

CHAPTER 2: INTERNET FINANCIAL REPORTING (IFR): INTERNATIONAL SCENARIO

2.1 Introduction

The Internet is here to stay, as agreed by all commentators including academics, auditors, regulators, reporting companies and users. Indeed, they stress that the demise of the paper-based financial statement is unavoidable (Gowthorpe and Flynn, 1997; Trites, 1999b; Bury, 1999), due to delayed reporting and lack of customised information. Internet reporting is perceived and welcomed as a potential solution to these well-recognised problems. It may facilitate the real-time reporting, provision of increased information, desegregation and customisation of financial reporting (Jones and Xiao, 2004) caters to the needs of different users, especially for investors (Beattie, 1999). In addition, the Internet makes the dissemination and communication of a wide range of additional non-financial information possible (Green and Spaul, 1997).

Many researchers view IFR as part of corporate voluntary disclosure practices (Ashbaugh et al., 1999; Davey and Homkajohn, 2004; Kelton and Yang, 2008). The researcher draws on this research stream to include variables unique to the Malaysian context in this Web-based new corporate reporting environment. Section 2.2 provides IFR definition and Section 2.3 presents IFR incentives. Section 2.4 reviews the emerging literature that examines practices and issues relating to the development of Web sites as communication channel for corporate financial information. This chapter ends with the analysis of IFR in Section 2.5 and conclusion in Section 2.6. Next chapter discusses IFR for Malaysia scenario.

2.2 Definition of Internet Financial Reporting (IFR)

Internet Financial Reporting (IFR) uses Internet technologies such as the World Wide Web for corporate performance and financial information distribution (FASB, 2000; Lymer et al., 1999; Ashbaugh et al., 1999; Trites, 1999b). The FASB (2000) identifies the presentation and content as two main dimensions of IFR. It provides dynamic forms of presentation that are unavailable in the hard copy version. It includes interaction with corporate databases, video and multimedia sound by the users directly. In terms of content, IFR can include quarterly reports, annual reports, press releases, proxy statement and analysts' reports, similar to hardcopy-based content. Additionally, the Internet also includes content such as live and/or recorded annual shareholders meetings and analysts meetings. eXtensible Business Reporting Language (XBRL) is another new development in IFR, which is an efficient automated retrieval of financial information based on eXtensible Markup Language (XML) (the next generation of HyperText Markup Language (HTML)) specification (Debreceeny and Gray, 2001; see www.xbrl.org).

IFR is a new but rapidly growing phenomenon. Companies from different parts of the world present their corporate financial information via their Web sites. Financial information provided on the Web includes either a partial or a comprehensive set of annual report. It also includes financial highlights that may consist of a summarised annual report and/or extracts from such report. Recent studies record such reporting practice among companies in a number of countries (Bonson and Escobar, 2006; Abdelsalam et al., 2007; Kelton and Yang, 2008). This practice is expected to grow to the extent that future financial reporting will change entirely from the present paper-based version to using the Internet as the main communication channel (Lymer et al., 1999; Bagshaw, 2000; Kelton and Yang, 2008). The growth of IFR in combination with the Internet's multimedia

capability and capacity for interactive communication may challenge the financial reporting nature, framework and boundaries (Oyelere et al., 2003).

2.3 Incentives for Internet Financial Reporting (IFR)

Due to the dynamics of the business world, traditional hard copy corporate reporting is becoming increasingly untimely and, therefore, less useful to stakeholders (Green and Spaul, 1997; Koreto, 1997). The ever-changing business environment is pressuring companies to create a competitive advantage through the development of their reporting strategies (Burrus, 1997). Therefore, companies may adopt a strategy for developing a Web site to present more relevant information to decision makers (Ashbaugh et al., 1999). A Web site may present more detailed information and reach a wider audience than what is possible with traditional paper-based materials (Kaplan, 1996).

IFR participation by companies may be considered as parts of voluntary disclosure practices (Ashbaugh et al., 1999). From the findings of past studies, companies engage in differential disclosure strategies (Botosan, 1997). Researchers have found that firm size is positively associated with firms' disclosure levels, suggesting that firm size reduces disclosure costs (Lang and Lundholm, 1993). Therefore, firms have differential incentives to engage in IFR due to the difference in costs and benefits related to replacing their hard copy based financial reporting with soft copy IFR. The potential benefits of IFR are as follows:

First, IFR can reduce firms' information dissemination costs (Ashbaugh et al., 1999, FASB, 2000; Xiao et al., 2002). Firms enjoy cost savings if the shareholders obtain financial information via the firm's Web site. The benefits include: facilitating stakeholders'

interaction; communicating information more speedily, with wider coverage and at lower cost; providing a platform to integrate new technologies, reducing the cost of providing paper-based financial statements and providing more information than that contained in the hard copy version of the annual reports.

Second, companies can communicate with previously unidentifiable information users via IFR (Ashbaugh et al., 1999). Stakeholders who are required and/or have requested to receive financial information are limited under the traditional hard copy reporting. There will be good unlimited global access to financial information to the public once a company sets up a Web site that engages in IFR (FASB, 2000; Xiao et al., 2002). Therefore, firms can broaden their disclosure audience to meet the demands for their financial information by engaging in IFR.

