An Investigation of Accounting Information Quality: A Comparative Study of Listed Companies on the Stock Exchange of Thailand and China

Kittima Acaranupong, Ph.D.
Assistant Professor of the Corporate Accounting Group (Financial Accounting) School of Accountancy, University of the Thai Chamber of Commerce
E-mail: kittima_aca@utcc.ac.th;
kittima456@yahoo.com

Abstract

The objective of this paper is to examine and compare the level of accounting information quality of companies listed on the Stock Exchange of Thailand (SET) and the Shanghai Stock Exchange (SSE). Empirical research is conducted by regression analysis. Two perspectives of accounting information quality are measured: market-based perspective (value relevance of earnings) and accounting-based perspective (earnings persistence). The results indicate that earnings are value relevant information and they have the persistence properties for listed companies on the SET and the SSE. The value relevance of earnings of the listed companies on the SET is more than that of the listed companies on the SSE. Similarly, the earnings persistence of the listed companies on the SET is more than that of the listed companies on the SSE. The paper contributes to two countries standard setters in issuance of new accounting standards and revising of the existing accounting standards. In addition, it will provide initial guideline for the regulatory bodies of two countries in investigation of accounting information quality.

Keywords: Accounting Information Quality, Value Relevance of Earnings, Earnings Persistence, Thailand, China

Introduction

Several prior studies showed that the quality of accounting information was affected by many factors; for example, institutional factors (Ball, Robin and Wu, 2003), the adoption of International Accounting Standards (IAS) or International Financial Reporting Standards (IFRS) (Ding, Hope, Jeanjean and Stolowy, 2007) and the level of book-tax conformity (Atwood, Drake and Myers, 2010). Further, Ball et al. (2003) showed that earnings in four East Asian countries (Hong Kong, Malaysia, Singapore and Thailand) generally lacked transparency, which they defined as timeliness in incorporating economic income, particularly for economic losses. Leuz, Nanda and Wysocki (2003) indicated the low level of disclosure measured as disclosure index in this region compared with other continents. Thailand and China are two countries in this region where accounting information quality is still less explored. The adoption of IAS/IFRS indicated the high level of accounting information quality (Barth, Landsman and Lang, 2008). Although the issuance of Thai Accounting Standards (TAS) and Thai Financial Reporting Standards (TFRS) has adapted from IAS/IFRS more than the past, the accounting information quality of Thai listed companies remains questionable. In Thailand, accounting professional bodies issue accounting standards while the issuance of accounting standards in China is the responsibility of public sectors. China has just started the implementation of IAS/IFRS since the year 2006. The Chinese Accounting Standards (CAS) are issued by the Ministry of Finance. Absence score (from IAS) of Thailand was 29 and that of China was 14. Divergence score (from IAS) of Thailand was 7 and that of China was 15 (Ding et al., 2007). The differences in absence and divergence scores between Thailand and China indicated the different level of IAS/IFRS adoption and implementation between two countries. No previous research studied the accounting information quality of these two countries in the comparative manner. Thus, the main objective of this paper is to examine and compare the accounting information quality level of Thailand and China. Plausible reasons for differences in accounting information quality between two countries are the difference in legal system (Ball, Kothari and Robin, 2000), the extent of IAS/IFRS implementation (Barth et al., 2008; Ball, 2008) and book-tax conformity level (Atwood et al., 2010). The current study provides the important guidance to standard setters of two countries in issuance the new accounting standards and revising existing accounting standards. It also contributes to the regulatory bodies of both stock exchanges (The Security Exchange Commissions-SEC in Thailand and The Chinese Security Regulatory Commissions-CSRC in China) for monitoring and investigating the quality of financial reporting.

Purposes of Research

To investigate and compare level of accounting information quality of listed companies on the Stock Exchange of Thailand (SET) and the Shanghai Stock Exchange (SSE).

Related Literature Review and Development of Research Hypotheses Definition, measurement of accounting information quality

The term “quality” in connection with accounting information can be understood as the

achievement of general objectives of accounting. Many prior studies measured accounting quality in terms of earnings quality (Dechow and Schrand, 2004; Dechow, Ge, and Schrand, 2010). Higher quality earnings provided more information about the features of a firm's financial performance that was relevant to a specific decision made by a specific decision-maker (Dechow et al., 2010). Many measures of earnings quality reflected market-based attributes and accounting-based attributes. For market-based measures, many previous studies measured accounting information quality as the value relevance of accounting information. That is, how well of accounting information was used in valuing securities (Kothari, 2001; Dechow et al., 2010). Firms with higher quality of accounting information had a higher association between stock price, earnings, and book value of equity because high quality of accounting information reflected a firms' underlying economics better (Lang, Raedy and Yetman, 2003; Lang, Raedy and Wilson, 2006). For accounting based-measures, Barth et al. (2008) exhibited that the accounting information quality was measured in terms of earnings persistence, more timely loss recognition, and high value relevance of accounting information. They interpreted that earnings that were more persistent, less earnings management were being of high quality.

