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VOLUNTARY INTERNET FINANCIAL REPORTING BY LISTED COMPANIES IN EMERGING ECONOMIES: A STUDY OF KEY DETERMINANTS IN THE UNITED ARAB EMIRATES

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Abstract

We investigated the key determinants in the use of the internet as a channel for voluntary disclosure of financial information by companies listed on two stock exchanges (the Abu Dhabi Securities Exchange and the Dubai Financial Market) in the emerging economy of the United Arab Emirates (UAE). The focus is on the main corporate characteristics that distinguish companies that engage in internet financial reporting (IFR) from those that do not. The 132 companies listed on the Abu Dhabi Securities Exchange and the Dubai Financial Market were investigated to ascertain whether they engage in IFR or not. Eighty-eight of the companies (about 67%) were found to use their websites for IFR. Similar to prior studies in this area, logistic multiple regression was used to isolate the key corporate characteristics of IFR companies (IFRC) from non-IFR companies (N-IFRC). Results indicated that firm size and leverage are the key determinants of the voluntary adoption IFR. However, other traditional firm characteristics, such as profitability, industry and liquidity do not explain the choice of the Internet for corporate financial disclosure. Policy implications of these findings, as well as the limitations of the study, which provide potential areas for future research are also discussed.

Keywords: Internet financial reporting, Voluntary disclosure, Emerging economy, UAE, Middle East.

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1. Introduction

The literature on internet financial reporting (IFR) has grown, and continues to grow, at a relatively fast pace in recent times. As the internet became a powerful tool for corporate communication in recent times, IFR has become the norm, rather than the exception, in most western countries (Gowthorpe, 2004). Until recently, hard copies (paper) have been the primary means for communicating financial information to shareholders and other interested corporate stakeholders. Technological advancement has made the internet a useful, timely and cost-effective tool for the communication of this information to stakeholders. The internet has the potential power to revolutionise financial reporting, with companies being able to include the traditional annual reports together with additional financial and non-financial information in multiple formats (Jones & Xiao, 2004). In this paper, we document, catalogue and review extant literature on the key determinants of corporate disclosure and literature that describes the global IFR environment.

IFR is providing a useful opportunity for corporate organisations around the world to use the Internet to communicate financial information to their stakeholders. There is little doubt about the benefits of the internet as a tool for the communication of financial information, even as it raises a variety of challenging issues. Given the increasing importance of IFR, this paper provides an important central point of reference for literature on this dynamic subject of ever-increasing importance. This is of particular importance at a time when there is so much interest, as the world transition onto the next stage of internet development – the internet of things (IOT).

The remainder of this paper is structured as follows. The next section provides a review of the literature on determinants of corporate disclosure and literature that describes the IFR environment. Summary and conclusions are presented in the final section.

2. Literature Review

In most transition and emerging economies, IFR is yet to be mandated by regulatory authorities. Hence, companies that use the Internet as a channel for financial disclosure are doing so on a voluntary basis. Under such circumstances, IFR is viewed as a component of company voluntary disclosure practices (Ashbaugh et al., 1999; Oyelere et al., 2003). In this section, we draw on the stream of research on voluntary corporate financial disclosure and extend the theories and models implicit in this literature to the new corporate reporting environment created by the Internet. We also provide, in the section, a review of the literature that examines practices and issues relating to the recent development of the Internet as a medium for dissemination of corporate financial information, and the determinants of such practices.

Evidence of IFR practices in various countries have been presented by a number of academic and professional studies – see, for example, Craven and Marston (1999), Deller et al. (1999), Gowthorpe and Amat (1999), Hedlin (1999), Lymer et al. (1999), Pirchegger and Wagenhofer (1999), Trites (1999), Marston (2003), Oyelere et al. (2003), Fisher et al. (2004), Gowthrope (2004), Marston and Polei (2004), Xiao et al. (2004), Khadaroo (2005), Laswad et al. (2005), Smith and Peppard (2005), Chan and Wickramasinghe (2006), Al-Shammari (2007), Oyelere et al. (2007), and Mohamed et al. (2009). Most of the studies in this area have covered IFR practices in specific countries and are on specific IFR issues. A summary of main issues investigated and key findings of some of these studies are presented in Table 1. They indicate the growing use of the Internet for corporate dissemination, including providing annual reports on the Internet and that the extent and sophistication of IFR practices vary across countries. They also document some evidence of potential predictors of corporate engagement in IFR in different countries. The current paper provides evidence of IFR and its determinants in the United Arab Emirates (UAE).

