International Business Management 11 (12): 2138-2150, 2017
ISSN: 1993-5250

The Impact of IFRS Adoption, Quality of Accounting Information and Information Asymmetry on Cost of Equity (Analysis in Indonesia Stock Exchange as Emerging Market)

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Abstract: The purpose of this study is to obtain empirical evidence that the adoption of IFRS improves the quality of accounting information and simultaneously with the quality of accounting information, the adoption of IFRS lowers cost of equity capital, either directly or through information asymmetry on the Indonesia Stock Exchange. The population in this study are manufacturing companies listed on the Indonesia Stock Exchange with a target population of companies announcing annual financial statements in 2010-2013. Samples are taken using a simple random method and the number of samples is calculated using the Slovin formula. The data used is secondary data and time series. Data are tested using path analysis. IFRS adoption is divided into two periods, the period before full adoption and the period after full adoption. The quality of accounting information is measured using an accrual quality model while information asymmetry is measured using bid ask spread. The results show that the full adoption of IFRS in Indonesia has not met the expected results. No. of IFRS adoption and the quality of accounting information has decreased cost of equity.

Key words: International Financial Reporting Standars (IFRS), quality of accounting information, information asymmetry, cost of equity capital, quality, evidence

INTRODUCTION

Capital market development in a country is closely associated with the development of the country's financial accounting standards. Investors in the stock market is one of the users of financial statements who will use the financial information provided as the basis for making investment decisions. Financial information that is reliable, relevant, timely and comparable enable an investor take effective investment decisions and allocate its resources efficiently. Financial accounting standards play an important role in the provision of financial information that meet the quality of reliable, relevant, timely and comparable.

Indonesian capital market has developed very rapidly in the period 1984-1994. The number of companies going public has jumped from 24 companies in early 1989 to around 160 firms in September, 1994. As of the end of 2014, there were 507 companies listed on the Indonesia Stock Exchange.

In addition, to the rapid development of the capital market in the period 1984-1994 also indicated a number of important phenomena in the economy and the national and global businesses including: the passage of the Banking Law and the Law on Pension Fund; reform of the Taxation Laws of Indonesia; the emergence of several cases of bank crises and the issue of bad debts and non-performing loans and the signing of a new agreement as a continuation of the GATT Uruguay Round. In line with the various developments, the Institute of Indonesia Chartered Accountants (IICA) as a professional association, through the Committee on Financial Accounting Standards which was later changed to Financial Accounting Standards Board as a standard setter make breakthroughs in order to improve the quality of financial reporting in Indonesia.

Before 1994, financial accounting standards in Indonesia, set forth in Accounting Principles Indonesia based on the work of Paul Grady of the AICPA in the United States. Since, 1994, it has become a policy of Financial Accounting Standards Board to use International Accounting Standards (IAS) as the basis for building a financial accounting standards in Indonesia.

With more and more countries are adopting International Financial Reporting Standards (IFRS) as a

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standard preparation of financial statements, then in 2006, it was determined that full convergence of IFRS will be completed in 2008 but the target is not reached. Until January, 2012, IICA has published all IFRS/IAS except IAS 41 agriculture and IFRS 1 first time adoption of International Financial Reporting Standards. Financial Accounting Standards Board of IICA on numerous occasions stated that the use of fair value accounting on IFRS will increase the relevance of financial statements to the needs of the user. But behind it, the use of fair value accounting are recognized to reduce the level of reliability of financial statements due to the use of fair value-especially on fixed assets-will cause the verification procedure of the authentic proof of the transaction can not be performed (Ramanna and Watts, 2007).

Hadad says the challenge the application of international financial reporting standards is the readiness of the actors in the implementation of financial accounting standards. According to Hadad, quick review the results of the FSA on the issuer's annual financial statements show that market participant's understanding of the IFRS-based accounting standards still have to be improved. Unpreparedness of the actors, especially investors, financial analysts and the media in addressing the impact of the decline in the value of assets and the recording of income can lead to sentiments in the capital market. The next challenge is no law of reporting financial statements.

Changes in accounting standards will affect the content of information received by the investor. Further, Wibisana states that the application of the fair value of assets is relatively easy to have observable market prices in an active market. For assets that do not have an active market is more problematic because it requires skill assessment. One of the problems that will be faced by Indonesia in implementing the fair value is limited sources of market information. Kurniawan (2013) reveals there are three problems main faced by Indonesia in full adoption of IFRS, they are less readily as infrastructure such as Financial Accounting Standards Board as financial accounting standard setter, the condition of the legislation that has not been synchronized with IFRS and the lack of readiness of resources and education in Indonesia. Further, Kurniawan (2013) says that by adopting the IFRS Indonesia will get seven benefits as well. First, improve the quality of Financial Accounting Standards (GAAP). Second, reduce the cost of financial accounting standards. Third, improve the credibility and usefulness of financial statements. Fourth, enhance the comparability of financial reporting. Fifth, increase financial transparency. Sixth, lowering capital costs by enabling collection of funds through the capital market. Seventh, improving the efficiency of financial statements. IICA provides the target year 2012 IFRS convergence is achieved and applied in Indonesia. Capital market in Indonesia is categorized as emerging market. One feature of capital markets in emerging markets is the assumption that the market is inefficient due to the number of investors are small, weak communication systems, financial information that is not enough and most importantly, the lack of control in the dissemination of information (Bilgrami, 1998).

Capital Market Supervisory Agency and Financial Institution in its research report concludes that investors in the Indonesian capital market can not obtain sufficient information, so that this can sometimes cause errors in pricing. The character of investors typically divided into investors overreact to information, investors who transact with the motive of speculation, the domestic investors who tend to follow a pattern of transactions by foreign investors (herding behavior).

