

# THE IMPACT OF INTERNATIONAL FINANCIAL REPORTING STANDARDS ON COST OF CAPITAL

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## Abstracts

This paper discusses empirical research examining the impact of International Financial Reporting Standards (IFRS) on cost of capital. Using a sample of 1.173 observations of publicly listed companies on the Indonesian Stock Exchange for the fiscal year that ends on December 31, 2006 through 2013, this research finds evidence of positive relationship between IFRS implementation and cost of capital. This means that in post adoption period, the cost of capital increase. This result is inconsistent with investor's expectation, in which IFRS implementation will reduce information asymmetry which in turn decreases cost of capital. When analysis is decomposed into per sector's analysis, the results are inconsistent. For some sectors, IFRS adoption does not have impact on the cost of capital, whereas for the others IFRS adoption positively affect the cost of capital. This study provides further evidence on the economic consequence of IFRS implementation on cost of capital using data from emerging market with low-level coercion which is Indonesian Capital Market.

**Keywords:** IFRS, Cost Of Capital, Leverage, Size, Information Asymmetry

**JEL:** M41

## 1. INTRODUCTION

This research is motivated by gradual adoption of International Financial Reporting Standards (IFRS) by Indonesian listed companies since the year of 2008 and full adoption in the year of 2012. IFRS adoption has an economic impact (Epstein, 2009). One of impact of IFRS adoption is the increase of accounting information and therefore this ultimately leads to the increase of capital market liquidity and in turn reduces the cost of capital (Daske and Gebhardt, 2006). This confirms a statement of the former SEC chairman, Arthur Levitt, that 'The truth is, high quality standards lower the cost of capital' (Levitt 1998, 82). Based on the statement, several researches had performed to confirm it.

Several authors observed the consequences of adopting IFRS. They substantiate that reports under IFRS are of higher quality compared to the reports prepared under domestic GAAPs in various countries. These studies provide evidence that market liquidity and trading volume increases subsequently to the adoption of IFRS (Leuz and Verrecchia, 2000). Accounting quality increases due to less chances of earning management in the financial statements (Bartov, Goldberg, and Kim, 2005), more foreign mutual funds' investments are attracted (Covrig, Defond, and Hung, 2007), efficiency increases in the form of debt contracting (Kim and Shi, 2012) and also forecasting errors by the financial analysts are reduced (Ashbaugh and Pincus, 2001). Further IFRS adoption leads to more cross-border comparability, transparency, decreases in the cost of collecting information, increase in

competition and efficiency in the capital market by reducing the information asymmetry (Ball, 2006; Choi and Levich, 1991).

There are at least two reasons why mandatory IFRS adoption is expected to reduce the Cost of capital. First, prior research finds that IFRS requires greater financial disclosure than most local accounting standards (Ashbaugh and Pincus 2001) and that increased disclosure reduces the cost of capital (Botosan 1997; Easley and O'Hara 2004; Lambert, Leuz, and Verrecchia, 2007). Second, prior literature argues that one set of uniform accounting standards is likely to improve information comparability across firms, which in turn is expected to reduce the cost of capital (Armstrong, Barth, Jagolinzer, and Riedl, 2010).

A research which focuses on the impact of IFRS adoption on cost of capital was performed by Hail and Leuz (2007) who find some evidence that the cost of capital is lower for all firms reporting under IFRS and for those that adopted IFRS for the first time in 2005 (relative to non-IFRS firms). Another research performed by Daske, Hail, Leuz, and Verdi (2009) evaluates the effect of IFRS by focusing on heterogeneity of economic consequences and find evidence that companies gain IFRS adoption benefit in increase of market liquidity and reduce of cost of capital. This result is confirmed by Li (2010) who examines a sample of 6,456 firm-year observations of 1,084 EU firms during 1995 to 2006 and finds evidence that, on average, the IFRS mandate significantly reduces the cost of equity for mandatory adopters by 47 basis points in countries with strong legal enforcement. Daske (2006) uses a set of German firms that have

