY. PLC	2009	Regulatory: NSE
29	ASABA TEXTILE MILLS PLC	2009	Regulatory: NSE
30	ABOSELDEHYDE LAB. PLC	2009	Regulatory: NSE
31	EPIC DYNAMIC PLC	2009	Regulatory: NSE
32	FADMAD PLC	2009	Regulatory: NSE
33	ABA TEXTILE MILLS PLC	2009	Regulatory: NSE
34	AFPRINT PLC	2010	Regulatory: NSE
35	INCAR PLC	2010	Voluntary
36	NIGERCEM PLC	2011	Regulatory: NSE
37	DAILY TIMES PLC	2011	Regulatory: NSE
38	ALBARKA AIRLINE PLC	2011	Regulatory: NSE
39	FOREMOST DAIRIES PLC	2011	Regulatory: NSE
40	WIGGINS TEAPE NIG. LC	2011	Regulatory: NSE
41	OKITIPUPA OIL PALM PLC	2011	Regulatory: NSE
42	FIRST CAP. INV. & TRUST PLC	2011	Regulatory: NSE
43	FLEXIBLE PACKAGING PLC	2011	Regulatory: NSE
44	NEWPAK PLC	2011	Regulatory: NSE
45	KRABO NIGERIA PLC	2011	Regulatory: NSE
46	TROPICAL PETRO. PLC	2011	Regulatory: NSE
47	NIGERIAN BOTTLING COY PLC	2011	Voluntary
48	NAMPAK PLC	2011	Voluntary
49	UNITED NIG. TEX. PLC	2011	Voluntary
50	BANK PHB PLC	2011	Nationalised: CBN
51	AFRIBANK PLC	2011	Nationalised: CBN
52	SPRING BANK PLC	2011	Nationalised: CBN
53	INTERCONTINENTAL BANK PLC	2011	Merged with Access Bank Plc.
54	OCEANIC BANK PLC	2011	Merged with ETI
55	FINBANK PLC	2011	Merged with FCMB Plc.
56	ECOBANK PLC	2011	Absorbed by ETI: Now Ecobank Nigeria Ltd
57	ABPLAST PLC	2012	Regulatory: NSE
58	UDEOFOSIN GARMENT PLC	2012	Regulatory: NSE
59	HALLMARK PAPER PRODUCT PLC	2012	Regulatory: NSE
60	BACGO BAG PLC	April 11, 2013	Merged with Flour Mills Plc
61	CRUSADER NIGERIA PLC	May 13, 2013	Merged with Custodian & Allied Insurance Plc.
62	WEST AFRICAN ALUMINIUM PLC	June 3, 2013	Regulatory: NSE
63	NIGERIAN WIRE INDUSTRY PLC	Jun2 3, 2013	Regulatory: NSE
64	BIG TREAT PLC	November 24, 2014	Voluntary
65	AFROIL PLC	November 24, 2014	Voluntary
66	STARCOMMS PLC	November 24, 2014	Voluntary
67	PINNACLE POINT GROUP	November 24,	Voluntary

