

## Factors Affecting the Financial Performance of Biological Asset-Based Companies in Singapore, Thailand, and Indonesia

Falikhatun<sup>1</sup>, Vianita Lianasari Dini<sup>2</sup>, Sri Hanggana<sup>3</sup>

<sup>1</sup> Universitas Sebelas Maret Surakarta, Surakarta, Indonesia, ✉ falie.feuns17@gmail.com

<sup>2</sup> Universitas Sebelas Maret Surakarta, Surakarta, Indonesia, ✉ vianitalianasari@gmail.com

<sup>3</sup> Universitas Sebelas Maret Surakarta, Surakarta, Indonesia, ✉ srihanggana@gmail.com

### Abstract

The International Accounting Standards Board (IASB) published a rule to regulate agricultural activities, named IAS 41: Agriculture. Measurement of agricultural activities based on IAS 41 is stated using fair value which is considered better because it can show that the transformation process immediately represented in the company's financial statements. Information regarding the performance of biological assets can be used by management to increase additional capital because it is a basis consideration for investors. The aim of this study is to examine the influence of the intensity of biological assets, company size, and capital structure on the financial performance of biological asset-based companies in Thailand, Singapore, and Indonesia for the year 2012 to 2018. Data analysis uses descriptive analysis, the classical assumption test, hypothesis testing, and Kruskal Wallis test to analyze the differences of the financial performance. The results indicate that the intensity of biological assets, company size, and capital structure influences the financial performance of biological asset-based companies. Kruskal Wallis test also found that there are significant differences among financial performance in Thailand, Singapore, and Indonesia. Future studies are expected to add independent variables that explain the financial performance of biological asset-based companies such as corporate governance or tax rates.

**Keywords:** *biological assets, capital structure, company size, financial performance, intensity of biological assets*

### Introduction

Agriculture is an essential sector in the global economy because the vital economic role of a country is based on this sector. International Accounting Standards Board (IASB) issued a regulation to manage the agriculture activity through IAS 41: Agriculture issued on December 2000 and effective on financial report starting January 2003 (Gonçalves & Lopes, 2015). Generally, this standard is accounting treatment in measuring and disclose agricultural activities such as biological assets, agricultural products, and government grant (Aryanto, 2011). IAS 41: Agriculture is one of the accounting principles from International Financial Reporting Standard (IFRS) which has been amended several times, for example in 2008 there is a change concerning the improvement of the discount rate. The last amendment is done in June 2014. IASB made changes concerning the bearer plants (Deloitte, 2019). Bearer plants are living plants that can produce an agricultural product for more than one accounting period and the possibility to sell bearer plants as the agricultural product is very rare (IASB, 2014). This amendment allows the company to choose between cost model or revaluation model in valuing bearer plants according to IAS 16: Property, Plant, and Equipment. The valuation of biological assets according to IAS 41 is using fair value, therefore, causing gain and losses on the biological assets and agriculture product. All forms of gain and losses are included in the income statement (IASB, 2014). This provision is effective and implemented in a company financial report after 1 January 2016 (Gonçalves & Lopes, 2015). Agricultural activities in Thailand is regulated by Thai Accounting Standards 41 ((FAP), 2017). This regulation is officially endorsed on 26 September 2017 and effectively started from 1 January 2018. TAS 41 in Thailand is considered as new regulation because there is no regulation

governing the agricultural activities before. Singapore regulated agricultural activity through Financial Reporting Standard 41 ((ASC), 2018). FRS 41 Agriculture is first published in 2001 and following amendment on IAS 41, including the last change on bearer plants. The agricultural activities in Indonesia are regulated through Statement of Financial Accounting Standards number 69 ((PSAK), 2016). This standard is endorsed in 2015 and effective from 1 January 2018.

Valuation using fair value is considered better because it shows that the transformation process is immediately represented in the financial statement so that investor can estimate future economic benefits (Leter & Roman, 2007). Experts stated that it will be easier to understand the fair value for financial statement users, especially with the availability of an active and liquid market. Even more, fair value is considered to be more relevant to represent the real biological transformation (Herbohn & Herbohn, 2006). The use of fair value shows that both biological assets and agricultural products will depend on market condition. The gain or loss can take place on any reporting date in the financial statement so that an entity's financial statement will always change. Financial performance will also be affected by these changes. Financial performance is needed to measure the achievement of a company. Besides, an investor will take decision based on the information generated from the financial performance because it is considered that the company's value is reflected by financial performance. The information on the performance of the biological assets in a period can be used by the management to raise additional capital because this information can be used as a basis for an investor to make a decision. Besides that, the standardization in the reporting, both in one country or among different country can be used as a basis to compare the performance of biological assets among the agricultural companies (Herbohn & Herbohn, 2006).

The current study is follow-up research from Gonçalves and Lopes (2015) concerning the factors that are considered to be related to the valuation of biological assets (the use of fair value or historical cost). The factors that will be studied are the biological assets intensity, company size, company listing status, company growth, leverage, and industrial sector. This study is conducted on several biological assets-based companies in various countries in 2012. The result of this study shows that the intensity of biological assets and company size have a significant and positive effect on the probability of biological assets valuation using fair value concept. The current study is different from the study conducted by Gonçalves and Lopes (2015). Based on the result of the study, researchers will conduct follow-up research to examine the effect of biological assets intensity, company size, and added a new variable, Debt to Equity Ratio (a proxy of capital structure) and financial performance. Daniel, Jung, Pourjalali, & Wen (2010) also study the fair value option for non-financial assets (FVONFA). The study analyzed the factors that make finance manager choose the fair value to value non-financial assets such as property, plant, and equipment (PPE). The result of the study showed that the company with large size, high leverage, and high total non-financial assets prefers fair value as measurement.

Gonçalves and Lopes (2015) stated that biological assets-based companies are not inclusive to agricultural sector companies. Companies in the manufacturing, mining, forestry, and fishery are also included in biological assets-based as long as these companies have biological assets. Companies that operate in agribusiness sectors in Thailand, companies in consumer staples sectors in Singapore, and agriculture companies in Indonesia are the samples of the study. World food and agriculture statistical pocketbook collected from FAO official website in 2018 stated that ASIA is a continent that uses 50% of lands for agriculture activities (FAO, 2018b). Indonesia is one of the countries in the world with the largest permanent agricultural lands for perennial crops such as palm oil and fruits. The data adds that Indonesia and Thailand are ASEAN countries included in the list of largest crop commodities exporter in the world. The data obtained from Food and agriculture policy analysis in Thailand adds that Thailand is the main exporter of tuna in the world, taking almost 40% of worldwide market share (FAO, 2018a). Singapore does not have a significant contribution in producing agricultural products in the world, as evidenced by agriculture's contribution to Singapore's GDP of 0% (FAO, 2018b). However, the World food and agriculture statistical pocketbook stated that Singapore has the largest expenditure in agricultural sector investment in the world.

The expenditure is mainly used for agricultural activity such as construction cooperation, foreign investment, and agricultural sector loans (FAO, 2018b). These statements are the reason for samples selection in this study. Besides that, Singapore, Thailand, and Indonesia all use IFRS standard as a reference in preparing regulation on agricultural activities. These countries also have implemented the newest amendment stated in IAS 41: Agriculture by removing productive plants (bearer plants) within the scope of the Agricultural accounting standards.