adopted such standards and investigate the potential economic benefits of this reporting strategy by analyzing their cost of capital through the use and customization of available implied estimation methods. Evidence from the 1993-2002 periods fails to document lower expected cost of capital for firms applying IAS/IFRS or US-GAAP. Patro and Gupta (2014) examines whether adoption of IFRS reduces Cost of capital for firms in four Asian Countries, namely China, Hong Kong, Israel and Philippines. The results vary for different countries. The firms in Hong Kong and Philippines get benefit from the reduction in their cost of capital after adopting IFRS, but for firms in China and Israel cost of capital increased. It is also evident from the study that other firm specific control variables have no impact on cost of capital.

While prior research finds some evidence that voluntary IFRS adoption reduces the cost of capital (Leuz and Verrecchia 2000; Barth, Landsman, and Lang, 2008), little empirical evidence supports this assertion for mandatory IFRS adoption and, hence, the economic consequences of mandatory adoption remain largely unclear (Daske, Leuz, and Verdi, 2008). The purpose of this study is to fill this gap by exploring the cost of equity effects of IFRS adoption on the cost of capital in the public company listed in Indonesian Stock Exchange. Indonesia is selected as the country for study for several reasons. Firstly, Indonesian capital market is one of emerging stock exchange and Indonesia listed companies fully adopt IFRS in 2012 (Indonesian Institute of Accountant, 2012). Indonesia, as a developing country, has several flaws, especially in law enforcement and therefore similar research will be performed in Indonesia to provide evidence whether the result similar to that of in strong legal coercion countries. Hence, this research seeks to address the following research question: does IFRS adoption decrease cost of capital for companies listed in Indonesian Stock Exchange?

This study contributes to the literature in several ways. First, it provides insights into the economic consequences of mandatory IFRS adoption. Despite the mandatory adoption of IFRS by over 8,000 EU firms, there is limited evidence on its capital market effects (Daske 2006; Daske et al. 2008). This study improves our understanding of the implications of mandatory IFRS adoption by providing evidence on its cost of equity benefits. This evidence, however, should be interpreted with caution, as this study does not explicitly consider the costs of mandating IFRS and, hence, it only speaks to the gross rather than net benefits of mandating IFRS. Second, this study contributes to the limited empirical research on the economic consequences of disclosure regulation. Despite the extensive and diverse disclosure regulations that exist around the world, there is little evidence on the costs and benefits of disclosure regulation (Healy and Palepu, 2001). Third, the findings of this study highlight the importance of institutional arrangements in shaping the outcomes of financial reporting convergence. One of the ultimate goals of mandating IFRS is to develop a financial reporting infrastructure (Tweedie 2006). Prior studies indicate that high-quality accounting standards alone do not necessarily result in high-quality financial reporting (Ball, Robin, and Wu, 2008). This paper is organized

as follows: section two discusses the literature review along with the hypotheses development. The research method and results discussion are presented in section three and four respectively. Finally, section five presents the conclusions along with the implications of the study, limitations, and suggestions for further research.

## 2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### 2.1. Literature Review

This study uses agency theory which predicts and explains behavior of related parties in principal-agent relationships (Jensen and Meckling, 1976). The relationship between principal and agent is agency relationship. In this relationship, both principal and agent are assumed to be self-interested and act for their own interests. Therefore, when principal delegates the authority, agent tends to pursue personal agendas such as empire building and wasting firm resources for personal benefits rather than fulfilling the principle interest (Barnea, Haugen, and Senbet 1985). Principal-agent relationships create a potential conflict between principal and agent. Agency theory states that agency conflict between principal and agent could be created. The conflict happened because both principal and agent want to maximize their own utility and interest (Jensen and Meckling, 1976). The agency conflict can be reduced by implementing corporate governance, because the corporate governance philosophy is to balance between principal and agent interest through a governance mechanism (Lukviarman, 2012).