S/N	COMPANY	DATE DELISTED	REASON FOR DELISTING
		2014	
68	POLY PRODUCTS PLC	December 12, 2014	Voluntary
69	OASIS INSURANCE	December 31, 2014	Acquired by FBN Life Insurance
70	CAPPA AND D'ALBERTO	January 16, 2015	Voluntary
71	IPWA PLC	May 18, 2016	Regulatory: NSE
72	G. CAPPA PLC	May 18, 2016	Regulatory: NSE
73	WEST AFRICAN GLASS INDUSTRIES PLC (WAGI)	May 18, 2016	Regulatory: NSE
74	INVESTMENT & ALLIED INSURANCE PLC	May 18, 2016	Regulatory: NSE
75	ALUMACO PLC	May 18, 2016	Regulatory: NSE
76	JOS INTERNATIONAL BREWERIES PLC	May 18, 2016	Regulatory: NSE
77	ADSWITCH PLC	May 18, 2016	Regulatory: NSE
78	ROKANNA PLC	May 18, 2016	Regulatory: NSE
79	VONO PRODUCTS NIGERIA PLC	May 23, 2016	Merged with Vitafoam Plc
80	Lennards (Nigeria) Plc	December 1, 2016	Regulatory: NSE
81	P.S Mandrides & Company Plc	December 1, 2016	Regulatory: NSE
82	Premier Breweries Plc	December 1, 2016	Regulatory: NSE
83	Costain (W.A) Plc	December 1, 2016	Regulatory: NSE
84	Navitus Energy Plc	December 1, 2016	Regulatory: NSE
85	NIGERIAN ROPES PLC	December 1, 2016	Regulatory: NSE
86	BECO PETROLEUM PRODUCTS PLC	May 2, 2017	Regulatory: NSE
87	MTECH COMMUNICATIONS PLC	May 2	Regulatory: NSE
88	MTI PLC	May 2	Regulatory: NSE
89	UTC PLC	May 2	Regulatory: NSE
90	ASHAKACEM PLC	July 4, 2017	Voluntary
91	AFRICAN PAINTS (NIGERIA) PLC	April 6, 2018	Regulatory
92	AFRIK PHARMACEUTICALS PLC.	April 6, 2018	Regulatory
93	PAINTS AND COATINGS MANUFACTURERS NIGERIA PLC	August 17, 2018	Voluntary
94	GREAT NIGERIA INSURANCE PLC	January 25, 2019	Voluntary (shareholders' approval)

NSE annual report, NSE bulletin and NSE fact books 2002 – 2018

2.1.3. Reasons for Delisting

1. Legal Necessity

The legal necessity cases are of two main types. Either the company has been acquired or has been merged with another company and so no longer exists, or the company has been liquidated for other reasons. Tyrhaug (2003), for example, reports that Norway is finding that merger and acquisition (M&A) activity is reducing the number of listed companies. Similarly, it is commonly known that leveraged buyout (LBO) usually result in target firms being privatized so that agency problems with minority shareholders are minimized and to provide more freedom of action to the acquirer to restructure and skim the acquired property.

2. Forced Delisting by NSE (regulatory)

Involuntary delisting occurs when a company forced out of the Exchange for regulatory reasons. This could be when a company fails to meet the listing requirements as determined by the exchanges it trades. Listing requirements can be very complex and different types of issuers and securities may have different rules but generally the guidelines include filing financial statements in a timely manner, a share price above a certain price, a minimum number of shareholders, a minimum market capitalization, or certain revenue, profit, cash flow and trading activity requirements. Sanger and Peterson (1990) found that most of such delisting are ordered because of failure to meet financial numbers (net income, minimum number of shareholders, minimum market

capitalization), accounting practices, conflict of interest, inability to meet debt obligations, abnormally low price or volume of trading.

A compulsory delisting sends a negative signal and leads to lowering of price and increase in cost of capital (Sanger & Peterson, 1990). However, this negative signal may have already started before the delisting because the market would be aware of the under-performance (Baker & Meeks, 1991), consistent with market efficiency hypothesis.

3. Voluntary Delisting by Companies (Shareholders' approval)

The third category of delisting causes is Voluntary Delisting by companies. More and more companies seem to want to go private. Tyrhang (2003), for example found that many UK small companies are going private. Barlett (2009) indicate that closely controlled companies go private to eliminate agency costs associated with minority shareholders. In addition to all these, there could be many other reasons which includes to avoid take-over, to disclose less information to the market which is also available to competitors, the use of surplus cash through share buybacks encourages buying back of smaller shareholders, no expectation of using exchange to raise capital because of large cash availability, lack of trading in the share or lack of effective liquidity.