Background of accounting development in Thailand and China

Before 1997, Thai accounting system had been fully influenced by Westerns especially by the United States. In 1997, Thai Financial Reporting Standards (TFRS) were changed to apply IFRS as its main principle. During 1998-1999, many TFRS were revised or newly issued in accordance with IFRS. The Federation of Accounting Professions (FAP) is the official accounting standards-setting body in Thailand which identifies the Thai Accounting Standards (TAS) and Thai Financial Reporting Standards (TFRS), auditing standards and other standards related to accounting profession and the FAP planned to substantially adopt IFRS by the end of 2006. However, until year 2008, there were some differences between TFRS and IFRS. Some TFRS were still the same as U.S. GAAP for such as accounting for troubled debt restructuring, accounting for investments in debt and equity securities, accounting for investment companies.

For the accounting development in China, before 1979, China's economic system was under The Chinese Communist Party (CCP)'s Control. After 1979, the economic system reform and open door incentives gradually evolved China's economic and legal system. In 1992, the accounting system reform changed the Chinese accounting system to a capital market oriented financial reporting system. China's accounting standards moved towards to harmonize with IFRS. In February 2006, the Ministry of Finance announced the introduction of 39 New Chinese Accounting Standards (one basic accounting standard and the 38 specific accounting standards for business enterprise). The new Chinese accounting standards adopt the principle-based approach according to IFRS, but they do not comply fully with IFRS. However, Chinese accounting standards will continue to update in line with IFRS development. Zhang and Liu (2010) summarized that, although Chinese new accounting standards have reached substantive convergence with IFRS, there were some differences between Chinese Accounting Standards and IFRS. Chinese accountants lacked in making the professional judgment because the

accounting standards were under the control of government.

From briefly accounting development in China and Thailand, there are some similarities between both countries. That is, both countries are in the phrase of developing accounting standards which are in the line with IFRS. However, there are some different factors influencing the accounting information quality. The main differences between Thailand and China are summarized and presented in Table 1. The differences are influence of legal system, the accounting standard setters, the extent of adoption IAS/IFRS and the book-tax conformity level.

Furthermore, the main differences of accounting practices between Thailand and China

Table 1 Main differences between Thailand and China

Differences	Thailand	China
Legal System	Thailand has a codified system law or civil law country. The content of law is derived from the laws of other countries with well developed legal system. Most content of law in Thailand is influenced by common law countries such as Great Britain.	The civil law country is greatly influenced by Napoleonic Civil code and the Civil law of Germany. However, in recent years, the common law countries begin to influence the legislation of China.
Accounting Standards Setters	Private Sector: Federation of Accounting Professions	Public Sector: Ministry of Finance
Stock Market-Oriented	Old establishment since 1977 (the Stock Exchange of Thailand)	New establishment since 1990 (the Shanghai Stock Exchange)
Contents of Accounting Standards	Every accounting standards are consistent with contents of IAS/IFRS except TAS No. 104 Accounting for Troubled Debt Restructuring (revised 2002), TAS No. 105 Accounting for Investments in Debt and Equity Securities, and TAS No. 106 Accounting for Investment Companies which are consistent with U.S. GAAP.	Since 2006, China accounting standards gradually converge to IAS/IFRS. China's accounting regulations continue to depart from IAS/IFRS on two major issues. The definition of related parties' entities excludes most state-owned enterprises (SOEs) in China, while IFRS consider all SOEs are related parties. The difference is found in reversal of impairment of depreciable assets. Regulators in China believe that impairment of tangible long-term assets is most likely permanent, and recovery is exception rather than the rule.

are the valuation of property, plant and equipment (PPE) and intangible assets. In Thailand, the revaluation of PPE and intangible assets are allowed, but the revaluation of PPE and intangible assets are not permitted in China. The development cost in Thailand is capitalized when it meets criteria. However, the development cost in China is expensed (except patent registration and legal costs, which are capitalized). In addition, for the accounting items in income statement, profit and loss on disposal of fixed assets are included in operating profit in Thailand, but this item is presented as non-operating gain or loss in China.

Value relevance of earnings and earnings persistence studies in Thailand and China

