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**Financial and Non Financial Factors Influencing Internet Financial and Sustainability Reporting (IFSR) in Indonesia Stock Exchange**

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**Abstract:**

Internet Financial and Sustainability Reporting (IFSR) is voluntary in nature. With no specific regulations on IFSR, there is a disparity of IFSR practices among companies. Some companies disclose only partial financial statement using a low level of technology, while others disclose full sets of financial reports using sophistications of the web such as multimedia and analytical tools. Sustainability (1999) addressed the benefits (global reach, immediacy, ease of updating, transparency, link ability, and interactivity) of reporting social and environmental information on the website and thus the factors that affect decision of whether or not to use this communication medium. By placing information on the firm's website, users can search, filter, retrieve, download, and even reconfigure such information at low cost in a timely fashion.

The purpose of this study was to examine financial variables that affect Internet Financial and Sustainability Reporting (IFSR) in Indonesia Stock Exchange companies. The ordinal logistic regression used to examine variables that affect Internet Financial and Sustainability Reporting (IFSR). The sample of this research is companies that listed in Indonesia Stock Exchange companies. The 203 observations were divided into three categories: 87 companies not providing financial and sustainability report in the internet (No website), 62 companies providing financial and sustainability report in the internet with low index (Low Index) and 54 companies providing financial and sustainability report in the internet with high index (High Index). The result of this research show that firm size, majority shareholding, auditor size and industry type as a determinant factor of internet financial and sustainability reporting index in Indonesia, whereas leverage and profitability not statistically significant as determinant factors of internet financial and sustainability reporting index in Indonesia.

**Keywords:** internet financial reporting, website, traditional financial reporting, internet, financial statement, voluntary disclosure.

JEL classification: G14, M41

## 1. Introduction

The use of Information technology for competitive advantage is well known and often applied by business firms. Internet financial reporting refers to the use of a company's website to distribute information about the financial performance of the corporations. Use of internet financial reporting is effectually a method of marketing a company to shareholders and investors. According to Wagenhofer (2003), internet financial reporting has at least two major economic effects. First, the internet alters information processing costs and with it the demand and supply of financial information in capital markets. Second, internet financial reporting creates a demand for standardization; this led to development of XBRL (Wagenhofer, 2003).

Disclosure can also be categorized as previously undisclosed 'new' (potentially price sensitive) information or previously disclosed 'old' information. An example of old (but recognized) information is the provision of key accounting ratios. This study is concern with company voluntary disclosure on the internet. There are no rules governing disclosure on the internet although companies are constrained by existing regulation. Disclosure should provide a variety of users with adequate information for their purposes. Many company websites make us of graphics and photographs. The internet has the potential to ease access to information for all user groups and to increase the timeliness of information provision.

Some empirical studies examined corporate financial reporting on the internet in different countries (e.g., Budi and Almlia 2008b, Pirchegger and Wagenhofer 1999; Ismail 2002; Wagenhofer 2003). Pirchegger and Wagenhofer (1999), and Ismail (2002) analyze the use of the internet to present and the extent of financial information disclosed on the internet. Budi and Almlia (2008) examine the use of the websites of the banks and LQ-45 firms in Indonesia, it was shown that most go public banks and LQ-45 firms in the sample had websites and provided financial data on their sites. Davey and Homkajohn (2004) found that Thai companies provide financial information on the website as a complement to their traditional paper-based annual reports.

Indonesian Company Act 2007 has been arranged about obligation of company to report their sustainability activities (Undang-undang Perseroan Terbatas No. 40 Tahun 2007 or), firms are using internet to supplement their traditional corporate reporting practice. Indonesian security regulations currently do not require firms to disseminate financial information on the internet. Another issue is the lack of formal guidance and the huge differences in the nature and extent of reporting on the web are likely to raise issue concerning the comparability and reliability data. The national standards setters and regulators of accounting practices will not be able to continue to treat financial reporting on the internet as identical to traditional distribution channels of corporate data. The Indonesia government or other regulatory bodies should decide to introduce guidelines that provide both corporations and information users with a framework within which the exchange of data can take place with maximum of efficiency. Budi and Almlia (2008) show that not all of the firms listed in Indonesia stock exchange disclose sustainability reporting completely.

There are many empirical studies on company disclosure. Craven and Marston (1999) examine the extent of financial information disclosure on the internet by the largest companies in the UK in 1998. Craven and Marston (1999) finds a statistically significant positive relationship between the size of a company and the use and extent of disclosure on the internet, and no significant association between industry type and disclosure. Oyelere et al. (2003) indicate that firm size, liquidity, industrial sector and spread of shareholding are determinant of voluntary adoption of internet financial reporting (IFR). Abdelsalman et al. (2007) find that corporate internet reporting comprehensiveness of London listed companies associated with analyst following, director holding, director independence, and CEO duality. Ismail (2002) found that firm assets, profitability, and leverage affecting the decision to disseminate financial information on the internet.

Internet Financial and Sustainability Reporting (IFSR) is voluntary in nature. With no specific regulations on IFSR, there is a disparity of IFSR practices among companies. Some companies disclose only partial financial statement using a low level of technology, while others disclose full sets of

financial reports using sophistications of the web such as multimedia and analytical tools. The differences in Generally Accepted Accounting Standards (GAAP) among different countries are a constraint on company performance comparisons through the web. There are also potential legal risks which many constraint company use of IFR and equally for users, real time data as non audited financial information may lack the reliability of the traditional paper based financial report.

