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Relevance of Structure, Conduct and Performance Paradigm in the Nigerian Banking Industry

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Abstract
The main objective of this study is to examine the structure, conduct and performance (SCP) paradigm within the context of the Nigerian banking industry. The analysis is based on data collected from the annual report of twenty commercial banks listed in the Nigeria stock exchange; and Central Bank of Nigeria's Annual report and statement of Account between 2005 to 2008. The study employed "Hausman specification test" which is also known as indirect least squares (ILS) in testing for the simultaneity among the three variables in the model and Durbin-Watson test to detect the degree of autocorrelation among these variables. The results of these findings shows that, there is a positive relationship between the bank performance (profitability) and some of the variables under consideration (market share, index of market concentration, risk management and customer's deposit) whereas, loan disbursement was negatively related to profitability. The fact that market structure and performance has a positive effect on both ways is an indication that persistent increase in the size of banks will raise the bank performance vice -versa.
Keywords: Market Structure, Market Conduct, Market Performance, Banking industry and autocorrelation,

Introduction

Market structure, conduct and performance (SCP) framework was developed from the neo-classical analysis of markets, aiming at measuring and analyzing the degree of relationships that exist among market structures, conduct and performance. The relationship between structure and performance has been treated within the framework of structure-conduct performance (SCP) paradigm. The original model SCP interprets performance as a result of the exogenous structure of the market which influences industry's performance. The SCP paradigm assumes that a higher banks concentration allows a higher degree of cooperation between them (Mensi and Zauari, 2010). The basic postulate of the structure, conduct and performance approach is that market structure determines market conduct, which is turn determines market performance (Johann, 2010). An industry structure is expressed in terms of market concentrations (which are measured by concentration ratio) and performance by profitability, Returns on Bond (ROB), Returns on Capital (ROC), Return on Asset (ROA) and Employment. Primarily structure, conduct and performance paradigm is concerned with one-way relationships from market structure to conduct and performance. It is commonly known as the collusion hypothesis which measures the profitability and concentration of individual organization (Atemnkeng and Nzongang ,2010).

The SCP paradigm was the brain child of the Harvard school of thought and popularized during 1940-60 with its empirical work involving the identification of correlations between industry structure and performance. (Seanicaa, Albert and Saleem; 2006).

From the existing literatures, this study observed that many research works have been carried out on structure, conduct and performance paradigm in the developed countries which cut across all industries including tourism, manufacturing, banking, and so on, but, it is unfortunate that much on the subject matter had not been carried out in developing countries especially Nigeria, the little that have been in existence was concentrated on the manufacturing industry. In the Nigeria banking sector this has not been ascertained which obviate the following fundamental questions: Is structure really a trigger (booster of) or an obstacle to the Nigerian banking performance? Is conduct a yardstick to measure banking performance? And are there any factors except structure and conduct to measure performance in the Nigerian banking industry? In view of these, this research work takes pace to extend the scope in Nigeria to the banking industry. That is to ascertain, the real effect of banks' structure and banks' conduct and other determinants on banks' performance. The objective of this research work is to examine empirically, effect of market structure and conduct on the bank performance in Nigeria and to check the level of autocorrelation among the variables.

The study is an attempt to reveal the degree of the effect of the structure and conduct on the Nigerian banks performance through the use of market share and concentration ratio. At the end of this research work, the readers will have the vivid knowledge of the terminology structure, conduct, performance and the related market terminologies in use and to:

- identify structure, conduct and performance parameters
- demonstrate the relationships between structure and conduct; structure and performance; conduct and performance and the resultant performance of the Nigeria banking industry.
- analyse bank data to determine bank structure, conduct and performance and apply the paradigm to real life issues.

This research work is carried out using twenty of the consolidated commercial banks in Nigeria, and it covers the period between 2005-2008. This research work purposely chosen this period of time due to the availability of substantial data after consolidations which are usable for the examination of the subject matter.