The measurement of accounting information quality is based on the value relevance of earnings and earnings persistence. Many prior studies investigated the value relevance of earnings and earnings persistence in mature market such as the U.S. and UK. (e.g. Francis and Schipper, 1999). However, in Thailand, there are very few studies on the value relevance of earnings and earnings persistence. Narktubtee (2000) found that earnings were related to returns significantly during 1994-1997. Vichitsarawong (2011) investigated the value relevance of earnings and cash flows by studying three sub periods: pre-crisis (1999-2000), crisis (2001-2002) and post-crisis period (2003-2004). The findings revealed that earnings better explained the stock returns in the pre-crisis period. Nonetheless, ability of earnings to explain the stock returns has decreased during the crisis period. In the post-crisis period, the value relevance of earnings has increased, but still lower than that of cash flows. The result strongly supported an increase in value relevance of cash flows beyond earnings information. Benyasrisawat (2011) also investigated the value relevance of earnings, earnings persistence and earnings timeliness after the adoption IFRS in its domestic accounting standards in Thailand. The findings showed that value relevance of earnings and earnings persistence has been improved after the adoption of IFRS, however the earnings timeliness has been declined. Vivattanachang and Supattarakul (2013) examined the earnings persistence and the market pricing of earnings and their accrual and cash flow components of Thai listed companies during 1999-2007. Their results indicated that the earnings persistence coefficient was 0.574 which was less than 1. It was positive and significantly related to future earnings. Therefore, their results were consistent with Sloan (1996) that accounting rates of return in Thailand were mean reverting. In China, the value relevance of earnings and earnings persistence has been examined since the late 1990s. Chen, Chen and Su (2001) examined the value relevance of earnings and book value of equity in Chinese stock market from 1991 to 1998. Their results indicated that accounting information in China were value relevant both cross-sectional and time-series regressions. Navissi, Mirza and Yao (2006) investigated the earnings persistence, the role of earnings components in the persistent of earnings and the use of earnings persistence in equity pricing by investors. Their results showed that there was a high level of earnings persistence of listed companies in China. Chalmers, Navissi, and Qu (2010) examined the effect of accounting reform in China on value relevance of accounting information. Their findings indicated that accounting information better explained the stock returns for both A-share firms and A&B-share firms in the

post Accounting Standards for Business Enterprise (ASBEs) period.

Effects of difference in countries' factors on accounting information quality

There are many factors influencing the accounting information quality such as legal systems, tax systems, level of IFRS implementation. Previous studies investigated the differences in financial reporting quality between common law and code law (Ball et al., 2000). Earnings were more volatile, more informative, and more closely followed by investors and analysts in common law countries. The common law made standard setters as private responsibility. Code law also took its name from the process whereby laws, including financial reporting rules, were created by the public sectors. There was less emphasis on timely recognition of losses in public accounting statements, and earnings were lower volatility and lower informativeness (Ball et al., 2000). Moreover, the difference in book tax conformity level also affected the accounting information quality. Atwood et al. (2010) examined whether the required book-tax conformity affected earnings persistence and the association between earnings and future cash flows. Using 33 countries including Thailand and China in their samples, their result suggested that an increase in book-tax conformity may reduce earnings quality. Further, the level of IFRS implementation also affected the information quality. Barth et al. (2008) investigated whether the implementation of IAS/IFRS was associated with higher accounting information quality. The implementation reflected the combined effects of features of financial reporting systems, including standards, interpretations, and enforcement. They concluded that IAS was principle-based approach and found evidence that the use of IAS was associated with less earnings smoothing, less earnings management, more timely loss recognition, and greater value relevance. In addition, previous studies investigated the amounts based on domestic accounting standards compared with applying IAS. Eccher and Healy (2003) compared the value relevance of amounts based on IAS and Chinese Accounting Standards (CAS). They found that accounting amounts based on IAS were not more value relevant than those based on Chinese accounting standards for firms owned by foreign investors. However, their study indicated that accounting amounts based on IAS were less value relevant than those based on Chinese standards for firms owned by domestic investors. Chamisa, Mangena and Ye (2012) found that both A-share and B-share markets, both CAS-based and IFRS-based accounting information were value relevant, but IFRS-based information was more relevant than CAS-based information. From all above findings, there were not same conclusions from previous research about the better value relevance between IAS/IFRS based earnings and other GAAP based earnings.

Research Hypotheses

The level of accounting quality in Thailand and China may be different because of the differences in legal systems, level of adoption IAS/IFRS and level of book tax conformity (see details in literature review section). The null and alternative research hypotheses of this paper are as follows.

H0: There is the same level of accounting information quality between listed companies on the Stock Exchange of Thailand and China.

H1: There is the different level of accounting

information quality between listed companies on the Stock Exchange of Thailand and China.

Research Design

Sample selection and data collection

Scope of research is the study of companies listed in Thailand and China. The paper selects the companies listed on the Stock Exchange of Thailand (SET) and on the Shanghai Stock Exchange (SSE) as the sample. The samples in this study are listed companies from all industries and sectors. The period of study is the years 2005-2008. Stock prices, stock returns, accounting information for companies listed on the SET and the SSE are extracted from Data Stream Database. The number of listed companies on the SET and the SSE is 476 firms and 860 firms, respectively. This research excludes the Non-December financial year ended firms for controlling the same accounting period. The paper also removes the outlier by cutting the extreme value of variables (+/- 1% of samples). Hence, the final sample composes of 1,222 firms-years for the SET and 2,339 firms-years for the SSE.