Dumitru (2011) states that accounting is a powerful source of information and accounting is not just about processing the data, aimed to mark the presence and movement of elements of the previous and the ability to respond to the needs for control. As the data bank, the entire accounting system set up on a bunch of goals, principles, norms and standards. Accounting must be able to present the information needed to reach the target, i.e., information able to describe the activities that have taken place, the financial situation, economic returns generated entities and at the same time also informed that enable companies to run the operation efficiently (Dumitru, 2011).

Accounting numbers reported by the company is one of the most important sources of information for investor decision regarding the share price. Financial Accounting Standards Board (FASB) explicitly states that one purpose of accounting is to inform investors about the aspects that help them predict future economic events that are relevant to determine the value of the company. Battacharya *et al*. (2011, 2012) show that one of the key role of accounting information is the basis for the allocation of capital in the financial markets.

Accounting standards determine the quality of accounting. Based on this argument, regulatory intervention required to adopt the prevailing international standards provide major benefits, by adopting a 'language' public accounting then the level of comparability of financial statements internationally will increase. This will facilitate cross-border capital flows and therefore reduce the cost of capital (Lee *et al*., 2008).

Information asymmetry is a condition in which the manager as an insider have private information that is more than the parties outside the company (such as investors, creditors, analysts, etc). This asymmetry of information related to information risk and is a component of the cost of capital. There is a presumption that the quality of accounting information asymmetry will affect the financial statement information presented in the capital markets. Studies that examine the relationship between the adoption of IFRS to the information asymmetry of which is the research conducted by Naranjo who find that after the implementation of IFRS, the company will raise equity capital if they decrease information asymmetry. Further research conducted by Lu and Trabelsi. The results show that the level of accounting conservatism declined post mandatory IFRS adoption but adoption of IFRS tends to weaken the relationship between information asymmetry and accounting conservatism. Chatam, using three proxies for information asymmetry which has been shown to impact the cost of capital of the company, the study shows that the level of compliance IAS does not appear to affect this proxy. Espinoza conclude that the disclosure of financial information which is considered an essential element of the quality of corporate governance and the adoption of IFRS have a negative correlation with the spread.

Studies that examine the relationship between the quality of accounting information and the information asymmetry are researches conducted by Bhattacharya *et al*. (2012), Rahman *et al*. (2013) and Cerqueira and Pereira (2014). Bhattacharya *et al*. (2012) provide empirical evidence to support the regulator that one important consequence of the low quality of earnings is increasing information asymmetry and reduce liquidity. Rahman show that earnings management reduces information asymmetry. Purwanti and Kurniawan find that earnings management does not affect the information asymmetry. Cerqueira and Pereira (2014) find that in the European capital markets, the quality of financial statements are measured using positive discretionary accruals associated with information asymmetry is measured using a high-low spread estimator.

The cost of capital is a real cost to be incurred by the company to obtain funding either from debt, preferred stock, common stock or retained earnings to finance an investment or operation of the company. Determining the cost of capital is intended to determine how much the real cost that must be issued by the company to obtain the necessary funds.

Currently, there are two main schools of thought in the debate about mandatory accounting harmonization (Lee *et al*., 2008). On the one hand, proponents indicate that the accounting standards determine the quality of accounting. Based on this argument, regulatory intervention is required to provide two main benefits. First, by adopting the ‘language’ of general accounting in this case the IFRS will increase the international comparability of financial statements. This should facilitate cross-border capital flows and therefore reduce the cost of capital. Second, impose disclosure requirements of IFRS should improve the quality of information disclosure of companies domiciled in countries where standards are lower than the disclosures required by Generally Accepted Accounting Principles (GAAP).

The quality of accounting information should also lower the cost of capital. This is because the quality of accounting information that investors can allocate their resources efficiently. Quality accounting information will provide information that is relevant, timely, accurate and can be compared to be used as basis for decision making in the allocation of resources. Implementation of IFRS and the quality of accounting information can reduce capital costs by information asymmetry. By reducing information asymmetry, investors can monitor managerial performance better and therefore demanded a lower risk premium (Lee *et al*., 2008).

The studies that are conducted to prove the effect of IFRS implementation on the cost of capital of which are Li (2010) as well as Merino. While the researchs are conducted to prove the effect of the quality of accounting information on the cost of capital of which are Bhattacharya *et al*. (2012). Hughes *et al*. (2007) study the effects of information asymmetry on the cost of capital as well as with Armstrong *et al*. (2011) and Cormier (2014).

Based on the phenomena as well as previous studies, researchers will test the impact of the adoption of IFRS and the quality of accounting information in the Indonesia Stock Exchange on information asymmetry and its impact on the cost of equity capital. The research model will be tested using path analysis.

The population in this research are manufacturing companies listed in Indonesia Stock Exchange. Manufacturing companies are companies with greater external capital competition than other types where companies are expected to have greater incentives to provide more and more informative disclosure under the IFRS (Lee and Zeng, 2013). This study is intended to demonstrate empirically the effect of the adoption of International Financial Reporting Standards and the quality of accounting information to information asymmetry and its impact on the cost of equity capital.

Literature review

Agency theory and signaling theory: Jensen and Meckling were the first to explore the agency theory, theoretically and detailed. This theory mentions that the manager of a company as an ‘agent’ and shareholders as the ‘principal’. Shareholders, who are the principal delegate business decision-making to the manager who is a representative or agent of the shareholders. The problems that arise as a result of system ownership of companies like this that the agent does not always make decisions that aim to meet the best interests of the principal.