Every year IRGlobalRanking.com evaluates the company's website links related to their investors and publishes The Investor Relation Global Ranking Awards. Using a corporate website to disclose financial and business information, it has become commonplace for most firms. Communication possibilities that go far beyond that achievable by traditional means are the advantage offered by web-based corporate reporting. However, the mere existence of a corporate websites does not automatically mean that the quantity and quality of information available is of a uniform high standard. In many ways, the development of internet reporting during the last decade mirrors the development of accounting practice up to the 1960s in that, over time common practices have emerged, have become the norm, and are underpinned by an assumption that the "best" practices survive. Internet reporting continues to evolve based on common practices rather than prescribed standards. The purpose of this study was to examine the factor influencing of Internet Financial and Sustainability Reporting (IFSR) of the go public firms on the Indonesia Stock Exchange. This research also extends Almilia (2009) that include not only financial variables but also non financial variables. An index was developed by basing closely on the work of Davey and Homkajohn (2004) who had devised their framework from three stages of website financial reporting as identified by Lymer et al. (1999).

The remainder of the paper is organized as follows. Section 2 briefly discusses the relevant literature and development hypothesis. Data selection, research methodology, and empirical models are described in Section 3. Section 4 provides analysis and interpretations of the empirical findings and Section 5 concludes the paper.

## 2. Theoretical Background and Hypothesis

### 2.1. Agency Theory and Voluntary Disclosure

Many studies have been conducted of voluntary disclosure and attempt to explain determinant factor of voluntary disclosure. Different theories have been used to explain voluntary disclosure. These theories include agency theory, signaling theory and cost-benefit analysis. Agency theory has been regarded as an important construct for understanding and analyzing financial reporting incentives. Agency theory proposes that, the firm is based on a relationship between manager (agent) and owner (principal), where the agent is hired to manage the company on behalf of the principal. The separation of ownership and control give rise information asymmetries between managers and principal where manager have better information on the firm's current and future performance than do principals.

Several empirical researches examine how agency problem can be mitigated through increased disclosure. Ball (2006) argues that increased transparency and disclosure will contribute a better convergence of the interests of managers with those of shareholders. Healy and Palepu (2001) discuss the role of disclosures in reducing agency cost by providing shareholders with an effective monitoring tool. Specifically, better disclosure improves shareholders' ability to relate material decisions to firm performance (Hope and Thomas, 2007). In this sense, agency theory conceives voluntary disclosure as a mechanism to control the managers' performance and to reduce information asymmetry and agency cost of monitoring. Simultaneously, this theory predicts that agency cost will vary with different corporate characteristics.

### 2.2. Signaling Theory and Voluntary Disclosure

Signaling theory was suggests that companies with superior performance use financial information to send signals to the market. Signaling theory might be used to predict that higher quality firms will use the internet to disseminate "old" accounting information. Gray and Roberts (1989)

considered the cost and benefits of voluntary disclosure and investigated perception of costs and benefits empirically. Gray and Roberts (1989) found that for British multinationals, the most important perceived benefits of voluntary information disclosure were: (1) improved image/reputation of the company, (2) better investment decisions by investors, (3) improved accountability to shareholders, (4) more accurate risk assessment by investors, (5) fairer share prices. And the most important cost factors constraining voluntary information disclosure were: (1) cost of competitive disadvantage, (2) cost of data collection and processing.

### 2.3. Internet Financial and Sustainability Reporting

There has been a growing of empirical studies on Internet Financial Reporting since 1995 reflecting the growth in this form of information dissemination. Several studies have examined the determinants of web-based disclosure policy (Pirchegger & Wagenhoffer, 1999; Budi and Almilia, 2008a). Several studies have investigated the nature and extent of financial reporting on corporate websites as an instrument for firms' stakeholder relation.

Cheng, Lawrence and Coy (2000) developed a benchmark index to measure the quality of IFR disclosure of the Top 40 New Zealand companies. The results revealed that 32 (80%) of the companies in the sample had websites and 70% of the sample presented financial information on their websites. Of the 32 companies having websites, only 8 (25%) companies scored more than 50% on the index by virtue of having reasonably well-developed sites.

Deller, Stubenrath and Weber (1999) find that more US corporations (91%) used the internet for investor relation activities than UK (72%) and German (71%) corporations. In the USA, corporate reporting on the internet seems to be a standard feature of investor relation strategies. In contrast, Germany only about two-thirds of the corporations used the internet as an alternative way to distribute accounting information and UK corporations are more extensive users of the internet as an alternative distribution channel than German corporation.

Rikhardsson, Andersen and Bang (2002) show that many of the GF500 companies publish social and environmental information on their websites (63% and 79%, respectively for the 6581 websites that could be analyzed) and they do not use the technological possibilities of the internet to communicate environmental and social information to their stakeholders. Rikhardsson et al (2002) show that the most popular issues addressed regarding the environments are environmental policies, resources consumption, emissions and product performance. Regarding the social aspect, the most popular issues addressed are workplace performance, stakeholder relationship, and social policies.

