

Advances in Internet Financial Reporting in West Africa: An Exploratory Study of Nigeria and Ghana

Michael Opara, Muhammad Ruhul Amin and Matthew Cremeans
College of Business, Texas A&M University, Commerce 2200 Campbell Street,
75428 Commerce, TX, USA

Abstract: The deployment of internet technology for corporate financial reporting in West Africa has remained largely unexplored. This study documents advances in corporate financial reporting using the internet by listed companies in Nigeria and Ghana. The findings suggest that while corporate reporting on the internet is steadily evolving in both countries, the full potential of the internet to mobilise, engage and disclose information to current and future stakeholders is yet to be realised. As the two largest economies in West Africa, their combined progress would unleash a galvanising impact that could advance an enhanced deployment of internet technology and its capabilities to satisfy strategic corporate reporting objectives, meet the requirements of current shareholders and simultaneously mobilise and motivate a wide range of potential investors that could be critical to the strategic interests of businesses in Nigeria and Ghana. Therefore, at both corporate and policy levels and drawing on insights from both agency theory and stakeholder perspectives, the opportunities for innovation in corporate financial information dissemination presented by internet technology remains enormous and largely untapped in West Africa.

Key words: Internet financial reporting, financial reporting on the internet, corporate reporting, business reporting, unexplored, galvanising impact

INTRODUCTION

Internet technology is helping businesses achieve competitive advantage (Hunter and Smith, 2011) and meet their strategic and reporting objectives by leveraging on the advances offered by recent improvements in communication technology and a consumer population with growing access to these technologies (Saxton, 2012; Internet Society, 2016; Lodhia *et al.*, 2004). With the technological capabilities of the internet becoming extensive and widespread, the World Wide Web (WWW) is growing in value and importance as a model to reach and disseminate corporate business, marketing and social responsibility information to all the stakeholders (Saxton, 2012).

Meanwhile, several technologically advanced countries are capturing and utilising the opportunities offered by advancing internet technologies (Khadaroo, 2005; Debreceeny and Gray, 1999; Hunter and Smith, 2011; Lodhia *et al.*, 2004). However, there is a question as to whether technologically developing countries are able to capture similar opportunities given their circumstances. Elliott states that information technology is changing and altering almost everything in accounting, something that

characterises a uniquely post-industrial model of wealth, design and creation (1992). According to Lodhia *et al.* (2004), corporate reporting especially financial reporting is an essential component of the accounting system that delivers information to various stakeholders. As modern businesses look for cost effective and most convenient models of communication with their stakeholders, the internet via. their corporate website is one of the most accessible, effective and efficient tools for engaging and maintaining stakeholder relations. Previously, only large companies were able to communicate with their shareholders through the internet but nowadays small companies are also able to do so (Brennan and Hourigan, 1999). However, sharing financial information through the internet for listed companies in developing countries seems to lag the pace of global technological change, especially with voluntary or only partially mandated disclosures (Samaha *et al.*, 2012).

Considering the globalised nature of business today and technological improvements that enable the deployment of the internet as a business management and advancement tool, this study explores the nature and extent of internet financial reporting in West Africa via. an empirical study of Nigeria and Ghana. The specific

objectives of this study are to identify and explain the current state of internet financial reporting in West Africa (focusing on Nigeria and Ghana) and compare the current state of IFR in Nigeria and Ghana with two developing but technologically advanced economies Malaysia and Singapore. The study applies a combination of agency theory and stakeholder theory to frame this study, analyse our results and discuss the possible business ramifications.

Our research was conducted using a re-adapted set of criteria established by Khadaroo (2005)'s comparative study of Malaysia and Singapore. A structured questionnaire was used to compare the websites of companies listed in the Nigerian and Ghanaian stock exchanges. Ghana was found to generally have more information both in corporate disclosures such as financial statements and stakeholder-focused information like news releases, corporate social responsibility statements and contact information. Both countries, however have lower than expected expanse of financial disclosure such as annual balance sheets (Nigeria 29%, Ghana 36%) when compared to their Malaysia (63%) and Singapore (80%) counterparts (Khadaroo, 2005). This shows a potential lack of capacity or inefficiency in their use of internet financial reporting capability. The issues, potential causes and remedies and comparisons with previous research are further handled in the discussion study.

This study advances the accumulating accounting knowledge on internet financial reporting by providing a more in-depth look at the financial disclosure practices in two developing African economies, something lacking in the current body of research (Pendley and Rai, 2009). We argue that the deployment of internet technology for corporate financial reporting in West Africa is forgotten. Specifically, we add to the literature on the evolving practices of West African listed companies (Nigeria and Ghana) on their deployment of internet technology for business management. Secondly, it uses the stakeholder and agency theories to frame discourse, advance structural relationships between shareholder/stakeholders and management and re-conceptualise alternative ways of engagement provided by the internet to advocate the expanded use of the internet for disclosing corporate information and mobilising a growing perimeter of stakeholders. Thirdly, it provides additional, albeit nuanced, insights on how adopting financial standards in a country does not necessarily or inherently improve the nature, extent or quality of disclosed information even when mandated by accounting standards. Fourthly, it updates and expands by Salawu (2012)'s exploratory study into Nigeria internet financial reporting evolution.

Finally, it highlights the geographical differences (digital divide) between developing economies when it comes to adopting the internet reporting model through comparison with previous studies (Khadaroo, 2005).