The agency theory recognize the existence of information asymmetry, i.e., information that is not balanced due to the unequal distribution of information between principal and agent. Application of agency theory can be realized in the employment contract that will regulate the proportion of the rights and obligations of each party by also considering the overall benefit. The employment contract is a set of rules governing the mechanism for the results, either in the form of profits, returns and risks are approved by the principal and the agent. The employment contract will be optimal if the contract can be fairness that is able to balance between the principal and the agent are mathematically demonstrated that optimal implementation of the obligations by the agent and incentive or reward special satisfactory from the principal to the agent.

Signaling theory put forward about how should a company give a signal to users of financial statements. This signal in the form of information about what has been done by the management to realize the wishes of the owner. The signal can be either promotion or other information which states that the company is better than any other company. Signal theory explains that the signaling is done by managers to reduce information asymmetry. Managers provide information through the financial statements that they apply the accounting policy conservatism generate profits more qualified for this principle prevents companies taking action to exaggerate profits and helps users of financial statements to present the earnings and assets not overstate.

International Financial Reporting Standards: International Financial Reporting Standards (IFRS) are the rules (standards) issued by the International Accounting Standards Board (IASB), an independent organization based in London. The standard is intended to be a set of rules that can be applied in financial reporting by public companies worldwide. Between 1973-2000, the international standards issued by organizations predecessor of the IASB, the International Accounting Standards Committee (IASC) an organization founded in 1973 by the organization of accounting professionals in Australia, Canada, France, Germany, Japan, Mexico, Netherlands, UK Ireland and the US. In the period, the rules issued by the IASC 'portrayed' as International Accounting Standards (IAS). Since, April 2001, the function of the preparation of this rule is taken by the IASB in which the rules issued by the IASB using the new labels, the International Financial Reporting Standards (IFRS). IFRS still continuing the previous rules, issued by the IASC (Ball, 2005).

One of the important objectives of the IASB is to develop a set of high quality global accounting standards that can be understood and increase the transparency of financial reporting in capital markets around the world. IASB to develop IFRS for the purpose of fulfilling the fundamental theory of financial reporting that is to measure economic activity. IFRS conceptual framework developed from the balance-sheet oriented.

Compared with US GAAP, IFRS is a fundamental difference of using principle-based IFRS whereas US GAAP using rule based. Inherent characteristics of a principle-based framework is the potential for different interpretations for the same transaction. This situation led to the emergence of possibilities and give rise to uncertainty and thus require extensive disclosures in the financial statements (Forgeas, 2008).

Shortridge and Mrying (2004) quote Robert Hertz, chairman of the FASB, explaining that using the approach of principles-based, standard starting by putting the main purpose of a good reporting in the area in question and then provide a reference that explains the purpose and connect with some typical examples when the rules are sometimes unavoidable is not intended to provide specific rules or rules for any situation that mengkin occur. In case of doubt, the reader is directed to return to the basic principles. The opposite of a ruled-based which provides the rules in detail about every situation that may occur (Shortridge and Mrying, 2004).

The second difference is the difference in methodology in assessing an accounting treatment. Under US GAAP, research focuses on literature whereas under IFRS, the Review is based on the patterns are the facts in more detail (Forgeas, 2008). One of the benefits the migration of US. GAAP to IFRS is to use IFRS as the financial reporting standards can improve the liquidity of the capital markets and reduce the cost of capital company by providing better information to investors regarding the company's performance (Hail *et al*., 2009). However, Hail *et al*. (2009) state that, these benefits can be achieved when the adoption of new standards in actual improve the quality of reporting and comparability in reporting practices worldwide.

Convergence of IFRS on Financial Accounting Standards in Indonesia: The Institute of Indonesia Chartered Accountants (IICA) in December 2008 declared Indonesia's Plan for Convergence to International Financial Reporting Standards (IFRS) in the financial accounting standard setting. Setting accounting treatment are converging with IFRS will be applicable to the preparation of the entity's financial statements beginning on or after January 1, 2012. This was decided after a review of in-depth assessment and taking into account all the risks and benefits of convergence to IFRS.

IICA states that the compliance to IFRS for the benefit of comparability of financial reporting and increased transparency. Compliance through the Indonesian company's financial statements will be comparable to the financial statements of companies from other countries, so, it will be very clear where the company's performance better. In addition, the convergence program is also beneficial to reduce the cost of capital (cost of capital), improve global investment and reduce the burden of preparing financial statements.

The road map IFRS convergence in Indonesia is divided into three stages, namely the adoption stage, set in the time span 2008-2010. At this stage, the steps undertaken are: adoption of IFRS to IAS whole, preparation of necessary infrastructure and evaluate and manage the impact of the adoption of SFAS applicable. The second stage is the final preparation stage, set within the period of 1 year, i.e., 2011. At this stage, the steps undertaken are: completion of the preparation necessary infrastructure and application of gradually some of SFAS-based IFRS. And the last stage is the implementation phase, in 2012 with the following steps: the application of IFRS-based SFAS gradually and Evaluation of the impact of adoption of SFAS comprehensively. According to the roadmap above, the full adoption of IFRS in Indonesia was in 2012.

Indonesian capital market is the capital market are included in the category of emerging capital markets. Emerging capital markets are capital markets are in countries categorized as emerging markets, namely the market which has one of the following characteristics: market is situated in an economy with low or medium income and/or ratio of market capitalization to be invested with a low GNP.

Emerging capital markets have characteristics of concern to investors, among which are the liquidity of the market. Emerging capital market liquidity tends to be low compared to developed capital markets. Moreover, the issue of transparency, competitiveness and corruption are problems that also concern investors in emerging markets.

