

IFRS Adoption and Information Quality: Evidence from Emerging Market

SEYED SAJAD EBRAHIMI RAD & ZAINI EMBONG

ABSTRACT

The IASB was established in order to produce a single set of high quality, understandable and enforceable accounting standards, namely the IFRS. Most of the existing studies about the IFRS have largely focused on advanced countries adoption, while the present study fills a gap in the existing literature by studying the effect of IFRS adoption on information quality in an emerging market. A number of studies indicate that this new set of standards is primarily aimed at countries with highly developed capital market, and it can be questioned whether the resulting standards are optimal for developing and transitional economies. This study attempts to examine whether there is any significant association between IFRS adoption and market perspective of information quality, proxied by bid-ask spread. The sample comprises a balanced panel of 858 firm-year observations of listed firms under the Main Board of Bursa Malaysia. Results of the study shows that the implementation of IFRS generally reinforces information quality. Taken together, our results are consistent with the view that IFRS represent a vehicle through which countries can improve information quality and make their capital markets more efficient and accessible to investors. This is the first published study that investigates the impact of IFRS adoption on information quality of an emerging market. The nature of the information environment of capital market in Malaysia provides us with enough motivations to investigate the impacts of this new set of standards on information quality.

Keywords: Information quality; bid-ask; emerging market; information asymmetry; IFRS

INTRODUCTION

Emergence of multinational companies and globalization of the world's capital markets has created a need for a single set of accounting standards that can be applied around the world. Such standards should improve transparency and comparability of financial information for investors, resulting in lower information asymmetry, greater willingness of investors to invest, lower cost of capital, higher capital market efficiency, more efficient allocation of resources and higher economic growth. These have been the objectives of the International Accounting Standards Board (IASB).

The IASB was established in 2001 in order to produce a single set of high quality, understandable and enforceable International Financial Reporting Standards (IFRS) and encouraging global convergence on these standards. Studies (e.g. Levitt 1998) indicate that there is a strong link between high quality standards and high quality financial outcomes. Past researches also demonstrate that higher information quality decreases adverse selection (Lambert et al. 2007; Horton et al. 2013), reduces information asymmetry (Myers & Majluf 1984; Gassen & Selhorn 2006), decreases cost of capital (Hail & leuz 2006) and increase market efficiency (Akerlof 1970; Spence 1976). Thus, if IFRS are higher quality standards than local GAAPs and provide better information, adoption of IFRS has the potential to generate the mentioned benefits.

Studies that investigate the impact of this new set of accounting standard on accounting outcomes, users and capital markets of advanced countries are abound (e.g. Landsman et al. 2012; Chua et al. 2012; Brochet

et al. 2013). However, despite these widespread studies within advanced and developed markets such as European Union (EU) countries and Australia, little research has directly addressed the impact of IFRS adoption on the financial market and quality of financial reporting in an emerging market. There is a significant gap in the literature given the differences that exist between developed and developing countries and their capital markets. Among others, the differences are organization of the economy and society (Hofstede & Hofstede 2004), capital market (Gibson 2003), regulatory authorities (Berghe 2002) and ownership structure (Claessens et al. 2000). Considering these differences, the question that begs to be answered is whether the IFRS adoption has a positive impact on financial information quality within emerging markets as claimed by standard setters.

The question is empirically evaluated using firm level observations from an emerging market, Malaysia. The primary reason we focus on Malaysia is that the country is one of the main business and financial centers in the Asia Pacific (Muniandy & Jahangir Ali 2012). Asia Pacific countries have evolved in recent years to be leading countries among developing countries. Alongside the economic developments, there is also tremendous improvement in financial system. However, little attention has been paid to understanding the evolutionary development process of these countries' financial reporting quality. These countries also have a rich history of financial reporting reforms. For example, various restructuring programs that aim to achieve a better financial information quality have been launched since the 1970s in Malaysia.

However, there is little empirical evidence providing policy makers with the necessary information as to whether these reforms have had any impact on the information quality. Another reason to choose Malaysia is that the country is one of the forerunner emerging markets that adopt IFRS. This allows a sufficient information window to assess the impact of the adoption, as the effects often take time to materialize post-implementation.

In order to examine the effect of IFRS adoption on information quality from market perspective, we investigate whether the changes of information quality, proxied by bid-ask spread, has any significant association with the adoption of IFRS. The study covers short periods of three years before and three years after the IFRS adoption. This is to ensure that changes in information quality observed are not due to changes in other institutional factors, such as the change in legal institutions and stock exchange requirements. Since there was no other change in the country's financial reporting environment during the studied period, we assume that the potential factor that could affect firm's information quality during the period was the adoption of IFRS.

Overall, inferences based on a sample of 858 firm-year observation for 143 Malaysian listed companies in Main Board of Bursa Malaysia provide support that the adoption of IFRS in Malaysia has made an improvement to financial information quality. Specifically, we find that in post-IFRS era the level of information quality (bid-ask spread) increases (decreases) compared to pre-IFRS. This implies that the decision made by the Malaysian accounting standard setting body to adopt IFRS leads to significant benefits for the country's financial reporting, in terms of higher information quality.

