Research Article

A Comparative Study of Earnings Quality in ASEAN Countries

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ABSTRACT

The research objectives are to investigate the earnings quality using two main proxies (properties of earnings and value relevance of earnings) and compare the level of earnings quality among the member countries in ASEAN after the International Financial Reporting Standards (IFRS) adoption periods. The study uses five ASEAN member countries as the sample which composed of Indonesia, Malaysia, the Philippines, Singapore, and Thailand. The period of study is 2013-2017. The ratio of cash flows from operation to net income (CFO/NI), earnings smoothness, and earnings persistence are the representatives of properties of earnings whereas the market reaction to earnings is used to measure the value relevance of earnings. The findings show that means of CFO/NI among five ASEAN countries are equal or indifferent. However, the result indicates that the statistically significant mean differences of CFO/NI are between Malaysia and Singapore; Singapore and Thailand. The high earnings smoothness is shown in Thailand while the least one is shown in Indonesia. In addition, the study finds that earnings persistence and value relevance of earnings is highest in Singapore and lowest in Indonesia. The plausible reason is that Singapore is the country that almost fully converged its domestic accounting standards with IFRS while Indonesia has the lowest level of IFRS adoption compared with other four ASEAN countries. Therefore, the results of this paper support that the IFRS adoption will enhance the earnings quality.

Keywords: Earnings Quality, ASEAN Countries, Earnings Persistence, Value Relevance of Earnings

บทความวิจัย

การศึกษาเปรียบเทียบคุณภาพกำไรในประเทศอาเซียน

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บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อตรวจสอบคุณภาพกำไรโดยใช้ตัววัด 2 ตัววัดหลัก (คุณสมบัติของกำไรและความเกี่ยวข้องในการกำหนดมูลค่าหลักทรัพย์ของกำไร) และเปรียบเทียบคุณภาพกำไรของประเทศสมาชิกในอาเซียนหลังจากนำมาตรฐานการรายงานทางการเงินระหว่างประเทศมาใช้ การศึกษานี้ใช้ประเทศสมาชิกในอาเซียน จำนวน 5 ประเทศเป็นตัวอย่าง ซึ่งประกอบด้วย อินโดนีเซีย มาเลเซีย ฟิลิปปินส์ สิงคโปร์และประเทศไทย ระยะเวลาที่ศึกษา คือ ค.ศ. 2013 ถึง 2017 อัตราส่วนกระแสเงินสดจากการดำเนินงานต่อกำไรสุทธิ กำไรที่ราบเรียบและเสถียรภาพกำไรเป็นตัวแทนคุณสมบัติของกำไร ในขณะที่การตอบสนองของตลาดต่อกำไรเป็นตัววัดความเกี่ยวข้องในการกำหนดมูลค่าหลักทรัพย์ของกำไร ผลการศึกษาพบว่า ค่าเฉลี่ยของอัตราส่วนกระแสเงินสดจากการดำเนินงานต่อกำไรสุทธิเท่ากันหรือไม่แตกต่างกันระหว่างประเทศอาเซียน 5 ประเทศ อย่างไรก็ตาม ค่าเฉลี่ยของอัตราส่วนดังกล่าวมีความแตกต่างกันอย่างมีนัยสำคัญทางสถิติ คือ ระหว่างประเทศมาเลเซียและสิงคโปร์ และระหว่างประเทศสิงคโปร์และไทย กำไรราบเรียบสูงสุดเกิดขึ้นในประเทศไทยและต่ำสุดพบในประเทศอินโดนีเซีย นอกจากนี้ ผลการศึกษายังพบว่า เสถียรภาพกำไรและความเกี่ยวข้องในการกำหนดมูลค่าหลักทรัพย์ของกำไรสูงสุดพบในประเทศสิงคโปร์และต่ำสุดในประเทศอินโดนีเซีย เหตุผลที่เป็นไปได้ คือ สิงคโปร์เป็นประเทศที่มาตรฐานการบัญชีของประเทศมีความสอดคล้องกับมาตรฐานการรายงานทางการเงินระหว่างประเทศในระดับสูง ในขณะที่ประเทศอินโดนีเซียมีระดับการนำมาตรฐานการรายงานทางการเงินระหว่างประเทศมาใช้น้อยที่สุดเมื่อเปรียบเทียบกับอีก 4 ประเทศในอาเซียน ดังนั้น ผลการศึกษานี้สนับสนุนว่าการนำมาตรฐานการรายงานทางการเงินระหว่างประเทศมาใช้จะช่วยเพิ่มคุณภาพกำไร

คำสำคัญ: คุณภาพกำไร ประเทศอาเซียน เสถียรภาพกำไร ความเกี่ยวข้องในการกำหนดมูลค่าหลักทรัพย์ของกำไร

1. Introduction

Many previous studies investigated the earnings quality from different perspectives (e.g., Field, Lys, & Vincent, 2001; Schipper & Vincent, 2003; Francis, Nanda, & Olsson, 2008; Dechow, Ge, & Schrand, 2010; Demerijian, Lewis, Lev, & McVay, 2013). Earnings quality is important information for evaluating the earnings in valuation model. Although there are high interests for exploring the earnings quality from previous studies in developed capital markets, there are very few prior studies for investigating earnings quality in emerging markets (e.g., Chebanne & Othman, 2014; Kwon, 2018). The Association of Southeast Asian Nations (ASEAN) was founded in 1967 which the members are all in emerging markets (ASEAN, 2012). This study focuses on five member countries in ASEAN which have the official stock markets. They are Indonesia, Malaysia, the Philippines, Singapore, and Thailand. These countries adopt the International Financial Reporting Standards (IFRS) as the main concept for issuing their local accounting standards. Nonetheless, the levels of IFRS adoption are still different among them (Ding, Hope, Jeanjean, & Stolowy, 2007; Bae, Tan, & Welker, 2008; Limijaya, 2017). Therefore, the difference of IFRS adoption will affect the earnings quality of these countries. Some prior evidence showed that the adoption of IFRS improves earnings quality (e.g., Bartov, Goldberg, & Kim, 2005; Barth, Landsman, & Lang, 2008; Gebhardt & Novotny-Frakas, 2011; Houqe, Monem, Tareq, & Zijl, 2016). However, the other studies showed the contrast results that the adoption of IFRS leads to the decline in earnings quality (e.g., Ahmed, Neel, & Wang, 2013; Negakis, 2013).

Until now, the studies on the effects of IFRS adoption on earnings quality were unclear (Defond, 2010). Therefore, the research objectives are to investigate the earnings quality using two main proxies (properties of earnings and value relevance of earnings) and compare the level of earnings quality among the member countries in ASEAN after the IFRS adoption periods. The research will provide the implication to the official accounting standards setting bodies in ASEAN for the development of their domestic accounting standards to improve earnings quality.

