Information Technology and Financial Reporting By Deposit Money Bank in Nigeria: An Empirical Study
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ABSTRACT
The study investigated the impact information technology has on the preparation and publishing of financial reports in deposit money banks in Nigeria. It examines whether Information Technology improves the qualities required by the international financial reporting standards on financial reports, and if it affects compliance with required standards as well. The study adopted descriptive research design method with a population of 2,500 accountants and a sample size of 345 which was derived using Yaro Yamani formula. The study made use of primary data. Data collected were analyzed using simple regression analysis. Results from the study based on the regression analysis which gave an outcome of 90% and a p-value of 0.00 for the first hypothesis show that information technology makes financial reporting more accurate, useable and of better quality. The regression analysis gave a result of 2.9% and a p-value of 0.680 for the second hypothesis which means that information technology does not hinder compliance with international financial reporting standards. Finally, the study recommended that information technology should be made a core part of the curriculum in schools and professional training of accountants so as to improve their skills. Also, research on advancements accounting technology should be taken serious in Nigeria, as there is constant change and improvement in this area.

Key words: Information, Technology, Financial Reporting, Money Deposit Bank

1.0 INTRODUCTION
Financial reports are companies’ formal record of their financial activities. All corporate entities are required by law to account for their finances. Financial reporting is the preparation and publishing of financial statements or making accessible financial statements for users. These reports are expected to meet certain standards or qualities that make them easier and better to use. The qualities include relevance, understandability, reliability and comparability. Under section 331 of the companies and Allied Matters Act of Nigeria (CAMA) 2004, companies in Nigeria are to hold accounting records that would display and interpreted the transactions of the company to disclose with financial accuracy at any time the financial position of the company and other applicable matters. Banks and other financial institutions decree, 1999, section 25, requires all banks to release in a daily newspaper printed and circulated in Nigeria and approved by the bank copies of their statements of financial position, income statements and other relevant financial statements showing their financial position, structure and performance.

In their study, Kharuddin, Zariyawati and Annuar (2010), they state that accounting systems that were previously performed manually can now be performed with the help of computers. Thus, improvements in the Information Technology have facilitated the use of accounting procedures. They state that the increasing growth of Information Technology in the world has made the preparation and publishing of financial statements easier and less stressful. Novinson (2005), disclosed that the language known as Extensible Business Reporting Language is used to standardize the financial information in companies’ annual reports. According to him, the format has brought about easy access and quick sorting. It enables investors find data they need and make investment decisions. Information Technology has subsisted for a long time, fundamentally as long as people have lived. According to Haigh (2011), Information Technology has existed because there were always ways of communicating through technology available at that point in time.

According to researchers (Sajady, Dastgir and Hasheem, 2008; Urquia, Raquel, and Clara, 2011), implementation, investment, and improvement of accounting information system are related to the increase in economic and financial results of a firm. Also that accounting information system leads to improved decision-making by managers, more efficient internal control systems, improves the quality of financial reports and improves performance measures and facilitates financial transaction processes. To respond to developments in Information Technology in financial reporting, providers of accounting information must possess a broader set of knowledge, skills and abilities than prior generations, (Fowzin and Narsin 2011).

1.2 OBJECTIVE OF THE STUDY
The broad objectives of this research work are to determine the impact of Information Technology on financial reporting on money deposit banks in Nigeria. The broad objective is broken down into the following specific objectives which are:
To examine if and how Information Technology can improve the qualities of financial reports with regards to accuracy, reliability, relevance and completeness;

To determine if automation of financial reports affects compliance with generally accepted accounting principles and standards; to determine if Extensible Business Reporting Language has been adopted by deposit money banks and; to examine the level of Information Technology expertise that can be seen in present day accountants.

1.3 RESEARCH QUESTIONS

The questions the researcher hopes to answer in the research are outlined below

To what extent can the accuracy, reliability, relevance and comparability of financial reports be enhanced by Information Technology?

In what ways can automation of financial reports affect compliance with generally accepted accounting principles and standards?

Why is the adoption Extensible Business Reporting Language needed by deposit money banks and what are the advantages derived?

What level of Information Technology expertise can be seen in present day accountants?

