

# An Investigation Of The Comparative Impact Of Degree Of Implementation Of IFRS Upon The Public And Private Information Quality Of Asia Pacific Country Firms

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## ABSTRACT

*This research investigates the comparative quality of public and private information environments between firms domiciled in 15 Asia Pacific countries of which seven are characterized as market supportive institutional infrastructure. Our empirical analyses examine the comparative quality of public and private information components of equity securities analysts' earnings forecasts for Asia Pacific firms, while controlling for firms cross-listing on U.S. equity securities exchanges and country of domicile degree of implementation of IFRS. Our results indicate that the quality of private information is higher for non-market supportive infrastructure countries, as compared to market-supportive infrastructure countries of domicile, and the quality of public information is higher for market-supportive infrastructure as compared to non-market-supportive infrastructure countries of domicile. Furthermore, and particularly noteworthy, is that our results indicate that country of domicile degree of implementation of IFRS increases the quality of public information and decreases the quality of private information for both market-supportive infrastructure and non-market-supportive infrastructure countries of domicile, and also that the decrease in the quality of private and increase in the quality of public information associated with degree of implementation of IFRS are significantly more pronounced for market-supportive infrastructure countries relative to non-market-Supportive infrastructure countries of domicile. We believe that our results suggest that IFRS is more beneficial for countries having market supportive institutional infrastructure in place as compared with those who do not.*

**Keywords:** Asia-Pacific Countries, Market Supportive Institutional Infrastructure, International Financial Reporting Standards, Analysts Earnings Forecasts, Public Information Quality, Private Information Quality.

## INTRODUCTION

Differences in accounting practices observed around the world hinder direct global comparison of firm financial statements and, for this reason, serve as an impediment to international capital flows. Perhaps one of the most noteworthy and prominent world events following the turn-of-the-21st century is rapid paced adoption of International Financial Reporting Standards (i.e., IFRS) by countries around the globe motivated out of the widely held belief that implementation of high-quality accounting standards will result in high-quality financial reporting environments for stock exchange-listed firms. The extant accounting research literature supplies substantial evidence indicating that the quality of financial reporting impacts transnational capital movements (Young and Guenther (2002)), capital allocation efficiency (Bushman et al. (2006) and Sun (2006)) and

capital costs (Leuz and Verrecchia (2000)) by reducing existing information asymmetry (Frankel and Li (2004)) as a result of disclosing relevant timely information to present and potential investors and creditors.

However, differences in accounting practices observed around the world arise as a result of the interaction of a number of socio-cultural and economic-institutional variables which vary from country to country and continent to continent. For this reason, adoption and implementation of high-quality standards of financial reporting has come to be viewed as an essential, but not necessarily adequate, condition for high-quality financial reporting standards to improve financial reporting and information environments in countries around the world. In addition to the implementation of high-quality standards of financial reporting<sup>1</sup>, high-quality financial reporting standards need to be complemented with a supportive national institutional infrastructure (Ball (2001)). Empirical findings reported by La Porta et al. (1998) support the observation that British common law countries tend to have legal systems that are more supportive of equity securities market investors' interests than Napoleonic code law countries, consequently providing more appropriate infrastructure support for high-quality financial reporting standards in contributing to a high-quality financial reporting environment.<sup>2</sup>

As in prior research, we utilize financial analysts as surrogates for securities investors wherein public information refers to that which is available to all analysts and private information refers to analysts' individual information. However, we extend prior research by investigating differences in the quality of securities analysts' public and private information between Asia Pacific countries of domicile characterized as having high levels of securities market support infrastructure and Asia Pacific countries of domicile characterized as having low levels of securities market support infrastructure. Furthermore, we provide evidence regarding the differential impact of degree of implementation of IFRS upon quality of public and private information between Asia Pacific countries of domicile characterized as having high and low levels of supportive securities market infrastructure. We utilize the Barron, Kim, Lim, and Stevens (1998) (henceforth BKLS) measures of public and private quality information calculated from mean analyst forecast error and dispersion of inter-analyst forecasts. The BKLS measures of the precision of public and private information have been widely used in a number of recent research studies.<sup>3</sup> Our results indicate that 1) the quality of public information is higher for Asia Pacific countries of domicile characterized as having high levels of securities market support infrastructure and 2) the quality of private information is higher for Asia Pacific countries of domicile characterized as having low levels of securities market support infrastructure. Furthermore, we observe that 1) country of domicile degree of implementation of IFRS increases the quality of public information and decreases the quality of private information for both high and low levels of securities market support infrastructure and 2) the increase in the quality of public and decrease in the quality of private information are significantly more pronounced for Asia Pacific countries of domicile characterized as having high levels of securities market support infrastructure. We believe these results are intuitive considering the relative historical development of equity securities markets in these environments. For this reason, we further surmise that IFRS are very likely marginally more useful for Asia Pacific countries of domicile characterized as having high levels of securities market support infrastructure in the sense of reducing information asymmetry by moving important prospective performance-related information from the private into the public domain. We believe that this research makes a noteworthy contribution to the extant literature regarding differences in information environments between Asia Pacific countries of domicile characterized as having high and low levels of securities market support

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<sup>1</sup> Barth et al. (2006) provide convincing evidence that firms adopting IFRS exhibit more relevant reported earnings, improved timeliness of loss recognition, and lower management of earnings. A number of measures of earnings quality had been established in the relevant accounting research literature. Shipper and Vincent (2003) provide one survey of the relevant earnings quality literature as does Dechow and Schrand (2004).

<sup>2</sup> Some of the other economic factors identified in the relevant accounting research literature as contributing to the effectiveness of high-quality standard for financial reporting are degree of capital market development (Ali and Hwang (2000)), capital structure (Sun (2006)), political system (Leuz and Oberholzer-Gee (2006)), ownership structure (Ball and Shivakumar (2005), Burgstahler et al. (2007), and Fan and Wong (2002)), and system of taxation (Guenther and Young (2000)).

<sup>3</sup> In recent years, numerous studies have used the BKLS 1998 analysts earnings forecast error variance decomposition to discern the quality of public and private information. Barron et al. (2002) investigate changes in analysts information environment following up on firms earnings announcements. Barron et al. (2008) investigate the nature of earning surprises promoting reductions in average forecast errors. Barron et al. (2002) investigate analysts information environment relative to high technology firms intangible assets. Botosan et al. (2004) investigate the role of information precision in determining firms cost of equity capital. Botosan et al. (2005) examine the impact of SFAS No.131 on analysts information environment.

infrastructure, as well as illustrating the importance of the culture contextual dimension of the usefulness of IFRS to equity securities analysts' earnings forecasting task and the overall quality of disclosure comprising firms' information environment.

In the Literature Review section, we will survey the relevant research literature examining uniquely Asian socio-economic characteristics in order to illuminate differences in types of information and manner by which information is disseminated in Asian countries. The Implementation section discusses the impact of country-specific degree of implementation of IFRS upon the quality of public information used by securities investors. The subsequent section discusses the development of the research hypotheses, followed by a research design section describing the data measurement, empirical method, and statistical hypotheses tests utilized herein. Next, we present and discuss the results of the statistical model estimation and related hypotheses tests, followed by our conclusions and suggestions for possible future avenues of inquiry.