The outline of this article is as follows. The section 2 describes literature review and development of research hypotheses. Section 3 explains research methodology. The empirical results are shown in section 4. Finally, the research concludes and discusses the findings in section 5.

2. Literature Review and Development of Research Hypotheses

2.1 Definition of Earnings Quality

Under conceptual framework (2018) of International Accounting Standard Board (IASB), it states that the qualitative characteristics of useful financial reporting quality identify the types of information which are likely to be most useful to users in making decisions about the reporting entity on the basis of financial report. Financial information is useful when it is relevant and represents faithfully which it purports to represent (IASB, 2018). Schipper and Vincent (2003) defined earnings quality as the extent to which reported earnings faithfully represent the change in net economic assets other than transactions with owners. In opposite side, Healy and Wahlen (1999) defined earnings management as the disclosure of unreliable financial information to influence stockholders' decision-making, achieving benefits only the firms' managers. Consequently, earnings management is expected to inversely related to earnings quality because manipulated earnings worsen the decision making process. Earnings quality is the precision of earnings signal coming from the firm's financial reporting system that will affect the capital market's demand as well as the firm's motive to supply, disclosures that are useful to current shareholders and prospective investors in assessing the firm's value (Francis et al., 2008). Higher quality of earnings provides more information about the features of a firm's financial performance that are relevant to a specific decision made by a specific decision-maker. In sum, the definition of earnings quality is jointly determined by the relevance of underlying financial performance to the decision and by the ability of the accounting system to measure performance (Dechow et al., 2010).

2.2 The Measurement of Earnings Quality

There are various measures of earnings quality from many prior studies because earnings quality is unobservable. Many prior researches used different earnings quality proxies (e.g., Schipper & Vincent, 2003; Dechow et al., 2010; Gutierrez & Rodriguez, 2019) as shown in Table 1.

Table 1 Earnings Quality Measures

Earnings Quality Proxies	Measurement	Theory	Authors
Level of Cash Flows from Operation compared with Net Income	Ratio of Cash Flows from Operation to Net Income	Convergence of cash provided by operations to net income	Kamp (2002); Dichev, Graham, Harvey and Rajgopal (2013); Gullett, Kilgore, and Geddie (2018)

Table 1 Earnings Quality Measures (Cont.)

Earnings Quality Proxies	Measurement	Theory	Authors
Earnings Smoothing or Earnings Smoothness	Deviation of Earnings/ Deviation of Cash Flows	Low variability of earnings over time can indicate high quality of earnings because the smoothed earnings can be forecasted with lower error than high variability of earnings. Highly deviation of earnings/deviation of cash flows represented the low quality of earnings.	Schipper and Vincent (2003); Biddle and Hilary (2006); Burgstahler, Hail, and Leuz (2006); Dechow et al. (2010); Ahmed et al. (2013); Gutierrez and Rodriguez (2019)
Earnings Persistence	$Earnings_{t+1} = \alpha_0 + \alpha_1 Earnings_t + \varepsilon_t$	Firms with more persistent earnings have a sustainable earnings/cash flows stream. The α_1 is called as earnings persistence.	Schipper andVincent (2003); Dechow and Schrand (2004); Dechow et al. (2010)
Magnitude of Accruals	Accruals = $Earnings_t - CF_t$ Accruals = (Δnoncash working capital) Accruals = (Δnet operating assets)	Extreme accruals represent the low quality of earnings which indicate the less persistence of earnings.	Dechow et al. (2010)
Value Relevance of Earnings	$R_{it} = \beta_0 + \beta_1 E_{it} + \varepsilon_t$ R_{it} = annual stock return of firm i year t; and E_{it} = earnings per share of firm i year t.	Investors respond to information that has value implications. The β_1 is called as earnings response coefficient (ERC).	Easton and Harris (1991); Warfield and Wild (1992); Narktabtee and Patpanichchot (2011)
Conservatism	Conditional Conservatism	Timeliness of earning; Skewness of earnings	Basu (1997); Paanamen and Lin (2009)
	Unconditional Conservatism	Market to Book Value Ratio; Legal negative accruals; Hidden reserve	Dechow et al. (2010); Gutierrez and Rodriguez (2019).

There are many measures of earnings quality for capturing the quality in different dimensions (Gaynor, Kelton, Mercer, and Yohn, 2016). Some previous studies used the measures of earnings quality that are not consistent with conceptual framework such as conservatism (e.g., Basu, 1997). Some prior research examined the earnings quality by measuring how useful of information in the financial reports is to users (e.g., Easton and Harris ,1991; Warfield and Wild,1992). However, as seen in Table 1, it can be partitioned the earnings quality into two main perspectives: properties of earnings and market perspectives (e.g., Dechow et al., 2010). For properties of earnings, there are many measures of earnings quality for such as level of cash flows from operation compared with net income, earnings smoothness, earnings persistence, accruals, level of conservatism (e.g., Basu, 1997; Dechow et al., 2010; Gutierrez & Rodriguez, 2019). In addition, the value relevance of earnings is the measure of earnings quality in terms of market perspective. Earnings quality is measured by the association between security's returns and accounting earnings (e.g., Easton & Harris, 1991; Warfield & Wild, 1992). That is, how well of earnings can be used by investors for equity valuation.

2.3 Different Level of IFRS Convergence in ASEAN countries

At the present, five countries in ASEAN (Indonesia, Malaysia, the Philippines, Singapore, and Thailand) adopt IFRS as the main guideline for issuing their local accounting standards. However, the level of IFRS adoption was different among them (Ding et al., 2007; Bae et al., 2008; Limijaya, 2017). Ding et al. (2007) examined the difference between domestic accounting standards and IAS of 30 countries. They created the absence score and divergence score which are the difference between accounting practices under local accounting standards and IAS/IFRS. They indicated that the absence scores from IAS/IFRS were 30 for Malaysia, 29 for Thailand, 24 for the Philippines, 12 for Indonesia, and 4 for Singapore. For the divergence scores from IAS/IFRS, the divergence scores were 14 for the Philippines and Singapore, 13 for Malaysia, 12 for Indonesia, and 7 for Thailand. Bae et al. (2008) measured the difference accounting standards across countries by identifying a list of 21 important accounting items based on review of the past literature and comprehensive survey of generally accepted accounting principle (GAAP) differences. They created GAAP different scores range from zero to 21 and increases as the extent of difference in GAAP between two countries increases. Their findings showed that the Philippines's accounting items have most different accounting practices from IAS/IFRS with 10 out of 21 whereas there are no difference between Singapore GAAP and IAS. Indonesia and Thailand have GAAP different score with 4 out of 21 equally while Malaysia has GAAP different score with 8 from 21 accounting items. Limijaya (2017) investigated Indonesia Accounting Standards and compared them with other ASEAN members. His result showed that Indonesia ranked 9th out of 10 ASEAN members in terms