The present study aims to contribute to the literature examining the effects of IFRS in several ways. First, as the Asia Pacific countries in general, and specifically Malaysia capital markets play an increasing role in global investment strategy (Favere-Marchesi 2000), this assessment should help to evaluate the risk factors of investing in this region. Further, as these countries become more involved in global trading, companies wishing to invest or conduct business in the region should benefit from understanding the present state of financial information quality. Additionally, as most of the existing studies on the impact of IFRS have largely focused on European countries adoption, the present study fills a gap in the existing literature by studying the effect of adoption of IFRS on information quality in an emerging market. Finally, similar to Wan Ismail et al. (2013), our empirical findings, which suggests that the adoption of IFRS increase the quality of financial information quality, could encourage regulators and standard setters in other emerging markets to move forward in adopting the standards.

The remainder of the paper is organized as follows. Section 2 discusses previous studies leading to the development of the hypothesis. Section 3 describes methodology, including the description of the sample and variables involved. Section 4 discusses the results and additional test, followed by conclusion in section 5.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

IFRS ADOPTION IN MALAYSIA

The Malaysian Association of Certified Public Accountants (MACPA) and Malaysian Institute of Accountants (MIA) were established in 1958 and 1967 respectively (Tan 2000). In 1978, after being admitted as a member of the IASC, the MACPA began adopting International Accounting Standards (IASS). They jointly issued national accounting standards, called the Malaysia Accounting Standards (MAS) in 1984. The process of adoption of IASS and development of MASs continued until 1997 when the Malaysian Accounting Standards Board (MASB) was established.

In December 1996, the Malaysian government announced its intention to establish a new financial accounting and reporting regime, and this intention was subsequently endorsed by Parliament when the Financial Reporting Act 1997 (FRA 1997) was passed and gazette on 6th of March 1997 (Tan 2000). The Act establishes two bodies, the Malaysian Accounting Standards Board (MASB) and the Financial Reporting Foundation (FRF) with FRF serves as an overseeing body of the operations and activities of the MASB. MASB together with the FRF make up the new framework for financial reporting in Malaysia which has sizeable similarity to the IASC's framework. The MASB has commenced a project to adopt or adapt the extant accounting standards in the form of MASB standards. Apart from adopting or adapting the extant IASS and MASs, the MASB also initiates projects to develop new accounting standards (Tan 2000). Until January 2004, MASB has issued 32 MASB standards and one Islamic Accounting Standards (Saudagaran 2005).

In late 2004, the Malaysian accounting standard setting body, MASB, announced the adoption of IFRS for Malaysian listed companies, effective from January 1, 2006. The standards are named Financial Reporting Standards (FRS). The major change in accounting standards in Malaysia as a consequence of the adoption of IFRS is the use of fair value accounting. Among others, the extensive use of fair value occurs in the standards related to share-based payments (FRS2), business combination (FRS3), property plant and equipment (FRS116), impairment of assets (FRS136), intangible assets (FRS 138) and investment properties (FRS140). The movement towards fair value accounting from historical-cost accounting is expected to result in financial statements that are more relevant, timely, credible and transparent. Another attribute of IFRS is that it requires greater level of disclosure. For example, FRS 136 on Impairment of Assets requires more disclosure on goodwill and other intangibles, particularly in relation to allocation of goodwill to cash generating units, key assumptions used to measure recoverable amounts, and impairment testing. Increased level of disclosure in corporate financial reports could affect the quality of reported information positively.

FEATURES OF IFRS

The introduction of IFRS is considered as beneficial to the adopting countries due to the standards having excellent reputation, good quality and high credibility (Ball 2006). One argument in favor of IFRS is that the adoption of IFRS improves financial reporting to outside investors. To support this argument, academicians point out that IFRS are more capital market oriented and hence, more relevant to investors as well as more comprehensive, especially with regard to disclosure, than most local GAAP (Daske & Gebhardt 2006).

Another attribute of IFRS is that it requires greater level of disclosure which can be linked to an increase in the quality of reported information (Wan Ismail et al. 2013; Ball 2006). Carlin et al. (2007) posit that the IFRS framework requires substantially greater levels of disclosure, for example regarding assumptions about valuation of goodwill. They also believe that this new framework requires an entirely different approach to accounting for goodwill, and resulted in a requirement for radically different disclosures relating to the asset class. In this line, Levitt (1998) firmly believes that the success of capital markets is directly dependent on the quality of the accounting and disclosure system and disclosure systems that are founded on high quality standards lead investors to be more confident in the credibility of financial reporting.

Another important feature of IFRS is the use of fair value accounting. The progress towards fair value accounting from historical cost accounting is expected to result in financial statements that are more relevant, timely and credible (Wan Ismail et al. 2013), which may lead to higher information quality. A primary advantage of fair value accounting is that it provides accurate asset and liability valuation on an ongoing basis to users of a company's reported financial information which provides better insight for them in decision making. However, this new measurement of IFRS has few opponents. They point out that in order to calculate fair value, there must exist asset pricing markets for the assets. It is likely that in the great majority of countries adopting IFRS, the asset pricing markets are not sufficiently deep to provide the necessary data with which to revalue many of the assets reliably. This means that firms in these countries would have to turn to synthetic approaches, like using fair value models or basing estimates on the prices of similar assets. This situation may result in estimated values that are not truly comparable among all countries (Hoogendoorn 2006; Ball 2006).