The existing studies on the use of fair value in Singapore Financial Reporting Standards are conducted by Yapa, Joshi, & Kraal (2011). The research studied the socio-economic effects of IFRS adoption in ASEAN countries: Singapore, Malaysia, and Indonesia. Yapa et al. (2011) stated that Singapore implemented IFRS progressively since 2005. Financial reporting standard issued by ASC is mostly in line with IFRS standard. Ninety-five percent of IFRS standards are adopted by ASC. The implementation of IFRS based standard in Singapore has a positive effect on stakeholder's trust because IFRS adoption is considered to increase comparability of annual reports between companies that operate in Singapore and companies that operate outside Singapore. The previous study also has been conducted in Thailand. The study is conducted by Thi Thuong (2018). The study discusses the accounting system in Vietnam and other countries in South East Asia, including Thailand. Thuong (2018) stated that Thailand is considered as a country that makes its accounting standard based on IFRS and almost does not change or add a new feature in its accounting standard. Thailand Accounting Standards (TASs) as the national accounting standard in Thailand is made in line with IFRS, even though it has not adopted the IFRS standard for a financial instrument. TAS still contains several national standards for the financial instrument that is different from IFRS. Thailand has not implemented IFRS intensively as its accounting standard. The previous study on biological assets-based companies in Indonesia is conducted by Maharani (2018). The study examines the financial performance of agricultural sector companies listed in Indonesia Stock Exchange (IDX) in 2009-2016, from profitability, solvability, and activity ratios and linking it to the intensity of biological assets, leverage, company size, and company growth.

## **Theoretical Review and Hypothesis Development**

### **Theoretical Review**

#### **Agency Theory**

Agency theory refers to an agency relationship, in which one party (principal) gave their authority to another party as agent (Eisenhardt, 1989). Jensen & Meckling (1976) stated that the principal has an ownership role, while the agent has a management role. Conflict often occurs between the agent and principal which is called agency conflict. Stockholder expects the agent or management to act according to their interest. It is intended to increase firm value and stockholder gain benefits. To ensure that the principal's interest is in line with the management's actions, both the manager and principal will incur the agency cost. The assessment on company financial performance is expected to suppress deviant behavior that occurs when agency conflict takes place. The assessment also can act as a motivation for a manager to manage the company more effectively and efficiently (Widyati, 2013).

Agency theory stated that the company tends to incur agency cost, therefore, the entity has a desire to follow the applicable standard. In this study, agriculture accounting standard has a role to regulate the valuation of biological assets in the company. When a company follows the procedure regulated in the accounting standard, it is expected that biological assets will reflect the actual situation so that it can describe the company's financial performance more relevantly. Larger company tend to have high agency cost. Therefore, the entity is more motivated to follow the predetermined accounting standard, in this study agricultural accounting standard. As it is known, IAS 41 regulated the valuation of biological assets using fair value, and as explained in the previous section, valuation using fair value reflects the real condition of the assets better, so that financial performance reported will show a more appropriate result that match company condition. The composition of the capital structure specified by the company will depend on the agency cost

in the company. This theory assumes that company debts will require a company to pay principals and interest installment. Therefore, the company will use its cash flow to pay its liability. The cash flow is one of the preventative measures so that managers do not act arbitrarily in using company resources (Murhadi, 2012).

### **Identification of Biological Assets**

IAS 41 is an accounting standard that regulates agricultural activities. The agricultural activities mentioned is the biological assets (except bearer plant or productive plants), agricultural products, and government grant regulated in the standard. Biological assets are animals or plants managed by the entity, while agricultural products are the result harvested from the biological assets. This standard does not regulate the productive plants related to agricultural activities. Valuation is conducted using fair value and all gain and loss during valuation are recorded in the income statement. To support the valuation process using fair value, a grouping of biological assets is needed. The grouping is conducted based on the product that can be consumed and are productive. Besides, the assets are also classified based on assets that have not yet been produced and assets that have already yielded (IASB, 2014).

The agricultural activity in Singapore is regulated by Financial Reporting Standard 41 (FRS 41). FRS 41 firstly issued in 2001 and effective in 2003 (ASC, 2018). In 2014, FRS 41 conduct amendment concerning productive plants according to IAS 41. This amendment is effective in the company annual report started in 2016 (Deloitte, 2019)(ASC, 2018). Agricultural activities in Thailand is regulated by Thai Accounting Standards 41 (TAS 41). This regulation was officially adopted on September 26, 2017, and came into effect on January 1, 2018. TAS 41 in Thailand belongs to new regulation because no regulation regulates agricultural activities before TAS 41. The agricultural activity in Indonesia is regulated in Pernyataan Standar Akuntansi Keuangan 69 (PSAK 69). This standard is endorsed since 1 January 2018.

### **Financial Performance**

Financial performance of a company reflects the achievement of works that have been done by the company. All of the achievements are stated in the company annual report in a certain period (S. Rahayu, 2010). Financial analysis is an assessment of financial performance. A reviewed annual report can be used as a tool to detect the shortcomings and strength of the company. Various efforts can be taken to detect financial performance, one of the most general and popular means is by conducting ratio analysis on the company (Subramanyam & John, 2012).

### **Liquidity Ratio**

Company capability to fulfill its short-term liabilities can be seen from its liquidity ratio (Subramanyam & John, 2012). Liquidity ratio will benefit many parties, both external and internal parties. The current study will use the current ratio to measure liquidity ratio. The current ratio as a representation of liquidity ratio is considered to be relevant to the current study because the current ratio includes all current assets in the computation. This is in line with the agricultural standard that does not classify biological assets into current assets or fixed assets, therefore, it is recognized in two different accounts, both in current accounts and in fixed assets. Because of this, by including all current assets in the computation of the current ratio, it is considered that biological assets are included in the computation.

## **Hypothesis Development**

### **Biological Assets Intensity**

The study conducted by Daniel et al., (2010) on fair value option for non-financial assets (FVONFA) stated that company will tend to apply fair value (following the applicable accounting standard) when the proportion or intensity of non-financial assets is high. More relevant information for the investor will be very important, coupled with the accuracy of information as a result. Similarly with Christensen & Nikolaev (2013) on non-financial assets and Hlaing & Pourjalali (2011) on the fair value in PPE, which stated similar notion, the use of fair value will increase the intensity of non-financial assets. The agency theory states that the company has to follow the applicable accounting standard to avoid regulatory problems and to maximize

company performance. IAS 41 Agriculture regulates the valuation of biological assets using fair value, similar to non-financial assets. Therefore, based on the previous study, it is predicted that the proportion of biological assets on the total assets will increase in line with the implementation of fair value valuation. A previous study from Gonçalves and Lopes (2015) on biological assets shows that the intensity of biological assets has a positive effect on the use of fair value valuation.

H<sub>1</sub>: The intensity of biological assets affects the financial performance of biological assets-based companies.

### **Company Size**

The agency theory states that larger companies tend to have high agency cost. They have the motivation to follow the predetermined accounting standard. When a company follows agriculture accounting standard, the company will use fair value valuation. This valuation better reflects the actual state of biological assets so that financial performance reported will show a more fit result with the company condition. Wijayanti & Mutmainah (2012) and Bukhori & Raharja (2012) stated that expenditure will be larger in large companies. The funds are used to increase the profit and performance of the company. All are done because more attention from annual report users is seen on large companies. Therefore, financial performance stability will be more considered.