of IFRS application. Malaysia has the first rank of jurisdictions based on the IFRS implementation while Singapore, the Philippines, and Thailand have the 2nd, 3rd, and 8th among ASEAN members, respectively. Therefore, the previous findings did not provide the same conclusion about level of IFRS implementation in ASEAN. Yusrina, Mukhtaruddin, Fuadah, and Sulong (2017) showed the reason of difference level of IFRS adoption in ASEAN countries are due to many plausible reasons, such as (1) lack of resource in local accounting standard board, (2) IFRS changing too fast so that when the process of adopting IFRS standard is done, IASB has already revised the new version of IFRS, (3) the language barrier, some countries in ASEAN must translate IFRS from English to local languages. (4) infrastructure accounting professions who are not yet ready.

2.4 The Effects of IFRS Adoption on Earnings Quality

Some previous studies has indicated that the adoption of IFRS improves the accounting information quality (Bartov et al., 2005; Barth et al., 2008; Gebhardt & Novoty-Frakas, 2011; Bertin & Moya, 2013; Adibah, Ismail, Kamarudin, Zijl, & Dunstan, 2013; Houqe et al., 2016). Bartov et al. (2005) showed an increase in value relevance of earnings for German firms adopters of IAS/IFRS. Barth et al. (2008) studied and compared the domestic GAAP and IAS/IFRS across 21 countries. Consistent with Bartov et al. (2005), they showed that firms applying IAS evidence less earnings management, more timely loss recognition, and more value relevant accounting amounts than do matched sample firms not applying IAS after the IFRS adoption. Gebhardt and Novoty-Frakas (2011) examined how the mandatory adoption of IFRS in 12 EU countries affects the accounting quality of banks. Their results can be summarized that there was an improvement in accounting quality after the IFRS adoption. Bertin and Moya (2013) also found the consistent results with Gebhardt and Novoty-Frakas (2011). That is, the IFRS adoption leads to an increase in conditional conservatism for Chilean firms. They concluded that the use of IFRS improves the earnings quality in terms of value relevance and reliability. In addition, Adibah et al. (2013) also found that earnings quality has enhanced after the adoption of IFRS for Malaysian listed firms. They indicated that earnings management's level has declined and the value relevance of earnings has increased after IFRS period. Houqe et al. (2016) investigated how difference in national culture (measured in terms of secrecy), affect the impact of IFRS adoption on earnings quality. They found that the mandatory IFRS adoption enhances the earnings quality for all countries. However, there are contrast evidence which showed the decline in earnings quality after the adoption of IFRS. Ahmed et al. (2013) studied the effects of IFRS adoption on three dimensions of accounting quality measures: income smoothing measures, reporting aggressiveness, and earnings management for beating the target. Their overall results in three dimensions showed that the accounting quality has declined

after the IFRS adoption. Negakis (2013) also found that the adoption of IFRS leads to a decrease in information content of earnings and earnings changed for the Greece listed firms.

In addition, some studies revealed that no effects of IFRS on earnings quality are evidenced. Jeanjean and Stolowy (2008) analyzed the effect of the mandatory IFRS in earnings quality in terms of earnings management. They found that earnings management of listed companies in Australia, France, and the UK. did not change after the IFRS adoption. Liu and Sun (2015) investigated whether the mandatory IFRS adoption affected earnings quality of Canadian listed firms. They used many measures of earnings quality such as discretionary accruals, performance-matched discretionary accruals, small positive earnings response coefficients, and earnings persistence. Their overall results suggested that there were no significant difference in earnings quality after IFRS adoption. Consistent with Liu and Sun (2015), Baig and Khan (2016) also indicted that the adoption of IFRS has no significant effect on earnings quality for the Pakistan firms.

2.5 Hypotheses Development

Previous studies found that five countries in ASEAN (Indonesia, Malaysia, the Philippines, Singapore, and Thailand) adopt the IFRS in different level (Ding et al., 2007; Bae et al., 2008; Limijaya, 2017). Some previous research showed the adoption of IFRS will enhance earnings quality (Bartov et al., 2005; Barth et al., 2008; Gebhardt & Novoty-Frakas, 2011; Bertin & Moya, 2013; Adibah et al., 2013; Houqe et al., 2016) whereas some of them indicated the contradicted findings. Earnings quality has declined after the adoption of IFRS (Ahmed et al., 2013, Negakis, 2013). In addition, some previous studies showed no effect of adoption of IFRS on earnings quality (Jeanjean & Stolowy, 2008; Liu & Sun, 2015; Baig & Khan, 2016). Because of mixed findings of previous studies, the researcher cannot predict the direction of effect of IFRS adoption on earnings quality whether it has been increased or decreased or unchanged. Furthermore, no previous research has directly compared earnings quality between five member countries in ASEAN. This study expects that earnings quality will be different among these countries, but it cannot predict which countries will have earnings quality more than others. The hypothesis in terms of alternative hypothesis is set as follows.

H_1: There is the difference of earnings quality among five member countries in ASEAN.

3. Research Methodology

3.1 Sample Selection and Data Collection

This study uses the sample from listed companies on stock exchanges in five countries of ASEAN. The five countries are composed of Indonesia, Malaysia, the Philippines, Singapore, and Thailand. All of these countries have their official stock markets and financial statements and annual reports of listed companies shown in English language. The highly market capitalization listed firms in each stock market are used as sample because these firms are highly interested by both local and foreign investors. In addition, the highly market capitalization listed firms have greater likelihood to be affected by IFRS (Cairns, Massoudi, Taplin, and Tarca, 2011). These top listed firms in each country in ASEAN are indexed differently such as LQ45 Index in Indonesia, FBM KLCI30 in Malaysia, PSEI30 in Philippines, STI30 in Singapore and SET50 in Thailand. This causes the number of sample sizes in each country unequal. Furthermore, the research also excluded the listed companies on Financial Industry (Banking, Finance, and Insurance companies) due to the different accounting practices. The Non-December year ended firms are also excluded from the sample for controlling the effect of the stock prices from external environments. Previous studies related to value relevance have also employed the 31 December year ending firms (Mitra & Hossain, 2009; Omokhudu & Ibadin, 2015). The main data are from financial statements and annual reports during the periods 2013–2017. However, only earnings persistence model uses the information in current and future periods (see details in section 3.2.1.3), the financial statements during the periods 2012–2017 will be used for data analysis. The collection of financial statements was extracted from the official listed companies' websites. Stock prices were collected from Thomson Reuter's Data Stream. The number of samples is summarized in Table 2.