Budi and Almilia (2008a) measured the IFR of the 19 go public banks in Indonesia it was shown that, while most go public banks in the sample had websites and provided financial data on their sites. The survey findings show that the nature of IFR disclosure varies considerably across the sample banks. The variation in the content of the websites suggests that firms had different reasons for establishing an Internet presence. Some banks' website contains only product and service advertising. Most financial reporting is confined to PDF, which looks exactly like the paper-based annual reports. Apart from the lower cost consideration, this may be because the firms would like to protect themselves from legal risk in the event of providing uncorrected financial data to the users. Most of the banks in the sample do not take full advantage of the computer technologies. Only one bank allows users to download financial information or provided analysis tool for users to make their own analyses. The common technology feature provided by the banks is the download plug-in spot, but none of the banks in the sample provided download plug-in spot. Another common feature is online feedback. None of the banks used advanced futures (XBRL) to create their websites.

Almilia and Budi (2008) compare quality of banking industry and LQ-45 firms. Almilia and Budi (2008) used 19 banking industry and 35 LQ-45 firms as a samples. The statistic method used to compare internet financial reporting between banking sector and LQ 45 firms is independent sample t-

test. The results show that banking sector has highest score on technology and user support component than LQ 45 firms.

#### 2.4. Determinant Factors of Internet Financial and Sustainability Reporting

##### 2.4.1. Firm Size

Firm size is an important determinant of corporate disclosure. Results from prior studies frequently confirm a positive association between firm size and disclosure level (Meek, Roberts and Gray, 1995; Zarzeski, 1996; Almlia, 2009). There are several arguments that may explain this positive association. **Firstly**, because of their more developed internal reporting systems, large companies may have the resources to produce information, and the cost producing such information is also lower for these firms. Secondly, large firms have more incentives to disclose voluntary information, because they face higher political costs and pressures. Thirdly, smaller firms are more likely to hide crucial information because of their competitive disadvantage within their industry. Wallace, Naser and Mora (1997) provide evidence that the amount of detail in Spanish corporate annual reports and accounts is increasing in firm size. This explanation leads to the first hypothesis of this research:

**H1: There is an association between the voluntary disclosure on website and firm size.**

##### 2.4.2. Profitability

Studies refer to profitability as an independent factor that may affect disclosure level. For example, Singhvi and Desai (1971) examine 500 large listed US firms, and found positive association between profitability and the quality of disclosure. Their results suggest that the firm profitability can be regarded as an indicator to good management, as management tends to disclose more information when the profitability is high. Based on this, it may be argued that profitable companies have extra financial resources to disseminate financial information voluntarily or in compliance with additional regulations imposed, or they might have incentives to show the public and stakeholders that they are more profitable than their counterparts in the same industry.

Oyelere, Laswad, and Fisher (2003) examine the voluntary adoption of the internet as a medium for transmitting financial reports and determinants of such voluntary practice by New Zealand companies. The result indicate the some determinants of traditional financial reporting such as firm size, liquidity, industrial sector and spread of shareholding are determinants of voluntary adoption of internet financial reporting (IFR). The other findings of this research show that the other firm characteristic such as leverage, profitability and internationalization do not explain the choice to use the internet as a medium for corporate financial reporting.

Ismail (2002) examine the extent of internet financial information by the Gulf Co-operation Council (GCC) countries. In this research using forward stepwise in logistic regression was undertaken to assess whether voluntary dissemination of financial information on the internet was related to firm size, leverage, and profitability. The result of this research show that the profitability of a firm to publish financial information on the internet does not only depend on Individual characteristic, but on a combination of interaction effects among firm characteristics (size, leverage, and profitability), industry type and country.

Vance (1975) reported a negative association between social involvement and profitability, studies by Heinze (1976) and Bowman and Haire (1975) reported a positive association. Abbot and Monsen (1979) reported being socially involved does not appear to increase investors' total rate of return. Almlia (2009) reported that profitability as a determinant factor of voluntary disclosure on company website for LQ-45 firms and go public banks. This explanation leads to the second hypothesis of this research:

**H2: There is an association between the voluntary disclosure on website and profitability.**

#### 2.4.3. Leverage

Agency theory could be explained the possible link between leverage and voluntary disclosure. According to this theory, highly leveraged firms have an incentive to voluntarily increase the level of corporate disclosure to such stakeholders through traditional financial statement, and other media, such as internet financial reporting (Jensen and Meckling, 1976). However, research in this relation has been mixed. Ismail (2002) found a positive relationship between internet financial reporting and the amount of leverage in firm's capital structure, whereas studies by Andrikopoulos and Dridis (2007); Zeghal et al (2007) and Oyelere (2003) do not support this relationship, while Meek et al (1995) reported a significant negative relationship between leverage and voluntary disclosure for US, UK, and continental European multinational. Almilia (2009) reported the different results that leverage not significantly impact on internet financial reporting on company website for LQ-45 firms and go public banks. This explanation leads to the third hypothesis of this research:

**H3: There is an association between the voluntary disclosure on website and leverage.**

#### 2.4.4. Majority Shareholders

Agency theory suggests that in a more diffused ownership environment, companies will be expected to disclose more information to reduce agency cost and information diffusion (Jensen and Meckling, 1976). The potential for agency conflicts is greater for a company with diffused ownership because of the divergence of interests between contracting parties. In a widely-held company, managers may provide additional information to signal they are acting in the best interest of the principles. Conversely, highly concentrated ownership may be linked to lower levels of disclosure. Chau and Gray (2002), in a study of Hong Kong and Singapore companies, report a significant relationship between the proportion of outside ownership and level of voluntary disclosure. Both Eng and Mak (2003), in a study of Hong Kong Companies, and Ghazali and Weetman (2006), in a study of Malaysian companies, find that director ownership is significantly negatively associated with the level of voluntary disclosure. This explanation leads to the fourth hypothesis of this research:

**H4: There is an association between the voluntary disclosure on website index and leverage.**

#### 2.4.5. Auditor Size

The logic of the hypothesis relating to auditor size is that client firms audited by big auditor size, firms represented are likely to provide more detail in their annual report and disclosure. Debreceeny and Gray (1999) identify a number of audit and auditor implication regarding the dissemination of audited financial statements on the internet. These implications include the association of the audit report with unaudited information and the responsibilities of the auditors to monitor clients' website. Several researches found that auditor size is significantly associated with level of voluntary, mandatory and aggregate disclosure (Ahmed and Nicholls, 1994; Patton and Zelenka, 1997; Inchausti, 1997 and Raffournier, 1995). The different result reported by Wallace, Naser and Nora (1994), Marston and Robson (1997) and Owusu-Ansah (1998) that auditor size is not significant associated with level of disclosure. This explanation leads to the fifth hypothesis of this research:

**H5: There is an association between the voluntary disclosure on website and auditor size.**

#### 2.4.6. Industry Type

Political cost theory suggests that industry membership may affect the political vulnerability of firms (Inchausti, 1997; Craven and Marston, 1999). Firms in industries that are more politically vulnerable may use voluntary disclosure to minimize political costs. Signaling theory also suggests industry difference in disclosure. If a company within industry fails to follow disclosure practices, including internet disclosure, of others in the same industry, then it may be interpreted that the company is hiding bad news (Craven and Marston, 1999). Marston and Leow (1998) found no significant association between disclosure of financial information and industrial classification, but, when the

surveyed companies' categories as disclosing either primary or detailed information on the website, there were significant result as the company type is associated with the extent of disclosure. Brennan and Hourigan (2000) in Ismail (2002) found that internet reporting is positively related to industry type. This may due to different industries having different proprietary cost of disclosure and some may be more technologically advanced than others. This explanation leads to the sixth hypothesis of this research:

**H6: There is an association between the voluntary disclosure on website and industry type.**

### 3. Empirical Test

This section describes the research design of the study including sample description, variable identification, data collection and research model.

#### 3.1. Sample

This survey is based on data that were collected on the listed companies in Indonesia Stock Exchange. Sample of this research divided into three group samples, where the categorizing group sample based on companies disclosed financial and sustainability on the web. The first group sample is firm with no web or non-financial and sustainability information on the web, the second group sample is firm with low score of IFSR and the third group sample is firm with high score of IFSR. The screening of the corporate websites was carried out in November 2007 and February 2008.

#### 3.2. Variable Measurement

This study empirically examines the association between some variables that may motivated companies to disseminate financial and sustainability on the internet. The data collected are related to the variables that represent the core interest for this research:

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##### 3.2.1. Dependent Variable

Dependent variable of this research is internet financial and sustainability reporting. First of all, models have been developed to assess quality of corporate website like www.IRGlobalRanking.com or www.JungleRating.com. In order to evaluate company websites a checklist of criteria has been developed. The criteria were used to construct an Internet Financial Reporting Index, which was used to assess company websites. Then, the index developed to favor the importance of technology rather than the content of information statements. Therefore, in order to add weight to content over technology enhancements, the index criteria were divided into four parts and assigned weights – content (40%), timeliness (20%), technology (20%) and user support (20%). An index was developed by basing closely on the work of Cheng et al. (2000) who had devised their framework from three stages of website financial reporting as identified by Lymer et al. (1999). Internet financial reporting instruments are content, timeliness, technology and user support.

1. In terms of **Content**, this category includes the components of financial information from statement of financial position, cash flow through shareholder information and social responsibility disclosures. For example, financial information disclosed in html format scores higher (2 points) than disclosure in PDF format (1 point), since the former makes better use of the web technology and as a result it is easier for users to access effectively. A copy of the content index is attached as Appendix 1.
2. **Timeliness**, since the web can provide information in real time it is important to find out the extent to which this facility is utilized. These real time data include press release, unaudited latest quarterly results, vision/forward-looking statements, and charts of future profits forecast. For disclosure of press releases and stock quotes, there is an added score for the recently of information (on a scale from 0 to 3). Companies receive a score for disclosing unaudited quarterly results and vision statements and a score is also given for appropriate disclaimers. This is



included since companies may face potential legal risk if they endorse the unaudited or forward-looking statements and omit meaningful cautionary disclaimers. A copy of the timeliness index is attached as Appendix 2.

3. **Technology**, these items related to enhancements that cannot be provided by printed reports. Those items that uphold the quality of the electronic financial reporting and facilitate communication with site users score highly on the index. The elements are download plug-in on spot, online feedback, use of presentation slides, use of multimedia technologies (audio and video clips), analysis tools (for example, Excel's Pivot Table), advanced features (such as implementing an "Intelligent Agent" or XBRL). A copy of the technology index is attached as Appendix 3.
4. **User Support**, users' computer skills are different. Some of them are experts and some are novice. Those who do not have state-of-the-art technology may find themselves unable to use a site at all. Companies score is higher if they implement tools that facilitate use of the internet reporting irrespective of computer skills. The tools scored in the index are: search and navigation tools (such as FAQ, links to homepage, site map, site search), number of clicks to get financial information (on a scale from 0 to 3), and consistency of web page design. A copy of the User Support index is attached as Appendix 4.

