ENSURING ACCOUNTABILITY IN THE FINANCIAL STATEMENTS OF NIGERIAN BANKS: THE IRRATIONAL RATIOS APPROACH

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ABSTRACT

The subject matter of high profile cases of financial statement fraud has been dominating the world in recent years. This has caused people to question the integrity of the financial information made available by business organizations. In Nigeria, there has been determined efforts to sustain a credible financial reporting regime. This paper uses the secondary data analysis methodology by engaging the irrational ratios research approach of Beneish analytical model to analyze the financial statements of some Nigerian Banks over a period of eight years. It found out that there was the existence of an inherent risk of Financial Statement Fraud in the Nigerian Banking Sector organizations. It therefore recommends that the way of continuous prevention, detection, and corrective mechanisms is the most effective way to tackle the challenge of potential financial statement fraud in the Banks.

Keywords: Beneish Model, Accountability, Financial Statement Fraud, Banks, Nigeria.

INTRODUCTION

High profile cases of financial statement fraud which have been dominating the world recently, and causing people to question the integrity of the financial information made available by companies attest to the significance of the subject matter of ensuring accountability in the financial statements of Nigerian Banks (Rezaee & Riley, 2010). Financial statement fraud remains a public concern despite increasingly stringent legislations at combating fraud around the world. (Deloitte Forensic Center, 2008; Committee of Sponsoring Organizations of the Treadway Commission, 1998). In Nigeria, the advent of the Financial Reporting Council of Nigeria (FRCN) brought to the fore the determination to sustain credible financial reporting regime. This further enhanced the country's credit rating and image in the international community (Federal Ministry of Trade and Investment, 2011).

While companies are slowly coming to grips with the task of regulatory compliance, addressing the larger issues of financial statement fraud and corporate governance seem more elusive. Cadbury Nigeria Plc and two of its executive directors were found culpable by the Securities and Exchange Commission, the Investment and Securities Tribunal, and the Economic and Financial Crimes Commission (EFCC) over misstatements in the company's 2004-2005 annual report (Agba, 2008). According to Rezaee (2005), Financial Statement Fraud (FSF) has cost market participants, including investors, creditors, pensioners, and employees, more than $500 billion during the past several years in the United States of America (USA). Capital market participants expect vigilant and active corporate governance

to ensure the integrity, transparency, and quality of financial information. Financial statement fraud constitutes serious threat to market participants' confidence in published financial statements and this subject has recently received considerable attention from the business community, accounting profession, academics, and regulators.

Auditors have failed in detecting financial statement fraud because of technical reasons such as application of analytical review procedures to conclude on sufficient audit evidence, weaknesses in audit risk model and risk assessment concerning internal control, as well as audit failure in revenue recognition and related-party transaction disclosure. There is the critical need to enhance the methodology of the audit process in a bid to protect auditors and accountants from the lawsuits against them and the risk of loss of money and reputations because of their suspected negligence in not detecting financial statement fraud.

This study has filled the gap of the application of the engaged technique of Beneish model in Nigeria. This paper is therefore an effort towards suggesting improvements in the audit process to prevent or detect financial statement fraud. In order to achieve this target, it explored the feasibility and applicability of the mechanism of Beneish analytical model in the prevention and detection of Financial Statement Fraud (FSF).

Research Questions

According to Yue et al. (2007), detecting FSF is a new attempt. The questions arising which are addressed in this study are:

1. To what extent is there financial statement fraud in the financial statements of Nigerian banks?
2. To what extent can Beneish analytical model mechanism detect the threat of financial statement fraud in Nigerian Banks?

Objectives of the Study

The specific objectives of this work are to assess the existence of falsification in the financial statements of Nigerian banks and investigate the relevance of Beneish analytical model in the prevention and detection of Financial Statement Fraud (FSF).

Research Hypotheses

The following are the hypotheses of the research and they are stated in the null form:

H_0: *There is no financial statement fraud in the financial statements of Nigerian banks.*

H_0: *Beneish analytical model mechanism cannot detect the concern of financial statement fraud in Nigerian banks.*

Significance of the Study

Business ethics is of great significance in financial reporting. Fraudulent financial reporting can have significant consequences for the organization and for public confidence in capital markets. (The Committee of Sponsoring Organizations of the Treadway Commission, 1998). The complexity of financial statement fraud has received considerable attention over the past few years and will continue to cause concern as the number and size of financial statement frauds are increasing. This work therefore stimulates greater awareness of opportunities for improvements in the corporate financial reporting process. It provides information that can be used to guide future efforts to combat the problem of financial statement fraud as well as a better understanding of financial statement fraud cases.

This research should increase the attention of corporate governance participants (the

board of directors, audit committees, top management team, internal auditors, external auditors, and governing bodies) toward financial statement fraud and the strategies for its prevention and detection. The economic significance of this paper lies in the fact that banks account for 90% of Nigeria's financial system asset. They dominate the stock market and are Nigeria's multinational companies, having branches/subsidiaries in over 22 African countries, and 5 Organization for Economic Cooperation and Development (OECD) countries. The banks also are the dominant source of financing the Nigerian economy (The private sector, Federal and State governments) and they constitute the engine of the economy for the short or near term (Omachonu, 2009).

REVIEW OF RELATED LITERATURE AND THEORETICAL FRAMEWORK

According to Richards et al. (2008), all organizations are subject to fraud risks. The perpetration of large frauds have led to the downfall of entire organizations, massive investment losses, significant legal costs, incarceration of key individuals, and erosion of confidence in capital markets.

