DIVERSITY OF BOOK-TAX CONFORMITY IN ASEAN 4: PHILIPPINES, INDONESIA, MALAYSIA, AND SINGAPORE

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ABSTRACT

This research aimed to determine the diversity of Book-Tax Conformity (BTC) between countries and industries in ASEAN 4. This research is descriptive-qualitative research. This research uses a sample of manufacturing and non-manufacturing companies listed on the Philippine Stock Exchange, Indonesia Stock Exchange, Bursa Malaysia, and Singapore Exchange. Limited from 2012-2018. The results of this research indicate that during the period 2012–2018 the movement of the BTC level in ASEAN 4 varies every year. Based on the results of different tests that have been carried out between industries in each country in ASEAN 4, it can be seen that there is a diversity of BTC between industries in the Philippines, Indonesia, and Malaysia. Meanwhile, in Singapore, there is no diversity of BTC between industries because there are no differences in tax regulations regarding the provisions of the inventory valuation method and the depreciation method regulated by the Singapore taxation authority for the manufacturing industry and non-manufacturing industries in Singapore in presenting the taxable profit report.

Keywords: Diversity, Book–Tax Conformity, ASEAN 4

Tujuan penelitian ini adalah untuk mengetahui keragaman Book-Tax Conformity *(BTC) antar negara dan antar industri di ASEAN 4. Penelitian ini merupakan penelitian kualitatif deskriptif. Penelitian ini menggunakan sampel perusahaan manufaktur dan non manufaktur yang terdaftar di Bursa Efek Filipina, Bursa Efek Indonesia, Bursa Malaysia, dan Bursa Singapura. Dibatasi dari tahun 2012 hingga 2018. Hasil penelitian ini menunjukkan bahwa selama periode 2012 hingga 2018 pergerakan level BTC di ASEAN 4 bervariasi setiap tahunnya. Berdasarkan hasil uji beda yang telah dilakukan antar industri di masing-masing negara di ASEAN 4, terlihat adanya keragaman BTC antar industri di Filipina, Indonesia, dan Malaysia. Sedangkan di Singapura, tidak terdapat diversitas BTC antar industri karena tidak ada perbedaan peraturan perpajakan mengenai ketentuan metode penilaian persediaan dan metode penyusutan yang diatur oleh otoritas perpajakan Singapura untuk industri manufaktur dan industri non-manufaktur di Singapura dalam menyajikan laporan laba kena pajak.*

Kata kunci: Keberagaman, *Book-Tax Conformity*, ASEAN 4

INTRODUCTION

Accounting and taxation have different standards for preparing financial statements. In accounting, the preparation of financial reports must be based on the basic principles of financial accounting established by the International Financial Reporting Standard (IFRS). Meanwhile, for taxation, the financial statements that were originally prepared based on IFRS must then be adjusted to the tax regulations that have been made by the tax regulator through the fiscal reconciliation process. Because of the differences that underlie the two guidelines for preparing financial statements, the income statement presented based on IFRS is commonly referred to as accounting profit, while the profit prepared based on tax regulations is called taxable profit.

As it is well known that accounting and taxation have different standards for

the preparation of financial statements, the objectives of preparing financial reports in accounting and taxation will be different. Based on IFRS No. 1 concerning the presentation of Financial Statements, the purpose of preparing financial statements is to provide information about the financial position, financial performance, and cash flow of an entity that is useful for most users of financial statements in making economic decisions. Financial reports also inform the results of management's accountability for the use of resources entrusted to the company in by investors order to make the best use of these resources. Meanwhile, fiscal financial reports are accounting information prepared for tax purposes. So the presentation must also be based on the applicable tax law and its implementing regulations. Therefore, the purpose of preparing fiscal financial statements is to present information as the basis for calculating the amount of taxable income.

Due to differences in the guidelines for preparing financial statements between accounting profit and taxable profit, the results of two financial statements presented will certainly give different results. Although accounting profit and taxable profit are prepared on an accrual basis, the final results of the calculation of the two financial statements are not the same (Hanlon & Shevlin, 2005). This is due to the difference in the concept of revenue and expense recognition between accounting and taxation. Although there are differences between accounting and taxation, by considering the costs and benefits, some companies take advantage of compliance with IFRS rules and tax regulations (which are called Book–Tax Conformity or BTC) to make it easier for companies to prepare reports of accounting and taxable profits, as long as no provisions are violated (Atwood, Drake & Mayers, 2010; Atwood, Drake, Myers & Myers, 2012).

However, these actions seem to invite debate. It is proven that there are two conflicting opinions regarding the company's decision to apply BTC when preparing an income statement. The first opinion explains that the application of BTC can improve the quality of earnings and tax compliance because implementing BTC can reduce aggressive financial reporting actions and efforts to reduce corporate taxes (Chan, Lin & Tang, 2013; Firman, Siregar, Martani & Rahayu, 2020; Niggemann, 2022; Sundvik, 2017; Tang, 2015; Watrin, Ebert & Thomsen, 2012, Watrin, Pott & Ullmann, 2014). Meanwhile, the second opinion explains that the application of BTC in preparing the income statement will reduce the quality of earnings (Blaylock, Gaertner, & Shevlin, 2015, 2017; Hanlon, Laplante & Shevlin, 2005, Hanlon, Maydew & Shevlin, 2008; Hanlon & Shevlin, 2005; Pais & Dias, 2022). The reason is that the information required by interested parties (stakeholders) and taxation authorities is substantially different. In particular, the taxation system is designed to fulfill the government's objectives of increasing state revenues and providing economic incentives. Conversely, accounting profit is made to provide information about the company's performance and is intended to reduce information asymmetry between company management and its stakeholders. Thus, the accounting system is designed to allow managers flexibility in conveying information to outsiders (Hanlon & Shevlin, 2005).