Table 1 (See Appendix 1)

The Internet provides a useful communication tool for corporate organizations. One of the main benefits of IFR is the potential large savings in the cost of production and distribution of financial information. The Internet allows companies to reach a much wider category and variety of stakeholders at relatively lower costs, with reduction in incidental requests from non-shareholder financial statement users (Allam & Lymer, 2002; SEC, 2002, 2003a, 2003b; Khadaroo, 2005). The literature also documents a number of other benefits that may accrue from IFR (Baker & Wallage, 2000; Ettredge et al., 2001; Debreceny et al., 2002; Wagenhofer, 2003; Jones & Xiao, 2004; Boritz & No, 2005). These include more equitable information dissemination among stakeholders as a result of improved accessibility to information. With IFR, users can choose to access information that meets their specific needs as the Internet allows non-sequential access to information through the use of hyperlinks, interactive and search facilities. IFR also presents companies with the opportunity to provide more information than those available in annual reports. Potentially, the internet provides an opportunity for going beyond what is available in hard copy corporate financial statements to communicate additional financial information to users, possibly on real-time and interactive bases (McCafferty, 1995; Louwers et al., 1996; Green & Spaul, 1997; Trites & Sheehy, 1997; Trites, 1999; FASB, 2000; Ettredge et al., 2002; Wickramasinghe, 2006). IFR provides corporate organisations with a real opportunity to extend financial disclosure beyond the reproduction of a hard copy annual report and improve on the timeliness, scope, and interactivity of financial reporting, with multimedia, such as sound, animation and video, being used to potentially increase the understanding of information (Louwers et al., 1996; Ravlic, 2000; Wickramasinghe & Lichenstein, 2006). These developments have a great potential impact on users (Wallman, 1997; Green & Spaul, 1997; Gowthrope & Flynn, 2001).

A number of IFR-related issues and challenges have, however, been noted in the literature. There is a potential that the dividing line between current financial information used by management and historical audited financial information made available to public users of financial information could be erased by online, real-time reporting (Green & Spaul, 1997; Hodge, 2001; Oyelere et al., 2003), with auditors being possibly required to provide opinion on such hitherto internal financial information (Trites & Sheehy, 1997; Lymer & Debreceny, 2003; Khadaroo, 2005). Also, if IFR is installed as the only mode for communicating financial information, there is the likelihood that access to such information will be restricted to only those who possess costly computer equipment and skills. Hence, to ensure equity in financial information dissemination, it will be necessary to ensure that the information being reported through corporate websites are already provided previously or simultaneously through other media of financial information disclosure (McCafferty, 1995). This could however be viewed as unnecessary duplication and may result in even greater costs in the UAE and other emerging economies in the Middle East region, where financial information are commonly disseminated in both English and Arabic languages.

Additional issues and challenges for IFR include possible errors in the extraction or re-keying process, which may affect the reliability and integrity of the financial information. Generally Accepted Accounting Practice (GAAP) implications of IFR; the use of the corporate websites for many diverse purposes, which may make the location of financial information difficult; and the acceptability of Internet financial reports as alternatives to hard copy annual reports among users of corporate financial information (Laswad et al., 2000).

Perhaps by far the greatest challenge faced in the IFR environment is that of ensuring the security and integrity of the financial information published on corporate websites. Apart from possible errors in the publishing process, materials published on the web are susceptible to all manners of security risks. Financial information could, post-publication, be knowingly or unknowingly altered by parties both external and internal to the organisation. There is a real risk that critical decisions could be made by users of financial information based on inaccurate financial information gleaned from corporate websites. The extent to which these issues are dealt with is likely to determine the long-term usefulness of the Internet as a medium of corporate financial information dissemination.

More recently, some studies have provided evidence on the factors motivating the IFR behaviour of companies around the world. Given the voluntary nature of IFR, these studies sought to establish the reason why companies engage in IFR and the extent of such engagement. Majority of these studies have found corporate size to be a major factor, with IFR likely to provide greater economies of scale cost savings for larger firms (Ashbaugh et al., 1999; Craven & Marston, 1999; Pirchegger & Wagenhofer, 1999; Debreceny et al., 2002; Ettredge et al., 2002; Oyelere et al., 2003; Trabelsi et al., 2008). Evidence on other variables examined is largely inconclusive.