2.1.4. Post-Delisting Performance and Its Impact on Investors' Wealth

The death of firms is central to the creation/destruction process in an economy and to the investors' wealth. According to Baker and Kennedy (2002), without the economic 'grim reaper', productive resources (physical, intangible, and human) would be less likely to move to higher-valued uses or into the hands of better managers. While some firms are able to reconfigure their assets and strategies to adjust to changing technology and tastes, many are not. This inability to reconfigure could be the case for delisted firms. Consequently, delisting has a negative effect on the investors' wealth insofar as this decision involves a dilution of share prices after the exit from the stock exchange.

Using a sample of 520 US delisted firms over the 1962–1985 period, Sanger and Peterson (1990) showed that the firms' values are negatively impacted when their stock is delisted from NYSE or AMEX. This loss of value could be caused by the decrease in liquidity that accompanies delisting. Another explanation for the decline in firm value is the negative signal about the firm's quality and future prospects sent by the exchange's decision to delist the firm. Marosi and Massoud (2007) found the same results as Angel (2004). They observed a negative impact from the involuntary delisting on the shareholders' wealth, with the average abnormal cumulative return sharply dropping (approximately -12%) on the delisting day.

2.1.5. NSE delisting and market performance indices (market capitalization, stocks traded, and all share indexes)

In 2008, the total market value of 266 securities listed on the Exchange dropped by 26.5%, from N9.563 trillion to stand at N7.03 trillion at year-end. The decline in market capitalization resulted mainly from equity price losses, and the delisting of 64 securities – 11 equities and 53 fixed income securities. Market capitalization had in 2008 declined by 28.1%.

By year-end, the market capitalization of the 216 listed equities accounted for N5 trillion or 71.04% of the aggregate market capitalization (2008: 213 equities accounted for N7 trillion or 73.1% of market capitalization). Analysis on the Market Capitalization of the five delistings recorded in 2015 reflected they represent about 0.37% of the Total Market Capitalization as at 17th November 2015. The Market Capitalization of five delisted stocks amounted to N36.42bn. The delisting of 15 companies from the Nigerian Stock Exchange in 2016 took away N24,075,418,729.61 capital from the market. However, the NSE only succeeded in listing one firm throughout 2016.

The outstanding shares for each of the delisted companies, according to the NSE, were 125,000,000; 514,140,713; 208,614,500; 28,000,000,000; 75,604,049; 562,000,000; 125,005,250; 50,000,000; 563,651,183; 70,164,062; 40,000,000; 979,211,412; 1,084,382,980; 98,600,000; and 263,668,295, respectively. A breakdown of the losses incurred by investors through the delisting showed that investors in MTECH Communications will suffer the highest loss at N4.5 billion being its total market capitalisation as at date of delisting 4.96 billion shares at 91 kobo per share.

The delisting of 4.89 billion units of MTI at 50 kobo each amounted to a total loss of N2.45 billion, and 3.72 billion units of Beco Petroleum product's shares with a unit price of 50 kobo per share also resulted in a loss of N1.9 billion. For UTC Nigeria, 1.23 billion shares of 50 kobo each were delisted, representing a loss of N616.7 million by investors.

2.2. Theoretical Framework

2.2.1. Delisting Wave Theory

The evidence that delisting occurs in waves has been theorized by Helwege and Liang (2004) which state that in periods when the markets are characterized by positive trends (hot market) there is a higher number of IPOs, and delisting occurs when markets is experiencing negative results (cold market). In other words, they suggest that when the economy is expanding, firms judge projects with higher expected cash flow, and usually investors are

overoptimistic, thus companies have more incentive to list. On the other hand, different reasons can explain the higher number of delisting during cold market periods: during these periods markets are characterized by few under pricing, few cases of oversubscriptions, and large offerings: all elements that make survival more difficult. In addition, according to some scholars (Loughran & Ritter, 1994) the cold and hot market theory implies that the companies that enter the market during the hot phase are often characterized by managerial opportunism and investors irrationality, and therefore firms are not selected on the base of their quality at the time of IPOs, and that cause higher probability of delisting when markets slow down.