Financial Statement Fraud (FSF) and the integrity of financial information have continued to be front-burner issues. The entrepreneurial spirit of many fast-growing companies led some of them to use aggressive accounting, the methods of which, in some cases clearly crossed the line into financial statement fraud. The result has been damaging, not just to the companies themselves but to the accounting profession, investors and the global economy (The American Institute of Certified Public Accountants, 2008).

The seemingly rampant spread of corporate fraud in the past years has placed a renewed and increased scrutiny on many businesses' financial statements. Fraud in business is a matter of grave social and economic concern. The annual cost of corporate fraud scandals (e.g., Enron, WorldCom, Tyco, and Qwest) to the United States organizations is more than $400 billion (Kaminski & Wetzel, 2004). Fraudulent financial reporting is a critical problem for external auditors, both because of the potential legal liability for failure to detect false financial statements and because of the damage to professional reputation that results from public dissatisfaction about undetected fraud. Such is evidenced by the demise saga of Arthur Andersen (The American Institute of Certified Public Accountants, n.d.).

When questions relating to corporate fraud arise in litigation, auditors and forensic accountants can leverage their expertise with complicated financial statement documents to detect fraudulent or wrongful practices.

In today's earnings-crazy environment, there are times when management may attempt to boost sales by improper, premature recognition of sales in an effort to whitewash a company's (or a division's) poor performance. Such decisions may be based on a variety of factors such as pressures to meet budget projections and goals, overly optimistic expectations by securities analysts for the company's stock, a downturn in the economy, as well as desire to keep the company afloat and save their jobs as well as the jobs of their employees.

Fraudulent financial reporting is indeed a serious problem. Although it is perceived to be infrequent, its consequences can be widespread and significant. Granted the fact that fraud in any form can be difficult to deter, fraudulent financial reporting can, perhaps, be reduced, substantially (Bloomenthal, 2021).

The Fraud Theory

The major theoretical framework of this research is underlined by the Fraud Theory Approach. The Fraud Theory Approach *is* an accepted process utilized by forensic accountants around the world. Although the process is principally utilized to investigate suspected cases of fraud, it is adaptable for auditors to use when assessing whether or not

financial statement fraud may be occurring within the organization. According to Colby (n.d.), the Fraud Theory Approach begins with the assumption (hypothesis) of what might have occurred based on known facts and the available data analyzed. These known facts would normally be the warning signs that were present which led to the need to perform additional procedures and gather the financial information to that point in time. Once the hypothesis is generated, a test is carried out to determine if the hypothesis is provable. The hypothesis may have to be refined or amended on the basis of the procedural testing engaged in and professional judgement would be used to determine the acceptance or rejection of hypothesis at the conclusion of the testing evidence.

The Beneish Theory

Another basis of the theoretical framework of this work is known as the Beneish theory. The Beneish Model is a mathematical model that uses financial ratios and eight variables to identify whether a company has manipulated its earnings. The variables are constructed from the data in the company's financial statements and, once calculated, create an M-Score to describe the degree to which the earnings have been manipulated.

There have been attempts to develop new analytical techniques to better assist the auditor. Messod D. Beneish—an associate professor at the Kelly School of Business, Indiana University, in his 1999 article, titled "*The Detection of Earnings Manipulation,"* (Financial Analysts Journal, Sep./ Oct.99), researched the quantitative differences between public companies that had committed financial statement manipulations and those that had not. Beneish theorized that there may be up to five useful predictors of earnings manipulation, which he defined as "*an instance in which a company's managers violate generally accepted accounting principles (GAAP) to favorably represent a company's financial performance*." Beneish's ratios, which he labeled *"indexes,"* used figures he obtained from financial statements (Wells 2001). The predictors are (i) Days' Sales in Receivables Index (ii) Gross Margin Index (iii) Asset Quality Index (iv) Sales Growth Index (v) Total Accruals to Total Assets Index.

Transparency and Accountability

The issue of transparency and accountability in financial institutions is one that cannot be readily glossed over (Oladoyin et al. 2005). Transparency is the moral virtue which stresses sincerity, truthfulness, and openness. Operators in the banking sector are trustees in a sense. So, they must be honest, otherwise, the trust and confidence reposed in them will be abused and this will lead to the loss of confidence in the essence of such institutions.

Accountability in banks is best explained by the theory of agency which says a person who manages a given amount of resources for the benefit of another is an agent. Thus, he must operate according to mandate or perform to satisfaction of the beneficiaries. The trends in executive compensation show that it is common to see rich rewards for success. It is a lot less common to see board members and senior executives pay a price for poor performance. Being accountable means having some skin in the game, personally, professionally and financially. The stiff penalties established by Sarbanes-Oxley have increased the personal and financial risk, but they have been adjudged not enough.

Accountability is when people face consequences for their actions or performance. In the worlds of finance and accounting, accountability is essential to preserve faith in the integrity of corporate financial reports and market transparency. Without checks, balances, and consequences for wrongdoing, the integrity of the capital and money markets would not be able to be maintained, and this will damage those markets' ability to perform their vital social functions (James, 2021). Beneish analytical model is hereby being demonstrated as a

veritable tool of accountability in this regard.