Agency theory is the branch of game theory that studies the design of contracts to motivate a rational agent to act on behalf of a principal when the agent's interests would otherwise conflict with those of the principal (Scott, 2009). Monitoring practice, to ensure that actions performed by agent are in line with the principle's interests, is hard to be realized because of the complexity of agent's activities. This situation is called information asymmetry (Scott, 2009). Information asymmetry is a condition where some parties to business transactions may have a relevant information advantage over others. Agency problem will arise when there is information asymmetry both in term of activities and information owns by agent. The first problem is called hidden action and the second problem is called hidden information. Hidden action leads to moral hazard whereas hidden information leads to adverse selection (Arifin, 2007). Moral hazard is a type of information asymmetry whereby one or more parties to business transaction, or potential transaction, can observe their action in fulfillment of the transaction but not the other parties. Adverse selection is a type of information asymmetry whereby one or more parties to business transaction, or potential transaction, have an information advantage over other parties (Scott, 2009).

Information asymmetry leads to principal's high quality information need is not fulfilled. The information asymmetry literature suggests that greater disclosure mitigates the adverse selection problem and enhances liquidity, thereby reducing

the cost of equity through lower transaction costs and/or stronger demand for a firm's securities (Amihud and Mendelson 1986; Diamond and Verrecchia 1991; Easley and O'Hara 2004). Given proper implementation and enforcement, mandatory IFRS adoption can reduce the cost of capital because IFRS is a high quality standard which requires a more disclosure than the old accounting standard.

The increase in information disclosure will reduce information asymmetry between the firms and investors which in turn decreases cost of capital (Patro and Gupta, 2014). Ly (2010) have tried to explain this phenomenon by proposing two types of theories. The first theory says that investor's belief of the expected returns from the securities mainly rely on the available information provided by the companies. Estimation risk is higher for those companies that disclose less information as compared to those that disclose more information. Thus as a compensation for this high estimation risk, investors seek higher returns which eventually lead to higher cost of capital. The second theory points out that transaction cost increases with the information asymmetry. Investor's rejection for stocks with high transaction costs leads to low market liquidity. Now the companies are expected to provide discounts to investors for keeping these stocks in their portfolio which increases cost of capital. Hence more financial disclosure leads to less cost of equity by reducing transaction cost.

Various empirical researches have tested these theoretical assumptions by using various proxies and find that after the introduction of IFRS in the financial statements, cost of capital decreases. Impact of mandatory adoption of IFRS on cost of capital is different for different firms in UK with different characteristics (Christensen, Lee, and Walker, 2015). Just before the date of announcement of the mandatory adoption of IFRS, there is a decrease in cost of capital expecting the economic consequences in the capital market, but later the cost increases after adoption actually happens (Dasgupta, Gan, and Gao, 2010). Further the study finds the effects are more apparent for firms that are voluntary adopters. After comparing the firms in a particular period, it was found that firms who adopted IFRS have lower cost of capital as compared to firms which have not (Hail and Leuz, 2006). Mandatory adoption of IFRS lowers the level of cost of capital for Dutch listed companies (Prather-Kinsey, Jermakowicz, and Vongphanith, 2008). The study of Li (2010) shows that mandatory adoption of IFRS significantly reduces the cost of capital and the effects highly depend on the legal coercion system. Gao (2010) says this relation holds only in certain circumstances. According to this study if there is perfect competition between the investors in the economy, the cost of capital will increase with the quality of disclosure when the new investments are perfectly elastic in nature.

Cost of capital is the required rate of return by investors for their investments in equity capital. It can be measured either directly or using proxies. Direct measures of calculating cost of capital is unable to calculate asymmetry of information, hence alternative proxies are used like trading volume, share price volatility (Leuz and Verrecchia, 2000). The Capital Asset Pricing Model (CAPM) is a widely

used model to measure the cost of capital. The cost of capital depends on the risk free rate plus the equity sensitivity to market risk times the expected market return on equity minus the expected risk-free rate of return.

