

## **Empirics of Demutualization of African Stock Exchanges: Lesson from Nigeria**

**Onafalujo, Akinwunmi Kunle<sup>1</sup>, Eke, Patrick Omoruyi<sup>2</sup> and Oluitan, Roseline O.<sup>3</sup>**

### **Abstract**

Mutualisation means that the funding is strictly undertaken by members of a mutual company, whose membership is restricted by certain criteria and most non-profit oriented. To demutualize requires that the knots and bolts of mutualisation are loosened in such ways as to fit the needs of not only members but for public good. The inhibitive features differ across different Stock Exchanges globally, and hinges on corporate governance and regulatory quality with it. From 2004, the Nigerian capital market seems infested with lack of professionalization, broker- banker nexus and corruption which led to scams and erosion of confidence of investors from lack of trust. This might be catastrophic for a demutualized stock exchange. The study examines demutualization using linear probability techniques on how the adoption could drive Nigerian capital market indices in the face of questionable levels of regulatory and corporate governance. Regulatory functions that are for protecting public interest may not be effectively controlled by a demutualized stock exchange in African stock markets. It is suggested that the governance structure concerning membership proportion of stockbrokers of the Exchange is fundamental to privatization. The enabling laws protecting minority shareholders and corporate governance of listed companies should be addressed en-route to demutualization.

**JEL classification numbers:** G10, G28, G34, J80, K20, O16

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<sup>1</sup>Department of Accounting and Finance, Lagos State University, Ojo, Lagos State, Nigeria 08023055233.

<sup>2</sup>Department of Accounting and Finance, Lagos State University, Ojo, Lagos State, Nigeria 08029742444.

<sup>3</sup>Department of Accounting and Finance, Lagos State University, Ojo, Lagos State, Nigeria 08085282611.

## **1 Introduction**

Demutualization is the process of changing the legal status, structure and governance of an exchange from non-profit, protected interest one to profit oriented [1]. The membership seats are converted to shares and the Exchange can be listed on its own platform. The wave of demutualization wafted contagiously from the developed to emerging markets portending to have solutions to capital market growth. [2] articulates that the developed markets were motivated to adopt demutualization by combined factors: changing behaviour by their customers, need for diversification across international borders, developments in information technology and reduction in communication costs. By and large, this is another way of propagating globalization [3] while indicating demutualization. However, the noise was sufficient to pave the way for remote membership and internationalization of trading which threatened the traditional trading floors while promoting growth of Stock Exchanges worldwide. In spite of this, it is unclear how this affects the African stock markets. This paper therefore contributes to knowledge by looking at the prospects of demutualization of African Stock Exchanges with peculiar regulatory environment, rule of law and literacy rates by investigating Nigeria's case

The capital market thrives on trust, and this is the basis of the confidence of investors, and the same must be protected whether in a mutualised or demutualized Stock Exchange. Trust is derivable from regulatory quality, rule of law professionalization and corporate governance, which this paper combines into the building block of stock market growth. Demutualization cannot solve the conundrum of capital market growth if the ingredients are insufficient. [4] underscores this point. He laments that the US financial crisis snowballed out of lax professionalism and "bad behaviour". The two variables are connected to corporate governance and rule of law and regulatory quality. This occurred in a stock market that has been demutualized for several years and yet the biggest banks tumbled out. From early 2008, the Nigerian Stock Market seems to have ebbed into the greatest crash since its existence; from a market capitalization of \$19.35-\$32.82billion, 69% increase in 2005-2006; swung to \$86.34billion, 163.7% in 2007 [5] declining precipitously to -34.9%, -2.8% in 2008 and further 2009-2013. The changes in market capitalization may be explained by the impact of the reforms, but the price change is suspect to sloppy regulatory framework bordering on quality of corporate governance and rule of law in a mutualised Stock Exchange [6]. The outcome is the ensuing loss of confidence threatening the business continuity of the Nigerian Stock Exchange (NSE). The loss of confidence of investors is a more fundamental dynamics of capital market growth when examined in terms of affinity for being listed. Some policy thinkers are proffering demutualization as the panacea to this critical melt down. The objective of this paper is to understand the mechanism of demutualization in developing capital markets, and to what extent professionalism, regulatory quality and corporate governance drive the process. Thus, this study hypothesizes that NSE would not rapidly grow the capital market companies post-demutualization.