(Bhutta & Hassan, 2013) found that company size has a significant and negative effect on the company profitability in the food sector in Pakistan during 2001-2006. While the study conducted by Chandrapala & Knapkova (2013) found that company size has a positive effect on the financial performance of companies in Czech Republic 2005-2008. This is in line with the study conducted by Dioha, Nma Ahmed, & Okpanachi (2018) on companies in the consumer staples sector in Nigeria in 2011 until 2016. Egbunike & Uchenna Okerekeoti (2018) also found that company size has a significant effect on financial performance in manufacturing companies in Nigeria in 2017.

H<sub>2</sub>: Company size affects the financial performance of biological assets-based companies.

### **Capital Structure**

Capital structure is the structure of company liability and capital which will be used to funding operational activities. The determination of company capital structure is done to achieve an objective; to create the best composition between company liability and capital so that it can provide benefits in terms of corporate finance (Tommy & Saerang, 2014). The agency theory states that the composition of the capital structure determined by a company depends on the agency cost in the company. This theory assumes that a company's liability requires the company to pay principal and interest installments, therefore, the company will use its cash flow to pay the installments. The use of cash flow is one of the precautions so that managers do not act arbitrarily in using company resources (Murhadi, 2012). Capital structure is a very important matter in the company decision-making process because it has to maximize company performance and value (Shah, Muhammad, & Islam, 2014).

Shah et al. (2014) examine the effect of capital structure on company performance in cement companies in Pakistan during 2009-2013 and the study states that capital structure proxied with DER has a significant and negative effect on company performance proxied with Return on Assets (ROA) and Return on Equity (ROE), and a significant and positive effect on Gross Profit Margin (GPM) and Net Profit Margin (NPM). Further, Ramadan & Ramadan (2015) state that capital structure proxied with debt to equity ratio (DER) has a significant and negative effect on manufacturing companies in Jordania. This result is in line with the study conducted by Vätavu (2015) which states that capital structure has a significant and negative effect on ROA and ROE in manufacturing companies in 2003-2010.

H<sub>3</sub>: Capital structure affects the financial performance of biological assets-based companies.

### **Financial Performance of Biological Assets-Based Companies in Thailand, Singapore, and Indonesia**

Thailand, Singapore, and Indonesia are part of Southeast Asian countries. All the three countries are members and founder of The Association of Southeast Asian Nations (ASEAN). ASEAN Statistical Yearbook (2018) states that 30.7% of lands in South East Asia are used for agricultural activities (ASEAN, 2018).

Referring to the data, there are differences in the allocation of lands that are used for agricultural activities in Thailand, Singapore, and Indonesia. Thailand allocates 43.3% of its lands for an agricultural area. This number makes Thailand a country that allocates the largest area for agriculture. However, different from Singapore, from 71,000 hectares of area in Singapore, there is 0% of lands allocated for an agricultural area. This shows that Singapore does not have sufficient lands to perform agricultural activities. Because of that, Singapore chooses to perform innovation and research in performing urban agriculture. As for Indonesia, 31.5% of the overall lands are allocated for the agricultural area (ASEAN, 2018). This makes Indonesia as the largest country that uses its lands for growing tree crops such as palm oil and fruits (FAO, 2018b).

ASEAN Statistical Yearbook (2018) states that the contribution of the agricultural sector in Gross Domestic Product (GDP) in Thailand, Singapore, and Indonesia showed the different result (ASEAN, 2018). The agricultural sector in Thailand has contributed 6.3% to the GDP, while in Singapore the contribution of the agricultural sector in GDP is 0.1%. Even though the total contribution of the agricultural sector in Singapore is very low, based on World food and agriculture statistical pocketbook 2018, Singapore is a country with the largest government expenditure for the agricultural sector in the world (FAO, 2018b). The government expenditure is used for, among others, development cooperation, foreign investment, and loans in agriculture. The contribution of the agricultural sector for Indonesia GDP is 12.7%, the largest among the three countries selected as the samples (ASEAN, 2018).

The regulation or standard to regulate agricultural activities in Thailand and Singapore are also different. The agricultural activities in Singapore are regulated by Financial Reporting Standard 41 (FRS 41). In general, FRS 41 Agriculture in Singapore is based on the International Financial Reporting Standards (IFRS), this regulation is endorsed in line with IAS 41 Agriculture, which is effective for the company annual report in 2003. The valuation in the last amendment concerning productive plants both in IAS 41 and FRS 41 also effective in the same year, 2016. At the same time, the agricultural activities in Thailand are regulated by Thai Accounting Standards 41 (TAS 41). This regulation is endorsed from 26 September 2017 and effective from 1 January 2018. TAS 41 in Thailand is a new regulation because previously there is no regulation on the agricultural activities in Thailand before TAS 41. Broadly, TAS 41 Agriculture in Thailand is developed based on International Financial Reporting Standards (IFRS). As for Indonesia, the agricultural activity is regulated by SFAS 69 Agriculture effective for company annual report in 2018. Indonesia had adjusted accounting standard based on IFRS, but there is new regulation concerning agricultural activity in 2016 and effective from 2018 because Indonesia examines the regulation concerning bearer plant or productive plant previously. Even though the three regulations, FRS 41, TAS 41, and PSAK 69 refer to IFRS namely IAS 41, however, several differences have been adjusted with the condition in each country. According to the differences in Thailand, Singapore, and Indonesia, the researchers hypothesized that there are differences in the financial performance of biological assets-based companies in Thailand and Singapore.

H<sub>4</sub>: There are differences in the financial performance of biological assets-based companies in Thailand, Singapore, and Indonesia.

## **Methods**

### **Research Object**

The object in this study is biological assets-based companies. Companies in the basic staples di Singapore, agribusiness sector in Thailand, and the agricultural sector in Indonesia are the samples of this study. Data is collected from 2012 and 2018 from each country stock exchange official site. Singapore Exchange for data from Singaporean companies, The Stock Exchange of Thailand for Thailand companies, and Indonesia Stock Exchange for Indonesian companies.

## Operational Definition of Variable

### Independent Variables

#### The intensity of biological assets

The intensity of biological assets is the ratio of biological assets on company total assets. The measurement of biological assets intensity is based on the study of Gonçalves & Lopes (2015), and Maharani (2018), the measurement is:

$$BIO = \frac{\text{Biological Assets}}{\text{Total Assets}} \times 100$$

#### Company Size

The size of the company is measured using the measurement in Haniffa & Cooke (2005), Daniel et al. (2010), Haron (2014), Gonçalves & Lopes (2015) and Outa & Waweru (2016) studies; from the book value of company's total assets.

$$SIZE = \text{Nilai Buku Total Aset}$$

#### Capital Structure

Capital structure is the combination of liability and capital which will be used to funding operational activity. Refers to the study conducted by Shah, Muhammad, & Islam (2014), Tommy & Saerang (2014), Ramadan & Ramadan (2015), Vätavu (2015), and Rahayu (2018), debt to equity ratio (DER) is used as the measurement of capital structure.

$$DER = \frac{\text{Total hutang}}{\text{Total modal}}$$

### Dependent Variable

#### Current Ratio (CR)

Current ratio (CR) is a part of the liquidity ratio. The measurement of CR in this study refers to (Murhadi, 2013) and (Kasmir, 2017). The current ratio is a liquidity ratio that most commonly used.

$$CR = \frac{\text{Aktiva lancar}}{\text{Liabilitas/utang lancar}}$$

### Data Analysis Technique

Multiple regression analysis is used to test the hypothesis in this study. Refers to the described hypothesis, the regression formula to explain the hypothesis is:

$$CR = \alpha + \beta_1 \text{BIO} + \beta_2 \text{SIZE} + \beta_3 \text{DER} + \varepsilon$$

Notes:  $\alpha$  = regression constant,  $\beta$  = regression coefficient, CR = Current Ratio, BIO = Intensity of Biological Assets, SIZE = Company Size, DER = Debt to Equity Ratio,  $\varepsilon$  = error term

The hypothesis in this study is tested using the coefficient of determination test (Adj R<sup>2</sup>), F-statistics test (f-test), t-statistics test (t-test), and Kruskal Wallis test.