Internet Sustainability Reporting Index, replicate the item which issued on www.junglerring.com. Internet sustainability reporting index divided into 21 items, a copy of the internet sustainability reporting items is attached as Appendix 5. The index of Internet Financial and Sustainability Reporting (IFRS) were divided into two parts and assigned weights – internet financial reporting index (50%) and internet sustainability reporting index (50%).

### 3.2.2. Independent Variables

The Determinant factors of internet financial reporting in this research are accounting and non accounting variables including firm size, profitability, leverage, majority shareholder, auditor size and industry type. Data for relevant variables in this research were collected from corporate websites for companies with internet financial report and Indonesia Capital Market Directory. The detailed measurements of independent variables are:

1. Firm size. Two variables were used to represent firm size; logarithm natural of total assets and logarithm natural of total sales.
2. Profitability. Two variable were used to represent profitability; net profit divided by total assets and total sales divided by total assets.
3. Leverage is measured by the ratio of total debt divided by total assets.
4. Majority shareholder is measured by the higher proportion of shares owned by the top of shareholders.
5. Auditor size is measured by Johnson-Miller (JM) method divided auditor size into 3 category based on number of client.
6. Industry type was assessed using the Indonesia Stock Exchange classification categories. The Indonesia Stock Exchange classification led to fourteen categories and divided into 2 category (manufacture and non manufacture).

### 3.3. Research Model

The ordinal logistic regression analysis examines the combined ability of the eight variables to disseminate financial and sustainability information on the internet. The model provides an indication of statistical signification of the combined variables. The ordinal logistic regression equation is formulated as follows:

$$\text{Logit } (p_1 + p_2 + p_3) = \text{Log} [(p_1 + p_2 + p_3) / (1 - p_1 - p_2 - p_3)] = \alpha_1 + \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + e_{it} \dots\dots\dots (1)$$

Where:

Logit (p1 + p2 + p3) = Internet Financial and Sustainability Reporting index

p1 = Firm with no web or non-financial and sustainability information on the web

p2 = Firm with low score of IFSR

p3 = Firm with high score of IFSR

X<sub>1</sub> = logarithm natural total assets

X<sub>2</sub> = logarithm natural total sales

X<sub>3</sub> = the ratio of total debt divided by total assets

X<sub>4</sub> = the ratio net profit divided by total assets

X<sub>5</sub> = the ratio to sales divided by total assets

X<sub>6</sub> = the higher proportion of shares owned by the top of shareholders

X<sub>7</sub> = categorial variable based on number of client

X<sub>8</sub> = categorial variable based on Indonesia Stock Exchange industry classification

#### 4. Results

Multivariate analytical approaches were employed in the study to identify the determinants of IFSR. First, exploratory data analysis was carried out to determinants IFSR. The 203 observations were divided into three categories: 87 companies not providing financial and sustainability report in the internet (No website), 62 companies providing financial and sustainability report in the internet with low index (Low Index) and 54 companies providing financial and sustainability report in the internet with high index (High Index). Descriptive statistics pertaining to the independent variables for IFSR are presented in Table 1.

On average, high index firms have higher total assets and total sales than the other group samples. Comparisons between three groups sample reveal that engage in high index firms are generally larger and more profitable than the other group samples. There are not differences on leverage for firm with high IFSR, low IFSR and firms without IFSR. On average, high index firms have higher majority share holder than the other group samples. Table 1 also indicated that firms with high index tend to use big size auditor.

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INSERT TABLE 1 ABOUT HERE

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Before performing the ordinal logistic regression a model fitting test was run to check for goodness of fit the research model. Table 2 indicated the model fitting information of research model. The value of -2Log Likelihood with intercept only is 1308.397, and the value of -2Log Likelihood included all independent variables is 923.785. The decreasing of value of -2Log Likelihood between intercepts only and included all independent variables show that research model is fit. The value of significance (0.00) shows the same results with the value of -2Log Likelihood that research model is fit.

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INSERT TABLE 2 ABOUT HERE

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Table 2 indicated the degree of independent variables which affect the dependent variables. The value of Nagelkerke is 0.530; it means that 53% dependent variable affected by independent variables in the model.

The results of the estimate of model for 603 observations are reported in table 3. The results of its estimation indicate that IFSR practices are highly dependent on size, leverage, majority share holder, auditor size and industry type, thereby supporting H1, H4, H5 and H6. Size is a statistically significant predictor at the 1% for logarithm natural total assets and 5% for logarithm natural total sales. Leverage,

auditor size and industry type is a statistically significant predictor at the 10%, majority shareholder is statistically significant predictor at the 1%, while profitability is not significant.

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This study show that size has a significant and positive impact on IFSR practices. This finding support H1. Larger firms are more likely to engage in IFSR. This finding is consistent with those reported by Ashbaugh et al. (1999) in the US, Pirchegger and Wagenhofer (1999) in Austria, Craven and Marston (1999) in the UK and Oyelere et al. in the New Zealand (2000) and Almilia (2009) in Indonesia. It appears that larger companies are able to derive scale benefits from voluntarily using the internet as medium for financial and sustainability disclosure and are less likely to be competitively disadvantaged by such incremental reporting.

