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Statistical Analysis Of Public Views Of Bank Recapitalization

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ABSTRACT
The issues of recapitalization in our banking cannot be overemphasize of, considering much significant role played by banks in our economy where any liquidations in this sector, which adversely affects the citizen in particular and econ in Nigeria with Port Harcourt City as the case study was carried out, using one of the statistical techniques which is chi-square test (x^2 test) of independence with the data collected through the use of questionnaire method, with the sole aim of determining the dependability of banks risk on other factors, ascertaining the justification for increase in minimum paid-up capital of banks, as well as investigating the risk facing owners of bank capital. Generally, the following inference where drawn from the analysis carried out, which include the justification for increase in bank capital bases depends on factors like inflationary pressure, technological enhancement etc, and the risk facing owners of bank capital depends on some factors like credit and exchange risk while that of protection against bank risk depends on quality of management.
Keywords: Banks, Capital, Diversification and Recapitalization

1.0 INTRODUCTION

One of the most critical of all banking problems in recent years centers upon raising and maintaining sufficient capital. To a banker capital has a special meaning which refers principally to funds contributed by the bank owner these consist mainly of stocks reserves and those earnings that are retained in the bank capital performs several indispensable function in the operation of a bank as supplying resources to get new bank started, providing a base for growth and expansion depending the against risk and maintaining public confidence in the banks management and stockholders, but a situation where the inflationary pressure in Nigeria is very high and the banks need to review upward their capital base to be consort Ent with the pressure existing in the economy by inflation. This situation however leads to the introduction by Central Bank of Nigeria (CBN) of the increase in minimum paid-up capital otherwise know as re-capitalization of Banks Capital.

The history of the increase in the minimum paid-up capital for banks started in 1952 when indigenous banks has N2500 and expatriate banks had N200,000 as minimum paid-up capital. In 1985, the minimum capital requirement for expatriate banks rose to N400,000 while the indigenous banks had theirs not reviewed.

There was a change in the year 1992, expatriate banks needed to operate with N1.5million while the indigenous bank requires minimum paid up capital of N600,000. In the year 1979, with the advent of merchant banking, the minimum paid capita for merchant banks was N2.0million. For the year 1988, commercial banks had N10.0 million as their capital of N20.0 million and merchant banks had N12.0 million as paid-up capital with the introduction of community banks was paged at N250,000.

However, another amendment to the minimum paid up capital for banks was made in the year 1991, whereby the minimum paid up capital for banks were:-

- Commercial Banks N50 million
- Merchant Banks N40 million
- Community Banks N500,000

The year 1977, set the stage for uniform capital base requirement of N500 million for both commercial banks and merchant banks rose to N1 billion in the year 2004, the Central Bank of Nigeria (CBN) came up with a policy of a proposed minimum capital base of N25 billion for commercial and merchant banks, while the community banks will operate with a minimum paid up capital of N20 million.

This review is expected to take effect from 31st December 2005, according to Central Bank of Nigeria (CBN) Governor Prof. C. Soludo.

Statement of Hypothesis

H_0: Growth and development of banking sector is independent of recapitalization of banks.

H_1: Growth and development of banking sector is not independent of recapitalization of banks.

H_0: Justification for increase in capital base of banks is independent on some factors.

H_1: Justification for increase in capital base of bank is not independent on some factors.

2.0 REVIEW OF LITERATURE

This chapter is to review all known literature that have relevance to the problem being researched; in the area of recent bank's recapitalization; for the past years banks. Currently, the banks in Nigeria are undergoing recapitalization. As we are all aware, the world economy has been cite by the repercussion of the financial meltdown that started with the sub-prime mortgage crisis in the United State of America and spread to Europe and other part of the world. This crisis has lead to the collapse of many banks and other financial institutions and even rendered an entire nation bankrupt.

In Nigeria, the banking system appears to have weathered the storm due to a number of factors. Among these are the facts that our financial system is not strongly integrated into the international financial system, as well as the relatively simply nature of financial products and strong capitalization and liquidity of Nigerian banks.

However, there are many who have been aware for a while now that whereas the system in general is likely to absorb and survive the effects of crisis, the effects vary from bank to bank. A few Nigeria banks, mainly due to huge concentrations in their exposure to certain sectors (capital market and oil and gas being the prominent ones), but due to a general risk management and corporate governance, have continued to display signs of failure.