Literature review

Agency theory: Agency theory deploys incentives and explanations for asymmetric information between two parties to bridge and harmonise the interests of the parties (Principal-Agent) in the model. The first is the principal which derives value from an agent, the other party (Bosse and Phillips, 2016). The theory draws on the idea of the interests of the two parties diverging as one or both parties have more, pertinent, (asymmetric) information than the other (Eisenhardt, 1989). This research draws on this theoretical framework within the premise of the joint stock companies-the stockholders are the principal, the company's management are the agent. The stockholders are primarily informed of management's information through disclosures and releases which includes but is not limited to the financial statements, annual reports, corporate sustainability reports, MD and A reports. The cost of reporting to the principal remains an internalised cost of the corporation, one that cannot be shifted. To minimise this cost, the internet platform could be conceptualised as a modern way to communicate and provide pertinent corporate information to the principal (Lodhia *et al.*, 2004).

Stakeholder theory: The stakeholder theory advocates that the needs of all stakeholders must be considered in corporate decisions. The theoretical foundation for the stakeholder model is that businesses are custodians of our collective social values or social moral agents, entrusted with direct obligations to society (Donaldson and Preston, 1995). Proponents of stakeholder theory argue that while investments such as CSR investments have a positive impact on corporate performance, the reporting/disclosure of such investments or activities allows a firm to better market itself, its products and services, enjoy enhanced brand image and good reputation. This study adopts both agency theory and stakeholder theory convinced that the combined theoretical model better captures the relationships under investigation, explains the role and capacity of management in meeting its information obligations to the diverse range of stakeholders that make up its constituency of interest and provides insights that could guide the progressive deployment of the internet as the model of choice in proactively engaging with both the principals and other stakeholders.

Internet financial reporting

Trend and platforms: According to Lymer (1999), the number of companies using the World Wide Web (www) sites is increasing daily. Corporate financial information of companies such as annual reports, quarterly reports, MD and A and financial reports are now mostly distributed through the internet. Even sharing information through the internet will be the primary and main distribution channel in the near future due to rapid technological development (Lymer, 1999).

The Extensible Business Reporting Language (EXBRL) is a popular platform that is used to normalise and provide financial data through the internet for investors and other stakeholders. This is one of the platforms for listed companies to present their financial information. The other languages are extensible Markup Language (XML), the Electronic Data Gathering, Analysis and Retrieval (EDGAR), System for Electronic Document Analysis and Retrieval (SEDAR). All these platforms are widely used to share corporate financial information. The use of these platforms is part of the growing policy of transparency and governance for public companies.

Internet financial reporting ensures that financial information is communicated to stakeholders in a timely and convenient manner (Lodhia *et al.*, 2004). Reporting financial information on the internet increases corporate accountability and resolves some of the problems associated with communicating financial information to stakeholders by providing key information such as financial statements, executive compensation, the companies major accounting practice and management structure (Lodhia *et al.*, 2004).

Brennan and Hourigan (2000) study revealed that there is a tendency for larger companies to use the internet to disseminate their financial information but there is no significant relation between using the internet and the number of shareholders or leverage of the companies. Further study noted that the size of an organisation is a significant explanatory variable for companies sharing investor related information (Marston and Polei, 2004). These studies illustrate the argument that as a company grows bigger, there is a higher tendency or regulation requirement to share information. This study hopes to further cement and build on this idea with additional examples from Ghana and Nigeria.

Internet financial reporting in developed countries: The remarkable advancement in internet technologies and the techniques used to strategize and organise web sites has continued to evolve (Pendley and Rai, 2009). There is a significant shift in the way that financial information is shared. During 2006-2007, US companies made remarkable

changes in the way they convey online financial reports. The traditional channels are obsolete due to the application of digitised Internet Financial Reporting (IFR) which is easier and more accessible for the users. Internet financial reporting is a modern type of disclosure of information to the stakeholders. Consistent with both Agency and stakeholder theories and to engage with and maintain a thriving business relation with the investors, companies have developed sophisticated corporate web sites which provide a great breadth of content and information. Research findings have shown that there are significant differences among companies who do not have websites, companies who have websites without financial information and companies with financial information (Pendley and Rai, 2009). For one, there is an inherent lowering of the rate of disclosure, though in places like the US, government oversight provides alternate avenues via. the SEC's EDGAR (Pendley and Rai, 2009). There is also the ability for the company to provide unique or interactive information and content that would not be available through other means such as study distribution (Chatterjee and Hawkes, 2008).

The structure and design of websites for financial reports may vary from country to country in terms of contents, guidelines and so on (Yu and Rijia, 2009). The policies and regulations are not consistent in every country. For example, the United States is a pioneer in conveying financial reports through the internet. However, China is an example of a developed country that relatively recently developed the competitive and comprehensive internet financial reporting model needed to advance business communication (Yu and Rijia, 2009). Current research studies on the deployment of IFR are mostly limited to developed countries (Pendley and Rai, 2009). This continues the trends from earlier channels and requirements of disclosure as these websites report financial and non-financial information about the listed companies in addition to or outright replacement of previous methods. It is further noted that the stakeholders such as investors, legislators and the company itself benefits from sharing financial information on the internet (Omran and Ramdhony, 2016). Despite the current focus on developed nations, there is a growing body of research on developing economies and especially the determinants used for disclosure and other reporting issues (Nurunnabi and Hossain, 2012; Samaha *et al.*, 2012; Salawu, 2012).

Internet financial reporting in developing countries: Using the United Nations Development Program's (UNDP) broad groupings, we categorise previous research into internet financial reporting by focusing on three areas of developing countries-Asia, the Middle East and Africa (United Nations, 2016).

The studies in Asia include the countries of Malaysia (Khadaroo, 2005; Al Arussi *et al.*, 2009), Singapore (Khadaroo, 2005) and Bangladesh (Nurunnabi and Hossain, 2012). These studies mainly focus on the level of disclosure for the countries studied (Nurunnabi and Hossain, 2012) with Khadaroo (2005)'s research involving one of the only comparator studies found. A reoccurring idea found in this and the other two regions reviewed is 'determinates of financial reporting' the major factors that could affect financial reporting like leverage, technological level and personalities of the CEO (Al Arussi *et al.*, 2009).