2.3. Empirical Review

The delisting of corporations does not represent a single area of study in the international and local literature. Existing research appears to be very fragmented, as scholars tend to concentrate separately on specific types of delisting (going-private transactions, going-dark strategies, involuntary delisting or termination of a cross-listing), without sharing a wider and common theoretical framework.

Other studies address delisting as the result of a going-dark strategy (Marosi & Massoud, 2007; Leuz, Triantis & Wang, 2008), i.e. deregistration, typical of the U.S. market, where companies cease SEC reporting, but continue to trade publicly on less regulated markets (for example, the pink sheets system). In particular, Leuz et al (2008) demonstrate that going dark and going private are distinct economic events.

Chen and Schoderbek (1999) analyzed the involuntary delisting process using a sample of 150 AMEX delisted firms between 1981 and 1992. By focusing on the accounting information, they noted that 45.7% of the delisted firms did not violate the accounting standards before their delisting, whereas 31% had violated these directives on several occasions during the five years before the delisting. Only 21.7% of the firms were delisted during the year following their first violation of the accounting standards.

Baker and Kennedy (2002) studied the stock returns before the delisting to understand why and how the firms died. They found a high disappearance rate for listed companies on the NYSE and AMEX (both at 40% over 10 years). In addition, their results showed that firms lost a significant fraction of their value during the period from 10 years to 1 year before delisting. Two studies examined the aftermarket survival (Fama & French, 2004; Peristiani & Hong, 2004).

Angel, Harris, Pancha, Pagesan and Werner (2004) confirmed that an involuntary delisting is associated with a significant loss of shareholder wealth. They analyzed a sample of 1098 firms delisted from the NASDAQ between 1999 and 2002 and considered a period of six months around the involuntary delisting date (three months before and after). They used different proxies (effective spreads, quoted spreads, volume of exchange and volatility) to measure liquidity and found that involuntary delisting is associated with a large decline in liquidity: volume declines by two-thirds; quoted spreads almost triple from 12.1% to 33.6%; effective spreads triple from 3.3% to 9.9%; and volatility more than triples from 4.4% to 14.3%. In regards to the geographical and cultural research frames, the vast majority of studies use U.S. market data (Leuz 2007; Bartlett 2009) and U.K. market data (Weir, Laing & Wright 2006).

2.4. Summary of Literature Review and gap in literature

In summary, various studies have been carried out to examine the effect of delisting on stock price, shareholders wealth, delisted firms and the economy using volatility and liquidity as a measure in international literature, concluding that delisting has its most effect on shareholders/investors and on the delisted companies and that delisting affects the capitalization of the stock market on the actual day of delisting only. To the best of the Researchers' knowledge, studies are yet to analyze empirically, the effects of delisting on stocks traded, all-share index and provide a detailed study into the effect on market capitalization. Also, there is absence of recent literature on the subject, even; most of the existing literatures were carried out outside Nigeria. This study therefore, fills the gaps.

3. Methodology

The study adopted a longitudinal research design. This study is focused on delisting from the NSE in the period 1998 to 2018.

The data used were extracted from the annual reports of the Nigerian Stock Exchange, NSE fact book and Daily official lists of the NSE.

The technique of analyses employed by the study is simple linear regression, in which some of the variables have a quadratic model trend. The models and the variables of the study are presented in these equations:

$$Y1 = \beta_0 + \beta_1X1 + \beta_2X1^2 + \varepsilon1 \dots\dots\dots(1)$$

$$Y2 = \beta_0 + \beta_1X2 + \varepsilon1 \dots\dots\dots (2)$$

$$Y3 = \beta_0 + \beta_1X3 + \beta_2X3^2 + \varepsilon1 \dots\dots\dots (3)$$

Y1 = Market Capitalization.