As far as October last year, some of the banks showed serious liquidity strain and had to be given financial support by the central bank in the form of an "Expanded Discount Window (EDW)" where the CBN extended credit facilities to these banks on the basis of collateral in the form of commercial paper and bankers' acceptances, sometimes of doubtful value.

As at June 4, 2009, when the CBN Governor Mr. Sanusi Lamido Sanusi assumed office, the total amount outstanding at the EDW was N256,571 billion most of which was owed by the five banks.

A review of the activity in the EDW showed that four banks had been almost permanently located in as borrowers and were clearly unable to repay their obligations. A fifth bank had been a very frequent borrower when its profile ordinarily should have placed it among the net placers of funds in the market. Whereas the five banks were by no means the only ones to have benefited from EDW, the persistence and frequency of their demand pointed to a deeper problem and the CBN

identified them as probate source of financial instability, most likely suffering from deeper problems due to non-performing loans.
In view of the aforementioned circumstance, he instructed the director of banking supervision of the CBN to carry out a special examination of the following five banks;

1. Afribank Plc
2. Finbank Plc
3. Intercontinental Bank Plc
4. Oceanic Bank Plc and
5. Union Bank Plc

The examination was conducted by a joint team of CBN and NDIC 9Nigeria Deposit Insurance Corporation) officials. The major findings on the five banks include:

1. Excessively high level of non-performing loans in the five banks which are attributable to poor corporate governance practices, tax credit administration processes and the absence or non-adherence to the bank's credit risk management practices. Thus the percentage of non-performing loans to total loans ranged from 19 percent to 48 percent. The five banks will therefore need to make additional provision of N539.09 billion.
2. The total loan portfolio of these five banks was N2801.92 billions margin loans amounted to N456.28 billion and exposure to oil and gas was N487.02 billion. Aggregate non-performing loans stood at N1,143 billion representing 40.8 percent.
3. From 1 and 2 above, it is evidence that the five banks accounted for a disproportionate component of the total exposure to capital market and oil and gas, thus reflecting heavy concentration to high risk areas relative to other banks in the industry.
4. The huge provisioning requirements have led to significant capital impairment. Consequently, all the banks are under capitalized for their current levels of operations and are required to increase their provisions for loans losses, which impacted negatively on their capital. Indeed on is technically insolvent with a capital adequacy ratio of (1.01 percent). Thus, a minimum capital infection of N204.94 billion will be required in the five banks to meet the minimum capital adequacy ration of 10 percent.
5. The five banks were either peremial net-takers of funds in the inter-long periods of time, a clear evidence of illiquidity. In order words, these banks were unable to meet their maturing obligations as they fall due without resorting to the CBN or the inter-bank market.

It is important to note that at least three of the banks are systematically important (accounting for more than 5 percent of assets and deposits in the banking system) and together the five banks account for 39.93 percent of loans, 29.099 percent of deposits and 31.47 percent of total assets as at May 31 2009.
Given the extent of the asset quality problem leading to liquidating stresses and the variety of stress points on the banks balance sheets, failure to act to secure the financial health of these banks will clearly place the system at risk. The Central Bank has a responsibility to act to protect all depositors and creditors and ensure that no one loses money due to bank failure. The bank also needs to more decisively to remove this principal cause to financial instability and restore confidence in the banking system.
Consequently, the CBN governor, haven reviewed all the reports of the examiners and the comments of the directors and deputy governors and is satisfied that these five institutions are in a grave situation and that their management have acted in a manner detrimental to the interest of their depositors and creditors. Therefore, in the exercise of his powers as contained in Sections 33 and 35 of the banks and other financial institutions act 1991, as amended, and after security the consent of the board of directors of the CBN, we hereby remove the managing directors and the executive directors of the following banks from office with effect from Friday August, 14, 2009.

1. Afribank Plc
2. Intercontinental banks plc
3. Union Bank of Nigeria Plc
4. Oceanic International Bank Plc
5. Finbank Plc.

	Affected Banks	Past CEO	Current CEO
1.	Afribank Plc	Mr. Sebastian Adigwe	Mr. Nebolisa Arab
2.	Intercontinental Bank	Mr. E. Akingbola	Mr. Mahmud L. Alabi
3.	Union Bank of Nig	Mr. B. Ebong	Mrs. Funke Osibodu
4.	Oceanic bank	Mrs. Cecilia Ibru	Mr. John Aboh
5.	Finbank Plc	Mr. Okey Nwosu	Mrs. Suzanne iroche

Each of the above will head a management team that will include executive directors and chief financial officers to be appointed by the CBN. The CBN is conscious of the fact that changing management along will not resolve this problem. Consequently, the CBN is injecting a total of about N400 billion into these five banks with immediate effect in form of tier 2 capital to be repaired from proceeds of capitalization in the near future. This injection is sufficient to resolve and stabilize all the institutions and enable them continue normal business. The injection of fresh capital by the CBN is a temporary measure as government does not intend to hold the shares for long and shall divest its holding as soon as new investors recapitalize these banks.