There are various models available to measure the cost of capital directly such as residual income valuation model (Ohlson, 1995) abnormal earnings growth valuation model (Ohlson & Juettner-Nauroth, 2005) and dividend discount model (Gordon and Shapiro, 1956). The Price Earnings Growth (PEG) ratio model is developed by Easton (2004) and is the price-earnings (PE) ratio divided by the short-term earnings growth rate. The choice of the accounting standards do not influence the variables used in the PEG-model. Hence PEG -model has been used to measure the cost of capital in this study. The PEG-model itself has some specific shortcomings. Easton (2004) stated two assumptions which should be made when applying this model to measure the implied cost of capital. One of the assumptions concerns the variables of the equation; the forecasted earnings per share for the second year should be higher compared with the forecasted earnings per share for the first year. This assumption is to prevent a negative input that would cause impossibility to resolve the equation giving the cost of capital. Another assumption necessary in the use of PEG-model is a constant growth in the accounting earnings, in addition guarding against a possible equation error. The model implicitly assumes that the short-run growth forecast also captures the long-run future.

## 2.2. Hypotheses Development

According to previous theoretical and empirical evidence in this field, mandated disclosures, as the legal requirement of the International Financial Reporting Standards (IFRS) adoption in the EU, can reduce the cost of capital through at least two different paths: increasing the quality of financial disclosure and enhancing information comparability (Merino, Plans, and Guerrero, 2014). IFRS usually are more capital-market oriented and more comprehensive, particularly in terms of disclosure requirements, than local accounting standards (Daske et al., 2008). This higher quality financial reporting and better disclosure reduce adverse selection problems in stock markets, enhancing liquidity and allowing for a decrease in the cost of equity, through diminishing transaction costs, stronger demand for securities (Easley and O'Hara, 2004) and lower forward-looking betas (Francis, Khurana, and Pereira, 2005; Lambert et al., 2007). A second argument for explaining the beneficial effects of IFRS adoption on the cost of capital is that a uniform set of accounting standards can improve comparability of financial information of firms across markets and countries, making the use of information less costly for investors and, in turn, reducing information asymmetries and leading to a lower cost of capital (Covrig et al., 2007). The impact of information comparability on firms' cost of capital seems to be a critical issue. In fact, even if the quality of corporate reporting is not enhanced by the mandatory adoption of IFRS, the financial information provided by firms in different markets and countries is still very useful to investors as IFRS reporting enhances the comparison across firms and

drops estimation risk (Daske et al., 2008; Lambert et al., 2007).

Yet, there is empirical evidence suggesting that the positive effects of IFRS adoption on the cost of capital can only emerge if the improve in quality reporting and the enhanced information comparability across firms is consistent with firms' reporting incentives and enforcement mechanisms (Li, 2010). In other words, it is unclear that mandating the use of IFRS alone makes financial information more informative or comparable (Daske et al., 2008). In fact, reporting incentives and enforcement play an important role in explaining the positive impact of IFRS mandatory adoption as capital-market effects have only emerged in countries with strong institutions and legal systems. This is the reason why many countries have made enforcement changes (i.e. the creation of enforcement authorities that assume responsibility for IFRS compliance, governance and auditing reforms) along with the switch in accounting standards to support it, and it seems to be this bundle that is responsible for the positive capital-market outcomes (Christensen, Hail, and Leuz, 2013).

In the case of the mandatory IFRS adoption in the EU, the shift to a new accounting regulation has been accompanied with several institutional changes, such as the Financial Services Action Plan (FSAP) in 1999 or the series of directives to improve financial market regulation. These institutional changes can modify firms' reporting incentives leading to better quality disclosures and, thus, to a lower cost of capital (Merino et al., 2014). As many countries with different enforcement regimes and institutional structures adopted the similar IFRS, it is in practice difficult to disentangle the effects stemming from the shift in the information disclosure from other external effects. Another difficulty is identify whether the effects are evidenced just around the time of the introduction of IFRS or, instead, they remain over time (Merino et al., 2014). Hence, there are some unsolved questions that can be addressed through a focused analysis on particular countries in order to get to comparable results that may avoid the abovementioned noisy effects. This motivates us to perform a research in Indonesia.