Research into the Middle East found the widest number of studies both per country and the number of countries studied. An abridged list of previous studies includes the nations of Kuwait (Alanezi, 2009; Joshi and Al-Modhahki, 2003; Khan and Ismail, 2011), Qatar (Hossain *et al.*, 2012; Al-Moghawli, 2009) and Jordan (Htaybat, 2011). All of the studies found focus on factors (determinates) or otherwise empirically survey the nations listed for the amounts of disclosure and incorporate the factors for analysis. It is again worth noting that this represents a minority of studies found for this geographical region.

More pertinent to this study, research into Africa has heavily focused on multiple factors in Egypt (Samaha *et al.*, 2012; Ezat and El-Masry, 2008). Other nations studied for IFR (or IFR-related) information include: Mauritius (Omran and Ramdhony, 2016), Nigeria (Salawu, 2012) and South Africa (Barac, 2004). The exploratory study by Salawu (2012) for Nigeria is perhaps the most relevant of these for our purposes-it examined similar data from 2010 but split it into industry and used different criterion for analysis. Barac (2004)'s study into South Africa focused on a similar thread-providing then current information on both general usage and disclosure rates. Research into the Egypt again focused on quantitative determinates of disclosure but also included corporate governance's impact on various factors (Samaha *et al.*, 2012) such as timeliness (Ezat and El-Masry, 2008). Essentially to the best of our knowledge, there are no studies that have specifically examined the nature, extent and evolutionary pattern of internet financial reporting in West Africa using Nigeria and Ghana on a comparative basis.

Implications of internet financial reporting: Financial statement disclosures are the established basis for disseminating business performance and organisational activities to the general public. Thus, financial reporting should be transparent as it is vital for the effective and efficient operation of capital markets. The objective of the

modern business era regarding financial reporting and disclosure is to publicise the necessary information about the financial achievements and profitability status of the companies to the stakeholders. Advancements in information technology are a boon in the world of global business and the application of the internet is critical to disseminate, both mandatory and discretionary, information to the stakeholders, especially to the investors. Recent studies suggest that the companies listed in the official stock market, especially larger companies usually have higher Internet Financial Reporting (IFR) score-especially pharmaceutical companies have greater score than other companies in the industrial sectors.

There are some environmental factors affecting the popularity of internet financial reporting such as legitimacy, societal, cultural and institutional factors (Moradi *et al.*, 2011). Internet financial reporting is a unique subject matter to research because it is an effective channel to distribute corporate information, especially financial information to investors. However, there are some countries such as Iran who are not yet following this trend and as such are slow to disclose financial information through the internet (Moradi *et al.*, 2011). Although, using the information technology may be a unique source of competitive advantage, it may also be a good method of marketing to investors and shareholders (Hunter and Smith, 2011).

Overall, the reporting model for financial reporting has experienced some transformation because of the rapid adoption of the internet which allows disclosures of corporate information to the investors and other stakeholders (Ou, 2016). Furthermore because of this transformation, Ou (2016) notes that the production and quality of corporate financial information has increased and the flow of information between companies and financial statement users has accelerated. However, there are various kinds of risks currently associated with internet financial reporting such as website security, litigation and undue disclosure (Ou, 2016). Projections seem to suggest that soon, internet financial reporting will become the dominant form or model of financial reporting (Ou, 2016). Therefore, more advanced tools, like eXtensible Business Reporting Language (XBRL) may assist organisations in sharing financial information with both internal and external users in an efficient manner. This new tool allows the stakeholders to find, specify, select and copy the information on the internet through a more intuitive interface (Anonymous, 2003). Previously, internet technology was used only for marketing or for other correspondence purposes but nowadays, it is mostly used by corporations to convey financial information to

end users. Indeed, it is expected that in the near future there will be no print-based disclosures and only internet-based ones, especially to circulate financial information to shareholders (Hanafi *et al.*, 2009).

The quantity of corporate information and accessibility of business reporting affects the quality of internet-based financial information. Thus, it is necessary to find out the easiest way of accessing financial information by constructing and deploying an updated website design with modern technological tools. This has been found to have the following positive outcomes: communicating with the investors, shareholders or other users; disseminating information with the aid of modern technology and the ability to provide timely financial information (Chatterjee and Hawkes, 2008).

The current trends of globalisation suggest the feasibility of growing and sustaining the internet, especially with the faster growth expected (Internet Society, 2016). Even some developing countries are embracing the internet to present financial information to the investors, creditors and other stakeholders as described in the previous study. In addition, the disclosure of financial information through the website depends broadly on the company size (Rodrigues and Menezes, 2003). However, this type of reporting faces the challenge of audit, especially external audit. This is why some large companies do not link their websites to that of their auditors. Sometimes the auditors may be addressed by the regulatory bodies (government agencies) or the law courts (Debreceeny and Gray, 1999).

MATERIALS AND METHODS

Quantitative and qualitative data collected during this study were sourced from the companies' official websites. The sample size was limited to the 164 companies listed on the Nigeria Stock Exchange (NSE) and 36 companies listed on the Ghana Stock Exchange (GSE). Only listed companies were selected in both countries due to the underlying assumption that listed companies are statutorily required to report their financial and relevant corporate information to the public and other stakeholders. The data collection period was from March 1-30 May 2017. A team of Graduate Assistant Researchers (GARs) was deployed and directly collected, compiled and analysed the data under the direct supervision of the lead researcher. The data collection was conducted using a two-stage approach.

Stage 1: There were two types of attributes considered in this study-general attributes and specific attributes. The

general attributes relate to the general information found on the corporate websites of the listed companies (it contained 10 characteristics).