This research was conducted to develop research that had been previously conducted by Atwood et al., (2010, 2012) and Rachmawati & Martani (2017). The purpose of this research is to determine the diversity of levels of book–tax conformity between countries and between industries in ASEAN 4. In contrast to the research of Atwood et al. (2010, 2012), which used a sample of companies from several countries, and research by Rachmawati & Martani (2017), which only used a sample of companies in one country. Meanwhile, this study uses a sample of manufacturing and non-manufacturing companies in ASEAN 4: the Philippines, Indonesia, Malaysia, and Singapore. According to Atwood et al. (2010, 2012) the diversity of tax reporting will reflect the level of diversity of taxable

income permitted by the tax authorities in a country. Tax reporting diversity will also reflect the level of BTC allowed by a country. Therefore, the diversity of BTC levels is measured through the suitability of IFRS accounting standards and domestic tax regulations in each country in ASEAN 4.

The remainder of this paper is organized as follows: Section 2 reviews the literature available, Section 3 outlines the research methodology, and Section 4 presents our sample selection, descriptive statistics, and results. Finally, Section 5 presents our conclusions.

LITERATURE REVIEW
Agency Theory
The main principle of this theory states that there is a working relationship between the parties who have the authority (principal) namely investors, shareholders, the government and the party receiving the authority, namely management, in the form of cooperation. This theory argues that each individual will act based on their own interests, resulting in agency problems according to Jensen & Meckling (1976), namely agency problems between management and shareholders, shareholders and creditors, companies and governments, and companies and consumers. A company leader plays an important role in influencing relationships with its stakeholders, especially from the perspective of agency relationships (Karyadi & Slamet, 2022).

This agency problem arises because of differences in the interests of the company and the government. In general, when the accounting profit is high, the taxes to be paid will automatically be high. However, due to agency problems that prioritize the satisfaction and interests of each, companies will often tend to exaggerate profits to seek funding from investors, and vice versa, companies will try to shrink taxable profits so that the tax paid is small.

International Financial Reporting Standard (IFRS)
The International Accounting Standard Board (IASB) publishes the International

Financial Reporting Standards (IFRS). These International Accounting Standards are prepared by four major world organizations, namely the IASB, the European Commission (EC), the International Organization of Securities Commissions (IOSCO), and the International Federation of Accountants (IFAC). The IASB, formerly known as the International Accounting Standards Committee (IASC), is an independent institution for compiling accounting standards. This organization aims to develop and encourage the use of global accounting standards that are high quality, easy to understand, and comparable. Most of the standards that were part of the previous IFRS were International Accounting Standards (IAS). The IAS was published between 1973 until 2001 by the IASC. In April 2001, the IASB adopted the entire IAS and continued its development into a new standard known as IFRS.

The International Accounting Standard, better known as IFRS, is a single accounting reporting standard that emphasizes strong professional revaluation with clear and transparent disclosures regarding the economic substance of transactions, explanations to reach certain conclusions, and accounting related to the transaction. Thus, users of financial statements can easily compare financial information on entities between countries in different parts of the world. This standard arises due to the demands of globalization, which require business people in a country to participate in cross-country business. For this reason, there must be an international standard that applies equally in all countries to facilitate the process of business reconciliation.

Each country has its authority and policies in the process of harmonizing and applying IFRS as a global standard to the accounting standards that have been applied in that country before. Several countries adopt the entire contents of the IFRS and translate it word for word, some are harmonizing the standards that have been applied previously with several chapters contained in the IFRS that are deemed appropriate to the situation in that country, and there are

even countries that do not adopt IFRS at all. This may occur because every country has different economic conditions, so they cannot be equated from one country to another. Thus, below will be presented an explanation of the adoption of IFRS by the Philippines, Indonesia, Malaysia, and Singapore.

The Philippines is a country that has adopted IFRS for a long time. This country has adopted IFRS in full since 2005. Every element of IFRS is properly adopted without any exceptions or changing the IFRS standard according to its country. This country also has no differences in the application of its national standards.

Indonesia is a country that is relatively new in terms of IFRS adoption. The new adoption process was carried out in early 2009 and was only effectively implemented in 2012. Until now, Indonesia has been synchronizing and updating the updates made by the IFRS board. However, there are some differences in standards between Indonesia and IFRS. The difference is in SAK ETAP and the standard for non-profits. This difference occurs due to differences in conditions in Indonesia that require additional standards to regulate these conditions.

Malaysia has already implemented IFRS in its national accounting standards. Malaysia has adopted IFRS since 2005 and has effectively implemented IFRS since 2012. All elements and instruments in IFRS were adopted without any exceptions. There is no difference between the standards applied by Malaysia and the national standards in this country. This happens because there are no special conditions that oblige Malaysia to have its standards to regulate these special conditions.

Singapore is a country that has adopted IFRS for a long time. Long before Indonesia and Malaysia started to adopt. Singapore has fully adopted IFRS since 2005, translated IFRS word by word into the Singaporean language, and has been effectively implementing IFRS since 2011. Every element of IFRS is adopted properly and without any exceptions. Singapore also does not have a different application of its national standards.

Characteristics of the Taxation Environment in ASEAN 4

The characteristics of the taxation environment in ASEAN 4 include corporate income tax rates, the tax system, and compensation for fiscal losses. The characteristics of the taxation environment that will be discussed first are the corporate income tax rates in each country in ASEAN 4. The Corporate Income Tax rate in the Philippines from 2012–2018 for both Filipino and foreign companies operating in the Philippines was 30%. In certain exceptions, a 2% Minimum Corporate Income Tax (MCIT) is applied to both Filipino companies and foreign companies operating in the Philippines, starting from the fourth tax year after the year the business began operations. MCIT is payable if the company has zero or negative taxable income or if MCIT is greater than regular income tax obligations.

Then the corporate income tax rate in Indonesia from 2012–2018 was subject to a fixed rate of 25%. This rate applies to Indonesian companies as well as foreign companies operating in Indonesia through a Permanent Establishment. Domestic corporate taxpayers in the form of Limited Liability Companies that have at least 40% of the total paid-up shares traded on the Indonesia Stock Exchange and meet the predetermined requirements are entitled to a rate reduction of 5% lower than the normal rate that has been assigned to the domestic Corporate Taxpayer and Permanent Establishment which is regulated based on Government Regulation. Small and medium-scale domestic companies with a gross turnover of up to IDR 50 billion are entitled to a 50% rate reduction from the tax rate imposed on net income. This rate reduction also applies to taxable income with a gross turnover of up to IDR 4.8 billion.

