

Determinants of Readability of Financial Reports of U.S.-Listed Asian Companies

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Abstract

In this paper, I investigate the impact of secrecy, ownership dispersion and profitability on the readability of annual reports of U.S.-listed Asian companies. This is perhaps the first paper to examine the effect on readability of cross-listed Asian companies. I use a measure of secrecy developed in Hope et al. (2008) to study its effect on readability. The sample of this paper consists of all 68 Asian companies from nine countries listed on NYSE/NASDAQ, that are registered and reporting with the SEC. The univariate and multivariate analyses show that companies whose domestic culture is more secretive are providing less readable financial statements. This result is robust to sensitivity tests. This is an interesting and important result in line with the efforts being made to have convergence in the International accounting area. This is despite the fact that a large number of these companies are using IFRS and U.S. GAAP to prepare their financial statements. The results also show that companies with higher ownership dispersion are providing more readable annual reports. The results fail to reject the hypothesis related to the effect of profitability. Finally, the results show that larger sample companies are providing more difficult to read financial statements. These results have important implications for international investors and global standard-setting bodies.

Keywords: Readability, Secrecy, Ownership dispersion, U.S.-listed Asian Companies

1. Introduction and Motivation

Public companies are required to provide an annual report to their investors. Research has long argued that the disclosures provided in these reports are complex and use “incomprehensible language” (Pashalian and Crissy, 1952). The Securities and Exchange Commission (SEC) has made consistent efforts to make these disclosures more readable in the United States (U.S.). One of these efforts is the plain English disclosure rules adopted by the SEC on January 22, 1998. According to Li (2008), the primary argument for this regulation is that firms could use vague language and format in disclosure to hide adverse information, and average investors may be unable to understand these disclosures leading to capital market inefficiency.

There has been little research in this area on cross-listed companies. Cross-listed companies provide an excellent opportunity to examine readability of annual reports because these companies tend to borrow a global culture while retaining characteristics of domestic culture (Zarzeski, 1996). There has been extensive research that examines the effect of culture on accounting disclosures. This paper extends the literature by examining the effect of cultural framework on the readability of annual reports by U.S. – listed Asian companies. Research has shown that accounting disclosures in Asian stock markets are low in both quality and quantity as compared to the U.S. (Sami and Zhou, 2008). When companies from these countries cross-list on a developed market like U.S., the disclosure behavior of these firms attract more attention and therefore, affect the quantity and quality of firms’ disclosures. Therefore, I use U.S.–listed Asian companies because prior research has argued that annual report disclosures made by cross-listed companies will be more extensive than those of domestic-only listed companies, and also because foreign-listed companies tend to borrow a global culture (Zarzeski, 1996). Moreover, the importance of Asian companies cannot be overstated in the present time. India and China are the fastest growing economies in the world and Japan is the second largest economy after the U.S.

Gray (1988) uses the Hofstede’s (1980) cultural framework and defines secrecy versus transparency as a preference for confidentiality and the restriction of disclosure of information about the business only to those who are closely involved with the business. Hope at al. (2008) use this definition of secrecy and study its effects on auditor choice. This paper uses the measure of secretiveness developed in Hope at al. (2008) and studies its effects on the readability of annual reports of U.S.–listed companies. In addition, I examine the effect of ownership dispersion on readability of annual reports because agency theory argues that as ownership structure gets more dispersed, agency costs increase due to increased probability of conflicts of interest between owners. Therefore, higher ownership dispersion will lead the companies to issue more readable annual reports to reduce those conflicts. Finally, I examine the effect of profitability on the readability of U.S.–listed Asian companies because Li (2008) reports that companies that have bad news write excessively long sentences with unnecessary big words thereby making these reports difficult to read.

I use Flesch Reading Ease (FRE) score to measure the readability of annual reports and use OLS regression to examine the effect of secrecy, ownership dispersion, and profitability. The

results of this paper show that companies whose domestic culture is more secretive are providing less readable annual reports. In addition, this paper reports that companies with higher ownership dispersion are providing more readable annual reports. This study did not find any effects of profitability on the readability of annual reports. These results have important implications for the international accounting literature because many of these companies are using IFRS or U.S. GAAP to prepare their financial statements and in spite of using these global standards the domestic culture has an effect on the readability of their annual reports. Therefore, investors of these companies must take this into consideration while perusing the annual reports of these companies. In addition, the global standard-setting bodies should consider the effects of culture on financial statements while issuing new standards.

This paper is organized as follows. The next section reviews the literature on this subject and explores the determinants of readability and readability measures. Section 3 derives the hypotheses and describes the research design of this study. Section 4 explains the sample selection process and provides descriptive analyses and the results of regression analysis. The last section concludes and provides the contributions and limitations of this research.

2. Literature Review and Hypotheses Development

This section reviews the literature on readability of annual reports, readability measures, and culture.