Another feature of the capital markets in emerging markets is the assumption that the market is inefficient due to the number of investors are small, weak communication systems, financial information that is not enough and most importantly, the lack of control in the dissemination of information (Bilgrami, 1998). Capital Market Supervisory Agency and Financial Institution in its research report, concluded that investors in the Indonesian capital market can not obtain sufficient information, so that, this can sometimes cause errors in pricing (mispricing). The character of investors typically divided into investors overreact to the information, investors who transact with the motive of speculation, the domestic investors who tend to follow a pattern of transactions by foreign investors (herding behavior).

Quality of accounting information: Accounting is a powerful source of information and accounting is not just about processing the data, aimed to mark the presence and movement of elements of the previous and the ability to respond to the needs for control. As the data bank, the entire accounting system set up on a bunch of goals, principles, norms and standards.

IASB states that the general purpose financial reporting (communication of financial information to the user) is to provide financial information about the entity reported that are useful for potential investors, lenders and other creditors in making decisions about providing resources to the entity. These decisions including buying, selling or holding equity and debt instruments and providing or settlement loans and other forms of credit. So that, the decisions taken are accurate, then the accounting information generated accounting information to be useful, information that meets the needs of the user. To be useful, the accounting information (financial) must be relevant and it aptly describes what is meant to be described (faithfully represents). The usefulness of financial information will increase if the information is comparable, verifiable, timely and understandable.

Several studies using discretionary accruals and accrual quality to measure the quality of accounting information (Trainor, 2011; Hope *et al*., 2013; Bhattacharya *et al*., 2012; Cerquera and Pereira, 2014; Rahman *et al*., 2013). While Deng (2013), Barth *et al*. (2013), Chua *et al*. (2012) and Outa (2011) use earnings management to measure the quality of accounting information. In addition, the value relevance, time loss recognition, reability value, feedback value and predictive value can also be used to measure the quality of accounting information (Kao and Wei, 2014; Deng, 2013; Barth *et al*., 2007;Chua *et al*., 2012; Outa, 2011; Ji and Lu, 2014; Barth *et al*., 2007; Lai *et al*., 2013; Barth *et al*., 2013).

IFRS and information asymmetry: Information asymmetry is a condition in which the manager as an insider have private information that is more than the parties outside the company (such as investors, creditors, analysts, etc). This information asymmetry related to information risk and is a component of the cost of capital. Watts and Zimmerman (1986) state: "information asymmetry happen in weak form and semistrong market. In weak form market, the information set contain only past security prices and/or past trading volume. In semistrong market, the information set contains all published information at the time". In the information-rich environment such as in the developed countries, information asymmetry between management and investors can be minimized (Rahman *et al*., 2013). In such an environment, public disclosure (either using formal channels such as the annual financial statements or other lines) play the role of intermediary in which management signaling private information to stakeholders, including investors.

Research aimed at proving the effect of the adoption of IFRS on information asymmetry which was commissioned by Kao and Wei (2014) who find that the adoption of IFRS has reduced information asymmetry. Naranjo find a significant link between the IFRS with information asymmetry. Chatham (2004) find that the degree of compliance with the IAS had no effect on information asymmetry and Muller III *et al*. (2011) find that IFRS lowering the information asymmetry.

Quality of accounting information and information asymmetry: Accounting information is the output of the accounting system to be used by various users such as investors, creditors, management and other users. (Albrecht *et al*., 2010). So that, the decisions taken are accurate, then the accounting information generated accounting information to be useful, information that meets the needs of the user. To be useful, the accounting information (financial) must be relevant and it aptly describes what is meant to be described (faithfully represents). The usefulness of financial information will increase if the information is comparable, verifiable, timely and understandable.

Information asymmetry is a condition in which the manager as an insider have private information that is more than the parties outside the company (such as investors, creditors, analysts, etc.). This information asymmetry related to information risk and is a component of the cost of capital. Several studies show that the quality of accounting information affecting information asymmetry. Some studies have included the Bhattacharya *et al*. (2011) and Cerquira and Pereira (2014) which show that quality of accounting information significantly affect information asymmetry. Rahman *et al*. (2013) find that earnings management to lower information asymmetry, Ferdousi find the effect of the accrual to the uncertain quality of the information, although, not significant while Purwanti and Kurniawan find that earnings management does not affect the information asymmetry.

IFRS and cost of equity capital: Li (2010) shows evidence that on average, mandatory IFRS significantly reduce the cost of equity. Li (2010) also find, that the reduction is present only in countries with strong law enforcement and that the increased disclosure and increased comparative information are two mechanisms behind the cost of reducing equity. Taken together, these findings suggest that while mandatory IFRS adoption significantly lowers companie's cost of equity, the effects depend on the strength of state law enforcement.

Lee *et al*. (2008) comparing the cost of equity capital for European countries between the pre-and post-IFRS use a different proxy and test specifications and find no evidence of a decrease in the cost of equity capital among the countries where the incentive reporting financial and law enforcement is relatively low. On the contrary, find a significant reduction in the group of high incentives, especially companies based in the UK. Merino, find the Spanish issuers show a significant reduction in the cost of equity capital after the mandatory adoption of IFRS in 2005, after using the control variables firm risk and market risk.

Quality of accounting information and cost of equity capital: Francis *et al*. (2005) prove that firms with good earnings quality has a broader voluntary disclosure of companies with poor earnings quality. It is found that voluntary disclosure is associated with lower capital costs. Effects disclosures capital costs are substantially reduced or disappear altogether (depending on the proxy cost of capital) after conditioned on earnings quality.