Y2 = Shares Traded (Volume Traded)

Y3 = All-Share Index.

β_0 : Constant, β_1 and β_2 : Linear regression coefficient, X_1 : Total delisted companies per year., X_2 : Stock traded (volume traded), X_3 : Total delisted companies per year, X_1^2 : Squared total delisted companies per year (because it follows a quadratic trend), ϵ_1 : Error term.

The justification for the use of regression equation for the study lies in the fact that it is a prediction method. In other words, regression analysis identifies the relationship between variables in the form of an equation in which one can predict one variable (dependent) on the basis of another (independent) variable. These are analysed using SPSS 20 software.

4.0. Analyses and discussion

4.1. Data Presentation

Table 2: Research Study Dataset

Year	Market Cap (Billions ₹)	Shares Traded (Units)	All Share Index	Total_Delisted	C_Total Delisted	C_TotalDelisted2
1998	263,300,000,000.00	2,100,000,000.00	5,672.80	0	-4.47	19.98
1999	299,900,000,000.00	3,900,000,000.00	5,226.40	0	-4.47	19.98
2000	478,600,000,000.00	5,000,000,000.00	8,111.00	0	-4.47	19.98
2001	662,600,000,000.00	5,900,000,000.00	10,963.10	0	-4.47	19.98
2002	763,900,000,000.00	6,600,000,000.00	12,137.70	2	-2.47	6.1
2003	1,356,000,000,000.00	13,300,000,000.00	20,128.90	0	-4.47	19.98
2004	2,112,000,000,000.00	19,200,000,000.00	23,844.50	0	-4.47	19.98
2005	2,900,000,000,000.00	26,700,000,000.00	24,085.80	0	-4.47	19.98
2006	5,120,000,000,000.00	36,700,000,000.00	33,189.30	0	-4.47	19.98
2007	13,295,000,000,000.00	138,100,000,000.00	57,990.20	1	-3.47	12.04
2008	9,560,000,000,000.00	193,100,000,000.00	31,450.80	19	14.53	211.12
2009	7,030,000,000,000.00	102,085,000,000.00	20,827.20	11	6.53	42.64
2010	9,920,000,000,000.00	93,330,000,000.00	20,780.20	2	-2.47	6.1
2011	10,280,000,000,000.00	82,300,000,000.00	20,730.60	21	16.53	273.24
2012	14,800,000,000,000.00	89,150,000,000.00	28,078.80	3	-1.47	2.16
2013	19,080,000,000,000.00	26,360,000,000.00	41,329.20	4	-0.47	0.22
2014	16,000,000,000,000.00	28,920,000,000.00	34,657.20	6	1.53	2.34
2015	17,000,000,000,000.00	18,370,000,000.00	28,642.20	1	-3.47	12.04
2016	12,190,000,000,000.00	15,340,000,000.00	26,874.60	15	10.53	110.88
2017	13,089,000,000,000.00	16,101,000,000.00	37,503.73	5	11.30	112.59
2018	12,168,018,646,376.16	234,991,111.00	32,629.43	4	9.752	109.23

NSE annual report, NSE bulletin, NSE fact books 2002 – 2018 and computation there from

4.2. Test of Hypotheses

4.2.1. Hypothesis One

H0: There is no significant effect of delisting on market capitalization

Regression Summary Result on Effect of Delisting on Market Capitalization.

Model Summary	Value				
R	0.639				
R Square	0.409				
Adjusted R Square	0.335				
Durbin-Watson	1.222				
ANOVA	Df	F Test	Sig.		
Regression	2	5.528	0.015		
Residual	19				
Total	21				
Variables	Coefficients	T Test	Sig.	Tolerance	VIF
(Constant)	12,235,282,153,196.60	5.732	.000		
C_TotalDelisted	1,387,026,228,433.98	3.253	.005	.198	5.062
C_TotalDelisted2	(101,886,696,971.82)	-2.608	.019	.198	5.062

Source: SPSS Version 20 Output

Interpretation of result:

The table above is the result summary of the effect of delisting on market capitalization. Analyzing the model fit

output first which comprises of the Model Summary table and the ANOVA table. The Pearson correlation coefficient is 0.639 (63.9%) showing a relatively strong positive correlation between the dependent variable and the independent variables. a value of 1.222 shows a positive autocorrelation which is normal in Time Series analysis.