2.1 SEC and Readability

Although the SEC has been working to improve the readability of annual reports since it was established in 1934. In the last 15 years, the SEC has taken an active role in emphasizing the importance of clearly presenting information in SEC filings. First, the SEC issued “A Plain English Handbook” in 1998, that encouraged the use of plain English in the designing of all prospectuses in registered public offerings. This handbook provided practical tips to improve the readability of disclosures in the annual reports such as write in short sentences, use definite, everyday language avoid the use of jargon, and double negatives, etc. In 2003, the SEC reiterated the importance of readable annual reports and issued the following guidance on overall presentation of the MD&A section (SEC, 2003):

MD&A, like other disclosure, should be presented in clear and understandable language.

We understand that complex companies and situations require disclosure of complex matters and we are not in any way seeking over-simplification or "dumbing down" of

MD&A. However, we believe that companies can improve the clarity and understandability of their MD&A by using language that is clearer and less convoluted.

MD&A readability can be viewed as a form of voluntary disclosure and large amount of research has examined the voluntary disclosures of domestic and foreign companies (such as Botosan, 1997, Healy and Palepu, 2001, Cahan et al., 2005, Kumar et al., 2008). However, very few studies have investigated the readability of annual reports of companies. The first

research on readability of annual reports was first published in 1952. Over the last six decades or so, annual report readability has been examined in the context of Australian companies (Lewis et al., 1986; Parker, 1982; Pound, 1981), Canada (Courtis, 1986), the UK (Jones, 1988), and the U.S. (Pashalian and Crissy, 1952; Smith and Smith, 1971; Li, 2008). In general, findings have revealed the readability of annual reports to be at a level of difficult to very difficult, and beyond the comprehension skills of about 90 percent of the adult population and about 40 percent of the investor population (Courtis, 1995).

2.2 Measures of Readability

Readability assessment research has developed several methods for measuring readability. Some of the most popular methods for assessing readability include the Cloze procedure, the Gunning's Fox Index, The Flesch-Kincaid Grade Level, and the Flesch Reading Ease (FRE) formula. The Cloze procedure was one of the early methods developed for assessing readability. The method for this procedure makes it arguably the most difficult method to use for researchers since it requires the use of individual readers. Critics of this method argue that it better assesses the reader's ability rather than the readability of the passage. While the Cloze approach is associated with understandability of the material, the other three procedures examine the syntactical complexity of the text. Examining the syntactical complexity of the text allows the researcher to determine the readability of text independent of reader intelligence. The Gunning's Fog Index (Gunning, 1952) is one of the methods that focuses on the syntactical complexity of the passage and requires that the researcher count words containing three or more syllables, referred to as "hard words." The formula determines the grade level of the passage based on a formula using the percentage of "hard words" and the average sentence length.

Another formula that asserts to assess grade level is the Flesch-Kincaid Grade Level. This score indicates the minimum level of education required in order to understand the subject material. Similar to the Gunning's Fog Index, the FRE index uses the average sentence length, but then uses the average number of syllables per word to calculate a score.¹ The FRE index calculates how easy it is to read a passage and assigns a score from one to 100, where higher scores indicate greater ease in reading and a score of 64 is considered "plain English" while any score less than 60 is considered difficult reading material (Flesch 1948, 1949). Table 1 presents a description of the reading ease score calculated by the FRE formula.

Although the FRE index is widely used by accounting researchers to assess readability, criticism includes the fact that "attributes such as syntax, style, format, graphic design, logic, conceptual density, human interest, organization and reinforcement are not considered" (Courtis 1998, p. 460). Despite criticisms, according to Crosier (2004), FRE is the formula

¹ The formula for the Flesch Reading Ease score is: $206.835 - (1.015 \times \langle \text{ASL} \rangle) - (84.6 \times \langle \text{ASW} \rangle)$, where $\langle \text{ASL} \rangle$ is the average sentence length (number of words/number of sentences) and $\langle \text{ASW} \rangle$ average number of syllables per word (number of syllables/number of words) (Microsoft.com).

used most often in research, and its validity as a measure of readability has been established. The IRS has also used the FRE index to evaluate tax forms and instruction booklets. In a review article, Jones and Shoemaker (1994) identified thirty-two empirically based, readability studies in accounting research (limited to English speaking countries). They found that researchers used a Flesch-based test in 26 of the 32 studies and only 11 of the 32 studies used more than one test of readability. More recently, Chiang, et al. (2008) found that the readability scores obtained using the Flesh Reading Ease, Flesch-Kincaid Grade Level Index, Gunning's Fog Index, and the SMOG procedure were highly correlated ($p < 0.0001$) indicating consistency among the four measures. This consistency implies that a researcher need only use one of these four methods and expect reliable results (Chiang et al. 2008). Therefore, because of its extensive use in research and ease in calculating, I have selected the FRE score as calculated in Microsoft Word to evaluate the readability of annual reports of sample companies.