## **2 Conceptual Framework and Review of the Literature**

The NSE is currently mutualised but runs on a demutualized architecture [7] and yet ran into broker-banker nexus that ended up in CEO scams and a depressed market bordering

on excessive risk-taking and weak corporate governance [6]. Likewise, many advanced demutualized stock markets grew in size but suddenly brew bankruptcy of big banks suggesting a nexus of poor corporate governance in the Stock Exchanges and in the quoted companies. From the ensuing scenario, the role of regulations in the Stock Exchanges to prevent corporate failure either in a mutualised or demutualized is critical to promoting growth.

Regulatory theory has three approaches [8]; the first puts "Public Interest theory" as the basis of regulation. Due to the great depression in early 20<sup>th</sup> century, early classical and monetary economists believed market failure can be mitigated by government intervention through regulation in favour of public interest. That means while free market is essential to economic development, the possible abuse must be prevented as a public institution. The Stock Exchange's objective of providing a platform for cheaper long term funds is more or less based on public interest. The argument against regulation is the possibility of creation of economic rents by regulators. The second, "the Chicago School of Thought" linked to University of Chicago scholars [9] explains that regulation might stifle competition, encourage oligopoly and corruption. The third is the Special Interest or Collective Interest theory or capture theory developed in the 1970's which also argued for the elimination of economic rent-seeking activities.

[8] recognize the struggle to control regulation by different business groups as proposed by capture theory. The collective theory advocates the coming together of individuals to further their interest. Therein lays the conflict of interest in regulation. In all of these, who regulates the regulator? The proponents of Self-regulation may have been locked-in by the complexities of regulation and corporate governance. These issues might reach a critical mass when a stock exchange is demutualized as Self Regulatory Organization (SRO), and will need to combine such functions as developing trading rules and enforcement, rules of conduct, listing requirements and disclosure of material information by listed companies [10]. An ineffective regulatory regime might emerge in a demutualized SRO. The ripple effect might be manipulation of market factors as experienced in the margin loan behaviour of banker-broker nexus in 2006-2008 financial reform in Nigeria. [4] may have been very right in asserting that the collapse of the banking sector in US resulted from lax regulation and poor professionalization which he referred to as 'bad behaviour'. This paper contributes to the literature on the nexus between regulatory theory, professionalization and corporate governance in promoting the integrity of the capital market and its significance in demutualization. Regulations cannot pre-empt all the profit mining by economic agents and rent seekers. The participants in the capital market need to recognize that as the larger society is propelled by survival instincts; self-regulated by culture and law, the sophistry of the financial market requires it to be fuelled by a strong rule of law, corporate governance, professionalization and regulations. Any lax of any of the factors could spell doom quickly in a demutualized self-regulated organization. The capital market is built on trust. The implied integrity that promises will be kept. Any variance from this high ethical standards guided and guarded by professionalization might erode the much needed confidence of uninformed investors, thus impairing growth of the capital market listing. The recent history of market crash is inseparable from weak regulation and corporate governance. The directive to raise minimum capital of banks to N25bn (\$167.5) from N2bn (\$13.4) within 18 months revealed a deep pool of investible funds as most shares were oversubscribed [6]. The governance structure between the Securities and Exchange Commission (SEC) and NSE could not anticipate the level of pressure created by "financialization" and margin lending. "Financialization" refers to the

increasing relative importance of financial markets, financial motives, financial institutions, and financial elites in the operations of the economy and its governing institutions, both at the national and international levels [11]. One of its adverse effects is that it promotes economic rent. From 2008, regulatory confusion took the toll on prices, as SEC is announcing need to investigate manipulation of prices, CBN banned margin lending and directed banks to have the same accounting calendar year. The Nigerian Stock Exchange (NSE) index reached the tipping point when a new focus of regulation enforced risk management approach to examine banks with a motive to fight corruption and fraud. The market plummeted, and no recovery is in sight till date; despite recovery of market capitalization, companies are finding it difficult to raise equity fund and new listings may be discouraged. The ripples are conjectured to be linked to the governance structure and professionalism of regulators and operators. [12a], [12b] and [13] support this view in evaluating macro level governance indicators' link to the corruption levels in each country. In a system where there is no competition among self regulatory regimes, the capture theory will ensue to the detriment of growth. The NSE as well as Kenya and Ghana are now considering demutualization as a mechanics of growth. The risk of demutualization is not to understand that the success is enabled by the presence of professionalization, corporate governance and financial culture.