Previous studies have found some evidence that voluntary IFRS adoption reduces the cost of capital (Leuz and Verrecchia, 2000; Daske, 2006; Barth et al., 2008; Karamanou and Nishiotis, 2009; Hail, Leuz, and Wysocki, 2010), nonetheless there is little (if any) empirical evidence supporting the aforementioned relationship for mandatory IFRS adoption and cost of capital. One of research about mandatory IFRS adoption is performed by Daske et al. (2008) who examines the economic consequences of mandatory IFRS reporting on market liquidity, cost of capital and Tobin's q across 26 countries. Their results show that: (1) an average market liquidity increase around IFRS introduction; (2) a decrease in firms' cost of capital and an increase in equity valuation, but only prior to the official adoption date; and (3) market-capital benefits only appear to be significant in countries where firms have incentives to be transparent and where legal enforcement is strong. Similarly to our study, Li (2010), using a focused EU sample, additional data in the postadoption period, a difference-in-differences research design, and tests to account for

a transition effect, she finds consistent evidence that the IFRS mandate is associated with a significant reduction in the cost of capital for mandatory adopters, but, unlike our work, finds no significant effect for voluntary adopters at the time of mandatory adoption. She also shows how disclosure and enhanced comparability are two of the possible mechanisms behind the cost of equity effects.

After going through the literature review on the IFRS related studies and studies relating IFRS and Cost of capital the following research gaps were identified. Number of studies on the influence of IFRS on cost of equity for capital market of various European countries exists but capital for Asian countries, the studies are not limited. Not a single study is available which has traced the industry wise impact of IFRS on cost of equity within a single country and supported the reasons behind it. Prior studies focus primarily on the economic consequences of voluntary IFRS adoption, providing some evidence that voluntary adoption reduces the cost of capital (e.g., Leuz and Verrecchia 2000; Barth et al. 2008). There is little empirical evidence, however, on the cost of equity effects of mandatory IFRS adoption. While providing useful insights, the findings on voluntary IFRS adoption are not necessarily generalizable to the case of mandatory IFRS adoption. This is because voluntary adopters self-select to follow IFRS after considering the related costs and benefits, with the cost of capital effects being only one of them, whereas mandatory adopters in the EU switch to IFRS because this switch is required by regulation. The effectiveness of this regulation in achieving benefits such as a reduction in the cost of equity is likely to depend on the extent to which the institutional environment influences preparers' actual reporting incentives (Ball et al. 2003). Therefore, it is unclear *ex ante* how mandatory IFRS adoption impacts firms' cost of capital and this remains an empirical question.

Moreover, prior studies also report inconclusive evidences. Some report that IFRS adoption increase cost of capital whereas the others decrease cost of capital (Patro and Gupta, 2014). The benefit from the reduction in their cost of capital after adopting IFRS is happened in the strong legal coercion countries (Li, 2010) and the decrease in cost of capital just before mandatory announcement date expecting the economic consequences of adoption by the market (Daske et al., 2008). Indonesia is a weak legal coercion and law enforcement with moderate institutional supports. Hence, we offer the following hypothesis:

Hypotheses<sub>1</sub>: *IFRS implementation affects cost of capital for companies listed in Indonesian Stock Exchange.*

Hypotheses<sub>2</sub>: *IFRS implementation affects cost of capital differently on the various industry type.*

### 3. RESEARCH DESIGN

#### 3.1. Sample Selection

This study examines relationship between IFRS adoption and cost of capital. The sample used in this research are firms listed at the Indonesian Stock Exchange (IDX) in the year of 2006 to 2013. The sample was selected using the purposive sampling technique. The first requirement is that it is a public

company listed at the IDX from 2006 to 2013. The second requirement is that those firms should have complete data needed by the research. The third criterion is, that these firms report EPS for the year of  $t+1$  as well as EPS for the year of  $t$ . The last criterion is that the firms have publicly available information. The data came from three sources, (1) Indonesian Capital Market Directory (ICMD), Indonesian Stock Exchange website: [www.idx.co.id](http://www.idx.co.id), and (3) company's website. The unit analysis used in this research is firm-year.