Another related argument is that IFRS reduce the amount of reporting discretion relative to many local GAAP and, subsequently compels firms to improve their financial reporting quality. Consistent with this argument, Ewert and Wagenhofer (2005) show that tightening the accounting standards can reduce the level of earnings management and improve reporting quality. From another point of view, using the same set of accounting standards across firms from different countries likely improves outsiders'

ability to detect earnings management and accounting manipulations, as it limits the set of permissible accounting treatments, which in turn should improve firms' reporting incentives.

ACCOUNTING STANDARDS AND FINANCIAL INFORMATION QUALITY

The IASB was established in 2001 in order to produce a single set of high quality, understandable and enforceable International Financial Reporting Standards (IFRS) and encouraging global convergence on these standards. Studies (e.g. Levitt 1998) indicate that there is a strong link between high quality standards and high quality financial outcomes. Also past researches demonstrate that higher information quality decreases adverse selection (Lambert et al. 2007; Horton et al. 2013) reduces information asymmetry (Myers & Majluf 1984; Gassen & Sellhorn 2006), decreases cost of capital (Hail & Leuz 2006) and increase market efficiency (Akerlof 1970; Spence 1976). Thus, if IFRS are higher quality standards than local GAAPs and provide better information, adoption of IFRS has the potential to generate the mentioned benefits.

Notwithstanding, prior studies indicate mixed evidence as to whether accounting outcomes after IFRS are of higher quality compared to those associated with the application of local GAAPs (Leuz & Wysocki 2008). A study on 21 countries by Barth et al. (2008) shows that reporting quality of firms increases after voluntary IFRS adoption. Gassen and Sellhorn (2006) analyze information asymmetry differences between IFRS and German GAAP (HGB), and they show that IFRS adopters experience a decline in bid-ask spread. Brochet et al. (2013) findings are consistent with mandatory IFRS adoption improving comparability and thus leading to capital market benefits by reducing insiders' ability to exploit private information. Landsman et al. (2012) find that the information content of earnings announcement increases after adopting IFRS mandatorily. They find evidence of three mechanisms through which IFRS adoption increases information content, reducing reporting lag, increasing analyst following, and increasing foreign investment. Iatridis (2010) study indicates that the implementation of IFRSs generally reinforces accounting quality. His findings suggest that less information asymmetry and earnings manipulation would lead to the disclosure of informative and higher quality accounting information and would therefore assist investors in making informed and unbiased judgments. In similar vein, Wan Ismail et al. (2013) study on public listed companies in Malaysia indicates that abnormal accrual is significantly lower, and the value-relevance of companies earnings is significantly higher after the adoption of IFRS. This leads them to conclude that level of information quality is higher in post-IFRS. Hope et al. (2006) results show that IFRS represent a vehicle through which countries can improve investor protection and make their capital markets more accessible to foreign investors.

Several other studies fail to find strong evidence that IFRS improves the information set of investors and find limited or no capital market benefits for adopters. Daske (2006) finds no evidence that IFRS adoption reduces a firm's cost of capital. The results of the study of Goodwin et al. (2008) on Australian listed firms show that IFRS earnings and equity are not more value relevant than Australian GAAP earnings and equity. Jeanjean and Stolowy (2008) find that the pervasiveness of earnings management did not decline after the introduction of IFRS, and in fact increased in France. Similarly, Ahmed et al. (2013) find that IFRS firms exhibit significant increases in income smoothing and aggressive reporting of accruals, and a significant decrease in timeliness of loss recognition.

The mixed evidence found by prior studies could be due to differences in the background of the countries that adopt IFRS. Environmental determinism theory asserts that accounting background and colonial ties of countries could affect accounting practices. Therefore, further studies on IFRS in other countries with different background are needed to provide substantiated evidence on whether or not IFRS adoption leads to improvement in the level of financial information quality as claimed by the standard setters. This is because the standards developed by the IASB are primarily aimed at countries with highly developed capital market, and it can be questioned whether the standards are optimal for countries categorized as developing and transitional capital markets and economies (Peng et al. 2008). The institutional theory on the other hand asserts that coercive institutions such as accounting standards can affect practice and system of the companies, including financial reporting. Combined with empirical evidence that IFRS has higher quality than local GAAPs (Daske & Gebhardt 2006; Bae et al. 2008), and prominent findings of previous studies (e.g., Barth et al. 2008; Iatridis 2010; Brochet et al. 2013), the results suggest that financial information quality increases after IFRS adoption. The hypothesis is therefore stated as follows:

H₁: Financial reporting quality is higher after IFRS adoption.

METHODOLOGY

SAMPLE

At the end of 2004, the Malaysian Accounting Standard Board (MASB) embarked on an effort to align Malaysia's reporting standards with IFRS. The convergence exercise started in January 2006. As a result, we define before IFRS adoption era for Malaysia from 2003 to 2005, while after adoption period comprises the years 2007 to 2009. Year of implementation, 2006, is not chosen, because there is a contingency that firms may not be able to comply with all new set of accounting standards requirements in the year of transition.