The customers of the affected banks and all the banks in general were informed that there is no cause for alarm. They should continue to transact their normal business in the banks where their accounts are domiciled as this exercise is meant to further strengthen the banking industry and recapitalize the affected banks.

He also state that the scope of the special examination was widened to cover all 24 banks so far, we have concluded the audit of 10 banks including these five, the other being;

1. Diamond Bank
2. First bank
3. United Bank for Africa
4. Guaranty Trust Bank
5. Sterling Bank

He said they have also commenced the next batch of 11 banks and hope to conclude them by the end of August. All in all, we expect to conclude the audit in mid-September.

This research work in statistical analysis of public views of the bank recapitalization will conclude by restating that, going forward, the CBN will not waiver units desire to ensure that public confidence in the Nigerian banking system is maintained through appropriate disclosure and the reinvigoration of its policy of zero tolerance on all professional and unethical conducts.

3.0 METHOD OF ANALYSIS

The formula for Chi-Square Statistic

$$x^2 = \frac{(e_1 - f_1)^2}{e_1} + \frac{(e_2 - f_2)^2}{e_2} + \ldots + \frac{(e_n - f_n)^2}{e_1}$$

$$= \sum_{k=1}^{n} \frac{(e_k - f_k)^2}{e_k}$$

4.0 ANALYSIS OF DATA

The data collected in the course of this research survey through the use of questionnaire are presented on the table below;

Table 4.0
Please indicate how much you agree with the following statement;
Increase in minimum paid-up capital depends on some factors like inflationary pressure technological enhancement; compete with foreign banks and exchange rate depreciation.

Factors	**Responses**				**Total**
	Agreed	**Strongly Agreed**	**Disagreed**	**Strongly Disagree**	
Inflationary pressure	65	67	26	40	198
Technological enhance	25	46	51	41	163
Compete with foreign banks	30	34	32	53	149
Exchange Rate Depreciation	70	72	06	02	150
Total	**190**	**219**	**115**	**136**	**660**

Source: Questionnaire response from respondent in Aba, Port Harcourt Road

Table EAU 4.1
Please indicate how much you agree with the following statement;
Protection against bank risks depends on some factors like quality of management, owners of banks capital, diversification and banks resources.

Factors	**Responses**				**Total**
	Agreed	**Strongly Agreed**	**Disagreed**	**Strongly Disagree**	
Quality of management	67	46	72	34	219
Owners of Banks Capital	41	53	40	02	136
Diversification	31	51	26	06	115
Banks Resources	25	30	65	70	190
Total	**165**	**180**	**203**	**112**	**660**

Source: Questionnaire responses from respondents in Lagos-Borokiri Road (Town)

Table EAU 4.2
Please indicate how much you agree with the following statement;
Risk facing owners of bank capital depends on some factors like liquidity risk, credit risk, exchange risk and crime risk.

Factors	**Responses**				**Total**
	Agreed	**Strongly Agreed**	**Disagreed**	**Strongly Disagree**	
Liquidity Risk	67	72	53	51	243
Credit Risk	26	02	32	41	101
Exchange Risk	40	06	34	46	126
Crime Bank	65	70	30	25	190
Total	**198**	**150**	**149**	**163**	**660**

Source: Questionnaire responses from respondents in Olu-Obasanjo's Road and some areas in Diobu

Determination of Dependability or Otherwise; Other Factor Example Inflation

1. **Statement of Hypothesis**

   H_0: Justification for increase in capital base of banks is independent on some factors.

   H_{01}: Justification for increase in capital base of banks is not independent on some factors.

2. The level of significance is at $\alpha = 0.05$

3. The critical value at $\alpha = 0.05$

$$x_{\alpha}^{2} : (R-1)(C-1)$$

$$x_{0.05}^{2} : (4-1)(4-1)$$

$$x_{0.05}^{2} : 9 = 16.919$$

4. The Decision Rule

   We do not accept H_0 ie. The null hypothesis if

   $x_{cal}^{2} \geq x_{tab}^{2}$; otherwise we do not reject H_0.