Third, the stakeholders' environment can limit the usefulness of the information (Lev and Zarowin, 1999). Diverse stakeholders can retrieve and analyse idiosyncratic information via the Internet, which facilitates the dissemination of the companies' Internet financial disclosures. (Xiao et al., 2002). The Internet facilities include hyperlinks, Web browsers and devices for data-transfer (Ashbaugh et al., 1999). Hyperlinks offer links between the firms' financial disclosures to other pertinent information, and the integration of several parts of a firms' financial statement. Web browsers allow users to find specific details or data that was simply unavailable in the past. This is due to the nature of financial information aggregation that could only be obtained by reading an extensive amount of text such as footnotes. Additionally, users can download financial information for their own analysis via the Internet (FASB, 1998).

Fourth, companies are using the Internet to supplement their traditional information dissemination practices, thereby improving their financial disclosures (Ashbaugh et al., 1999; FASB, 2000). For example, information is timely as companies are managing risk using complex financial instruments, shortening product life cycles and implementing just-in-time inventory systems (Wallman, 1995). Information can be directly disseminated to certain users such as analysts. However, other information users who want to obtain timely information have to incur additional costs. By engaging in IFR, companies' information users are gaining instant access to timely information and, thus, reducing their information costs (FASB, 2000).

Lastly, an increase in Internet financial disclosures is possible as companies can disclose additional disaggregated financial data. This includes daily, weekly and quarterly revenue data via the Internet (Ashbaugh et al., 1999; FASB, 2000). Because of the earlier restrictions on technology, companies have presented aggregated financial data to their stakeholders (Wallman, 1995; AICPA, 1994). Now, with the power of the Internet, companies are beginning to disclose more relevant disaggregated financial data.

New situations beyond the traditional paper-based paradigm have been created by Internet technology. While some companies are motivated to engage in IFR, others may not do so. Companies may not disseminate financial information via the Internet because the IFR costs outweigh the perceived benefits (Ashbaugh et al., 1999). Explicit costs of IFR include set up costs, and maintenance costs of the Web site to contain the financial information on the Internet. When companies increase the potential litigation risks, they will incur implicit costs. Prime examples include hyperlinks, forward-looking statements as well as legal disclaimers (FASB, 2000). The implicit costs also increase when firms lose

their competitive advantage. Due to the operating characteristics of the firms, market competition or ownership structure, more traditional financial disclosures, i.e. printed annual reports may better meet corporate reporting objectives.

2.4 Previous Research

Since 1995, there have been a growing number of empirical studies reflecting the popularity of the Internet as a channel for the communication of information. The studies concerning Internet reporting are divided into three main areas. First, earlier studies are mainly descriptive in nature. These give a current overview of the Internet corporate reporting. These studies concentrated either on one country or make a comparison between different countries. Second, since 1999, many researchers extended their studies to identify factors that are related to the level of voluntary disclosure on the Internet. Third, between 2002 and 2004, several researchers explored the views of various interested parties such as academics, auditors, regulators, preparers and users. They were concerned about the newly emerging practices and issues that needed to be considered by reporting companies.

2.4.1 Descriptive Studies

The first category includes mainly descriptive studies. One of the earliest studies, by Petravick and Gillet (1996) on the Fortune 150 companies, reported that 69% had a Web site and 81% of these companies have a home page with financial information. Subsequently, Petravick and Gillet (1998) examined how quickly 125 companies of Fortune 500 companies posted earnings releases via the Internet; 79.2% of these companies made the releases available via the Internet on the same day as the announcement. This suggests that companies considered the Internet as being the most important channel for the dissemination of financial information.

Gray and Debrecency (1997) found that 98% of the Fortune 500 companies had a Web site, 68% had Internet-based financial statements, and 36% disclosed auditor reports on the Internet.

Marston and Leow (1998) examined the extent of financial disclosure on the Internet in November 1996. They surveyed U.K.'s FTSE-100 companies to determine whether the companies had a homepage or a Web site. They carried out a further survey on whether the company disseminated any financial information via the Internet.

In 1998, Ettredge et al. (2001) compared the Internet disclosure levels of 490 U.S. companies in 17 industries – 82% of these companies had a Web site, 80% had news releases of the most frequently disclosed financial and accounting data, and 54% had quarterly reports. A comparison of the disclosure levels among different industries shows that the smaller emerging technology companies tend to disclose less information than the larger and more established companies.

In 1999, the *European Accounting Review* published a special edition, “The Internet and Corporate Reporting in European”. Lymer (1997) found that although 92% of top 50 U.K. listed companies had a Web site, only 52% disseminated reports or accounts on their Web page. In addition, the study states that the chemical and pharmaceutical sector provided more financial information than the financial services, banks and insurance sector.

Craven and Marston (1999) examined the Top 206 U.K. companies to establish whether they had a Web site and if so whether they provided financial data – 74% of the sample

companies had Web sites. Of these 153 companies, 109 (71%) companies disclosed detailed financial statements.

