BAASANA

Business and Applied Sciences Academy of North America

February 23, 2014

Professor Faboyede, Olusola Samuel
E-mail: samuel.faboyede@covenantuniversity.edu.ng

Mukoro, Oluku Dick, Ph.D
E-mail: oluku.mukoro@covenantuniversity.edu.ng

Iyoha, Francis, Ph.D
E-mail:francis.iyoha@covenantuniversity.edu.ng

Odafen, Aiwanose Hannah
Department of Accounting, School of Business, College of Development Studies
Covenant University,Ota
Ogun State, Nigeria
E-mail:aiwahannah@yahoo.com

Dear authors:

Based on positive reviews, I have the pleasuretoaccept your co-authored paper entitled,*The impact of extensible business reporting language education and adoption on stock exchange development: A focus on Nigeria* for presentation at the2014 international conference of Business and Applied Sciences Academy of North America (BAASANA) scheduled to be held at Ramapo College of New Jersey, USA during June 19-21, 2014. Congratulations! This acceptance is contingent upon your official registration and presentation of the paper at the conference.

In order for your paper to be included in the conference program, please complete the attached registration form and pay the regular registration fee as soon as possible. To include your paper in the official proceedings of the conference, please follow the manuscript guidelines available at www.baasana.org and proofread the paper for possible grammar, composition, typos, and punctuation errors and submit the same by June 1, 2014. Thank you.

I look forward to meeting you atRamapo College, New Jersey, USA

Sincerely,

John okpara

Dr. John Okpara
Professor of Management and Chair, Department of Management and Marketing
Program Chair, 2014 BAASANA International Conference
Bloomsburg University of Pennsylvania
Bloomsburg, PA 17815, USA

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THE IMPACT OF EXTENSIBLE BUSINESS REPORTING LANGUAGE EDUCATION AND ADOPTION OF STOCK EXCHANGE DEVELOPMENT: A FOCUS ON NIGERIA

Faboyede, Olusola Samuel,
Department of Accounting, School of Business, College of Development Studies, Covenant University, Canaanland, Ota, Ogun state, Nigeria, samuel.faboyede@covenantuniversity.edu.ng

Mukoro, Oluku Dick PhD,
Department of Accounting, School of Business, College of Development Studies, Covenant University, Canaanland, Ota, Ogun State, Nigeria. oluku.mukoro@covenantuniversity.edu.ng

Iyoha, Francis PhD
Department of Accounting, School of Business, Covenant University, Canaanland, Ota, Ogun State, Nigeria, francis.iyoha@covenantuniversity.edu.ng

Odafen, Aiwanose Hannah
Department of Accounting, School of Business, College of Development Studies, Covenant University, Ota, Ogun State, Nigeria. aiwahannah@yahoo.com

Abstract

The growing need for widely available and easily accessible financial information in the financial markets has prompted the necessity for the knowledge and adoption of Extensible Business Reporting Language (XBRL) as the standard format for presenting financial reports across the globe. The impact of an efficient information distribution system like the Extensible Business Reporting Language (XBRL) could help protect creditors, make cross border relations more secure and support the competitiveness of financial markets This study aims at investigating the impact of the possible learning and adoption of Extensible Business Reporting Language (XBRL) in the Nigerian Stock Exchange. The data used for this study were gathered through the instruments of a questionnaire and secondary sources. One hundred and Fifty (150) copies of a questionnaire were administered, out of which one hundred and thirty-one (131) were collated for analysis. To achieve the objectives of this study, three hypotheses were formulated from the structure of research questions. Kruskal-Wallis and descriptive statistical tools were used in testing these hypotheses. Findings show that environmental factors and problems in the Nigerian Stock exchange will affect the learning and implementation of XBRL in the Stock Exchange as well as the fact that certain infrastructure must be put in place before the implementation of XBRL. Based on these findings, the study recommends that the Federal government should announce and compel the educational awareness and adoption of XBRL as a format for regulatory filing and financial reporting in the Nigerian Stock Exchange.