Board members should have a significant financial stake in the companies on whose boards they sit. The reason is because owning a large chunk of stock helps them to be attentive and skeptical. It is also a strong message to other stakeholders that the people making the decisions are taking the same risks that they are on the basis that they are a comforting thought during difficult times. Additionally, board members and senior management need to be measured against realistic, verifiable standards. Those standards should include performance against peer groups and other outside measures, not just stock price or meeting earnings objectives.

Nigerian Commercial Banks: 2009-2013

Following the rot revealed by the special audit of banks in the Nigerian banking sector during the peak period of 2006 to 2009, the Central Bank of Nigeria (CBN) embarked on a reform agenda with far reaching effects which saved the sector from possible incalculable disaster. The 2009 banking sector reforms brought about the intervention and nationalization of some banks, the sack of some Banks' CEOs and the establishment of Asset Management Company of Nigeria (AMCON) to take over the toxic assets and to recapitalize the capital-deficient banks. These efforts were incredibly successful in safeguarding and strengthening the Nigerian financial sector.

Other policy measures taken by the Central Bank to safeguard the Nigerian financial system also included substantial liquidity injection into the system; a blanket guarantee for depositors which helped to maintain and sustain confidence in the sector to avoid overrun, as well as the extension of interbank and foreign credit lines of banks for six-monthly periods until end–2011; the establishment of AMCON to purchase banks' nonperforming loans (NPLs) in exchange for zero coupon bonds and inject funds to bring capital to zero; the strengthening of regulations and supervision and enhancement of corporate governance; and the abandonment of the universal banking model as banks were instructed to establish holding companies or to divest their nonbank activities. These measures by the CBN saved the Nigerian economy from potential economic collapse thereby making the economy stabilized, even, in the midst of weak global economic growth (Okoroji, 2013).

The fact that available data suggest that the CBN achieved considerable success and that the reform now serve as a model for both developed and developing countries makes the most relevant or critical period of this research to be 2006 to 2009. A Financial System Assessment Program (FSAP) by the IMF in 2012 published the conclusion that the Nigerian commercial banking system as a whole can absorb most credit and market risk shocks, withstand liquidity pressures, and absorb moderate potential losses. The conclusion means that the Nigerian banking sector is well capitalized, liquid, and profitable. The banks have become stronger than their position before the CBN intervention in 2009 (Okoroji, 2013; Nigerian News Service, 2013). However, this research has extended its analyses on the use of Beneish model to 2012 for purposes of robustness.

METHODOLOGY

The paper engaged a longitudinal design which is concerned with the study of variables studied over time using seven-year annual report and financial statements- 2006 to 2012. Researchers sourced for Bank Annual Reports and Financial Statements from Corporate Registrars of companies, corporate organizations, and the Nigerian Stock Exchange. Other sources of secondary data information include the World Wide Web (internet), journals, textbooks, directories, newspapers, etc. Annual reports are reliable statutory reports, used in similar works. Annual reports are corporate documents which comply with statutory standards and are generated regularly. They serve as the most important documents for the construction of an organization's social change. In addition, audited annual reports and financial statements have reliability and credibility.

The population of this study is comprised of all commercial banks in Nigeria. The sample population of the study for the analyses on Beneish Model is made up of 2 tier-1 banks in Nigeria. Selection was on the basis of data availability and their strong economic values indicating adequate representation of other banks. Instrument for data analyses was the Beneish model.

The sampling technique adopted is known as the purposive sampling technique. The purposive sampling technique involves the selection of a sample unit on the basis of specific criteria and result generalization is limited to those having the criteria. The criteria for the choice of purposive sampling emanates from the need to include only those commercial banks that were involved in the consolidation, merger and acquisition exercise of 2005 (Guilford &Fruchter, 1973 as cited in Enahoro, 2009; Ojo, 2003). This selected period is important because it marked a critical season of re-engineering and turnaround restructuring for banks in Nigeria.

The two banks used were selected on the basis of their tier 1 category classification in the Nigerian Banking industry. 8 variables are involved in Beneish model analysis. The selected tier one category bank in Nigeria is Bank G and Bank H (Eromosele, 2013; Chima, 2013; Cardinal, 2013).

Data Analysis Method

Beneish model specification

The Beneish Model is a mathematical model that uses financial ratios to unravel possible earnings manipulation in financial statements (Investopedia 2010). It is a mathematical model that uses financial ratios and eight variables to identify whether a company has manipulated its earnings. The variables are constructed from the data in the company's financial statements. The variables, once calculated, create an M-Score to describe the degree to which the earnings have been manipulated. The eight variables are:

1. DSRI - Days' sales in receivable index
2. GMI - Gross margin index
3. AQI - Asset quality index
4. SGI - Sales growth index
5. DEPI - Depreciation index
6. SGAI - Sales and general and administrative expenses index
7. LVGI - Leverage index
8. TATA - Total accruals to total assets

The equivalents of the integral elements of the Beneish model variables used for this banking industry based research are as shown below:

Sales = Gross Interest (revenue) and Similar Income

Cost of Goods Sold = Interest (outgoing) and Similar Expenses

Current Assets = Cash in hand, short term funds, and balances with Central Bank of Nigeria (CBN), Treasury Bills, Due from Financial Institutions, Loans and advances to customers, Advances under finance lease, Insurance Receivables, Investment Securities, Short term investments, Other assets, and Goodwill on consolidation.

Fixed Assets = Investment property, Property and equipment, Deferred tax assets, Land and Buildings, Plant and Machinery, Motor Vehicles, Furniture and Fittings, and Investment in subsidiaries.