2.3 Culture and Readability

Hofstede (1980) defines culture as 'the collective programming of the mind which distinguishes the members of one human group from another' and Gray's (1988) theory explains how culture affects the development of businesses and their institutions, including accounting systems. Gray's model defines four accounting values which are linked to Hofstede's societal values. These accounting values are "Professionalism, Uniformity, Conservatism, and Secrecy". Gray (1988, P. 8) describes the secrecy versus transparency as a "a preference for confidentiality and the restriction of disclosure of information about the business only to those who are closely involved with its management and financing as opposed to a more transparent, open, and publicly accountable approach." Gray (1988) states that secrecy is positively correlated with uncertainty avoidance and power distance and negatively correlated with individualism.

Hofstede (1980) states that Individualism represents the degree of separateness within a society and a preference for a loosely knit social framework in society in which individuals are supposed to take care of themselves. Power distance denotes the dispersion of authority in a society. In a society with a high power distance, for example, there is less dispersion of and less questioning of authority figures and vice-versa. The cultural dimension of uncertainty avoidance signifies the degree to which a society can accept uncertainty and ambiguity.

Hope et al. (2008) argue that uncertainty-avoiding societies are expected to be more secretive so as to avoid potential conflict with outsiders. When power distance is large, managers are expected to hide and not disclose information to preserve power inequalities. In addition, individualistic societies are expected to be less secretive than collectivist societies, where people share the common beliefs and possibly information.

3. Hypotheses Development

Agency theory (Jensen and Meckling, 1976) predicts that due to the information asymmetry between a principal (owner) and an agent (manager), there is a moral hazard problem – the possibility that an agent will exploit the principal's assets for his self-interest. This theory

predicts that both agents and principals recognize that it can be beneficial to reduce this information asymmetry by providing accounting disclosures. However, Hope et al., (2008) argue that even for managers with an incentive to share information for reducing information asymmetry, their cultural tendency to be secretive might conflict with such incentives. Therefore, it can be argued that companies that want to reduce information asymmetry will provide their annual reports in a clearly readable format. However, companies from countries whose culture inherently secretive will try to hide information by burying it in complex language.

Warner (2003) shows that all Asian countries have a distinct cultural framework and in many cases a form of management with local characteristics. More importantly, Warner (2003) reports that in Asia, country-specific cultures have resulted in an observable set of highly identifiable institutions leading to different management styles in all countries. Therefore, this paper tests the following hypothesis (stated in alternative form):

H₁: U.S.-listed Asian Companies with low/ (high) secrecy are likely to provide more/(less) readable annual reports in the U.S.

Another argument that follows from agency theory is that as the ownership structure more dispersed, the agency costs increase due to increased probability of conflicts of interest between owners (Fama and Jensen, 1983). Therefore, to counter this effect, the firms that have high ownership dispersion will likely issue more readable annual reports. Oliveira et al. (2006) and Kumar (2013) examines the effect of ownership dispersion on the voluntary disclosures and reports that firms with higher ownership dispersion provide higher voluntary disclosures of intangible assets. Therefore, this study posits the following hypothesis (stated in alternative form):

H₂: U.S.-listed Asian companies with higher/ (lower) ownership dispersion will provide more/ (less) readable annual reports.

Incomplete revelation hypothesis (IRH) implies that managers can reduce the market response to bad news by making bad news more costly to analyze (Bloomfield, 2002). Li (2008) tests this hypothesis and reports that managers make bad news costly by writing excessively long annual reports with unnecessary big words and long sentences. An alternative explanation of these results is that losses and bad news are simply more difficult to describe. Another reason is that managers might write longer and complex annual reports to protect themselves from litigation when they report poor performance (Bloomfield, 2008). The SEC handbook on Plain English recognizes that legalese can be complex to read. Therefore, this paper tests the following hypothesis (stated in alternative form):

H₃: U.S.-listed Asian Companies with higher/ (lower) profitability are likely to provide more / (less) readable annual reports in the U.S.

4. Sample Selection and Analyses

The sample for this study consists of all U.S.-listed Asian companies in the year 2010. Although there are hundreds of Asian companies that are listed in the U.S. that have issued

ADRs (American Depository receipts), however, I choose to use only those companies that are registered and reporting with the SEC. This is because these companies are subject to increased disclosure requirements. This leads to 85 companies from nine Asian countries (see Table 2). However, 17 of these companies are listed on over-the-counter (OTC) debt and stock exchanges.² There are significant differences in the disclosure rules for companies listed on OTC exchanges versus those listed on national stock exchanges such as the NYSE and NASDAQ. Therefore, this paper focuses on the 68 Asian companies listed on the NYSE/NASDAQ from nine countries.