## 2.1 Why Demutualization?

“Demutualization is a change in legal status, structure and governance of an exchange from a non profit, protected interest one to profit oriented” [1]. From the 1990s, demutualization gained prominence as a way of enhancing the fortunes of the Stock Exchanges [14] and [3]. Within 1999-2003, demutualized exchanges grew from 10 to 25 [15] in the developed markets, representing about 40% of the membership of the World Federation of Exchanges [16]. But it is rather slow in emerging markets and Africa in particular. [17] further states that there are three reasons advanced by exchanges for demutualization. Firstly, the desire to be more commercially nimble and respond to market needs more quickly, unimpeded by member committees and their diverse interests. Secondly, demutualization would give access to the capital markets for fund raising. Thirdly, being publicly quoted would also give exchanges and their management a clearer idea of what exactly they were worth. In a broader sense, [18] suggests that demutualization will improve liquidity and global-order flow. The fear is, will the advance Exchanges not crowd out and marginalize small and emerging ones? Another issue is the economic and social environment of African Exchanges which may not have attained the level that is effective for demutualization.

[19]Minney (2009) comments that the demutualization of Nairobi Stock Exchange could help nip the propensity for conflict of interest embedded in the corporate governance of a mutualised company. Although, [20] and [21] list the gains of demutualization to be improving governance, globalization, increased participation by institutional investors, and impact of technology and infrastructure from international investors, but may not be sufficient to overcome agency cost. A demutualized Exchange separates ownership of the exchange and trading rights of members. [22] identifies governance, reconciliation and management of a wider range of interests as challenges. The same concern was expressed by [23], [24] and [25] on the ground that the commercial interest of for – profit organization will collide with the regulatory role. The essence of demutualization may be further questioned, if it unlocks capital for itself but fails to grow the capital market. In

line with the projection of this paper, [2] provide evidence that demutualized exchange perform relatively poor as far as productivity is concerned. Productivity is reflected in market capitalization but depends on the volatility. The higher the volatility, the more is the market believed to have been motivated by abuses and manipulation adducible to weak governance. The combination of profit motive, weak professionalization and negative rule of law could further impair the success of demutualization in an emerging market.

Corporate governance theorizes that a system must be in place to control and direct a business so as to ensure fair return to investors [26], [27], [28] and [29]. What seem to be missing in literature are the empirics of governance structure as the essence of rule of law, regulatory quality and corporate governance of listed companies being key ingredients and exogenous variables for effective demutualization. Governance structures develop from ownership structure and may be create more conflicts with public interest if few individuals hijack ownership as is often the case in Nigeria. Studies on corporate governance link its root to the delicate balance of regulatory framework and agency theory [30]. It is precariously presumed that the agency rules guide the agents. But in financial service businesses involving complex combination of agents, rule of law, regulatory quality and professionalization could be compromised especially in the case of an Exchange. This is recognized by [31] and [32] as changes in agency costs, due to the special nature of their assets and liabilities leading to inadequate corporate governance. [33] argue that regulation is critical to corporate governance in financial services using insurance industry in their empirical analysis. The essence of regulations in financial market had been captured into the need to protect investors and integrity of the market [34], [35]. According to them, "History has shown that inadequate or absence of regulation is detrimental to the financial market as it encourages sharp practises by participants. Regulatory quality is therefore, necessary to police or monitor activities in the market with the ultimate aim of preventing or minimizing abuses which might mar market integrity, erode investor's confidence thereby thwarting development of the market." This assertion queries the presupposed premise of Efficient Market Hypothesis [36] and [37], that assumes that manipulations and abuse are minimal, acknowledging the possibilities of market imperfections and failure. The alternate, which is regulation, may have promoted weak corporate governance. [6] adduces that weak regulation in the banking sector was perhaps the chief reason for the stock market decline, while bureaucratic confusion exacerbated the situation. The study argues that bureaucratic confusion is an ingredient of lack of good governance structure that combines with low regulatory quality and rule of law. This was more or less the window to abuses that accompanied the banking and insurance reforms and capital market infractions in Nigeria under the mutualisation regime. On this account, regulatory risk occurs, and is heightened when such opportunities are not guarded giving room for speculators to exploit the laxity. Demutualization may become counterproductive and insinuate a greater economic crisis from failed stock exchanges [20], if cognizance is taken of the systemic risk ignited by failed global corporate giants in the last four years. A demutualized Stock Exchange presumes high level of professionalization where cronies are not employed and stockbrokers have understanding of the need for good corporate governance in driving capital market growth. [38] mention two criteria for a profession; it must rest on a systematic body of knowledge of substantial intellectual content and personal skill development, and the existence of standards of professional conduct which take precedence over the goal of personal gain. Professionalization requires expertise; that is

skill development, which [39] say may take about 100 years to acquire. While the advanced markets may have such supplies, the African markets are insufficient. The literacy rate may also have contributed to technical deficiencies in broker-client relationship and improved professionalization.