Research model and hypotheses testing

The study investigates the accounting information quality in two perspectives: market-based (value relevance of earnings) and accounting-based perspective (earnings persistence). Model (1) is used to test the relationship between the stock returns and earnings (Liu and Thomas, 2000; Holthausen and Watts, 2001) and model (2) is used to test the association between future earnings and current earnings (Lipe, 1990; Pronobis, Schwetzler, Sperling and Zulch, 2009; Frankel and Litov, 2009). Model (1) and (2) are presented as follows.

$$R_{it} = \alpha_0 + \alpha_1 E_{it} + \varepsilon_{it} \qquad (1)$$

R_{it} = 12 monthly stock returns compounding after 2 months of the end of years;

E_{it} = basic earnings per share of firm i period t; and

ε_{it} = error term of firm i period t.

$$E_{t+1} = \beta_0 + \beta 1 Et + \varepsilon_{it} \qquad (2)$$

E_{t+1} = basic earnings per share of firm i period t+1;

Et = basic earnings per share of firm i period t; and

ε_{it} = error term of firm i period t.

Model (1) and model (2) are analyzed for the pooled-periods of the study and for each stock exchange separately. Further, the differences of value relevance and earnings persistence between Thai and China's listed companies are tested by using F test (Zar, 1984). F value is manually calculated as follows.

F = (SSc – SSp)/ k-1

SSc= combined residual sum of squares from regression analysis on the square of explanatory variables for all samples in model (1) and model (2);

SSp = pooled residual sum of squares of regression model (1) and (2) of Thai listed firms and Chinese listed firms;

k = number of regression models; and

DFp = number of pooled regression degree of freedom.

Moreover, Pearson correlation of stock returns-earnings between the listed companies on the SET and the SSE and Pearson correlation of future earnings-current earnings between the listed companies on the SET and the SSE are computed. The z-test is prepared for testing the difference in Pearson correlation between the two stock exchanges.

Empirical Results

Descriptive statistics

In this section, it presents the descriptive statistics of stock returns, earnings per share of companies listed on the SET and the SSE in Table 2.

According to Table 2, the mean of stock returns of listed companies on the SET is negative while that of the SSE is positive. The volatility of stock returns for listed companies on the SSE is higher than that of listed companies on the SET. Earnings per share of year t and year t+1 of the listed companies on the SET are more than those of listed companies on the SSE. The volatility of earnings of Thai listed firms is higher than that of Chinese listed firms which is the opposite direction of stock returns.

SSp/DFp

Table 3 Panel A reveals that the correlations between stock returns and earnings per share of Thai listed companies are significant both from Pearson and Spearman rank. This result is the same for Chinese listed companies. Table 3 Panel B also shows that both Pearson and Spearman rank correlations between future earnings and current

Table 2 Descriptive statistics of stock returns, earnings per share of year t and earnings per share of year t+1*

Panel A: Listed companies on the Stock Exchange of Thailand (SET) (n=1,222)					
Variables	**Variable used in model**	**Mean**	**Std**	**Min**	**Max**
Stock Returns	Model (1)	-0.05479	0.43490	-0.81005	2.51360
Earnings per Share of Year t	Model (1)	1.50227	3.10505	-4.98000	24.49000
Earnings per Share of Year t+1	Model (2)	1.50227	3.10505	-4.98000	24.49000
Earnings per Share of Year t	Model (2)	1.52063	2.76901	-4.08000	16.43000
Panel B: Listed companies on the Shanghai Stock Exchange (SSE) (n=2,339)					
Variables	**Variable used in model**	**Mean**	**Std**	**Min**	**Max**
Stock Returns	Model (1)	0.55480	0.93688	-0.71371	3.90830
Earnings per Share of Year t	Model (1)	0.18253	0.33038	-1.50200	1.59700
Earnings per Share of Year t+1	Model (2)	0.18253	0.33038	-1.50200	1.59700
Earnings per Share of Year t	Model (2)	0.15043	0.27855	-1.31100	1.10000

*For the investigation of earnings persistence, earnings of year t+1 are regressed on earnings year t. Hence, the researcher uses earnings in 2006 as dependent variables and earnings in 2005 as independent variables. In same manner, we use earnings in 2007, 2008 as dependent variables and earnings in 2006 and 2007 as independent variables, respectively.

earnings are statistically significant for the listed companies on the SET and the SSE. The values of Pearson and Spearman rank correlations between stock returns and earnings per share of Thai listed companies are higher than those of Chinese listed companies. Similarly, the values of Pearson and Spearman rank correlations between future earnings and current earnings of Thai listed companies are more than those of Chinese listed companies.

Regression results

Model (1) is used to test value relevance of earnings for the listed companies on the SET and the SSE. The result is presented in Table 4.