Conceptual Framework

Market Structure

"Market" or "Industry" structure assumes different meanings according to the type of market or industry and the objectives of the research. Thus, structure may mean the characteristics or features of a certain industry or sector e.g. the volume and distribution of capital, production, employment among the units in the industry or sector. However, structure may go beyond such raw figures to measure the relative distribution of sizes of the existing units in the industry or sector whether that size is capital, output, assets, sales or number of employees. Within this context, the structure includes the concentration level in the industry or sector as well as the main factors or determinants influencing it, like barriers to entry, market growth or product differentiation. Most of the studies on the banking structure emphasize the concentration level and barriers to entry as the main components of the banking structure. They, however, add to them branching as an important element particular to the banking sector and a significant determinant of its structure (Ahmed, 1992).

Market structure refers to the organizational characteristics of a market. Traditionally, economic analysis had placed great emphasis on the structure of markets as the determinants of behaviour and performance. Market structure of an industry is observed and measured through the seller concentration, product differentiation, and barriers to entry from the economic environment of the firm. Structure characteristics are often slow and can be regarded as fixed over time. Government policies can alter significantly various structures to improve performance.

Baumol (1982) describes market structure as the organisational and other characteristics of a market. These characteristics affect the nature of competition and pricing, but it is important not to place too much emphasis simply on the market share of the existing firms in an industry. High levels of research and development spending are frequently observed in oligopolistic markets, although this does not always translate itself into a fast pace of innovation. This provides support for oligopoly as market structure best suited for innovative behaviour. Innovation is perceived as being “mandatory” for businesses that need to establish a cost-advantage or a significant lead in product quality over their rivals.

Market Conduct

Bain (1950) identified market conduct as “patterns of behaviour that enterprises follow in adapting or adjusting to the market in which they sell”. It embraces the acts practices and policies of the seller in determining, price and output, sales promotion outlays and product designs and qualities. Conduct refers to the behaviour of firms under a given set of circumstances and is normally determined by the structural characteristics of industry.

Market conduct deals essentially with the behaviour of middlemen and conduct of marketing functions with regard to the formation of association, pricing policies, price collusion and discrimination, sex restrictions and monopoly practices (Okeke, 1987).

Although industry conduct cannot be directly and accurately measured, variables can be used to measure various aspects of the latent variable more accurately. Thus, while industry conduct may not be directly observed, it has operational implications for relationships among observed variables that may be regarded as indicators of industry conduct. Industry conduct accounts for some of the observed variation in commodity supply that is not already explained by variation in price and factor costs. Observed quantities and prices are operational implications of industry conduct. (Jill and Kwamena; 2004).

Market Performance

Any attempt to measure the performance of an industry, will depend on the dimension or perspective in which the individual views performance. Market performance refers to the composite of end results which industry in any market arrive at by pursuing whatever lines of conduct they espouse, end result in the dimensions of price, output production and selling cost, product design and so on (Bain, 1968). Alternatively, market performance can be considered as an appraisal of how much the economic results of an industry’s market behaviour deviate from the best possible contribution it could make to achieve some specified goals of the economy. A full appraisal of market performance of industries is difficult because performance has many dimensions. Nonetheless, certain broad aspects of market performance are important in all industries. We may measure an industry’s performance by looking among others, at its technical efficiency, allocative efficiency, and the size of selling costs in relations to sales revenue.

Baldrige, (2010) states that performance refers to output results and their outcomes obtained from processes, products, and services that permit evaluation and comparison relative to goals, standards, past results, and other organisations. Performance can be expressed in non-financial and financial terms. Measurement refers

to numerical information that quantifies input, output, and performance dimensions of processes, products, services, and the overall organisation (outcomes). Performance measures might be simple (derived from one measurement) or composite. The challenge for organisations today is how to match and align performance measures with business strategy, structures and corporate culture, the type and number of measures to use, the balance between the merits and costs of introducing these measures, and how to deploy the measures so that the results are used and acted upon. All organisations measure performance to some extent. However, there is a large disparity among organisations in terms of which performance measures are used with many primarily focusing on financial measures. Performance measurement is one of the cornerstones of business excellence.