β_2 (squared total delisted) shows that the dependent variable (market capitalization) decreases by ₦ (101,886,696,971.82) per 1-unit increase in the number of delisted companies while other independent variables remain constant. The calculated T test value which is the modulus of $|-2.608| = 2.608$ is greater than the critical (tabulated) T test value 2.110. P-value 0.019 is less than the level of significance at $\alpha = 0.05$. Collinearity statistics has a tolerance of 0.198 which is greater than 0.1 and a VIF (Variance Inflation Factor) of 5.062 which is less than 10, so both independent variables passed multicollinearity assumption test.

In conclusion we reject the null hypothesis (H_0) that claims that delisting has no effect on market capitalization and and conclude that delisting has a statistically significant negative effect on market capitalization at level of significance $\alpha = 0.05$.

The model for the effect of delisting on market capitalization is now:

$$Y = 12,235,282,153,196.60 + 1,387,026,228,433.98X_1 - 101,886,696,971.82X_1^2 + \epsilon_1.$$

4.2.2. Hypothesis Two

H_0 : Delisting has no significant effect on stock traded (volume traded).

$$Y = \beta_0 + \beta_1X_2 + \epsilon_1.$$

Regression Summary Result on Effect of Delisting on Shares Traded (Volume Traded).

Model Summary	Value				
R	-0.546				
R Square	0.298				
Adjusted R Square	0.257				
Durbin-Watson	1.066				
ANOVA	Df	F	Sig.		
Regression	1	7.214	0.016		
Residual	20				
Total	21				
Variables	Coefficients	T Test	Sig.	Tolerance	VIF
(Constant)	47,692,354,386.30	4.495	0		
C_TotalDelisted	4,289,523,719.88	2.686	0.016	1	1

Source: SPSS Version 20 Output (Appendix 3)

Interpretation of result:

The table above is the result summary of the effect of delisting on shares traded (volume traded). The Pearson correlation coefficient is -0.546 (54.6%) which is a relative strong correlation between the dependent variable and the independent variable. The coefficient of determination R Squared is 0.298 (29.8%) which means that 29.8% of the variance in dependent variable is accounted for by the independent variable. The adjusted R square is 0.257 (25.7%), corrected after error. Durbin-Watson test for autocorrelation is 1.066 which is a positive autocorrelation common with time series data.

ANOVA table, tests the hypothesis that there is no association/relationship between the dependent variable and the independent variable.

The calculated T test value of 2.686 is greater than the tabulated T test value of 2.110 and the P-value of 0.016 is less than the given level of significance at $\alpha = 0.05$. The collinearity statistics is 1 because it's a simple linear regression so only one independent variable is used.

In conclusion we will reject the null hypothesis (H_0) that claims that delisting has no effect on shares traded (volume traded) and assert that delisting has a statistically significant negative effect on shares traded (volume traded).