4.1 Dependent Variable

An Ordinary Least Squares (OLS) model is used to test the hypotheses. The dependent variable in the OLS regression model is the Flesch Reading Ease (FRE) score as calculated in Microsoft Word based on readability of the Management Discussion and Analysis (MD&A) section of the sample companies' Form 20-F annual report. This study measures the readability of the MD&A section because of the opportunity offered by this section as a communication medium for voluntary disclosure, as its contents are not affected significantly by the accounting regulations. Moreover, in the MD&A Section, companies provide disclosures on the current trends, and potential impact of the events or uncertainties that are reasonably likely to have material effects on a company's financial condition (IOSCO, 2003).

The FRE score has been extensively used in prior research to measure readability and its reliability has been tested as well (Chiang et al., 2008). A potential limitation to this method is a lower score (indicating more difficult reading) when used with highly technical material. The score uses the average number of syllables per word and technical terms may inflate this calculation. This limitation can be overcome by assessing material that is similar in nature (such as material on the same topic) and by using the score to assess relative readability rather than absolute readability (Flory et al. 1992). Therefore, this paper uses this score to test the readability of similar documents i.e., annual reports of U.S.-listed Asian companies.

4.2 Independent Variables

The primary variable of interest for the first hypothesis is secrecy. According to Gray (1988), uncertainty avoidance and power distance are positively associated with secrecy and

Individualism is negatively related with secrecy. Countries with high uncertainty avoidance tend to provide minimal disclosures to avoid conflict and competition and to preserve security of interests. High power distance societies are likely to be characterized by the hiding of information to preserve power inequalities, leading to more secrecy. Secrecy is consistent with a preference for collectivism. Individualistic societies express greater concern for those closely involved with the firm rather than for external parties. Therefore, I measure this variable as the sum of uncertainty avoidance and power distance scores less the individualism score (similar to Hope et al, 2008). Table 3 shows the computation of this variable.

² The number of U.S.- listed Asian companies on the OTC is 17 out of 85 companies (20%). The number of all foreign OTC companies on the U.S. stock exchanges is **256 out of 970 companies (26.4%)**.

To test the second hypothesis, I measure the Ownership Concentration as the percentage of shares owned by the three most important and known shareholders to be used as an independent variable (Ownership Concentration)³. The third hypothesis predicts that companies that are profitable will provide more readable annual reports. Therefore, I measure the profitability as Net Income scaled by Total Assets of a firm and use that as an independent variable.

4.3 Control Variables

The following variables are used as control variables in the regression:

1. **Size:** Various studies have shown firm size is a determinant for accounting disclosures and size is also used as a proxy variable for omitted variables (Botosan, 1997; Hossain et al. 1995). This paper uses natural log of total assets measured in millions of dollars as FIRMSIZE to explain the readability of annual reports. In general, it is expected that a larger firm will have more complex operations and will provide longer and complex annual reports.
2. **Foreign Sales:** I use foreign sales percentage (FSALES%) as a proxy for complexity of operations. In general, higher foreign sales will lead to longer annual reports and difficult to read annual reports. In addition, this variable acts as a control variable for the domestic culture as it is expected that a larger foreign sales will mitigate the effect of domestic culture (secrecy in home country) since that means that the firm is more exposed to foreign culture norms and behaviors (Hope et al., 2008)
3. **Debt Ratio:** Debt ratio is measured as total liabilities divided by total assets. In general, companies that have higher proportion of debt are expected to provide less readable annual statements.

4.4 Descriptive Analyses

Table 4 shows the results of descriptive analyses. The minimum FRE score for the sample companies is 3.90 and the maximum is 21. Recall that a higher FRE score indicates reading ease and that a score of 64 is considered “plain English”. Therefore, none of the sample companies are providing annual reports that can be described as easy to read. There is a large variability in the rest of the variables as well. The sample companies come from cultures that have varying levels of secrecy in their home countries (the scores range from 62 to 127). A higher value indicates more of that particular trait.

Table 5 shows the scores of dependent variable and the three control variables by country. Companies from India and Taiwan have the highest FRE scores indicating *easiest to read* financial statements among all the sample countries. Apart from countries that have a very small number of companies listed in the U.S., companies from Hong Kong and China have the lowest FRE scores indicating difficult to read financial statements among all the sample

³ Similar to Oliveira et al. (2006)

countries. The largest sample companies are from Japan and the smallest come from Singapore. Companies from China are heavily dependent upon debt (median DEBTRATIO = 0.74) and sample companies from Taiwan have the lowest DEBTRATIO after Singapore⁴ indicating higher reliance on equity capital.

Table 6 provides the Pearson correlation coefficients among the regression variables. Secrecy is negatively correlated with FRE (-0.244), as hypothesized. This result provides bivariate support for the prediction that less secretive companies provide annual reports with higher readability scores. Firm size is also negatively correlated with FRE indicating that bigger companies provide difficult to read annual reports. Debt Ratio is positively correlated with Firm size indicating that bigger companies have more debt and negatively related with FRE. While some of these results are consistent with the hypotheses in this paper, they should be interpreted with caution since they do not control for differences in other variables.