List of general attributes:

- States minimum required browser
- Version 3.0 and above
- Other browser requirements
- States language requirements
- Graphic images
- Animated graphics
- Sound files
- Video files
- Search box (or link to search page)
- Website updated frequently (Khadaroo, 2005). Business reporting on the internet in Malaysia and Singapore: A comparative study. Corporate communications: An International Journal, 10 (1), 58-68)

The specific attributes included 31 characteristics in 4 categories which are related to the financial reporting, business information, board and management information and investor relations information.

List of specific attributes of financial information

Presentation of investor relations information:

- Table of contents/site map for whole web site
- Link to news releases
- Link to investor relations from home page
- Press releases
- Postal address for investor relations
- e-mail address of investor relations
- Phone number for investor relations
- Current stock prices

Information on board and management:

- Chairman message
- Chairman signature on message
- Names and composition of board
- Management Discussion and Analysis (MD and A)
- Management responsibilities
- Management signature on MD and A

Financial reports:

- Annual report
- Quarterly reports
- Balance-sheet
- Statement of income
- Statement of cash flow

Table 1: Structure questionnaire

Attributes/Contents	Yes	No
Do the companies state the minimum required browser?	-	-
Do the companies use version 3.0 and above?	-	-
Do the companies follow other browser requirements?	-	-
Do the companies states the language requirements	-	-
Do the companies have graphic images?	-	-
Do the companies have animated graphics?	-	-
Do the companies have sound files?	-	-
Do the companies have video files?	-	-
Do the companies have search box (or link to search page)?	-	-
Do the companies update their website frequently	-	-
Do the companies have table of contents/site map for whole web site?	-	-
Do the companies have link to news releases?	-	-
Do the companies have link to investor relations from home page?	-	-
Do the companies have press releases information?	-	-
Do the companies have postal address for investor relations?	-	-
Do the companies have e-mail address of investor relations?	-	-
Do the companies have phone number for investor relations?	-	-
Do the companies have current stock prices?	-	-
Do the companies have chairman message?	-	-
Do the companies have chairman signature on message?	-	-
Do the companies have names and composition of board?	-	-
Do the companies have management discussion and analysis (MD and A)?	-	-
Do the companies have management responsibilities?	-	-
Do the companies have management signature on MD and A?	-	-
Do the companies have annual report?	-	-
Do the companies have quarterly reports?	-	-
Do the companies have balance-sheet?	-	-
Do the companies have statement of income?	-	-
Do the companies have statement of cash flow?	-	-
Do the companies have consolidated financial statements?	-	-
Do the companies have financial highlights?	-	-
Do the companies have notes to financial statements?	-	-
Do the companies have changes in shareholder's equity?	-	-
Do the companies have shareholdings information?	-	-
Do the companies have auditor's reports?	-	-
Do the companies have auditor's signatures included in audit report?	-	-
Do the companies have corporate profile?	-	-
Do the companies have advertisement of own products/services?	-	-
Do the companies have goods and services offered online?	-	-
Do the companies have corporate social responsibility?	-	-
Do the companies have product warranty/guarantees?	-	-

Khadaroo (2005). Business reporting on the internet in Malaysia and Singapore: A comparative study. Corporate communications: An International Journal, 10 (1), 58-68

- Consolidated financial statements
- Financial highlights
- Notes to financial statements
- Changes in shareholder's equity
- Shareholdings
- Auditor's reports
- Auditor's signatures included in audit report

Business information:

- Corporate profile
- Advertisement of own products/services
- Goods and services offered online
- Corporate social responsibility

- Product warranty/guarantees (Khadaroo, 2005) Business reporting on the internet in Malaysia and Singapore: A comparative study. Corporate communications: An International Journal, 10 (1), 58-68)

Stage 2: A structured questionnaire was administered to methodically collect data of a dichotomous nature those with a ('yes' or 'no') type answers (Table 1). Throughout the data collection phase, two commonly used web browsers, 'Google Chrome' and 'Mozilla Firefox' were used to collect the business information. The websites were reviewed within the shortest possible time frame because of the frequent updates and constant dynamism of the information displayed on these websites.

RESULTS AND DISCUSSION

Data analysis finds that 93% (153 companies) of Nigerian listed companies have their own websites compared to 86% (31 companies) of Ghanaian listed companies. This suggests that more Nigerian listed companies use the internet to report corporate information than their Ghanaian counterparts. This also represents an increased percentage of listed companies having websites than the study by Salawu (2012) which found 90% of companies having websites as of 2010. Compared to the findings of Khadaroo (2005) that over a decade ago only 75% of Malaysian companies and 87% of Singaporean companies had websites-this difference is most likely due to the higher adoption of the internet in the intervening years.

General web page attributes: The webpages of 164 Nigerian-listed and 36 Ghanaian-listed companies were surveyed in terms of 'general web page attributes' and 'specific' attributes. The general web page attributes were: a required web page browser, version of browser, language requirements of browser, usage of Java or JavaScript or ActiveX, graphic image, animated graphics, sound files, video files, search box and frequency of update of the website. Table 2 displays these web page attributes with the percentage of each attribute in Nigerian and Ghanaian-listed companies on the web page.

All the Nigerian-listed companies (100%) who maintained their own websites stated the minimum required browser. These same companies also fulfilled the language requirement and used web browser version 3 and above. However, approximately 80% of Ghanaian companies meet all these attributes.