Following the definition or selection of appropriate performance criteria and categorization, financial ratios are often examined and analyzed under groups reflecting different operating characteristics of banks. The popular categories include capital adequacy, asset quality, managerial efficiency (often used as a proxy for management quality), earnings (or profitability), and liquidity. Popular ratios for assessing capital adequacy include gross capital to total assets and gross capital to total loans. For asset quality, the ratios of total loans to total assets, loan loss provision to total loans and risk assets to total assets are commonly used. The ratios of operating income to operating expenses and operating expenses to total assets are commonly used to assess managerial efficiency. Profitability ratios include net income to total assets and net income to total capital, while for liquidity, total loans to total deposits and holding of government securities as a ratio of total assets are common. The list of ratios could indeed be endless.

Theoretical Literature

The Structure-Conduct-Performance paradigm, which began with Bain (1950), rested on two ideas. The first idea involved a one-way chain of causation that ran from structure (concentration) to conduct (the pricing behaviour of firms) to performance (profitability). High concentration, it was argued, facilitated collusion and led to high profits. To explain why these high profits were not eroded by entry, the second idea came into play: it was argued that high levels of concentration could be traced to the presence of certain 'barriers to entry'. The central thrust of the Structure-Conduct-Performance literature lay in relating the level of concentration to the level of profitability (profits/fixed assets, say) across different industries. Here, it is necessary to distinguish two claims.

The first relates to the way in which a fall in concentration, due for example to the entry of additional firms to the market, affects the level of prices and so of price-cost margins. Here, matters are uncontroversial; that a fall in concentration will lead to a fall in prices and price-cost margins is well-supported both theoretically and empirically. (While theoretical counter-examples can be constructed, they are of a rather contrived kind; see Rosenthal (1980). To test this idea it is appropriate to look at a number of markets for the same product, which differ in size (the number of consumers), so that larger markets support more sellers. It can then be checked whether prices and so price-cost margins are lower in those larger markets which support more sellers (Weiss 1989).

A second, quite different (and highly controversial) claim relates to the net profit of firms (gross profit minus the investment costs incurred in earlier stages), or their rates of return on fixed assets. In the 'free entry' models used in modern game-theoretic literature, entry will occur up to the point where the gross profits of the marginal entrant are just exhausted by its investment outlay. In the special setting where all firms are identical in their cost structure and in their product specifications, the net profit of each firm will be (approximately) zero, whatever the level of concentration. This symmetric setup provides a useful point of reference, while suggesting a number of channels through which some relationship might appear between concentration and profitability (Sutton, 2002).

Review of Empirical Studies

As earlier stated there have been several works on structure conduct and performance. Generally, some are on a particular side of market concentration, efficiency and performance while some considered the market share, advertising and profitability. Some of these past studies are reviewed.

Gu-Shin, Ching-Yi and Chih-Yan (2010), studied the relationship among market share, advertising and profitability in the international tourist hotel industry in Taiwan, where index of market share is a function of advertising and performance. Advertising is specified as a function of market share and performance, also performance is specified as a function of market share as well as advertising. The estimation technique adopted was Wooldridge test to check the problems of serial correlation; it also tests for groupwise heteroscedasticity using modified Wald tests. It provides evidence of groupwise heteroscedasticity. It uses 3SLS method which performs well in the case of heteroscedasticity while dealing with simultaneity to estimate the jointly determined relationships among market share, advertising and profitability.

The market share equation shows that there is correlation between market share and advertising which states that advertising does affect the level of market share positively. Based on the analysis, it was also affirmed that there is positive relationship between profit and market share, profit does not increase the market share due

to the characteristics of monopolistic competition.

In the advertising equation, it was ascertained that market share is appositively related with advertising. The firm with greater market share and higher star class ratings tends to have higher advertising expenditures. It also shows the positive relationship between profit and advertising. The profit variable is not found to be significant in the advertising equation. In a summary, a simultaneous relationship exists between market share and advertising. These two way causes and effects relationship indicates that higher market share lead to increased intensity of advertising vice and versa. In the profitability equation, it was shown that profit is positively related to both market share and advertising, as higher market share and advertising assist in creating more profit.