Table 2 Number of Samples

Highly Market Capitalized Firms	Indonesia Stock Exchange (LQ45 Index)	Malaysia Stock Exchange (FBM KLCI30)	Philippines Stock Exchange (PSEI30)	Singapore Stock Exchange (STI30)	Stock Exchange of Thailand (SET50)
Number of Listed Companies	45	30	30	30	50
Less Financial firms	(8)	(8)	(4)	(7)	(10)
Less Non-December years ended Firms	(0)	(6)	(2)	(6)	(4)
Less Incomplete Financial Data	(2)	(1)	(0)	(1)	(4)

Table 2 Number of Samples (Cont.)

Highly Market Capitalized Firms	Indonesia Stock Exchange (LQ45 Index)	Malaysia Stock Exchange (FBM KLCI30)	Philippines Stock Exchange (PSEI30)	Singapore Stock Exchange (STI30)	Stock Exchange of Thailand (SET50)
Final Samples	35	15	24	16	32
Number of years in this study (2013–2017)	5	5	5	5	5
Final Samples (firms-years)	175	75	120	80	160
(percentage)	28.69%	12.30%	19.67%	13.11%	26.23%

Source:

Indonesia Stock Exchange (2017). *Stock Index: LQ45*. Retrieved from http://www.idx.co.id/media/1835/20170724_lq45_aug17-jan18.pdf

ASEAN UP (2017). *Top 30 companies from Malaysia's KLCI*. Retrieved from https://aseanup.com/top-30-companies-from-malaysia-klci/

Philippines Stock Exchange (2017). *Indices Composition: PSEI*. Retrieved from http://www.pse.com.ph/stockMarket/marketinfo-marketActivity.html?tab=1

Singapore Stock Exchange (2017). *STI Constituents*. Retrieved from http://www.sgx.com/wps/portal/sgxweb/home/marketinfo/indices/sti_constituents

The Stock Exchange of Thailand (2017). *List of Stocks in SET 50 Index*. Retrieved from https://www.set.or.th/th/market/files/constituents/SET50_100_H2_2017.pdf

Total samples of this study is 610 firms-years which are composed of 175 firms-years in Indonesia, 75 firms-years in Malaysia, 120 firms-years in the Philippines, 80 firms-years in Singapore, and 160 firms-years in Thailand.

3.2 Research Model: Measurement of Earnings Quality

This research uses two categories of earnings quality measurement: properties of earnings (e.g., Dechow et al., 2010) and value relevance of earnings (e.g., Easton & Harris, 1991; Warfield & Wild, 1992). Properties of earnings include level of cash flows from operation compared with net income (CFO/NI), earnings smoothness, and earnings persistence. Value relevance of earnings links earnings quality in terms of decision usefulness of equity valuation for investors.

3.2.1 Properties of Earnings

3.2.1.1 Level of Cash Flows from Operation Compared with Net Income (CFO/NI)

Ratio of cash flows from operation to net income (CFO/NI) is measured that how much net income of firms generated the cash flows from operation (Kamp, 2002; Dichev et al., 2013; Gullett et al., 2018)

$$\text{Ratio of cash flows from operation to net income} = \frac{\text{Cash Flows from Operation}}{\text{Net Income}} \quad (1)$$

3.2.1.2 Earnings Smoothness

Low variability of earnings over time indicates high quality of earnings because the smoothed earnings can be forecasted with lower error than high variability of earnings (e.g., Schipper & Vincent, 2003; Ahmed et al., 2013). The earnings smoothness is calculated as follows.

$$\text{Earnings Smoothness} = \frac{\text{Standard Deviation of Earnings}}{\text{Standard Deviation of Cash Flows}} \quad (2)$$

3.2.1.3 Earnings Persistence

Time series properties of earnings measure earnings quality in terms of earnings persistence. Earnings persistence is measured by the auto-regression coefficient model of current earnings (E_{it}) on future earnings (E_{it+1}). The model (3) for earnings persistence measurement (e.g., Schipper & Vincent, 2003; Dechow & Schrand, 2004; Dechow et al., 2010) is as follows.

$$E_{it+1} = \alpha_0 + \alpha_1 E_{it} + \varepsilon_{it} \quad (3)$$

E_{it+1} = earnings per share of firm i for year t+1;
E_{it} = earnings per share of firm i for year t; and
ε_{it} = error term.

3.2.2 Value Relevance of Earnings

For the value relevance of earnings, the relationship between the security's return and accounting earnings will be examined. The research model (4) is used to test the market reaction to earnings for long horizon window (e.g., Easton & Harris, 1991; Warfield & Wild, 1992). The model (4) is presented as follows.

$$R_{it} = \beta_0 + \beta_1 E_{it}/P_{it-1} + \varepsilon_{it} \quad (4)$$

R_{it} = annual stock return of firm i year t since after three months of year ended year t–1 to year t calculated by stock price at the end of three months after year ended t minus stock price

at the end of three months of year ended t–1 divided by
stock price at the end of three months after year ended year t–1[1];

E_{it} = earnings per share of firm i year t;

P_{it-1} = stock price of firm i as at the end of three months after year ended t–1; and

ε_{it} = error term.

3.3 Data Analysis

The descriptive statistics is analyzed for each variable and shown separately according to the measurement of earnings quality because each earnings quality measurement uses different variables (see details in model 1–4). Level of CFO/NI and earning smoothness (measured by standard deviation of earnings/standard deviation of cash flows) uses the data stated in local currencies because both measurements are in ratio which the translation of currencies does not affect the value of CFO/NI and earnings smoothness. The differences of CFO/NI mean among five ASEAN countries is analyzed by ANOVA (F-test) while the difference of earnings smoothness are compared directly.

In addition, model (3) and model (4)[2] are analyzed by separating each country's stock market in ASEAN and using pooled-sample regression for all years[3]. The α_1 in model (3) is called as earnings persistence. If α_1 is significant, it can be inferred that current earnings can be used to predict future earnings. The research will compare the Pearson correlation between future earnings (E_{it+1}) and current earnings (E_{it}), the value of standardized coefficient, and adjusted R^2 from running model (3) for each country in ASEAN. The β_1 in model (4) is called as earnings response coefficient (ERC). It is the test of value relevance of earnings. If β_1 is significant, it can be summarized that investors use the earnings for valuing their stock returns. This research will also compare the Pearson correlation between stock return (R_{it}) and accounting earnings deflated with stock price at beginning period (E_{it}/P_{it-1}), the value of standardized coefficient, and adjusted R^2 from running model (4) for each country in ASEAN.