## **2.2 Organizational Structure of African Stock Exchanges and Demutualization**

Prior to 1989, there were five Stock Exchanges, and by 2011, there are 20 African Stock Exchanges [20], which are currently thinly and marginally traded [40] and grouped under emerging markets [41]. In terms of listed companies, the biggest markets are Egypt (792), South Africa (403), Nigeria, (207) and Zimbabwe (79). Average number of listed companies is 39 excluding Egypt and South Africa. Market capitalization to GDP is as low as 1.4 in Uganda compared to other emerging market like Malaysia (161). Despite, this scenario, the Ghana Stock Exchange was adjudged as the world's best performing market. Some studies like [42] find correlation between countries with low enforcement of rules have smaller and narrower markets. Although, the African Stock Market doubled capitalization from 1992-2002 [15] except JSE, this might be due to the special features of developing markets.

Organizational structure effectiveness is linked to corporate governance corporate governance of quoted companies and the regulatory quality of the Stock Exchanges. The regulatory quality of the Exchanges depends on the ownership structure. The Exchanges do not have owners but members [43] but also allow individual membership in promoting reputation and philanthropic funding. Along the line this noble objective may be the sources of conflict of interest and slow expansion of the Stock Exchanges under mutualisation. [44] argue that while agency theory seeks to minimize the beneficial consequences of separation, the allocation of power problem between shareholders and managers could be resolved by exploiting the separation rather than minimizing through regulation as advanced earlier by [45].

In the case of Stock Exchanges, many governments get involved in view of the economic and political relevance [20] and supported by public interest theory. Thus, providing financial support for its establishment and leaving the governance to professional members. Sooner than later, organization structure inadequacies crop up as the managers begin to operate as economic autocrats. The incentive is created for the managers to skew membership in favour of management cronies. The origin of conflicts of interest in such mutualised environment could expand under demutualization when new owners take over and subject the Stock Exchange to agency mechanism. The main objectives of the Stock Exchange: protecting investors and integrity of the market so as to provide platform for providing cheap long term capital may be dwarfed by the short term focus on profit making likely to appear from demutualization, rule of law and monopoly. Securities' markets are highly sensitive to any socio-economic and political factors and the integrity of the market can only be sustained when these risks are not manipulated. Can demutualization spur growth? A critical indicator of capital market growth is market capitalization but may have to be corrected for price distortions and inflation. Instead the study descriptively investigates growth of listed companies across 10 African leading Stock Exchanges for 22 years as shown in Figure one.