### 3.2. Variable Definition and Measurement

The dependent variable cost of capital (COEC) is the required return rate by investors for their investments in equity capital where COEC is calculated by PEG model as proposed by Easton (2004).

$$COEC_{PEG} = \sqrt{\frac{EPS_2 - EPS_1}{P_0}} \quad (1)$$

where,

$EPS_2$  = Expected accounting earnings per share for period  $t = 2$ .

$EPS_1$  = Expected accounting earnings per share for period  $t = 1$ .

$P_0$  = Current year share price.

The PEG-ratio is a special case of (Ohlson and Nauroth, 2005) model. Two important assumptions underlying the Easton formula are: (1) There is no change in abnormal earnings beyond the forecast horizon; and (2) There are no dividend payments prior to the earnings forecasts. Forecasts of earnings and forecasts of short-run earnings growth are readily available as a practical matter. Several institutions provides forecasts of earnings for the current year, for the next year, and for the short-run future. For COEC calculation, forecasts of earnings two years ahead as a proxy for  $EPS_2$  and forecast of earnings one year ahead as a proxy for  $EPS_1$ .

IFRS is an independent dummy variable which is stated to 0 for pre-adoption period, 1 for gradual adoption period, and 3 for full adoption period. Size is a control variable and reflects firm's size. This variable is measured by log total assets. Previous researches like Christensen et al. (2010); Daske (2006); Hail and Leuz (2006); Kim and Shi (2012b); and Li, (2010) have control for firm size. They argue that large size firms have lower level of the cost of capital because investors of larger companies demand lower returns resulting in a lower level of cost. Leverage (LEV) is a variable and reflects the financial leverage of a company. This variable is measured by dividing total liabilities with total assets. Low leverage companies have low cost of equity (Kim and Shi, 2012b; Li, 2010) because of higher return demand by investors for more levered companies. Return variability is another variable that is taken for the model. There is a higher demand for return by investors if there is less certainty of return (Daske, 2006; Hail & Leuz, 2006; Li, 2010). Type of Industry a firm belongs to is used as a control variable to control the differences in impact of IFRS adoption across industries. Return on equity (ROE) is a control variable used to control earnings variability. This variable is measured by

dividing net earnings with company's total equity. We expect that ROE is negatively correlated with a firm's cost of capital. Hence, the higher ROE, the lower cost of capital (Merino et al., 2014).

### 3.3. Model Specification

The main statistical method to test the hypotheses is the OLS regression. The OLS regression models are estimated are as follows:

$$COEC_{it} = \alpha + \beta_1 IFRS_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 ROE_{it} + \epsilon_{it} \quad (2)$$

Where:

- $COEC_{it}$  = Cost of capital of firm  $i$  in the year  $t$ .  
 $IFRS_{it}$  = Dummy variable of IFRS adoption which is stated to 0 for pre-adoption period, 1 for gradual adoption period, and 3 for full adoption period of firm  $i$  in the year  $t$ .  
 $SIZE_{it}$  = Log total asset, used as a proxy of firm size, of firm  $i$  in the year  $t$ .  
 $LEV_{it}$  = Leverage ratio of firm  $i$  in the year  $t$ .  
 $ROE_{it}$  = Profitability of firm  $i$  in the year  $t$ .  
 $\epsilon_{it}$  = error term.

## 4. DATA ANALYSIS AND DISCUSSION

Based on the sampling process described, this study uses a sample of 1.173 firm observation from the year of 2006 to 2013. Unbalanced data is used to include all firms listed on the IDX in each year that met the data requirements. In order to mitigate the survivorship bias, to increase the sample size, and to improve the generalizability of the results, this approach was followed even if the firm met the data requirements for a single year. The sample data are presented in detail at Table 1.

**Table 1.** Data Sample

Year	Number
2006	11
2007	101
2008	187
2009	199
2010	191
2011	187
2012	181
2013	116
<b>Final Sample</b>	<b>1.173</b>

Table 2 shows the descriptive statistics for the sample data. From Table 2, it can be seen that the mean of the COEC shows a value of 0.26 in the pre-adoption period (2006-2007), increase to become 0,29 in the gradual adoption period (2008-2011), and increase become 0,33 in the full adoption period (2012-2013). This is one of indication that IFRS positively affect cost of capital.