## **LITERATURE REVIEW AND UNDERLYING INTUITION REGARDING OUR EMPIRICAL REGULARITIES**

A substantial amount of extant research investigates the earnings forecast accuracy<sup>4</sup> and forecast bias<sup>5</sup> for firms listed on U.S. securities exchanges, particularly for European firms. A significant body of analysts' earnings forecast research investigates analysts forecast accuracy and bias for U.S. compared to non-U.S. companies listed with United States Securities Exchanges (e.g., Das and Saudagaran [2002 and 1998]). The research literature is particularly rich for European firms' earnings forecasts as contrasted with Asian firms' earnings forecasts.<sup>6</sup>

Ang and Ma (1999) use individual analysts' earnings forecasts of Chinese firms' earnings to investigate the transparency of the Chinese markets. Their results indicate that aggregate analysts' forecast errors related to all Chinese firms are double the magnitude of forecast error relating to Hong Kong companies and are also larger than for firms in several developed and developing Asia Pacific countries. They also find that analysts' forecast errors

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<sup>4</sup> A substantial body of research literature has developed identifying the economic determinants of the analysts earnings forecast error. Research results reported by DeBondt and Forbes [1999] suggest that analysts earnings forecast errors are positively related to degree of disagreement among analysts (i.e., standard deviation of analysts earnings forecasts). Sinha, Brown, and Das [1997] and Capstaff [1999] report evidence indicating that analysts earnings forecast errors are negatively associated with firm size and number of analysts following firms.

<sup>5</sup> Early research such as Dreman and Berry [1995] document a statistically significant optimistic bias for consensus analysts earnings forecasts over a nearly twenty five year period. Researchers such as Capstaff, Paudyal, and Rees [1995] and DeBondt and Forbes [1999] have observed similar phenomena in U.K. analysts earnings forecasts, while Capstaff et al. [1995] and Capstaff [2001] provide empirical results for Germany and the broader European region respectively. Based upon the existing literature it is somewhat accepted as a stylized fact that analysts for U.K. and Netherlands companies tend to outperform analysts earnings forecasts for Spanish and Italian companies. However, evidence regarding the comparative earnings forecasting performance of equities securities analysts in different countries remains limited.

Extant literature comprised of research such as Huberts and Fuller [1995] and DeBondt and Forbes [1999] suggests that analysts systematic optimistic bias is positively related to earnings variability. Research such as Das, Levine, and Sivaraniakrishnan [1998] indicates that analysts systematic optimistic bias is negatively associated with firm information environment. Francis and Philbrick [1993], Downen [1996], Butler and Saraoglu [1999], Easterwood and Nutt [1999], provide evidence that analysts systematic optimistic bias is negatively associated with the magnitude of reported earnings. Over much of the recent history of analysts earnings forecast literature researchers have speculated that analysts systematic optimistic bias is a natural reaction to new information. DeBondt and Thaler [1990] hypothesize that security analysts over-estimate the persistent portion firms reported earnings increases resulting in earnings forecasts that are systematically optimistic. DeBondt and Thaler's "overreaction" hypothesis applies to earnings decreases as well but rather that analysts underestimate the persistence of magnitudes of earnings decreases. The combination of the overreaction to earnings increases and underreaction to earnings decreases results in analysts earnings forecasts that are on average systematically optimistic.

<sup>6</sup> Beckers, Stelarios and Thomsen (2004) investigate the bias in European analysts' earnings forecasts. Their results document analysts optimistic bias when forecasting European listed companies earnings. The Beckers et al. results are consistent with those reported by Capstaff, Paudyal, and Rees (1995) who find analysts forecasts for United Kingdom firm earnings display persistent optimism bias. The similar optimism bias has also been observed in research on earnings forecasts of U.S. firms reported by Dreman and Berry (1995). Capstaff (1998) as well notes persistent optimism for German firms.

depend on variables associated with the transparency of firms in the market; e.g., total capitalized value of firms. The Ang and Ma results indicate that there are costs associated with the absence of transparency - particularly, market valuations of more (less) transparent Chinese shares are priced higher (lower).

Lui (1993) examines two characteristics of Hong Kong analysts' forecast revision activity: 1) the time profile of analysts' forecast revisions and 2) the relationship between their revisions for different fiscal years. Lui's results provide evidence that analysts in the Hong Kong market anticipate and respond to earnings announcements as they revise their annual earnings forecasts. During months preceding interim and annual earnings announcements, revision of forecasts is relatively low and revision activity primarily occurs in the months following announcements. The analysts studied revise their one-year-ahead and two-year-ahead forecasts at the same time, which are highly positively related. Lui's results also indicate that the Hong Kong market analysts are concerned with multi-year-ahead forecasts.

Allen, Cho, and Jung (1997) investigate analysts' earnings forecasts for firms traded in Pacific-Basin equity markets, vis-à-vis earnings forecasts for U.S.-based firms. They compare forecast errors across countries and undertake regression analyses to identify variables related to differences in earnings forecast errors. The Allen, Cho, and Jung results indicate that significant differences persist in forecast errors relating to firms traded in virtually all Pacific-Basin equity markets compared to forecasts for firms traded in the U.S. and Japan. The reported differences significantly decrease as the forecast horizon decreases. Their regression results provide insight into macroeconomic and firm specific variables, which may account for differences in forecast errors pertaining to firms traded in different markets.

Chang, Dallas and Ng (2002) examine the association between analysts' earnings forecast revisions and subsequent stock returns pertaining to firms traded in 15 Asia-Pacific markets. Based upon a trading strategy derived from forecast revisions, Chang, Dallas and Ng find that positive abnormal returns were taken in emerging markets, while negative abnormal returns resulted from developed markets. They further find this phenomenon was more pronounced in the 3-year period following July 1997 than in the prior three years. They suggest important frictions and imperfections in emerging markets are possible explanations for their results. Chang, Dallas and Ng also suggest that the difference in results between sub-periods may be attributable to an increased focus on near-term earnings information in stock valuation subsequent to the burst of the Asian bubble economy.

Coen and Desfleurs (2004) investigate security analysts' forecast performance on eight Pacific-Basin markets between 1990 and 2000. They analyze the impact of the financial crisis in 1997 on the quality of earnings forecasts pertaining to firms traded in those markets. Since the Asian crisis may be indicative of a significant breakdown in the performance of analysts, their results indicate that prior to and subsequent to the crash, analysts issued forecasts that were systematically positively biased. In 2000, the magnitude of forecast errors remained smaller than those observed in the pre-crash period.

Coen and Desfleurs conclude that security analysts failed to foresee the underlying financial problems prior to the crisis or to learn from it.

Cicccone and Etibari (2004) examine trends in analysts' forecast properties between 1987 and 1998 in the United States and seven Pacific Rim countries: Australia, New Zealand, Taiwan, Hong Kong, Japan, South Korea, and Thailand. In the United States, analysts' earnings forecasts have become less dispersed, more accurate, and less optimistic during the study period. The authors document similar patterns for analysts' earnings forecasts for firms in Australia and New Zealand, but not in the other sample countries. Cicccone and Etibari find that for Pacific Rim countries, analysts' earnings forecasts are more dispersed, less accurate, and more optimistic. They find that for Japan and Korea, analysts' forecast dispersion, forecast error, and optimism all significantly increase over the study period. Their results suggest that Asia Pacific firms do not participate in the U.S.-style earnings game in which firm managers steer analysts toward targets and then subsequently report earnings that exceed the target.