4.5 Regression Analysis and Hypothesis Testing

Table 7 provides the results of regression analysis. Out of the three control variables, only the coefficient for FIRMSIZE is marginally significant ($p=0.080$) and the rest of the coefficients on the control variables are not significant. The coefficient on FIRMSIZE is negative, indicating larger companies have lower FRE scores and therefore less readable financial statements. This result is in line with expectations as larger companies usually have complex operations.

The first hypothesis predicts that companies whose domestic culture is more secretive will provide difficult to read financial statements. The variable of primary interest for the first hypothesis is Secrecy and the results show that the coefficient on this variable is negative and statistically significant, providing support for H_1 . The second hypothesis predicts that companies with higher ownership dispersion will provide more readable financial statements; however, the coefficient on this variable is not statistically significant. Therefore, these results fail to reject the second hypothesis. The third hypothesis predicts that companies with higher profitability will provide more readable annual reports; however, the coefficient on this variable is not statistically significant. Therefore, these results fail to reject the third hypothesis as well.

4.6 Sensitivity Analyses

I do three sensitivity tests to investigate the robustness of the results reported. First, I devise a second measure of secrecy based on the alternative definition in Gray (1988). Gray (1988) also hypothesizes a somewhat weaker link between secrecy and masculinity. He argues that in more caring societies where more emphasis is given to the quality of life, people will tend to be more open especially for socially related information. In particular, the alternative secrecy variable is the sum of uncertainty avoidance and power distance scores less individualism and masculinity scores. I repeat the above tests using the alternative measure of secrecy. There are no significant differences between results for this alternative measure of secrecy and therefore those results are not reported.

⁴ Singapore has only one company listed in the U.S.

As discussed above, I derive the readability numbers by using FRE index method. As an alternative to using the resulting raw composite measure of these scores, I repeat these analyses using the ranks of readability scores. One concern is that it is hard to interpret, in an economically quantifiable way, what the difference in these composite scores represents. For example, is the difference between 18 and 12 twice as great as the difference between 15 and 12, at least in terms of the effect of culture on the variable of interest? These results are essentially similar to the ones reported with raw FRE scores and therefore are not reported separately.

Lastly, Oliveira et al. (2006) argue that different industries have different characteristics relative to market competition, the type of private information, and the threat of entry of new firms into the market. These factors provide incentives for companies belonging to the same industry to disclose more information than firms in another industry. Therefore, this paper introduces a dummy variable for industry (1 if non-financial industry, 0 otherwise) and includes that variable in the regression analysis. Table 8 provides those results. The results with respect to Firm Size and Secrecy do not change. Firm Size is statistically significant in this regression. The coefficient on Ownership Concentration is negative and statistically significant. This indicates that companies that have higher ownership dispersion are providing more readable annual reports providing support for H2. The coefficient on the dummy variable, industry, is also statistically significant.

5. Conclusions and Recommendations

This paper examined the following issues: 1) the effect of domestic culture, i.e. secrecy; 2) the effect of agency theory, i.e., ownership dispersion; and 3) the effect of profitability, on the readability of annual reports of U.S. – listed Asian companies. The analyses show that companies whose domestic culture is more secretive are providing less readable financial statements. This result is robust to sensitivity analyses and holds after controlling for size, profitability, complexity of operations, debt ratio and ownership concentration. This is an interesting and important result in line with the efforts being made to have convergence in the International accounting area. This is despite the fact that a large number of these companies are using IFRS and U.S. GAAP to prepare their financial statements. Regarding the second hypothesis, the results in the sensitivity analyses support the finding that companies with higher ownership dispersion are providing more readable annual reports. With respect to the third issue, the results failed to reject the hypothesis related to the effect of profitability. The results also show that larger sample companies are providing difficult to read annual reports.

As with all research, there are some limitations of this study. The sample size of 68 companies is unevenly distributed among nine countries. Second, the FRE measure of readability has been criticized in the literature because it does not consider attributes such as syntax, style, format, graphic design, logic, conceptual density, human interest, organization and reinforcement. However, its widespread use and studies showing that the reliability of this score is at least equal to the other readability measures provides support for this test. Moreover, prior research argues that these limitations can be overcome if this test is used to analyze similar documents. Third, the culture scores from Hofstede (2001) were developed

before 1980. It is possible that the cultural characteristics of Asian countries may have changed since then.

An important contribution of this study is that this is perhaps the first paper to analyze the readability of annual reports of U.S. – listed Asian companies in the U.S. These companies provide an important avenue of International accounting research because they come from different forms of culture and it is interesting to examine the effect of culture on their annual statements. Previous research has argued that when firms get cross-listed, their characteristics change when they borrow global culture. This paper provides evidence that the annual reports of U.S.–listed Asian companies exhibit some effects of their domestic culture even after they are listed globally. This result has important implications for the purpose of international accounting convergence and can prove useful for standard setters and policy makers across the world.