Total Assets = Current Assets plus Fixed Assets

Accounts Receivables = Due from Financial Institutions, Loans and advances to customers, Advances under finance lease, Other assets, and Insurance Receivables.

Total Accruals = Change in working capital accounts other than cash less depreciation

Sales, General and Administrative Expenses = Interest expenses, provisions on loans and

other assets, Overheads (Charges and expenses, Bank charges, Depreciation on fixed assets), Goodwill amortization, Auditors' remuneration, Director's emoluments, Exchange loss, Premium on deposit insurance scheme, Pension costs, Loss on sale of fixed assets, and Taxation.

Depreciation = Depreciation on fixed assets

Net PP & E = Net Property, Plant & Equipment

Total Debt = Short term liabilities plus Long term liabilities

Once the model is calculated, the eight variables are combined together to achieve an M-Score for the company. The eight variables are weighted together according to the following:

M = -4.84 + 0.92*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI – 0.172*SGAI + 4.679*TATA – 0.327*LVGI

A score greater than -2.22 indicates a strong likelihood of a firm being a manipulator. In his out of sample tests, Beneish found that he could correctly identify 76% of manipulators, whilst only incorrectly identifying 17.5% of non-manipulators. An M-Score of less than -2.22 suggests that the company will not be a manipulator. An M-Score of greater than -2.22 signals that the company is likely to be a manipulator (Investopedia, 2010; Shookrun.com, 2013).

Auditors and forensic accountants can use Beneish's ratios to help carry out the SAS 99 requirement to perform audits and focus investigations to be reasonably assured that financial statements are free from material misstatement. Although the usefulness of this analysis depends on who is using it, auditors, for example, might note an unusual accumulation of receivables which would cause them to probe until they find a reasonable explanation. Numbers from different reporting periods of the income statement and the balance sheet produce results that red flag potential problems. The ratios measure sales growth, the quality of assets and gross margins, the progression of receivables versus sales, and that ratio of general, and administrative expense. The probability of earnings manipulation goes higher with unusual increases in receivables, deteriorating gross margins, decreasing asset quality, sales growth, and increasing accruals. The ultimate achievement will be that the results will point to where there is most likely a problem (Voisin, 2013).

The Beneish model was applied by some accounting professors in their classes on the Enron Corporation in 1998. Beneish theorized using five useful predictors of earnings manipulation which he labeled as indexes for spotting instances in which a company's managers violate generally accepted accounting principles (GAAP) to favorably represent a company's financial performance. Beneish's ratios used figures which he obtained from financial statements. Results showed that Enron had been aggressively managing earnings in the previous reporting periods (Wells, 2001). The ratios stand the test of time and still help send up red flags of potential fraud. The model is as shown below:

Sales Growth Index (SGI)

$$\text{Sales Growth Index} = \frac{\text{sales current year}}{\text{sales prior year}}$$

Gross Margin Index (GMI)

$$\text{Gross Margin Index} = \frac{\text{(sales prior year-cost of goods sold prior year)/prior year}}{\text{(sales current year-cost of goods sold current year)/sale current year}}$$

Asset Quality Index (AQI)

$$= \quad 1- \quad \frac{\text{Current assets}_t + \text{Net fixed assets}_t / \text{ Total assets}_t}{} = \text{asset quality index}$$

$$1- \quad \text{Current assets}_{t-1} + \text{Net fixed assets}_{t-1} / \text{Total assets}_{t-1}$$

Days' Sales in Receivables Index

$$\text{Day's Sales in Receivables Index} = \frac{\text{receivables current year/sales current year}}{\text{Receivables prior year/sales prior year}}$$

The formula for the days' sales in receivables index is:

$$\frac{\text{Accounts receivable}_t/\text{Sales}_t}{\text{Accounts receivable}_{t-1}/\text{Sales}_{t-1}} = \text{days' sales in receivable index}$$

(Note: Current-year income statement and balance-sheet items are indicated with a subscript t and prior year items have a t-1 subscript. The change in account balances from one yearend to the next is denoted by Δ, delta. Delta is used to calculate total accruals. Two observations are important here: First, material increases may not be the result of receivables manipulation, but rather could be caused by legitimate factors, such as liberalized credit policies from one period to the next. Second, this index and the others here are not foolproof: In Beneish's research, they correctly identified predictors in about one-half to three-quarters of the cases.

Total Accruals To Total Assets Index

$$\frac{\Delta \text{ Working capital} - \Delta \text{Cash} - \Delta \text{ Current taxes payable} - \text{Depreciation and amortization}}{\text{Total assets}}$$

According to Harrington (2005), Sales, General and Administrative Expenses Index (shown below) also formed part of Beneish's ratios.

Sales, General and Administrative Expenses Index

$$\text{SGAI} = \frac{\text{sales, general and administrative expenses current year/sales current year}}{\text{sales, general and administrative expenses prior year/sales prior year}}$$

Depreciation Index

$$\text{DEPI} - \frac{\text{Depreciation}_t / (\text{Depreciation} + \text{Net PP\&E})_t}{\text{Depreciation}_{t-1} / (\text{Depreciation} + \text{Net PP\&E})_{t-1}}$$

This is measured as the ratio of the rate of depreciation versus prior year. A slower rate of depreciation (DEPI greater than 1) may mean that the firm is revising useful asset life assumptions upwards, or adopting a new method that is income friendly.

Leverage Index

$$\textbf{LVGI} = \frac{\text{Total Debt / Total Assets (current year)}}{\text{Total Debt / Total Assets (prior year)}}$$

This measures the ratio of total debt to total assets versus prior year. It is intended to capture debt covenants incentives for earnings manipulation (Stockpedia, 2011).