1.4 STATEMENT OF HYPOTHESES

HYPOTHESIS 1

H₀: There is no relationship between automation of financial reports and certainty of their accuracy, reliability, relevance and completeness.

H₁: Automation has a positive effect on the accuracy, reliability, relevance and completeness of financial reports.

HYPOTHESIS 2

H₀: Automation of financial reports does not affect compliance with generally accepted accounting principles and standards.

H₁: Automation of financial reports disrupts compliance with generally accepted accounting principles and standards.

The study covers twenty one (21) out of twenty two (22) money deposit banks in Nigeria that are registered under companies and allied matters act as at 2013 in Nigeria. The resultant effect of this study is the generalizations on all deposit money banks in Nigeria.

2 REVIEW OF LITERATURE

The outcome of the research by Florescu and Tudor (2009) on the optimization of the internal and external reporting in financial accounting shows that in the context of streamlining the financial reporting process, extensible business reporting language has major implications in relevant information dissemination, required to express the enterprise’s health and business performance. They claimed that extensible business reporting language adoption in business community as de facto standard in business reporting, in general, and in financial reporting, in particular, can only occur through a combination of two factors: the existence of a regulatory framework at national level, and the existence of technological solutions for integrating the extensible business reporting language into the organizations information systems. Ly (2012) examines if analysts’ coverage and their quality of forecasts change following extensible business reporting language adoption. Particularly, he investigates whether extensible business reporting language affects the numbers and dispersion of analysts’ earnings forecasts.

Gopisetti and Srinvas (2012) found from their conceptual study on accounting information systems that Managerial decision making normally relies upon an effective information system. In present era this accounting information system is metamorphic ally changed as Management Information System with greater improvement of different elements. Hence, accounting information system is a perfect tool of information provisioning the environment for decision making and also eliminates the paper work as well as reduces the cost very significantly. However it can be asserted that accounting information system can help the business enterprises in the global context to make rational decisions in a swift manner for the betterment of the businesses (Gopisetti and Srinvas 2012). Florescu, Amza and Tudor (2008), found from their study on the normalization of financial data exchange over the internet, that the migration to the financial reporting over the Internet using the extensible business reporting language format it’s a strategic decision within the global context and in accordance with accounting and financial reporting norms (International Accounting Standards or international financial reporting standards, etc.).

Sharkasi and Wynn (2011), contribute to the existing limited studies on accounting information system investment conducted on Libyan commercial banks. It clearly showed that there has been significant investment in modern accounting information system, that these systems have been implemented reasonably effectively, but that there is significant scope for harnessing their potential to improve business processes and bottom-line benefits; and that investment in training and up-skilling of the workforce is a key element in achieving this, (Bleistein et al, 2006). The study by Moorthy, Seetharaman, Goplan and San (2010) on the necessities of
paperless accounting system, shows that the research analyze six sub functions of the client system which are Leave module, Claim module, Appraisal module, Training module, Resource requisition module, and The accounting system doesn’t work alone without taking considerations of human capital (or employee) and other business tasks. It is important to understand, having the client system alone will still need to rely on massive papers especially application forms. Unless we use today’s technology, software providers have already come out with Employee Self-Service (ESS) which is a web-based system that integrates with client systems. Agnes (2011) study on computerized accounting systems and financial reporting reveals that computerized accounting system actually has an influence on the quality of financial reports for the purpose of publication. She found that National Water and Sewerage Corporation run a fully computerized accounting system using the information generated by system. Fowzia and Nasrin (2011), concluded based on their study on appreciation of Computerized Accounting System in Financial Institutions in Bangladesh that new technologies are changing the environment in modern accounting practice. So to reply to this change, accounting information providers must have skills and abilities and a broader set of knowledge than previous generations. “The idea of accounting information system is quite well established and numerous commercial packages as well as tailor-made systems have been urbanized. However, the business world is best by accounting system that has different levels of efficiency and excessive costs for such information.”