Finally, U.S.–listed Asian companies are an under-explored area in the international accounting research. These companies have their origin in those Asian countries, which stand at the forefront of economic growth at present (for example, India and China are two of the fastest growing economies and China is the second largest economy after the U.S.). Therefore, it is important for researchers to obtain empirical evidence on the disclosure practices of these companies. Future research in this area may compare the readability of annual reports by U.S.–listed Asian companies with matched home country companies. Another research question that can be examined is the effect of cross listing on U.S.–listed Asian companies. Lastly, the hypotheses tested in this study can be examined in the context of other countries.

Table 1. Flesch Reading Ease Score

This table shows the ease of readability associated with different ranges of Flesch scores.

Flesch Score	0-30	30-50	50-60	60-70	70-80	80-90	90-100
Readability	Very Difficult	Difficult	Fairly Difficult	Standard	Fairly Easy	Easy	Very Easy

(Flesch, R. 1949, p. 149)

Table 2. Sample Companies

This table provides the number of companies from each Asian country that are listed in the U.S., the number of OTC companies (excluded from the sample) and the number of companies included in the sample for this paper.

Country	Number of Companies Listed in U.S.	Number of OTC Companies/Data Unavailable	Included in Sample
China	11	0	11
Hong Kong	5	0	5
India	13	1	12
Indonesia	2	0	2
Japan	27	6	21
Philippines	2	1	1
Singapore	5	4	1
South Korea	14	5	9
Taiwan	6	0	6
Total	85	17	68

Table 3. Culture Scores for Asian Countries

These scores were developed by Hofstede (1980) in a multidimensional scaling of work-related surveys of 160,000 IBM employees over 64 countries. Secrecy is computed based on the model in Gray (1988). A higher value indicates more of that particular cultural trait.

Countries	Uncertainty Avoidance (UA)	Power Distance (PD)	Individualism / Collectivism (INDIV)	Secrecy (UA+PD-INDIV)
1. China	30	80	20	90
2. Hong Kong	29	68	25	72
3. India	40	77	48	69
4. Indonesia	48	78	14	112
5. Japan	92	54	46	100
6. Philippines	44	94	32	106
7. Singapore	8	74	20	62
8. South Korea	85	60	18	127
9. Taiwan	69	58	17	110

Table 4. Descriptive Statistics

This table provides the descriptive statistics for the dependent and independent variables that are used in this research.

Variables	Minimum	Maximum	Mean	Median	Standard Deviation
Flesch Reading Ease Score	3.90	21	12.35	16.50	3.89
FIRMSIZE	18.06	28.40	23.56	22.26	2.25
Debt Ratio	0.13	0.98	0.53	0.54	0.25
Income/Assets	-0.72	0.27	0.04	0.13	0.13
FSALES%	0	0.99	0.33	0.41	0.36
Secrecy	62	127	95.19	100	18.89
OC	0.06	0.93	0.41	0.44	0.25

Flesch Reading Ease Score: Readability output from MS-Word of the MD& A section of the Form 20-F annual report;

Firm Size = natural log of total sales of the firms (in millions of U.S. Dollars);

Debt Ratio = total debt divided by total assets (in millions of U.S. Dollars);

Income/Assets = Net Income of the company divided by Total Assets;

FSALES% = foreign sales divided by total sales as reported in the Form 20-F annual report;

Secrecy = computed as Uncertainty Avoidance + Power Distance – Individualism scores from Hofstede (1980);

OC = Ownership Concentration = the percentage of shares owned by the three most important and known shareholders.

Table 5. Country Readability Statistics

This table provides the mean and median readability scores of companies within Asian countries. Please see Table 4 for variable definitions.

Country	N	Flesch Reading Ease Mean (Median)	FIRMSIZE Mean (Median)	FSALES% Mean (Median)	DEBTRATIO Mean (Median)
China	11	11.74 (10.4)	23.93 (23.44)	0.06 (0)	0.69 (0.74)
Hong Kong	5	11.64 (11.9)	22.45 (24.26)	0 (0)	0.48 (0.49)
India	12	14.76 (14.5)	22.31 (22.60)	0.46 (0.43)	0.45 (0.44)
Indonesia	2	4 (4)	22.84 (22.84)	0 (0)	0.54 (0.54)
Japan	21	12.54 (13.1)	24.49 (25.14)	0.54 (0.52)	0.43 (0.43)
Philippines	1	7.2 (7.2)	22.48 (22.48)	0 (0)	0.65 (0.65)
Singapore	1	12.3 (12.3)	19.40 (19.40)	0.94 (0.94)	0.19 (0.19)
South Korea	9	10.78 (10.7)	24.28 (24.81)	0.32 (0)	0.62 (0.56)
Taiwan	6	14.65 (14.55)	23.11 (23.23)	0.62 (0.65)	0.32 (0.23)

Table 6. Bivariate Correlations

This table provides the bivariate correlations (Pearson) between the variables used in the regression analysis. Please see Table 4 for variable definitions. * Indicates significance at 0.05 level.