The required data of the study are obtained from DataStream databases from 2003 to 2009. The population of this study consists all firms listed under the main board of Bursa Malaysia. Firms in financial services are subjected to different regulation, and therefore excluded from the sample list in order to ensure greater homogeneity of the firms in the sample. We also impose data restriction on the sample, such as availability of required data. Most of missing data are due to unavailability of number of shares traded and stock price, which are required to calculate volume of share traded and stock return respectively. As the study attempts to investigate the quality of information before and after adoption of IFRS, firms included in our sample need to exist before and after IFRS adoption. Due to this requirement, some firms that were not available in whole studied period are excluded. These selection criteria produce a final sample of 143 firms which generate a balanced panel of 858 firm-year observations.

MODEL SPECIFICATION

The present study attempts to investigate the impact of IFRS adoption on information quality. Among others, information asymmetry is one of the criteria to assess the level of information quality. The lower information asymmetry means higher information quality (Wittenberg-Moerman 2008). According to prior studies (e.g. Armstrong et al. 2011) there are several accounting and market based measurements for investigating the level of information asymmetry. The market based measurements that have been used in the literature are bid-ask spread (Greenstein & Sami 1994; Armstrong et al. 2011), Probability of Informed Trade (PIN) (Easley et al. 2002; Boehmer et al. 2007), news or media coverage (Duarte et al. 2008) and analyst coverage (Armstrong et al. 2011). However, bid-ask spread is chosen for this study. This is mainly because the bid-ask spread is superior measure for information asymmetry than other measures (Leuz & Verrecchia 2000; Yoon, Zo & Ciganek 2011). Previous studies (e.g. Wittenberg-Moerman 2008) suggests that when the level of bid-ask spread is lower, information asymmetry is lower and information quality is higher.

Following previous studies (e.g. Greenstein & Sami 1994; Leuz & Verrecchia 2000; Peterson & Plenborg 2006), this study uses bid-ask spread as a measure of information quality. We then estimate the OLS regression of equation as follows to test our hypothesis of whether the IFRS adoption has had any improvement on quality of financial information.

$$INFQ_{i,t} = \alpha_i + \beta_1 IFRS_{i,t} + \beta_2 VOL_{i,t} + \beta_3 PRICE_{i,t} + \beta_4 VOLATILITY_{i,t} + \varepsilon_{i,t}$$

Where:

INFQ	Average of bid-ask spread	$Bid - Ask_{i,t} = \frac{1}{D_{i,t}} \sum_{d=1}^{D_{i,t}} \frac{(Ask_{i,d} - Bid_{i,d})}{2}$
		Bid: The daily closing bid price Ask: The daily closing ask price D: The number of days with available data in year t
IFRS	IFRS adoption	Dummy variable given the value of 1 if the financial statements are prepared under IFRS and 0 otherwise
VOL	Average of traded share	Average daily number of shares traded over year t
PRICE	Average of price of stock	Average daily price of stock over year t
VOLATILITY	Standard deviation of stock returns	Standard deviation of daily stock returns measured over year t

Studies such as by Copeland and Galai (1983), Karpoff (1986) and Greenstein and Sami (1994) find that number of shares traded (VOL) is an important variable in measuring information asymmetry. These studies find a strong inverse relationship between bid-ask spread and volume of trade. Further studies by Morse and Ushman (1983), Copeland and Gala (1983) as well as Greenstein and Sami (1994) find that the spread is a function of the amount of uncertainty regarding the true price of the stock (PRICE) and/or the volatility of stock returns (VOLATILITY); the greater the uncertainty, the larger the spread. Therefore, these three variables (VOL, PRICE & VOLATILITY) are added to the model as a control variable since prior studies has indicated that these variables are related to bid-ask spread.

EMPIRICAL RESULTS

DESCRIPTIVE ANALYSIS AND RESULTS

The IASB was established in order to produce a single set of high quality, understandable and enforceable international financial reporting standards to improve quality of financial

information. However, there is an uncertainty about the impact of this new set of accounting standards on financial issues of developed and emerging countries (Peng et al. 2008). Therefore, the present study attempts to find whether there is any improvement in quality of financial information in an emerging market as standard setters claim.

Table 1 indicates descriptive statistics of the main variables used in the study before IFRS adoption (panel A) and after adoption of IFRS (panel B). The table shows means of information quality (INFQ) before and after IFRS adoption as 0.018 and 0.016 respectively. Information quality is measured by bid and ask spread. The difference in the means of INFQ shows that the quality of information changes after the adoption of IFRS.

Table 2 presents the correlation matrix between the variables included in the regression. The correlation matrix shows that there is a negative correlation between higher information quality, proxied by lower bid-ask spread, (INFQ) and IFRS, -0.10. The table also indicates that the correlations between variables used in the model are relatively small and do not exceed 0.29 (0.28). As a result, there is no multi-collinearity issue between variable.