Furthermore, the Corporate Income Tax rate in Malaysia from 2012–2015 for resident and non-resident companies was a tax of 25%. Then, effectively starting in 2016, the corporate income tax rate in Malaysia decreased to 24%. Resident

companies that have paid-up capital of MYR 2,500,000 or less will be subject to a tax rate of 19% on the first MYR 500,000 of billable income, with the balance subject to a tax rate of 24%. This concession tax rate does not apply if the company controls or is directly or indirectly controlled by another company that has paid up capital of more than MYR 2,500,000 or is directly or indirectly related to another company that has paid up capital in respect of shares of more than MYR 2,500,000. Next, the Corporate Income Tax rate in Singapore from 2012–2018 was 17%. The Singapore government instituted a tax exemption policy of 75% on the first SGD 10,000 of normal taxable income, and 50% of the subsequent SGD 290,000 will also be exempt from tax.

The characteristics of the taxation environment that will be discussed second are the taxation systems in each country in ASEAN 4. Companies that are established or domiciled in the Philippines, Indonesia, or Malaysia will be taxed on all income, better known as worldwide income. In the worldwide income system, a country will tax all income received or earned by Corporate Taxpayers in that country, regardless of whether the income comes from within the country or from abroad. Meanwhile, companies that are established or domiciled in Singapore will be subject to the territorial tax system. In the territorial system, a country will only tax income that originates from that country or its jurisdiction. Meanwhile, income originating from outside the country (foreign income) will not be taxed.

The third characteristic of the taxation environment will be compensation for fiscal losses in each country in ASEAN 4. The fiscal loss compensation provided by the Philippine government in the form of net operating losses incurred in a tax year can be considered a deduction from the gross income for three consecutive years following the loss year, provided that there is no substantial change in the ownership of the business or company. Furthermore, the compensation for fiscal losses provided by the Indonesian government is in the form of fiscal losses, which can be compensated by fiscal net income starting from the next tax year for up to five consecutive years. Then the fiscal losses incurred by certain businesses or in certain areas can be compensated with fiscal net income starting from the next tax year for up to ten consecutive years.

Next, the compensation for fiscal losses provided by the Malaysian government is in the form of fiscal losses that can be carried over to the next tax year without any time limit, unless there is a substantial change in the ownership of an inactive company. Then the fiscal loss compensation provided by the Singapore government in the form of any trade losses and unused capital allowances can be carried over to the next tax year to offset income for the following assessment year by following the shareholder continuity test. Unused capital allowances and trading losses that exceed the SGD 100,000 limit will continue to be available to carry over to the next tax year under normal rules.

Book–Tax Conformity (BTC)

Every company is obliged to make financial reports for a certain period. In preparing financial statements, they must be following with IFRS accounting standards. As explained in IFRS No. 1 on the Presentation of Financial Statements, the purpose of preparing financial statements is to provide information about the financial position, financial performance, and cash flows of an entity that is useful for most users of financial statements in making economic decisions. Financial reports also inform the results of management's accountability for the use of resources entrusted to the company by investors to make the best use of these resources.

The tax regulations provide provisions for companies to be able to prepare financial reports by the provisions of the applicable tax laws. So the financial statements that were originally made based on IFRS must then be adjusted to the provisions in the tax law. These adjustments are made through a fiscal reconciliation process. The purpose of making these adjustments is so that the

information contained in the financial statements can be used as the basis for calculating, paying, and reporting the payable income tax.

Due to differences in the guidelines in the preparation of financial statements between accounting profit and taxable profit, the results of the two financial statements presented will certainly give different results (Amriza & Rachmawati, 2021; Pramesti & Rachmawati, 2021; Rachmawati, 2016; Rachmawati, Utama, Martani & Wardhani, 2019, 2020, 2022; Rachmawati & Martani, 2017). Although both accounting profit and taxable profit are prepared on an accrual basis, the final results of the calculation of the two financial reports are not the same (Hanlon & Shevlin, 2005). This is due to the difference in the concept of revenue and expense recognition between accounting and taxation. Weber (2005) states that three factors can cause differences between accounting profit and taxable profit, namely as follows: 1) There are differences in standards in the preparation of financial reports between accounting and taxation; 2) There is a tendency for companies to carry out tax management, which in turn can lead to tax sheltering; and 3) There is discretion or freedom given to managers in considering a transaction.

Although there are differences between accounting and taxation, by considering the costs and benefits, some companies take advantage of compliance with IFRS rules and tax regulations (which are called Book-Tax Conformity or BTC) to make it easier for companies to prepare reports of accounting and taxable profits, as long as no provisions are violated (Atwood et al., 2010). Previous researchers explained that the application of BTC can improve the quality of earnings and tax compliance because implementing BTC can reduce aggressive financial reporting actions and efforts to reduce corporate taxes (Tang, 2015).

Based on research conducted by Ashbaugh-Skaife & LaFond (2004), measuring BTC can be done through three criteria: inventory conformity, depreciation conformity, and limited tax incentives. The first criterion to be discussed is inventory conformity in each country in ASEAN 4. Based on the IFRS accounting standards, two inventory valuation methods can be used, namely the FIFO method (first–in, first–out) and the Average method. Then, the provisions for the inventory valuation method that can be used based on the tax regulations made by the taxation authority of the Philippines are the FIFO method and the Average method. Furthermore, Indonesia also has the same tax regulations as the Philippines regarding the inventory valuation methods that can be used, namely the FIFO method and the Average method. Meanwhile, the tax authorities of Malaysia and Singapore have the same tax regulations, which only allow one method of inventory valuation to be used, namely the FIFO method. Thus, it can be seen that the provisions of the inventory valuation method regulated by the tax authorities in each country in ASEAN 4 are following IFRS accounting standards.