Key words: XBRL, Nigerian Stock Exchange, Education, Information, Development

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1.0 Introduction

In recent times, the need for updated, accurate and easily understandable financial information in the financial markets has grown. This is facilitated by the upsurge in international trade and unification of markets and increase in the number and users of accounting information. According to Chandran (2010), cited in Faboyede, Mukoro, and Olowe (2011), investors today are very demanding, and emphasize greatly on authenticity, accuracy, and reliability of financial data as financial reporting reveals the true financial and overall health of an organization. However, the differences in presentation, terminologies, interpretation, and accounting standards in financial reports have frustrated users of accounting reports all around the world.

The answer to this problem, it seems, came in the form of the Extensible Business Reporting Language (XBRL) when Charles Hoffman, a Certified Public Accountant (CPA) from the State of Washington, began experimenting with Extensible Mark-up Language (XML) in April 1998 which eventually led to the development of XBRL. The Extensible Business Reporting Language (XBRL) is defined as ―a standard-based method with which users can prepare, publish (in a variety of formats), exchange and analyze financial statements and the information they contain (Malhotra and Garriit, 2004). It is to address business reporting information on the internet and bases on XML, which is a standard for electronic data exchange on the internet. It is a markup language, rather than a programming one. It enables business data and information to be shared and communicated by companies, banks, stock exchanges, accounting institutions, governments and other relating organizations (Faboyede, Mukoro, Olowe, 2011). It is open-standard, free of charge, and developed by an international non-profit consortium known as the XBRL International (Li, 2007). It should be noted that Extensible Business Reporting Language (XBRL) is a significant part of the Accounting Information System process.

China, in 2004, and the United States of America (USA), in April 2009, set the pace for the world when their respective Securities and Exchange Commissions mandated that regulatory filing by companies be done in the XBRL format. Incidentally, financial markets the world over are mandating that companies listed on the stock exchange report their financial data for the

period in Extensible Business Reporting Language (XBRL) including Japan, Brazil, South Africa and many others, with positive results.

In the Nigerian system, little or no strides have been made in the area of XBRL. So far, only the Association of National Accountants of Nigeria (ANAN), has taken steps by joining the XBRL International as a direct member and incorporating XBRL into the ANAN training curriculum for over 10,000 students. The Nigerian Stock Exchange (NSE) has made no move towards the adoption of the Extensible Business Reporting Language (XBRL) in its regulatory filing system which would have made positive impact on users of financial reports. This is a major reason for undertaking this study.

Thus, the main objective of this study is to examine the usefulness and need for the implementation of the Extensible Business Reporting Language (XBRL) based on the review of its implementation in selected international stock exchanges which include the American Stock Exchange, Japanese Stock Exchange, Chinese Stock Exchange, South African Stock Exchange and the Indian Stock Exchange, and the implications of its adoption for financial report users in those countries and Nigeria.

Other specific objectives include: examining the environmental factors that will affect the implementation of the Extensible Business Reporting Language (XBRL) in the Nigerian Stock Exchange; identifying the infrastructure necessary to ensure the implementation of Extensible Business Reporting Language (XBRL) in the Nigerian Stock Exchange; and analyzing the attitude of participants in the Nigerian Stock Exchange and users of financial reports to the possible implementation of the Extensible Business Reporting Language (XBRL) in the Nigerian Stock Exchange. The remaining part of this paper discusses the literature review, methodology, findings, implications, and recommendations.

2.0 LITERATURE REVIEW

Extensible Business Reporting Language (XBRL) is a framework based on XML (Extensible Markup Language) that is freely licensed and facilitates the automatic exchange and reliable

extraction of financial information among various software applications anywhere in the world. This new business reporting language enables companies and individuals to use financial information in a much swifter and more flexible way (Malhotra and Garriit, 2004). In today's financial markets, financial information should be widely available and easily accessible (Wymeersch, 2008). It should also be in the format that encourages easy and accurate business decision making. Financial reporting in recent times has been unsatisfactory due to discrepancies in terminology, presentation, analysis and standardization of financial reports. Financial fraternities have been trying to find a solution to this problem with special attention to that of dissemination and standardization especially the financial markets.