Ashbaugh et al. (1999) examine the IFR practices of US companies and find that firms operating websites are larger than firms without websites. Using univariate analysis, they find profitability, indicators of excellence in reporting practices, and to some extent the percentage of equity shares held by individual investors are associated with IFR. However, a multivariate logit regression indicates that only firm size is associated with IFR. Craven and Marston (1999) examine the extent of financial information disclosure on the Internet by the largest companies in the UK in 1998 and whether such practice is associated with firm size and industry type. They find that the extent of financial disclosure on the Internet is positively associated with firm size but not associated with industry type. Pirchegger and Wagenhofer (1999) examine IFR practices by Austrian and German companies and find that for Austrian companies IFR is associated with firm size, measured by sales, and dispersion of its equity ownership. However, such results did not extend to German companies.

Debreceny et al. (2002) investigate the IFR practices of 660 large companies in 22 different countries and find disclosure environment to be an important environmental driver for IFR presentation and content. They also find presentation of IFR to be more associated with certain identified determinants than the content of IFR. Firm size, dual listing (foreign and US) and firm technology are found to be significantly associable with corporate disclosure. Ettredge et al. (2002) investigated whether IFR can be explained by mandatory and voluntary disclosure theories, and find voluntary information item disclosure to be significantly associable with firm size, information asymmetry, demand for external capital, and firms' traditional disclosure reputations. Oyelere et al. (2003) examined the determinants of voluntary IFR practices by New Zealand companies and find that some determinants of traditional financial reporting such as size, liquidity, industrial sector and spread of shareholding are also determinants of voluntary adoption of IFR. However, they find that other firm characteristics, such as leverage, profitability and internationalization, do not explain IFR practices.

While majority of empirical evidence in this area has been from developed and advanced western economies, some evidence of IFR practices and determinants are now emerging from transitional and emerging economies. Perhaps the most significant of this is Xiao et al. (2004), are those which investigate the determinants of 300 listed Chinese companies' voluntary IFR practices and find that their IFR disclosure choices are responsive to specific attributes of their environment. Their results indicate that size is a key predictor of IFR, with larger firms more likely to disclose financial information through the Internet. Profitability was negatively associated with IFR, while auditor and industry are also significant predictors. Similar to Ettredge et al. (2002), they also find significant and positive relation between mandated and voluntary financial disclosure.

The evidence of size, being a key predictor of IFR in companies in transitional and emerging economies is corroborated by the findings of Momany and Al-Shorman (2006) and Al-Shammari (2007). Momany and Al-Shorman (2006) examine the extent of IFR by Jordanian companies listed on the Amman Stock Exchange (ASE) and find that, on average, companies that engage in IFR are larger. In addition, they are more leveraged, with concentrated ownership, have more international investors and are more recently incorporated than non-IFR companies. Al-Shammari (2007) also report company size to be a key determinant of IFR in another emerging economy. He investigate the IFR practices of Kuwaiti-listed companies in 2005 and find that, in addition to company size, liquidity, auditor and industry are the key predictors of IFR by these companies. Larger Kuwaiti-listed companies with lower levels of liquidity, and audited by Big Four audit firms affiliates were more likely to engage in IFR than others.

Studies of a more general nature in relation to IFR practices in the region have also began to emerge. Oyelere et al. (2006) discussed the issue of accountability and transparency through voluntary disclosure on the Internet by GCC companies, while Mohamed et al. (2009) focused on the IFR practices of companies listed in Oman, one of the GCC countries. Most of these studies reveal that IFR practice is still in a nascent stage in the region, with a few companies being advanced in their use of the Internet as an additional channel for voluntary communication with stakeholders. Majority of the companies surveyed are either yet to take up the practice, or are not taking full advantage of the flexibility and communication options offered by the Internet.

While initial evidence appear to indicate some similarities between the findings on IFR determinants in developed and advanced western economies as compared to those of transitional and emerging economies such as those in the Middle East region, such evidence, as shown by the review of extant literature above, is relatively sparse. It is predicted that IFR is likely to overtake hard-copy print form of financial information disclosure in the near future. It is therefore surprising that evidence on the variety of issues associated with this form of financial disclosure is currently not being deposited in the public domain. Such evidence will depend on the outcome of in-depth and thorough investigation and analysis, such as is being undertaken in the current study.