A study by Hussey et al. (1999) compared the FTSE 100 companies' Internet reporting level between August 1997 and March 1998. They reported that companies provided financial information on the Internet increased from 54 to 63. This shows increased of Internet usage for the financial information disclosure.

In July 1998, Gowthorpe and Amat (1999) found 16% (61 companies) of 379 companies listed on the Madrid Stock Exchange in Spain had an accessible Web site. Only 34% of these companies presented some kind of financial information on their Web page. When the researchers made a comparison with other countries' findings, they found that there are significant differences in Internet financial disclosure.

Hedlin (1999) examined a random sample of 60 Stockholm listed companies in September 1998; 98% of these companies had a Web site. A study by Brennan and Kelly (2000) found that only 67% of 99 Irish-listed companies had a Web site and that 84% provided the information relating to investor relations.

A descriptive study by the Interactive Bureau (2003) concludes that based on an analysis of U.K. FTSE 100 companies Web sites, 72 of the Web sites need further improvement in the areas of Web design, content and usability. The Web sites did not meet the key constituents' needs.

Lymer and Debreceeny (2003) reviewed the guidance level of corporate Internet reporting provided by audit standard setters and securities regulators. The study reveals that actual pronouncements issued, as of the date of the study, represent an inadequate response to the current and future challenges arising from corporate Internet reporting.

Several professional bodies and standard setters have also sponsored Internet reporting studies. These include the Canadian Institute of Chartered Accountants (CICA) (Trites, 1999a and b), the International Accounting Standard Committee (Lymer et al., 1999), and the U.S. Financial Accounting Standard Board (FASB 2000; 2004).

The CICA commission is a research study in North America to obtain an overview of the level of Web usage for financial reporting. Trites (1999a) surveys a random sample of 370 companies from the 10,000 listed companies on the NASDAQ, the Toronto Stock Exchange and the New York Stock Exchange – 69% of these companies had a Web page and only 35% of them included some kind of financial information on the Internet. Additionally, the researcher discusses the implication of Internet reporting for accounting standards setters. Specifically, they address the boundaries problem between non-audited and audited data.

The following studies give valuable insights into Internet financial disclosure practices across countries boundaries. Lymer and Tallberg (1997) analysed 72 Helsinki listed companies and found that 90.2% had a Web site. The study suggested approaches to raise the quality of the home pages, because the U.K. and Finland sample companies failed to see the importance of improving their Web sites.

Another study, by Deller et al. (1999), compared the usage of the Internet for investor relations of respective country's relevant stock market 100 indexes from the U.K., Germany and the U.S. The authors found that the U.K. and Germany Internet investor relations are less common and offer fewer features than the U.S.

Most studies on Internet reporting have usually been conducted in developed countries, for example, the U.S., the U.K., Germany and Eastern Europe. Only a few studies have been carried out in Asian countries, such as Japan, Thailand, China and Malaysia. A study by Davey and Homkajohn (2004) examined the Top 40 Thai listed companies' level and quality of IFR. They found that these companies used the Internet as a complement to their traditional printed-based financial statements. There are considerable differences in the level and quality of IFR practices and only a few companies enhanced the Internet technology. The disclosure relating to technology and timeliness scored lower than content and user support scores. The researchers suggested Thai companies to improve the utilisation of Internet technology for financial reporting.

Based on the above studies, it can be concluded that majority companies in many countries considered the Internet as the most important channel for the communication of financial information.

2.4.2 Factors Influencing Internet Financial Reporting (IFR)

The above studies mainly provide a general review of the present usage of Web sites for reporting; they did not provide what causes the differences in the quantity and quality of information disseminated on the Internet. The second research type tries to associate firms' characteristics to the Internet voluntary disclosure level. The next section discusses the

factors influencing the development of IFR in selected developed nations, namely, the U.K., other European Countries, the U.S., New Zealand, and Asian Countries. The importance of looking at these countries is to study and understand their experience to gain valuable insights into the development of IFR.

2.4.2.1 Firm Characteristics and IFR

Regulatory environment changes in the London Stock Exchange directed the regulators from the U.K. and the European Union (EU) to address the concerns of prohibiting selective disclosure and the desire for enhancing the credibility of reporting. The Financial Services and Market Act of 2000 highlighted the U.K. government's desire to overhaul the financial market regulations and uphold the London Exchange's status as one of the world's leading exchanges (Al-Hawamdeh and Snaith, 2005). In 1998, Craven and Marston (1999) examined the Internet financial disclosure level of 206 of the largest U.K. companies. They found that firm size is positively significantly related to the usage and extent of Internet disclosure. However, this finding may not hold for small to medium sized quoted companies. Their analysis only included firm size and type of industry; other factors such as assets in place or performance, auditor size, financial leverage and international listing status could also be considered to explain the disclosure level.

The European Union developed a series of norms to increase the transparency of financial markets and companies via the Internet in disseminating corporate information. Thus, as Pirchegger and Wagenhafer (1999) document, the quality of Austrian Web sites improved significantly from 1997 to 1998. The analysis provides a strong relationship between free float percentage, size and the quality of Austrian Web sites. In 1998, a comparison of 33 Austrian and 30 German Web sites showed that although their Web sites are quite similar

the German's scores are much more homogeneous. The study covered relatively small sample companies and examined very few factors that might explain the Internet reporting practices.