Hayale (2006), found that Jordanian domestic banks effective use fraud and error reduction controls mainly, while they do not do enough with regard to the other dimensions (Data security, Logical access, Physical access, Internet, Disaster Recovery, Documentation standard, Output security controls and communication and E-Control). Memis (2011) found from his study on E-accounting that in recent years, continuous change and development in the technological field forced a change in the private and the public sector. According to him, this change find itself in the execution of activities, recording these activities and auditing record by showing itself through the process of the realization of control. Salawudeen (2006) researched on the Nigeria’s experience on E-learning technology, and found that there is no doubt that info-tech has come to stay in the world of ours. The need to apply it in all our daily life is imperative to our sustainable development. The educational sector which is the basis for the upbringing of the future professionals, leaders, researchers, scientists, etc has witnessed a great turn around which call for cross fertilization of ideas as well as knowledge about the recent development in the world in real time. Sajady, Ahvaz, Hasheem, and Ahvaz (2008), examines the effectiveness of accounting information systems in five different extents: more effective internal control systems, better decision-making by managers, enhancement of the quality of financial reports, facilitating financial transaction processes and improvement of performance measures. The findings of the research indicated that implementation of accounting information systems could lead to more effective internal control systems, better decision-making by managers, facilitating financial transaction processes and enhancement of the quality of financial reports. Abu-Musa (2006) and Abu-Musa (2001), investigates the significant perceived security threats of computerized accounting information system, through their frequency of occurrence, in the Saudi organizations. Results reported that introduction of computer viruses to the system, accidental and intentional entry of bad data by employees, employees’ sharing of passwords; accidental destruction of data by employees, unauthorized document visibility; suppression and destruction of output; and misdirecting prints and distributing information to people not allowed to receive them are the most perceived major security threats to computerized accounting information system in the Saudi organizations. Results from the study by Li, Roge, Rydl and Crews (2006), show that as extensible business reporting language continues to emerge, users of financial report information have indicated a strong interest in its application. Some researchers suggested that, in addition to potential effects on user acquisition and processing of financial information, extensible business reporting language might further influence user judgments and decisions based on the information obtained(Eccles,2001. Hodge, Kennedy and Maines (2004), conducted an investigation in the context of recognition versus disclosure of stock option compensation. They investigated whether using an extensible business reporting language-facilitating technology improved nonprofessional investors’ acquisition and integration of financial information in investment decisions. Their findings suggested that when stock option accounting varies between two firms, search technology helps users to both acquire and integrate relevant information. In their experiment, participants who used extensible business reporting language-facilitating technology were more likely to acquire footnote information. They were also more likely to integrate the footnote information with related information on the face of the income statement when making judgments and decisions. When compared to participants who did not, differences in investment decisions were detected. Grande, Estebanes and Colomina (2011) researched on the impact of accounting information system on performance measures and found that considering the average returns the results indicate that firms which use accounting information system for the whole of their management get a superior figure regarding the other groups of firms which show a negative average. There is no significant relationship between
a firm’s productivity and the use of accounting information system. According to Okoli (2011), in his study on evaluation of the accounting systems used by small scale enterprises in Nigeria, simplicity of single entry accounting system, small scale enterprises are more inclined to adopt single entry accounting system.

3 METHODLOGY

The study was a descriptive study as it aimed at providing as much as possible accurate information about the impacts Information Technology has on financial reporting. Based on information from the 2012 Nigeria’s stock exchange fact book, the websites of the banks and a preliminary survey, the population for the study consists of 2,500 Accountants out of the 95,000 employees in the deposit money deposit banks in Nigeria. In order to achieve the advantages of an in-depth study and effectual exposure, samples size was determined using Yaro Yamani.

\[ n = \frac{N}{1+(N\cdot e^2)} \]

Where N= population

n= sample size

e= error limit (0.05 on the basis of 95% confidence level

Therefore,

\[ \frac{2500}{1+ (2500 \cdot 0.0025)} \]

\[ \frac{2500}{7.25} = 345 \]

Data were gathered from primary sources and secondary sources. The primary source of data consists of information derived from the response of those instruments administered to respondents. Survey method was used to collect data in form of questionnaires and subsequently analyzed. The secondary sources include various forms of literature such as books and journals. Data were collected through the use of 345 questionnaires containing sections with a combination of open and close ended questions. The questionnaires were administered to Accountants in the randomly chosen deposit money banks that prepare the financial reports or are associated with the automation of the financial reports.