To test the hypotheses, this study uses ordinary least square (OLS). The classic assumptions of the regression model are tested before the regression analysis. The assessment shows that the data are normally distributed and there is no problem with multicollinearity, heteroscedasticity, autocorrelation and the existence of outliers in the data. Before we test the hypotheses, we also perform bivariate analysis and the correlation among variables is presented in Table 3 in the form

of Pearson correlation. The table shows that the correlation between COEC and IFRS is positively correlated. This indicates that IFRS significantly correlated to COEC in the level of 5%. This provides initial support for research hypotheses. This correlation is also indicates that IFRS adoption significantly increase firm's COEC. All control variables are also correlate to IFRS with different sign. Leverage is correlated with COEC positively whereas size and ROE are correlated to COEC negatively. This result will further be tested in the regression analysis.

The regression analysis results to test the hypotheses 1 is presented in Table 4. Table 4 shows that F-statistic is significant at the level of 1%. This means that research model meets requirement to test hypotheses. Adjusted R-squared has value of 0.097. This means that independent variable (IFRS) and all control variables (SIZE, LEV, and ROE) affect dependent variables (COEC) by 9.7% and the rest is affected by other variables (residuals) do not involved in this analysis.

**Table 2.** Descriptive Statistics

	COEC	SIZE	LEV	IFRS	ROE
<b>Pre-Adoption</b>					
Mean	0.26	5.98	0.56	0.00	6.75
Median	0.19	5.96	0.55	0.00	9.07
Std.Dev.	0.24	0.87	0.37	0.00	29.21
<b>Gradual Adoption</b>					
Mean	0.29	6.02	0.55	1.00	1.85
Median	0.23	6.08	0.51	1.00	6.61
Std.Dev.	0.22	0.84	0.43	0.00	92.60
<b>Full Adoption</b>					
Mean	0.33	6.18	0.62	2.00	1.49
Median	0.25	6.25	0.51	2.00	4.86
Std.Dev.	0.28	0.91	0.73	0.00	55.67

**Table 3.** Pearson Correlation

	COEC	Size	LEV	IFRS
Size	-.087**			
LEV	.255**	-.169**		
IFRS	.083**	.073*	.046	
ROE	-.186**	.141**	-.061*	-.014

\*. Correlation is significant at the level of 0.05 (2-tailed).

\*\* . Correlation is significant at the level of 0.01 (2-tailed).

The variable of interest is IFRS. Table 4 shows that IFRS has coefficient value of 0.031 and significant at the level of 5%. This result indicates that IFRS positively affects COEC. This means that IFRS adoption increase cost of capital; thus supporting our hypothesis 1 which stated that IFRS implementation affects cost of capital for companies listed in Indonesian Stock Exchange. Control variables are SIZE, LEV, and ROE. SIZE has coefficient of -0.008 and insignificant. This means that firm's size do not affect cost of capital. LEV has coefficient of 0.111 and significant at the level of 0.01. This means that leverage positively affect cost of capital. The more leverage, the greater cost of capital. ROE has coefficient of 0.000 and significant at the level of 0.01. This means that ROE positively affect cost of capital. The more ROE (profitability), the greater cost of capital.

This result confirms research performed by Patro and Gupta (2014) who find that mandatory IFRS adoption in Chin and Israel increase COEC. This result is also answer the evidence found by Daske et al. (2008) who state that economic consequence of mandatory IFRS adoption is still unclear. Yet, this result is inconsistent to the previous research which conducted in strong legal coercion countries (Li, 2010).

Moreover, this result is logic and as predicted since the research is conducted in Indonesia, a country which has not own a strong legal coercion culture. Finally, this result will able to contribute to the existing literature about the effect of mandatory IFRS adoption on cost of capital, especially in country with similar characteristics as Indonesia.