Extensible Business Reporting Language (XBRL) is the most reliable and all-encompassing solution to modern day financial reporting issues. As Malhotra and Garriit (2004) put it, Extensible Business Reporting Language is the missing link; the specification that allows financial and business reporting concepts to be expressed quickly, less expensively, and more efficiently. The widespread use of XML will streamline reporting and transaction tracking in every area of business, from regulatory and tax compliance to internal and performance measurements and international harmonizationl. Reports that took hours to assemble using any analytical application can now be prepared, distributed and consumed in merely seconds using XBRL tags. Joined in a quiet revolution, many companies around the world are beginning to speak a new but common language known as XBRL (Willis, 2003).

Naseem (2011) explains that XBRL allows companies and individuals to —tag data inside financial reports to facilitate data extraction and manipulation. Its specifications satisfy the major users of the application which include i) business information preparers, ii) intermediaries in the preparation and distribution process, iii) users of this information and iv) the vendors who supply software and services to one or more of these three types of user. UBMatrix (2006) defines XBRL in 3 categories as follows: (a) XBRL is a **global standard** method for the electronic exchange of business information (replacing 100s of proprietary methods). (b) XBRL represents a global **agreement of the semantics** of financial reporting concepts and business rules. ©

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XBRL is also an **organization**, comprised of over 400 members from around the world. The organization stands behind and maintains XBRL.

Summarizing the definitions of XBRL is Eckhausen (2004) who states that: XBRL is a freely available electronic language for financial reporting, based on the XML standards in order to:
i) Prepare financial data ii) Extract reliable financial data iii) Exchange financial data on a system to system basis, and iv) Publish company financial data.

Business organizations are required by regulatory bodies to produce reports periodically for the users of financial statements in different formats as some users require more information than others. With XBRL, all these needs can be met.

3.0 The XBRL Process

Business organizations are required by regulatory bodies to produce reports periodically for the users of financial statements in different formats, since some users require more information than others, but with XBRL, all these needs can be met simultaneously. The diagram below indicates some examples of the need for multiple reports based on the same data. A goal of XBRL is to reduce the manual rework that is usually required to meet the needs/requirements of each of the users. According to Richards and Smith (2004), if all the needs can be met by simply transforming the same data into different formats using XML/XBRL technologies, then many of the repetitive reporting processes can be eliminated.

Shown below is the diagram that shows the different stages which may be involved in a typical XBRL process:

The XBRL Process
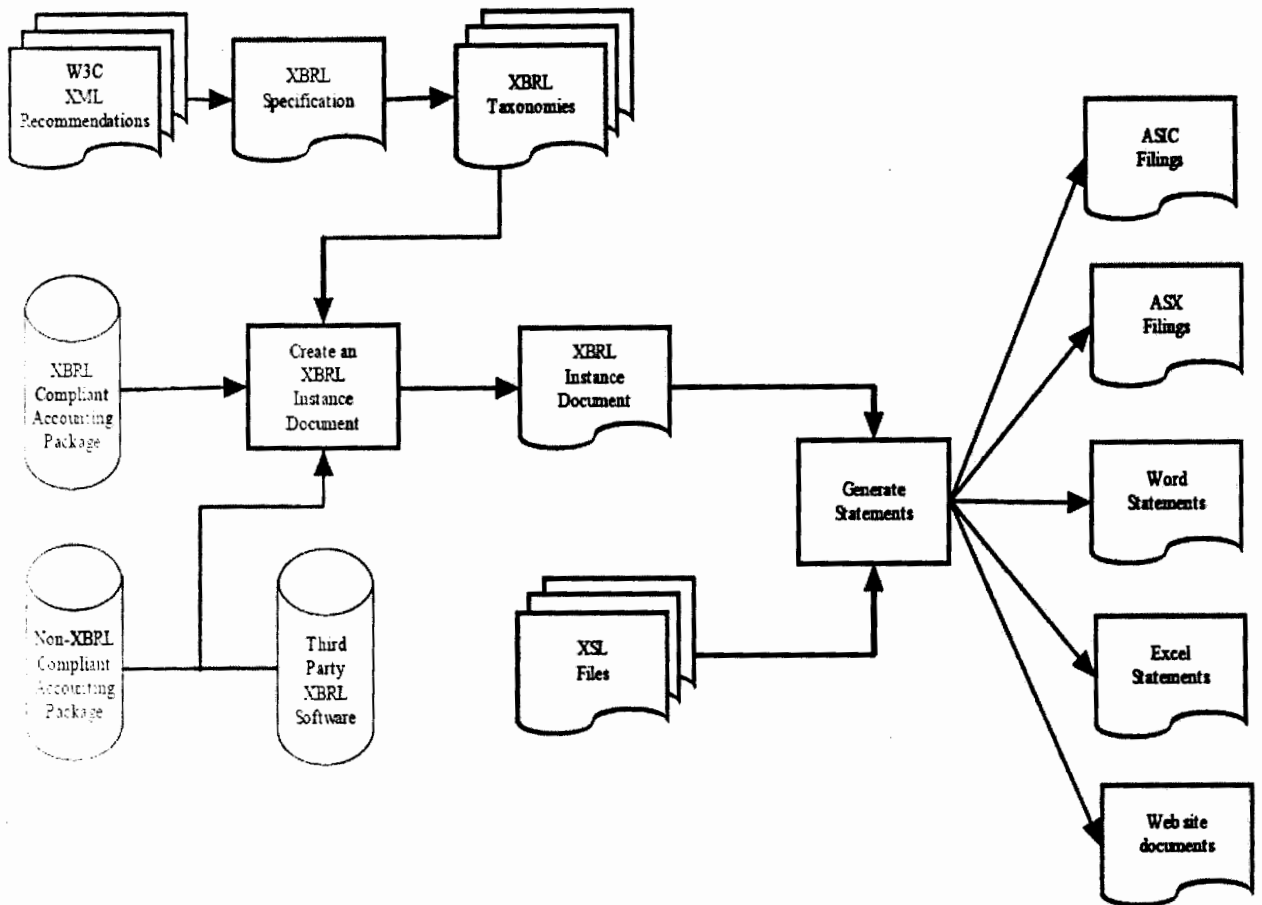
4.0 Benefits of XBRL for External Reporting

EDGAR (2007) attests to the benefits of using XBRL for financial external reporting to companies. Such benefits include: quick communication of more accurate data; unprecedented level of transparency for external reporting; reduced costs of automated data gathering and aggregation; efficient data validation; errors are identified/corrected prior to disclosure filings; narrative explanations of valid data discrepancies embedded; faster speed to publishing; expedited reviews from the Securities and Exchange Commission for XBRL filings; leadership and reputation for transparency; improved communications: Companies can ensure that individuals are receiving their numbers as they were depicted.

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4.1 Benefits of XBRL for Internal Accounting

Although the primary push is for using XBRL in interactive data to prepare financial statements, XBRL also works for internal company information, controls, compliance, and reporting processes. The larger the company, the more benefits there are to using XBRL enterprise-wide to automate business processes (EDGAR, 2011). Other benefits include: (a) Analysis of competitors and benchmark against industry peers (b) Improved audits and analysis of Merger and Acquisition targets (c) Faster integration of new acquisitions (d) Communication between autonomous business units using different accounting and ERP systems (e) Automation of aggregation of data from various software applications and databases.

4.2 Requirements of XBRL

The requirements of XBRL as stated by UBMatrix (2006) include: (i) Automated, efficient and reliable extraction of information from an XBRL document (ii) Automated comparison of information expressed in XBRL documents such as financial and other business information. These include accounting policies, notes to the financial statements between companies and the supply chain information (iii) Drill down from information to more detailed information such as, authoritative literature, and audit working papers (iv) Support for multiple languages (v) Extensibility in terms of adding concepts and modifying relationships which is the highest priority. XBRL must be flexible to meet its users' needs (vi) Semantic and syntactic validation of information within XBRL instances, particularly numeric information, and textual-type information (vii) Presentation, such as the use of bold, italics, and other stylistic techniques are also a requirement (viii) The data in XBRL documents is commonly numeric and has relationships to other numbers. These relationships need to be accurate.