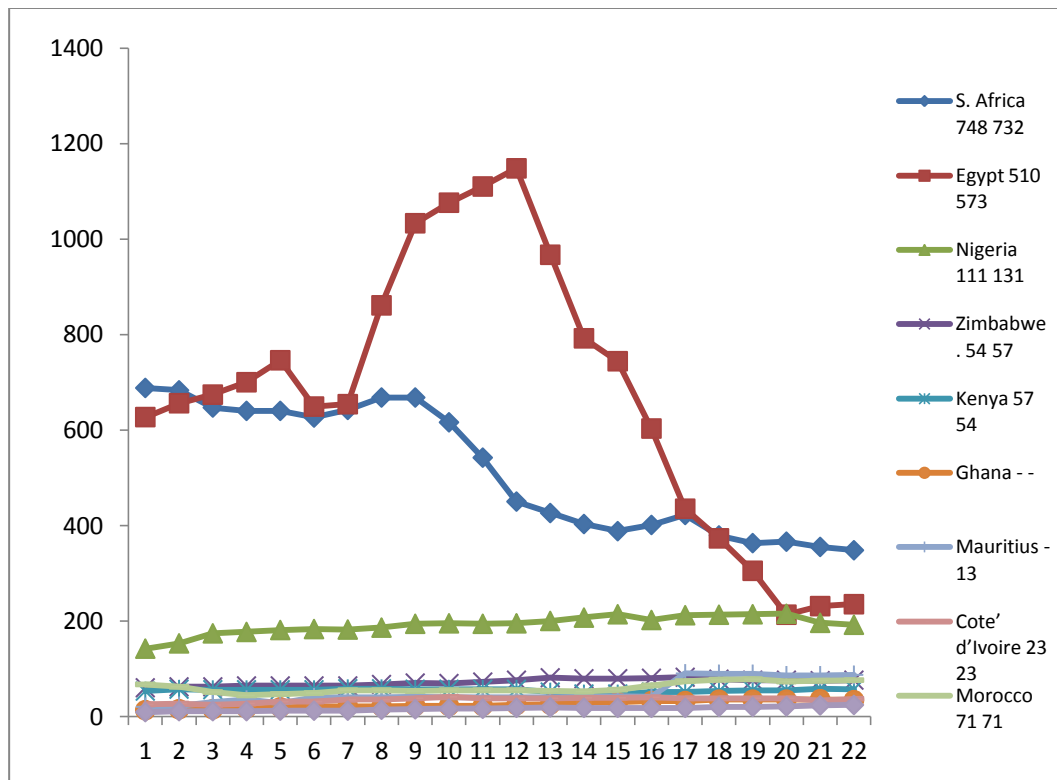


Figure 1: Listed companies across 10 African leading Stock Exchanges: 1990-2012

It is suggestive that common systemic behaviour controlled two most developed markets; Egypt (mutualised) and South Africa (demutualized on 2<sup>nd</sup> May, 2005). The highest numbers of listed companies were in 1998-2001 and while a continuous decline occurred afterwards even with the demutualization event in South Africa. Nigeria and other seven countries including demutualized Mauritius were of similar development patterns with insignificant changes in growth of listed companies. Nigeria's listings peaked by 2009-2010 in the wake of market bubbles involving banking and insurance reforms followed by an unexplained ominous decline possibly linked to Exchange governance structure and regulatory quality of listed companies.

The growth of market capitalization and listings seems to reflect more of macro-economic factors than the concept of demutualization. Policy initiatives should be considering prevailing local factors like degree of professionalization and rule of law as it affects market efficiency if it will initiate growth. Investors' sentiment could linger for long if slack regulation prevails which may occur in a demutualized Stock Exchange. The incentives to growth and listing are that the companies are able to raise cheap capital and the Exchange derives huge income from commissions from regulations. These are potential risks of demutualization in the absence of good corporate governance practise, which is presumed will improve. African countries have lowest literacy [46]; which means there is preponderance of financial naivety [39]. There is therefore high likelihood of low professionalization and weak rule of law. The growth of the capital market could suffer serious setback under demutualization if it is suddenly implemented in these environments.

### 3 Data and Methodology

Primary data was obtained through questionnaire personally delivered to stockbrokers, regulators, investors and senior academics. Qualitative information extracted thereon from structured questionnaire was used to produce binary variables taking values of unity and zero. While unity signifies likely occurrence of the demutualization and other stock market growth characteristics i.e. adherence to rule of law; corporate governance; financial literacy, established for study, zero denotes otherwise for the Nigerian market. In other words the model's dependent and independent variables are of survey choice in which the behavioural responses are qualitative.

To [47] "binary-choice models assume that individuals are faced with a choice between two alternatives and that the choice depends on identifiable characteristics". In this study, the dependent variable dichotomises whether privatisation of the stock exchange will increase listing. Similar choice questions were given for rule of law; corporate governance; financial literacy, and demutualization as explanatory variables. Should the answer be positive it takes value of one, otherwise it takes value of zero. Two hundred and thirty questionnaires were returned from 500 representing 46% success rate which was analysed using E-view 7.

#### 3.1 Model Specification

The modified linear probability model (LPM) designed to capture the logic of the variable relationship is implicitly presented below:

$$Lst = (Rol, Dmu, Flt, Cgov) \quad (1)$$

(+    +)    (+)    (+)

Where: Lst represents probability of increase in listing of firms; Rol represents probability of improved regulation in rule of law in regulation; Dmu represents probability of increase investors' confidence; Flt represents probability of improved financial literacy rate; C.gov represents probability of improved corporate governance. The signs beneath represent the a-priori expectations of the study.