Instrument or Technique for Data Analysis

Wells (2001) affirms that financial statements do tell a story which should make sense. If not, it is possible the story is a fake. By standing far enough back from the numbers to get a good picture of the client's business, auditors frequently can detect signs of financial statement frauds. This is possible because the balance sheet, income statement and statement of cash flows are interrelated. Such frauds can pop out when certain numbers don't make sense (Zatta 2005). The inescapable logic of the accounting equation ensures that any major overstatement of assets or profits will show up over time. To this end, the adopted model of Beneish has been found very pertinent.

Beneish Model

Sales Growth Index (SGI)

By using the sales growth index, which is computed by dividing the current period's sales by the last period's, the auditors should be able to tell whether a company is adding fake sales. The mean for nonmanipulators in this study was 1.134; for manipulators 1.607, a 42% increase. An increase in the index reflects a rise in sales, which may or may not be legitimate. Companies with high growth rates find themselves highly motivated to commit fraud when the trend reverses. Shareholders from inside and outside the company expect that growth to continue and those expectations put a lot of pressure on managers to produce.

Results show that companies that manipulated earnings have a mean SGI of 1.607 and a median of 1.411. The Cornell students calculated the SGI of Enron at 1.526, which placed it in the range of the average manipulator. Enron's high SGI factored heavily into the final score of -1.89. This score is higher even than the standard score based on the five core ratios of -2.22 used to gauge the likelihood of manipulation.

However, it should be noted that the sales growth index can detect potential fraud only when sales have increased. The sales growth index of a company that is adding fictitious revenues just to stay even with last year will not be out of line.

Gross Margin Index (GMI)

One sign that a company's performance is suffering relates to its gross margins. If an entity's gross margins on sales shrink from one period to the next, the risk is higher that management will engage in fraud to create artificial profits or decrease losses. In Beneish's research, the mean for nonmanipulators was 1.014; for manipulators 1.193, an increase of 18%.

Comparing the gross margins from one period to the previous period produces the gross margin index. When the GMI is greater than 1, the company's gross margins have deteriorated and management is motivated to show better numbers. Like the SGI, the GMI sounds a potential note of caution. Finding a high GMI means auditors and CFEs should look deeper into reporting of sales and cost of goods sold. Manipulators sported GMIs of 1.193 at the mean and 1.036 at the median. Enron soared into the upper ranges with 1.448.

It should be noted that this index will not tell whether a company is engaging in financial statement fraud: It is designed to alert that the risk of earnings manipulation is higher when gross margins drop. But, if the company is already engaging in attempts to inflate earnings, gross margins will be just the opposite: higher than normal.

Asset Quality Index (AQI)

The AQI measures the proportion of total assets for which future benefits are uncertain. This index reflects the change in asset realization risk by comparing current assets and property, plant, and equipment with total assets. An AQI greater than 1 means the company has potentially

deferred costs in an effort to increase the bottom line. Companies in the study that manipulated earnings had median AQIs of 1. The asset quality ratio derives from dividing noncurrent assets (minus property, plant and equipment) by total assets. It measures the proportion of total assets for which future benefits may be less certain. For the purpose of evaluating earnings manipulation, an increase in the asset quality index may indicate a company's propensity to capitalize costs. In the Beneish study, nonmanipulators had a mean of 1.039, manipulators 1.254, an increase of 21%.

Days' Sales in Receivables Index (DSRI)

Sales and receivables typically stay in fairly consistent trend. If the ratio detects a rise in receivables the change might result from revenue inflation. The DSRI is an example of how the ratio might give a false signal. An explanation of a rising DSRI might be the perfectly legal activity of a company extending more credit to customers. Companies that overstated revenue had a mean DSRI of 1.465 and median of 1.281. Enron's was lower than the median for non-manipulating companies at 0.625. 1.254. The evidence of Enron's cost deferrals in 1997 is reflected in the AQI of 1.308. This sales variable index (see equation) measures whether receivables and revenues are in or out of balance in two consecutive reporting periods. A material increase in the index could indicate a company's receivables are phony. Beneish determined that companies that had not manipulated sales (nonmanipulators) had a mean index of 1.031; companies that had manipulated sales (manipulators) had a mean index of 1.465, a 42% increase.

Total Accruals to Total Assets Index

For purposes of this index, total accruals are calculated as the change in working capital accounts (other than cash) less depreciation. In Beneish's study, the mean index of nonmanipulators was (.018), compared with manipulators (.031), a 72% increase. An increase in accruals from one period to the next may indicate management is attempting to manipulate earnings through its discretionary authority over accrual policy. The presence of higher accruals and a corresponding decrease in cash often can be an attempt by management to internally finance its losses.

Sales, General and Administrative Expenses Index

If sales increase faster than expenses, there needs to be an explanation. If not, the SGAI may be pointing to overstated revenues. While the mean for manipulators was 1.041 and the median .96, Enron dipped into the lower rankings at .649.

Depreciation Index

This is measured as the ratio of the rate of depreciation versus prior year. A slower rate of depreciation (DEPI greater than 1) may mean that the firm is revising useful asset life assumptions upwards, or adopting a new method that is income friendly. Measured as the ratio of the rate of depreciation in year t-1 to the corresponding rate in year t. DEPI greater than 1 indicates that assets are being depreciated at a slower rate. This suggests that the firm might be revising useful asset life assumptions upwards, or adopting a new method that is income friendly.