## Results and Discussion

### Descriptive Statistics

Table 1a, 1b, and 1c contain descriptive statistics from the data in Thailand, Singapore, and Indonesia. The classical assumption test has been done in the data from the three countries. In the normality test, all data from all countries have a normal distribution, so that the next procedure is to conduct outlier detection using casewise diagnostic. Therefore, the number of samples decreased according to the result presented in table 1, 2, and 3. The initial number of samples in Thailand is 50 samples, in Singapore 204 samples, and Indonesia 126 samples. After outlier is excluded from the data, the data has a normal distribution, then other classical assumption tests are conducted. The data passed all the classical assumption tests according to the requirement from each testing.

Table 1a shows descriptive statistics for Thailand companies. The number of samples used in the analysis is 45 companies. All companies are agribusiness sector companies and some are food and agro industry sector.

**Table 1 Descriptive Statistics of Thailand Companies**

	N	Minimum	Maximum	Mean	Std. Deviation
CR	45	0.309	15.170	3.79564	4.213602
BIO	45	0.000	0.226	0.05460	0.051571
SIZE	45	20.879	24.813	22.44947	1.155020
DER	45	0.023	4.135	0.87973	1.061857
Valid N (listwise)	45				

Source: Processed data, 2019

We can see that in Thailand, the mean, maximum, and minimum value have a narrow range, except for CR data which has a wide range. It is showed in the table that the mean value of CR is 3.79564, with a minimum value of 0.309, and maximum value of 15.170. From these numbers, we can see that the data range is very wide. This is proved with the highest deviation standard among the other variables in Thailand with 4.213602.

Table 1b shows the descriptive statistics of companies in Singapore. The number of samples used in the analysis is 126 companies from a total of 204 population. All of these companies are in customer staples sector listed in Singapore Exchange.

**Table 2 Descriptive Statistics of Singapore Companies**

	N	Minimum	Maximum	Mean	Std. Deviation
CR	126	0.730	2.506	1.49634	0.455520
BIO	126	0.000	0.594	0.11860	0.134914
SIZE	126	9.605	22.216	14.63270	2.732086
DER	126	0.372	6.892	1.21637	0.967465
Valid N (listwise)	126				

Source: Processed data, 2019

Table 2 contains the data distribution of Singapore samples. The distribution is less evenly distributed in company size. Company size has a very high score and a very low score. The standard deviation higher than two indicates the unevenness in the data. Company size data and CR data have a standard deviation of 2.732086, mean score of 14.63270, a minimum value of 9.605, and maximum value of 22.216.

Table 3 shows the descriptive statistics of data from Indonesia companies. The number of samples used in the analysis is 98 companies out of 126 population size. All companies are agricultural sector companies listed in the Indonesian Stock Exchange.

**Table 3 Descriptive Statistics of Indonesia Companies**

	N	Minimum	Maximum	Mean	Std. Deviation
CR	98	0.070	2.221	0.96087	0.460027
BIO	98	0.003	0.698	0.30054	0.196016
SIZE	98	14.884	28.867	20.64849	4.680601
DER	98	0.183	11.274	1.46928	1.285186
Valid N (listwise)	98				

Source: Processed data, 2019

The data distribution in Indonesia samples is presented in table 3. The table explains that several values are too low and too high, especially in SIZE and DER. This happens because of the high standard deviation. The data in the table states that the mean value of SIZE is 20.64849, the minimum value of 14.884, and maximum value of 28.867. While DER has a minimum value of 0.183 and maximum value of 11.274.

**Hypothesis Testing**

**Coefficient of Determination Test (Adj R<sup>2</sup>)**

The coefficient of determination test is a test that aims to see the ability of independent variables in explaining the dependent variable (Ghozali, 2018). The result of the coefficient of determination test in the data from Thailand, Singapore, and Indonesia is presented in table 4, 5, and 6. . The current ratio is included as the depended variable in this testing, the independent variables are capital structure, biological assets intensity, and company size.

**Table 4. Coefficient of Determination Test (Adj R<sup>2</sup>) of Thailand Companies**

Model	R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of the Estimate
1	0.598 <sup>a</sup>	0.357	0.310	3.500120

a. Predictors: (Constant), DER, BIO, SIZE  
b. Dependent Variable: CR

Source: Processed data, 2019

Table 4 shows the result of the coefficient of determination test on data from Thailand. The result presented in table 4 shows that the Adj R<sup>2</sup> from CR is 0.310 or 31.0%. The number means that 31.0% of variations in CR values are explained by the independent variables of BIO, SIZE, and DER, while the rest 69.0% is explained by other variables outside the analyzed model.

**Table 5 Coefficient of Determination Test (Adj R<sup>2</sup>) of Singapore Companies**

Model	R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of the Estimate
1	0.326 <sup>a</sup>	0.106	0.084	0.435892

a. Predictors: (Constant), DER, SIZE, BIO  
b. Dependent Variable: CR

Source: Processed data, 2019

Further, the result presented in table 5 shows that the Adj R<sup>2</sup> from CR is 0.084 or 8.4%. The number means that 8.4% of variations in CR values are explained by the independent variables of the intensity of biological assets (BIO), company size (SIZE), and debt to equity ratio (DER), while the rest 91.6% is explained by other variables outside the analyzed regression model.

**Table 6 Coefficient of Determination Test (Adj R<sup>2</sup>) of Indonesia Companies**

Model	R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of the Estimate
1	0.578 <sup>a</sup>	0.334	0.312	0.381435

a. Predictors: (Constant), DER, SIZE, BIO

Source: Processed data, 2019

Table 6 shows the result of coefficient of determination test on data from Indonesia. The result of testing in 6 shows that in Indonesia the Adj R<sup>2</sup> of CR is 0.312 or 31.2%. This shows that 31.2% variations in CR value can be explained by the independent variables of the intensity of biological assets (BIO), company size (SIZE), and debt to equity ratio (DER), while the 68.8% is explained by other variables outside the analyzed regression model.

**Simultaneous Significance Test (F-statistic Test)**

To examine the influence of the independent variable on the dependent variable simultaneously is the aim of the F-statistic test (Ghozali, 2018). Table 7, 8, and 9 show the result of F-statistic testing on the data from Thailand, Singapore, and Indonesia. The result shows a significance value of 0.000 in Thailand data, 0.003 in Singapore data, and 0.000 in Indonesia data.