## **IMPLEMENTATION OF INTERNATIONAL FINANCIAL REPORTING STANDARDS**

In addition to investigating differences in the quality of public and private information between Asia Pacific countries of domicile with Market Supportive Infrastructure (High) and Non-market Supportive Infrastructure (Low), a secondary objective of this research is to examine the comparative impact of Market

Supportive Infrastructure and Non-market Supportive Infrastructure country of domicile degree of implementation of *IFRS* on the quality of public and private information. A considerable body of research evidence indicates that variation in countries' generally accepted accounting practices impacts equity securities investors' dissemination and interpretation of accounting communications (Alford et al. [1993]).<sup>7</sup> But, the inverse finding does not have unambiguous empirical support in the current research literature; that is, harmonization or convergence of countries' accounting practices does not necessarily imply an improved body of public information relevant to securities investors (Joos and Lang [1994], and Auer [1996]). A considerable growth of related research investigates differences in home country accounting standards and the utilization of *IFRS*<sup>8</sup> (i.e., International Financial Reporting Standards) based earnings forecasts (Ashbaugh and Pincus [2001]) and, once again, is represented primarily by European firms.<sup>9</sup>

The reduction in choices comprising home country generally accepted accounting practices should result in substantially higher quality public information and lower quality of private information employed by securities analysts in formulating their earnings forecasts. Consequently, we intuitively expect country-specific degree of implementation of *IFRS* conditioned upon explicitly controlling home country supportive institutional infrastructure – via the high and low levels of securities market support infrastructure characterization - to be significantly associated with increased quality of public information and decreased quality of private information used by equity securities analysts in performing their earnings forecast tasks.

#### **DEVELOPMENT OF STATISTICAL HYPOTHESES TESTS**

The primary purpose of this study is to investigate differences between the quality of public and private information between firms domiciled in countries characterized as having high and low levels of securities market support infrastructure. Generally speaking, we expect 1) firms from Asia Pacific countries, characterized as having low levels of securities market support infrastructure firms, to have lower quality public information than firms in Asia Pacific countries of domicile characterized as having high levels of securities market support infrastructure and 2) firms from Asia Pacific countries of domicile, characterized as having low levels of securities market support infrastructure firms, to have higher quality private information than firms in Asia Pacific countries of domicile characterized as having high levels of securities market support infrastructure firms. Pertaining to *IFRS*, a second purpose of this study is to investigate the differential impact of country-specific degree of implementation of *IFRS* upon the quality of equity securities analysts' public and private information for countries of domicile characterized as having high and low levels of securities market support infrastructure. In general, we expect 1) the degree of implementation of *IFRS* to be associated with increased public information quality and decreased private information quality and 2) the degree of implementation of *IFRS* to be associated with more pronounced increases in public information quality and decreases in private information quality for Asia Pacific countries of domicile characterized as having high levels of securities market support infrastructure.<sup>10</sup>

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<sup>7</sup> Questions have arisen regarding the degree of enforcement of *IFRS* among countries (e.g., Davis-Friday and Rueschhoff [1998]) as well as extent of compliance with *IFRS* (e.g., Street, Gray, and Bryant [1999]). The impact of changing accounting policies upon the statistical properties of equity securities analysts earnings forecasts is not unambiguous (Brown [1983]; Elliot and Philbrick [1990]). Implementation of *IFRS* may reduce the extent of earnings management practices among companies and, consequently, may improve the quality of public information underlying equity securities analysts earnings forecasts.

<sup>8</sup> *IFRS* are accounting principles written by the *International Accounting Standards Board* (IASB) with the explicit objective of the creating a single set of accounting principles employed by firms world-wide in the preparation of the financial statements and, as a result, increasing comparability by reducing differences among countries accounting practices (i.e., *Financial Accounting Standards Board* [1996]). In many, if not most, cases the implementation of *IFRS* results in the limitation of choices within generally accepted accounting practices and increases overall disclosure by firms. A natural consequence of a reduction of choices within generally accepted accounting practices would be higher quality public information for firms implementing *IFRS*.

<sup>9</sup> Lang, Lins, and Miller [2003] investigate a country-of-domicile effect in equity security analyst earnings forecast accuracy for U.S.-listed companies. Hope [2003] investigates the impact of degree of accounting standards enforcement upon analyst forecasts accuracy, in addition to the investigating effect of degree of accounting disclosure upon analysts forecast accuracy.

<sup>10</sup> We note that firms may utilize *IFRS* and have very little, if any, divergence with country of domicile generally accepted accounting practices. On the other hand, implementation of *IFRS* may result in large deviations from country of domicile generally accepted accounting practices and, thereby, perhaps adding considerable complexity to equity securities analysts earnings forecasting tasks. Brown [1983] and Elliot and Philbrick [1990] provide compelling empirical evidence regarding changes in accounting methods for U.S. firms.

We test null of these hypotheses using one-tailed statistical tests based upon our interpretation of the research literature regarding the socio-economic determinants of the quality of firms’ public and private information and impact of degree of convergence toward IFRS upon the information available to securities analysts in performing their earnings forecasting tasks.

- H<sub>01</sub>:** There is no difference in the quality of **public** information between firms from Asia Pacific countries of domicile characterized as having high vs. low levels of securities market support infrastructure.
- H<sub>02</sub>:** There is no difference in the quality of **private** information between firms from Asia Pacific countries of domicile characterized as having high and low levels of securities market support infrastructure.
- H<sub>03</sub>:** There is no difference in the association of degree of implementation of IFRS and quality of **public** information between Asia Pacific countries of domicile characterized as having high and low levels of securities market support infrastructure.
- H<sub>04</sub>:** There is no difference in the association of degree of implementation of IFRS and quality of **private** information between Asia Pacific countries of domicile characterized as having high and low levels of securities market support infrastructure.

**RESEARCH DESIGN AND EMPIRICAL METHOD**

The research design utilized in this study identifies non-U.S. country of domicile firms from the *Investment Brokers Estimate Service International Detail* database. We employ firms having non-missing annual earnings forecasts and historical earnings data and domiciled in 15 countries in the Asia Pacific geographic region. Distribution of the 15 IBES firm countries of domicile over the national institutional infrastructure, characterized as having high and low levels of securities market support infrastructure, is shown in Table 1. Table 2 shows the distribution of the sample firms individually across Eastern Europe and Western Europe geographic regions.

**Table 1**  
**Distribution Countries over all of East Asia, Non-Market-Oriented and Market-Oriented Institutional Arrangements**

<b>Countries Employed: Total Aisa</b>		<b>Non-Market-Oriented:</b>	<b>Market-Oriented:</b>
Australia	New Zealand	China	Australia
China	Pakistan	Indonesia	India
Hong Kong	Philippines	Korea	Japan
India	Singapore	New Zealand	Hong Kong
Indonesia	Sri Lanka	Pakistan	Malaysia
Japan	Taiwan	Philippines	Singapore
Korea	Thailand	Sri Lanka	Taiwan
Malaysia		Thailand	
<b>Total Number of Asian Countries:</b>		<b>Non-Market-Oriented:</b>	<b>Market-Oriented:</b>
Countries: 15		Countries: 8	Countries: 7

**Table 2**  
**Distribution of Sample Firms over Non-Market-Oriented Asian and Market-Oriented Asian Countries of Domicile**

<b>Total Asian</b>	<b>Non-market Asian</b>	<b>Market Asian</b>
Firms: 6744	Firms: 4892	Firms: 1852
<b>Firms: 6744</b>	<b>Firms: 4892</b>	<b>Firms: 1852</b>

The purpose of this research is to 1) describe differences in the quality of public and private information between firms domiciled in Asia Pacific countries characterized as having high and low levels of securities market support infrastructure and 2) describe the impact of country of domicile degree of implementation of IFRS upon the quality of public and private information for firms domiciled in countries characterized as having high and low

levels of securities market support infrastructure.<sup>11</sup> Our research design is based upon regression analysis approaches in which public and private information quality measures are dependent variables and firm and country specific characteristics are independent variables. We specify the regression analyses utilizing indicator variables distinguishing between high and low levels of securities market support infrastructure countries of domicile. As a result, the dependent variable utilized in this research is the BKLS decomposition of analysts’ earnings forecast error, which takes two forms as seen in the extant research literature:<sup>12</sup>

**REGRESSION ANALYSES INDEPENDENT VARIABLES:<sup>13</sup>**

- *Public<sub>i</sub>*: The common component from decomposition of total variability of inter-analysts earnings forecasts  $Public_i = \sqrt{h}$ , and;

<sup>11</sup> In this research study we utilize country of domicile specific pervasiveness of IFRS implementation measures for Asia Pacific countries obtained from the *Deloitte and Touche IASPlus* website. The IASPlus website maintains a listing of 144 countries and rates their degree of implementation of IFRS as follows:

- IFRS Not Permitted For Domestic Listed Companies (assigned value of 0);
- IFRS Permitted For Domestic Listed Companies (assigned value of 1);
- IFRS Required For Some Domestic Listed Companies (assigned value of 2);
- IFRS Required For All Domestic Listed Companies (assigned value of 3).