Noting from [48], [49], the study adopts the modified linear probability model because of "its comparative simplicity, and because it can be estimated by ordinary least squares (OLS)". Thus, the probability for improved listing, rule of law in regulation, increasing investor confidence, improved financial literacy rate and improved corporate governance obtained from individual (observation) choice is represented as:

$$y_i, x_i = \begin{cases} 1 \\ 0 \end{cases} \quad (2)$$

Where,  $y_i, x_i = 1$  if the probability of the event occurs, while 0 if otherwise for all variables in the model. The explicit form of the model is presented as follows:

$$Lst_i = \alpha_i + \gamma_1 Rol + \gamma_2 Dmu + \gamma_3 Flt + \gamma_4 Cgov + \varepsilon_i \quad (3)$$



The model indicates that probability of improvement in listing is a function of positivity in probability of improved rule of law in regulation, improved investors confidence following demutualization, improved literacy rate, and improvement corporate governance, and where:

$$E(\varepsilon_i) = 0, Var(\varepsilon_i) = \delta^2, cov = (\varepsilon_i \varepsilon_j) = 0 \quad (4)$$

#### 4 Discussion and Results

The outcome of the analysis shows this regression outcome, and the resulting analysis and discussion thereon are presented as follows:

$$Lst_i = \alpha_i + \gamma_1 Rol + \gamma_2 Dmu + \gamma_3 Flt + \gamma_4 Cgov + \varepsilon_i \quad (3)$$

$$Lst = -0.29 + 0.13Rol + 0.07Dmu + 0.27Flt + 0.37Cgov \quad (4)$$

Std. Errors	0.09	0.063	0.068	0.061	0.810
Prob.	0.0021	0.0359	0.2596	0.0000	0.0001

R-Squared: 0.2071; F-stat. 14.7601, Prob. 0.000000; D.W. Stat: 2.128

The potency of increased listing in the Stock Exchange is posited by the positivity of the various explanatory variables and critically including Demutualization. Hence, the probability of Capital Market growth through listing could be based on improved Rule of Law by 13%; Demutualisation 7%; Financial Literacy 27% and Corporate Governance 37%. The standard error tests show significant probabilities except demutualization. There were relatively higher correlations for financial literacy and corporate governance which theoretically implies that the level of professionalization is low and good corporate governance can influence growth of listed companies rapidly than demutualization. The joint influence test is significant. The result exhibits no evidence of spurious regression [50].

#### 5 Conclusion

This study demonstrates that demutualization may not provide the impetus for capital market growth in African Stock Markets as evidenced from the empirical results on Nigeria. This is evidenced by the intervening variables of financial literacy, corporate governance and rule of law which separately have weak correlations with capital market growth rate in the Nigerian capital market. While demutualization may further facilitate the growth of stock market indices in developed markets, this study is positive that it may be a landmine for African Markets in view of the weak socio-economic infrastructure (rule of law and literacy rates) as captured by the degree of corporate governance, low literacy rate and implied governance structure of the Exchange indicated by the rule of law. The study extends this inference that a demutualized stock exchange with few listed

companies may want to drive profit making and naturally be lured into adopting poor corporate governance practises. This may result in greater investors' loss of confidence and further stifle capital market growth.

## 5.1 Recommendations

The study suggests that the governance structure for African Stock Markets must focus on the peculiarities of corporate governance, listing requirements and literacy rates in designing regulatory regimes. Specifically, it is suggested that the governance structure concerning membership proportion of stockbrokers of the Exchange is fundamental to privatization. The enabling laws protecting minority shareholders and corporate governance of listed companies should be addressed en-route to demutualization. The public interest theory should guide the process of demutualization, so that market failure can be adequately hedged. Demutualization should not lead to hijack by powerful business groups highlighted under the collective theory of regulations. African Stock Exchanges should focus more on financial deepening, promoting professionalism and expertise, and enhancing macroeconomic stability such that more companies will be listed. The issue of raising capital to enhance trading efficiency can be achieved through the Nigerian Central Securities Clearing System Limited which may be a public for-profit organization while at the same time perform some regulatory functions. This company can always raise capital and fulfil the infrastructural expansion much sought after under the proposed demutualization. There is need for time line and strategic risk map developed for demutualization of African Stock Exchanges.