Table 7 is the result of the F-statistic test on the data from Thailand. The table shows an F score of 7.589 with a significance level of 0.000. The dependent variable is the current ratio, while the independent variables are the debt to equity ratio, biological assets intensity, and company size.

**Table 7 Simultaneous Significance Test (F-statistic Test) on the data from Thailand**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	278.911	3	92.970	7.589	0.000 <sup>b</sup>
	Residual	502.284	41	12.251		
	Total	781.195	44			

a. Dependent Variable: CR

b. Predictors: (Constant), DER, BIO, SIZE

Source: Processed data, 2019

Refers to Table 7, the significance level of the F-statistic test on CR shows a significance level of 0.000. This shows that all of the independent variables simultaneously affect the dependent variable. This conclusion is drawn because the significance level of F-statistic testing is less than 0.05.

Table 3b is the result of the F-statistic test on the data from Singapore. The table shows an F score of 4.837 with a significance level of 0.003. The dependent variable is the current ratio, while the independent variables are the debt to equity ratio, biological assets intensity, and company size.

**Table 8. Simultaneous Significance Test (F-statistic Test) on the data from Singapore**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.757	3	0.919	4.837	0.003 <sup>b</sup>
	Residual	23.180	122	0.190		
	Total	25.937	125			

a. Dependent Variable: CR

b. Predictors: (Constant), DER, SIZE, BIO

Source: Processed data, 2019

Table 8 shows the result of F-statistic test on the data from Singapore. The result of the test shows a score of 0.003 on the dependent variable. The score is less than 0.05, which means all the independent variables simultaneously affect the dependent variable.

Table 9 is the result of the F-statistic test on the data from Indonesia. The table shows an F score of 15.697 with a significance level of 0.000. The dependent variable is the current ratio, while the independent variables are the debt to equity ratio, biological assets intensity, and company size.

**Table 9 Simultaneous Significance Test (F-statistic Test) on the data from Indonesia**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.851	3	2.284	15.697	0.000 <sup>b</sup>
	Residual	13.676	94	0.145		
	Total	20.528	97			

a. Dependent Variable: CR

Source: Processed data, 2019

Refers to table 9 the testing on the data from Indonesia shows that the significance level from the F-statistic is 0.000. Because the significance level is less than 0.05, the conclusion that can be drawn is that all of the independent variables simultaneously affect the dependent variable, current ratio (CR).

The result of F-statistic test on the data from Thailand, Singapore, and Indonesia is in line with the study conducted by Gonçalves & Lopes (2015) which found that the intensity of biological assets, company size, listing status, IFRS regulation, company growth, leverage, and sector are simultaneously affecting company decision is using fair value measurement for biological assets. It is also in line with Maharani (2018) who found that simultaneously, biological assets intensity, company size, company growth, and leverage affect the financial performance of agricultural companies in Indonesia.

### t-statistic Test

This test explains the effect of the independent variable in explaining the dependent variable individually (Ghozali, 2018). Table 10, 11, and 12 show the result of t-test on the data from Thailand, Singapore, and Indonesia.

#### Thailand

Refers to table 10, the result of the t-statistic test on the data from Thailand for the dependent variable of CR shows that biological assets intensity (BIO) and debt to equity ratio (DER) have a significant effect on CR because the significance level is less than 0.05. The result of the t-statistic test on the CR shows that H1 is supported by data, with a significance level of 0.022. This shows that the intensity of biological assets has a significant effect on company performance in this testing, CR.

**Table 10 t-statistic test on Thailand companies**

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	23.664	11.528			2.053	0.047
BIO	-26.539	11.121	-0.325		-2.386	0.022
SIZE	-0.769	0.515	-0.211		-1.494	0.143
DER	-1.320	0.579	-0.333		-2.282	0.028

Source: Processed data, 2019

Table 4a shows that t-statistic test on the dependent variable of CR shows that H2 is not supported by data because the score is higher than 0.05; 0.143. This shows that company size does not affect financial performance. The result of the t-statistic test on the dependent variable CR shows that H3 is supported by data with a significance level of 0.028 which shows significance level less than 0.05. This means that DER has a significant effect on the financial performance of biological assets-based companies.

#### Singapore

Based on table 4b, the result of the t-statistic test on dependent variable CR shows that the independent variables of biological assets intensity (BIO) and debt to equity ratio (DER) have a significant effect on CR because it has significance level below 0.05. This result shows that H1 is supported by data, with a significance level of 0.013. This shows that the intensity of biological assets has a significant effect on company financial performance, in this test is CR.

**Table 11. t-statistic test on Singapore companies**

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	1.913	0.217			8.827	0.000
BIO	-0.741	0.294	-0.220		-2.522	0.013
SIZE	-0.012	0.014	-0.074		-0.864	0.389
DER	-0.122	0.041	-0.258		-2.962	0.004

a. Dependent Variable: CR

Source: Processed data, 2019

The result of the t-statistic test on the dependent variable CR shows that H2 is not supported by data because the score is higher than 0.05; 0.389. This shows that company size does not affect financial performance. The result of the t-statistic test on the dependent variable CR shows that H3 is supported by data with a significance level of 0.004 which shows significance level less than 0.05. This means that DER has a significant effect on the financial performance of biological assets-based companies.

**Indonesia**

The result of the t-statistic test shows that all of the independent variables in this study have a significant effect on CR. The independent variables are the intensity of biological assets (BIO), company size (SIZE), and debt to equity ratio (DER). This is due to the significance level of less than 0.05.

**Table 12 t-statistic test on Indonesia companies**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
1	(Constant)	1.858	0.182		10.215	0.000
	BIO	-0.951	0.206	-0.405	-4.620	0.000
	SIZE	-0.020	0.009	-0.207	-2.394	0.019
	DER	-0.129	0.031	-0.362	-4.233	0.000

a. Dependent Variable: CR

Source: Processed data, 2019

The result of the t-statistic test on the dependent variable CR shows that H1, H2, and H3 are supported by data. The significance score of each variable tested in 0.000 for H1, 0.019 for H2, and 0.000 for H3. This shows that the intensity of biological assets, company size, and debt to equity ratio have a significant effect on the financial performance of biological assets-based companies.

**The Kruskal Wallis Test**

The additional testing performed in this study is the Kruskal Wallis test. The t-test is used to see the significant difference among the research samples. This study conducted another test to see the difference in the financial performance of biological assets-based companies in Thailand, Singapore, and Indonesia. Therefore, because there are three samples, One-way ANOVA is the parametric option while the Kruskal Wallis test is the non-parametric option. Before conducting the test, normality and homogeneity test are performed. The test is used to choose the appropriate method to test the difference between the three samples (Ostertagová, Ostertag, & Kováč, 2014). If the data is normally distributed and homogeneous, One-Way ANOVA test will be used. If the data is not normally distributed and not homogenous, Kruskal Wallis test is more appropriate because this test does not require the assumption of normal distribution and homogeneous assumption (Ostertagová et al., 2014)(McKight & Najab, 2010). Even though there is literature that mentioned ANOVA is quite strong for not normally distributed data, but Kruskal Wallis is better at testing the difference in samples with non-normal distribution (Hecke, 2012). When the Kruskal Wallis test shows a significant number (Asymp. Sig. <0.05), at least one sample has significant differences from other samples (Ostertagová et al., 2014).