5. Computation of Expected Frequency

Factors	**Responses**				**Total**
	Agreed	**Strongly Agreed**	**Disagreed**	**Strongly Disagree**	
Inflationary pressure	65(57)	67(66)	26(35)	40(4)	198
Technological Enhancement	25(47)	46(54)	51(28)	41(24)	163
Compete with foreign banks	30(43)	34(49)	32(26)	53(31)	149
Exchange rate depreciation	70(43)	72(50)	06\(26)	02(31)	150
Total	**190**	**219**	**115**	**136**	**660**

Expected frequencies $= \dfrac{\text{Row Total * Column Total}}{\text{Grand Total}}$

$$= \frac{198(190)}{660} = 57$$

$$= \frac{198(219)}{660} = 65.7 = 66$$

6. Test statistic

$$\therefore x_{cal}^{2} = \sum_{i=1}^{r}\sum_{j-1}^{c}\frac{(e_{ij} - f_{ij})}{e_{ij}}$$

$$x_{cal}^2 = \frac{(65-57)^2}{57} + \frac{(67-66)^2}{66} + \frac{(26-35)^2}{35} + \frac{(40-40)^2}{40} + \frac{(25-47)^2}{47} + \ldots + \frac{(2-31)^2}{31}$$

$$x_{cal}^2 = 129.9297$$

7. Decision

Since $x_{cal}^2 = 129.9297 > x_{tab}^2 = 16.9190,$ we do not accept the null hypothesis.

8. Conclusion

We thereby conclude that justification for increase in capital base of banks depends on factors like inflationary pressure, technological enhancement.

4.1 Determination of the Risk Facing Owners of Ban

1. Statement of Hypothesis

H_0: Risk facing owners of banks capital is independent on some factors.

H_1: Risk facing owners of banks capital is not independent on some factors.

2. Level of significance at $\alpha = 0.05$
3. The critical value at $\alpha = 0.05$

$x_{\alpha}^2 : (R-1)(C-1)$

$x_{0.05}^2 : (9) = 16.9190$

4. The Decision Rule

We do not accept H_0 ie. The null hypothesis if $x_{cal}^2 \geq x_{tab}^2$; otherwise we do not reject H_0.

5. Computation of Expected Frequency

Factors	Responses				Total
	Agreed	Strongly Agreed	Disagreed	Strongly Disagree	
Liquidity Risk	67(66)	72(50)	53(49)	51(54)	219
Credit Risk	26(35)	02(26)	32(26)	41(28)	115
Exchange Risk	40(4)	06(31)	34(31)	46(34)	136
Crime Risk	65(57)	70(43)	30(43)	25(47)	190
Total	**198**	**150**	**149**	**163**	**660**

$$\text{Expected frequencies} = \frac{\text{Row Total} * \text{Column Total}}{\text{Grand Total}}$$

$$= \frac{219(198)}{660} = 65.7 = 66$$

$$= \frac{219(150)}{660} = 49.8 = 50$$

6. Test statistic

$$\therefore x_{cal}^2 = \sum_{i=1}^{r}\sum_{j-1}^{c}\frac{\left(e_{ij} - f_{ij}\right)}{e_{ij}}$$

$$x_{cal}^2 = \frac{(67-66)^2}{66} + \frac{(72-50)^2}{50} + \frac{(72-50)^2}{50} + \frac{(53-49)^2}{49} + \frac{(51-54)^2}{54} + \ldots + \frac{(25-47)^2}{47}$$

$$x_{cal}^2 = 99.092$$

7. Decision

Since $x_{cal}^2 = 99.092 > x_{tab}^2 = 16.9190,$ we do not accept the null hypothesis.

8. Conclusion

However, we conclude that, the risk facing owners of bank capital depends on some factors like credit risk, exchange risk, liquidity risk and crime risk.

4.2 Determination of the Dependability of Banks Risk on other Factors

1. Statement of Hypothesis

H_0: protection against of banks risk is independent on some factors.

H_1: protection against banks risk is not independent on some factors.

2. Level of significance at $\alpha = 0.05$
3. The critical value at $\alpha = 0.05$

$$x_\alpha^2 : (R-1)(C-1)$$

$$x_{0.05}^2 : (4-1)(4-1)$$

$$x_{0.05}^2 : 9 = 16.919$$

4. The Decision Rule

We do not accept H_0 ie. The null hypothesis if $x_{cal}^2 \geq x_{tab}^2$; otherwise we do not reject H_0.