TABLE 1. Descriptive Statistics

<i>Panel A: Before IFRS adoption (2003-2005)</i>					
Variables	Mean	Median	Maximum	Minimum	Std. Dev.
INFQ	0.018	0.015	0.057	0.005	0.009
VOL	878	188	11090	8.589	1988
VOLATILITY	0.022	0.019	0.089	0.007	0.012
PRICE	2.249	0.979	24.26	0.117	3.481
<i>Panel B: After IFRS adoption (2007-2009)</i>					
Variables	Mean	Median	Maximum	Minimum	Std. Dev.
INFQ	0.016	0.011	0.071	0.004	0.011
VOL	1966	457	21142	9.139	3662
VOLATILITY	0.027	0.026	0.085	0.007	0.012
PRICE	3.131	1.734	31.036	0.217	4.106

INFQ is information quality proxied by average bid-ask spread over 12 month period where bid-ask spread is defined as $(bid-ask)/\{(bid-ask)/2\}$, bid is the daily closing bid price, and ask is the daily closing ask price. VOL is average of volume of share traded which is average daily number of shares traded over 12 month period. VOLATILITY is standard deviation of return which is standard deviation of daily stock returns measured over a year's time. PRICE is share price which is average stock price over 12 month period.

TABLE 2. Correlation Matrix of the Variables

	INFQ	VOL	VOLATILITY	PRICE	IFRS
INFQ					
VOL	-0.27***				
VOLATILITY	0.28***	0.23***			
PRICE	-0.21***	-0.06*	-0.29***		
IFRS	-0.10***	0.18***	0.17***	0.11***	

INFQ is information quality proxied by average bid-ask spread over 12 month period where bid-ask spread is defined as $(\text{bid-ask})/\{(\text{bid-ask})/2\}$, bid is the daily closing bid price, and ask is the daily closing ask price. VOL is average of volume of share traded which is average daily number of shares traded over 12 month period. VOLATILITY is standard deviation of return which is standard deviation of daily stock returns measured over a year's time. PRICE is share price which is average stock price over 12 month period. IFRS is a dummy variable given the value of 1 if the financial statements are prepared under IFRS adoption and 0 otherwise. ***Correlation is significant at the 0.01 level (two-tailed), and *Correlation is significant at the 0.05 level (two-tailed).

In the present study the association between dependent variable (information quality) and independent variable (IFRS adoption) is estimated using panel regression with fixed effect model. This method is chosen after the result of likelihood test (Pooled vs Fixed) that indicates fixed effect is appropriate and Hausman test (Fixed vs Random) which is in favor of the fixed effect model.

Before accepting the reliability of the regression results, we conduct diagnostic tests on the estimated regressions. First, autocorrelation is tested based on the Durbin Watson statistics. The result of the test shows 2.03 which confirms that there is no autocorrelation in the residuals (Gujarati 2003; Agung 2009). Second, multicollinearity among variables is evaluated based on the correlations. As shown in Table 2, correlations between variables used in the model are relatively small and do not exceed 0.8 (Gujarati 2003). These results lead us to conclude that there is no multicollinearity issue among variables. Other fundamental assumptions of regression are also evaluated such as zero mean residuals and linearity of the relationship between dependent and independent variables. The only problem that is observed is the Jarque-Bera test. The outcomes of this test show that the data is not normally distributed and the non-normal distribution persists after the Box-Cox transformation is employed. This problem, however, is not a major concern when involving financial data which non-normal distribution has been accepted as a stylized fact (Abdul-Rahim 2010). Moreover, Cont (2001) states

that according to the Central Limit Theorem, in financial studies with relatively big sample, size non-normality would not be a serious issue.

Table 3 demonstrates the results of the ordinary least square regression used to test the association between information quality, proxied by bid-ask spread, and IFRS adoption. As shown in the table, the coefficient of the IFRS, β_1 , is negative and significant at 5% level with t-statistics of -3.017. This result proposes that the adoption of IFRS is significantly associated with lower level of bid-ask spread which means higher information quality. In other words, the level of bid-ask spread decreases after the adoption of IFRS, suggesting that financial information quality has changed (increases) after the adoption of this new set of standards.

In addition, the outcomes as stated in Table 3 regarding control variables show the same results as predicted and mentioned in the literature. The coefficient of traded shares (VOL) posits that there is an inverse association between this variable and information quality as measured by bid-ask spread (Greenstein & Sami 1994). In other words, the higher the bid-ask spread, the lower the volume would be. Higher bid-ask spread means lower information quality. Also the coefficients of share price (PRICE) and volatility of stock returns (VOLATILITY) suggest that there is a positive relation between these variables and bid-ask spread (Copeland and Galia 1983).

To sum up, these findings show that Malaysia benefits from the adoption of IFRS, in terms of decrease in bid-ask spread, and correspondingly an improvement in

TABLE 3. OLS Regression Results of Information Quality and IFRS Adoption

Variable	Constant	IFRS	VOL	PRICE	VOLATILITY
Coeff.	0.016732***	-0.001655**	-0.000000771***	0.000215	0.065270*
T-value	17.46289	-3.017743	-5.171176	1.163077	1.957692
R ²	0.61				
F-Stats	7.784				
N	858				

$$INFQ_{i,t} = \alpha_i + \beta_1 IFRS_{i,t} + \beta_2 VOL_{i,t} + \beta_3 PRICE_{i,t} + \beta_4 VOLATILITY_{i,t} + \varepsilon_{i,t}$$

IFRS is a dummy variable given the value of 1 if the financial statements are prepared under IFRS adoption and 0 otherwise. VOL is average of volume of share traded which is average daily number of shares traded over 12 month period. PRICE is share price which is average stock price over 12 month period. VOLATILITY is standard deviation of return which is standard deviation of daily stock returns measured over a year's time. ***, ** and * represents statistical significance at 0.01, 0.05 and 0.10 levels respectively (two tailed test).

information quality. These results support our hypothesis, that is, financial information quality changes in a positive manner after the adoption of IFRS.