The second criterion to be discussed is depreciation conformity in each country in ASEAN 4. Based on the IFRS accounting standards, several depreciation methods can be used, namely the straight-line method, the declining balance method, the number of production units method, and the number of years method. Then, according to the provisions of the depreciation method based on tax regulations in the Philippines, three methods can be used: the straight-line method, the declining balance method, and the number of years method. The next country is Indonesia, based on taxation regulations in Indonesia, two depreciation methods can be used, namely the straight-line method and the declining balance method. Meanwhile, the Malaysian tax authorities only allow one depreciation method to be used, namely the straight-line method. The last country is Singapore, based on taxation regulations in Singapore, two depreciation methods can be used, namely the straight-line method and the declining balance method. Thus, it can be seen that the provisions of the depreciation method regulated by the tax authorities in each country in ASEAN 4 are following IFRS

accounting standards.

The third criterion that will be discussed is the limited tax incentives in each country in ASEAN 4. Based on taxation regulations in the Philippines during this research period, there were two tax facilities provided to corporate taxpayers, namely R&D incentives and special taxes for certain industries or sectors. Then, based on taxation regulations in Indonesia during this research period, there were several tax facilities provided to corporate taxpayers, namely investment allowance incentives, tax holiday incentives, reduction of income tax rates for corporate taxpayers, reduction of final income tax rates, income tax facilities on fixed asset revaluation, and special economic zones. Furthermore, based on taxation regulations in Malaysia during this research period, there were three tax facilities granted to corporate taxpayers, namely pioneer status and investment tax allowances, R&D incentives, and principal hubs. Next, based on taxation regulations in Singapore during the period this research was conducted there were several tax facilities provided to corporate taxpayers, namely incentives for pioneer companies; development and expansion; investment allowances; approved royalties, technical assistance fees, and contributions to research and development costs; tax exemption scheme for new companies; productivity and innovation credit; R&D incentives; intellectual property development incentive; tax certainty on gains on disposal of equity investments; international headquarters program; finance and treasury center incentives; financial service incentives; maritime sector; international trade; and venture capital fund incentives.

In short, book-tax conformity is the suitability between accounting income and taxable income. A country with a low level of book-tax conformity can be said to have the possibility that companies in that country report a more varied amount of taxable income. Taxable income is used to calculate the amount of income tax payable. Thus, the level of variation in taxable income can be seen through the amount of current tax expense reported in the total accounting profit before tax. The level of variation in taxable profit can be estimated by calculating the current tax burden on the total accounting profit before tax.

RESEARCH METHODS
Data and Samples
This research uses a sample of all companies in the manufacturing and non-manufacturing industries listed on the Philippine Stock Exchange, Indonesia Stock Exchange, Bursa Malaysia, and Singapore Exchange Limited in the period 2012–2018. The ASEAN 4 countries that were selected as the subject of this research were the Philippines, Indonesia, Malaysia, and Singapore. This study uses data samples from ASEAN 4, because the Philippines, Indonesia, Malaysia, and Singapore meet the criteria in this study, which have adopted IFRS and have diverse industries, so it is easy to research and compare between industries. Actually, in the ASEAN region, there are already several countries that have adopted IFRS, such as Brunei Darussalam, the Philippines, Indonesia, Malaysia, Singapore, and Thailand. This research does not use the country of Brunei Darussalam because there are too few industries in Brunei, making it difficult to research and compare with the existing industries in ASEAN 4. This study also does not use Thailand because Thailand has not adopted International Accounting Standard 12 concerning Accounting for Income Tax while in Indonesia it is better known as PSAK 46 concerning Accounting for Income Tax, because PSAK 46 regulates how entities report income tax in financial statements, both in reports of financial position as well as in the statement of profit or loss and other comprehensive income.

This study uses a research period from 2012–2018, because Indonesia, Malaysia, and Singapore only effectively implemented IFRS in 2012, and only the Philippines had implemented IFRS first, namely in 2005. Because the implementation of IFRS in ASEAN 4 was partly carried out in 2012, and to facilitate

the research process, this research period was carried out starting in 2012. This research period was carried out until 2018, because researchers wanted to know the level of diversity of book-tax conformity in ASEAN 4. By carrying out a research period of 7 years, it is expected that researchers will be able to observe carefully the level of diversity of book-tax conformity in ASEAN 4.

The author has several criteria that can be used as a reference for sampling in this research. First, countries with status have adopted IFRS. Second, the authors exclude companies that are specifically regulated by taxation (for example, final taxpayers and companies in banking and finance). Third, the authors exclude companies that are in industrial sectors that are treated differently in taxation (for example, the real estate and property sector, the energy sector, etc.). Fourth, the authors only use companies that are a profitable. The last, the authors exclude companies whose data is incomplete. The number of companies that met the criteria for this research during the research period was 8,893 companies. Table 1 presents a description of the samples used in this research.

Measurement BTC

To determine the diversity of BTC between countries and between industries in ASEAN 4, the measurement of BTC levels in this research follows the BTC measurement conducted by Atwood et al. (2010). According to Atwood et al. (2010), the diversity of tax reporting will reflect the level of diversity of taxable income permitted by the tax authorities in a country. Tax reporting diversity will also reflect the level of BTC allowed by a country. Therefore, this research uses data from four countries, namely the Philippines, Indonesia, Malaysia, and Singapore, which is measured by the suitability of IFRS accounting standards and domestic tax regulations in each country in ASEAN 4. Thus, the author will measure the level of BTC based on the Root Mean Square Error (RMSE) as in the model below, which will be estimated based on country–industry–year:

$$CTE_{it} = \theta_0 + \theta_1 PTBI_{it} + \theta_2 DIV_{it} + e_{it}$$

To control for firm size, all of the above variables must be scaled against the average total assets in year t.