4. DATA ANALYSIS AND HYPOTHESIS TESTING

The data were presented by use of tables. Regression analysis was used to compare the relationships between the variables in the hypothesis. The P-values from the Analysis of variance were used in testing the hypothesis. Collected data for the dependent and independent variables were taken from the questionnaires and presented, examined and qualitatively analyzed with the aid of statistical package for social sciences (SPSS), 2010

<table>
<thead>
<tr>
<th>HYPOTHESIS 1</th>
<th>SOURCE: FIELD STUDY (2013)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certainty of accuracy</td>
<td>4.38</td>
<td>.868</td>
<td>210</td>
</tr>
<tr>
<td>Quality reports</td>
<td>4.20</td>
<td>.817</td>
<td>210</td>
</tr>
<tr>
<td>Automation</td>
<td>3.09</td>
<td>.856</td>
<td>210</td>
</tr>
<tr>
<td>Measures used</td>
<td>4.86</td>
<td>.351</td>
<td>210</td>
</tr>
</tbody>
</table>
### TABLE 2

**Correlations**

<table>
<thead>
<tr>
<th></th>
<th>Certainty of accuracy</th>
<th>Measures used</th>
<th>Automation</th>
<th>Quality reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1.000</td>
<td>.890</td>
<td>.803</td>
<td>651</td>
</tr>
<tr>
<td>Quality reports</td>
<td>.890</td>
<td>1.000</td>
<td>.870</td>
<td>601</td>
</tr>
<tr>
<td>Automation</td>
<td>.803</td>
<td>.870</td>
<td>1.000</td>
<td>.521</td>
</tr>
<tr>
<td>Measures used</td>
<td>.651</td>
<td>.601</td>
<td>.521</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**N**
- Certainty of accuracy: 210
- Quality reports: 210
- Automation: 210
- Measures used: 210

**SOURCE:** FIELD STUDY (2013)

### TABLE 3

**Model Summary**

<table>
<thead>
<tr>
<th>Mo del</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of Estimate</th>
<th>Change Statistics R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.904</td>
<td>.817</td>
<td>.844</td>
<td>.374</td>
<td>.817</td>
<td>306.396</td>
<td>3</td>
<td>206</td>
<td>.000</td>
</tr>
</tbody>
</table>

**SOURCE:** FIELD STUDY (2013)

a. Predictors: (Constant), quality reports, measures used, automation

### TABLE 4

**ANOVA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig. F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>3</td>
<td>42.895</td>
<td>306.396</td>
<td>.000*</td>
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<tr>
<td></td>
<td>Residual</td>
<td>206</td>
<td>.140</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>209</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SOURCE:** FIELD STUDY (2013)

a. Predictors: (Constant), automation, measures used, quality reports
b. Dependent Variable: certainty of accuracy
TABLE 5

Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>-1.201</td>
<td>.376</td>
<td></td>
</tr>
<tr>
<td>Measures</td>
<td>.450</td>
<td>.092</td>
<td>.182</td>
</tr>
<tr>
<td>used</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automation</td>
<td>.121</td>
<td>.061</td>
<td>.119</td>
</tr>
<tr>
<td>Quality</td>
<td>.719</td>
<td>.068</td>
<td>.677</td>
</tr>
<tr>
<td>reports</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: FIELD STUDY (2013)
a. Dependent Variable: certainty of accuracy

INTERPRETATION

Responses on certainty of accuracy and other qualities from the respondents were used as the dependent variable for this hypothesis. The independent variables used were responses on quality of the reports, level of automation in the banks and automation of measures used to ensure accuracy and other qualities of the financial reports. Each correlation result shows a positive relationship between each of the variables. The results were: 0.890 For certainty of accuracy and quality of the reports; 0.803 For certainty of accuracy and level of automation of financial reports; 0.651 for certainty of accuracy and measures used to ensure accuracy; 0.870 For quality reports and level of automation in deposit money banks and; 0.601 for quality reports and measures used to ensure accuracy of financial reports. The regression result of 0.904 shows a strong positive linear relationship between automation of financial reports and certainty of accuracy, reliability, relevance, and other necessary qualities of financial reports. The R square of 0.817 shows a large level of how much the certainty of their accuracy, reliability, relevance and completeness can be explained by the automation of financial reports. The significant F value of 0.00 is highly significant. It shows joint significance of explanatory variables. The p-value of 0.00 is highly significant. The value is not larger than 0.05 which is the level of significance, meaning that the variances for automation of financial reports and certainty of required quality are the same and the assumption of equal variances has not been violated and there is significant difference in the mean score. Since the p-value is less than 0.05, the null hypothesis should be rejected.