4.3 Role of XBRL in the Stock Exchange Development

Stock exchanges that collect standard electronic financials and that have automated the analysis and filing of this data have a fundamental advantage over other Exchanges. They are much more attractive to investors. With XBRL-compliant data, Stock markets can offer increased value and provide competitive advantages to institutions and private investors. Financial data verified in real-time, converted to XBRL and posted directly to an issuer's website improves worldwide exposure and provides rapid analysis capabilities to the investment and analyst

commu ity (Selim, 2012). There has been a positive increase in XBRL implementation around the rld. According to XBRL and the International Accounting Standards Committee Fou   ion, XBRL in the stock exchange will ensure: (a) Seamless flow of data (b) Filtered data © \   tion (d) Creation of enhanced/new revenue opportunities and (e) Saving of time and res   s. Also, Selim (2012) noted that the implementation of XBRL in the stock exchange will h market regulators in the following ways:

(i) Q   er A alysis of **listed companies' filings**: In the past, market regulators had to build con   y data into analysis database and send to investment houses for use. This process usu   took months to carry out thus providing these houses with outdated information. XF   ers investors and market regulators instant access to company financials

(ii)   tal Data Collection Solutions: XBRL Forms:

Pro a. like XBRL forms remove the financial and technological burden from the filers and pro   an e y-to-use, web-based front end for users to verify financial information prior to su   on. ith the taxonomy identified, the XBRL Forms application dynamically renders a set of   my-driven returns for high quality financial data capture.

(ii   C ..e **Opportunities**: By adopting an integrated platform to collect, verify, analyze an   t .. RL data in near real-time, market regulators can collect higher -quality data anc   e stically improved time to market. This opens the door for new viable profit cc   po ities:

a)   mu more valuable is same-day data versus data received in 30 days, 90 days or an   ould a Portfolio Manager pay a premium for near real time analytics and/or data m: p. ies against the most current reported investment data? With an integrated end-to- e.   L ta collection and analytics platform in place, market regulators could explore pr   da rvices as a viable profit centre.

b)   en n to the standardized Exchange listing fees could be charged to the Issuers for fac   i RL filings. Financial data verified in real-time, converted to XBRL and posted d   c suer's website would improve transparency and worldwide exposure, and provide ra   ly   o the investment and analyst community.

c) ⟨...⟩ a market regulator has implemented an Analytics platform that integrates validated, near ⟨...⟩ real-time XBRL data, they may wish to offer some or all of this data to the community in order ⟨...⟩ drive new revenue growth for the Exchange. Investors, analysts and journalists would ⟨...⟩ 's data ideal for intra and cross-sectored analysis and data mining, such as predictive ⟨...⟩ regression analysis, neural networks, benchmarking, identifying outliers, or peer ⟨...⟩ rankings within an industry category or across market sectors.

d) ⟨...⟩ models for investors, analysts and journalists against near real-time Investment data can ⟨...⟩ revenue growth for an Exchange.

(iv) ⟨...⟩ Validation: Since XBRL forms dynamically renders web submission forms from a ⟨...⟩ r ⟨regul⟩ator's taxonomy, it can also validate each filing in real time before certifying the return ⟨...⟩ and generating the required XBRL instance document.

(v) ⟨...⟩ gation: For market regulators, better risk mitigation involves validating financial returns ⟨...⟩ against their taxonomy prior to submission, dramatically reducing round trip ⟨...⟩ errors related to re-keying data into back-end systems. An integrated XBRL-based ⟨...⟩ tion system enables this type of workflow and introduces cost, labour and time eff ⟨...⟩ r the regulator as well as the filer.

(v ⟨...⟩ ability: Fundamentally, structured data like XBRL has meaning and context at ⟨...⟩ so that it can be exchanged effectively between trading partners, between entities and ⟨...⟩ as well as exchanged internally. Properly structured data is inherently easier to reu ⟨...⟩ tomated applications; whereas unstructured data is difficult to share without m ⟨...⟩ on.