Surprisingly, using graphic image and animated graphics in Nigeria seems rather behind compared to their Ghanaian counterparts. At 22 and 15%, respectively for

Table 2: General web page attributes

Attributes	Percentage of companies disclosing the respective items	
	Nigeria (%)	Ghana (%)
States minimum required browser	100	81
Version 3.0 and above	100	79
Other browser requirements	100	79
States language requirements	100	83
Graphic images	22	79
Animated graphics	15	79
Sound files	0	5
Video files	0	7
Search box (or link to search page)	18	60
Website updated frequently	30	74

the Nigerian companies and 79% on each attribute for the Ghanaian companies it appears that the used of graphic interface with users is still at a rudimentary level or possibly considered a distraction for their stakeholders. Speculatively, it may also point to the current state of internet capabilities in the region, given that graphics take up a fair amount of space and may slow the use of the internet and thus minimise user experience. It is interesting and possibly for the same reason stated above that no Nigerian-listed companies (0%) use both sound and video files. For Ghanaian-listed companies, it was 5% and 7%, respectively. This could be attributed to the level of sophistication of the telecommunication technology available in both countries, especially given that Ghana has had better and earlier access than Nigeria. Ghana's telecommunication industry was deregulated in 1995/96, while Nigeria's was deregulated in 2001/02 (Frempong and Atubra, 2001; Osagi, 2017).

Furthermore, regarding the availability of a 'search box' and 'frequent update of website' they are more prevalent in Ghanaian companies compared to Nigerian companies. The percentage of these two attributes for Ghanaian companies were 60 and 74, respectively and 18 and 30 for the Nigerian companies. Again, this could be a function of the lag in user sophistication given the longer exposure of Ghanaian users to internet technology with the time advantage over their Nigerian counterparts (Frempong and Atubra, 2001).

Specific web page attributes

Presentation of information and investor relations: Table 3 represents the characteristics of web-based information relating to the presentation of information and investor relations which includes the availability of table of contents/site map for whole website, link to news releases, link to investor relations from home page, press releases, postal address for investor relations, e-mail addresses for investor relations, phone number (sec) for investor relations and current stock prices.

Table 3: Presentation of investor relations information

Attributes	Percentage of companies disclosing the respective items	
	Nigeria (%)	Ghana (%)
Table of contents/site map for whole web site	34	71
Link to news releases	20	60
Link to investor relations from home page	20	48
Press releases	16	36
Postal address for investor relations	19	74
E-mail address of investor relations	19	74
Phone number for investor relations	19	76
Current stock prices	0	29

Regarding all the above aspects of presentation of information and investor relations, Ghana significantly topped Nigeria. Providing site map for whole website or table of contents 71% of Ghanaian companies have it whereas it is only 34% for Nigerian companies. The link to investor relations from home page and link to news releases are the same for Nigeria which is 20% while it is 48 and 60%, respectively for Ghanaian companies. About 16% of Nigerian companies have the press release for stakeholders although it is more than double (36%) for Ghanaian companies. Concerning postal address, e-mail address and company phone numbers for maintaining investor relations 19% of the Nigerian companies shared these through their website. On the other hand, it is significantly higher in Ghana as 74% of the companies had their postal address and email address. In case of phone number for investor relations the percentage is 76%. Interestingly, no Nigerian company report their current stock prices on their websites but 29% of Ghanaian companies reported the same in the websites. This may suggest that Nigerian companies are not yet optimally using internet technology to reach current and potential shareholders and other stakeholders who have the capacity to invest in their business. Inability to capture this audience may point to limited knowledge of or recognition of the power of internet technology, limited internet penetration within the country and or management disinterest in deploying this tool to grow the investor base.

Information on board and management: Analysis of the information about board and management, Table 4 revealed that 19% of Nigerian companies had their chairman's message which is higher than Ghanaian companies (14%). None of the Ghanaian company websites contained the chairman's signature. However, 11% of the Nigerian companies' websites had their chairman's signature appended. In terms of detailing names and composition of board, 26% of the Nigerian companies and 33% Ghanaian companies had that information on their websites. Provision of management

Table 4: Information on board and management

Attributes	Percentage of companies disclosing the respective items	
	Nigeria (%)	Ghana (%)
Chairman message	19	14
Chairman signature on message	11	0
Names and composition of board	26	33
Management Discussion and Analysis (Md and A)	25	5
Management responsibilities	24	7
Management signature on MD&A	20	0

discussion and analysis were also uneven in both countries. Disclosure was 25% for the Nigerian companies and only 5% for the Ghanaian companies. Reporting the management responsibilities on corporate website was not a general practice among the Ghanaian companies as proved by the small percentage (7%), conversely, it was comparatively higher in Nigeria (24%). In terms of the provision of management signature on MD and A reports, none was found in Ghanaian companies, although, 20% of Nigerian companies append their management signature on MD and A reports on their websites. While most of the disclosure information in both countries regarding board and management are fairly close, we must point out the glaring disparity in the disclosure of MD and A in both countries. With a 20-point differential lower than in Nigeria, Ghanaian companies are not disclosing forward looking information that could be an attraction for potential investors. The MD and A has become mandatory information in corporate reporting under IRFS, thus helping both non-financially and financially literate corporate information users better understand the historical financial and future-facing information that could facilitate investment decisions. This could be missed opportunity for Ghanaian companies in the race for investment sources both locally and internationally.

Financial reports: The nature of analysis and presentation of corporate financial information such as annual reports, quarterly reports, balance sheet, statement of income, statement of cash flow, consolidated financial statements, financial highlights, notes to financial statements, changes in shareholder's equity, shareholdings, auditor's report, auditor's signatures included in audit report were investigated and reported in this section. According to Table 5, none of the two countries prevailed enough in disclosing these items through their websites. For instance, regarding the annual report only 30% of Nigerian-listed companies and 57% of Ghanaian-listed companies shared their annual reports online. In the case of quarterly reports, only 20% of the Nigerian companies and 10% of the Ghanaian companies

Table 5: Financial reports

Attributes	Percentage of companies disclosing the respective items	
	Nigeria (%)	Ghana (%)
Annual report	30	57
Quarterly reports	20	10
Balance-sheet	29	36
Statement of income	29	33
Statement of cash flow	29	33
Consolidated financial statements	29	29
Financial highlights	28	33
Notes to financial statements	28	26
Changes in shareholder's equity	27	17
Shareholdings	27	19
Auditor's reports	27	5
Auditor's signatures included in audit report	8	2

disclose this on online. It is normalised practice to disclose the balance sheet, statement of income, statement of cash flow, consolidated financial statements but it was not popular enough for both the countries to share all these information on their websites. In Ghana, disclosure was 36, 33, 33 and 29%, respectively as compared to Nigeria where it was lower at 29% across the board.