Traditional hard copy corporate reporting is less useful for decision-making, because it is becoming increasingly less timely in this dynamic business environment (Green and Koreto 1997). A Web site may reach a wider audience and present more detailed information than traditional printed materials (Kaplan 1996). Supporters of this reporting practice, such as Ashbaugh et al. (1999), found that the quality of 253 U.S. firms' IFR practices varied substantially, specifically, variations in quality pertaining to the timeliness of reporting. Their analysis reveals that firm size is the only significant explanatory variable that predicts the IFR engagement by firms. The researchers argue that IFR could generate unreliable financial information as: (1) firms' Web sites may disseminate unaudited financial information or hyperlink the audited information to the unaudited information; (2) insufficient Web site security can hamper the reliability of financial information, as it can be fraudulently changed to unreliable financial information. Therefore, Internet financial practices are of concern to corporate reporting regulators.

In effect, the Internet is not only used to disseminate corporate financial performance information. Corporations are marketing their company to investors using Internet technology (Ettredge et al., 2001). The study examined the financial content of 203 U.S. Web sites. They found evidence that companies that have more sophisticated financial consumers are more likely to disseminate objective and detailed financial information. In contrast, companies with less sophisticated consumers are more likely to disseminate more subjective and less extensive financial information. This is consistent with the findings of

past studies – that as company size increases both objective (analyst reports, calendar, current stock price, etc) and subjective (such as speeches) scores tend to increase. Subsequently, Ettredge et al. (2002) extended their study by providing a clearer understanding using two categories of financial information presentation via the Internet. The first category is made up of reports filed with the SEC. The second category is voluntary disclosures for investors. The presence of the first category of required items is significantly related to a proxy for information asymmetry and firm size, while the second category of voluntary disclosure is related to variables proxying for companies' traditional disclosure reputations, demand for external capital, information asymmetry and firm size. Indeed, the subsequent voluntary materials dissemination can be explained by incentives motivating initial voluntary disclosure.

Another explanatory study was carried out by Brennan and Hourigan (2000) in 1998. They examined 109 Irish sample companies. The results indicate that larger firms in the services and financial industries are more likely to have a Web site and that demand for corporate information (measured by the shareholders number in a company) and leverage are insignificant explanatory variables. It also appears that services and financial companies are more likely to have a Web site. As expected by the researchers, Irish listed companies are lagging behind their corporate counterparts in other countries. This wait and see approach could put Irish listed companies and users of the financial information at a comparative disadvantage.

The study by Debreceeny et al. (2002) goes beyond the firm-specific determinants analysis for IFR by examining 660 companies from 22 countries. The results show firm-specific characteristics such as environmental variables, listing on U.S. stock exchanges and firm

size determined the nature and amount of data disseminated on the home pages of companies. The environment appears to be the most significant explanatory variable for IFR.

The financial reporting of New Zealand public sector entities is aligned to the financial reporting of the private sector following reforms in the early 1990s. Both entities prepared their financial statements in accordance with the same set of financial reporting standards. There is a study by Oyelere et al. (2003) that extends the factors influencing the IFR of New Zealand companies. The results indicate that the spread of shareholding, industrial sector, liquidity and firm size explain the voluntary use of Web sites as a channel for corporate financial reporting. Other explanatory variables such as age and education levels of company directors/managers, new ideas and IT attitude of management, the age and strategic position of each company and its major products life cycle stage may influence the choice to use the Internet for corporate financial reporting.

The survey results presented by Marston (1996) show that 61% of the Top 500 U.K. quoted companies participated in the activities of investor relations. Their analysis indicates that the existence of an investor relations officer is related to positive opinions on the value of investor relations meetings, overseas listings and size. An investor relations officer is more likely to be appointed in a high specific risk firm and privatised companies. Further research is needed to examine whether the U.K. regulatory and legal changes resulted in changes in investor relations activities.

IFR is an increasing activity in Japan (Marston, 2003). The study presents survey findings on Internet reporting by the top 99 Japanese companies in 1998. Of these companies, 78

had an English Web site, 68 provided some financial information with 57 reported detailed accounting information. Company size is only significantly positively related to a Web site existence, but is not associated with the financial disclosure level. Subsequently, the author re-evaluated those companies in 2001, for those that only had a Japanese Web site or no English Web site in 1998. The study found that the majority of these companies had an English Web site with a full financial statement.

Allam and Lymer (2003) developed the Internet reporting practices literature further in their study focusing on the biggest companies from five countries around the world. At the end of 2001 and in early 2002, they examined Internet reporting practices of 250 companies by creating a detailed attribute analysis for common factors across the samples. The attribute index shows that the U.S., U.K. and Canadian companies are leading the Internet reporting, followed by Australian companies with a small gap. However, the Hong Kong companies lagged behind and varied widely concerning both content and technological matters. No significant relationship was found between the size and the IFR level in any of the companies for the five countries except Australian companies. The study uses a similar attribute index like previous research by Ettredge et al. (2001).