Table 4 indicates that the model (1) is statistically significant at 0.01 level for listed companies

Table 3 Pearson correlation and Spearman rank correlation

PANEL A: Correlation between stock returns and earnings per share				
Correlation	Listed Companies of the SET		Listed Companies on the SSE	
	Stock Returns	EPS	Stock Returns	EPS
Stock Returns	1.00000 0.35819***	0.20688*** 1.00000	1.00000 0.10058***	0.09605*** 1.00000
EPS	1.00000 0.76030***	0.82479*** 1.00000	1.00000 0.70279***	0.54258*** 1.00000
PANEL B: Correlation between earnings per share of year t+1 and earnings per share of year t				
Correlation	Listed Companies of the SET		Listed Companies on the SSE	
	$EPSt_{+1}$	EPS_t	$EPSt_{+1}$	EPS_t
EPS_{t+1}	1.00000 0.35819***	0.20688*** 1.00000	1.00000 0.10058***	0.09605*** 1.00000
EPS_t	1.00000 0.76030***	0.82479*** 1.00000	1.00000 0.70279***	0.54258*** 1.00000

Pearson Correlation is upper right and Spearman Rank Correlation is lower left.

* significant level at 0.1 for two-tailed test ** significant level at 0.05 for two-tailed test

*** significant level at 0.01 for two-tailed test

Table 4 Regression results of stock returns on earnings per share

$$Rit = \alpha_0 + \alpha_1 E_{it} + \varepsilon_{it} \quad (1)$$

Variables	Listed Companies on the Stock Exchange of Thailand (SET)		Listed Companies on the Shanghai Stock Exchange (SSE)	
	Coefficients	t-statistics	Coefficients	t-statistics
Constant	-0.09832	-7.26766***	0.50508	22.92154***
E_{it}	0.02898	7.38590***	0.27238	4.66498***
	F=54.55150*** Adj.R2=0.04202		F=21.76201*** Adj.R2=0.00880	

* significant level at 0.1 ** significant level at 0.05 *** significant level at 0.01

on both stock markets. The findings also reveal that earnings are positively and significantly related to stock returns at 0.01 level for listed companies on both stock markets. Hence, earnings are value relevant information for listed companies on the SET and the SSE. The result is consistent with Narktubtee (2000), Vichitsarawong (2011) and Benyasrisawat (2011) for Thai's listed firms. It is also in line with Chen et al. (2001) and Chamisa et al. (2012) for Chinese listed firms. The adjusted R2 of Thai listed firms is 4.202% whist that of Chinese listed firms is 0.880%. That is, earnings of listed companies on the SET can explain the variability in stock returns more than those of listed companies on the SSE.

The association between earnings per share of year t+1 and year t (earnings persistence) is examined and the regression result is presented in Table 5.

Table 5 indicates that the model (2) is statistically significant at 0.01 level with adjusted R2 68.001% for Thai listed companies and 29.409% for Chinese listed companies. In addition, the coefficients of earnings are 0.92488 in Thailand and 0.64355 in China. This can be inferred that the accounting rates of return of listed companies on both stock markets are mean reverting which are consistent with Sloan (1996). The result indicates that earnings of year t are positively and significantly related to earnings of year t+1 at 0.01 level for listed companies on both stock markets. That is, earnings of listed companies on the SET and the SSE have persistence and predictability properties which are consistent with Vivattanachang and Supattarakul (2013) for Thai listed firms and Navissi et al. (2006) for Chinese listed firms. The adjusted R2 of model (2) of listed companies on the SET is higher than that of listed companies on the SSE. Therefore, current earnings of Thai listed firms can better explain the variability in future earnings than those of Chinese listed firms.

Test of difference in value relevance of earnings and earnings persistence between Thai and Chinese listed firms

To test the research hypotheses on difference in value relevance of earnings, the study uses F test (see detail in research model and hypotheses testing). F value from model (1) is calculated as follows.

Table 5 Regression results of earnings per share of year t+1 on ear

$$E_{t+1} = \beta_0 + \beta_1 E_t + \varepsilon_{it} \quad (2)$$

Variables	Listed Companies on the Stock Exchange of Thailand (SET)		Listed Companies on the Shanghai Stock Exchange (SSE)	
	Coefficients	t-statistics	Coefficients	t-statistics
Constant	0.09587	1.67235*	0.08572	13.1408***
E_t	0.92488	50.94881***	0.64355	31.2257***
	F=2,595.78129***		F=975.04532***	
	Adj.R2=0.68001		Adj.R2=0.29409	

* significant level at 0.1 ** significant level at 0.05 *** significant level at 0.01

$$F = \frac{(SSc - SSp)/ k\text{-}1}{SSp/DFp}$$

$$= \frac{(2{,}576.380 - 2{,}254.298)/2\text{-}1}{2{,}254.298/3{,}557}$$

$$= \frac{322.082}{0.6338}$$

$$= 508.18$$

F value from formula is 508.18. It is compared with F value in critical value of F distribution Table (Zar, 1984) at 0.05 level for degree of freedom 1, 3557. Its value is approximately to 3.84. This result can be inferred that earnings per share affect the stock returns differently between Thai and Chinese listed companies.

