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Accounting Conservatism and Cost of Equity Capital – Evidence from Indonesia

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Abstract

This paper describes the results of the research that investigates the association between ex-post conservatism or conditional conservatism and cost of equity capital in Indonesian manufacturing companies using data from 2015 to 2019. Conservatism is measured using accrual methods while equity capital costs are measured using a price/earnings growth (PEG) model. Using data from 142 companies or 710 observations, selected using purposive sampling methods, the study concludes that ex-post accounting conservatism lowered the company's cost of equity capital. These results not only confirm previous research conducted in other countries, but also the agency theory which predicts that accounting conservatism lowers the asymmetry of information between the company's management and shareholders, thereby affecting the decrease in equity capital costs.

Key terms: conservatism, equity capital costs, accrual methods, PEG model

JEL Classification: G32, G38, M41, M48

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➲ Introduction

This study aims to obtain empirical evidence regarding the association between ex-post conservatism or conditional conservatism and equity capital costs in manufacturing companies listed on the Indonesia Stock Exchange (IDX) between 2015 and 2019. Accounting conservatism deals with the uncertainty of deferred earnings recognition until uncertainty has been substantially resolved. The "bias" of conservatism is applied in two ways. First, the principle of income recognition states that income is recognized only if cash is deemed to have been "realized" or "can be realized" and performance obligations have been met. Second, when costs are adjusted to recognized revenues, matching is done with the conservative bias. If the potential future income from an investment is uncertain, the investment is charged faster, often at a direct cost. Both the suspension of recognition of income and investment expenditures are rapidly suppressing current earnings and increasing expected earnings in the future (Penman & Zhang, 2020).

There are two types of accounting conservatism, namely *conservatism ex-ante* and *ex-post.* Conservatism ex-ante is an accounting-based conservatism, related to financial position reports, and unconditioned by or independent of events or news that will appear (Chan *et al.*, 2009). This type of conservatism reflects a reduction in the book value of net assets and is not related to the increases or decreases of future cash flow. Examples of ex-ante conservatism are direct research and development costs, marketing costs, and accelerated depreciation of fixed assets. The influence of ex-ante conservatism on profit flows is more persistent and more predictable by investors, as they can predict its consequences on earnings, both current and future, by using disclosure of accounting policy. Conservatism ex-post is a market-based conservatism which is related to profit and depends

on conditions or news that will subsequently emerge. Basu (1997) uses conditional conservatism terminology for ex-post conservatism and unconditional conservatism for ex-ante conservatism. Basu (2014) outlines the key to distinguishing between the two forms of conservatism as follows: unconditional conservatism uses information that was already known at the beginning concerning the assets and liabilities owned, while conditional conservatism uses new information received in the future.

Ex-post conservatism recognizes economic losses timelier than acknowledging profits and can involve higher managerial discretion because managers can determine the time and amount of impairment of assets or the number of restructuring costs. Hence, its influence on the profit flows becomes less predictable and less persistent for investors. Thus, Chan *et al.* (2009) concludes that both type of conservatism can deliver diverse information about the company's current and future profits quality to the stock market. Basu (2005) also state that ex-ante or unconditional conservatism was a leeway form of accounting that preceded the implementation of ex-post (conditional) conservatism. To summaries, conservatism ex-ante can limit the opportunities for the conservatism ex-post. Chan *et al.* (2009) states that higher levels of ex-ante conservatism are associated with good capital costs, and that higher levels of ex-post conservatism are associated with higher equity capital costs and lower-quality returns.

Previous literature has identified advantages in connection to conservative financial statements. Previous research reports that ex-post conservatism improves debt contracts efficiency and decreases the cost of debt (Zhang, 2008). Moreover, conservatism decreases the asymmetry of information and equity capital costs (LaFond & Watts, 2008; Lara *et al.*, 2011). Yet, the findings of previous research are not necessarily meaningful for countries with weaker legal systems because the study reported that financial statements only help the capital market when mixed with proper law enforcement (Christensen *et al.*, 2013). Therefore, the results of research on the impact of conservatism on equity capital costs carried out in developed countries can be implemented to other countries with a weaker legal system.