Following the previous explanation, it is known that the RMSE value is used to determine how much error will occur in the calculation results of the model above when compared to the actual value. The authors estimate the BTC measurement model based on country and industry in the period 2012–2018 to allow for changes in tax rates and the diversity of BTC in ASEAN 4, over time. The higher the RMSE value, the lower the BTC level. Conversely, the smaller the RMSE value, the higher the BTC level. Thus, to be able to find out the RMSE value in each country and industry during the period 2012–2018, the authors must first regress the data on manufacturing and non-manufacturing companies in ASEAN 4 that have met the criteria for this study.

ANALYSIS AND DISCUSSION
Descriptive Statistics

Table 2 shows the results of descriptive statistics on each variable using a complete

Table 1.
Sample Description: Industrial Composition

Country	Industrial Sector		Number of Observations
	Manufacture	Non-Manufacturing	
Philippines	372	437	809
Indonesia	972	820	1,792
Malaysia	2,411	1,460	3,871
Singapore	1,086	1,335	2,421
Total			8,893

sample.

Based on the table above, it is known that the variable current tax burden on the average total assets (CTEit) shows the minimum and maximum values of 0.00 and 0.37, respectively. During the seven years of the research period, we obtained a mean value on the CTEit variable amounting to 0.01, and a standard deviation value amounting to 0.02. If the standard deviation value is greater than the mean value, the wider the range of data variation between each sample will be. Then, because the sample used in this study only uses companies that are in profit, the values in the PTBIit variable all show positive. This is evidenced by the magnitude of the variable accounting profit before tax on average total assets (PTBIit) in the range between 0.00 and 5.76. During the seven years of the research period, we obtained a mean value on the PTBIit variable of 0.10 and a standard deviation value of 0.16. If the standard deviation value is greater than the mean value, the wider the range of data variation between each sample will be. Furthermore, the median value on the PTBIit variable amounts to 0.08. If the median value is compared to the mean value, it indicates that the mean value is greater than the median value. This indicates that most of the sample companies obtained high accounting profits before tax. Based on the table above, it is known that the variable dividend to the average total assets (DIVit) shows minimum and maximum values of 0.00 and 6.21, respectively. During the seven years of the research period, we obtained a mean value on the DIVit variable amounting to 0.02, and the standard deviation value amounting to 0.08. If a standard deviation value is greater than the mean value, the wider the range of data

variation between each sample will be. Then, the median value on the DIVit variable amounts to 0.00. If the median value is compared to the mean value, indicates that the mean value is greater than the median value. This indicates that most of the sample companies distribute dividends to shareholders.

Results

The results of the acquisition of RMSE values between countries in ASEAN 4 during the 2012-2018 period are presented in the form of a line graph in Figure 1. Because the measurement of BTC levels in this research is based on the RMSE value, through this figure it can be seen that the movement of BTC in each country in ASEAN 4 every year shows a movement, both increasing and decreasing.

Based on Figure 1 above, it is known that the highest RMSE value during the period 2012–2018 in the Philippines was in 2013, then in Indonesia in 2012 and 2016, then in Malaysia in 2012 and 2014, and finally in Singapore in 2014. Following the previous explanation, the higher the RMSE value, the lower the BTC level. It should be noted that the high RMSE value that occurred in the Philippines in 2013 was due to the taxes paid by all companies in the Philippines in 2013 using varying or different tax rates. This, of course, will have an effect on the RMSE value, which will be higher and cause the level of conformity between IFRS accounting standards and tax regulations in the Philippines to be lower. Then, the high RMSE value that occurred in Indonesia in 2012 and 2016 was also due to the taxes paid by all companies in Indonesia in 2012 and 2016 using varying or different tax rates. With a variety of tax rates paid by corporate taxpayers, it will certainly affect

Table 2
Descriptive Statistics

Variable	Obs.	Minimum	Maximum	Mean	Median	Std. Dev.
CTE_{it}	8.893	0.00	0.37	0.01	0.01	0.02
$PTBI_{it}$	8.893	0.00	5.76	0.10	0.07	0.16
DIV_{it}	8.893	0.00	6.21	0.02	0.00	0.08

the RMSE value, which will be higher, so that the level of conformity between IFRS accounting standards and tax regulations in Indonesia will be lower.

Furthermore, the high RMSE value that occurred in Malaysia in 2012 and 2014 was also due to the tax paid by all companies in Malaysia in that year using various or different tax rates. With a variety of tax rates paid by all companies in Malaysia, it will certainly have an effect on the RMSE value, which will be higher, so that the level of conformity between IFRS accounting standards and tax regulations in Malaysia will be lower. Then, the high RMSE value that occurred in Singapore in 2014 was due to taxes paid by all companies in Singapore in 2014 using varying or different tax rates. This, of course, will have an effect on the RMSE value, which will be higher and cause the level of conformity between IFRS accounting standards and tax regulations in Singapore to be lower. Based on research conducted by Ashbaugh-Skaife & LaFond (2004), measuring BTC can also be done through three criteria: inventory conformity, depreciation conformity, and limited tax incentives. Therefore, the low BTC in each country in ASEAN 4 can be identified through the provisions of the inventory valuation method, depreciation method, and tax facilities that are regulated by the tax authorities in each country in ASEAN 4.

Based on the previous explanation, it is known that the provisions of the inventory valuation method and the depreciation method regulated by the tax authorities in each ASEAN 4 country are following IFRS accounting standards. Thus, the factor that causes several companies in each country in ASEAN 4 to pay taxes at various or different rates is the tax facilities provided by the taxation authorities in each country in ASEAN 4. And of course, this will have an effect on the RMSE value of each country in ASEAN 4, to be higher causing the level of conformity between IFRS accounting standards and tax regulations in each country in ASEAN 4 to be even lower. After knowing the movement of BTC and the cause of the low level of conformity in each country in ASEAN 4. Furthermore, Figure 2 presents the results of the acquisition of RMSE values between industries in each country in ASEAN 4 during the 2012–2018 period in the form of a line graph.