For profitability, this research finding not consistent with Singhvi and Desai (1997) examine 500 large listed US firms who found positive association between profitability and the quality of disclosure and support the research finding of Heinze (1976) and Bowman and Haire (1975), but not support Vance (1975). This finding did not support H2.

Firms with high leverage tend to disclose more information than firm with low leverage. Agency theory could be explained the possible link between leverage and voluntary disclosure. According to Agency theory, highly leveraged firms have an incentive to voluntarily increase the level of corporate disclosure to such stakeholders through traditional financial statement, and other media, such as internet financial reporting, but the result of this research not support agency theory and Jensen and Meckling (1976). This finding did not support H3. This research is not consistent with those reported by Ismail (2002) and Meek et al. (1995), whereas studies by Andrikopoulos and Diakidis (2007); Zeghal et al (2007); Almilia (2009) and Oyelere (2003) support this relationship.

Higher level of shareholding by the top shareholders was positively significant related to IFSR practices in model. This result show that high level majority shareholder firms tend to disclose less financial and sustainability information on web than firms with low majority shareholder. Incremental voluntary disclosure through the web could view as an additional channel of communication set up by the IFSR companies to reach their more widely dispersed owners. These practices reduce such owners' information cost and assist them in monitoring management behavior. Chau and Gray (2002), in a study of Hong Kong and Singapore companies, report a significant relationship between the proportion of outside ownership and level of voluntary disclosure. Both Eng and Mak (2003), in a study of Hong Kong Companies, and Ghazali and Weetman (2006), in a study of Malaysian companies, find that director ownership is significantly negatively associated with the level of voluntary disclosure. This research is consistent with Eng and Mak (2003) and Ghazali and Weetman (2006) that there are negative association between proportion shareholding and voluntary disclosure. This finding support H4.

The statistically significant coefficients for auditor size in the models provide additional insight into the factors that determine companies' IFSR practices. The logic of the hypothesis relating to auditor size is that client firms audited by big auditor size, firms represented are likely to provide more detail in their annual report and disclosure. These result consistent with Dechow and Sloan (1999), Ahmed and Nicholls (1994), Patton and Zelenka (1997), Inchausti (1997) and Raffournier (1995). These result not consistent with by Wallace, Naser and Nora (1994), Marston and Robson (1997) and Owusu-Ansah (1998) that auditor size is not significant associated with level of disclosure. This finding support H5.

Industry type statistically significant that determine companies' IFSR practices. Cross-industrial differences in disclosure requirements have previously been reported to influence both conventional disclosure practices (Owusu-Ansah, 1998) and the more recent practice of disclosing financial information on corporate website (Brennan and Hourigan, 2000 in Ismail, 2000). Overall, the result in this study is consistent with a political cost explanation. This finding did not support H6. Firms in

industries that are more political vulnerable may use voluntary disclosure to minimize political costs. Signaling theory also suggests industry difference in disclosure. If a company within industry fails to follow disclosure practices, including internet disclosure, of others in the same industry, then it may be interpreted that the company hiding bad news.

#### 4. Summary and Conclusion

The development of the internet as a medium for global corporate communication creates a new channel for the dissemination of corporate financial information. Due to its increasing usage, its multimedia capability and its capacity for interactive communication, the internet is challenging the very nature of financial reporting. The global access of financial and sustainability reports on the internet could produce further impetus for global standards for financial reporting.

The purpose of this study was to measure the quality of Internet Financial and Sustainability Reporting (IFSR) of firms on the Indonesia Stock Exchange. An index was developed by basing on the work of Davey and Homkajohn (2004). The index criteria were divided into four parts and assigned weights – content (40%), timeliness (20%), technology (20%) and user support (20%). The sample consists of 303 firms. By measuring the IFSR of the 303 go public firms in Indonesia it was shown that, while most go public firms in the sample had websites and provided financial data on their sites. The survey findings show that the nature of IFR disclosure varies considerably across the sample firms. The variations in the content of the websites suggest that firms had different reasons for establishing an Internet presence. Some website contains only product and service advertising. Most financial reporting is confined to PDF, which looks exactly like the paper-based annual reports. Apart from the lower cost consideration, this may be because the firms would like to protect themselves from legal risk in the event of providing uncorrected financial data to the users. This research used ordinal logistic regression to examine the hypothesis. The result of this research show that firm size, majority shareholding, auditor size and industry type as a determinant factor of internet financial and sustainability reporting index in Indonesia, whereas leverage and profitability not statistically significant as determinant factors of internet financial and sustainability reporting index in Indonesia.

There are several limitations of this study. First, the observations of firm's website in this study only one period. Future research, the observations of firm's website more than one period to get more robustness conclusions. Second, this research not include specific factors like political factor or regulation factor in Indonesia, the next research must consider specific factors that influence practice of internet financial and sustainability reporting in Indonesia.