Similarly, the difference of earnings persistence between Thai and Chinese listed companies is analyzed by using F test. F value from model (2) is calculated as follows.

$$F = \frac{(SSc - SSp)/ k\text{-}1}{SSp/DFp}$$

$$= \frac{(5{,}130.190 - 3{,}943.896)/2\text{-}1}{3{,}943.896/3{,}557}$$

$$= \frac{1{,}186.294}{1.1088}$$

$$= 1{,}069.89$$

F calculated is 1,069.89. It is compared with F value in critical value of F distribution Table (Zar, 1984) at 0.05 level for degree of freedom 1, 3557. Its value is approximately to 3.84. This result can be concluded that earnings persistence of Thai and Chinese listed companies is different significantly.

From above findings, the results can be implied that value relevance of earnings and earnings persistence of companies listed on the SET and the SSE are different significantly.

The study also tests whether the value relevance of earnings and earnings persistence of companies listed on the SET are more significantly than those of the SSE or not. The paper uses the z statistics to test the difference of Pearson correlation of stock returns-earnings and Pearson correlation of future earnings-current earnings between both stock markets. The results are shown in Table 6 Panel A and Panel B, respectively.

According to Table 6 Panel A, the probability of z is less than 0.01 for two-tailed test. It is consistent with the result of F test. That is, correlations between the stock returns and earnings of both stock exchanges are different significantly. For the result of one-tailed test, the probability of z is also less than 0.01. It can be concluded that correlation of stock returns-earnings of Thai listed firms is significantly higher than Chinese listed firms. Table 6 Panel B shows the probability of z is less than 0.01 for two-tailed test which is similar to Table 6 Panel A. Correlations between future earnings and current earnings of listed companies on the SET and the SSE are different significantly. For the result of one-tailed test, the probability of z is also less than 0.01. It can be inferred that the correlation between future earnings and current earnings of Thai listed companies is higher than that of the listed companies on the SSE. Earnings persistence of listed companies on the SET is significantly higher than that of listed companies on the SSE.

The findings presented in Table 6 Panel A and Panel B indicate that the value relevance of earnings and earnings persistence of listed companies on the SET are more significantly than that of the listed companies on the SSE. The plausible

reason is partially due to the difference in extent of IAS/IFRS adoption between Thailand and China. Thailand has a higher absence score than China whilst China has a higher divergence score than Thailand (Ding et al, 2007). It indicates that there are no specific accounting rules in Thailand more than that of China while China has different accounting practices from IAS/IFRS more than Thailand. The difference of IAS/IFRS adoption will affect the accounting information quality (Barth et al., 2008).

In Thailand, the Federation of Accounting Professions (FAP) has begun the announcements of IAS/IFRS adoption since the year 1999. The new accounting framework and numerous Thai Accounting Standards (TAS) and Thai Financial Reporting Standards (TFRS) have been issued in that year. The FAP has continuously revised TAS and TFRS until now. Hence, the financial statement users perceive that TAS/TFRS are in line with IAS/IFRS since 1999, although there are some distinct differences with IAS/IFRS. In China, Chinese Accounting Standards (CAS) were largely replaced by the IFRS, bring China more in line with the rest of the word since 2006. The new Accounting Standards for Business Enter-

Table 6 Test of the difference in Pearson correlation

PANEL A: Correlation of stock returns and earnings per share between listed companies on the SET and the SSE			
	Listed Companies on the Stock Exchange of Thailand (SET) (1)	**Listed Companies on the Shanghai Stock Exchange (SSE) (2)**	**Difference between (1) and (2)**
Pearson correlation	0.207	0.096	0.111
Sample size	1,222	2,339	1,117
Fisher's z	0.2132	0.1003	0.1129
	z = 3.20 Prob. of z (3.20) = 0.0026***		
PANEL B: Earnings per share of year t +1 and earnings per share of year t between listed companies on the SET and the SSE			
	Listed Companies on the Stock Exchange of Thailand (SET) (1)	**Listed Companies on the Shanghai Stock Exchange (SSE) (2)**	**Difference between (1) and (2)**
Pearson correlation	0.825	0.543	0.282
Sample size	1,222	2,339	1,117
Fisher's z	1.1568	0.6042	0.5526
	z = 15.64 Prob. of z (15.64) = 0.0000***		

* significant level at 0.1 for two-tailed test ** significant level at 0.05 for two-tailed test

*** significant level at 0.01 for two-tailed test

$$z = \frac{z_1' - z_2' - 0}{\sigma_{z_1' - z_2'}}$$

$$\sigma_{z_1' - z_2'} = \sqrt{\frac{1}{N_1 - 3} + \frac{1}{N_2 - 3}}$$

z_1' = the first correlation (correlation between stock returns and earnings (for model 1); future earnings-current earnings (for model 2) of listed companies on the SET) which is transformed into Fisher's z;

z_2' = the second correlation (correlation between stock returns and earnings (for model 1); future earnings- current earnings (for model 2) of listed companies on the SSE) which is transformed into Fisher's z;

$\sigma_{z_1' - z_2'}$ = the standard error of the difference in Fisher's z;

N_1 = the sample size for the first correlation (number of listed companies on the SET); and