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1 The research uses the stock price as 31 March of the following year-ending for calculating the annual return because the listed companies in five ASEAN member countries need to send their financial statements to the Securities Exchange Commissions (SEC) of each country within three months.

2 Both model (3) and (4) is analyzed by separating for each country's stock market in ASEAN. Therefore, the data used for both models are also stated in local currencies.

3 Pooled sample regression (2012–2017 for model (3) and 2013–2017 for model (4)) will be used for data analysis because the number of samples in each year are very few especially for Malaysia and Singapore. Therefore, the rolling regression cannot be used in this study.

4. Empirical Results

The results are presented as two main sections as follows: properties of earnings and value relevance of earnings. Properties of earnings can be measured in terms of ratio of cash flows from operation to net income (CFO/NI), earnings smoothness, and earnings persistence while the value relevance of earnings can be measured in terms market reaction to earnings.

4.1 Properties of Earnings

4.1.1 Earnings Quality Measured by Ratio of Cash Flows from Operation to Net Income (CFO/NI)

Table 3 shows the descriptive statistics of CFO/NI separated by countries.

Table 3 Descriptive Statistics of CFO/NI Separated by Countries

Variables	Country	Minimum	Maximum	Mean	Standard Deviation	Coefficient of Variation (CV.)
CFO/NI (times)	Indonesia	–296.2510	25.6158	–0.7465	22.9603	30.7573
	Malaysia	–0.7239	48.3949	2.4065	5.6077	2.3302
	The Philippines	–5.3867	6.6999	1.4361	1.3164	0.9166
	Singapore	–27.8113	6.7362	0.9039	3.5178	3.8918
	Thailand	–6.5959	20.1658	1.7841	2.6836	1.5042

From table 3, it can be seen that mean of cash flows from operation to net income (CFO/NI) are positive in Malaysia, the Philippines, Singapore and Thailand. The highest mean of CFO/NI is found in Malaysia because of the highest positive maximum value of CFO/NI (48.3949). However, the mean of CFO/NI in Indonesia are negative due to the highest negative values of CFO/NI shown as the minimum value of CFO/NI (–296.2510). In addition, the highest standard deviation of this ratio (22.9603) is found in Indonesia because of the high range between the minimum value (–296.2510) and maximum value of CFO/NI (25.6158).

The finding of mean difference test of CFO/NI among five countries in ASEAN using ANOVA (F-test) is presented in Table 4.

Table 4 Test of Mean Difference of CFO/NI among Five Countries in ASEAN

Variables	Types	Sum of Squares	df	Mean Square	F	Sig.
CFO/NI	Between Groups	802.650	4	200.663	1.260	0.285
	Within Groups	96384.743	605	159.314		
	Total	97187.393	609			

*** significant level at 0.01
** significant level at 0.05
* significant level at 0.10

The result in Table 4 shows that the F value is 1.260 (sig. = 0.285). It is statistically insignificant. The means of CFO/NI among five countries (Indonesia, Malaysia, the Philippines, Singapore, and Thailand) are equal or indifferent. Although the overall ANOVA test is insignificant, the post test has the power to find the difference between group (Hsu, 1996). Therefore, this research also compares the mean difference of CFO/NI between two countries by independent sample t-test. Therefore, results for comparison of mean difference of CFO/NI between two countries (10 pairs) in ASEAN are shown in Table 5.

Table 5 Test of Mean Difference of CFO/NI between Two Countries in ASEAN

CFO/NI	Levene's Test for Equality of Variance		t	Sig. (two-tailed)	Mean Difference	Standard Error
	F	Sig.(one-tailed)				
Indonesia VS. Malaysia	0.902	0.343	–1.173	0.242	–3.1530	2.6877
Indonesia VS. The Philippines	2.985	0.085*	–1.255	0.211	–2.1826	1.7398
Indonesia VS. Singapore	1.571	0.211	–0.639	0.524	–1.6504	2.5835
Indonesia VS. Thailand	3.001	0.084*	–1.447	0.150	–2.5307	1.7486
Malaysia VS. The Philippines	4.551	0.034**	1.474	0.145	0.9704	0.6586
Malaysia VS. Singapore	0.922	0.339	2.012	0.046**	1.5026	0.7470
Malaysia VS. Thailand	1.453	0.229	1.152	0.250	0.6224	0.5402
The Philippines VS. Singapore	1.411	0.236	1.508	0.133	0.5322	0.3529

Table 5 Test of Mean Difference of CFO/NI between Two Countries in ASEAN (cont.)

CFO/NI	Levene's Test for Equality of Variance		t	Sig. (two-tailed)	Mean Difference	Standard Error
	F	Sig.(one-tailed)				
The Philippines VS. Thailand	3.972	0.047**	–1.427	0.155	–3.4805	0.2438
Singapore VS. Thailand	0.041	0.840	–2.153	0.032**	–0.8803	0.4089

*** significant level at 0.01
** significant level at 0.05
* significant level at 0.10

Before using t-test, the study uses the levene's test for equality of variance. Four pairs of countries have significant F-values which shows inequality of variances of CFO/NI. They are Indonesia and the Philippines; Indonesia and Thailand; Malaysia and the Philippines; the Philippines and Thailand. All other pair countries have the equal of variances of CFO/NI. Table 5 also indicates the result of two samples independent sample t-test for the mean difference of CFO/NI. The findings show that only two pair countries which have the mean difference of CFO/NI significantly. They are Malaysia and Singapore; Singapore and Thailand. However, other pair countries show the indifferent means of CFO/NI.

4.1.2 Earnings Quality Measured by Earnings Smoothness

The standard deviation of earnings to standard deviation of cash flows is the measurement of earnings smoothness. The result of this ratio is presented in Table 6.

Table 6 Earnings Smoothness Separated by Countries

Country	Standard Deviation of Earnings	Standard Deviation of Cash Flows	Standard Deviation of Earnings/Standard Deviation of Cash Flows (Times)
Indonesia	IDR 51,213,119,849,993.9000	IDR 8, 206,378,701,361.1700	6.2406
Malaysia	MYR 1,016,409,989.1416	MYR 1,862,327,181.7380	0.5458
The Philippines	Peso 11,591,028,884.2022	Peso 19,185,004,187.9828	0.6042
Singapore	SGD 3,790,048,940.9411	SGD 5,659,860,029.7560	0.6696
Thailand	THB 22,854,004,623.8464	THB 47,859,584,298.4391	0.4775

Table 6 shows that Indonesia has the highest value of standard deviation of earnings to standard deviation of cash flows. It can be inferred that earning quality of Indonesia is lower than other four countries in terms of earnings smoothness. In the opposite side, the lowest value of this ratio is found in Thailand. It can be implied that the highest earnings smoothness is evidenced from Thailand which indicate the higher earnings quality. Nevertheless, values of this ratio are nearby amounts among Malaysia, the Philippines, Singapore, and Thailand.