Furthermore, some previous studies have examined the influence of accounting conservatism on equity capital costs, however, the results of his research are as diverse and inconsistent as the one of Francis *et al.* (2004) which reported no significant association, Chan *et al.* (2009) and Biddle *et al.* (2012) who report a positive relationship. However, Artiach & Clarkson (2014), Lara *et al.* (2011), Khalifa & Ben Othman (2015) and Li (2015) find a negative influence of accounting conservatism on equity capital costs. This condition of course requires further investigation by conducting similar research in different jurisdictions such as Indonesia.

Francis *et al.* (2004) investigate the relationship between accounting information quality and the level of return needed by the investors. They concentrate on the relationship between returns quality and equity capital cost. They assume that companies with higher conservatism levels are companies with higher returns quality and tend to have lower equity capital costs. Nevertheless, how this relationship influences the company's capital equity costs remains an empirical issue. Therefore, this study further explores this topic by testing the impacts of conservatism on the cost of equity capital. This research tests the task of accounting conservatism in financial statements reporting from the perspective of information. In this study, it was assumed that shareholders or equity investors are the main financial statements users and that such investors fall into the category of rational investors in determining stock prices based on the availability of information.

Based on the study above, research on conservatism, especially conservatism about equity capital costs, needs to be done using the latest data of companies listed on the Indonesia Stock Exchange, which is an emerging stock exchange. Therefore, research problems can be formulated in the form of questions as follows:

RQ: *How does conservatism affect equity capital costs on public companies listed on the Indonesia Stock Exchange?*

This research contributes to the accounting literature in two ways. First, prior research documented the accounting conservatism existence, but they ignored its economic consequences. Therefore, this study provides practical proof of the influence of accounting conservatism on equity investor returns using Indonesian data.

Second, this research explores the relationship between conservatism and equity capital costs by specializing in conservatism ex-post (conditional).

This paper is organized according to the following system. After presenting the introduction containing the research objectives, the research motivation, the relevant past research, the research questions, and the research contributions, the second part comprises the literature review and the formulation of hypotheses. The third section outlines the research method and continues with the discussion of the research results. The final part of this paper presents the conclusions, the research implications, the research limitations, and the advanced research opportunities.

➲ Literature review and hypothesis formulation

■ Literature review

This research uses the agency theory, which is a theory that predicts and explains the relationship of the agency between the owner (principal) and the manager (agent). In agency relations, each party acts according to its interests to cause a conflict of interest (Jensen & Meckling, 1976). The main problem in agency relations is the emergence of information asymmetry, both in the context of adverse selection and moral hazard (Scott, 2015). The application of the conservatism principle is expected to lower the cost of the company's capital by reducing the number of dividends paid so that in turn lowers the agency conflict (Razzaq & Rui, 2018).

Previous research on equity capital costs tested various factors that influence it (Khalifa *et al.*, 2019). More specifically, research that tested the quality of returns on equity capital costs among others was conducted by Chan *et al.* (2009), McInnis (2010), Kim & Sohn (2013), Artiach & Clarkson (2014), Khalifa & Ben Othman (2015), and Khalifa *et al.* (2018). They proved that low quality of return has an impact on the high cost of equity capital. One important attribute of the quality of profit is accounting conservatism (Basu, 1997; Watts & Zimmerman, 2005; Watts, 2003). Nonetheless, the theory offers the opposite prediction about the effect of accounting conservatism on equity capital costs.

The first group of study predicted that there was a negative link between the accounting conservatism and the cost of equity capital. Accounting conservatism can play a role as a replacement for voluntary disclosures that enable managers to indicate the future income information (Gietzmann & Trombetta, 2003). Since voluntary disclosure decreases company's equity capital costs by decreasing the risk of undiversified information, accounting conservatism can lower the cost of equity capital (Botosan, 1997; Botosan & Plumlee, 2002; Francis *et al.*, 2004; Botosan, 2006).