Bhattacharya *et al*. (2012) examine the direct relationship between the quality of earnings-as a proxy for the risk of information-the cost of equity and indirect relationships via. the variable information asymmetry. Statistically proven that a direct link has greater influence than indirect relationships.

Information asymmetry and cost of equity capital: Armstrong *et al*. (2011) suggest that the information asymmetry has a positive relationship with the cost of capital exceeds the standard risk factors on the market is not perfect whereas in a perfectly competitive market, this relationship is not found. Overall, their results show that the level of market competition is an important variable to consider when examining the association between information asymmetry and capital costs. Bellalah and Belhaj (2003) say that the cost of capital in small countries is determined globally not locally on the conditions of incomplete information.

MATERIALS AND METHODS

Objects in this study is the adoption of IFRS, the quality of information that is proxied by the accrual quality, information asymmetry proxied by the bid-ask spread as well as the cost of equity capital. The unit of analysis of this study is the annual financial statements of manufacturing companies listed in Indonesia Stock Exchange and stock trading reports monthly. Data taken from the annual financial statements as well as data from the report will be tabulated monthly stock trading to be processed and statistically tested to then be deduced. Data tabulated is the time series data which in this study tabulated data is data from financial reports and stock trading for 4 years.

Operationalization of variables

IFRS adoption: The adoption of IFRS is a period in which the Capital Market Supervisory Agency and Financial Institution said, it would streamline the convergence 18 statement of Financial Accounting Standards (GAAP) to International Financial Reporting Standard (IFRS), i.e., on January 1, 2012 in line with the commitment to adjust to international regulations. The data used in this study is four years which will be divided into two periods, namely the period before and after the implementation of IFRS in full. The period before the implementation is the data in 2010-2011 while the data after implementing is data in 2012-2013.

It will be tested using path analysis which is to see the direct influence of the IFRS adoption on information asymmetry and cost of equity as well as the indirect influence of the adoption of IFRS and quality of accounting information on cost of equity through information asymmetry. To test this, the adoption of IFRS operationalized variables using dummy variables which were given a score of 0 for the period before adoption and a score of 1 for the period after adoption (Horton *et al*., 2013; Adibah *et al*., 2013).

Quality of accounting information: The quality of accounting information in this study is measured using the accrual quality, using the model introduced by Dechow and Dichev (2002) and later developed by Francis *et al*. (2008). This model is also used by Core *et al*. (2008) and Bhattacharya *et al*. (2012). In addition, this study attempted to examine the quality of accounting information using the model used by Barth *et al*. (2007) which is to see the correlation between accruals and cash flows.

Accrual quality: Accrual quality is described by the following equation (Francis *et al*., 2005; Core *et al*., 2008; Bhattacharya *et al*., 2012):

$$TCA_{j,t} = \beta_{0,j} + \beta_{1,j}CFO_{j,t-1} + \beta_{2,j}CFO_{j,t} + \beta_{3,j}CFO_{j,t+1} + \beta_{4,j},\Delta REV_{j,t} + \beta_{5,j}PPE_{j,t} + \varepsilon_{j,t}$$

$$TCA = (\Delta CA - \Delta Cash) - (\Delta CL - \Delta STDEBT),$$

TCA is Total Current Aaccruals

Where:

ΔCA = Changes in Current Assets
ΔCcash = Changes in cash and cash equivalent
ΔCL = Changes in Current Liabilities
ΔSTDEBT = Changes in Short Term Debt
CFO = Cash Flow from Operation
ΔREV = Changes in Revenue
PPE = Property, Plant and Equipment
ε = Error

Dechow and Dichev (2002) explains that CFO_{t-1} shows the cash flows that occur corresponding amount recognized in earnings (e.g., collection of receivables), CFO_t refers to the cash flow received or paid in the same period as the cash flows are recognized in earnings and CFO_{t+1} refers to the cash is received or paid before income or expense recognized in income such as cash payment for supplies.

Furthermore, Dechow and Dichev (2002) state that the quality of the accrual is based on assumptions, so that, if there is an error should be corrected in accruals and earnings in the future. Through this model, they argued that the estimation error and subsequent correction of the noise that reduces the accrual, so, the quality of accruals and earnings decreased in accordance with the amount of the estimated value of the error. Process match between working capital towards the realization of the cash flows used to measure the quality of accruals. Error value is high, meaning that the big difference between working capital and cash realization which means indicates the quality of the low accrual. The magnitude of accruals quality used is the residual value of the regression model.

Information asymmetry: Information asymmetry is measured using the bid-ask spread, i.e., the difference between the stock price desired by the buyer (bid price) with the desired stock price by the seller (ask price) (Leuz and Verrecchia, 2000). Bid prices and ask prices are determined by the stock dealer as a market maker and the amount varies from one company to another, depend on the level of information asymmetry between investors who have information and investors who do not have the information (Callahan *et al*., 1997).

The bid-ask spread is used as a proxy for information asymmetry because there are two types of investors: investors who need liquidity (liquidity traders) and investors who need information (informed traders). (Callahan *et el*., 1997). Dealers predict profits from transactions with investors who need liquidity but predicts losses from transactions with investors who have information, i.e., investors who trade only if they benefit. When, dealers feel that the risk of high information asymmetry (transactions with investors who have information increases), then they will expand certain costs that harm, thus increasing the bid-ask spread (Callahan *et al*., 1997). Equation of Bid-ask spread:

$$\text{Bid ask spread}_{it} = \frac{\text{Ask price-Bid price}}{\left[\left(\text{Ask price = Bid price}\right)/2\right]}$$

Bid price and the ask price used in this study is priced on a monthly trade (monthly trading) during the study period.