ADDITIONAL TEST

To ensure that our findings are robust, we run further test. For this, we run a t-test to ensure whether there is a significant difference between information quality before and after the adoption of IFRS. As far as our data are not normally distributed, we run *Wilcoxon Signed Ranks* test. This is mainly because this test is appropriate to compare two related data sets which are continuous and has non-normal distribution. Table 4 indicates the results of the test.

TABLE 4. Results of Wilcoxon Signed Ranks Test

Era	Mean	N
Pre-IFRS	0.0180	429
Post-IFRS	0.0164	429
Sig	0.000	

Pre-IFRS is related to before IFRS adoption era (2003-2005) and Post-IFRS related to after IFRS adoption (2007-2009).

The results in Table 4 show that the mean of bid-ask spread before IFRS adoption is 0.0180; and decreases to 0.0164 after IFRS adoption. Moreover, the results of the test show that this reduction is significant at 1% level. These results therefore lend support to the earlier findings that information quality (bid-ask spread) increases (decreases) after IFRS adoption in Malaysia.

CONCLUSION

Prior studies state that standards developed by the IASB are primarily aimed at countries with highly developed capital market, and it can be questioned whether the resulting standards are optimal for developing and transitional economies that lack the infrastructure to monitor financial reporting decisions (Peng et al. 2008). To contribute to our knowledge in this important topic, the present study attempts to investigate whether the adoption of IFRS changes financial information quality in the context of an emerging country, Malaysia.

In order to examine the impact of IFRS adoption on information quality we use market perspective of information quality proxied by bid-ask spread, i.e. lower bid-ask spread means higher information quality correspondingly. Our results confirm that IFRS adoption is positively associated with higher quality of financial information. Specifically, we find that financial information quality reported by listed companies in Malaysia during the period after the adoption of IFRS increased compared to pre-IFRS era. The results support our prediction that financial information quality changes after the adoption of IFRS.

Although the obtained results show an improvement in financial information quality of Malaysian listed companies in post-IFRS era, the small coefficient of IFRS, β_1 , give an indication that the impact of the adoption of IFRS on information quality in Malaysia is not prevalent as previous studies find within advanced countries. This outcome could be due to two reasons: First, prior studies (Daske et al. 2008; Horton et al. 2013) find that impact of IFRS adoption on capital market and accounting numbers are stronger in countries that have larger differences between local GAAP and IFRS. When combined with the evidence that principle-based standard setting has been preference of Malaysian standard setters and there are several similarities between local GAAP of this country and IFRS (Saudagaran & Diga 2000; Saudagaran 2005), these results support our findings and confirm the contention of the previous studies that the impacts of IFRS adoption are less prevalent in countries that differences between their local GAAP and IFRS are slight.

Second, former studies (e.g. Daske et al. 2008; Siqui 2010) show that impact of IFRS adoption on accounting numbers and financial issues are more prevalent in countries that have strong legal enforcement. When combined with the evidence that legal enforcement of developing countries is not as strong as legal enforcement in advanced countries (Berghe 2002; Hofstede & Hofstede 2004), these results support our findings for a developing country and confirm the contention of the prior studies regarding the influence of enforcement on the IFRS adoption prevalence.

The published information by professional bodies such as Deloitte show that there are many countries that have not adopted or have only adopted IFRS for specific companies (detailed information see <http://www.iasplus.com/en/resources/ifrs-topics/use-of-ifrs>). The findings of this study would be beneficial for these countries, specifically emerging countries, as they contemplate whether and when to adopt IFRS. The results of this study suggest that the business environment can be improved by adopting IFRS in the sense that financial information produced will be of higher quality. This in return will grab attention of foreign and local investors to participate in the capital market, which will provide capital that is essential to the economic growth of a country.

The results of our study however, need to be interpreted with caution, due to several limitations. First, this study uses data for three years before and after IFRS adoption. Longer period might give a better picture about the outcomes of IFRS adoption. Future research can extend for the studied period to cover longer than three years, to better understand the impact of IFRS on the quality of information. Second, our results are based on Malaysian data, where some IFRS standards are yet to be implemented, for example IFRS 9 (Financial Instrument). Rankin et al. (2012) point out that the alternative implementation strategies used by countries subscribing to IFRSs mean that there will be issues and/or questions as to whether a particular organization complies with IFRSs as issued by IASB. More research

could be conducted in other environments so that the impact of IFRS adoption in different environments can be revealed. Focus of this study is to investigate the impact of IFRS adoption on information quality. As an extension of this, future research can investigate the implementation and compliance to this new set of accounting standard within adopting countries, especially in the emerging markets. Ball (2006) calls attention to an issue regarding to uneven implementation of IFRS. He states that powerful national political and economic forces of each country influence the implementation of the standards which leads to different outcome as consequence of IFRS adoption in each jurisdiction.