According to Marston and Polei (2004), firm size was the only significant explanatory variable for the quantity of investor-related and financial information disclosed on the Web sites of German companies that was stable over time between year 2000 and 2003. For the year 2000 sample, only free float appeared to be significant. For the year 2003 sample, only foreign listing status is significant. The sample of the study contained 100 publicly traded German listed companies on the Frankfurt Stock Exchange. The study examined very few factors that might explain the Internet reporting practices of relatively small

sample companies. Other explanatory variables such as leverage or industry sector could be included for future studies.

Xiao et al. (2004) used theories on voluntary disclosure and innovation diffusion to generate hypotheses that are specific to the context of Chinese companies and their disclosure level. Findings from the 300 Chinese listed companies show their Internet-based disclosure choices are related to the specific environment attributes. Indeed, their results show that determinants that have been proposed and received strong empirical support in the more advanced countries' literature may not play equally important roles in the context of Chinese companies. In order to unravel the reasons for the finding, a study involving experimental control over chosen variables or a longitudinal approach may be required for future research.

Debreceeny and Rahman (2005) examined the regularity and frequency of online announcements on the stock exchange Web sites of the Morgan Stanley Capital Index for small-cap companies of eight developed markets in Europe and Asia. They found higher regularity and frequency of continuous online reporting among companies with higher information asymmetry. Their findings also demonstrate that the regularity and frequency of online disclosure is positively related to analysts following, earnings and agency costs, but that it is negatively associated with a company's product cycle length. However, an alternative hypothesis, that of a reverse causality between disclosure and the proxies, may be suggested by the information asymmetry measurement used in the study.

Company data from each of the following countries was collected: Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia

and Turkey. Bonson and Escobar (2006) examined whether there are considerable differences between the information supplied by these Eastern Europe companies that have joined the EU according to the EU initiatives. The findings show that Big-4 auditors, financial sector and company size are statistically significantly related to the level of Internet disclosure.

Another study was conducted by Bollen et al. (2006) concerning investor relations Web site characteristics for 270 companies located in six countries – Australia, Belgium, France, the Netherlands, South Africa and the United Kingdom. Their results show that company size, level of internationalisation, disclosure environment and percentage of shares held by individual investors are significantly associated with the extent of investor relation activities on the Internet. In addition, evidence found a significant negative effect for the growth rate of a company and level of technology industry. However, the results of the study may not be applicable to smaller or non-listed companies. The researchers suggest that studies on the use of the Internet for investor relation activities may benefit from the use of a detailed measure of Web site quality, as their research instrument did not include the actual or perceived quality of investor relation Web sites characteristics.

Today, financial institutions are facing great challenges to adapt to the constant changes in technology. Serrano-Cinca et al. (2007) used the structural equation model to relate size, financial performance and Internet visibility to the e-transparency of 70 Spanish financial sectors. They found that all three constructs are positively and significantly related to e-transparency. However, the study only analyses the data for one year from one country and one sector.

The study by Gutierrez-Nieto et al. (2008) found that there is limited Internet presence in micro finance institutions' (MFI) and that there is a need for higher disclosure levels. They found that smaller MFIs with a low degree of public exposure disclose lesser amounts of information on their Web sites than large MFIs with a high degree of public exposure on the Internet. According to legitimacy theory, external factors influence corporate managers to legitimise their activities. The study found that MFIs located in Africa and Latin America are less likely to reveal information than those located in Asia or Eastern Europe. In Africa, this could be due to the country's low gross national income per capita, as well as the low level of information and communications technology, whereas, in Latin America, this could be due to cultural traditions that do not value transparency.

Almilia (2009) shows that the nature of IFR disclosure varies considerably across 19 Indonesian banks and 45 firms. The variation suggests that companies have different reasons to disseminate information via the Internet. The findings also indicate that firm size and return on equity are positively associated with IFR. The study only included four firms' characteristics variables related to IFR; the researcher may not have identified other potentially correlated variables specific to their environment.

2.4.2.2 Corporate Governance and IFR

Using an innovative 143 items disclosure checklist, Abdelsalam et al. (2007) examined the comprehensiveness of corporate Internet reporting (CIR) with the corporate governance measures within the new regulatory environment and the ownership diffusion of the London Stock Exchange. They found that CEO duality; director independence, analyst followings and director holding are associated with the comprehensiveness of CIR.

However, the results of the 110 random samples chosen from the top quartile listed companies may not generalise to smaller listed companies on the exchange.

Kelton and Yang (2008) examined the relationship between corporate governance mechanisms and the financial reporting transparency level of the Internet. Their findings show that U.S. firms with a higher proportion of independent directors, a more diligent audit committee and a higher proportion of audit committee members with financial expertise are more likely to have IFR. The findings may not be generalised to listed companies from other stock exchanges. Future studies may further examine other factors such as reporting frequency and information quality.

2.4.2.3 Ownership Structure and IFR

In addition to the earlier discussion in Section 2.4.2.2 above, Abdelsalam et al. (2007) argue that high director ownership aligns the interests of the agent and shareholder and reduces the need for shareholder monitoring through disclosure. The study found a significant negative association between director holding and CIR comprehensiveness, general content and usability. The study may include other ownership variables such as number of shareholders to gain valuable insight into the relationship between ownership structure and IFR.