Cost of equity capital: Cost of equity capital is treated as a dependent variable in this study. Cost of equity capital is estimated using a model Ohlson as used in Botosan and Utami. Calculation of cost of equity capital using Ohlson simplified models:

$$r = \frac{B_t + X_t + 1 - P_t}{P_t}$$

Where:

r = Cost of equity capital
B_t = Book value per share period t
X_{t+1} = Earning per share period t+1
P_t = Share price period t

Earning per share in the priod t+1 estimated using Random Walk Model:

$$E_{(xt+1)} = X_t + \delta$$

Where:

$E_{(xt+1)}$ = Estimated earnings per share period t+1
X_t = Actual earnings per share period t
* = The drift term is the average change in earnings per share over 5 years

Population and research samples: The population of this research is manufacturing companies listed in Indonesia Stock Exchange in 2010- 2013. The period of 2010-2011 is a period in which SFAS convergence of IFRS has not been fully and effectively established as guidelines for the preparation of financial statements in Indonesia while period of 2012-2013 is a period in which the IFRS convergence IAS has been set fully and effectively as guidelines for the preparation of financial statements in Indonesia and is mandatory for public companies.

Selection of manufacturing enterprises as the study population because the companies are manufacturing companies with competition external capital greater than other types in which the companies are expected to have a greater incentive to provide disclosure that more and more informative under SFAS convergence of IFRS. (Lee and Zeng, 2013). In 2010, there were 130 companies listed, in 2011 there were 132, companies, in 2012 there were 134 companies and in 2013 there are 137 companies.

The sample is part of a population that is expected to represent the population as a whole. Because this research is to perform a statistical test, the sampling method used is probability sampling, by simple random sampling technique. The number of samples is determined using a Slovin equation:

$$n = \frac{N}{1 + Ne^2}$$

Where:

n = Number of samples
N = Number of target population
g = The level of error specified

Using the formula, with the specified error rate of 10% (0.1) and the target population number 127, the sample size for this study are 57 companies.

Path analysis is used to examine the effect of the quality of accounting information (X_1) and the adoption of IFRS (X_2) on information asymmetry and subsequent impact on the cost of capital (Z). Model of testing can be describepd as follows: structural (Eq. 1 and 2):

$$Y = p_{y,\,x1}X_1 + p_{y,\,x2}X_2 + \varepsilon_1 \quad (1)$$

$$Z = p_{Z,\,x1}X_1 + p_{z,\,x2}X_2 + p_{z,\,y}Y + \varepsilon_2 \quad (2)$$

RESULTS AND DISCUSSION

Path analysis is used to test the effect of the adoption of IFRS and the quality of accounting information to information asymmetry and its impact on the cost of equity capital. Variable IFRS is divided into periods before and after the adoption of the full use of a dummy variable, the variable quality of accounting information is proxied by the accrual quality, information asymmetry is proxied by the bid-ask spread and the cost of equity capital (Table 1).

Based on data in Table 2 and 3, it appears that the structural Eq. 1 and 2 has fulfilled classical assumption. The absence of autocorrelation problem in which the value of Durbin-Watson for each equation in the range of <0<3, no problem heteroscedasticity in where spearman rho correlation indicates a value >0.05 or problems multi koliniearitas where all coefficients VIF<10. For descriptive statistics, correlation coefficient, beta

Table 1: Operationalization of variables

Name of variables	Type of variables	Variable measurement
Adoption of IFRS	Independent variable	Dummy variable, Score 1: Post full adoption, Score 0: Pre full adoption (Horton *et al*., 2013; Adibah *et al*., 2013)
Quality of accounting information	Dependent and independent variable	Quality of accrual, residu value of the equation: $TCA_{j,t} = \beta_{0,j}+\beta_{1,j}CFO_{j,t-1}+\beta_{2,j}CFO_{j,t}+\beta_{3,j}CFO_{j,t+1}+\beta_{4,j}\Delta REV_{j,t}+\beta_{5,j}PPE_{j,t}+\varepsilon_{j,t}$ $TCA = (\Delta CA-\Delta cash)-(\Delta CL-\Delta STDEBT)$: total current accruals, ΔCA = changes in current assets, Δcash = Changes in cash dan cash equivalent, ΔCL = Changes in current liabilities, ΔSTDEBT = Changes in Short Term Debt, CFO = Cash Flow from Operation, ΔREV = Changes in Revenue, PPE = Property, Plant and Equipment, E = Error; Modified of Dechow dan Dichev Model (Francis *et al*., 2005; Core *et al*., 2008; Bhattachary *et al*., 2011)
Information asymmetry	Dependent variable	Bid ask spread it = Ask price-Bid price/[(Ask price+Bid price)/2] (Rahman *et al*., 2013; Callahan, *et al*., 1997; Leuz and Verrecchia, 2000)
Cost of equity capital	Dependent variable	r = Bt+Xt+1-Pt/Pt

Table 2: Research samples

Years/Sector of industry	No. of companies
Basic industries and chemicals	60
Various industries	38
Industries with consumption (2010)	32
Total	130
Basic industries and chemicals	61
Various industries	38
Industries with consumption (2011)	33
Total	132
Basic industries and chemicals	60
Various industries	38
Industries with consumption (2012)	36
Total	134
Basic industries and chemicals	61
Various industries	39
Industries with consumption (2013)	37
Total	137

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coefficient, a significance value and R^2 can be seen in Table 4. Based on the data in Table 3, the structural Eq. 1 and 2 are as:

$$Y = 0.118X_1 - 0.004X_2 + \varepsilon_1 \tag{3}$$

$$Z = 0.177X_1 - 0.04X_2 + 0.014Y + \varepsilon_2 \tag{4}$$

ε_1 dan ε_2 is calculated with equation:

$$\varepsilon = \sqrt{1-R^2}$$

$$\varepsilon_1 = \sqrt{1-0.014} = 0.989$$

$$\varepsilon_2 = \sqrt{1-0.101} = 0.943$$

The results of path analysis test consists of test results of structural Eq. 1 and 2 and analyzes the influence of direct and indirect IFRS independent variables and the quality of accounting information to the dependent variable asymmetry of information. The following analysis for each equation (Fig. 1 and 2).