REFERENCE

- Abdul-Rahim, R. 2010. Impact Of Crisis On Stock Market Integration: Evidence From ASEAN-5 Plus 3+1 Countries. Working Paper. Faculty of Economics and Management, National University of Malaysia (UKM), March.
- Ahmed, A. S., Neel, M. & Wang, D. 2013. Does Mandatory Adoption of IFRS Improve Accounting Quality? Preliminary Evidence. *Contemporary Accounting Research* 30(4): 1344-1372.
- Agung, G.N. 2009. Time Series Data Analysis Using Eviews. John Wiley & Sons, Singapore.
- Akerlof, G. 1970. The market for lemons: quality uncertainty and the market mechanism. *The Quarterly Journal of Economics* 84(3): 488-500.
- Armstrong, C., Core, J., Taylor, D. & Verrecchia, R. 2011. When Does Information Asymmetry Affect the Cost of Capital?. *Journal of Accounting Research* 49(1) pp: 1-40.
- Bae, K.-H., Tan, H. & Welker, M. 2008. International GAAP differences: The impact on foreign analysts. *The Accounting Review* 83(3): 593-628.
- Ball, R. 2006. International Financial Reporting Standards (IFRS): pros and cons for investors. *Accounting & Business Research*. 36 (Supplement 1): 5-27.
- Barth, M.E., Landsman, W.R. & Lang, M.H. 2008. International Accounting Standards and Accounting Quality. *Journal of Accounting Research*. 46 (3): 467-498.
- Berghe, L. 2002. Corporate governance in a globalising world: Convergence or divergence?. Kluwer Academic Publishers, Boston.
- Boehmer, E., Grammig, J. & Theissen, E. 2007. Estimating the probability of informed trading — does trade misclassification matter? *Journal of Financial Markets*. 10(1): 26-47.
- Brochet, F., Jagolinzer, A.D. & Riedl, E.J. 2013. Mandatory IFRS Adoption and Financial Statement Comparability. *Contemporary Accounting Research* 30(4): 1373-1400.
- Carlin, T.M., Finch, N. & Ford, G. 2007. Goodwill Impairment - An Assessment of Disclosure Quality and Compliance Levels by Large Listed Australian Firms. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=963078, (accessed January 2007).
- Chua, Y., Cheong, C. & Gould, G. 2012. The Impact of Mandatory IFRS Adoption on Accounting Quality: Evidence from Australia. *Journal of International Accounting Research* 11(1): 119-146.
- Claessens, S., Djankov, S. & Lang, L.H.P. 2000. The separation of ownership and control in East Asian corporations. *Journal of Financial Economics* 58(1-2): 81-112.
- Cont, R. 2001. Empirical properties of asset returns: stylized facts and statistical issues. *Quantitative Finance* 1(2): 223-236.
- Copeland, T. & Galai, D. 1983. Information effects on the bid-ask spread. *Journal of Finance* 38(5): 1457-1469.
- Daske, H. 2006. Economic benefits of adopting IFRS or U.S. GAAP: Has the expected cost of equity capital really decreased?. *Journal of Business Finance and Accounting* 33(3-4): 329-73.
- Daske, H. & Gebhardt, G. 2006. International Financial Reporting Standards and experts' perceptions of disclosure quality. *Abacus* 42(3-4): 461-498.
- Daske, H., Hail, L., Leuz, C. & Verdi, R. 2008. Mandatory IFRS reporting around the world: Early evidence on the economic consequences. *Journal of Accounting Research* 46(5): 1085-1142.
- Duarte, J., Han, X., Harford, J. & Lance, Y. 2008. Information asymmetry, information dissemination and the effect of regulation FD on the cost of capital. *Journal of Financial Economics* 87(1) 24-44.
- Easley, D., Hvidkjaer, S. & O'Hara, M. 2002. Is Information Risk a Determinant of Asset Returns?. *The Journal of Finance* LVII (5): 2185- 2221.
- Ewert, R. & Wagenhofer, A. 2005. Economic effects of tightening accounting standards to restrict earnings management. *The Accounting Review* 80(4): 1101-1124.
- Favere-Marchesi, M. 2000. Audit Quality in ASEAN. *The International Journal of Accounting* 35 (1) 121-149.
- Gassen, J. & Sellhorn, T. 2006. Applying IFRS in Germany: Determinants and Consequences". Available at SSRN: <http://ssrn.com/abstract=906802> or <http://dx.doi.org/10.2139/ssrn.906802> (accessed January 2008).
- Gibson, M.S. 2003. Is corporate governance ineffective in emerging markets?. *Journal of Financial and Quantitative Analysis* 38(1): 231-250.
- Goodwin, J., Ahmed, K. & Heaney, R. 2008. The Effects of International Financial Reporting Standards on the Accounts and Accounting Quality of Australian Firms: A Retrospective Study. *Journal of Contemporary Accounting & Economics* 4(2): 89-119.
- Greenstein, M. & Sami, H. 1994. The Impact of the SEC's Segment Disclosure Requirement on Bid-Ask Spreads. *The Accounting Review* 69(1): 179-199.
- Gujarati, D. 2003. Basic econometrics. Fourth Edition. McGraw-Hili Companies. The USA.
- Hail, L. & Leuz, C. 2006. International differences in the cost of equity capital: Do legal institutions and securities regulation matter?. *Journal of Accounting Research* 44(3): 485-531.
- Hofstede, G. & Hofstede, G. 2004. Cultures and Organizations: Software of the Minds. McGraw Hill. New York.
- Hoogendoorn, M. 2006. International Accounting Regulation and IFRS Implementation in Europe and Beyond – Experiences with First-time Adoption in Europe. *Accounting in Europe* 3(1): 23-26.
- Hope, O-K., Jin, J. & Kang, T. 2006. Empirical Evidence on Jurisdictions that Adopt IFRS. *Journal of International Accounting Research* 5(2): 1-20.
- Horton, J., Serafeim, G. & Serafeim, I. 2013. Does Mandatory IFRS Adoption Improve the Information Environment?. *Contemporary Accounting Research* 30(1): 388-423.
- Iatridis, G. 2010. International Financial Reporting Standards and the quality of financial statement information. *International Review of Financial Analysis* 19(3): 193-204.