<sup>12</sup> The BKLS total variation decomposition model employs a setting where *N* financial analysts forecast earnings (*y*) and each individual analyst’s total information is described as being comprised of public information ( i.e., with precision *h*) and a private signal,  $z_i = y + e_i$ . Each variable is independent of all others and is normal distributed with mean zero and precision *s*. Each analyst weights their common and private information by its respective precision (*h* or *s*) in arriving at earnings forecasts. Utilizing a set of simplifying assumptions (i.e., 1) analysts issue unbiased forecasts, 2) earnings forecasts do not strictly determine earnings realizations, 3) all analysts private information is of equal precision, and 4) forecast errors are normally distributed.), BKLS express the precision of individual analysts’ common (*h*) and idiosyncratic (*s*) information in terms of the *expected* squared error in the mean forecast (*SE*), *expected* forecast dispersion (*D*) and the number of analysts forecasting (*N*) (See BKLS, Proposition 3, Corollary 1; p. 427-428).

<sup>13</sup>

**Quality of Common Information:**

$$h = \frac{SE - \frac{D}{N}}{\{(1 - \frac{1}{N})D + SE\}^2}$$

**Quality of Private Information:**

$$s = \frac{D}{\{(1 - \frac{1}{N})D + SE\}^2}$$

Assuming that common and idiosyncratic are normal distributed and are independent the total variance in analysts earnings forecasts is  $1/(h+s)$ .

In order to compute the BKLS Measures of quality of public and private Information, one needs to compute the Squared Error and Dispersion of each earnings forecast employed. The estimates of forecast Squared Error and Dispersion are calculated as

**Standard Error of Earnings Forecasts:**

$$SE = \{A_{jt} - \bar{F}_{jt}\}^2$$

**Dispersion of Earnings Forecasts:**

$$\hat{D} = \frac{\sum_{i=1}^N \{F_{ijt} - \bar{F}_{ijt}\}^2}{N-1}$$

*A<sub>jt</sub>*: Actual earnings for firm *j* in year *t*.  
*F<sub>ijt</sub>*: Forecast earnings for firm *j* in year *t*.

Because the measures of quality of public and private information are highly skewed, we employed the variance stabilizing square root transformation of the information quality variables to improve the distributional properties of the date observations.

**Quality of Public Information:**

$$Public = \sqrt{h}$$

**Quality of Private Information:**

$$Private = \sqrt{s}$$

Where *TotalQuality* =  $\sqrt{h + s}$

- $Private_i$  : The individual component from decomposition of total variability of inter-analysts earnings forecasts  $Private_i = \sqrt{s}$ .

The independent variables used to explicitly control other factors, which may systematically impact the dependent variables, are described below:

- $Cross_i$  : An integer valued qualitative variable (e.g., 0, 1) used to capture the effect of firms having cross-listed securities, such as ADRs in a US securities exchange.
- $Year_i$  : An integer-valued index to capture factors impacting sample countries and firms that are attributable to specific years.
- $Industry_i$  : An integer-valued index to capture factors impacting sample countries and firms that are attributable to specific industries.
- $Market_i$  : An integer-valued qualitative variable taking a value of one if the countries of domicile of the  $i^{th}$  sample firm is upper half of the Market Supportive Infrastructure index ranking for the 15 Asia Pacific countries employed in this sample and is assigned a value of zero otherwise. Market Supportive Infrastructure index is calculated by summing the rankings of each Asia Pacific sample country over the following seven dimensions reported in the World Bank *Doing Business* and *Economic Review* publications: 1) Strength of auditing and accounting standards, 2) Strength of investor protection, 3) Shareholder rights, 4) Stock market capitalization, 5) Stock market value traded, 6) Ease of access to local equity market, and 7) Financial market sophistication. Research design in this manner allows for the interception of the regression model to systematically differ between high and low levels of securities market support infrastructure subsets in a manner systematically impacting the statistical results.
- $IFRS_i$  : An integer-valued monotonic increasing (e.g., 0,1,2,3) index of the degree of implementation of IFRS for each sample firm's country of domicile.
- $Market_i \times IFRS_i$  : Integer-valued interaction qualitative variable capturing the interaction between firms' country of domicile degree of implementation of IAS and firms being characterized as domiciled in a high or low level of securities market support infrastructure home country. The variable will take values of either zero or integer values 1-4 since it is measured as the product of  $IFRS_i$  and  $D[Region]_i$  (i.e.,  $Market_i \times IFRS_i = IFRS_i \times Market_i$ ).

Table 3 shows the mean and median values for each of the dependent variables employed in the empirical analyses. The data values are shown by Asia Pacific sample country for comparative purposes. For each data variable, the null hypothesis of equality of means across Asia Pacific sample countries is rejected at the  $\alpha=0.05$  confidence level using two-tailed Chi-Square Kruskal-Wallis tests. Table 4 shows the mean and median values for each of the dependent variables employed in the empirical analyses, as well as by degree of IFRS implementation and high or low market supportive infrastructure strata. In addition, values of the Kruskal-Wallis Chi-Square test statistic are shown, as well as the related probability values, under the null hypothesis of the equality of means across high or low market supportive infrastructure and degree of IFRS implementation strata. For each data variable, the null hypothesis of equality of means across high or low market supportive infrastructure and degree of IFRS implementation strata is rejected at the  $\alpha=0.05$  confidence level using two-tailed Chi-Square Kruskal-Wallis tests. Consequently, we note that the data values differ significantly across Asia Pacific geographic regions, high or low market supportive infrastructure, and degree of IFRS implementation strata employed in this research study.



**Table 3**  
**Distribution of IBES International Detail Country of Domicile over Asia Pacific Geographic Regions**

Total Asia	Firm Count	Public Information Quality		Private Information Quality	
		$Public_i = \sqrt{h}$		$Private_i = \sqrt{s}$	
		Mean <sup>a</sup>	Median	Mean <sup>b</sup>	Median
Australia	1261	0.9031102	0.9759475	0.0950550	0.0240525
China	399	0.8277591	0.9591822	0.1598844	0.0408178
Hong Kong	845	0.7916624	0.9547425	0.1924151	0.0452575
India	252	0.7720902	0.9375000	0.2080458	0.0625000
Indonesia	11761	0.7933687	0.9070423	0.1961043	0.0929577
Japan	855	0.8962528	0.9849224	0.0995808	0.0150776
Korea	822	0.6050662	0.7571663	0.3543537	0.2428337
Malaysia	775	0.9133138	0.9760835	0.0866862	0.0239165
New Zealand	213	0.9133138	0.9760835	0.0866862	0.0239165
Pakistan	108	0.8050385	0.8796946	0.1907145	0.1203054
Philippines	279	0.8995929	0.9788559	0.0947148	0.0211441
Singapore	454	0.8988926	0.9751547	0.1000610	0.0248453
Sri Lanka	112	0.7089792	0.8418086	0.2695022	0.1581914
Taiwan	1584	0.7354130	0.9175136	0.2356322	0.0824864
Thailand	568	0.8421351	0.9718638	0.1473740	0.0281362
Overall Mean	XXXX24850	0.8020794	0.9315412	0.1856470	0.0684588

<sup>a</sup>: Test of Null Hypothesis that Private Information Quality values are equal across Asian countries of domicile strata. Kruskal-Wallis Test Public (Australia) = ... = Public (Thailand). Chi-Square 1463.6148 (p-val. <.0001).