The similar study by Kelton and Yang (2008) found that weak shareholder rights and a low percentage of block holder ownership are more likely to use the Internet to communicate information including disclosures on corporate governance to potential and existing investors than companies with strong shareholders rights. A possible reason is that managers disclose more in order to reduce agency costs resulting from the presence of

weak shareholder rights. In addition, Internet disclosure is negatively related to block ownership. This result provides evidence supporting the substitute effect that block ownership reduces a company's need for additional supervision through transparency in disclosure. Although the study included several variables related to IFR, they may not have identified all potentially correlated omitted variables.

Table 2.1 presents a summary of prior studies on IFR for companies in different stock exchanges except Bursa Malaysia. These studies link several factors to the level of IFR.

Table 2.1 Overview of Empirical Studies on Determinants of IFR

Authors	Date of Data Collection	Sample	No of Checklist Items	Dependent Variables	Significant Independent Variables
Craven and Marston (1999)	July 1998	206 largest U.K. companies	2	-Presence of Web site -Disclosure of any financial information on Web site	Size (+)
Pirchegger and Wagenhofer (1999)	December 1997 through December 1998	26/20 Austrian companies 98/97 30 German DAX 98 only	38	7-Content 5-Timeliness 14-Technology 12-User Support	Size (+) Free Float (+) (Both for Austrian Co only)
Ashbaugh et al. (1999)	November 1997 through January 1998	290 U.S. companies (criticised by AIMR)	3	Web site provides: -Comprehensive financial statement -Link to Annual Report elsewhere -Link to U.S. SEC	Size (+) Profitability (+) AIMR highly ranked firm (+)
Brennan and Hourigan (2000)	1998	109 Irish companies	Not available	-Presence of Web site -Disclosure of any financial information	Size (+)

Table 2.1 Overview of Empirical Studies on Determinants of IFR, continued

Authors	Date of Data Collection	Sample	No of Checklist Items	Dependent Variables	Significant Independent Variables
Ettredge et al. (2001)	February through May 1998	402 U.S. companies (AIMR rated, Bio-technology and Computer technology)	17	6-Accounting information items 11-Other financial information items	Size (+) Industry (petroleum highest and home building lowest)
Ettredge et al. (2002)	Late 1997 through early 1998	193 U.S. companies (AIMR rated)	17	4-Financial information items required in SEC filings 12-Voluntary disclosure items	For both: Size (+) Correlation annual earnings and returns (-) Voluntary disclosure: Raising equity capital (if stock issued during 1996 or 1997)(+) Quality (AIMR)(+)

Table 2.1 Overview of Empirical Studies on Determinants of IFR, continued

Authors	Date of Data Collection	Sample	No of Checklist Items	Dependent Variables	Significant Independent Variables
Debreceeny et al. (2002)	November 1998 through February 1999	660 large companies in 22 countries (30 largest market capitalisation companies listed in each country in Dow Jones Global Index)	2	1-Presentation (type of Web site) 1-Content (amount of disclosure)	For Content: Size (+) U.S. Listing (+) Growth Prospects/Intangibles (-) For Presentation: Size (+) U.S. Listing (+) General Cross Listing (-) Level of Technology (+)
Oyelere et al. (2003)	Not specified	229 New Zealand companies (123 with Web sites; 90 included IFR)	8	-Financial and non-financial information provided on corporate Web site	Size (+) Liquidity (+) Ownership spread (higher the proportion of shareholdings, lower the probability of disclosure) Industry (Oil and gas forestry highest)
Marston (2003)	1998 and follow up in May 2001	99 Top Japanese companies	13	-Presence of companies Web site -Presence of English Web site on homepage -Financial information disclosed on Web site	Size (+) Industry (+) (Both related to existence of Web site but not extent of disclosure on Web)

Table 2.1 Overview of Empirical Studies on Determinants of IFR, continued

Authors	Date of Data Collection	Sample	No of Checklist Items	Dependent Variables	Significant Independent Variables
Allam and Lymer (2003)	End of 2001 and early 2002	250 companies (50 largest in the U.S., U.K., Canada, Australia and H.K.)	36	12-General attributes 24-Financial/Annual report attributes	Size (+)(only for Australia) Country (U.S., U.K. and Canadian companies closed. Leading Australian companies follow with small gap. H.K. lagged behind)
Marston and Polei (2004)	July 2000 and May/June 2003	50 German companies (top quartile and bottom quartile of DAX 100)	53 (2000) 71 (2003)	Content (16-investor related, accounting and financial information; 5-Timeliness; 5-Contact details; 14-Corporate governance, and 5-Social responsibility)	For 2000: Size (+) Free Float (+) For 2003: Size (+) ROE (-) Foreign Listing (+) State Share Ownership (-)
Xiao et al. (2004)	August 2002	300 largest Chinese-listed companies (203 had a Web site)	82	58-Content 24-Presentation	IT Industry (+) Size (+) Legal person ownership (+) Leverage (+) State Share Ownership (-)