Atemkeng and Nzongang (2010); used the spearman ranking correlation matrix in determining the problem of multicollinearity among the independent variables. It affirms that concentration is positively related with the other variables in the model. It shows that the higher the concentration the higher the profit. Portfolio theory postulates that risk investment is usually associated with higher returns than primary assets. It states that, any positive influence on profit from economy of scale may be partially offset by greater ability to diversify assets resulting in a lower risk and a lower required return in the line with the portfolio theory (Evanoff and Fortier 1988, Smirlock 1985). According to the findings the coefficient of bank risk are positively related to profitability measures and statistically significant.

Jill and Kwamena (2004), measured industrial conduct with a latent structure, two different approaches of MIMIC model were adopted; they are the filtered-measure FM approach and the multiple-indicators MI approach. The two approaches where applied to data from the fresh apple industry. In their findings in terms of estimating market power, the FM approach predicted a relatively higher degree of market power than the MI model. The estimated market power indices from both models are low, suggesting that one of the apple industries does not exercise market power despite its higher market share. The research paper was carried out to examine the degree of competiveness and market power in the fruit market, varieties of apple were used they are: Golden delicious, Red delicious, and Granny smith using cross sectional data. The result from both techniques shows that they are both negatively related but statistically significant, which implies that retailers with largest share of apple sales have a significant negative effect on the market power. From the above analysis the signs on the estimated parameters estimate of the time trend in both models appear to suggest a declining trend in industry conduct. It affirms that, both models were successful in capturing the decline in the degree of market power with time and mitigating effect of competitive shipment and retailers bargaining power.

Berger and Hannan (1989) used price information collected by the Federal Reserve System on banking institutions to examine price-concentration relationships instead of the profit concentration relationship in order to eliminate the efficient structure hypothesis as an alternative explanation of the results. The results of this analysis support the structure performance hypothesis. Furthermore, studies by Smirlock (1985), Bourke (1989) and Staikouras and Wood (2003) suggested that concentration has a positive impact on banking performance. The more concentrated the industry is, the greater the monopolistic power of the firms will be. This, in turn, improves profit margins of banks.

Methodology

Given the nature of this research work, the data are purely secondary. The data covers the period of 2005 to 2008 with twenty (20) firms investigated. The data were sourced from, the annual statement of accounts of each financial institutions in question, CBN Statistical Bulletin, and the Nigeria Stock exchange 2009 factbook.

Estimating Technique

For the purpose of this research work two different techniques were adopted: they are; “Hausman specification test” which is also known as indirect least squares (ILS) (Gujarati, 2007). The choice of this estimation technique is to determine the simultaneity among profitability, index of market concentration and market share. Moreover, Durbin-Watson test was also employed to detect the degree of autocorrelation among the variables under consideration.

Model Specification

The work of Gu-Shin, Ching-Yi and Chih-Yan (2010), which was an extension of the Bain (1951) structure, conduct and performance SCP model stated in the previous chapter, is adopted for this research work. Bain (1951) SCP model made use of the traditional approach to establish the relationship between profitability, market concentration and market share and other variables.

π =f(MC, MS).

Where π is (Performance), which can be measured as either, Returns on capital (ROC), Return on assets (ROA) or Return on Equity (ROE). IMC is (index of market concentration); MS is (market share). Bain postulated a positive relationship between profitability and all independent variables. The model was modified

by Gu-Shin, Ching-Yi and Chih-Yan (2010), in their work which examined the relationship among profitability, market share and advertising. Simultaneous equation system was adopted as follows.

MS= f(AD, PF, X_1)
AD= f(MS, PF, X_2)
PF= f(MS, AD, X_3)
Where MS = (market share),
AD = (advertising),
PF = (performance) and
X_1, X_2, and X_3 are vectors of exogenous variables.

The model above is adopted for this research work with some modifications by expunging advertising and replaced with risk management due to non availability of accurate and substantial data to measure advertisement.

$\pi = f(IMC, MS, RM)$
$\pi = \alpha_0+\alpha_1 IMC_t+\alpha_2 MS_t+\alpha_3 RM_t+\mu_t$.

From the above analysis, the following structural equations are developed.