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**Table 1**  
**Descriptive Variables**

Variables	Group Sample	Mean	Minimum	Maximum
X1	17 website	12.6295952516	10.22994553	17.75936874
	Low Index	14.1682384726	10.47472130	17.51717703
	High Index	15.7725971061	8.45126704	19.40469439
	Total	13.9355951523	8.45126704	19.40469439
X2	No website	11.6555304089	.00000000	16.47563680
	Low Index	13.6453184441	10.11037976	17.20142789
	High Index	14.7503807933	5.63121178	17.93830708
X3	Total	13.0865096155	.00000000	17.93830708
	17 website	.6443004787	.00043438	4.59849572
	Low Index	.6545860179	.09406071	4.36638299
	High Index	.6540534547	.11581115	3.65456099
X4	Total	.6500362626	.00043438	4.59849572
	No website	.0109904181	-1.07036070	2.53767357
	Low Index	.0347641868	-.37928180	.96942903
	High Index	.0580231242	-.13359797	.77211268
X5	Total	.0307625353	-1.07036070	2.53767357
	17 website	.9671598331	.00000000	15.88704612
	Low Index	.9446044631	.04196250	12.72675598
	High Index	.5878684793	.00039748	2.60052634
X6	Total	.8593757639	.00000000	15.88704612
	No website	54.9791954023	19.00000000	97.97000000
	Low Index	49.7564516129	17.54000000	100.00000000
	High Index	58.2909259259	31.74000000	97.48000000
X6	Total	54.2650246305	17.54000000	100.00000000

Variable Specification: X<sub>1</sub> = logarithm natural total assets, X<sub>2</sub> = logarithm natural total sales, X<sub>3</sub> = the ratio of total debt divided by total assets, X<sub>4</sub> = the ratio net profit divided by total assets, X<sub>5</sub> = the ratio total sales divided by total assets, X<sub>6</sub> = the higher proportion of shares owned by the top of shareholders, X<sub>7</sub> = categorial variable measured by Johnson-Miller (JM) method divided auditor size into 3 category based on number of client, X<sub>8</sub> = categorial variable based on Indonesia Stock Exchange industry classification

**36** **Table 2**  
**Model Fitting Information and Pseudo R-Square**

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	1308.397			
Final	923.785***	384.612	8	.000

**48**  
 Cox and Snell = 0.468  
 Nagelkerke = 0.530  
 McFadden = 0.293

Link function: Logit

Logit ( $p_1 + p_2 + p_3$ ) = Internet Financial and Sustainability Reporting index, where:  $p_1$  = Firm with no web or non-financial and sustainability information on the web,  $p_2$  = Firm with low score of IFSR,  $p_3$  = Firm with high score of IFSR

Variable Specification:  $X_1$  = logarithm natural total assets,  $X_2$  = logarithm natural total sales,  $X_3$  = the ratio of total debt divided by total assets,  $X_4$  = the ratio net profit divided total assets,  $X_5$  = the ratio total sales divided by total assets,  $X_6$  = the higher proportion of shares owned by the top of shareholders,  $X_7$  = categorial variable measured by Johnson-Miller (JM) method divided auditor size into 3 category based on number of client,  $X_8$  = categorial variable based on Indonesia Stock Exchange industry classification

**3**  
 \*\*\* indicates significant at 1%  
 \*\* indicates significant at 5%  
 \* indicates significant at 10%

**Table 3**  
**Ordinal Logistic Regression Results**

$$\text{Logit}(p_1 + p_2 + p_3) = \text{Log} \left[ \frac{p_1 + p_2 + p_3}{(1 - p_1 - p_2 - p_3)} \right] = \alpha_1 + \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + e_{it}$$

	Std. Error	WALD.	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
Threshold					
[C_IFSR = 1.00]	0.966	168.886	0.000	10.662	14.449
[C_IFSR = 2.00]	1.027	206.013	0.000	12.728	16.753
X1	0.142	21.311***	0.000	0.377	0.933
X2	0.130	8.542***	0.003	0.125	0.632
X3	0.264	1.571	0.210	-0.848	0.186
X4	0.613	0.007	0.933	-1.151	1.254
X4	0.098	0.262	0.609	-0.242	0.142
X6	-.005	10.670***	0.001	-0.027	-0.007
X7	0.112	3.451*	0.063	-0.011	0.429
X8	0.214	7.431***	0.006	-1.004	-0.164

Link function: Logit.

Logit (p1 + p2 + p3) = Internet Financial and Sustainability Reporting index, where: p1 = Firm with no web or non-financial and sustainability information on the web, p2 = Firm with low score of IFSR, p3 = Firm with high score of IFSR

Variable Specification: X<sub>1</sub> = logarithm natural total assets, X<sub>2</sub> = logarithm natural total sales, X<sub>3</sub> = the ratio total debt divided by total assets, X<sub>4</sub> = the ratio net profit provided by total assets, X<sub>5</sub> = the ratio total sales divided by total assets, X<sub>6</sub> = the higher proportion of shares owned by the top of shareholders, X<sub>7</sub> = categorical variable measured by Johnson-Miller (JM) method divided auditor size into 3 category based on number of client, X<sub>8</sub> = categorical variable based on Indonesia Stock Exchange industry classification

\*\*\* indicates significant at 1%  
\*\* indicates significant at 5%  
\* indicates significant at 10%