Leverage Index (LVGI)

This measures the ratio of total debt to total assets versus prior year. It is intended to capture debt covenants incentives for earnings manipulation. The ratio of total debt to total assets in year t (current year) relative to year t-1(prior year). An LVGI >1 indicates an increase in leverage (Stockopedia, 2011; Jun, 2013).

Modeling Results

Fraud, by its nature, is easy to conceal and difficult to detect; an entity that manipulates its earnings only once might avoid discovery altogether. But manipulating financial statements is usually a continuous process that grows and deepens. Because no one irregularity is a sign of financial statement manipulation, patterns over a period of time should be carefully observed. These ratios help to flag problems areas for auditors and Certified Fraud Examiners. They are blunt tools in indicating earnings manipulation/strategies. They proved to be consistent indicators of problems in Beneish's study (Bell 2007)

DATA ANALYSIS AND INTERPRETATION

This segment analyses the information gathered from secondary data (the financial statements of Nigerian commercial banks). The data is first analyzed in tables and then explained. The hypotheses are tested with the use of Beneish model. The results of hypotheses testing and other data received are discussed as well.

Data analyzed are the secondary data of 2 Nigerian banks. The data utilized are the financial statements for the period 2005-2012. The probability of earnings manipulation and failure computations for the period of seven years are also presented.

Beneish Model (Based on Eight Variables)

Table 1
BENEISH ANALYSIS INPUT DATA OF BANK G

Input Variables	2005	2006	2007	2008	2009
	N'000	N'000	N'000	N'000	N'000
Net Sales	43,621,000	53,493,000	66,062,000	108,317,000	143,346,000
CGS	5,854,000	7,750,000	13,237,000	22,283,000	41,843,000
Net Receivables	203,205,000	291,209,000	369,327,000	740,632,000	1,224,256,000
Current Assets (CA)	340,733,000	3 52,148,000	522,151,000	1,063,005,000	1,560,171,000
PPE (Net)	12,108,000	13,952,000	16,850,000	29,155,000	38,320,000
Depreciation	10,709,000	14,389,000	17,354,000	21,397,000	26,810,000
Total Assets	377,496,000	540,129,000	762,881,000	1,165,461,000	1,667,422,000
SGA Expense	34,330,000	45,115,000	57,202,000	86,428,000	139,079,000
Net Income (before Xitems)	15,145,000	16,128,000	22,097,000	-70,297,000	-97,236,000
CFO (Cash flow from operations)	15,429,000	100,939,000	150,984,000	-104,654,000	233,173,000
Current Liabilities	330,814,000	421,047,000	660,569,000	789,126,000	1,268,366,000
Long-term Debt	0	0	22,101,000	29,414,000	35,042,000

Table 2
DERIVED VARIABLES BANK G

BENEISH	2006	2007	2008	2009
DSRI	1.169	1.027	1.223	1.249
GMI	1.013	1.069	1.008	1.121
AQI	4.954	0.910	0.215	0.651
SGI	1.226	1.235	1.640	1.323
DEPI	0.923	1.002	1.199	1.027
SGAI	1.080	1.019	0.921	1.216
Total Accruals/TA	0.187	0.198	-0.090	0.140
LVGI	0.890	1.147	0.784	1.114
M SCORE	0.369	-1.370	-2.33	-1.456

M = -4.84 + .920 DSRI + .528 GMI + .404 AQI + .892 SGI + .115 DEPI - .172 SGAI + 4.679 Accrual to TA - .327 Leverage

An M-Score smaller than -2.22 suggests that the bank does not manipulate its results. Here, it can be safely assumed that Bank G was not truthful in its reports of years 2006, 2007 and 2009. It is only in 2008 that it can be seen that results were not manipulated in Table 1 and Table 2.

Table 3
BENEISH ANALYSIS INPUT DATA OF BANK G

Input Variables	2010	2011	2012
	N'000	N'000	N'000
Net Sales	163,142,000	244,717,000	57,359,000
CGS	45,940,000	30,772,000	10,717,000
Net Receivables	1,401,304,000	1,350,969,000	1,523,020,000
Current Assets (CA)	1,860,626,000	2,348,796,000	2,311,056,000
PPE (Net)	52,616,000	55,352,000	55,749,000
Depreciation	7,972,000	8,517,000	2,221,000
Total Assets	1,962,444,000	2,463,543,000	2,497,933,000
SGA Expense	107,392,000	134,786,000	39,237,000
Net Income (before Xitems)	383,000	(15,501,000)	23,055,000
CFO (Cash flow from operations)	83,405,000	412,235,000	165,533,000
Current Liabilities	1,611,977,000	2,082,749,000	2,111,368,000
Long-term Debt	30,897,000	34,557,000	8,132,000

Source: Researcher's work

Table 4
DERIVED VARIABLES BANK G

BENEISH	2010	2011	2012
DSRI	1.006	0.643	4.809
GMI	0.986	0.822	1.075
AQI	0.610	0.960	2.208
SGI	1.138	1.500	0.234
DEPI	3.121	0.993	3.500
SGAI	0.678	0.837	1.241
Total Accruals/TA	0.043	0.167	0.066
LVGI	1.070	0.860	1.028
M SCORE	(2.039)	(1.618)	1.414