(v ⟨...⟩ ncy Risk Management: XBRL Designer: One example of these powerful T ⟨...⟩ n tools is XBRL Designer: a metadata-driven GUI design tool that su ⟨...⟩ nomy design (including data definitions, formula creation and returns de ⟨...⟩ e business users complete control over the entire data collection process.

W: ... Designer, Market Regulators can quickly react to changing legislation, standards and ... without IT or 3rd party intervention, effectively insulating the business from the in... ...lexities of XBRL.

(v... ...ur **Taxonomy Up to Date:** Taxonomy design has traditionally required skilled XB... ...rs and/or XBRL specialists to prepare taxonomies by specifying detailed co... ...ps, dimensions, calculations, and validation rules. Manually editing these Ta... ... can be very complex and time consuming, and in the past has required sig... ...ing of the data collection/validation requirements to highly paid XBRL ex... ...ing management of the Taxonomy. Over the past few years however, p... ...ness user-friendly Taxonomy design tools have emerged and now policy ch... ...plemented faster and more efficiently directly by business users.

4.. ... ...ing XBRL Adoption

T... ...actors that might affect the implementation of XBRL in the stock exchange.

A... ...dery, Fowler and Mustafa (2009), factors that affect XBRL adoption in ar... ...n be classified into:

i. ... **co..text factors:** Environmental context factors include industry ch... ... support infrastructure and Government. Industry characteristics involve co... ...' the level of competition, influence or pressure from and organization's trading p... ...ulatory and government agenda.

ii. ...context **factors:** According to Janvrin, Bierstaker and Lowe (2008, as cited by ...9), these factors relate to the organization's structure, processes and resources w... ...te the organization's readiness to adopt technology. These factors include o... ...d resources, top management support and organization champion.

iii ...context **factors:** These factors include relative advantage, compatibility, c... ...lity and observability of an information system technology like XBRL. These p... ...ole in the decision to adopt it.

5.(: 'n Hypotheses

Tl   ···s of this study include:

II·   :

IIl   · no significant difference in the opinion that environmental factors will affect

X'   ···err·ation across the 3 groups of respondents.

II   · ·· 2:

II   · n infrastructures are not necessary to ensure the implementation of XBRL in the

N'   ·'· Exchange.

I·   :

Ij   ·   :· of users of financial reports will not be positive to the possible implementation

of   ···· ·usiness Reporting Language (XBRL).

5.'   ·   ·o'' ·ata Analysis

Λ   ···-·d five point likert scale questionnaire was administered to stakeholders in

f·   ·rting in Nigeria, notably, investors, Tax practitioners, auditors, preparers of

fi.   ·· and capital market operators. A total number of 150 questionnaires were

d.   · ·l of these questionnaires were returned, showing an average return rate of

87   · ··· ·yed the Kruskal-Wallis Test (sometimes referred to as the Kruskal-Wallis H

Tc   i. ··on-parametric alternative to a one-way between-groups analysis of variance, in

tc·   ·· ·ses.

5   · ··sting

Ii

I'   significant difference in the opinion that environmental factors will affect

X'   ·ion across the 3 groups of respondents.

Ranks

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	Respondent Group	N	Mean Rank
at industry factors XBRL tation	Investor	46	65.21
	Tax Practitioner	36	64.25
	Auditor	39	53.04
	Total	121	

Test Statistics [a;b]

	Respondent Industry factors effect on XBRL Implementation
Cl	3.416
df	2
Asy	.181

 allis Test
 Variable.
 at Group

I

1   ti Significance of 0.181, which is greater than 0.05, shows that there is no
si   'er nce in the perception of the groups. The three groups agree to equal degree that
a m   ntal factor (industry factors) will affect the implementation of XBRL. The
Inv   mean rank of 65.21 followed by the Tax Practitioners with 64.25 and the
Aud   4.

D

Lev   e; $\alpha = 0.05$. Since p value = $0.181 \geq 0.05 = \alpha$, accept the null hypothesis which
sta   no significant difference in the opinion that environmental factors will affect
X   ation across the 3 groups of respondents and reject the alternative hypothesis.