Concerning financial highlights and notes to financial statements, 28% of the Nigerian companies disclosed that information on their websites whereas it is 33 and 26% correspondingly for the Ghanaian companies. With respect to sharing information about changes in shareholder's equity and shareholdings we find that 27% of Nigerian companies disclosed this information. However, it was comparatively less for Ghanaian companies where disclosure was 17 and 19%, respectively.

The auditor's report and the signature to be included in the audit report is really an important issue for the companies because it indicates that the financial statements have been independently certified as being a true and reflection of their financial performance in a given financial year. However, it was almost missing for Ghanaian companies which were only 5 and 2% consequently. On the other hand for Nigerian companies, it was 27 and 8%, respectively. We could not identify any valid reasons for the absence of signed audit reports posted online.

With the exception of a 57% disclosure of Annual Reports in Ghana no other item of financial information reached the 50% disclosure level. This is suggestive of a rather low level of financial information disclosure using the internet. This is in comparison to the data from Malaysia and Singapore which had similar annual reports (56 and 67%, respectively) but much higher balance sheets (63 and 80%), statements of income (60 and 80%) and statements of cash flow (59 and 79%) (Khadaroo,

2005). Comparing these to a study by Allam and Lymer (2003) reveals that all four countries have lower rates than the average from the five developed countries examined, 97.2% having balance sheets, 97.2% for statements of income and 95.6% for statements of cash flow. This shows the limited understanding and deployment of internet capability to reach an extended audience of current and potential consumers, investors and other stakeholders and possibly create a new brand image for the corporation. One advantage of the use of the internet is the cost efficiency that it affords the corporation by doing so (Allam and Lymer, 2003). This reduced cost leads to increased communication with investors, through easier means and dissemination of contact information (Allam and Lymer, 2003). It also means that there is the ability to provide information in both real time and to increase the range of disclosure of both financial and non-financial information (Chatterjee and Hawkes, 2008).

Business information: Ghanaian companies are absolutely leading regarding the disclosure of corporate profiles and the advertisement of their own products and/or services (81 and 76%) as compared to Nigerian companies which was 37% for both attributes. Modern business practices are making use of their online presence to display their corporate value, reach a wider range of stakeholders and offer/display their products and services. However, both Nigerian and Ghanaian-listed companies are not sufficiently leveraging this capability and global practice. The percentage of goods and services offered online for both countries is 36% (Nigeria) and 31% (Ghana), respectively. Corporate social responsibility is another vital issue for forward-looking companies (Perez, 2015) but our study reveals that only 23% of Nigerian companies disclose information about their corporate social responsibility. Interestingly, we did not identify any dedicate corporate social responsibility or corporate sustainability reports. In case of Ghanaian companies, it is comparatively higher at 31%. For product warranty or guarantee, it is almost absent in both Nigerian companies (18%) and Ghanaian companies (2%). These percentages reflect a low level of product warranty and guarantee (Table 6).

Internet technology has become a veritable tool for marketing and advertising corporate products and services. With companies in both countries still in the 31-36% range on this score suggests the lack of ability to leverage on the power of the internet to reach a wider market and grow their customer base. The cost effectiveness of this process could be seen in the comparable data from developed economies such as 96% having corporate information 79.5% having ‘corporate

Table 6: Business information

Attributes	Percentage of companies disclosing the respective items	
	Nigeria (%)	Ghana (%)
Corporate profile	37	81
Advertisement of own products/services	37	76
Goods and services offered online	36	31
Corporate social responsibility	23	31
Product warranty/guarantees	18	2

citizenship sections (a variant of corporate social responsibility), suggesting a higher uptake in reaching larger and wider stakeholders via internet advertising and efforts to improve brand image (Allam and Lymer, 2003). Both Nigerian and Ghanaian companies may be missing a larger segment of their markets in diaspora both as customers and potential investors if they are not able to take advantage of the power of the internet.

This research set out to identify and explain the current state of internet financial reporting in West Africa-focusing on Nigeria and Ghana and compare the current state of IFR in Nigeria and Ghana with two developing but technologically advanced economies/countries Malaysia and Singapore. Drawing inspiration on a similar study by Khadaroo (2005) that explored IFR in Malaysia and Singapore, we provide an update to the current state of IFR, considerations for online financial reporting and to help highlight the expansion and adoption of the internet in Western Africa. The internet has heavily expanded in the last decade with Africa showing some of the highest reported growth rates (Internet Society, 2016). This growth does not mean that the businesses in the countries examined use the internet to support their business as much as possible or to embrace the idea of internet-based disclosure financial reporting, however.