$\pi = f(IMC,MS, RM)$
$\pi = \alpha_{10}+\alpha_{11} IMC_t+\alpha_{12} MS_t+\alpha_{13} RM_t+\mu_{1t}$…… (1)
$IMC=f(MS, \pi, CD)$
$IMC = \alpha_{20}+\alpha_{21} MS_t+\alpha_{22}\pi_t+ \alpha_{23} CD+\mu_{2t}$…… (2)
$MS= f(IMC, \pi, LON)$
$MS = \alpha_{30}+\alpha_{31} IMC_t+\alpha_{32}\pi_t+ \alpha_{33} LON+\mu_{3t}$…….. (3)

Where, IMC denote Index of market concentration
MS is market share
RM is risk Management
π is profitability
CD is Customers' deposit
LON is Loan and advanced to customers
μ_t is the stochastic variable
t is time period
α_{10}, constant intercept,
α_{11}, α_{12} and α_{13} are parameter coefficient of IMC, MS, RM respectively.

Identification problem

The identification problem arises because different sets of structural coefficient may be compatible with the same set of data. To put the matter differently, a given reduced-form equation may be compatible with different structural equations or different models, and it may be difficult to tell which particular or different model we are investigating (Gujarati, 2007).

$\pi = \alpha_{10}+\alpha_{11} IMC_t+\alpha_{12} MS_t+\alpha_{13} RM_t+\mu_{1t}$…… (4)
$IMC = \alpha_{20}+\alpha_{21} MS_t+\alpha_{22}\pi_t+ \alpha_{23} CD+\mu_{2t}$…… (5)
$MS = \alpha_{30}+\alpha_{31} IMC_t+\alpha_{32}\pi_t+ \alpha_{33} LON+\mu_{3t}$…….. (6)

Identification criteria $V-M \leq K-1$
Where, V = Total number variables in the model, M = number of variables in a particular equation and K = number of equations.
Equation (1)
V=6, M= 4 and K= 3
$V-M \leq K-1 = 6-4 \leq 3-1, 2=2$
From the above analysis, it shows that, these structural equations are exactly or just identified which means, the unique numerical values of structural equation involved can be obtained from the estimated reduce-form coefficients.

The reduce form equations

The following reduce-form equations are obtained from the above structural equations.

$\pi = \pi_{10}+ \pi_{11} MS_t+ \pi_{12} IMC_t+ \pi_{13} RM_t+ \pi_{14} CD + \pi_{15} LON +v_{1t}$…… (7)
$IMC = \pi_{20}+ \pi_{21} MS_t + \pi_{22t} RM + \pi_{23}\pi+ \pi_{24} LON +w_{2t}$…..…… (8)
$MS = \pi_{30}+ \pi_{31} RM_t+ \pi_{32} IMC+ \pi_{33}\pi_t+ \pi_{34} CD +z_{3t}$……..…….. . (9)

Description of Variables

i. Index of market concentration (***IMC)***; Market concentration is a function of the number of firms and their respective shares of the total production (alternatively, total capacity or total reserves) in a market. For the

purpose of this study Herfindahl-Hirschman index of market concentration is used. This is calculated as the square of ratio individual banks deposit to the total deposit $(IBD/TD)^2$, where IBD is individual bank's deposit, TD is total commercial banks deposit in the market.

ii. Market share (***MS***) is the share of firm í in time period t. The proportion of the market that the firm is able to capture can measure the firm's performance relative to competitors. This proportion is referred to as the firm's market share. Market share is often associated with profitability and thus many firms seek to increase their sales relative to competitors. Market share is estimated by dividing individual firm's revenue with the total industry revenue. In the case this research work, revenue was represented by gross earning.

iii. Risk Management of the commercial banks which is itemized as individual bank total loan to total assets ratio of commercial banks.

iv. Performance (***π***); Profitability refers to the potential of a venture to be financially successful. Performance can either be measured as Return on Capital (ROA), Return on Assets (ROA), Return on Equity (ROE) or as Profitability. For the purpose of this study profitability was chosen to measure the bank performance due to the availability of substantial data on banks profitability.

v. Loan and Advance to Customer (**LON**); this is total loan and advance disbursed to the customers at the time frame, it comprise of long term, short term and medium term loans.

vi. Customer deposit (**CD**) these are total deposit with individual bank; it includes time, fixed, savings and current deposits.