The previous study conducted to examine the difference in the financial performance using Kruskal Wallis test has been done by Santis, Albuquerque, & Lizarelli (2016). The study examines the differences in financial performance between the Corporate Sustainability Index (ISE) companies, The Sao Paulo Stock Exchange Index (IBOVESPA) companies, and companies included in both indexes. The testing is conducted using the Kruskal Wallis test the data is not normally distributed. The result of the study shows that there is no difference between the three categories of companies tested. Refers to the study, this study will conduct the difference test on the financial performance of biological assets-based companies in Thailand, Singapore, and Indonesia. The result of the test can be seen in the following description.

**The result of the difference test on financial performance in biological assets-based companies in Thailand, Singapore, and Indonesia**

Before conducting the test on the current ratio (CR) from companies in Thailand, Singapore, and Indonesia, firstly the data has to be tested for normality and homogeneity. Therefore, the first step is to conduct a normality test using Shapiro-Wilk and homogeneity test can be seen from the Levene's test. The data has a normal distribution and homogeneous when the result of these two tests show significance level

above 0.05 (Ostertagová et al., 2014). If both assumptions are met, One-Way ANOVA will be selected. However, if the assumptions are not met, therefore, Kruskal Wallis should be selected because as a non-parametric statistic method, this test does not require normality and homogeneity assumption.

**Table 13 Normality Testing on CR in Thailand, Singapore, and Indonesia**

	country	Shapiro-Wilk		
		Statistic	df	Sig.
Value CR	Thailand	0.339	50	0.000
	Singapore	0.703	204	0.000
	Indonesia	0.698	126	0.000

a. Lilliefors Significance Correction

Source: Processed data, 2019

Refers to table 13, the result of the Shapiro-Wilk test in the three countries shows Sig. 0.000 which means that the data is not normally distributed. Therefore, the normality assumption cannot be met.

**Table 14 Homogeneity Test on CR in Thailand, Singapore, and Indonesia**

Levene's Test of Equality of Error Variances <sup>a</sup>				
Dependent Variable: CR				
F	df1	df2	Sig.	
34.658	2	377	0.000	

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Negara

Source: Processed data, 2019

Levene's test is a test used to examine the homogeneity of the data. Refers to table 14, the result of Levene's test on CR in the three countries shows Sig. 0.000, therefore, it can be said that the data is not homogeneous because of the sig. value is below 0.05.

The result of normality and homogeneity tests indicate that the data do not fulfill the assumptions for the parametric test. Thus, the test to examine the difference in the financial performance in the form of Current Ratio (CR) in Thailand, Singapore, and Indonesia will be done through the Kruskal Wallis test. The result shows a significant difference in the data if the Asymp. Sig. (2-tailed) shows a value below 0.05.

**Table 15 Kruskal Wallis test on CR in Thailand, Singapore, and Indonesia**

CR value	
Chi-Square	33.876
df	2
Asymp. Sig.	0.000
a. Kruskal Wallis Test	
b. Grouping Variable: Negara	

Source: Processed data, 2019

Refers to table 15, the result of the Kruskal Wallis test is 0.000. This shows that H<sub>4</sub> is supported by data because of the Asymp. Sig. is below 0.05. The conclusion that can be drawn from the Kruskal Wallis test is that there is a significant difference in the financial performance in the form of Current Ratio (CR) in biological assets-based companies in Thailand, Singapore, and Indonesia.

## Discussion

### The effect of biological assets intensity on financial performance in biological assets-based companies

Refers to table 6, we can conclude that in Thailand, the intensity of biological assets has a significant effect on financial performance (CR) with a significance level of 0.022. The result of testing on the data from Singapore shows the significant effect with a significance level of 0.013, while in Indonesia, we can conclude that BIO has a significant effect on financial performance in the form of CR with a significance value of 0.000. The overall conclusion states that the intensity of biological assets has a significant effect on the financial performance of biological assets-based companies in Thailand, Singapore, and Indonesia. The final result states that the hypothesis is supported by data. This result is in line with the study conducted by Daniel et al. (2010), Christensen & Nikolaev (2013), Hlaing & Pourjalali (2011) and Gonçalves and Lopes (2015) on PPE (property, plant, and equipment), investment property, intangible assets, and biological assets intensity that have significant effect on the valuation using fair value.

### The effect of company size on the financial performance of the biological assets-based company

Refers to table 16, the result of the analysis can be described that in Thailand, size does not affect the financial performance (CR) with a significance level of 0.143. The result of testing in Singapore also shows a similar result with a significance level of 0.389. The result of this study is in line with the study conducted by Al-Saidi & Al-Shammari (2015) which stated that company size does not affect the assessment of performance in non-financial companies in Kuwait both using Tobin's Q and return on asset (ROA).

As in Indonesia, company size has a significant effect on financial performance (CR) with the significance level of 0.000. Broadly, it can be concluded that the hypothesis is supported by the data in Indonesia. This result is in line with the study conducted by Bhutta & Hassan (2013), Chandrapala & Knapkova (2013), Dioha et al., (2018), Egbunike & Uchenna Okerekeoti (2018) which state that company size has positive effect on company financial performance.

A different result was found in biological assets-based companies in Thailand and Singapore. Both countries show Sig. level above 0.05 so that the hypothesis is not supported by data. The contrasting result is observed in Indonesia which showed that company size affects financial performance. This might be caused by the fact that the Current Ratio is a part of the liquidity ratio. As explained beforehand, liquidity ratio is a ratio that shows company ability in fulfilling its liability or short-term debts especially those that are due. If a company is liquid then the company is considered to be able to fulfill its short-term liability. On the contrary, by not considering company size, if a company is illiquid, then the company is considered to be unable to fulfill its short-term liability.

### The effect of debt to equity ratio on the financial performance of biological assets-based companies

Refers to table 16, in Thailand, Singapore, and Indonesia, debt to equity ratio has a significant effect on CR with a significance level of 0.028; 0.004; and 0.000 each. The conclusion that can be drawn is that the debt to equity ratio has a significant effect on the financial performance of biological assets-based companies in the three countries. The conclusion stated that the hypothesis is supported by data. The result is in line with the study conducted by Shah et al., (2014), Ramadan & Ramadan (2015), and Vätavu (2015) which stated that capital structure proxied with Debt to Equity Ratio (DER) has a significant effect on company financial performance.

**Table 16 Summary of Findings in Thailand, Singapore, and Indonesia**

	Current Ratio		
	Thailand	Singapura	Indonesia
BIO	significant effect	significant effect	significant effect
SIZE	no effect	no effect	significant effect
DER	significant effect	significant effect	significant effect

Notes: BIO = intensity of biological assets, Size = company size, DER= Debt to Equity Ratio (capital structure)

Source: Processed data, 2019

The study conducted by Daniel, Jung & Pourjalali (2010) concerning fair value option for non-financial assets (FVONFA) stated that company will prefer to adopt fair value (following the applicable accounting standard) when the proportion of the intensity of non-financial assets is high. IAS 41 Agriculture used fair value as valuation, the same with non-financial assets. Thus, we can say that the proportion of biological assets on the total assets will increase in line with the implementation of fair value. This also works for Thailand that uses TAS 41 agriculture standard, Singapore with FRS 41 Agriculture standard, and Indonesia that use SFAS 69 Agriculture.