Based on this figure, it is known that the RMSE value between industries in each country in ASEAN 4 each year also shows a movement, either experiencing a significant increase or decrease. By the previous explanation, the higher the RMSE value, the lower the BTC level. Conversely, the smaller
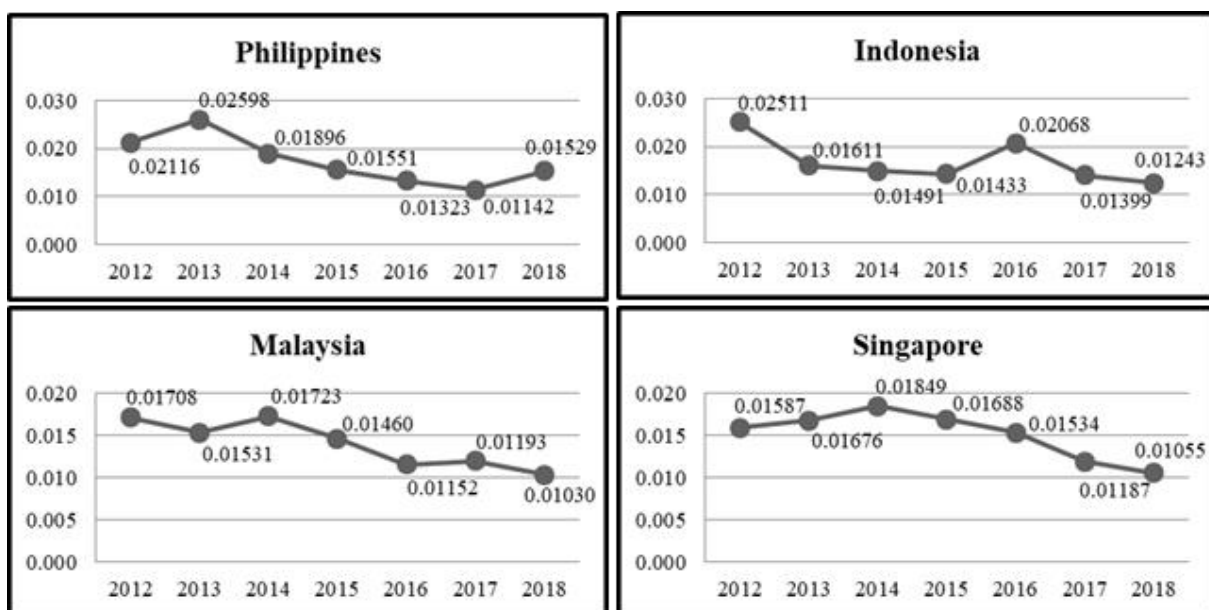

Figure 1.
RMSE value on each country in ASEAN 4

the RMSE value, the higher the BTC level. Through Figure 1, it can be known more clearly that manufacturing companies or non-manufacturing companies use more of the tax facilities provided by the taxation authorities in each country in ASEAN 4. In the previous explanation, it was known that the high value of RMSE was due to several companies paying taxes at various or different rates. The variety of taxes paid is because several companies, both manufacturing and non-manufacturing, are taking advantage of the tax facilities provided by the taxation authorities in each country in ASEAN 4. This is evidence that in Indonesia, the RMSE value obtained by manufacturing companies in 2012 shows the highest value compared to the following years. The high RMSE value that occurred in Indonesia in 2012 was due to the taxes paid by all manufacturing companies in Indonesia in 2012 using varying or different tax rates. This is because, in 2012, manufacturing companies in the pioneering industrial sector were taking advantage of the tax facilities provided by the Indonesian government, namely in the form of Tax Holiday. The tax facilities provided are in the form of exemptions or reductions in corporate income tax rates for manufacturing companies that are in the pioneer industrial sector and making new investments in Indonesia. With the variety of tax rates paid by corporate taxpayers, it will certainly affect the RMSE, value which will be higher, so that the level of conformity between IFRS accounting standards and tax regulations in Indonesia will be lower.