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**Appendix**


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Table 1: Composite index of World governance Indicators (WGI) on Rule of law and Regulatory quality of ten African Stock Exchanges

Year/ Countries	1996	'97	'98	'99	2000	'01	'02	'03	'04	'05	'06	'07	'08	'09	2010	'11	'12
South Africa: R.O.L	0.58	-	0.56	-	0.55	-	0.64	0.61	0.60	0.55	0.63	0.58	0.59	0.59	0.61	0.63	0.63
Reg. Quality	0.55	-	0.59	-	0.59	-	0.69	0.71	0.73	0.67	0.68	0.66	0.65	0.65	0.65	0.64	0.63
Nigeria: R.O.L	0.29	-	0.29	-	0.31	-	0.31	0.36	0.39	0.35	0.41	0.41	0.43	0.42	0.42	0.4	0.41
Reg. Quality	0.37	-	0.37	-	0.37	-	0.35	0.36	0.37	0.44	0.41	0.42	0.43	0.45	0.45	0.45	0.46
Egypt: R.O.L	0.57	-	0.53	-	.54	-	0.51	0.54	0.55	0.51	0.45	0.45	0.49	0.50	0.49	0.48	0.50
Reg. Quality	0.50	-	0.53	-	0.51	-	0.46	0.45	0.49	0.51	0.49	0.53	0.54	0.55	0.55	0.52	0.49
Botswana:R.O.L	0.74	-	0.74	-	0.74	-	0.71	0.73	0.72	0.74	0.72	0.72	0.72	0.72	0.72	0.72	0.71
Reg. Quality	0.62	-	0.74	-	0.74	-	0.74	0.75	0.71	0.72	0.67	0.69	0.69	0.69	0.69	0.68	0.68
Mauritius:R.O.L	0.62	-	0.81	-	0.81	-	0.80	0.75	0.60	0.74	0.73	0.73	0.78	0.77	0.78	0.78	0.76
Reg. Quality	0.5	-	0.55	-	0.55	-	0.57	0.62	0.62	0.62	0.64	0.64	0.71	0.72	0.73	0.72	0.73
Cote d'Ivoire: R.O.L	0.40	-	0.38	-	0.37	-	0.32	0.31	0.33	0.24	0.28	0.24	0.26	0.31	0.31	0.32	0.37
Reg. Quality	0.43	-	0.52	-	0.36	-	0.49	0.45	0.40	0.42	0.45	0.45	0.44	0.42	0.42	0.43	0.44
Morocco:R.O.L	0.66	-	0.62	-	0.60	-	0.58	0.51	0.48	0.52	0.52	0.51	0.50	0.50	0.50	0.50	0.48
Reg. Quality	0.48	-	0.57	-	0.57	-	0.55	0.54	0.48	0.52	0.55	0.56	0.51	0.58	0.58	0.57	0.57
Ghana: R.O.L	0.48	-	0.45	-	0.49	-	0.58	0.60	0.56	0.56	0.60	0.60	0.55	0.58	0.57	0.58	0.59
Reg. Quality	0.44	-	0.53	-	0.56	-	0.45	0.51	0.52	0.57	0.56	0.57	0.57	0.60	0.60	0.59	0.61
Kenya: R.O.L	0.43	-	0.37	-	0.38	-	0.37	0.43	0.47	0.41	0.42	0.43	0.42	0.42	0.43	0.42	0.43
Reg. Quality	0.45	-	0.50	-	0.47	-	0.56	0.52	0.55	0.56	0.56	0.56	0.57	0.57	0.58	0.53	0.54
Zimbabwe: R.O.L	0.54	-	0.43	-	0.28	-	0.23	0.26	0.27	0.21	0.27	0.27	0.26	0.24	0.25	0.25	0.29
Reg. Quality	0.32	-	0.36	-	0.20	-	0.17	0.19	0.23	0.18	0.23	0.19	0.21	0.18	0.19	0.20	0.23

Sources: The World Bank Development Research: Figures computed by authors. R.O.L indicates Index of Rule of Law; Reg. Quality indicates Index of Regulatory quality

Table 2: Numbers &amp; Growth/decline rate of Listed firms of Sampled African Stock Exchanges: 2008-2012