Structural equation 1: The average value for the variable quality of accounting information, adoption of IFRS and bid ask spread are -217.384, 0.5 and 0.067, respectively while the standard deviation is 501.616, 0.501 and 0.12, respectively. The standard error of the estimate for 0.120 (the unit used is the dependent variable, namely the bid ask spread). It is seen that the value of the standard error of the estimate is smaller than the standard deviation value of the bid ask spread which means that the regression model is better to act as a predictor of information asymmetry than the average bid ask spread itself. F-significance value of 0.210 indicates that the independent variable quality of accruals and adoption of IFRS do not significantly affect the dependent variable information asymmetry proxied by the bid ask spread. Rated R^2 of 0.014 indicates that the variable quality of accruals and adoption of IFRS as predictors can only explain 1.4% variable information asymmetry while the rest is explained by other factors. The correlation coefficient between variable asymmetry of information and the adoption of IFRS for 0.006 negative and the variable quality of information asymmetry and accounting information of positive 0.117, indicating a very weak correlation. The correlation coefficient between the variables of information asymmetry and vaiabel adoption of IFRS is negative indicates that the increased adoption of IFRS will reduce information asymmetry. This is consistent with the hypothesis. As well as the correlations between variables accrual quality and information asymmetry which shows the positive value.

Values are calculated using the accrual quality of residual total accruals. High residual value means indicate a lower quality, so that the positive correlation coefficient indicates that the higher the residual value (the lower the quality), the information asymmetry is also higher. These results are also consistent with the hypothesis of the study.

Table 3: The results of the classical assumption test 1

Type of test	Tool of test	Results
Autocorrelation	Durbin-Watson score <0<3, there is no autocorrelation problem	Durbin-Watson score: 1.858
Heteroscedasticity	If the correlation between independent variables with residuals in the significance of more than 0.05 then it can be said that there is no problem of heteroscedastisitas on the regression model	Spearman's rho correlation: IFRS: Sig. 0.639 TAcc, Sig. 0.549
Multicolinearity	VIF score of any independent variable. VIF<10, there is no multicollinearity	IFRS: 1.006 TAcc: 1.006

Table 4: The results of the classical assumption test 2

Type of test	Tool of test	Results
Autocorrelation	Durbin-Watson score <0<3, there is no autocorrelation problem	Durbin-Watson score: 2.007
Heteroscedasticity	If the correlation between independent variables with residuals in the significance of more than 0.05 then it can be said that there is no problem of heteroskedastisitas on the regression model	Based on the glejser test most Sig. >0.05, so, it does not become
Multicolinearity	VIF score of any independent variable. VIF<10, there is no multicollinearity	IFRS: 1.006 total accrual: 1.020 Bid ask spread: 1.014

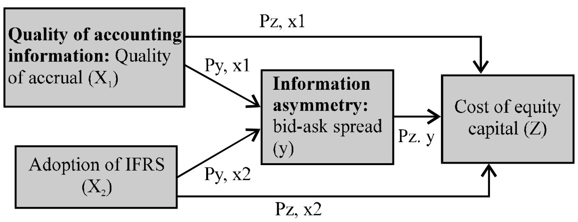

Fig. 1: Model of path analysis test

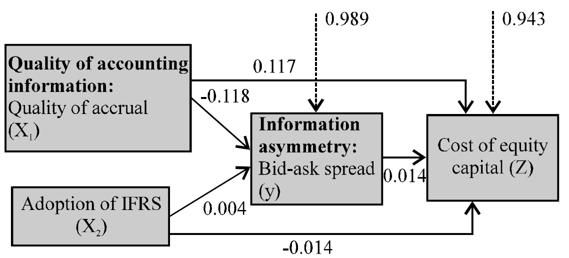

Fig. 2: Result of path analysis test

Structural equation 2: The average value for the variable quality of accruals, adoption of IFRS, information asymmetry and cost of equity are -217.384, 0.5, 0.069 and 1.033, respectively. While the standard deviation of each is 501.6159, 0.501, 0.120 and 9.315. The standard error of the estimate of 8.89 (the unit used is the dependent variable, i.e., the cost of equity). It is seen that the value of the standard error of the estimate is smaller than the standard deviation of the cost of equity which means that the regression model is better to act as a predictor of the cost of equity than the average cost of equity itself. The significant value-F for 0.000 indicate that the regression model can be used as predictors of the dependent variable cost of equity. Rated R^2 of 0.101 indicates that the variable quality of accruals, adoption of IFRS and the information asymmetry as predictors only 10.1% are able to explain the variable cost of equity while the rest is explained by other factors. The correlation coefficient of the cost of equity variable to accrual quality variable, the cost of equity variable to adoption of IFRS variable and the cost of equity variable to information asymmetry variable, respectively are 0.32, 0.42 and 0.41. The whole correlation coefficient indicates a weak correlation between the independent variables on the dependent variable. Although, it shows a weak relationship but the value of each correlation coefficient in accordance with the hypothesis which is the correlation between the cost of equity and the quality of accruals are positive, meaning that the higher the quality of accruals as measured by the residual value total accruals and indicates the poor quality of accruals, the higher the cost of equity. As well as the correlation between the cost of equity to the adoption of IFRS and the cost of equity to the bid ask spread. Sig. t to the quality of accruals variable, adoption of IFRS and the bid ask spread, respectively 0.000, 07.93 and 0.957. From Sig. t is evident that the only independent variable quality of accrual significant influence on the dependent variable cost of equity. Two other independent variables, adoption of IFRS and bid ask spread are not significant. Descriptive statistics, correlation coefficients, beta coefficients, F-significance and t-value and R^2 structural equations:

Structural Eq. 1
Mean:

- Tacc: -217.3844
- IFRS: 0.5
- BIDASK: 0.0668
- Costof equity: 1.0335

SD:

- Tacc: 501.61588
- IFRS: 0.50110
- BIDASK: 0.121

SE of the estimate:

- 0.120

Coefficient beta (y, x):

- TAcc: 0.118
- IFRS: -0.004

Correlation coefficient:

- BIDASK-IFRS: -0.006
- BIDASK-TAcc: 0.117

p-values:

- IFRS: 0.955
- TAcc: -0.078

R^2:

- 0.014

F-Sig.:

- 0.210

Structural Eq. 2

Mean:

- TAcc: -217.3844
- IFRS: 0.5
- BIDASK: 0.0668
- Costof equity: 1.0335

SD:

- TAcc: 501.61588
- IFRS: 0.50110
- BIDASK0: 12033
- Costof equity: 9.31494

SE of the estimate:

- 8.89

Coefficient beta (z, x) dan (z, x):

- TAcc: 0.577
- IFRS: -0.041
- BIDASK: 0.014

Correlation coefficient:

- COSTof EQUITY-TAcc: 0.32
- COSTof EQUITY-IFRS: -0.42
- COSTof EQUITY-BIDASK: 0.41

p-values:

- TAcc 0.000
- IFRS 0.793
- BIDASK 0.957

R^2:

- 0.101

F-Sig.:

- 0.000

Direct and indirect effect of variable IFRS, quality of accounting information and information asymmetry: Beta coefficient shows the following results: the direct effect of the quality of the accrual to the cost of equity is 0.177 while the influence of the indirect-through the bid-ask spread is 0.13. This means that the direct effect of accrual is greater than the indirect influence. The direct effect of adoption of IFRS variable to cost of equity is equal to 0.041 while the indirect effect is 0.01, so it, can be concluded that the direct effect of adoption of IFRS on the cost of equity is greater than the indirect effect, i.e., through the bid ask spread.

This study aimed to examine the effect of the adoption of IFRS and the quality of accounting information on the cost of equity, either directly or through the variable information asymmetry. The quality of accounting information is proxied by the accrual quality model (Dechow and Dichev, 2002) as modified by Francis *et al*. (2008), Core *et al*. (2008) and Bhattacharya *et al*. (2012) while the variable information asymmetry is proxied by the bid-ask spread.

The results of processing and analysis of data on structural Eq. 1, shows that the quality of accruals and IFRS does not affect the bid ask spread significantly. The adoption of IFRS and the quality of accruals also has a very weak correlation to the bid ask spread. Despite having a very weak correlation but the nature of the correlation between the independent variables and the dependent variable is consistent with the hypothesis. Structural Eq. 2 shows that, overall, the independent variables have a significant effect on the dependent variable. But partially, only the quality of accruals that had a significant influence on the cost of equity. The correlation coefficient indicates a weak correlation between the independent variables on the dependent variable but as well as structural Eq. 1, the nature of the relationship of each independent variable on the dependent variable is consistent with the hypothesis.

Significant influence as well as the correlations is very weak, both on a structural Eq. 1 and 2, according to the researchers this is due to the capital market in Indonesia is still classified as emerging market and is clearly not efficient (Watts and Zimberman, 1986). As stated by Ball (2005), that IFRS is a set of standards that is destined for the market that has been streamlined while in emerging markets, the effectiveness of the standard is still in doubt, given the generally emerging countries are countries that still debt based economies where for an environment like this, the application of IFRS still be regarded as a cost, rather than as a benefit (Lee *et al*., 2008).

CONCLUSION

The results also show that full adoption of IFRS in Indonesia has not met the expected results. There is no evidence that the adoption of IFRS and the quality of accounting information has lowered the cost of equity.

LIMITATIONS

This study also has various limitations among them is the No. of samples is determined with tolerable error rate by 10% and the time span is too short to test the impact of the application of IFRS which is only two years after the adoption of IFRS is fully effective. Based on the above limitations, the researchers suggest studies after this in order to minimize the error rate is tolerable in determining the number of samples as well as extending the time range (time horizon) of the analysis unit under test.

SUGGESTIONS

Based on the results of the study, the researchers suggested that regulators and policy makers can evaluate the standards and rules that apply in order to increase the efficiency of the capital market in Indonesia. Regulators and policy makers should give more incentives to market participants and enforcing the law enforcement for those who do not follow the standards and rules that have been set. Results of research Capital Market Supervisory Agency and Financial Institution (2011) in his research report, concluded that the investor in Indonesia capital market has not been able to obtain sufficient information, so that, this can sometimes cause errors in pricing (mispricing), proving that there are still many things that needs to be addressed in the regulation of transactions in the Indonesian capital market.

ACKNOWLEDGEMENTS

Sri Mulyani NS, S.E., M.Si., Ak., the Head of the Doctoral Program of Accounting Science Universitas Padjajaran. Azhar Susanto, S.E., M.Buss. Ak., former the Head of the Doctoral Program of Accounting Science Universitas Padjajaran.

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