4.1.3 Earnings Quality Measured by Earnings Persistence

The model (3) for earnings persistence test and model (4) for value relevance of earnings test are based on the four main assumptions of regression which are follows.

1. Mean of error term is zero.
2. Error term is normally distributed.
3. The variance of error term is constant.
4. There is no auto-correlation of error term.

The results from testing the assumptions of regressions are not met since the error term is not normally distributed. Therefore, the extreme values and/or outlier data will be cut off. Therefore, the number of sample for both earnings persistence model (model 3) and value relevance of earnings model (model 4) can be summarized as Table 7.

Table 7 Number of Samples for Earnings Persistence Model and Value Relevance of Earnings Model

Country	Indonesia	Malaysia	Philippines	Singapore	Thailand
Number of Samples (firms-years)	175	75	120	75	160
less extreme value and/or outlier*	(5)	(8)	(5)	(4)	(4)
Number of Samples (firms-years)	170 29.36%	67 11.57%	115 19.86%	71 12.26%	156 26.94%

* Outlier means that the sample has error term or residual more than +/–3 standard deviation.

The number of sample for earnings persistence model and value relevance of earnings model is 579 firms-years which composed of Indonesia 170 firms-years; Malaysia 67 firms-years; the Philippines 115 firms-years; Singapore 71 firms-years; and Thailand 156 firms-years. Descriptive statistics of E_{it+1} and E_{it} for each country are presented in Table 8. The regression results of earnings persistence are presented in Table 9.

Table 8 Descriptive Statistics of Future Earnings and Current Earnings Separated by Countries

Country	Variable	Minimum	Maximum	Mean	Standard Deviation (SD.)	Coefficient of Variation (CV.)
Indonesia	E_{it+1} (IDR)	–713.1201	4,030.0000	426.5001	682.5156	1.6003
	E_{it} (IDR)	–713.1201	3,470.0000	411.1769	631.9788	1.5370
Malaysia	E_{it+1} (MYR cents)	2.9400	275.0000	60.2545	63.4606	1.0532
	E_{it} (MYR cents)	5.7000	272.000	58.0952	59.4830	1.0239
The Philippines	E_{it+1} (Peso)	–0.1500	163.6700	17.5323	33.2977	1.8992
	E_{it} (Peso)	–0.1500	163.8600	17.4892	34.5404	1.9750
Singapore	E_{it+1} (Singapore cents)	0.6200	1,389.2106	146.8879	259.7919	1.7686
	E_{it} (Singapore cents)	0.1787	924.2545	127.9170	196.1609	1.5335
Thailand	E_{it+1} (THB)	–8.2400	46.7400	5.4959	9.0499	1.6467
	E_{it} (THB)	–8.2400	46.7400	5.5676	8.6105	1.5465

E_{it+1} = Earnings per share of firm i for year t+1; and
E_{it} = Earnings per share of firm i for year t

From Table 8, E_{it+1} and E_{it} cannot be compared between five countries in ASEAN because they are stated in different local currencies of each country. The results show that the minimum values of E_{it+1} and E_{it} are negative in Indonesia, the Philippines, and Thailand. That is, some listed companies in these countries incurred losses during the periods of the study. However, the mean of E_{it+1} and E_{it} are positive for all countries. Interestingly, the coefficient of variation (CV.) of E_{it+1} and E_{it} are more than 1 for all countries which indicate the high dispersion of E_{it+1} and E_{it}. It can be seen that the high range between the minimum values and maximum values of E_{it+1} and E_{it} for all countries.

Table 9 Regression Results of Earnings Persistence Model[4]

$$E_{it+1} = \alpha_0 + \alpha_1 E_{it} + \varepsilon_{it} \quad (3)$$

Panel A: Indonesia (n = 170)

Variable	Unstandardized Coefficients	Standardized Coefficients	t	Sig.t (two-tailed)
Constant	51.242		1.529	0.128
E_{it}	0.913	0.845	20.487	0.000***
F value = 419.697***				
Adjusted R^2 = 0.712				

Panel B: Malaysia (n = 67)

Variable	Unstandardized Coefficients	Standardized Coefficients	t	Sig.t (two-tailed)
Constant	0.268		0.097	0.923
E_{it}	1.033	0.968	31.017	0.000***
F value = 962.041***				
Adjusted R^2 = 0.936				

Panel C: The Philippines (n = 115)

Variable	Unstandardized Coefficients	Standardized Coefficients	t	Sig.t (two-tailed)
Constant	1.319		1.374	0.172
E_{it}	0.927	0.962	37.276	0.000***
F value = 1389.508***				
Adjusted R^2 = 0.924				

[4] The study adds the year control variable year as dummy variable in model (3).

$E_{it+1} = \alpha_0 + \alpha_1 E_{it} + \alpha_2 D + \varepsilon_{it}$

D = 1 if year 2013, 2 if year 2014, 3 if year 2015, 4 if year 2016, and 5 if year 2017.

The α_2 is not statistically significant.

The result does not present here because the year control variable does not change the main regression results.

Table 9 Regression Results of Earnings Persistence Model (Cont.)

Panel D: Singapore (n = 71)

Variable	Unstandardized Coefficients	Standardized Coefficients	t	Sig.t (two-tailed)
Constant	–18.470		–2.286	0.025**
E_{it}	1.293	0.976	37.290	0.000***
F value = 1390.517***				
Adjusted R^2 = 0.952				

Panel E: Thailand (n = 156)

Variable	Unstandardized Coefficients	Standardized Coefficients	t	Sig.t (two-tailed)
Constant	0.513		1.130	0.260
E_{it}	0.895	0.851	20.152	0.000***
F value = 406.083***				
Adjusted R^2 = 0.723				

*** significant level at 0.01 level
** significant level at 0.05 level
* significant level at 0.10 level

The results in Table 9 show that F-values are significant for all countries. That is, current earnings can explain the changes in future earnings significantly. In addition, the α_1 are positively and significantly for all countries. Current earnings and future earnings are positively and significantly related for all countries in ASEAN. That is, earnings in five countries in ASEAN have the persistence properties. The financial statement users can use current earnings to predict future earnings. The comparison of earnings persistence among five ASEAN member countries can be summarized in Table 10.