RESULTS AND DISCUSSION

This section deals with the data analysis, evaluation and interpretation of the empirical result. It was mentioned in the previous chapter that "Hausman specification test" known as indirect least square was adopted to determine the simultaneity among profitability, index of market concentration and market share. This technique involves three (3) steps, there are; identification problem, obtain reduce form equation from structural equation and apply OLS to the reduce form equations to obtain numerical value to the variables in the model.

Profitability Equation

Table 1.

Variables	Coefficient	Standard Error	t-Statistic	(Prob.)
Constant	26.50916	5.0577251	4.75087	(0.0000)
MS	0.569252	0.332454	1.71227	(0.0914)
IMC	0.242574	0.160161	1.51456	(0.1345)
RM	1.020158	0.224577	4.54258	(0.0000)
CD	0.042927	0.253409	0.16940	(0.8660)
LON	-0.032557	0.098287	-0.331247	(0.7415)

R^2 =0.986956.

Durbin-Watson = 1.650841

F test =1029.001 (2.45)

Table 1 showed the estimated relationship that exist among banks performance (profitability), market share, index of market concentration, risk management, customers deposit and loan disbursed to the customers by the banks. The above analysis shows that there is a positive relationship between bank performance (profitability), and some of the variables under consideration (market share, index of market concentration, risk management and customers deposit) and negatively related to the loan issued or disbursed to customers, which means a unit increase in market share, index of market concentration, risk management and customers deposit will bring about 57%, 24%, 102%, and 4% increase in profitability respectively. Whereas a unit increases in loan disbursement reduce profitability rate by 3%. Though not all the variables are correctly signed, when compared to the aprior expectation, all the variables were not statistically significant, except the intercept and risk management.

R^2 is very high showing that the variables under consideration explain or account for 99% variation in the banks performance (profitability) in Nigeria, while the remaining 1% is accounted for by the error term. The F-statistic indicates that the model is not statistically significant at 5% level, which shows that the model 1 (i.e profitability equation model) does not pass the over all test of statistical significance. The economic interpretation of this is that all the variables used in the model portrait positive impact on the banks performance, but, the impact is as not significant as it expected during the period under review.

Durbin-Watson, the estimated *d* value can be shown to be 1.65081 suggesting that serial correlation is indeterminate. From the Durbin-Watson table we found that 80 observations and (6) six explanatory variables, d_L*=1.480 and* d_u *=1.801.*

Index of Market Concentration Equation
Table 2.

Variables	Coefficient	Standard Error	t- Statistic	Prob.
Constant	-6.845068	3.271985	-2.092023	0.0401
MS	2.009922	0.195358	10.28838	0.8099
RM	0.069668	0.288434	0.241539	0.0000
PR (π)	0.134040	0.085414	1.569293	0.1212
LON	0.329198	0.099168	3.319592	0.0014

R^2 =0.736968
Durbin-Watson =1.286302
F test = 48.33134 (2.68)

Table 2 showed the estimated relationship that exist among index of market concentration (that is measure of banks structure), risk management (element of bank conduct), market share, profitability (performance) and loan to the customers. There is no gainsaying that the empirical result shows that there is positive relationship between index of market concentration and all the independent variables in the model. From this result evidence shows that a unit increase in any of these variables (market share, risk management and profitability) will lead to a positive change in the banking structure (product differentiation, diversification, economies of scale etc). It shows that not all variables are statistically significant. The result shows that market share and loan to the customers are statistically significance at 5 per cent level. The evidence from this study shows that banking structure improve substantively when there increase in both market share and loan to customers. While risk management and profitability are statistically insignificant at 5 per cent level which indicates that an improvement in both (risk management and profitability) will bust the improvement in banking structure.

The R^2 is also high at 0.736968 which means that 74 per cent systemic variation in banking structure were explain by the elements of banks conduct and performance.

F-statistic value indicates that model 2 (index of market concentration equation) failed to pass the test for overall statistical significance at 5 per cent level

Durbin-Watson test, the estimated *d* value can be shown to be 1.2863 suggesting that there is first serial positive correlation in the model. From the DW tables we found that 80 observations and (5) five explanatory variables, d_L *=1.590 and* d_u *=1.772*

Market Share Equation
Table 3.