Despite Nigeria having a higher percentage of existing websites than Ghana (100-81%), Ghana exceeds Nigeria when it comes to corporate profiles (81 compared to 37%) and advertising (76-37%). However, both countries lack in more customer focused areas such as goods/services offered online (Ghana 31%, Nigeria 36%) and product/warranty guarantees (Ghana 2%, Nigeria 18%). This seems to indicate that Ghanaian companies have adopted a more stakeholder-friendly approach with their business, offering more information to potential customers, clients, regulators, etc. However, neither country is using their internet sites to the full potential, due to the lower percentages when it comes to sales, advertising and other typical business usage of their websites. The head of communications for Yudala, one of the largest e-retailers in Nigeria, explains some of the reasons for slower growth as a lack of trust, inferior quality of online purchases and inaccessible internet for large swaths of the nation (Ayogu, 2017). On the Ghana

side, Boateng and Bulley (2015) found much the same, a deep lack of trust of vendors as well as the risk of not getting their item. The common thread of mistrust hurts the company per stakeholder theory as a majority of them have not seen it fit to try and raise public trust in their online offerings, especially as a study found the stakeholder-oriented concept of corporate social responsibility to give a competitive advantage in Ghana telecommunications and had a significant correlation with positive growth in a similar Nigerian company (Osagie, 2017).

Khadaroo (2005) found that 80% of publicly traded companies in Singapore and 63% of those in Malaysia disclosed balance sheets, a basic starting point for financial analysis by experts. The 12 years after this, even with Africa typically leading in internet growth rates over the period (Internet Society, 2016), Nigeria and Ghana's disclosures fall well below this with rates of 29 and 36%, respectively. This helps to highlight that even though the general usage of the internet has grown in these African countries, the use of internet technology for financial reporting has lagged behind what some other countries had over a decade ago, most likely due in part to the factors listed above. There also seems to be a distrust of the internet between customers and corporations that could extend to perceptions of financial statements, further driving up the asymmetry of information and exhibiting inefficiency all the while potentially raising the costs for the agents and lowering the returns for the principals. This is consistent with predictions of agency theory.

Both Nigeria and Ghana have adopted the 'International Financial Reporting Standards' (IFRS) in recent years, Nigeria in 2010 and Ghana in 2007. This helps to provide credibility, transparency and oversight to some to these two countries (Madawaki, 2012; Boateng, 2014) as both have made firm commitments to IFRS and are expected to uphold requirements on publicly traded companies on their stock exchanges (IFRS Foundation, 2016). But this doesn't necessarily mean they attempt to easily bridge the gap when it comes to the information asymmetry on their role as agents. Only 30% of listed Nigerian companies and 57% of listed Ghanaian had annual reports available on their corporate websites, implying that if these companies are reaching IFRS requirements, it is through traditional disclosures and not the use of internet reporting. Not only does this fail to reduce the asymmetry of information, it further cements the inefficiency in the distribution of important information and the raised costs from it (Bosse and Phillips, 2016). This shows the additional failure on the part of the company to capitalise on the wider

view provided by adopting a stakeholder-oriented approach-including wider brand image and reliable information for current and future stakeholders.

CONCLUSION

The apparent mistrust and concern for quality of not only information but goods and services, makes it understandable why a minority of the companies examined utilise IFR to its full extent. But this is to the detriment of both the company as an agent, the investors as a principal and the other parts of their countries as stakeholders. Better usage of the internet-from disclosure for investors that shows more than a nominal commitment to IFRS-to more stakeholder-driven initiatives such as voluntary disclosures and building trust through corporate social responsibility could increase the rate these countries transition from their current developing to developed economies.

REFERENCES

- Al Arussi, A.S., M.H. Selamat and M.M. Hanefah, 2009. Determinants of financial and environmental disclosures through the internet by Malaysian companies. *Asian Rev. Account.*, 17: 59-76.
- Al-Moghawli, M.H., 2009. A survey of internet financial reporting in Qatar. *J. Econ. Administrative Sci.*, 25: 1-20.
- Alanezi, F.S., 2009. Factors influencing Kuwaiti companies' internet financial reporting. *J. Econ. Administrative Sci.*, 25: 1-23.
- Allam, A. and A. Lymer, 2003. Developments in internet financial reporting: Review and analysis, across five developed countries. *Intl. J. Digital Accounting Res.*, 3: 165-200.
- Anonymous, 2003. Trusted and efficient financial reporting. PricewaterhouseCoopers Company, London, England, UK. https://www.pwc.com/gx/en/xbrl/assets/pwc_trusted_efficient_financial_reporting.pdf.
- Ayogu, G.O., 2017. Why E-commerce remains largely traditional in Nigeria. *Business Day Newspaper, Nigeria*. <https://www.businessdayonline.com/exclusives/analysis-sub/article/e-commerce-remains-largely-traditional-nigeria/>
- Barac, K., 2004. Financial reporting on the internet in South Africa. *Meditari Res. J. School Accounting Sci.*, 12: 1-20.
- Boateng, A.A., A.B. Arhin and V. Afful, 2014. International Financial Reporting Standard's (IFRS) adoption in Ghana: Rationale, benefits and challenges. *J. Advocacy Res. Educ.*, 1: 26-32.