<sup>b</sup>: Test of Null Hypothesis that Private Information Quality values are equal across Asian countries of domicile strata. Kruskal-Wallis Test Private (Australia) = ... = Private (Thailand). Chi-Square 1455.9553 (p-val. <.0001).

The Kruskal Wallis test is a nonparametric equivalent of an equality of means test t-test. It is roughly the sum of squared ranks divided by number in each group and is chi-square distributed.

$$Kruskal - Wallis(\chi^2) = \frac{12}{N(N+1)} \left[ \sum \frac{(T_g)^2}{n_g} \right] - 3(N+1)$$

**Table 4**  
**Descriptive Statistics for Quality of Public and Private Information for Non-Cross-Listed and Cross-Listed by IFRS Degree of Implementation Strata**

Non Cross Listed Observations				
		Mean Value	Median Value	Std. Deviation
Public Information Quality <sup>a</sup>	$Public_i = \sqrt{h}$	0.8011679	0.9290352	0.2901092
Private Information Quality <sup>b</sup>	$Private_i = \sqrt{s}$	0.1865852	0.0709648	0.2537494
<b>Cross Listed Observations:</b>				
		Mean Value	Median Value	Std. Deviation
Public Information Quality <sup>a</sup>	$Public_i = \sqrt{h}$	0.8181492	0.9599039	0.2991143
Private Information Quality <sup>b</sup>	$Private_i = \sqrt{s}$	0.1691073	0.0400961	0.2616018

<sup>a</sup>: Test of Null Hypothesis that Public Information Quality values are equal across Non Cross Listed and Cross Listed strata. Kruskal-Wallis Test: Public (Non Cross Listed) = Public (Cross Listed). Chi-Square 26.8275 (p-val. <.0001).

<sup>b</sup>: Test of Null Hypothesis that Private Information Quality values are equal across Non Cross Listed and Cross Listed strata. Kruskal-Wallis Test: Private (Non Cross Listed) = Private (Cross Listed). Chi-Square 26.6369 (p-val. <.0001).

Table 4 continued

IFRS: Low Level of Country-Specific Degree of Implementation of IFRS				
		Mean Value	Median Value	Std. Deviation
Public Information Quality <sup>c</sup>	$Public_i = \sqrt{h}$	0.7978337	0.9266630	0.2927870
Private Information Quality <sup>d</sup>	$Private_i = \sqrt{s}$	0.1895829	0.0733370	0.2559022
IFRS: Medium Level of Country-Specific Degree of Implementation of IFRS				
		Mean Value	Median Value	Std. Deviation
Public Information Quality <sup>c</sup>	$Public_i = \sqrt{h}$	0.8745624	0.9802955	0.2351257
Private Information Quality <sup>d</sup>	$Private_i = \sqrt{s}$	0.1192614	0.0197045	0.2107885
IFRS: High Level of Country-Specific Degree of Implementation of IFRS				
		Mean Value	Median Value	Std. Deviation
Public Information Quality <sup>c</sup>	$Public_i = \sqrt{h}$	0.8277591	0.9591822	0.2850134
Private Information Quality <sup>d</sup>	$Private_i = \sqrt{s}$	0.1598844	0.0408178	0.2461135

<sup>c</sup>: Test of Null Hypothesis that Public Information Quality values are equal over three IFRS implementation levels strata.

Kruskal-Wallis Test: Public (Low) = Public (Medium) = Public (High). Chi-Square 143.5952 (p-val. <.0001.)

<sup>d</sup>: Test of Null Hypothesis that Private Information Quality values are equal across three IFRS implementation strata.

Kruskal-Wallis Test: Private (Low) = Private (Medium) = Private (High). Chi-Square 144.8574 (p-val. <.0001.)

The Kruskal Wallis test is a nonparametric equivalent of an equality of means test t-test. It is roughly the sum of squared ranks divided by number in each group and is chi-square distributed.

$$Kruskal - Wallis(\chi^2) = \frac{12}{N(N+1)} \left[ \sum \frac{(T_g)^2}{n_g} \right] - 3(N+1)$$

The dependent and independent control variables discussed previously are employed in regression analyses designed to assess systematic differences in the quality of public and private information between high or low market supportive infrastructure countries and the impact of country of domicile degree of implementation of IFRS upon the quality of public and private information between high or low market supportive infrastructure countries. The precision of analysts' common and private information each appear as dependent variables in two of the four regression equations.

Regression Models 1-4 are shown below. For Models 1 and 2, the intercept is permitted to vary across high or low market supportive infrastructure country of domicile and country-specific degree of IFRS implementation. For Model 3 and 4, the intercept is allowed to vary between both high or low market-supportive infrastructure country of domicile geographic regions and country-specific degree of IFRS implementation, as well as their interaction, permitting an assessment of the impact of country-specific high or low market supportive infrastructure individually.

**Tests of Differences in Quality of Public and Private Information between Firms Domiciled in Market-Oriented and Non-Market-Oriented Asia Pacific Countries:**

**Model 1: Public Information Quality – Non-market and Market Institutions:**

**H<sub>01</sub>: a<sub>4</sub> = 0 a<sub>5</sub> = 0 at α=0.05 confidence level (Two-Tailed t-Test).**

$$Public_i = a_0 + a_1 \cdot Cross_i + a_2 \cdot Year_i + a_3 \cdot Industry_i + a_4 \cdot IFRS_i + a_5 \cdot Market_i + v_i$$

**Model 2: Private Information Quality – Non-market and Market Institutions:**

**H<sub>02</sub>: b<sub>4</sub> = 0 b<sub>5</sub> = 0 at α=0.05 confidence level (Two-Tailed t-Test).**

$$Private_i = b_0 + b_1 \cdot Cross_i + b_2 \cdot Year_i + b_3 \cdot Industry_i + b_4 \cdot IFRS_i + b_5 \cdot Market_i + v_i$$

**Tests of Impact of IFRS upon Quality of Public and Private Information Between Firms Domiciled in Market-Oriented and Non-Market-Oriented Asia Pacific Countries:**

**Model 3: Public Information Quality – Non-market and Market x Degree IFRS:**

**H<sub>03</sub>:  $c_4 = 0$   $c_5 = 0$  at  $\alpha=0.05$  confidence level (Two-Tailed t-Test).**

$$Public_i = c_0 + c_1 \cdot Cross_i + c_2 \cdot Year_i + c_3 \cdot Industry_i + c_4 \cdot IFRS_i + c_5 \cdot Market_i \cdot IFRS_i + w_i$$

**Model 4: Private Information Quality – Non-market and Market x Degree IFRS:**

**H<sub>04</sub>:  $d_4 = 0$   $d_5 = 0$  at  $\alpha=0.05$  confidence level (Two-Tailed t-Test).**

$$Private_i = d_0 + d_1 \cdot Cross_i + d_2 \cdot Year_i + d_3 \cdot Industry_i + d_4 \cdot IFRS_i + d_5 \cdot Market_i \cdot IFRS_i + x_i$$

Across the four regression specifications, the coefficients of primary interest pertain to the market-oriented and non-market-oriented Asia Pacific country of domicile and country-specific degree of IFRS implementation as well as their interaction; and, in all cases, the significance of the coefficient is statistically tested using two-tailed hypotheses tests of the null hypothesis that the coefficient is equal to zero. If the null hypothesis is rejected, the result provides an indication that the quality of public or private information is larger or smaller (i.e., depending on whether the estimated coefficient is greater than zero or less than zero) between market-oriented and non-market-oriented Asia Pacific countries of domicile, country specific degree of IFRS implementation, and their interaction.