The model for the effect of delisting on market capitalization is now:

$$Y = 47,692,354,386.30 + 4,289,523,719.88X_2 + \epsilon_1.$$

4.2.3. Hypothesis Three

H_0 : Delisting has no significant effect on all-share index.

$$Y = \beta_0 + \beta_1X_3 + \beta_2X_3^2 + \epsilon_1$$

Regression Summary Result on Effect of Delisting on All-Share Index

Model Summary	Value				
R	0.325				
R Square	0.106				
Adjusted R	-0.006				
Durbin-Watson	0.874				
ANOVA	Df	F	Sig.		
Regression	2	0.946	0.409		
Residual	19				
Total	21				
Variable	Coefficients	T Test	Sig.	Tolerance	VIF
(Constant)	28,934.04	5.696	.000		
C TotalDelisted	1,395.82	1.376	.188	.198	5.062
C TotalDelisted2	(113.41)	-1.220	.240	.198	5.062

Source: SPSS Version 20 Output (Appendix 4)

Interpretation

The table above is the summary result of the effect of delisting on all-share index. The model summary table has a Pearson correlation of 0.325 (32.5%) which is a weak correlation between the dependent variable and the independent variable. The coefficient of determination R Square is 0.106 (10.6%) which show that 10.6% of the variance in the dependent variable is accounted for by our independent variables. The adjusted R Square and the Durbin-Watson both produced very poor results.

The ANOVA table is used to test the hypothesis that there is no association/relationship between the dependent variable and the independent variable.

The calculated T test value is 1.376 which is less than the critical (tabulated) T test value of 2.110, also the P-value is 0.188 which is greater than the given level of significance so we fail to reject the null hypothesis at $\alpha = 0.05$. Collinearity statistics has a tolerance of 0.198 which is greater than 0.1 and a VIF (Variance Inflation Factor) of 5.062 which is less than 10, so both independent variables passed multicollinearity assumption test.

β_2 (Squared total delisted per year) shows that the dependent variable decreases by -113.41 by each 1-unit increase in β_2 . The modulus of the calculated T test value is 1.220 which is less than the critical (tabulated) T test value of 2.110 and also the P-value is 0.240 which is greater than the given level of significance $\alpha = 0.05$. We fail to reject the null hypothesis at $\alpha = 0.05$. Collinearity statistics has a tolerance of 0.198 which is greater than 0.1 and a VIF (Variance Inflation Factor) of 5.062 which is less than 10, so both independent variables passed multicollinearity assumption test.

In conclusion we accept the null hypothesis that says that delisting has no significant effect on all-share index and conclude that delisting has no significant positive effect on all-share-index.effect at $\alpha = 0.05$.

The model for the effect of delisting on market capitalization is now:

$$Y = 28,934.04 + 1,395.82X_3 - 113.41X_3^2 + \epsilon_1.$$

5.1. Summary of Findings

1. There is a statistically significant negative effect of delisting on market capitalization.
2. There is a statistically significant negative effect of delisting on shares traded.
3. Delisting has no statistically significant positive effect on all-share index.

5.2. Conclusion and Recommendations

This paper analyzed the effect of delisting on the performance of the Nigerian Stock Exchange. More importantly, we investigated the effect of delisting on market capitalization, effect of delisting on all share index and the effect of delisting on stock traded. The period of study covered 1998 - 2018. This study therefore concludes that delisting of companies and their stocks on the NSE negatively affects the performance of the Exchange, owing to the fact that it does not improve market performance; consequently, delisting does not offer adequate retail investor protection in the developing Nigerian market. The Researchers therefore recommend the following;

- i. Listed firms should be supported and given certain financial waivers in the NSE so as to encourage them to be effective in the market and NSE delisting should be ceased until the Exchange attains a standard level of performance and any other method adopted to punish market defaulters (e.g imposition of charges). These would remove the constraints to growth in the Nigerian capital market and especially the stock market.
- ii. Firms should be informed and given sufficient time to get their management together in areas where they have financial issues relating to their obligation to the Nigerian Stock Exchange as delisting should be used as last resort where unavoidable. This will give poor performing firms the opportunity to fight their financial challenges and sustain their listing status.

- iii. Within the ambit of the capital market, they should try to handle the high cost of transactions and the financial uncertainties that surround the subscription of shares like increase in costs of transactions such as charges, fees and commissions at the various levels of deals as there is already a hike in operating cost of firms due to the general economic downturn.

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