Table 2.1 Overview of Empirical Studies on Determinants of IFR, continued

Authors	Date of Data Collection	Sample	No of Checklist Items	Dependent Variables	Significant Independent Variables
Debreceeny and Rahman (2005)	1 st January 2001 to 31 st March 2002	334 listed companies from 8 countries	16	-Financial and Non-financial information	Info asymmetry (+) Agency cost (+) Earning (+) Analyst following (+) Product cycle (-)
Bonson and Escobar (2006)	Mid February to mid March 2005	266 companies from 13 Eastern Europe countries	44	-Spanish corporate transparency disclosure index	Size (+) Financial sector (+) Big-4 (+)
Bollen et al. (2006)	December 2001 and October 2002	270 companies from 6 countries in Australia, Europe, South Africa	29	9-Annual report 6-Press release 7-Presentation 4-Direct contact 3-Video	Size (+) Internationalisation (+) Individual Investor (+) Environment (+) Technology industry (-) Growth rate (-)
Serrano-Cinca et al. (2006)	May 2006	70 Spanish financial institutions	29	9-Development stage 11-Financial information in financial statement 11-Financial information outside financial statement	Size (+) Financial Performance (+) Internet Visibility (+)

Table 2.1 Overview of Empirical Studies on Determinants of IFR, continued

Authors	Date of Data Collection	Sample	No of Checklist Items	Dependent Variables	Significant Independent Variables
Abdelsalam al et. (2007)	Single day in mid-2005	110 U.K. Top companies	143	-Presence of Web site -Disclosure of any financial information 143-Full checklist 19-General Content 55-Credibility 69-Usability	All: Analyst Following (+) Full Checklist: Director Holding (-) Director independence (+) Manufacturing Industry (+) For Content: Director Holding (-) Director independence (+) For Credibility: Dual Role (-) For Usability: Director Holding (-)

Table 2.1 Overview of Empirical Studies on Determinants of IFR, continued

Authors	Date of Data Collection	Sample	No of Checklist Items	Dependent Variables	Significant Independent Variables
Kelton and Yang (2008)	October to November 2004	U.S. 284 companies	48	-Presence of Web site -Disclosure of any financial information 36-CG Checklist 12-Format 36-Content	All: Independent Directors (+) Audit Committee Diligence (+) Full Checklist: CG Index (+) Blockholder (-) Audit Committee Financial Expert (+) CG: CG Index (+) Audit Committee Financial Expert (+) Format: Blockholder (-) Content: CG Index (+) Blockholder (-) Audit Committee Financial Expert (+)

Table 2.1 Overview of Empirical Studies on Determinants of IFR, continued

Authors	Date of Data Collection	Sample	No of Checklist Items	Dependent Variables	Significant Independent Variables
Gutierrez-Nieto et al. (2008)	January 2006	173 MFIs from Africa, Latin America and Caribbean, Middle East and North Africa, Eastern Europe and Central Asia, East Asia and Pacific South Asia	15	12–Financial information 3–Social information.	Large MFI (+) For profit MFI (+) Level of development (+) MFIs located in Africa and Latin America (-) NGOs (-)
Almilia (2009)	November 2007 to February 2008	45 banks	32	16–Financial information 3– Timeliness 6–Technology 7–User support	Firm size (+) ROE (+)

2.4.3 Views of Interested Parties and Issues Concerning Web-based Business Reporting

Increasingly, companies are using the Internet to present financial information. However, there is very little published literature on the extent of this new medium that is shaping the future of corporate reporting practices (Xiao et al., 2002). To widen the participation in the debate, Xiao et al. (2002) posit that the non-technological and technological factors will decide the future of IFR; 17 U.K. experts including regulators, auditors, academics, reporting companies and users of corporate reports concur on certain issues but provide a range of different views in other areas. Some opinions are non-technologically driven such as resistance to changes in technology, regulators are slow to react and users are not interested in reading financial reports, whereas, others pay more attention to technology factors. Some experts adopt a more progressive or even radical perspective, while others do not foresee any financial reporting changes within the short period of time. The experts did not address a number of important issues such as the relative importance of the identified contingency factors that will mediate Internet-related changes, under what conditions these factors will take effect and the impact of Internet's integration on data processing systems.

A study by Beattie and Pratt (2003) reports the findings of a U.K. study concerning the views of 500 individuals from various user groups, preparers and auditors regarding newly emerging practices and specific change proposals. They found that users like the scope expanded via the Web. All groups found that the range of navigation aids, search aids and file formats were least useful. File format preferences vary across the groups. Paired group comparison shows that the views of the preparers and users differ substantially, while expert and non-expert users hold the same views on many issues. Generally,

auditors' views fall between the views of preparers and users. The study has three specific limitations. First, the extent to which members of ProShare and UKSA are representative of the population of private shareholders is unknown. Second, the views of financial company finance directors were not sampled. It is not clear how or why industry membership might influence views. Third, the study is limited to the U.K. settings and participants.