- Jeanjean, T. & Stolowy, H. 2008. Do accounting standards matter? An exploratory analysis of earnings management before and after IFRS adoption. *Journal of Accounting and Public Policy* 27(6): 480-494.
- Karpoff, J.M. 1986. A theory of trading volume. *Journal of Finance* 4(5): 1069-87.
- Lambert, R., Leuz, C. & Verrecchia, R. 2007. Accounting information, disclosure, and the cost of capital. *Journal of Accounting Research* 45(2): 385-420.
- Landsman, W., Maydew, E. & Thornoc, J. 2012. The information content of annual earnings announcements and mandatory adoption of IFRS. *Journal of Accounting and Economics* 53(1-2): 34-54.
- Leuz, C. & Wysocki, P. 2008. Economic consequences of financial reporting and disclosure regulation: A review and suggestions for future research. Working paper. University of Chicago, March.
- Leuz, C. & Verrecchia, R.E. 2000. The Economic Consequences of Increased Disclosure. *Journal of Accounting Research* 38(3): 91-124.
- Levitt, A. 1998. The Importance of High Quality Accounting Standards. *Accounting Horizons* 12(1): 79-82.
- Morse, D. & Ushman, N. 1983. The effect of information announcements on the market microstructure. *The Accounting Review* 58(2): 247-258.
- Muniandy, B. & Ali, M.J. 2012. Development of financial reporting environment in Malaysia. *Research in Accounting Regulation* 24(2): 115-125.
- Myers, S. & Majluf, N. 1984. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics* 13(2): 187-221.
- Peng, S., Tondkar, R H., Van der Laan Smith, J. & Harless, D W. 2008. Does Convergence of Accounting Standards Lead to the Convergence of Accounting Practices?: A Study from China. *The International Journal of Accounting* 43(4): 448-468.
- Petersen, C. & Plenborg, T. 2006. Voluntary disclosure and information asymmetry in Denmark. *Journal of International Accounting, Auditing and Taxation* 15(2): 127-149.
- Rankin, M., Stanton, P., McGowan, S., Ferlauto, K. & Tilling. 2012. Contemporary Issues in Accounting. John Wiley & Sons Ltd. Australia.
- Saudagaran, S. 2005. Asian Accounting Handbook: A user's guide to the accounting environment in 16 countries. Thomson Learning. Singapore.
- Saudagaran, S. & Diga, J. 2000. The Institutional Environment of Financial Reporting Regulation in ASEAN. *The International Journal of Accounting* 35(1): 1-26.
- Siqi, Li. 2010. Does Mandatory Adoption of International Financial Reporting Standards in the European Union Reduce the Cost of Equity Capital?. *The Accounting Review* 85(2): 607-636.
- Spence, M. 1976. Informational Aspects of Market Structure. *The Quarterly Journal of Economics* 90(4): 591-597.
- Tan, L. 2000. Financial Accounting and Reporting in Malaysia. Professional Advancement Achievement Center, volume 1, Malaysia.
- Wan Ismail, W., Khairul, K., Zijl, T. & Dunstan, K. 2013. Earnings quality and the adoption of IFRS-based accounting standards: Evidence from an emerging market. *Asian Review of Accounting* 21(1): 53-73.
- Wittenberg-Moerman, R. 2008. The role of information asymmetry and financial reporting quality in debt trading: Evidence from the secondary loan market. *Journal of Accounting and Economics* 46(2-3): 240-260.
- Yoon, H., Zo, H. & Ciganek, A. 2011. Does XBRL adoption reduce information asymmetry? *Journal of Business Research* 64(2): 157-163.

Seyed Sajad Ebrahimi Rad
 Zaini Embong*
 School of Accounting
 Faculty of Economics and Management
 UKM, Bangi, Selangor
 Universiti Kebangsaan Malaysia

*Corresponding author; email: zainiembong@ukm.edu.my