H :

Certain infrastructures are not necessary to ensure the implementation of XBRL in the Nigerian Stock Exchange.

Ranks

	Respondent Group	N	Mean Rank
nt Company formal	Investor	47	73.56
electronic matters	Tax Practitioner	36	57.25
	Auditor	39	50.99
	Total	122	

Test Stati   [b]

	Respondent Company formal policies on electronic matters
Chi	10.633
df	2
As	.005

allis Test
Variable.
t Group

Dec

ignificance; $\alpha = 0.05$. Since p value = $0.005 \leq 0.05 = \alpha$, reject the null hypothesis

t the alternate hypothesis which states that certain infrastructures are necessary

he implementation of XBRL in the Nigerian Stock Exchange.

II   attitude of users of financial reports will not be positive to the possible
    ation of the Extensible Business Reporting Language (XBRL).

Ranks

Respondent Group		N	Mean Rank
ent XBRL contribution ng up reporting and filing cycle	Investor	46	63.70
	Tax Practitioner	36	67.04
	Auditor	38	50.43
	Total	120	

Test

	Respondent XBRL contribution to speeding up reporting and filing cycle
Chi-S	6.52
df	2
Asy	.038

    Wallis Test
    g Variable.
    dent Group

Dec

    of significance; α= 0.05. Since p value = 0.038 ≤ 0.05= α, reject the null hypothesis

    the alternative hypothesis which states that the attitude of users of financial

    il be positive to the possible implementation of the Extensible Business

    g Language (XBRL).

Seq... to the closed ended questionnaire administered, we found out that Extensible Business Rep...ing Language has a very important role to play in the Nigerian Stock Exchange and has posit... im... ...tions for users of financial reports at large. Other findings include:

1. The study ...und out that environmental factors are capable of affecting the implementation of Exte...le...ness Reporting Language in the Nigerian Stock Exchange

2. T...e rese...h also found out that certain infrastructure such as Company formal policies on elec...ic ...rs must be put in place before the implementation of Extensible Business Rep...ng L...uage

3. C... ...ch as operational, organizational and Nigerian Stock Exchange problems will aff...e i... ...nentation of XBRL in the Nigerian Stock Exchange.

4. T...mai...keholders/users of financial reports (investors, tax practitioners and auditors) ha... ...d...attitude towards the possible implementation of XBRL in the Nigerian Stock Exc...

5. ...i o...opinion of the experts, Extensible Business Reporting Language will improve Acc...ting ...rmation System and the decision making process.

5.3 ...ngs
A...i...lysis of the questionnaires recovered from respondents, the following o...made:

T...geri...pital Market has a low awareness of Extensible Business Reporting Language. Indu...fac...will affect the implementation of Extensible Business Reporting Language in the N...Exchange.

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The ... support infrastructures will affect the implementation of Extensible Business Reporting Language in the Nigerian Stock Exchange.

The Nigerian economic environment is suitable for XBRL implementation.

Stakeholders believe that XBRL can contribute to speeding up the reporting and filing cycle, for data reusability, reduce processing errors and be a reliable resource for the preparation of turn...

Stakeholders believe that XBRL will improve the transparency, comparability, relevance and reliability of financial statements.

5. Conclusion

The global adoption of the programming language Extensible Business Reporting Language (XBRL), will improve business data and information sharing among companies, banks, stock exchanges, accounting institutions, governments and other related concerns. Transparency, comparability and reliability of financial statements promise to also improve.

The Extensible Business Reporting Language (XBRL) is needed and should be adopted by the Nigerian Stock Exchange as the standard for financial reporting and regulatory filing. Only then can it gain the investors' confidence and make strides towards the global stock exchange it aspires to be.

5.5 Recommendations

Awareness campaigns of the existence of Extensible Business Reporting Language (XBRL) must be carried out to encourage smooth and easy transition to XBRL-based financial reporting. Also, fund managers and other institutional investors should be made aware of XBRL through the professional bodies.