**STATISTICAL MODEL ESTIMATION AND RESULTS OF HYPOTHESIS TESTS**

Table 5 shows the empirical model estimation and statistical results for Models 1 and 2 utilized in assessing differences in quality of public and private information market-oriented and non-market-oriented Asia Pacific countries of domicile. The most striking result is reflected in Model 1 in that  $a_5$  is significantly greater than zero at the  $\alpha=0.05$  confidence level using two-tailed t-tests, indicating that the quality of public information is significantly greater for market-oriented countries as compared to non-market-oriented Asia Pacific countries of domicile. Similarly, Model 2 indicates that the  $b_5$  is significantly less than zero at the  $\alpha=0.05$  confidence level using two-tailed t-tests, indicating that the quality of private information is significantly greater for non-market-oriented as compared to market-oriented Asia Pacific countries of domicile. Furthermore, we note that the coefficients for the IFRS variables (i.e.,  $a_4$  in Model 1 and  $b_4$  in Model 2) are significantly greater than zero at the  $\alpha=0.05$  confidence level in Model 1 and significantly less than zero at the  $\alpha=0.05$  confidence level in Model 2, indicating that country of domicile degree of implementation of IFRS increases the quality of public information and decreases the quality of private information in both market-oriented and non-market-oriented Asia Pacific countries of domicile. Consequently, both  $H_{01}$  and  $H_{02}$  are rejected at the  $\alpha=0.05$  confidence level using two-tailed t-tests, indicating that 1) public information is significantly less reliable and private information is significantly more reliable for Asia Pacific countries having a lesser degree of market supportive infrastructure as compared to Asia Pacific countries having a greater degree of market supportive infrastructure and 2) that degree of implementation of IFRS increases the reliability of public information and decreases the reliability of private information for both market-oriented and non-market-oriented countries of domicile.

**Table 5**  
**Results of Statistical Comparison of Public and Private Information Quality between Non-Market-Oriented and Market-Oriented Asia Pacific Countries of Domicile: Qualitative Market Variable**

**Model 1: Public Information Quality – Non-market and Market Institutions:**

**H<sub>01</sub>:  $a_4 = 0$   $a_5 = 0$  at  $\alpha=0.05$  confidence level (Two-Tailed t-Test).**

$$Public_i = a_0 + a_1 \cdot Cross_i + a_2 \cdot Year_i + a_3 \cdot Industry_i + a_4 \cdot IFRS_i + a_5 \cdot Market_i + v_i$$

**H<sub>01</sub>:** There is no difference in the quality of **Public** information between Non-Market-Oriented Asian and Market-Oriented Asian firms.

	<b>a<sub>0</sub></b>	<b>a<sub>1</sub></b>	<b>a<sub>2</sub></b>	<b>a<sub>3</sub></b>	<b>a<sub>4</sub></b>	<b>a<sub>5</sub></b>	<b>R-Square</b>
<b>Coeff. Estimate</b>	0.90892	0.01960	-0.01111	-0.00019	0.04318	0.04615	0.0088
<b>t-statistic</b>	39.16	2.17	-8.84	-1.71	7.18 <sup>a</sup>	8.35 <sup>b</sup>	(0.0086)
<b>(p-val)</b>	<.0001 †	0.0302 †	<.0001 †	0.0871	<.0001 †	<.0001 †	

**Model 2: Private Information Quality – Non-Market and Market Institutions:**

**H<sub>02</sub>:  $b_4 = 0$   $b_5 = 0$  at  $\alpha=0.05$  confidence level (Two-Tailed t-Test).**

$$Private_i = b_0 + b_1 \cdot Cross_i + b_2 \cdot Year_i + b_3 \cdot Industry_i + b_4 \cdot IFRS_i + b_5 \cdot Market_i + v_i$$

**H<sub>02</sub>:** There is no difference in the quality of **Private** information between Non-Market-Oriented Asian and Market-Oriented Asian firms.

	<b>b<sub>0</sub></b>	<b>b<sub>1</sub></b>	<b>b<sub>2</sub></b>	<b>b<sub>3</sub></b>	<b>b<sub>4</sub></b>	<b>b<sub>5</sub></b>	<b>R-Square</b>
<b>Coeff. Estimate</b>	0.07005	-0.01929	0.01098	0.00018	-0.03907	-0.03775	0.0098
<b>t-statistic</b>	3.45	-2.44	9.99	1.87	-7.43 <sup>a</sup>	-7.81 <sup>b</sup>	(0.0095)
<b>(p-val)</b>	0.0006 †	0.0147 †	<.0001 †	0.0608	<.0001 †	<.0001 †	

<sup>a</sup>: Regression coefficient **a<sub>4</sub>** is significantly greater than zero at the  $\alpha = 0.05$  confidence level under the two-tailed test of the null hypothesis that the coefficient is equal to zero. Consequently, we conclude that the quality of public information for both Non-Market-Oriented and Market-Oriented Asian countries of domicile increases in relation to country of domicile degree of implementation of IFRS. The regression coefficient **b<sub>4</sub>** is significantly less than zero at the  $\alpha = 0.05$  confidence level under the two-tailed test of the null hypothesis that the coefficient is equal to zero. Consequently, we conclude that the quality of private information for both Non-Market-Oriented and Market-Oriented Asian countries of domicile decreases in relation to country of domicile degree of implementation of IFRS.

<sup>b</sup>: Regression coefficient **a<sub>5</sub>** significantly greater than zero at the  $\alpha = 0.05$  confidence level under the two-tailed test of the null hypothesis that the coefficient is equal to zero. Consequently, **H<sub>01</sub>** is rejected at the  $\alpha = 0.05$  confidence level and we conclude that the quality of public information for Market Orient Asian countries of domicile is significantly greater than public information quality for Non-Market-Oriented Asian countries of domicile. Regression coefficient **b<sub>5</sub>** is significantly less than zero at the  $\alpha = 0.05$  confidence level under the two-tailed test of the null hypothesis that the coefficient is equal to zero. Consequently, **H<sub>02</sub>** is rejected at the  $\alpha = 0.05$  confidence level and we conclude that the quality of private information for Market Orient Asian countries of domicile is significantly less than private information quality for Non-Market-Oriented Asian countries of domicile.

The table reports regression parameter estimates, t-statistics (in parentheses) relating to the test of the null hypothesis that the regression coefficient is equal to zero, and R-Square values (adjusted *R-Square* percentages in parentheses) from ordinary least squares estimation. † (‡): Indicates the coefficient is significantly different from zero at less than the  $\alpha = 0.01$  (0.05) confidence level. *p*-values are two-tailed for all coefficients.

**Definitions of Variables used In Regression Analyses:**

*Regression Dependent Variables:*

*Public<sub>i</sub>*: Precision of individual analysts' common information for firm *i*, annual earnings.

*Private<sub>i</sub>*: Precision of individual analysts' idiosyncratic information for firm *I* annual earnings.