Figure 2
RMSE value between industries on each country in ASEAN 4
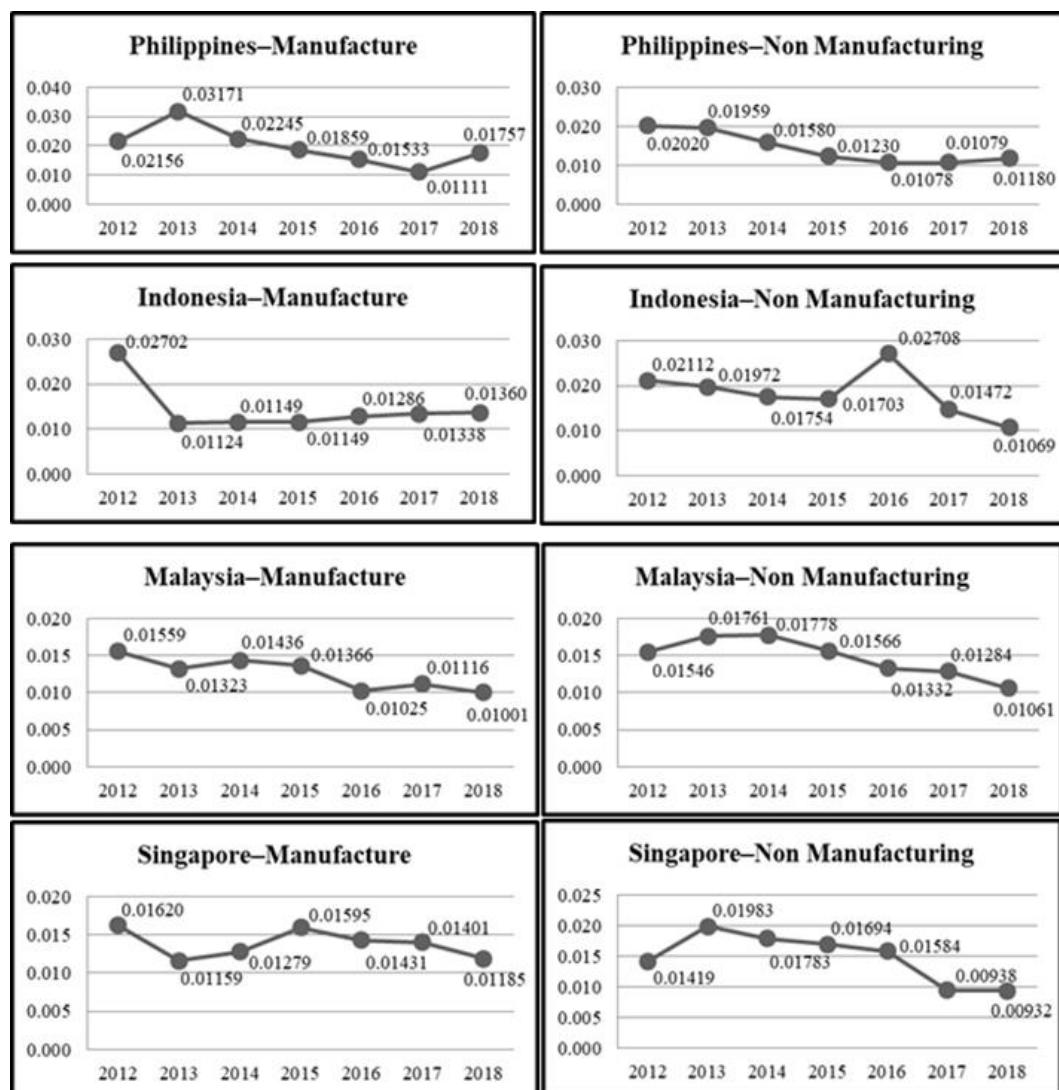
It should be known that it is not only manufacturing companies that take advantage of the tax facilities provided by the Indonesian government. However, non-manufacturing companies also took advantage of the tax facilities provided by the Indonesian government in 2016, namely Tax Amnesty. This is proven by the fact that in Indonesia, the RMSE value obtained by non-manufacturing companies in 2016 showed the highest value compared to previous years. The high RMSE value that occurred in Indonesia in 2016 was due to the tax paid by all non-manufacturing companies in Indonesia in 2016 using various or different tax rates. With the variety of tax rates paid by corporate taxpayers, it will certainly affect the RMSE value, which will be higher, so that the level of conformity between IFRS accounting standards and tax regulations in Indonesia will be lower. Then, because this research was conducted to determine the diversity of BTC both between countries and between industries in ASEAN 4, it was necessary to do a different test based on the RMSE value. The results of the different tests that have been carried out can be seen by looking at the probability value obtained from the results of different tests between countries in ASEAN 4 and between industries in each country in ASEAN 4. Of course, the probability value that has been obtained will be used as a basis for decision-making to prove whether the diversity of BTC in ASEAN 4 is really there or not. Furthermore, the testing will be carried out based on the results of the Kruskal Wallis test between countries in ASEAN 4.

Based on the results of data processing that has been carried out between countries in ASEAN 4 using the Kruskal Wallis test, it can be seen that the chi-squared value is 1.733 with d.f. 3. Then, the probability (two-tailed) value between countries in ASEAN 4 based on the Kruskal Wallis test is 0.6296, which is greater than the critical limit of 0.1. Therefore, based on the acquisition of probability values between countries in ASEAN 4, it can be concluded that "Ha is rejected". Based on the results that have been obtained, it can be concluded that during the period this research was conducted, there was no diversity in BTC between countries in ASEAN 4. It should be noted that there are things that can affect the absence of diversity in BTC in ASEAN 4. This is because there were no changes to the tax regulations governing Corporate Income Tax in each country in ASEAN 4 during the period this research was carried out, such as Corporate Income Tax rates, taxation systems, fiscal loss compensation and inventory valuation methods, and depreciation methods that can be used to present a taxable income report. After knowing the results obtained through the Kruskal Wallis test, which show that there is no diversity of BTC between countries in ASEAN 4. Furthermore, the researcher also wants to prove the existence of BTC diversity between industries in each country in ASEAN 4 based on the Kruskal Wallis test.

Based on the results of data processing that has been carried out

Table 3
Result of Differences Test Between Countries in ASEAN 4

Country	Obs.	Rank Sum
Philippines	7	118.00
Indonesia	7	108.00
Malaysia	7	79.00
Singapore	7	101.00
chi–squared	1.733 with 3 d.f.*	
probability	0.6296	

Note: * indicate significance at 10%. We use two-tailed tests when a sign is predicted .

between industries in the Philippines using the Kruskal Wallis test, it can be seen that the chi-squared value is 5.102 with d.f. 1. The probability (one-tailed) value between industries in the Philippines based on the Kruskal-Wallis test is 0.0551, which is smaller than the critical limit of 0.1. Therefore, as previously explained regarding the basis for decision-making based on the Kruskal-Wallis test, based on the acquisition of probability values between industries in the Philippines, it can be concluded that "Ha is accepted". After knowing the results obtained, it can be concluded that during the seven years of this research period, it was found that there was diversity in BTC between industries in the Philippines. This indicates that there are differences in tax regulations between manufacturing and non-manufacturing industries in the Philippines. The difference in tax regulations between the manufacturing industry and the non-manufacturing industry is found in the provisions of the inventory valuation method and the depreciation method that can be used by both the manufacturing and non-manufacturing industries in presenting

taxable profit reports that have been regulated by the Philippine taxation authority. It should be noted that the difference in tax regulations between manufacturing and non-manufacturing industries does not only exist in the inventory valuation method and the depreciation method used to present the taxable income reports. The next regulatory difference is in the tax facilities provided by the Philippine taxation authority for each manufacturing and non-manufacturing industry, such as differences in the tax facilities provided and the requirements specified for being able to take advantage of these tax facilities.