	Firm Size	FRE	Secrecy	Foreign Sales %	OC	Income/Assets
FRE	-0.205*					
Secrecy	0.303*	-0.244*				
Foreign Sales %	-0.185	0.140	0.023			
OC	-0.134	-0.093*	0.293*	-0.495*		
Income/Assets	0.402	-0.116	0.026	0.089	-0.043	
Debt Ratio	0.574*	-0.192*	0.139*	-0.345*	0.111	-0.204*

Table 7. Regression Results

This table provides regression results for the overall sample. Please see Table 4 for variable definitions.

Dependent Variable: Flesch Reading Ease Score

	Exp. Sign	Std. Beta	t	p-value
Intercept		1.50	1.496	0.141
Firm Size	-	-0.221	1.783	0.080
Secrecy	-	-0.262	2.432	0.018
Foreign Sales%	-	0.054	0.463	0.645
OC	-	0.086	0.700	0.487
Income/Assets	+	-0.068	-0.661	0.512
Debt Ratio	-	0.007	0.054	0.958
Model		Adj R²	F	p-value
Summary		0.476	7.254	0.000

Table 8. Regression Results

This table provides regression results for the overall sample with Industry as a dummy variable (1 for non-financial, 0 otherwise). Please see Table 4 for variable definitions.

Dependent Variable: Flesch Reading Ease Score

	Exp. Sign	Std. Beta	t	p-value
Intercept		1.69	1.597	0.115
Firm Size	-	-0.044	-1.947	0.056
Secrecy	-	-0.259	-2.071	0.043
Foreign Sales%	-	0.090	0.716	0.477
OC	-	-0.242	-1.947	-0.056
Income/Assets	+	-0.163	-1.306	0.196
Industry	+/-	-0.234	-1.933	0.058
Debt Ratio	-	-0.160	-1.013	0.315
Model		Adj R²	F	p-value
Summary		0.409	2.228	0.052

References

Bloomfield, R.J. (2002). The “incomplete revelation hypothesis” and financial reporting. *Accounting Horizons*, 16(3), 233–243 <http://dx.doi.org/10.2308/acch.2002.16.3.233>

- Bloomfield, R. (2008). Discussion of annual report readability, current earnings, and earnings persistence. *Journal of Accounting and Economics*, 45(2-3), 248-252. <http://dx.doi.org/10.1016/j.jacceco.2008.04.002>
- Botosan, C. (1997). Disclosure level and the cost of equity capital. *The Accounting Review*, 72(3), 323-339.
- Cahan, S.F., A. Rahman, and H. Perera. (2005). Global diversification and corporate disclosure. *Journal of International Accounting Research*, 4(1), 73-93. <http://dx.doi.org/10.2308/jiar.2005.4.1.73>
- Chiang, W. C, T. E. Englebrecht, T. J. Phillips, Jr., and Y. Wang. (2008). Readability of financial accounting principles textbooks. *The Accounting Educators' Journal*, 18, 47-80.
- Courtis, J.K. (1986). An investigation into annual report readability and corporate risk-return relationships. *Accounting and Business Research* 16(64), 285-294 <http://dx.doi.org/10.1080/00014788.1986.9729329>
- _____. (1995). Readability of annual reports, Western versus Asian evidence. *Accounting, Auditing & Accountability Journal*, 8(2), 4-17. <http://dx.doi.org/10.1108/09513579510086795>
- _____. (1998). Annual report readability variability, tests of obfuscation hypothesis. *Accounting, Auditing & Accountability Journal*, 11(4), 459-471. <http://dx.doi.org/10.1108/09513579810231457>
- Crosier, K. (2004). How effectively do marketing journals transfer useful learning from scholars to practitioners? *Marketing Intelligence & Planning*, 22(5), 540-556. <http://dx.doi.org/10.1108/02634500410551923>
- Deloitte Touche Tohmatsu. (2008). *IFRS in your pocket 2008*. Deloitte, London.
- Fama, E. and M. Jensen. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301-325 <http://dx.doi.org/10.1086/467037>
- Flesch, R. (1948). A new readability yardstick. *Journal of Applied Psychology*, 32(3), 221-233. <http://dx.doi.org/10.1037/h0057532>
- _____. (1949). *The art of readable writing*. New York, Harper.
- Flory, S. M., T. J. Phillips, Jr. and M. F. Tassin. (1992). Measuring readability, a comparison of accounting textbooks. *Journal of Accounting Education*, 10, 151-161. [http://dx.doi.org/10.1016/0748-5751\(92\)90022-W](http://dx.doi.org/10.1016/0748-5751(92)90022-W)
- Gray, S.J. (1988). Towards a theory of cultural influence on the development of accounting systems internationally. *Abacus*, 24(1), 1-15. <http://dx.doi.org/10.1111/j.1467-6281.1988.tb00200.x>
- Gunning, R. (1952). *The technique of clear writing*. New York, McGraw-Hill.