The agency theory states that larger company size tends to have higher agency theory. They have a motivation to follow the predetermined accounting standard, the IAS 41 Agriculture. The use of fair value in valuing the biological assets is considered to be better in reflecting the real financial performance in a company.

When a company has a debt, it is required to pay the principal and interest installments, company profits might decrease because of the payment of interest. However, the contrary also happens, the company can get tax protection when it has debts. Because the profits reported by the company is lower, the company pays less tax. Company financial performance is greatly affected by interest expense or tax as explained. The appropriate proportion of company debts and capital is very important. This description shows that company profits depend on the composition of predetermined debts and capital, and financial performance can be seen from its capital structure.

#### **Financial performance of biological assets-based companies in Thailand, Singapore, and Indonesia**

Referring to the result of the Kruskal Wallis test, there is a significant difference in the financial performance in biological assets-based companies in Thailand, Singapore, and Indonesia. This supports the hypothesis which states that the difference in the allocation of lands used in agricultural activities, the contribution of the agricultural sector in the GDP, and the regulation or standard used to regulate agricultural activities in the three countries lead to the difference in financial performance in Thailand, Singapore, and Indonesia.

## **Conclusions**

The intensity of biological assets has a significant effect on financial performance of biological assets-based companies in Thailand, Singapore, and Indonesia. The study conducted by Daniel, Jung & Pourjalali (2010) on fair value option for non-financial assets (FVONFA) stated that company will prefer to apply the fair value valuation stated that company will prefer to adopt fair value (following the applicable accounting standard) when the proportion of the intensity of non-financial assets is high. IAS 41 Agriculture used fair value as valuation, the same with non-financial assets. Thus, we can say that the proportion of biological assets on the total assets will increase in line with the implementation of fair value. This also works for Thailand that uses TAS 41 agriculture standard, Singapore with FRS 41 Agriculture standard, and Indonesia that use PSAK 69 Agriculture.

Company size has a significant effect on financial performance in Indonesia. This is caused by the range of company size data that varies from the small, medium, and large companies. It is marked by the largest standard deviation among the three countries, therefore, when it is tested, the hypothesis is supported. This is different from Thailand and Singapore. The size of companies in the two countries does not vary because the minimum, mean, and the maximum value tends to be similar so that when tested, the result does not support the hypothesis.

Current Ratio as the proxy of financial performance in this study is a part of liquidity ratio. As explained beforehand, liquidity ratio is a ratio that shows company ability in fulfilling its liability or short-term debts especially those that are due. If a company is liquid then the company is considered to be able to fulfil its

short-term liability. On the contrary, by not considering company size, if a company is illiquid, then the company is considered to be unable to fulfill its short-term liability.

The agency theory states that larger company size tends to have higher agency theory. They have a motivation to follow the predetermined accounting standard, the IAS 41 Agriculture. The use of fair value in valuing the biological assets is considered to be better in reflecting the real financial performance in a company.

Debt to equity ratio has a significant effect on the financial performance of biological assets-based companies in Thailand, Singapore, and Indonesia. When a company has a debt, it is required to pay the principal and interest installments, company profits might decrease because of the payment of interest. However, the contrary also happens, the company can get tax protection when it has debts. Because the profits reported by the company is lower, the company pays less tax. Company financial performance is greatly affected by interest expense or tax as explained. The appropriate proportion of company debts and capital is very important. This description shows that company profits depend on the composition of predetermined debts and capital, and financial performance can be seen from its capital structure.

Financial performance of biological assets-based companies in Thailand, Singapore, and Indonesia has a significant difference. This explains that there are factors that cause differences in the financial performance such as the difference in the allocation of lands used in agricultural activities, contribution of agricultural sector in the GDP, and the regulation or standard used to regulate agricultural activities in the three countries lead to the difference in financial performance in Thailand, Singapore, and Indonesia.

#### **Limitations**

This study uses secondary and quantitative data, therefore, this study cannot qualitatively describe the result. The range of study period is short especially after the last amendment on the agricultural accounting so that we cannot capture much of the effect from the implementation of the last amendment. The result of adjusted  $R^2$  is not quite high because of the lack of independent variables proxies used in this study.

#### **Suggestions**

Future study is expected to obtain primary data so that it can approach the phenomenon with a qualitative method. The research period should be extended and compare the condition before and after the amendment on the agricultural accounting standard. Add the proxies to explain the intensity of biological assets and add control variables.

#### **References**

- (ASC), Accounting Standard Council of Singapore. (2018). *FRS 41: Agriculture* (RPRT).
- (FAP), Federation of Accounting Profession (2017). *TAS 41: Agriculture* (RPRT).
- (IAI), Ikatan Akuntan Indonesia. (2016). *PSAK 69: Agrikultur* (RPRT).
- Al-Saidi, M., & Al-Shammari, B. (2015). Ownership concentration, ownership composition and the performance of the Kuwaiti listed non-financial firms. *International Journal of Commerce and Management*, 25, 108–132. JOUR. <https://doi.org/10.1108/IJCOMA-07-2013-0065>
- Aryanto, Y. H. (2011). Theoretical Failure of IAS 41 : Agriculture, 1–5. <https://doi.org/http://dx.doi.org/10.2139/ssrn.1808413>
- ASEAN, S. (2018). *ASEAN Statistical Yearbook 2018*. Jakarta.
- Bhutta, N., & Hassan, A. (2013). Impact of Firm Specific Factors on Profitability of Firms in Food Sector. *Open Journal of Accounting*, 2, 19–25. JOUR. <https://doi.org/10.4236/ojacct.2013.22005>
- Bukhori, I., & Raharja, R. (2012). Pengaruh good corporate governance dan ukuran perusahaan terhadap kinerja perusahaan (studi empiris pada perusahaan yang terdaftar di BEI 2010). DISS, Fakultas Ekonomika dan Bisnis.
- Chandrapala, P., & Knapkova, A. (2013). Firm-specific factors and financial performance of firms in the Czech Republic. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 61, 2183–2190. JOUR. <https://doi.org/10.11118/actaun201361072183>