Then, based on the results of data processing that has been carried out between industries in Indonesia using the Kruskal-Wallis test, it can be seen that the chi-squared value is 5.102 with d.f. 1. The probability (one-tailed) value between industries in Indonesia based on the Kruskal-Wallis test is 0.0551 which is smaller than the critical limit of 0.1. Therefore, as previously explained regarding the basis for decision-making based on the Kruskal Wallis test, based on

Table 4.
Results of the Inter-Industry Difference Test in ASEAN 4

Country	Industry	Obs.	Rank Sum
Philippines	Manufacture	7	65.00
	Non Manufacturing	7	40.00
	chi–squared probability	5.102 with 1 d.f.* 0.0551	
Indonesia	Manufacture	7	40.00
	Non Manufacturing	7	65.00
	chi–squared probability	5.102 with 1 d.f.* 0.0551	
Malaysia	Manufacture	7	41.00
	Non Manufacturing	7	64.00
	chi–squared probability	4.318 with 1 d.f.* 0.0709	
Singapore	Manufacture	7	47.00
	Non Manufacturing	7	58.00
	chi–squared probability	0.988 with 1 d.f.* 0.2411	

Note: * indicate significance at 10%. We use one-tailed tests when a sign is predicted.

the acquisition of probability values between industries in Indonesia, it can be concluded that "Ha is accepted". After knowing the results that have been obtained, it can be concluded that during the seven years of this research period, it was found that the diversity of BTC between industries in Indonesia. This indicates that there are differences in tax regulations between manufacturing and non-manufacturing industries in Indonesia. The difference in tax regulations between the manufacturing industry and the non-manufacturing industry is found in the provisions of the inventory valuation method and the depreciation method that can be used by both the manufacturing and non-manufacturing industries in presenting taxable profit reports that have been regulated by the Indonesian taxation authorities. It should be noted that the difference in tax regulations between the manufacturing and non-manufacturing industries does not only exist in the inventory valuation method and the depreciation method used to present the taxable income reports. The next regulatory difference is in the tax facilities provided by the Indonesia taxation authority for each manufacturing and non-manufacturing industry, such as differences in the tax facilities provided and the requirements specified for being able to take advantage of these tax facilities.

Furthermore, based on the results of data processing that has been carried out between industries in Malaysia using the Kruskal-Wallis test, it can be seen that the chi-squared value is 4,318 with d.f. 1. The probability (one-tailed) value between industries in Malaysia based on the Kruskal-Wallis test is 0.0709 which is smaller than the critical limit of 0.1. Therefore, as previously explained regarding the basis for decision-making based on the Kruskal Wallis test, based on the acquisition of probability values between industries in Malaysia, it can be concluded that "Ha is accepted". After knowing the results that have been obtained, it can be concluded that during the seven years of this research period, it was found that the diversity of

BTC between industries in Malaysia. This indicates that there are differences in tax regulations between manufacturing and non-manufacturing industries in Malaysia. The difference in tax regulations between the manufacturing industry and the non-manufacturing industry is found in the provisions of the inventory valuation method and the depreciation method that can be used by both the manufacturing and non-manufacturing industries in presenting taxable profit reports that have been regulated by the Malaysian taxation authorities. It should be noted that the difference in tax regulations between the manufacturing and non-manufacturing industries does not only exist in the inventory valuation method and the depreciation method used to present the taxable income reports. The next regulatory difference is in the tax facilities provided by the Malaysian taxation authorities for each manufacturing and non-manufacturing industry, such as differences in the tax facilities provided and the requirements specified to be able to take advantage of these tax facilities.

Finally, based on the results of the data processing that has been carried out between industries in Singapore using the Kruskal-Wallis test, it can be seen that the chi-squared value is 0.988 with d.f. 1. The probability (one–tailed) value between industries in Singapore based on the Kruskal-Wallis test is 0.2411 which is greater than the critical limit of 0.1. Therefore, as previously explained regarding the basis for decision making based on the Kruskal Wallis test, based on the acquisition of probability values between industries in Singapore, it can be concluded that "Ha is rejected". After knowing the results that have been obtained, it can be concluded that during the seven years of this research period, there was no diversity in BTC between industries in Singapore. This indicates that there is no difference in tax regulations regarding the provisions of the inventory valuation method and the depreciation method regulated by the Singapore taxation authority for the manufacturing and non-manufacturing industries in

Singapore in presenting the taxable income reports.

CONCLUSION AND SUGGESTION

This research was conducted to develop research that had been previously conducted by Atwood et al., (2010) and Rachmawati and Martani (2017). The aim of this research is to determine the diversity of BTC levels between countries and between industries in ASEAN 4. Based on the research results, it can be seen that during the period 2012–2018 the movement of the BTC level in ASEAN 4 varies every year. This is evidenced by the RMSE value obtained during the seven years of this research period, and it is known that the RMSE value continues to experience movements every year, either increasing or decreasing significantly. Then, because this research was conducted to determine the diversity of BTC both between countries and between industries in ASEAN 4, it was necessary to do a different test based on the RMSE value. After knowing the results of different tests that have been carried out between countries in ASEAN 4, it can be seen that there is no difference in BTC between countries in ASEAN 4. This is because there were no changes to the tax regulations governing Corporate Income Tax in each country in ASEAN 4 during the period this research was conducted. Based on the results of different tests that have been carried out between industries on each country in ASEAN 4, it can be seen that there is a diversity of BTC between industries in the Philippines, Indonesia, and Malaysia. Meanwhile, in Singapore, there is no diversity of BTC between industries. The absence of diversity in BTC between industries in Singapore indicates that there are no differences in tax regulations regarding the provisions of the inventory valuation method and the depreciation method regulated by the Singapore taxation authority for the manufacturing industry and non-manufacturing industries in Singapore in presenting the taxable profit report.

The following are some limitations in research that can be taken into consideration for further research in order to obtain more optimal results in the future: 1) It is known that the research period conducted was too short to be able to capture differences in regulations on accounting and taxation. Therefore, a longer research period is needed in order to capture the differences in regulations on accounting and taxation in a country; and 2) The scope of countries used in this study is still too small, only limited to countries in ASEAN 4. Therefore, it is necessary to expand the countries that will be used in further research in order to find out the diversity of BTC between countries.
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