Table 10 Comparison of Pearson Correlation and Regression Results of Earnings Persistence

$$E_{it+1} = \alpha_0 + \alpha_1 E_{it} + \varepsilon_{it} \quad (3)$$

Country	Pearson Correlation (r) between E_{it+1} and E_{it}	Sig. (two-tailed)	α_1 (Unstandardized Coefficients)	Standardized Coefficients[5]	t	Sig. t (two-tailed)	Adjusted R^2
Indonesia	0.845	0.000***	0.913	0.845	20.487	0.000***	0.712
Malaysia	0.968	0.000***	1.033	0.968	31.017	0.000***	0.936
The Philippines	0.962	0.000***	0.927	0.962	37.276	0.000***	0.924
Singapore	0.976	0.000***	1.293	0.976	37.290	0.000***	0.952
Thailand	0.851	0.000***	0.895	0.851	20.152	0.000***	0.723

*** significant level at 0.01 level
** significant level at 0.05 level
* significant level at 0.10 level

The earnings persistence is measured by the Pearson correlation between current earnings and future earnings (r), the coefficient of regression, and adjusted R^2 from model (3). As the results presented in Table 10, it can be inferred that earnings persistence is highest in Singapore (r = 0.976, standardized coefficient = 0.976, Adjusted R^2 = 0.952) while the least earnings persistence is found in Indonesia (r = 0.845, standardized coefficient = 0.845, Adjusted R^2 = 0.712). The earnings persistence indicates the earnings quality which current earnings can be used to predict future earnings. This earnings quality definition is measured in terms of predictability. Predictability is the attribute of relevance which is the basis qualitative characteristics of accounting information (IASB, 2018). The plausible reason of highest earnings persistence in Singapore is the high level of IFRS adoption in Singapore. Accounting items under Singapore Financial Reporting Standards (SFRS) has zero GAAP difference from IAS/IFRS (Bae et al., 2008). Singapore has the least absence score from IAS/IFRS among other four countries (Ding et al., 2007). In addition, the lowest level of IFRS adoption among five ASEAN countries was evidenced in Indonesia (Limijaya, 2017). Furthermore, the findings also showed that the level of earnings persistence in the second rank, third rank, and fourth rank are Malaysia, the Philippines, and Thailand, respectively.

[5] The values of standardized coefficients are equal to Pearson correlation and significant values of t-test are also equal to significant values of Pearson Correlation. The main reason is that model (3) is simple regression which has only one independent variable to explain the dependent variable.

4.2.1 Value Relevance of Earnings

Earnings quality is also measured in terms of value relevance of earnings. It can be inferred that the investors use earnings in valuation of their securities (e.g., Easton & Harris, 1991; Warfiled & Wild, 1992) (see detail in section 3.2.2). The descriptive statistics of security return and earnings per share deflated with stock price at the beginning period are presented in Table 11 and the regression results of value relevance of earnings are presented in Table 12.

Table 11 Descriptive Statistics of Return and Earnings Separated by Countries

Country	Variable	Minimum	Maximum	Mean	Standard Deviation (SD.)	Coefficient of Variation (CV.)
Indonesia	R_{it} (Times)	–0.7100	5.6400	0.0908	0.6594	6.6944
	E_{it}/P_{it-1} (Times)	–9.1426	1.0760	0.0194	0.7269	3.7488
Malaysia	R_{it} (Times)	–0.1997	0.9463	0.0860	0.2054	2.3856
	E_{it}/P_{it-1} (Times)	0.0189	0.1154	0.0502	0.0194	0.3865
The Philippines	R_{it} (Times)	–0.3774	0.7034	0.0546	0.2138	3.9158
	E_{it}/P_{it-1} (Times)	–0.0128	0.9761	0.0671	0.0912	1.3592
Singapore	R_{it} (Times)	–0.3109	0.4070	–0.0214	0.1546	–7.2243
	E_{it}/P_{it-1} (Times)	0.0067	0.3285	0.0820	0.0535	0.6524
Thailand	R_{it} (Times)	–0.4970	0.9225	0.0619	0.2504	4.0452
	E_{it}/P_{it-1} (Times)	–0.0871	1.2078	0.0821	0.1627	1.9817

R_{it} = annual stock return of firm i year t since after three months of year ended t–1 to year t; and
E_{it}/P_{it-1} = earnings per share of firm i for year t deflated with stock price as at the end of three months after year ended t–1.

The descriptive statistics of annual stock return (R_{it}) and earnings per share deflated with the stock price at the period t–1 (E_{it}/P_{it-1}) can be directly compared between five member countries in ASEAN because both data types are in ratios which are not measured in monetary values. The highest mean of stock return is found in Indonesia (0.0908 or 9.08%) while the least one is found in Singapore (–0.0214 or –2.14%). The minimum values of annual stock return are negative values for all countries. It can be inferred that there are the declines in stock prices for all stock markets during the periods of the study. The minimum values of E_{it}/P_{it-1} are negative for Indonesia, the Philippines, and Thailand while they are positive for Malaysia and Singapore. These are consistent with the findings of descriptive

statistics of E_{it+1} and E_{it} in Table 8. For the dispersion of data, the absolute value of coefficients of variation (CV.) of stock returns is more than 1 for all countries. That is, the high range between the minimum values and maximum values of stock returns for all countries. The range between the minimum and maximum values of E_{it}/P_{it-1} of Malaysia and Singapore (CV. less than 1) are lower than those of Indonesia, the Philippines, and Thailand.

Table 12 Regression Results of Value Relevance of Earnings[6]

$$R_{it} = \beta_0 + \beta_1 E_{it}/P_{it-1} + \varepsilon_{it} \quad (4)$$

Panel A: Indonesia (n = 170)

Variable	Unstandardized Coefficients	Standardized Coefficients	t	Sig.t (two-tailed)
Constant	0.088		1.757	0.081*
E_{it}/P_{it-1}	0.155	0.171	2.245	0.026**
F value = 5.039**				
Adjusted R^2 = 0.023				

Panel B: Malaysia (n = 67)

Variable	Unstandardized Coefficients	Standardized Coefficients	t	Sig.t (two-tailed)
Constant	–0.033		–0.483	0.631
E_{it}/P_{it-1}	2.376	0.225	1.861	0.067*
F value = 3.462*				
Adjusted R^2 = 0.036				

[6] The study adds the year control variable as dummy variable in model (4).

$R_{it} = \beta_0 + \beta_1 E_{it}/P_{it-1} + \beta_2 D + \varepsilon_{it}$

D = 1 if year 2013, 2 if year 2014, 3 if year 2015, 4 if year 2016, and 5 if year 2017.

The β_2 is not statistically significant.

The result does not present here because the year control variable does not change the main regression results

Table 12 Regression Results of Value Relevance of Earnings (Cont.)