Variables	Coefficient	Standard Error	t-Statistic	Prob.
Constant	-5.788990	0.885762	-6535608	0.0000
RM	-0.2265639	0.120509	-2.204305	0.0308
IMC	0.167282	0.027345	6.117412	0.0000
PR (π)	0.006508	0.020948	0.310668	0.7570
CD	0.130648	0.036106	3.618496	0.0006

R^2 = 0.955209
Durbin-Watson = 1.274296
F statistic = 373.2042. (2.68)

Table 3 showed the estimated relationship that exists among market share, Risk management, index of market concentration, profitability and customers' deposit. The result indicates that there is negative relationship between market share and risk management, which implies that a unit increase in risk management leads to about 23 per cent decrease in the market share. More so, it shows that, market share is positively related to other variables i.e index of market concentration, profitability and customers deposit which satisfy a priori expectation criteria, according to the result, a unit increase in any of these variables index of market concentration, profitability and customers deposit will increase the market share at 17%, 0.07%, and 13% respectively.

At 5per cent level, t- statistic it shows that risk management and profitability are statistically insignificant, while index of market concentration and customers deposit are statistically significant.

The high value of the R^2 at 0.955209 indicates that about 96 per cent systemic variation in market share were explained by the variable used in the model, this confirms the importance of these variables in describing the relationship that exist among banks structure, bank conduct and performance.

F-statistic value indicates that model 3, (market share equation) failed to pass the test of over all statistical significance as it were in equation 2 at 5 percent level of significance.

Durbin-Watson test, the estimated *d* value can be shown to be 1.274296 suggesting that there is first serial positive correlation in the model. From the DW tables we found that 80 observations and (5) five

explanatory variables, $d_L = 1.590$ *and* $d_u = 1.772$

Discussion of Empirical Findings

Judging from the estimating technique of this study has been able to achieve its set objective. This study carried out an empirical validity of structure, conduct and performance paradigm in Nigeria banking industry using the annual data from 2005 to 2008. This study made use of "Hausman specification test" also known as indirect least square (ILS) with panel data covering the period between 2005-2008 and making use of twenty (20) Nigerian commercial banks. This estimating technique was used to test for simultaneity problems. The method employed is consistent and efficient in wiping out the property of unbiasedness.

From the results of the findings it was revealed that there is a positive relationship between the bank performance (profitability) and some variables under consideration (market share, index of market concentration, risk management and customer's deposit) whereas, loan disbursement was negatively related to profitability. These also support the findings by Atemnkang and Nsongeng (2002), and Cu-Shin, Ching-Yi and Chil-Yan (2010). The coefficients of determination R^2 in the three equations are very high which are approximately 99%, 74% and 96% respectively. The result indicates that about 99% of the systematic variation in the banks performance (profitability) in Nigeria is accounted for by the explanatory variables, about 74% systematic variation in banking structure is as explained by the elements of banks conduct and performance and about 96% systematic variation in market share was explained by the regresors. The high value of R^2 in the three equations imply that the classical OLS estimation and ILS estimation are very close which means that the estimated value of the endogenous variables are highly closed to their actual value. This confirmed the significance of the relationship bank performance (profitability), market share, index of market concentration and risk management. At 5%level of significance the T-statics revealed that risk management and profitability are statistically insignificant.

The overall test of statistical significance which is F-statics value as shown in the three models failed to pass the test at 5 percent level of significance. The Durbin-Watson statistic of 1.2863 and 1.2742 respectively suggest that there is first order series positive correlation in the table 4.2 and 4.3 respectively.

Summary

This study examines the interactions that exist among structure, conduct and performance in the Nigeria banking industry using index of market concentration as a proxy for measuring structure, while risk management as an element of conduct and also profitability for that of performance. The main objective is to empirically assess the effect of market structure and conduct on the bank performance in Nigeria. Fro the previous research works such as Jill and Kwamena (2004), Atemnkeng and Nzongang (2010), Gu-Shin, Ching-Yi and Chih-Yan (2010) this research work indentify that much on the subject matter have not been carrying out in less developed countries especially Nigeria. This informed the basis for conducting this research work. The traditional theory of structure, conduct and performance (SCP) model was explored to serve as a backbone to this study. The theoretical framework is adopted because some of its variables such as market share, market concentration, risk management and customers deposit have great influence in bank performance.