3. Summary and Conclusion

IFR provides an additional cost-effective channel for companies in the global economy to voluntarily deposit financial information in the market place. This paper presents a review of existing literature on how companies are taking advantage of the opportunity afforded by the Internet to communicate their financial information. The role of new media channels such as the Internet in promoting transparency and efficient transmission of information in the global business landscape cannot be overemphasized. It is important that companies become fully engaged in the use of tools and technologies that promote capital market efficiency. This paper contributes to the literature by providing a centralized global reference point for prior studies on this subject of ever-increasing importance.

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Appendix 1

Table 1: Summary of Key Studies on Internet Financial Reporting

Author(s)	Location	Key Issues/Findings
Al-Shammari (2007)	Kuwait	Investigated IFR by Kuwaiti-listed companies in 2005 and found that 77% of them had websites and 70% use their websites for IFR. Also found company size, liquidity, auditor and industry to be the key predictors of IFR by Kuwaiti-listed companies. Larger companies with lower levels of liquidity, and audited Big Four audit firms affiliates were more likely to engage in IFR. Also, insurance companies were more likely to engage in IFR.
Allam and Lymer (2003)	Five countries	Studied the common factors influencing online reporting practices in five countries. Found no relationship between size and IFR levels in any of the five countries except Australia. Also found significant differences in IFR practices between the countries except in the case of US, UK and Canada.
Beattie and Pratt (2003)	UK	Studied the views of various user groups, preparers and auditors on proposals for change and newly emerging practices and found that users favour many of the expansions of scope made possible by the internet. A range of navigational aids, search aids and file formats are found by all groups to be at least fairly useful, while preferences regarding file formats vary across the groups.
Bonson and Escobar (2002)	Europe	Made a comparative analysis of the information provided on the internet by companies in leading European countries and found that they voluntarily disclose information on the internet and that the information provided depends on size, sector and country of origin.
Chatterjee and Hawkes (2008)	New Zealand and India	Investigated the differences in the accessibility of website information between New Zealand and Indian companies to demonstrate across countries and within the same reporting structure. Found that IFR provides an illusion of comparability but reveals variation in level at which information items are disclosed, terminology used on websites, and the information items provided on corporate websites.
Craven and Marston (1999)	UK	Examined the extent of IFR practices by UK companies. Found size to be a major determinant of the use and extent of IFR, but did not find the same relationship for industry type.

Debreceny et al. (2002)	International	Study of IFR practices of 660 large companies in 22 Countries and found disclosure environment to be an important environmental driver for IFR presentation and content. Also found presentation of IFR to be more associated with certain identified determinants than the content of IFR.
Debreceny and Rahman (2005)	Asia & Europe	Examined firm-specific determinants of continuous disclosure, and found that the frequency and regularity of online disclosure is positively associated with agency costs, earnings, and analysts following and is inversely related to the length of the product cycle of a firm. Also found variations in the frequency of disclosures by countries.
Deller et al. (1999)	US, UK and Germany	Compared the IFR activities of US, UK and German companies and found IFR to be more common in the USA. Also found that although Internet technology offers a variety of possibilities for communication with investors, only a fraction of the possibilities is used in all three countries.
Ettredge et al. (2001)	US	Evaluation and comparison of IFR practices of US companies found several practices of potential concern for the accounting profession.
Ettredge et al. (2002)	US	Investigated whether IFR can be explained by mandatory and voluntary disclosure theories, and found size and information asymmetry to be significantly associated with IFR, while voluntary information item disclosure is associated with variables size, information asymmetry, demand for external capital, and companies' traditional disclosure reputations.
Fisher et al. (2004)	New Zealand	The exploratory study identified the key audit implications of IFR and analysed the contents of all listed company Websites in New Zealand. The results of their content analysis of auditor Web-related practices revealed several significant concerns for the auditing profession with respect to the presentation, context, and content of the audit report in a Web-based environment.
Gandia (2008)	Spain	Analyzed the corporate governance information disclosed by Spanish listed companies on the internet to assess the extent and influence of several corporate characteristics on the level of voluntary disclosure. Found that disclosure levels depend on the degree to which firms are followed by analysts, their listing age, their "visibility" and industrial affiliation.