N_2 = the sample size for the second correlation (number of the listed companies on the SSE).

prises (ASBEs) became effective at the beginning of 2007. The ASBEs cover all of major topics found in literature with some notable exceptions, as have been applicable to all Chinese listed companies. Because ASBEs are new accounting standards for Chinese listed firms, firms undergoing transition to the new accounting systems may find that it is difficult to present a true picture if the impact of change has been occurred, at least in short term. This has the potential misleading information to shareholders in terms of incorrect financial reporting. It is imperative for persistent market confidence that firms are able to communicate their true performance to shareholders. The findings of this study are consistent with Wu and Wang (2009). They explored the characteristics of low quality companies represented by the restatement firms. Their results revealed that a significant proportion of listed companies on the SSE restated their financial statements for the years 1999-2005. Their conclusions indicated that the accounting creditability of the listed companies in China had low value, providing low quality of financial information.

Moreover, the results of this paper are also consistent with the findings of Ball et al. (2000). Although legal system of Thailand is civil law same as that of China, but the development of legal system is derived from difference influences. The main influence of Thai law comes from common law countries whilst that of Chinese law derives from Napoleonic and Germanic Civil Code. Earnings in common law countries were more informative and more closely followed by investors and analysts while earnings in code law were more likely to less emphasize on timely recognition of losses in financial statements, and the earnings were lower volatility and lower informativeness (Ball et al., 2000). Thus, the difference in influence of law systems affects to the value relevance and earnings persistence of both Thailand and China. Further, the findings of this research are also in line with Atwood et al. (2010). They found that earnings had lower persistence and lower association with future cash flows when the level of book-tax conformity was higher. They also suggested that an increase in book-tax conformity may reduce

earnings quality. The level of book-tax conformity in China was higher than Thailand. Therefore, the earnings persistence of the listed companies on the SSE was significantly lower than that of the listed companies on the SET.

Conclusion

This study investigates and compares the accounting information quality in terms of value relevance of earnings and earnings persistence of listed companies on the Stock Exchange of Thailand (SET) and the Shanghai Stock Exchange (SSE). The results show that earnings of listed companies in two countries are significantly related to stock returns. The findings are consistent with prior research (e.g. Narktubtee, 2000; Benyasrisawat, 2011; Chen et al., 2001, Chamisa et al., 2012) in that earnings in both stock markets are value relevant information which investors use them in valuing the securities. Moreover, the findings also reveal that the correlations of stock returns-earnings of listed companies on the SET are more than those of listed companies on the SSE. Hence, it can be inferred that value relevance of earnings of Thai listed firms are significantly higher than that of Chinese listed firms. In addition, the current earnings are significantly related to future earnings for listed companies on both stock markets. In other words, the earnings have the persistence and predictability properties for listed companies on the SET and the SSE which is consistent with Vivattanachang and Supattarakul (2013) and Navissi et al. (2006). The correlation of future earnings-current earnings of listed companies on the SET is more than that of listed companies on the SSE. Therefore, it can be concluded that earnings persistence of listed companies on the SET is more than that of listed companies on the SSE.

The result of this study can be concluded that accounting information quality of Thailand is more than that of China. The important reason may be partially due to the extent of IAS/IFRS adoption. In Thailand, the Federation of Accounting Profession (FAP) has begun the adoption of IAS/IFRS since 1999 while Chinese Accounting Standards were largely replaced by IAS/IFRS since 2006. The result is also consistent with the effects of the level book-tax conformity (Atwood et al., 2010). The level of book-tax conformity in China is higher than Thailand. Hence, the earnings persistence of China is lower than that of Thailand. The findings in this paper will provide the initial guideline for standard setting bodies and regulatory agencies of two countries in investigation of accounting information quality.

Recommendation

From the main findings, the value relevance of earnings and earnings persistence of Thailand is more than that of China. The extent and implementation of IAS/IFRS of Thailand is also more than China. Divergence score from IAS in Thailand was 7 while that of China was 14 (Ding et al., 2007). The difference of IAS/IFRS adoption will affect the accounting information quality (Barth et al., 2008). Hence, the adoption of IAS/IFRS will increase the accounting information quality. The results of this paper provide the supportive guideline for setting domestic accounting standards by adopting IAS/IFRS.

Acknowledgements

I am greatly thankful to University of the Thai Chamber of Commerce for financially support for this research.

References

Atwood, T.J., Drake, M.S. and Myers, L.A. 2010. **"Book-tax conformity, earnings persistence, and the association between earnings and future cash flows."** Journal of Accounting and Economics, 50 (1), 111-125.

Ball, R. 2008. **"What is the actual role of financial reporting?"** Working Paper. AAA Annual Meeting, Chicago, 31 August.

Ball, R., Kothari, S.P. and Robin, A. 2000. **"The effect of international institutional factors on properties of accounting earnings."** Journal of Accounting and Economics, 29 (1), 1-51.