Panel C: The Philippines (n = 115)

Variable	Unstandardized Coefficients	Standardized Coefficients	t	Sig.t (two-tailed)
Constant	0.016		0.670	0.504
E_{it}/P_{it-1}	0.572	0.244	2.675	0.009***
F value = 7.157***				
Adjusted R^2 = 0.051				

Panel D: Singapore (n = 71)

Variable	Unstandardized Coefficients	Standardized Coefficients	t	Sig.t (two-tailed)
Constant	–0.098		–3.055	0.003***
E_{it}/P_{it-1}	0.937	0.324	2.845	0.006***
F value = 8.095***				
Adjusted R^2 = 0.092				

Panel E: Thailand (n = 156)

Variable	Unstandardized Coefficients	Standardized Coefficients	t	Sig.t (two-tailed)
Constant	0.034		1.548	0.124
E_{it}/P_{it-1}	0.339	0.220	2.803	0.006***
F value = 7.855***				
Adjusted R^2 = 0.042				

*** significant level at 0.01 level
** significant level at 0.05 level
* significant level at 0.10 level

Table 12 shows that the F-values for return-earnings model are significant at 0.01 level for the Philippines, Singapore, and Thailand while F values are significant at 0.05 level for Indonesia and 0.10 level for Malaysia. It can be implied that accounting earnings can explain the changes in stock return for all countries. The coefficient β_1 (earnings response coefficient) in all countries in ASEAN are positively significant. It can be implied that earnings is value relevant information. The investors in all five countries' stock markets use the earnings information for valuing their stock returns.

Table 13 Comparison of Pearson Correlation and Regression Results of Value Relevance of Earnings

Country	Pearson Correlation (r) between R_{it} and E_{it}/P_{it-1}	Sig. (two-tailed)	β_1 (Unstandardized Coefficients)	Standardized Coefficients[7]	t	Sig. t (two-tailed)	Adjusted R^2
Indonesia	0.171	0.026**	0.155	0.171	2.245	0.026**	0.023
Malaysia	0.225	0.067*	2.376	0.225	1.861	0.067*	0.036
The Philippines	0.244	0.009***	0.572	0.244	2.675	0.009***	0.051
Singapore	0.324	0.006***	0.937	0.324	2.845	0.006***	0.092
Thailand	0.220	0.006***	0.339	0.220	2.803	0.006***	0.042

*** significant level at 0.01

** significant level at 0.05

* significant level at 0.10

Table 13 shows that Pearson correlation (r), the coefficient of regression, and Adjusted R^2 are different among five member countries in ASEAN. The highest level of Pearson Correlation, standardized coefficient, and adjusted R^2 are in Singapore. Correlation between return and earnings and standardized coefficient is 0.324 in Singapore. The adjusted R^2 of Singapore is 9.2%. The lowest level of Pearson Correlation, coefficient of regression, and adjusted R^2 is found in Indonesia. Correlation between return and earnings and standardized coefficient in Indonesia is 0.171. The adjusted R^2 of Indonesia is 2.3%. The adjusted R^2 of other countries are 5.1% for the Philippines, 4.2% for Thailand, and 3.6% for Malaysia. That is, the level of earnings quality in terms of value relevance is different among countries.

The result of this study reveals that highest value relevance of earnings is shown in Singapore which is compatible with Bae et al. (2008). They showed that all 21 key accounting items in Singapore are consistent with IFRS. Prior studies showed that the adoption of IFRS enhanced the earnings quality (e.g., Bartov et al., 2005; Barth et al., 2008; Gebhardt & Novotny-Frakas, 2011; Bertin & Moya, 2013: Adibah et al., 2013; Houqe et al., 2016). In addition, IFRS emphasizes the fair value measurement which improves the relevance for decision makers (Landsman, 2007; He, Wong, & Young, 2012; Elshany, Kayed, & Hewaidy, 2018). The findings in this study support that the high level IFRS adoption increases the level of earnings quality in terms of value relevance of earnings. In the opposite side, Indonesia adopt IFRS in the lower level compared with other four countries (Malaysia, the Philippines, Singapore,

[7] The values of standardized coefficients are equal to Pearson correlation and significant values of t-test are also equal to significant values of Pearson Correlation. The main reason is that model (4) is simple regression which has only one independent variable to explain the dependent variable.

and Thailand) (Limijaya, 2017), thereby the lower value relevance of earnings in Indonesia than others is evidenced.

In addition, the results in this section are also consistent with the findings of earnings persistence section (see details in section 4.1.3). That is, the earnings persistence is highest in Singapore while the least one is found in Indonesia.

5. Conclusion and Discussion

The results of this paper indicate that there are no significant differences between ratio of CFO/NI among five member countries in ASEAN. However, the findings reveal that the significant difference of CFO/NI means are between Malaysia and Singapore; Singapore and Thailand. The highest variability of earnings to cash flows is found in Indonesia while the lowest one is shown in Thailand. It can be inferred that the lowest earnings smoothness is found in Indonesia and the highest one is shown in Thailand. Furthermore, the results also show that the highest earnings persistence and value relevance is found in Singapore while the lowest ones is found in Indonesia. Singapore has the zero GAAP different score from IAS/IFRS (Bae et al., 2008) and lowest absence score from IAS/IFRS (Ding et al., 2007) while Indonesia is the lowest level of IFRS adoption compared with other four ASEAN countries (Limijaya, 2017). Therefore, the findings of this paper support that the IFRS adoption will enhance the quality of earnings (e.g., Bartov et al., 2005; Barth et al., 2008).

The paper will give the major contribution for the official accounting standards setting bodies of five countries in ASEAN. It should encourage them to adopt IFRS or fully converged their local accounting standards with IFRS as much as possible. IFRS's main concept is principle-based approach and fair value measurement. Fair value will improve the relevance of accounting information (Landsman, 2007; He et al., 2012; Elshany et al., 2018). The benefits of adoption IFRS outweigh cost (Landsman, 2007). Therefore, the findings of this paper motivate the more adoption of IFRS for ASEAN member countries.

The limitation of this paper is the sample based on only highly market capitalization firms. The future study should extend the sample for covering all listed companies in ASEAN. In addition, the research only employed the five member countries in ASEAN. The future research should examine the earnings quality for all member countries in ASEAN. The number of sample sizes in each countries are different because highly capitalization market index in each country are classified as Index based on different amount of listed firms (LQ45 Index in Indonesia, FBM KLCI 30 in Malaysia, PSEI30 in the Philippines, STI30 in Singapore and SET50 in Thailand,). Therefore, Thailand and Indonesia have more number of samples than other three countries which may dominate the findings of this paper.

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