Year	S. Africa	Egypt	Nigeria	Zimbabwe.	Kenya	Ghana	Mauritius	Cote' d'Ivoire	Morocco	Botswana
1989	748	510	111	54	57	-	-	23	71	-
1990	732 (-2.%)	573(12.3%)	131(18%)	57(5.5)	54(5.2%)	-	13(0)	23(0)	71(0)	-
1991	688(-6%)	627(9.4%)	142(8.4)	60(5.3%)	53(-1.85%)	13(0)	20 (5.8%)	25(8.7%)	67(-5.6%)	9(0)
1992	683(0.7%)	656(2.7%)	153(13%)	62(3.3%)	57(7.5%)	15(15%)	22(1%)	27(8%)	62(-7.4%)	11(2.2%)
1993	647(-5.3%)	674(2.7%)	174(13.7%)	62(0)	56(-1.7)	15(0)	30(3.6%)	24(-12.5%)	51(-17.7%)	11(0)
1994	640(-1%)	700(3.8%)	177(1.7%)	64(3.2%)	56(0)	17(13%)	35(16.6%)	27(12.5%)	44(-13.7%)	11(0)
1995	640(0)	746(6.5%)	181(2.2%)	64(0)	56(0)	19(11.7%)	28(-18.4%)	31(14.8%)	47(6.8%)	12(9%)
1996	626(2%)	649(-13%)	183(1.1%)	64(0)	56(0)	21(10.5%)	40(42.8%)	31(0)	49(4.2%)	12(0)
1997	642(2.5%)	654(0.7%)	182(-1.1)	64(0)	58(3.5%)	21(0)	40(0)	35(12.9%)	55(12.2%)	12(0)
1998	668(4%)	861(31%)	186(2.2%)	67(4.6%)	58(0)	21(0)	40(0)	35(0)	55(0)	14(16%)
1999	668(0)	1033(20%)	194(4.3%)	70(4.4%)	57(-1.7%)	22(4.7%)	41(2.5%)	38(8.5%)	53(-3.6%)	15(0.5%)
2000	616(7.7%)	1076(4.2%)	195(0.5%)	69(1.4%)	57(0)	22(0)	40(-2.5%)	41(7.8%)	55(3.7%)	16(6.6%)
2001	542(-12%)	1110(3.1%)	194(-.5%)	72(4.3%)	57(0)	22(0)	40(0)	38(-7.3%)	55(0)	16(0)
2002	450(-17%)	1148(3.4%)	195(0.5%)	76(5.5%)	57(0)	24(9%)	40(0)	38(0)	55(0)	18(12.5%)
2003	426(-5.3)	967	200(2.5%)	81(6.5%)	51(-10.5%)	25(4%)	40(0)	38(0)	53(-3.6%)	19(5.5%)
2004	403(-5.3%)	792(-15.7%)	207(3.5%)	79(-2.5%)	47(-8.5%)	29(16%)	41(2.5%)	39(2.6%)	52(-1.8%)	18(-5.5%)
2005	388(-3.7%)	744(-6%)	214(3.3%)	79(0)	47(0)	30(3.4%)	42(2.4%)	39(0)	56(7.6%)	18(0)
2006	401(3.3%)	603(-19%)	202(-5.6%)	80(1.2%)	51(8.5%)	32(6.7%)	41(-2.4%)	40(2.5%)	65(16%)	18(0)
2007	422(5.2%)	435(-27.8%)	212(5%)	82(2.5%)	51(0)	32(0)	90(119%)	38(-5%)	74(13.8%)	18(0)
2008	379 (-10%)	373 (-14%)	213(4.9%)	78 (-4.8%)	53 (3.9%)	35(9%)	89(-1.1%)	38(0%)	77(4.5%)	20(11%)
2009	363 (-4%)	305(-18%)	214(0.4%)	76(-2.5%)	55(3.7)	35(0%)	89(0%)	38(0%)	78(1.3%)	20(0%)
2010	366 (0.8%)	213 (-30%)	215(0.4%)	76(0%)	55(0%)	35(0%)	86(-3.3%)	38(0%)	73(-6.4%)	21(5%)
2011	355 (-3%)	231(8%)	196(-9.6%)	75(-1.3%)	58(5.4%)	36(2.8%)	86(0%)	33(-13.2%)	75(2.7%)	23(9.5%)
2012	348 (-2%)	235(1.7%)	192(-2%)	76(1.3%)	57(-1.7%)	34(-5.5%)	87(1.1%)	37(12%)	76 (1.3%)	24(4.3%)

Source: The World Bank, <http://data.worldbank.org/indicator>