Table 5 continued

*Regression Independent Variables:*

<i>Cross<sub>i</sub></i> :	An integer valued qualitative variable (e.g., 0, 1) used to capture the effect of firms having cross-listed securities such as ADRs in a US securities exchange.
<i>Year<sub>i</sub></i> :	An integer valued index to capture factors impacting sample countries and firms which are attributable to attributable to specific years.
<i>Industry<sub>i</sub></i> :	An integer valued index to capture factors impacting sample countries and firms which are attributable to attributable to specific industries.
<i>IFRS<sub>i</sub></i> :	An integer valued monotonic increasing (e.g., 0,1,2,3) index of the degree of implementation of IFRS for each sample firms country of domicile.
<i>Market<sub>i</sub></i> :	An integer valued qualitative variable taking a value of one if the country of domicile of the <i>i</i> <sup>th</sup> sample firm is uniquely above the median rank of the World Bank Market Institutional Characteristics Dimensions employed in this sample and is assigned a value of zero otherwise. Research design in this manner allows for the intercept of the regression model to systematically differ between the Non-Market-Oriented and Market-Oriented Asian subsets in a manner systematically impacting the statistical results.

Table 6 shows the empirical model estimation and statistical results for Models 3 and 4 utilized in assessing differences in impact of country specific degree of IFRS implementation upon quality of public and private information between market-oriented and non-market-oriented Asia Pacific countries of domicile. The particularly noteworthy result reflected in Model 3 is that  $c_6$  is significantly greater than zero at the  $\alpha=0.05$  confidence level using two-tailed t-tests, indicating that impact of IFRS upon the quality of public information is significantly greater for market-oriented as compared to non-market-oriented countries of domicile. Similarly, Model 4 indicates that the  $d_6$  is significantly less than zero at the  $\alpha=0.05$  confidence level using two-tailed t-tests, indicating that the impact of IFRS upon the quality of private information is significantly greater for market-oriented as compared to non-market-oriented countries of domicile. Furthermore, we note once again that the coefficients for the IFRS variables (i.e.,  $c_4$  in Model 3 and  $b_4$  in Model 4) are significantly greater than zero at the  $\alpha=0.05$  confidence level in Model 3 and significantly less than zero at the  $\alpha=0.05$  confidence level in Model 4 indicating that country of domicile degree of implementation of IFRS increases the quality of public information and decreases the quality of private information in both market-oriented and non-market-oriented countries of domicile. Consequently, both  $H_{03}$  and  $H_{04}$  are rejected at the  $\alpha=0.05$  confidence level using two-tailed t-tests, indicating that the impact of degree of implementation of IFRS in improving the quality of public information and decreasing the quality of private information is significantly greater for Asia Pacific countries having a greater degree of market supportive infrastructure as compared to Asia Pacific countries having a lesser degree of market supportive infrastructure. We consider these results to indicate that implementation of IFRS is marginally more useful for Asia Pacific countries having sufficient existing supportive infrastructure to improve the quality of public information with the adoption of IFRS. Table 7 summarizes the results of the statistical hypotheses tests  $H_{01} - H_{04}$  based upon Models 1-4. As indicated in Table 7, all of the dollar hypotheses  $H_{01} - H_{04}$  are rejected at the  $\alpha=0.05$  confidence level.

**Table 6: Results of Statistical Comparison of Public and Private Information Quality between Non-Market-Oriented and Market-Oriented Asia Pacific Countries of Domicile: Qualitative Market Variable and Interaction Market x Degree of IFRS Variable**

**Model (3) Public Information Quality – Qualitative Variable and Interaction Variable:**

**H<sub>03</sub>: c<sub>4</sub> = 0 c<sub>5</sub> = 0 and c<sub>6</sub> = 0 at α=0.05 confidence level (Two-Tailed t-Test).**

$$Public_i = c_0 + c_1 \cdot Cross_i + c_2 \cdot Year_i + c_3 \cdot Industry_i + c_4 \cdot IFRS_i + c_5 \cdot Market_i + c_6 \cdot Market_i \cdot IFRS_i + y_i$$

**H<sub>04</sub>:** There is no difference in the impact of Degree of Implementation of IFRS upon quality of **Public** information between Non-Market-Oriented Asian and Market-Oriented Asian firms.

	<b>c<sub>0</sub></b>	<b>c<sub>1</sub></b>	<b>c<sub>2</sub></b>	<b>c<sub>3</sub></b>	<b>c<sub>4</sub></b>	<b>c<sub>5</sub></b>	<b>c<sub>6</sub></b>	<b>R-Square</b>
<b>Coeff. Estimate</b>	0.92345	0.01830	-0.01096	-0.00019	0.02937	0.00627	0.01232	0.0092 (0.0089)
<b>t-statistic</b>	38.88	2.02	-871	-1.70	3.82 <sup>a</sup>	0.42 <sup>b</sup>	2.87 <sup>b</sup>	
<b>(p-val)</b>	<.0001 †	0.0432 †	<.0001 †	0.0899	<.0001 †	0.6750	0.0041 †	

**Model (4) Private Information Quality – Qualitative Variable and Interaction Variable:**

**H<sub>04</sub>: d<sub>4</sub> = 0 d<sub>5</sub> = 0 and d<sub>6</sub> = 0 at α=0.05 confidence level (Two-Tailed t-Test).**

$$Private_i = d_0 + d_1 \cdot Cross_i + d_2 \cdot Year_i + d_3 \cdot Industry_i + d_4 \cdot IFRS_i + d_5 \cdot Market_i + d_6 \cdot Market_i \cdot IFRS_i + z_i$$

**H<sub>05</sub>:** There is no difference in the impact of Degree of Implementation of IFRS upon quality of **Private** information between Non-Market-Oriented Asian and Market-Oriented Asian firms.

	<b>d<sub>0</sub></b>	<b>d<sub>1</sub></b>	<b>d<sub>2</sub></b>	<b>d<sub>3</sub></b>	<b>d<sub>4</sub></b>	<b>d<sub>5</sub></b>	<b>d<sub>6</sub></b>	<b>R-Square</b>
<b>Coeff. Estimate</b>	0.05613	-0.01806	0.01083	0.00018	-0.02586	0.00044	0.03386	0.0103 (0.0100)
<b>t-statistic</b>	2.70	-2.28	9.85	1.86	-3.84 <sup>a</sup>	0.03 <sup>b</sup>	-3.14 <sup>c</sup>	
<b>(p-val)</b>	0.0069 †	0.0225 †	<.0001 †	0.0631	<.0001 †	0.9729	0.0017 †	

<sup>a</sup>: Regression coefficient **c<sub>4</sub>** is significantly greater than zero at the α = 0.05 confidence level under the two-tailed test of the null hypothesis that the coefficient is equal to zero. Consequently, we conclude that the quality of public information for both Non-Market-Oriented and Market-Oriented Asian countries of domicile increases in relation to country of domicile degree of implementation of IFRS. The regression coefficient **d<sub>4</sub>** is significantly less than zero at the α = 0.05 confidence level under the two-tailed test of the null hypothesis that the coefficient is equal to zero. Consequently, we conclude that the quality of private information for both Non-Market-Oriented and Market-Oriented Asian countries of domicile decreases in relation to country of domicile degree of implementation of IFRS.

<sup>b</sup>: Regression coefficient **c<sub>6</sub>** is significantly greater than zero at the α = 0.05 confidence level under the two-tailed test of the null hypothesis that the coefficient is equal to zero. Consequently, null hypothesis regarding the coefficient being zero valued is rejected at the α = 0.05 confidence level and we conclude that the quality of public information for Market Orient Asian countries of domicile is significantly greater than public information quality for Non-Market-Oriented Asian countries of domicile. Regression coefficient **d<sub>5</sub>** is significantly less than zero at the α = 0.05 confidence level under the two-tailed test of the null hypothesis that the coefficient is equal to zero. Consequently, the null hypothesis regarding the coefficient being zero valued is rejected at the α = 0.05 confidence level and we conclude that the quality of private information for Market Orient Asian countries of domicile is significantly less than private information quality for Non-Market-Oriented Asian countries of domicile.