DECISION

Accept H1: Information Technology has ample positive effects on the accuracy, reliability, relevance and completeness of financial reports.

HYPOTHESIS 2

TABLE 6

Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance with standards</td>
<td>4.81</td>
<td>.854</td>
<td>210</td>
</tr>
<tr>
<td>Automation</td>
<td>3.09</td>
<td>.856</td>
<td>210</td>
</tr>
</tbody>
</table>

SOURCE: FIELD STUDY (2013)
TABLE 7
Correlations

<table>
<thead>
<tr>
<th></th>
<th>Compliance with standards</th>
<th>Automation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>Compliance with standards</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Automation</td>
<td>-.029</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td>Compliance with standards</td>
<td>.340</td>
</tr>
<tr>
<td></td>
<td>Automation</td>
<td>.340</td>
</tr>
<tr>
<td>N</td>
<td>Compliance with standards</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>Automation</td>
<td>210</td>
</tr>
</tbody>
</table>

SOURCE: FIELD STUDY (2013)

TABLE 8
Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.029*</td>
<td>.001</td>
<td>-.004</td>
<td>.856</td>
<td>.001</td>
<td>.171</td>
<td>1</td>
<td>208</td>
<td>.680</td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), automation

SOURCE: FIELD STUDY (2013)

a. Predictors: (Constant), automation

TABLE 9
ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.125</td>
<td>1</td>
<td>.125</td>
<td>1.171</td>
<td>.680p</td>
</tr>
<tr>
<td>Residual</td>
<td>152.256</td>
<td>208</td>
<td>.732</td>
<td>.680p</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>152.381</td>
<td>209</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: FIELD STUDY (2013)

a. Predictors: (Constant), automation

b. Dependent Variable: compliance with standards

TABLE 10
Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B</th>
<th>95.0% Confidence Interval for Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>t</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>4.898</td>
<td>.222</td>
<td>-.414</td>
</tr>
<tr>
<td></td>
<td>Automation</td>
<td>-.029</td>
<td>.069</td>
<td>-.029</td>
</tr>
</tbody>
</table>

SOURCE: FIELD STUDY (2013)

a. Dependent Variable: compliance with standards

INTERPRETATION
Responses on banks compliance with standards was used as the dependent variable from the questionnaires distributed. The independent variable for the regression analysis was level of automation. The correlation result of -2.9% shows a negative relationship between compliance with standards and automation of financial reports.
The regression result of 2.9% shows a low positive relationship between the level of automation in the deposit money banks and their compliance with standards. The R square result shows 0.1% of compliance with international financial reporting standards is explained by automation of financial reports. The p value of 0.68 is higher than the level of significance shows no significance. The null hypothesis should be accepted.

**DECISION**

Accept $H_0$: Automation of financial reports does not affect compliance with generally accepted accounting principles.

**5 CONCLUSION**

The results of the study show that Information Technology enhances the accuracy, reliability, relevance and completeness of financial reports to a sufficient and ample level. The accuracy, reliability, relevance and comparability of financial reports can be enhanced by Information Technology to a satisfactory degree. Information Technology has a great deal of positive effects on financial reports in deposit money banks in Nigeria. It also increases transparency through the use of mediums like extensible business reporting language; it reduces time wasted on manual preparation and makes financial reporting easier for the accountants and more understandable and accessible for users.

The findings also showed Automation of financial reports does not affect compliance with generally accepted accounting principles and standards. Automation does not affect compliance in any way. Extensible Business Reporting Language has not been implemented by a greater percentage of deposit money banks in Nigeria. Most of them have only heard of it. Reviewed literature answer the research question why is the adoption of Extensible Business Reporting Language needed by deposit money banks and what are the advantages derived.

**REFERENCES**


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