**Table 4.** Regression Analysis

$$COEC = \alpha + \beta_1 IFRS_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 ROE_{it} + \varepsilon_{it}$$

Variable	Coefficient	t-Statistic	Sig
Intercept	0.246***	0.005	0.000
IFRS	0.031**	0.007	0.012
SIZE	-0.008	0.006	0.319
LEV	0.111***	0.000	0.000
ROE	0.000***	0.000	0.000
Adjusted R-squared	0.097		
F-statistic	30.937***		

\*\*\*, \*\*, \* show that coefficient is significant at 0.01, 0.05, and 0.1 respectively

**Table 5.** Regression Analysis per Sector

$$\text{COEC} = \alpha + \beta_1 \text{IFRS}_{it} + \beta_2 \text{SIZE}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{ROE}_{it} + \varepsilon_{it}$$

**Panel A**

Variable	Agriculture	Mining	Basic Industry & Chem.	Miscellaneous
	Coefficient	Coefficient	Coefficient	Coefficient
Intercept	1.293***	0.306	0.566**	0.663***
IFRS	-0.132	-0.045	0.031	-0.031
ROE	-0.003	0.001	0.004**	0.001*
LEV	0.073	0.362**	0.243***	0.005
Size	-0.139*	-0.019	-0.072**	-0.052

**Panel B**

Variable	Consumer Goods	Property, RE, and BC	Infrastructure, Utility, & Transport	Trade, Services, & Invest.
	Coefficient	Coefficient	Coefficient	Coefficient
Intercept	0.004	0.440	-0.187	-0.215
IFRS	-0.101	0.155***	0.061	0.095**
ROE	0.000	0.001	0.003**	0.001
LEV	0.586***	0.066	0.251***	0.051*
Size	0.019	-0.060	0.048	0.058*

\*\*\*, \*\*, \* show that coefficient is significant at 0.01, 0.05, and 0.1 respectively

To test hypotheses 2, we conduct regression analysis for each sector. The result is presented in Table 5. Results in Table 5 show that, of eight sectors investigated, only two of them are consistent to the result of total regression, which are Property, Real Estate, & Building Construction and Trade, Service, & Investment sectors (Panel B). Coefficient for these sectors are 0.586 and 0.095 respectively. Both coefficients are statistically positive and significant. This means that IFRS positively affect (increase) cost of capital. Results for the other six variables are inconsistent. Some hold positive coefficients but do not significant, which are Basic Industry & Chemical sector and Infrastructure, Utility, & Transport sector. The last four variables hold negatively and insignificantly coefficient, which are Agriculture, Mining, Miscellaneous, and Consumer Goods. This results support hypotheses 2 which stated that IFRS implementation affects cost of capital differently on the various industry type. This results are also confirm other results in different countries which are also inconclusive. Based on this results, it can be concluded that IFRS adoption by Indonesian companies listed in Indonesia Stock Exchange for the year 2006 to 2013 had not yet given a positive impact, which is reduce cost of capital.

## 5. CONCLUSION, IMPLICATION, AND LIMITATION

This paper investigates the impact of IFRS adoption on cost of capital. The result shows that IFRS adoption by Indonesia listed companies positively affects cost of capital. This means that in the gradual adoption period (2008-2011) cost of capital increase compared to that of in the pre-adoption period. Cost of capital is further increase in the full adoption period. This result supports hypotheses 1 which stated that IFRS implementation affects cost of capital for companies listed in Indonesian Stock Exchange. Results from sector's analysis show inconsistent among them. For some sectors, IFRS adoption does not have impact on the cost of capital, whereas for the others positively IFRS adoption affect the cost of capital. This result support hypotheses 2 which stated that IFRS

implementation affects cost of capital differently on the various industry type.

This result has implication on the literatures. Literature expects that IFRS adoption, which requires more disclosure will reduce information asymmetry and in turn will decrease cost of capital. The results show differently in a weak legal coercion environment such as Indonesia. Therefore this study give supplementary evidence about the effect of IFRS adoption on the cost of capital for the firms operate in a certain environment

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