Gowthorpe (2004)	UK	Examined communication issues relating to IFR practices of smaller listed companies in the UK. Found the assessment of stakeholder requirements to be haphazard, but informed by an intention to correct long standing inequities in the provision of corporate information. Also found that the additional medium of communication offered by the Internet has not so far radically changed the essential nature of the dialogue between company and stakeholder, which remains asymmetrical.
Gowthorpe and Amat (1999)	Spain	Reported of IFR practices of Spanish companies quoted on the Madrid Stock Exchange, placing IFR in context by reporting extent of Internet access and the actual and potential development of the Internet as a means of establishing corporate dialogue with stakeholders.
Hedlin (1999)	Sweden	Reported the results of a survey of 60 companies listed on the Stockholm Stock Exchange and found larger companies to be more advanced in their use of IFR as a tool for communication with corporate investors.
Jones and Xiao (2004)	UK	The future of IFR: Delphi study of corporate financial reporting by 2010 found that financial reporting would evolve into a core of general purpose, standardised information in both the hard copy and Internet versions, together with a non-core of general purpose and customized information, and that radical changes such as real-time reporting and disclosure of raw data will not occur. IFR will need to be either standardised or customized.
Khadaroo (2005)	Malaysia	Examined IFR practices of Malaysian companies, with emphasis on auditing implications. Found increasein quantity, but little improvement in quality of internet reporting information to users. Highlighted the issue of auditors having little control over web contents and changes that could be made to audited information.
Laswad et al. (2000)	Not country-specfic	Examined the opportunities and challenges of IFR practices, and provided recommendations for increasing the effectiveness of the use of the Internet for the reporting of corporate financial information.
Laswad et al. (2005)	New Zealand	Examined the voluntary Internet financial reporting practices of local authorities and found leverage, municipal wealth, press visibility, and type of council to be associated with the Internet financial reporting practices of local authorities in New Zealand.

Lymer and Debreceny (2003)	Internationa l	Reviewed the state of guidance provided on IFR by regulators and standard-setters, and found that, despite a clear recognition of the challenges posed by IFR, actual enactments fall far short of requirements.
Marston (2003)	Japan	Surveyed the Internet reporting practices of top Japanese companies in 1998 and 2001, and found that the majority of these companies (about 79%) had a website in English, with about 69% reporting some financial information on their website in 1998. She also found size to be the main determinant of the existence of a corporate website.
Marston and Polei (2004)	Germany	Examined the IFR practices of German companies between 2000 and 2003 and found significant improvements in the quantity and presentation of financial information at corporate Websites. They also found firm size to be the the only explanatory factor for the quantity of information disclosed for both periods. Foreign listing status was found to be a significant explanatory in 2003, while free float was significant for 2000.
Mohamed et al. (2009)	Oman	Investigated the extent and variety of practices of IFR by companies listed in Oman and found that only 84 of the sample were found to operate websites, out of which only 31 engaged in IFR Also found that companies disclose both annual reports and financial highlights.
Momany and Al-Shorman (2006)	Jordan	Studied the extent of IFR by Jordanian companies listed on the Amman Stock Exchange (ASE). They found that, on average, companies that report financial information on their websites are larger, more leveraged, with concentrated ownership, having more international investors and are more recently incorporated than non-IFR companies. Many companies also provide timely information on stock prices and trading history.
Oyelere et al. (2003)	New Zealand	Examined the determinants of voluntary IFR practices by New Zealand companies and found that some determinants of traditional financial reporting such as size, liquidity, industrial sector and spread of shareholding are also determinants of voluntary adoption of IFR. However, other firm characteristics, such as leverage, profitability and internationalization, do not explain IFR practices.
Pirchegger and Wagenhofer (1999)	Austria and Germany	Analysed the IFR practices of Austrian companies and compared them to those of German listed companies. Found that larger Austrian companies and those with higher free float percentage scored higher on measures of IFR disclosure.

Smith and Pierce (2005)	Europe	Studied the integrity of IFR by reference to the adequacy of underlying corporate governance procedures. Found a trend towards increasing Internet usage to replicate paper-based financial information, but the integrity of the current IFR environment is questionable, given the limited knowledge of IFR at individual level, and the lack of coherent corporate governance procedures at organizational level.
Trabelsi et al. (2008)	Canada	Examined the incremental impact of the internet and the determinants and consequences of IFR on firms' financial reporting. Found that the nature of firms' investor base and financial reporting, the "good news" hypothesis and level of competition all influence IFR choices and decisions.
Xiao et al. (2004)	China	Analysed the determinants of 300 Chinese listed companies' voluntary IFR practices and found that the companies IFR disclosure choices are responsive to specific attributes of their environment.