Researcher's work

Table 5
BENEISH ANALYSIS INPUT DATA OF BANK H

Input Variables	2005	2006	2007	2008	2009
	N'000	N'000	N'000	N'000	N'000
Net Sales	25,466,000	80,905,000	97,943,000	154,330,000	220,467,000
CGS	3,490,000	24,879,000	26,531,000	39,800,000	54,920,000
Net Receivables	67,977,000	109,959,000	742,747,000	1,007,509,000	1,027,693,000
Current Assets (CA)	241,327,000	805,985,000	1,026,421,000	1,448,869,000	1,288,786,000
PPE (Net)	6,154,000	32,226,000	48,213,000	56,165,000	63,497,000
Depreciation	13,287,000	16,893,000	20,513,000	25,609,000	35,598,000
Total Assets	248,928,000	851,241,000	1,102,348,000	1,520,091,000	1,400,879,000

SGA Expense	19,267,000	73,565,000	74,118,000	99,693,000	197,478,000
Net Income (before Xitems)	6,239,000	12,514,000	26,988,000	54,637,000	22,989,000
CFO (Cash flow from operations)	41,106,000	515,292,000	(53,689,000)	188,273,000	(188,182,000)
Current Liabilities	228,480,000	800,986,000	935,401,000	1,330,945,000	1,196,897,000
Long-term Debt	1,676,000	1,135,000	1,135,000	0	14,760,000

Source: Researcher's work

Table 6
DERIVED VARIABLES BANK H

BENEISH	2006	2007	2008	2009
DSRI	0.509	5.580	0.861	0.714
GMI	1.247	0.949	0.982	0.988
AQI	2.500	1.667	0.400	3.500
SGI	3.177	1.211	1.576	1.429
DEPI	1.985	1.154	0.952	0.872
SGAI	1.201	0.833	0.853	1.387
Total Accruals/TA	0.605	(0.049)	0.124	(0.134)
LVGI	1.018	0.902	1.031	0.987
M SCORE	2.649	1.978	(1.757)	-2.061

Source: Researcher's work

An M-Score smaller than -2.22 suggests that the bank does not manipulate its results. Here, in all the four years, it can be seen that Bank H manipulated its reports of those years in Tables 3-6.

TABLE 7
BENEISH ANALYSIS INPUT DATA OF BANK H

Input Variables	2010	2011	2012
	N'000	N'000	N'000
Net Sales	62,927,000	55,616,000	121,573,000
CGS	54,920,000	41,203,000	51,302,000
Net Receivables	1,106,988,000	1,087,881,000	1,137,745,000
Current Assets (CA)	1,559,028,000	1,541,858,000	1,822,760,000
PPE (Net)	56,216,000	47,066,000	63,118,000
Depreciation	8,250,000	8,239,000	6,903,000
Total Assets	1,432,632,000	1,666,053,000	1,933,065,000
SGA Expense	82,458,000	82,084,000	75,393,000
Net Income (before Xitems)	16,359,000	-7,966,000	47,375,000
CFO (Cash flow from operations)	338,138,000	278,254,000	512,569,000
Current Liabilities	1,158,960,000	1,307,457,000	1,596,254,000
Long-term Debt	85,942,000	176,281,000	116,494,000

Source: Researcher's work

Table 8
DERIVED VARIABLES BANK H

BENEISH	2010	2011	2012
DSRI	3.774	1.112	0.479
GMI	5.913	0.49	0.448
AQI	3.657	0.359	0.522
SGI	0.285	0.884	2.186
DEPI	2.805	0.859	1.505

SGAI	1.462	1.127	0.42
Total Accruals/TA	0.236	0.167	0.265
LVGI	1.005	1.023	0.994
M SCORE	4.333	-2.273	-0.986

Source: Researcher's work

An M-Score smaller than -2.22 suggests that the bank does not manipulate its results. Here, in all but year 2011, it can be seen that Bank H manipulated its reports of those years in Table 7 and Table 8.

Testing and Hypothesis

Hypotheses are intelligent guesses or assumptions about a population.
Usually, a hypothesis is formulated with the aim of nullifying and rendering it insignificant.

Decision Rule for Beneish Model (Based on eight variables)

M = -4.84 + .920 DSRI + .528 GMI + .404 AQI + .892 SGI + .115 DEPI - .172 SGAI + 4.679 Accrual to TA - .327 Leverage

A score greater than -2.22 indicates a strong likelihood of a firm being a manipulator. An M-Score of less than -2.22 suggests that the company will not be a manipulator. An M-Score of greater than -2.22 signals that the company is likely to be a manipulator

Hypothesis 1

H_0: There is no financial statement fraud in the financial statements of Nigerian banks

Audit hour (LnAH) and audit fees (LnAF) are significantly positive with auditor size (BIG4). The larger the size of the auditor, the greater the audit hour and audit fees (Chang et al., 2011). Audit hour (LnAH) and audit fee (LnAF) are in a negative relation with the initial audit (FIRST). It can be understood that the initial audit shows a payout discount. Audit hour (LnAH) and audit fee (LnAF) are significantly positive with firm size (SIZE). The larger the size of the audited company, the greater the audit hour and audit fees. In addition, we can conclude that audit firms have a significant positive correlation with auditor hour and audit fees (Chang et al., 2011). Audit hour (LnAH) shows a significant positive relationship with OPN, LEV, GRW, CON, INVREC, ROA, and FORN, and shows a significant negative correlation with LIQ, LOSS, and OWN. Audit fees (LnAF) also show similar results.