<sup>b</sup>: Regression coefficient **c<sub>5</sub>** is significantly greater than zero at the α = 0.05 confidence level under the two-tailed test of the null hypothesis that the coefficient is equal to zero. Consequently, null hypothesis **H<sub>03</sub>** regarding the coefficient being zero valued is rejected at the α = 0.05 confidence level and we conclude that the implementation of IFRS increases the quality of public information for Market Orient Asian countries of domicile to a larger degree than for Non-Market-Oriented Asian countries of domicile. Regression coefficient **d<sub>6</sub>** is significantly less than zero at the α = 0.05 confidence level under the two-tailed test of the null hypothesis that the coefficient is equal to zero. Consequently, the null hypothesis **H<sub>04</sub>** regarding the coefficient being zero valued is rejected at the α = 0.05 confidence level and we conclude that the implementation of IFRS decreases the quality of private information to a larger degree for Market-Oriented Asian countries of domicile than for Non-Market-Oriented Asian countries of domicile.

The table reports regression parameter estimates, t-statistics (in parentheses) relating to the test of the null hypothesis that the regression coefficient is equal to zero, and R-Square values (adjusted *R-Square* percentages in parentheses) from ordinary least squares estimation. † (‡): Indicates the coefficient is significantly different from zero at less than the α = 0.01 (0.05) confidence level. *p*-values are two-tailed for all coefficients.

**Table 6 continued**

**Definitions of Variables used In Regression Analyses:**

*Regression Dependent Variables:*

*Public<sub>i</sub>* : Precision of individual analysts' common information for firm *i*, annual earnings.

*Private<sub>i</sub>* : Precision of individual analysts' idiosyncratic information for firm *I* annual earnings.

*Regression Independent Variables:*

*Cross<sub>i</sub>*: An integer valued qualitative variable (e.g., 0, 1) used to capture the effect of firms having cross-listed securities such as ADRs in a US securities exchange.

*Year<sub>i</sub>* : An integer valued index to capture factors impacting sample countries and firms which are attributable to attributable to specific years.

*Industry<sub>i</sub>* : An integer valued index to capture factors impacting sample countries and firms which are attributable to attributable to specific industries.

*IFRS<sub>i</sub>*: An integer valued monotonic increasing (e.g., 0,1,2,3) index of the degree of implementation of IFRS for each sample firms country of domicile.

*Market<sub>i</sub>*: An integer valued qualitative variable taking a value of one if the country of domicile of the *i*<sup>th</sup> sample firm is uniquely above the median rank of the World Bank Market Institutional Characteristics Dimensions employed in this sample and is assigned a value of zero otherwise. Research design in this manner allows for the intercept of the regression model to systematically differ between the Non-Market-Oriented and Market-Oriented Asian subsets in a manner systematically impacting the statistical results.

**Table 7: Summary of Public Information Quality Regression Models 1 and 2 and Private Information Quality Regression Models 3 and 4 Hypotheses Tests**

**Figure 1: Quality of Public Information: Comparison of Market-Oriented and Non-Market-Oriented Asia Pacific Countries of Domicile**

Model/Hypothesis	Degree IFRS <b>H<sub>01</sub>: a<sub>4</sub> = 0</b>	Non-Market vs.Market <b>H<sub>01</sub>: a<sub>5</sub> = 0</b>	Interaction [Not Applicable]
<b>Model 1</b>	<b>Reject</b> at the $\alpha=0.05$ confidence level (Two-Tailed t-Test).	<b>Reject</b> at the $\alpha=0.05$ confidence level (Two-Tailed t-Test).	[Not Applicable]
Model/Hypothesis	Degree IFRS <b>H<sub>03</sub>: c<sub>4</sub> = 0</b>	Non-Market vs.Market <b>H<sub>03</sub>: c<sub>5</sub> = 0</b>	Interaction <b>H<sub>03</sub>: c<sub>6</sub> = 0</b>
<b>Model 3</b>	<b>Reject</b> at the $\alpha=0.05$ confidence level (Two-Tailed t-Test).	<b>Reject</b> at the $\alpha=0.05$ confidence level (Two-Tailed t-Test).	<b>Reject</b> at the $\alpha=0.05$ confidence level (Two-Tailed t-Test).

**Figure 2: Quality of Private Information: Comparison of Market-Oriented and Non-Market-Oriented Asia Pacific Countries of Domicile**

Model/Hypothesis	Degree IFRS <b>H<sub>02</sub>: b<sub>4</sub> = 0</b>	Non-Market vs.Market <b>H<sub>02</sub>: b<sub>5</sub> = 0</b>	Interaction [Not Applicable]
<b>Model 2</b>	<b>Reject</b> at the $\alpha=0.05$ confidence level (Two-Tailed t-Test).	<b>Reject</b> at the $\alpha=0.05$ confidence level (Two-Tailed t-Test).	[Not Applicable]
Model/Hypothesis	Degree IFRS <b>H<sub>04</sub>: d<sub>4</sub> = 0</b>	Non-Market vs.Market <b>H<sub>04</sub>: d<sub>5</sub> = 0</b>	Interaction <b>H<sub>04</sub>: d<sub>6</sub> = 0</b>
<b>Model (4)</b>	<b>Reject</b> at the $\alpha=0.05$ confidence level (Two-Tailed t-Test).	<b>Reject</b> at the $\alpha=0.05$ confidence level (Two-Tailed t-Test).	<b>Reject</b> at the $\alpha=0.05$ confidence level (Two-Tailed t-Test).

## CONCLUSION AND SUGGESTIONS FOR FUTURE RESEARCH

The primary contribution of this research is that we extend prior research by investigating differences in the quality of securities analysts' public and private information between Asia Pacific countries having a lesser degree of market supportive infrastructure and Asia Pacific countries having a greater degree of market supportive infrastructure. Furthermore, we provide evidence regarding the differential impact of country-specific degree of implementation of IFRS upon the quality of public and private information between Asia Pacific countries having lesser degree of market supportive infrastructure and Asia Pacific countries having greater degree of market supportive infrastructure countries of domicile. We utilize the Barron, Kim, Lim, and Stevens (1998) measures of public and private quality information calculated from mean analyst forecast error and dispersion of inter-analyst forecasts. Our results indicate that 1) the quality of public information is higher for Asia Pacific countries having a greater degree of market-supportive infrastructure relative to Asia Pacific countries having a lesser degree of market-supportive infrastructure and 2) the quality of private information is higher for Asia Pacific firms from countries having greater degree of market-supportive infrastructure compared to Asia Pacific firms from countries having a lesser degree of market-supportive infrastructure. In assessing the comparative impact of country-specific IFRS implementation, we observe that 1) countries of domicile degree of implementation of IFRS increases the quality of public information and decreases the quality of private information for firms from Asia Pacific countries having both greater and lesser market-oriented supportive infrastructure and 2) the increase in the quality of public and decrease in the quality of private information are significantly more pronounced for firms from Asia Pacific countries having greater market-oriented supportive infrastructure as compared to firms from Asia Pacific countries having a lesser market-oriented supportive infrastructure. We believe these results are indicative that IFRS are very likely marginally more useful for firms in Asia Pacific countries having greater market-oriented supportive infrastructure as compared to firms in Asia Pacific countries having a lesser market-oriented supportive infrastructure in the sense of reducing information asymmetry by moving important prospective performance-related information from the private into the public domain.

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