Moreover "Hausman specification test" also known as indirect least square (ILS) were used with panel data covering the periods between 2005 and 2008 with twenty (20) Nigerian commercial banks listed in the Nigeria stock exchange. Some statistical tools were also used to explore the relationships that exist among the variables of interest.

The regression result for performance (profitability) in equation 1 shows that some of the explanatory variables are statistically significant and some are statistically insignificant at 5% of t-statistic, while all the equations were failed overall f - test statistical significance at 5% level. The positive relationship between market share and performance shows that the higher the capital rate is, the more profitable the bank will be. More so, it buttress the study of Berger (1995) and Anghazo (1997); which conclude that banks which are well capitalized are more profitable than the others. The positive and statistical significance of risk management also show the sensitive managerial decisions of each bank that have greater impact on the level of profit accrue to it. More so, positive relationship between customers deposit and profitability satisfy the assertion of Shaw's (1973) which goes thus, that the higher deposit rates increases financial savings and expand the role of financial institution in intermediating funds between surplus and deficits unit in the economy. The development of the financial system thus increases incentives to save, raise the volume efficiency and profitability of the banking industry.

Conclusion

Commercial banks have an important role to play in the economic development of a country. The effect of monetary policy could only be felt in the economy through the commercial bank. These banks were faced with chronic financial distress in late 2003 and early 2004. Despite their role, there is no study on the effect of structure, conduct on the performance of these banks. This paper should be seen as a first step, not the last result

in this direction. The main objective of this research work is to examine empirically, the effect of market structure and conduct on the bank performance in Nigeria banking industry from 2005 to 2009 with SCP hypothesis, which was actually reduced to 2008 due to non-availability of 2009 data in some banks under consideration and undisclosed information's by bank officials. The study utilized panel data on the twenty commercial banks listed in the Nigeria stock exchange due to the availability of the required data. Three models were used, one that defines performance in term of profitability, a second defining market structure in term of index of market concentration and the third that defines market conduct in term of market share and risk management. With respect to the SCP approach there is positive relationship among market structure, conduct and performance within the institutional context of banking system in Nigeria.

The role of market concentration, market share, risk management and customers deposit are important in the determination of bank profitability. More so, overall results indicate that size, deposit and effective risk management are directly contributes to the banks profitability, where as the loan expenses inversely affect bank profitability. The report shows that, the financial determinants of high performance banks are: both financial and operational factors including interest on deposits, gross loans to total deposit, gross charge- off to loans, municipal bonds, securities income to securities, payroll expense to employees, over head to earning assets, operating expenses to earning assets, loan loss provision to earning assets, loan income to gross loans, interest on deposits to time and saving deposits. Similar variables are included in the model of banks performance.

Finally, the results of the study in general confirm the reported findings of some of the studies in the body of the paper. However, looking at the summary statistics one notices a high fit, that is, coefficient of determination R^2 averaging 90 percent. For this reason, it is obvious that all the variables used in this study really represent the determinant of bank profit. Further researches are needed to obtain more of the determinants of bank profit or performance.

Recommendations

Empirical evidence from this research work has shown that the market structure and conduct through their elements, tell so much on the bank performance in Nigeria. The fact that market structure and performance has a positive effect on both ways is an indication that persistent increase in the size of banks will raise the bank performance vice -versa. On the other hand conduct and performance are also positively related, it implies that effective policy in the banking system will also increase it performance.

In view of these assertions in the Nigeria banking industry the following are recommended.

- Since the commercial banks are the primary suppliers of funds to business firms, bank loan should be available to the customers at affordable interest rate so as to encourage investment.
- The result shown that performance is appositive function of market share and concentration therefore, bank should expand there scope of operations.
- Banks should motivate there customers through substantive interest on capital deposit, so that customers will channel their capital into deposit rather than investing their money on securities.
- Bank should render social services to the people in their area of operations.

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