Ball, R., Robin, A. and Wu, J.S. 2003. **"Incentive versus standards: Properties of accounting incentives in four East Asian countries."** Journal of Accounting and Economics, 36 (1-3), 235-270.

Barth, M., Landsman, W. and Lang, M. 2008. **"International accounting standards and accounting quality."** Journal of Accounting Research, 46 (3), 467-498.

Benyasrisawat, P. 2011. **"Earnings persistence, value relevance, and earnings timeliness: The case of Thailand."** Dissertation, Durham University.

Chalmers, K., Navissi, F. and Qu, W. 2010. **"Value relevance of accounting information In China pre-and post-2001 accounting reforms."** Managerial Auditing Journal, 25 (8), 792-813.

Chamisa, E., Mangena, M. and Ye, G. 2012. **"Relative value relevance of accounting measures based on Chinese Accounting Standards and International Financial Reporting Standards."** Journal of Accounting in Emerging Economies, 2 (2), 162-187.

Chen, C.J.P., Chen, S. and Su, X. 2001. **"Is accounting information value-relevant in the emerging Chinese stock market?"** Journal of International Accounting Auditing & Taxation, 10 (1), 1-22.

Dechow, P., Ge, W. and Schrand, C. 2010. **"Understanding earnings quality: A review of the proxies, their determinants, and their consequences."** Journal of Accounting and Economics, 50 (2-3), 344-401.

Dechow, P. and Schrand, C. 2004. **"Earnings quality."** The Research Foundation of CFA Institute.

Ding, Y., Hope, O., Jeanjean, T. and Stolowy, H. 2007. **"Differences between domestic accounting standards and IAS: Measurement, determinants, and implications."** Journal of Accounting and Public Policy, 26 (1), 1-38.

Eccher, E. and Healy, P. 2003. **"The role of International Accounting Standards in transitional economies: A study of Republic of China."** Working Paper. Massachusetts Institute of Technology.

Francis, J. and Schipper, K. 1999. **"Have financial statements lost their value relevance?"** Journal of Accounting Research, 37 (2), 319-352.

Frankel, R. and Litov, L. 2009. **"Earnings persistence."** Journal of Accounting and Economics, 47 (2), 182-190.

Holthausen, R. and Watts, R. 2001. **"The relevance of value-relevance literature for financial accounting standard setting."** Journal of Accounting and Economics, 31 (1-3), 3-75.

Kothari, S. 2001. **"Capital markets research in accounting."** Journal of Accounting and Economics, 31 (1-3), 105-231.

Lang, M., Raedy, S.J. and Wilson, W. 2006. **"Earnings management and cross listing: Are reconciled earnings comparable to U.S. earnings."** Journal of Accounting and Economics, 42 (2), 255-283.

Lang, M., Raedy, S.J. and Yetman, M. 2003. **"How representatives are firms that are cross- listed in the United States? An analysis of accounting quality."** Journal of Accounting Research, 41 (2), 363-386.

Leuz, C., Nanda, D. and Wysocki, P.D. 2003. **"Earnings management and investor protection: An international comparison."** Journal of Financial Economics, 69 (3), 505-527.

Lipe, R. 1990. **"The relations between stock returns and accounting earnings given alternative information."** The Accounting Review, 65 (1), 49-71.

Liu, J. and Thomas, J. 2000. **"Stock returns and accounting earnings."** Journal of Accounting Research, 38 (1), 71-101.

Narktubtee, K. 2000. **"The implications of accounting information in the Thai capital markets", Dissertation,** University of Arkansas.

Navissi, F., Mirza, M. and Yao, J. 2006. **"Do stock prices in China reflect information in earnings persistence?"** paper presented at the ACESA 2006 conference on emerging China: International challenges and global implications, Melbourne, July.

Pronobis, P., Schwetzler, B., Sperling, M. and Zulch, H. 2009. **"The development of Earnings quality in Germany and its Implication for future research: A quantitative empirical analysis of German listed companies between 1997 and 2006."** Corporate Ownership and Control, 7 (1), 434-455.

Sloan, R.G. 1996. **"Do stock prices fully reflect information in accruals and cash flows about future earnings?"** The Accounting Review, 71 (3), 289-315.

Vichitsarawong, T. 2011. **"The value relevance of earnings and cash flows: Evidence from Thailand."** Journal of Accounting Profession, 7 (19), 39-53.

Vivattanachang, D. and Supattarakul, S. 2013. **"The earning persistence and the market pricing of earnings and their cash flow and accrual components of Thai firms."** Journal of Accounting Profession, 9 (25), 63-79.

Wu, M. and Wang, X. 2009. **"The quality of financial reporting in China."** Working Paper. Retrieved January 10, 2011 fromhttp://papers.ssrn.com/sol3/papers.cfm?abstract_id=1653278

Zar, J.H. 1984. **Biostatistical Analysis,** New Jersey: Prentice Hall.

Zhang, H. and Liu, X. 2010. **"On the construction of China's accounting standard system with international convergence on accounting standards."** International Journal of Business and Management, 5 (4), 200-203.