5. Computed of Expected Frequency

Factors	**Responses**				**Total**
	Agreed	**Strongly Agreed**	**Disagreed**	**Strongly Disagree**	
Quality of management	67 (55)	46 (6)	72(67)	34 (37)	219
Owners of Capital	41(35)	53(37)	40(42)	02(23)	136
Diversification	32(3)	51(31)	26(35)	06(20)	115
Bank Resources	25(49)	30(52)	65(58)	70(32)	190
Total	**165**	**180**	**203**	**112**	**660**

Expected frequencies = $\dfrac{\text{Row Total * Column Total}}{\text{Grand Total}}$

$= \dfrac{219(165)}{660} = 54.8 = 55$

$= \dfrac{219(180)}{660} = 59.7 = 60$

6. Test statistic

$$\therefore x_{cal}^{2} = \sum_{i=1}^{r}\sum_{j-1}^{c}\frac{\left(e_{ij}-f_{ij}\right)}{e_{ij}}$$

$$x_{cal}^{2} = \frac{(67-55)^2}{55} + \frac{(46-60)^2}{60} + \frac{(72-67)^2}{67} + \dots + \frac{(70-32)^2}{32}$$

$$x_{cal}^{2} = 134.3451$$

7. Decision

Since $x_{cal}^{2} = 134.3451 > x_{tab}^{2} = 16.9190$, we do not accept the null hypothesis.

8. **Conclusion**
We hence conclude that protection against bank risk depends on some factors like quality of management, owners of bank capital, diversification and bank resources.

5.0 Summary of Findings

In view of the fact that solid banking system helps in sustaining the growth and development of any given economy, but in a situation where the capital base of such banks are not adequate, it posses a great challenge to that given economy, this situation in Nigeria has lead to the increase in the minimum paid-up capital to N25 billion by the Central Bank of Nigeria (CBN).
The statistical techniques involved in the analysis of data collected is chi-square test (x^2) of independence to investigate if justification for increase in the minimum paid-up capital depends on some factors like persistent inflationary pressure in the economy, to determine whether risk facing owners of banks capital depends on some factors like liquidity risk etc and to ascertain whether protection against bank risk depends on some factors like banks resources.
In view of the inference drawn, the following findings where stated as follows;

1. That the reason for the increase in the minimum paid-up capital of banks, to N25 billion by Central Bank of Nigeria depends on some factors like the persistent inflationary pressure in the Nigerian Economy, using chi-square test of independence at $\alpha = 0.05$ level of significance
2. Secondly, on the test of independence on whether the protective measure that can facilitate against banks risk is independent of some factors like quality of management owners of banks capital influence and the effective use of banks resources. It was discovered that the protection against banks risk of distress totally depend on these factors mentioned earlier at $\alpha = 0.05$ level of significance
3. Furthermore, on whether the risk facing owners of banks capital is independent of some factors like liquidity risk, credit risk, exchange risk and crime risk, using the test of independence at $\alpha = 0.05$ level of significance, it was discovered that the risk being faced by the owners of banks capital is been contributed by all these factors like liquidity risk etc.

5.2 CONCLUSION

Based on the inference made on this research survey which seeks to investigate whether justification for increase in capital base of banks, as well as if risk facing owners of bank capital and whether protection against banks risk depends on some factors.

The following conclusion is drawn which includes the reasons for increase in the minimum paid-up capital of banks to n25 million by Central Bank of Nigeria (CBN) can be attributed to the persistent increase of the inflationary pressure on the Economy of Nigeria, and as well conclude that the risk facing owners of banks capital are been caused by some factors like liquidity risk, credit risk, exchange risk and crime risk.

Finally, we thereby conclude that through quality and efficient management in our banking activities, some protection can be made against risk facing the owners of banks capital to the bearest minimum.

5.3 RECOMMENDATIONS

In view of the analysis carried out so far, the following recommendation is hereby made;

1. That banks can increase their capital base to be over the required N25 billion by Central Bank of Nigeria (CBN) through selling of shares to the general public, through public offer in the media – house etc.
2. Banks should also increase their capital base through going into merger and acquisition with some other banks, to meet up with the required capital base.
3. Furthermore, in other to reduce the banks distress that indirectly affects the capital base of our banks, the management of our banks should have an in depth knowledge of customers operations, in order to reduce the increasing rate of bad debt.

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