Jones and Xiao (2004) report the final results of a Delphi study into corporate financial reporting by 2010, in which 20 U.K. experts in accounting and the Internet, representing regulators, auditors, academics, reporting companies and users, participated in the study. They conclude that the financial reporting package would change into a core of general purpose information and standardisation in both the printed copy and Web version, together with a non-core general purpose and information customisation. Prior studies suggested that radical changes such as real-time reporting and raw data disclosure will not occur, at least to the core package. Regulators will adopt a minimalist approach, while auditors will be reactive and cautious. The fundamental dilemma of financial reporting in the Internet environment will be between standardisation and customisation.

2.4.4 Possible Repercussions of Corporate Reporting through the Internet on the Accounting Profession

There have been several studies carried out by the principal accountancy bodies, which represent a first effort towards establishing the harmonisation of standards to both the format and content of Internet disclosure.

The Institute of Chartered Accountants in England and Wales (ICAEW) published a report (Spaul, 1997) to indicate the essential changes to be made to the existing reporting system in view of the challenges faced in this age of the Internet. They analysed the main implications that the new technologies may have on the accounting information dissemination. The study emphasised that the digital economy is bringing new challenges to the accounting profession, and there is an urgent need to make changes to the current reporting system. Subsequently, ICAEW (1998) made a proposal to the format and content of the new reporting system, which take into consideration of the needs of the capital markets.

A study by Lymer et al. (1999) published by the International Accounting Standards Board (IASB) identified the possible reasons for promoting the usage of the Internet for the dissemination of corporate information. The study suggests an integral approach of standards development to ensure the flexibility necessary for future innovations and the accuracy of reports. Thus, it supports evidence of the corresponding practices for 660 companies in 22 countries (Debreceeny et al., 2002). At the same time, it discusses the changes, opportunities and implications of the Internet on the dissemination of financial information on the IASC and accounting profession. The researchers emphasised that all parties must develop new strategies to pro-actively respond to the challenges of IFR. One of the immediate international accounting agenda is the need for IFR rationalisation and standardisation.

Another report, by the Canadian Institute of Chartered Accountants (CICA)(Trites, 1999a), reviewed the Internet reporting practices of 370 listed companies on the Toronto, NASDAQ and New York Stock Exchanges in 1999. It addressed important issues such as

the utilisation of international standards, the quality of information, corporate governance, the confidentiality, security and integrity of information, and the impact of online reporting on current accounting models.

Two reports were issued by the Financial Accounting Standards Board (FASB). First, the FASB (2000) draws attention to specific areas associated with the quality and homogeneity of online data, at the same time it affirms the advantages of disclosing financial information via the Internet. Second, the FASB (2001) provides illustrations showing that companies can utilise the Internet to raise the quality of the data disseminated on their home pages and gives evidence of the existing usage of the Internet for disseminating data.

2.5 Analysis of the Literature

Even though the findings of the countries differ, this review of research on Web reporting shows that Internet usage as a tool for financial disclosure has been increasing. It can be concluded that certain specific firm characteristics such as firm size appear to be statistically associated with the extent of Internet corporate reporting. Findings for the above research also vary by exchange listing or country, clearly indicating that IFR varies according to the institutional environment.

The Malaysian public limited companies' shareholdings are highly concentrated (Ghazali and Weetman, 2006). The largest shareholders of the top five shareholders are in nominee names under the investment companies' shares. The purpose of this practice is to conceal the true owners' identities. It is the outcome of the Malaysian Government's effort to reallocate company shares to Bumiputras. In addition, Malaysia presents an important and interesting study of relationship-based capitalism, since the close link between politics and

business is well documented in the study by Gomez and Jomo (1997). This unique ownership structure and relationship-based capitalism places the transparency reforms in a different context in comparison with the developed market-based capitalism in the West (Rodan, 2004; Adhikari et al., 2006).

Most of the above studies related IFR to firms' characteristics. There are limited studies associating IFR with important determinants such as ownership structures and corporate governance mechanisms except for Abdelsalam et al. (2007) and Kelton and Yang (2008). However, both studies examined corporations in developed economies including the U.K. and U.S.

Little research exists on the effects of Malaysia's unique ownership structure and corporate governance mechanisms on voluntary Internet disclosure (Chapter 3). Hence, there is a need to examine the IFR practices of Malaysian listed companies in view of the above differences. The researcher is also motivated to determine whether the transparency reform by the Malaysian Government increased the awareness of disclosure via the Internet. This study extends prior research by linking the corporate governance mechanisms to Internet reporting practices in developing countries such as Malaysia.

2.6 Conclusion

The review on IFR shows that most of the earliest studies focused on the existence of Web sites for top, stock exchanges listed companies and whether these companies presented some type of financial information via the Internet. Subsequently, a number of secondary studies developing these early studies by including factors influencing IFR and by examining other geographical domains. Then, studies on the specific features of IFR, and

its impact on various interested parties became a focus of publication. Studies conducted by professional bodies continued this trend covering other aspects such as the availability of press releases and real time stock quotes, and various presentation formats used for disseminating financial statements via the Internet. This chapter presents an analysis of the above studies. The next chapter provides a literature review on Web reporting of Malaysian companies.