It was only in 2008 that the score indicated that Bank G was not a likely manipulator. So, for the remaining 6 years, Bank G was detected as a likely manipulator. Likewise for Bank H, it was only in 2011 that it was indicated that the Bank was not a likely manipulator. The remaining 6 years in the period portrayed Bank H as a likely manipulator. As a result, we could conclude there is financial statement fraud in the financial statements of Nigerian Banks during the covered period.

Hypothesis 2

H_0: Beneish analytical model mechanism cannot detect the concern of financial statement fraud in Nigerian banks.

Based on the theoretical and empirical findings, it was established that Beneish analytical model can be used to detect the concern of financial statement fraud in the financial statements of Nigerian Banks.

Implications of Empirical Findings

Since the threat of insolvency arising from financial statements manipulation exists in addition to the fact that financial statement fraud is a phenomenon for concern in the Nigerian Banking sector, the following are therefore implied about the industry: There are worries that the some of the optimism on the testimony of years of impressive growth in Nigerian Banks may have been overblown. The Banks must have been creaking, corrupt, and weak. There are doubts over proper management, proper assets deployment, transparency, and information disclosure. The Banks are not as shiny as they look. There is the practice of deliberate misstatements or omissions of amounts or disclosures of financial statements to deceive financial statement users, particularly investors and creditors.

There is an undermining of the reliability, quality, transparency, and integrity of the financial reporting process in the sector which jeopardizes the integrity and objectivity of the auditing profession, especially auditors and auditing firms. This diminishes the confidence of the capital markets, as well as market participants, in the reliability of financial information. The capital markets are thus made less efficient. The Financial Statement Fraud situation will adversely affects the nation's economic growth and prosperity while costs incurred in respect of litigations might be on the rise. Careers of individuals involved in the fraudulent practice are also destroyed. Bankruptcy or substantial economic losses by the banks engaged in financial statement fraud might result.

The aforementioned situation encourages regulatory intervention, causes devastation in the normal operations and performance of alleged banks, raises serious doubt about the efficacy of financial statement audits, and erodes public confidence and trust in the accounting and auditing profession as well as that of the banking sector.

CONCLUSION

This study has provided an updated analysis of financial statement fraud occurrences as well as the prediction of the likelihood of the existence of Financial Statement Fraud (FSF) using some published data evidence spanning the period 2005 to 2012 in the Nigerian banking sector. The methodology adopted is anchored on the premise of the fact that lack of transparency and poor disclosure by individual banks has given rise to speculation over insolvency in the Nigerian banking sector, thereby constituting a major risk in the industry. The study has addressed the issue of financial statement fraud stemming from irregularities in the preparation of Financial Statements of Nigerian Commercial Banks.

RECOMMENDATIONS

In order to proactively reduce the likelihood of financial statement fraud, there must be put in place continuous prevention, detection, and correction mechanisms. The way of continuous mechanisms is the most effective way to tackle the financial statement fraud challenge. The following recommendations are hereby proffered:

(i) The policy measures below should be established in Nigerian Banks in order to prevent financial statement fraud:

(a) An effective as well as a responsible corporate governance system: This should establish and monitor ongoing processes that identify and eliminate the causes of financial statement fraud via the engagement of Beneish analytical model to mitigate effects of motive, opportunity, rationalization, and lack of integrity. The seven essential corporate governance functions should border on oversight, managerial, external audit, internal audit, compliance, legal and advisory, as well as monitoring issues.

b) A corporate code of conduct: This should ensure behaviours that are consistent with the defined set of norms and expectations which are perceived to be legitimate. It

addresses environmental or social factors. The appropriate tone at the top informed by ethical culture with underlining principles of Beneish analytical model will promote ethical behavior of corporate leaders and reward as well as prevent unethical actions and scandals.

(c) A vigilant board of directors and audit committee. There is need for objectivity and independence of special investigations by informed, vigilant, and effective corporate boards. An independent audit committee needs to play an active oversight role in management's fraud risk assessment. The employment of the instrumentality of Beneish model will aid this realization.

(d) An adequate and effective internal audit function, informed by the Beneish analytical model, which will evaluate and improve the effectiveness of fraud risk management, prevention, deterrence/detection controls, as well as critically evaluate fraud governance processes in regard of concerns like management override and collusive fraud.

(e) Diligent management team- whose members are thoroughly educated on the concept and application of Beneish analytical model to financial statements analyses.

(ii) The Banks should ensure the following in order to prevent or detect financial statement fraud:

(a) An adequate and effective internal control structure: The structure should be made up of the components of control environment, risk assessment, control activities, information and communication, as well as monitoring. Forensic accountants with the Beneish analytical skills should be engaged in this regard.

(b) Responsible legal counsel. A visible prosecution will send a strong signal that no one is above the rules. Stiff penalties and thorough prosecution should be encouraged.

(c) A skeptical external audit assurance function that is alert and that makes extensive use of the mechanisms of Beneish analytical model should be engaged from time to time.

(d) An effective external regulatory oversight procedure: Nigerian Banks should be able to cooperate with the Nigerian banks' external regulatory body that is equipped with the Beneish model skills, by reporting fraudulent financial statement cases for proper attention. Aggressive action should be taken when fraud is discovered.

(iii) The Nigerian government, relevant regulatory bodies, professional organizations, and Nigerian Banks, should ensure the establishment of functional research and development/ training units that are committed to widespread creation of awareness on regular and scientific application of the knowledge of Beneish analytical ratios for transparency, management, growth, and development

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