- Christensen, H. B., & Nikolaev, V. V. (2013). Does Fair Value Accounting for Non-Financial Assets Pass the Market Test ?
- Daniel, S., Jung, B., Pourjalali, H., & Wen, E. (2010). Firm Characteristics Influencing Responses Towards Adoption of the Fair Value Accounting Option: A Survey of Chief Financial Officers of U.S. Firms. *SSRN Electronic Journal*. JOUR. <https://doi.org/http://dx.doi.org/10.2139/ssrn.1579326>
- Deloitte, D. T. T. L. (2019). IAS 41 — Agriculture [ICOMM]. Retrieved from <https://www.iasplus.com/en/standards/ias/ias41>
- Dioha, C., Nma Ahmed, M., & Okpanachi, J. (2018). Effect of Firm Characteristics on Profitability of Listed Consumer Goods Companies in Nigeria, 4, 14–31. JOUR.
- Egbunike, C., & Uchenna Okerekeoti, C. (2018). Macroeconomic factors, firm characteristics and financial performance: A study of selected quoted manufacturing firms in Nigeria, 3, 142–168. JOUR. <https://doi.org/10.1108/AJAR-09-2018-0029>
- Eisenhardt, K. M. (1989). Agency Theory : An Assessment and Review, 14(i).
- FAO. (2018a). *Country fact sheet on food and agriculture policy trends (Thailand)*. Retrieved from [www.fao.org/in-action/fapda](http://www.fao.org/in-action/fapda)
- FAO. (2018b). *World Food and Agriculture Statistical Pocketbook 2018*. Rome. Retrieved from <http://www.fao.org/publications/highlights-detail/en/c/1164465/>
- Ghozali, I. (2018). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25 Edisi 9*. BOOK, Semarang: Badan Penerbit Universitas Diponegoro.
- Gonçalves, R., & Lopes, P. (2015). *Accounting in Agriculture: Measurement practices of listed firms* (RPRT). Universidade do Porto, Faculdade de Economia do Porto. Retrieved from <https://ideas.repec.org/p/por/fepwps/557.html>
- Haniffa, R. M., & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting, 24, 391–430. <https://doi.org/10.1016/j.jaccpubpol.2005.06.001>
- Haron, R. (2014). Capital structure inconclusiveness: evidence from Malaysia, Thailand and Singapore. *International Journal of Managerial Finance*, 10(1), 23–38. JOUR. <https://doi.org/10.1108/IJMF-03-2012-0025>
- Hecke, T. Van. (2012). Power study of anova versus Kruskal-Wallis test. *Journal of Statistics and Management Systems*, 15(2–3), 241–247. JOUR. <https://doi.org/10.1080/09720510.2012.10701623>
- Herbohn, K., & Herbohn, J. (2006). International Accounting Standard ( IAS ) 41 : What Are the Implications for Reporting Forest Assets ?, 5(2), 175–189. <https://doi.org/10.1007/s11842-006-0009-1>
- Hlaing, K. P., & Pourjalali, H. (2011). Economic Reasons for Reporting Property, Plant, and Equipment at Fair Market Value by Foreign Cross-Listed Firms in the United States. *Journal of Accounting, Auditing & Finance*, 27(4), 557–576. JOUR. <https://doi.org/10.1177/0148558X11423681>
- IASB, I. A. S. B. (2014). *IAS 41: Agriculture* (RPRT).
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. JOUR. [https://doi.org/https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/https://doi.org/10.1016/0304-405X(76)90026-X)
- Kasmir. (2017). *Analisis Laporan Keuangan, Edisi Pertama, Cetakan Kesepuluh*. BOOK, Jakarta: Rajawali Pers.
- Lefter, V., & Roman, A. G. (2007). IAS 41 Agriculture: Fair Value Accounting. *Theoretical and Applied Economics*, 5(510), 15–22. JOUR. Retrieved from [https://econpapers.repec.org/RePEc:agr:journl:v:5\(510\):y:2007:i:5\(510\):p:15-22](https://econpapers.repec.org/RePEc:agr:journl:v:5(510):y:2007:i:5(510):p:15-22)
- Maharani, D. (2018). *Analisis Kinerja Keuangan Perusahaan Agrikultur di Bursa Efek Indonesia* (THES).
- McKnight, P. E., & Najab, J. (2010, January 30). Kruskal-Wallis Test. *The Corsini Encyclopedia of Psychology*. <https://doi.org/doi:10.1002/9780470479216.corpsy0491>
- Murhadi, W. (2012). Determinan Struktur Modal: Studi di Asia Tenggara. *Jurnal Manajemen Dan Kewirausahaan*, 13. JOUR. <https://doi.org/10.9744/jmk.13.2.91-98>
- Murhadi, W. (2013). *Analisis Laporan Keuangan Proyeksi dan Valuasi Saham*. BOOK, Jakarta: Salemba Empat.
- Ostertagová, E., Ostertag, O., & Kováč, J. (2014). Methodology and Application of the Kruskal-Wallis Test.

- Applied Mechanics and Materials*, 611, 115–120. JOUR. <https://doi.org/10.4028/www.scientific.net/AMM.611.115>
- Outa, E. R., & Waweru, N. M. (2016). Corporate governance guidelines compliance and firm financial performance. *Managerial Auditing Journal*, 31(8/9), 891–914. JOUR. <https://doi.org/10.1108/MAJ-12-2015-1291>
- Rahayu, D. H. (2018). Struktur Modal Dan Kinerja Keuangan Perusahaan Property Dan Real Estate Di Indonesia. In *Prosiding Seminar Nasional Cendekiawan* (pp. 981–985). CONF.
- Rahayu, S. (2010). *Pengaruh Kinerja Keuangan Terhadap Nilai Perusahaan Dengan Pengungkapan Corporate Social Responsibility Dan Good Corporate Governance Sebagai Variabel Pemoderasi (Studi Empiris Pada Perusahaan Manufaktur di Bursa Efek Jakarta)* (THESIS).
- Ramadan, Z. S., & Ramadan, I. (2015). Capital Structure and Firm's Performance of Jordanian Manufacturing Sector. *International Journal of Economics and Finance*, 7. JOUR. <https://doi.org/10.5539/ijef.v7n6p279>
- Santis, P., Albuquerque, A., & Lizarelli, F. (2016). Do Sustainable Companies have a better Financial Performance? A Study on Brazilian Public Companies. *Journal of Cleaner Production*, 133. JOUR. <https://doi.org/10.1016/j.jclepro.2016.05.180>
- Shah, B., Muhammad, H., & Islam, Z. ul. (2014). The Impact of Capital Structure on Firm Performance: Evidence from Pakistan. *Journal of Industrial Distribution & Business*, Vol 5. JOUR. <https://doi.org/http://dx.doi.org/10.13106/jidb.2014.vol5.no2.13>
- Subramanyam, K. R., & John, J. W. (2012). *Financial Statement Analysis, 10th Edition* (10th ed.). BOOK, America, New York: McGraw-Hill.
- Thi Thuong, T. (2018). The Development Path of Vietnamese Accounting System. *International Journal of Economics and Finance*, 10, 154. JOUR. <https://doi.org/10.5539/ijef.v10n5p154>
- Tommy, P., & Saerang, I. S. (2014). Struktur Modal, Ukuran Perusahaan Dan Risiko Perusahaan Terhadap Nilai Perusahaan Otomotif Yang Terdaftar Di Bei. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 2(2), 879–889. JOUR.
- Vätavu, S. (2015). The Impact of Capital Structure on Financial Performance in Romanian Listed Companies. *Procedia Economics and Finance*, 32, 1314–1322. JOUR. [https://doi.org/10.1016/S2212-5671\(15\)01508-7](https://doi.org/10.1016/S2212-5671(15)01508-7)
- Widyati, M. F. (2013). Pengaruh dewan direksi, komisaris independen, komite audit, kepemilikan manajerial dan kepemilikan institusional terhadap kinerja keuangan. *Jurnal Ilmu Manajemen*, 1(1), 234–249. JOUR.
- Wijayanti, S., & Mutmainah, S. (2012). Pengaruh Penerapan Corporate Governance terhadap Kinerja Keuangan pada Perusahaan Perbankan yang Terdaftar di Bursa Efek Indonesia (BEI) Tahun 2009-2011. DISS, Fakultas Ekonomika dan Bisnis.
- Yapa, P. W. S., Joshi, M., & Kraal, D. (2011). The Socio-Economic Impacts of the Adoption of IFRS: a comparative study between the ASEAN countries of Singapore, Malaysia and Indonesia. *RMIT University*, 1–26. JOUR.