Healy, P.M. and K.G. Palepu. (2001). Information asymmetry, corporate disclosure, and the capital markets, A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31(1-3), 405-440. [http://dx.doi.org/10.1016/S0165-4101\(01\)00018-0](http://dx.doi.org/10.1016/S0165-4101(01)00018-0)

Hofstede, G. (1980). *Culture's consequences, International differences in work-related values*. Beverly Hills, Sage Publications.

_____. (2001). *Culture's consequences, Comparing values, behaviors, institutions, and organizations across nations, 2nd edition*. Thousand Oaks. Sage Publications.

Hossain, M., H. Perera, and A. Rahman. (1995). Voluntary disclosure in annual reports of New Zealand Companies. *Journal of International Financial Management and Accounting*, 6(1), 69-87. <http://dx.doi.org/10.1111/j.1467-646X.1995.tb00050.x>

Hope, O., T. Kang, W. Thomas, Y.K. Yoo. (2008). Culture and auditor choice, A test of the secrecy hypothesis. *Journal of Accounting and Public Policy*, 27(5), 357-373. <http://dx.doi.org/10.1016/j.jaccpubpol.2008.07.003>

International Organization of Securities Commissions(IOSCO). (2003). General Principles Regarding Disclosure of Management's Discussion and Analysis of Financial Condition and Results of Operations. Available at the SEC website.

Jensen, M.C., W.H. Meckling. (1976). Theory of the firm, Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360. [http://dx.doi.org/10.1016/0304-405X\(76\)90026-X](http://dx.doi.org/10.1016/0304-405X(76)90026-X)

Jones, M.J. (1988). A longitudinal study of the readability of the chairman's narratives in the corporate reports of a UK company. *Accounting and Business Research*, 18(72), 297-305 <http://dx.doi.org/10.1080/00014788.1988.9729377>

Jones, M. J. and P. A. Shoemaker. (1994). Accounting narratives, a review of empirical studies of content and readability. *Journal of Accounting Literature*, 13,142

Kumar, G., W.M. Wilder and M.H. Stocks. (2008). Voluntary Disclosures by U.S.-listed Asian Companies. *Journal of International Accounting Research*, 7(1), 25-50. <http://dx.doi.org/10.2308/jiar.2008.7.1.25>

Li, F. (2008). Annual report readability, current earnings, and earnings persistence. *Journal of Accounting and Economics*, 45(2-3), 221-247. <http://dx.doi.org/10.1016/j.jacceco.2008.02.003>

Lewis, N.R., L.D. Parker, G.D. Pound, and P. Sutcliffe. (1986). Accounting report readability, the use of readability techniques. *Accounting and Business Research*, 16(63), 199-213. <http://dx.doi.org/10.1080/00014788.1986.9729318>

Oliveira, L., L.L. Rodrigues and R. Craig. (2006). Firm-specific determinants of intangibles reporting, evidence from the Portuguese stock market, *Journal of Human Resource Costing and Accounting*, 10(1), 11-33. <http://dx.doi.org/10.1108/14013380610672657>

Parker, L.D. (1982). Corporate annual reporting, a mass communication perspective, *Accounting and Business Research*, 12(48), 279-286
<http://dx.doi.org/10.1080/00014788.1982.9728820>

Pashalian, S. and W.J.E. Crissy. (1952). Corporate annual reports are difficult, dull reading, human interest value low. *Journal of Accountancy*, 215-219

Pound, G.D. (1981). A note on audit report readability. *Accounting and Finance*, 21(1), 45-55.
<http://dx.doi.org/10.1111/j.1467-629X.1981.tb00028.x>

Sami, H. and H. Zhou. (2008). The economic consequences of increased disclosures, Evidence from cross-listings of Chinese firms. *Journal of International Financial Management and Accounting*, 19(1), 1-27.
<http://dx.doi.org/10.1111/j.1467-646X.2008.01014.x>

SEC. (1998). A Plain English Handbook, How to Create Clear SEC Disclosure Documents. U.S. Securities and Exchange Commission, Washington, DC.

SEC. (December 29, 2003). Interpretation, Commission Guidance Regarding Management's Discussion and Analysis of Financial Condition and Results of Operations."

Smith, J.E. and N.P. Smith. (1971). Readability, a measure of the performance of the communication function of financial reporting. *The Accounting Review*, 46(3), 552-561.

Warner, M. (2003). *Culture and Management in Asia*. London, RoutledgeCurzon.

Zarzeski, M.T. (1996). Spontaneous harmonization effects of culture and market forces on accounting disclosure practices. *Accounting Horizons*, 10(1), 18-37.