- Boateng, K.A. and E. Bulley, 2015. Consumer attitudes and the challenging prospects of ecommerce: The Ghanaian experience. *Proceedings of the International Conference on Information Resources Management (CONF-IRM)*, May 18-20, 2015, Association for Information Systems Research, Ottawa, Canada, pp: 1-15.
- Bosse, D.A. and R.A. Phillips, 2016. Agency theory and bounded self-interest. *Acad. Manage. Rev.*, 41: 276-297.
- Brennan, N. and D. Hourigan, 2000. Corporate reporting on the Internet by Irish companies. *Irish Account. Rev.*, 7: 37-68.
- Chatterjee, B. and L. Hawkes, 2008. Does internet reporting improve the accessibility of financial information in a global world? A comparative study of New Zealand and Indian companies. *Australas. Accounting Bus. Finance J.*, 2: 1-26.
- Debreceeny, R. and G.L. Gray, 1999. Financial reporting on the internet and the external audit. *Eur. Accounting Rev.*, 8: 335-350.
- Donaldson, T. and L.E. Preston, 1995. The stakeholder theory of the corporation: Concepts, evidence and implications. *Acad. Manage. Rev.*, 20: 65-91.
- Eisenhardt, K.M., 1989. Agency theory: An assessment and review. *Acad. Manage. Rev.*, 14: 57-74.
- Elliott, R.K., 1992. The third wave breaks on the shores of accounting. *Accounting Horiz.*, 6: 61-85.
- Ezat, A. and A. El-Masry, 2008. The impact of corporate governance on the timeliness of corporate internet reporting by Egyptian listed companies. *Managerial Finance*, 34: 848-867.
- Frempong, G.K. and W.H. Atubra, 2001. Liberalisation of telecoms: The Ghanaian experience. *Telecommun. Policy*, 25: 197-210.
- Hanafi, S.R.B.M., M.A.B. Kasim, M.K.B. Ibrahim and D.R. Hancock, 2009. Business reporting on the internet: Development of a disclosure quality index. *Intl. J. Bus. Econ.*, 8: 55-79.
- Hossain, M., M.A. Momin and S. Leo, 2012. Internet financial reporting and disclosure by listed companies: Further evidence from an emerging country. *Corporate Ownership Control*, 9: 351-366.
- Htaybat, K.A., 2011. Corporate online reporting in 2010: A case study in Jordan. *J. Financial Reporting Accounting*, 9: 5-26.
- Hunter, S. and M. Smith, 2011. Impact of internet financial reporting on emerging markets. *J. Intl. Bus. Res.*, 8: 21-41.
- IFRS Foundation, 2016. IFRS application around the world jurisdictional profile: Nigeria. *International Financial Reporting Standards (IFRS) Foundation*, London, England, UK. <https://www.ifrs.org/-/media/feature/around-the-world/jurisdiction-profiles/nigeria-ifrs-profile.pdf>.
- Internet Society, 2016. *Global Internet Report 2016*. Internet Society, Reston, Virginia, USA., Pages: 148.
- Joshi, P.L. and J. Al-Modhahki, 2003. Financial reporting on the internet: Empirical evidence from Bahrain and Kuwait. *Asian Rev. Accounting*, 11: 88-101.
- Khadaroo, M.I., 2005. Business reporting on the internet in Malaysia and Singapore: A comparative study. *Corporate Commun. Int. J.*, 10: 58-68.
- Khan, M.N.A.A. and N.A. Ismail, 2011. The level of internet financial reporting of Malaysian companies. *Asian J. Accounting Governance*, 2: 27-39.
- Lodhia, S.K., A. Allam and A. Lymer, 2004. Corporate reporting on the internet in Australia: An exploratory study. *Aust. Accounting Rev.*, 14: 64-71.
- Lymer, A., 1999. Internet and the future of reporting in Europe. *Eur. Accounting Rev.*, 8: 289-301.
- Madawaki, A., 2012. Adoption of international financial reporting standards in developing countries: The case of Nigeria. *Intl. J. Bus. Manage.*, 7: 152-161.
- Marston, C. and A. Polei, 2004. Corporate reporting on the Internet by German companies. *Int. J. Account. Inform. Syst.*, 5: 285-311.
- Moradi, M., M. Salehi and A. Arianpoor, 2011. A study of the reasons for shortcomings in establishment of internet financial reporting in Iran. *Afr. J. Bus. Manage.*, 5: 3312-3321.
- Nurunnabi, M. and A.M. Hossain, 2012. The voluntary disclosure of Internet Financial Reporting (IFR) in an emerging economy: A case of digital Bangladesh. *J. Asia Bus. Stud.*, 6: 17-42.
- Omran, M.A. and D. Ramdhony, 2016. Determinants of internet financial reporting in African markets: The case of Mauritius. *J. Dev. Areas*, 50: 1-18.
- Osagie, N.G., 2017. Corporate social responsibility and profitability in nigeria telecommunication industry: A case study of MTN Nigeria. *J. Entrepreneurship Manage.*, 6: 1-8.
- Ou, L., 2016. The risk of corporate information disclosure based internet and three-dimensional regulation mode. *Proceedings of the International IEEE Conference on Control and Decision Conference (CCDC)*, May 28-30, 2016, IEEE, Yinchuan, China, ISBN:978-1-4673-9715-5, pp: 4491-4496.
- Pendley, J.A. and A. Rai, 2009. Internet financial reporting: An examination of current practice. *Intl. J. Disclosure Governance*, 6: 89-105.
- Perez, A., 2015. Corporate reputation and CSR reporting to stakeholders: Gaps in the literature and future lines of research. *Corporate Commun. Intl. J.*, 20: 11-29.
- Rodrigues, L.L. and C. Menezes, 2003. Financial reporting on the internet: The Portuguese case. *RAE Eletronica*, Vol. 2,

- Salawu, M.K., 2012. The extent and forms of voluntary disclosure of financial information on internet in Nigeria: An exploratory study. *Intl. J. Financial Res.*, 4: 110-119.
- Samaha, K., K. Dahawy, K. Hussainey and P. Stapleton, 2012. The extent of corporate governance disclosure and its determinants in a developing market: The case of Egypt. *Adv. Accounting*, 28: 168-178.
- Saxton, G.D., 2012. New media and external accounting information: A critical review. *Aust. Accounting Rev.*, 22: 286-302.
- United Nations, 2016. World economic situation and prospects 2016. United Nations, New York, USA.
- Yu, S. and D. Rijia, 2009. Comparison of internet financial reporting between China and United States. *Proceedings of the International Conference on Information Management, Innovation Management and Industrial Engineering Vol. 2, December 26-27, 2009, IEEE, Xi'an, China, ISBN:978-0-7695-3876-1*, pp: 211-214.