**Appendix 1**

**The Content Index of Internet Disclosure Instruments**

Index Items	Explanations	Score	Multiplier	Max
<b>1. Component of Financial Information</b>				
<b>1.1. Statement of Financial Position</b>				
PDF	1 = Yes, 0 = No	1	1	1
HTML	1 = Yes, 0 = No	1	2	2
<b>1.2. Statement of Financial Performance</b>				
<b>1.3. Statement of Cash Flows</b>				
<b>1.4. Statement of Movement in Equity</b>				
<b>1.5. Notes to the Financial Statement</b>				
<b>1.6. Disclosures of Quarterly Results</b>				
<b>1.7. Financial Highlight/Year-in-Review</b>				
PDF	1 = Yes, 0 = No	1	1	1
HTML	1 = Yes, 0 = No	1	2	2
Growth rate, ratios, charts	1 = Yes, 0 = No	1	2	2
<b>1.8. Chairman's Report</b>				
<b>1.9. Auditors' Report</b>				
<b>1.10. Stakeholder Information</b>				
<b>1.11. Corporate Information</b>				
<b>1.12. Social Responsibility</b>				
<b>2. Number of years/quarters Shown</b>				
Annual Report	No. of years	1	0.5	2
Quarterly Report	No. of quarters	1	0.5	2
<b>3. Past Information (HTML Only)</b>				
Annual Report	1 = yes, 0 = no	1	1	1
Quarterly Report	1 = yes, 0 = no	1	1	1
Graph of Share Price	1 = yes, 0 = no	1	2	2
<b>4. Language</b>				
English	1 = yes, 0 = no	1	2	2
Other than English or Indonesia	1 = yes, 0 = no	1	1	1
<b>5. Address (HTML only)</b>				
Company Address	1 = yes, 0 = no	1	1	1

**Appendix 2**  
**The Timeliness Index of Internet Disclosure Instruments**

Index Items	Explanations	Score	Multiplier	Max	
<b>1. Press Releases</b>					
Existence	1 = Yes, 0 = No	1	2	2	
Number of days since last updated news	See note 1	1	1	3	Note 1: Press Release
<b>2. Unaudited Latest Quarterly Result (3 = updated on the date of investigation)</b>					
Existence	1 = Yes, 0 = No	1	2	2	2 = 1 week or less before the date of investigation
With proper disclaimer	1 = Yes, 0 = No	1	1	1	1 = 2 weeks or less before the date of investigation
<b>3. Stock Quote (0 = news is updated more than 2 weeks ago)</b>					
Existence	1 = Yes, 0 = No	1	2	2	
Updated in how many hours	See note 2	1	1	3	Note 2: Stock Quote
<b>4. Vision Statement/Forward Looking Statement (3 = updated every hour or less)</b>					
Existence	1 = Yes, 0 = No	1	2	2	2 = update every day or less
Proper disclaimer	1 = Yes, 0 = No	1	1	1	1 = updated every week or less
Charts of future profit forecasts/trends	1 = Yes, 0 = No	1	1	1	0 = updated every week or less

**Appendix 3**  
**The Technology Index of Internet Disclosure Instruments**

Index Items	Explanations	Score	Multiplier	Max	
Download Plug-in On Spot	1 = Yes, 0 = No	1	2	2	
Online Feedback	1 = Yes, 0 = No	1	2	2	
Use of Presentation Slides	1 = Yes, 0 = No	1	2	2	
Use of Multimedia Technology	1 = Yes, 0 = No	1	3	3	
Analysis Tools	1 = Yes, 0 = No	1	4	4	
Advance Features (XBRL)	1 = Yes, 0 = No	1	5	5	

**Appendix 4**  
**The User Support Index of Internet Disclosure Instruments**

Index Items	Explanations	Score	Multiplier	Max	
Help and Frequently Asked Questions	1 = Yes, 0 = No	1	2	2	
Link to Home Page	1 = Yes, 0 = No	1	1	1	
Link to Top	1 = Yes, 0 = No	1	1	1	
Site Map	1 = Yes, 0 = No	1	2	2	
Site Search	1 = Yes, 0 = No	1	2	2	Note 3: Number of Clicks to get to financial Info
Number of Clicks to get to Financial Info	See note 3	1	1	3	3 = 1 clicks
Consistency of Web Page Design	0 = poor, 1 = fair, 2 = good	1	2	4	2 = 2 clicks

**Appendix 5**  
**Sustainability Reporting Index**

<b>No.</b>	<b>Content</b>
1.	The companies have placed 'sustainability' as a separate item in their main navigation
2.	A sustainability-related FAQ on websites and a sustainability-related glossary on websites
3.	The companies inform their visitors on specific contact persons for sustainability.
4.	The companies do invite visitors pro-actively to get in touch with the company
5.	The companies provide photos regarding one of the three sustainability pillars on their website
6.	The companies offer presentations given by executives, which reflect the company's vision on sustainability
7.	On website the visitor can choose between at least two languages
8.	The companies provide the option to personalize the corporate newsletter for sustainability related news
9.	The companies do inform on their executives, although the extensiveness of the bios differs
10.	The corporate websites we did not find clear and concise information about the companies' locations by means of for example a location finder
11.	The companies have press releases about sustainability on their website (either social, environmental or economic)
12.	The websites case studies on social issues are available, present environmental case studies and present case studies from an economic point of view
13.	Nearly every company provides either a sustainability report or both a social and an environmental report
14.	All companies provide an external assurance statement within their online sustainability section
15.	The companies quantitatively inform on the geographical dispersion of their workforce
16.	Provides quantitative information on injuries, accidents and/or lost-day due to sickness
17.	The companies explain to some extent the role and nature of the various materials they use in their production processes. All companies do provide quantitative information on the materials used as well
18.	The companies provide a clear overview of their geographical breakdown of sales
19.	All companies inform about their donations to society
20.	A code of conduct is available on websites
21.	The companies, communicate on last years sustainability performance compared to that of previous years

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