A second research group supports a positive association between the accounting conservatism and the cost of equity capital. Lambert *et al.* (2006) claim that the more precise the information, the higher the heterogeneity of beliefs among investors so that it impacts the diverse levels of understanding. This can boost information asymmetry. The market participants with plenty of information have a greater impact on stock prices whereas investors with a lack of information need greater compensation for entering the market. Biddle *et al.* (2016) state that improving information quality generated by accounting conservatism could result in greater variety of opinion and result in the new asymmetry of information among the market participants, because stock market is more responsive to negative earnings news.

Also, Johnstone (2016) contends that ex-post conservatism delivers news of lower-earning and pay-outs, and reveals bad news more precisely so that conditional conservatism can increase equity capital costs. Moreover, conservatism practices lower the quality of information for analysts and provide biased, random results, as well as inefficient profit estimates, which in turn can lower the company's market value and increase equity capital cost (Pae & Thornton, 2010; Louis *et al.*, 2014). This is in line with the claim that the Financial Accounting Standards Board no longer regards conservatism as a qualitative property of financial statements since it is contrary to neutrality principle and causes negative bias of accounting figures.

■ Hypothesis formulation

The agency theory states that the principal (shareholders) assigns the authority for the decisions regarding company's operations to agents (managers). Consequently, shareholders reward them through the contracts of compensation based on a set of performance measures reflected in the financial statements. Yet, the existence of the asymmetry of information and imperfect contract creation result in managers exaggerating reports data for their benefit. This can mean recognizing good news early and delaying recognizing bad news. For instance, because the compensation packages are regularly established based on present performance and compensation recovery is frequently expensive and hard to be calculated, after they receive good news, managers have an incentive to include into the current period performance measure of cash flow the realization that has not yet occurred. Having received compensation, the moral hazard managers tend to unitize any attempt to further turn the good news into cash flow. In contrary, after managers receive bad news, they have an incentive to postpone including the bad news into the performance of this period, whether the hope of getting bad news in the coming period through making prospective investments or diverting blame to their inferior managers (Kothari *et al.*, 2010).

Demanding managers to acknowledge bad news earlier than good news will limit their motivation to take actions of value maximization for the shareholders. Besides, after receiving bad news signals on time, shareholders can minimize potential losses by conducting greater supervision or replacing managers who are not competent or only work in their own interest. Thus, ex-post conservatism alleviates the risk of agency for shareholders by decreasing potential investment distortions risk and manager takeovers (Shuto & Takada, 2010; Lara *et al.*, 2011). In return, shareholders tend to ask for lower risk premiums from companies committed to the system of conservative financial reporting.

Previous research has proven that accounting conservatism lowers equity capital costs (Artiach & Clarkson, 2014; Lara *et al.*, 2011; Khalifa & Ben Othman, 2015; Li, 2015; Khalifa *et al.*, 2018). More specifically, Li (2015) finds a negative relationship between conditional conservatism and the cost of equity capital and debt capital costs especially in countries where the law enforcement is strong, while Lara *et al.* (2011) find a negative relationship between conservatism and capital costs. Finally, Goh *et al.* (2017) find that there is a decrease in equity capital costs when conservatism levels increase because conservatism can lower the asymmetry of information between companies and shareholders compared to the one between companies and creditors. Razzaq & Rui (2018) find that conditional conservatism lowered equity capital costs in Chinese companies by lowering dividend payments, thus decreasing the agency conflicts, while Razzaq (2019) reports that conditional conservatism in financial reporting in Pakistan lowered equity capital costs. Based on the study above, we predict a negative relationship between conditional conservatism and the cost of equity capital. Thus, the research hypothesis can be formulated as follows:

H: *Ex-post conservatism lowers the cost of equity capital.*

➲ Research method

This research uses population data of companies listed on the Indonesia Stock Exchange from 2015 to 2019. Sample selection was conducted using the purposive method with criteria as follows: (1) the companies are manufacturing companies registered in IDX for five consecutive years, namely between 2015 and 2019; (2) the company possesses all the data required in this research. The main data sources used are the company's annual report, the Indonesia Stock Exchange Database, and the company's Website.

To test the hypothesis, a research model (1) is used as follows:

$$COEC_{it} = \alpha_{it} + \beta_1 CON_{it} + \beta_2 SIZE + \beta_3 PROF_{it} + \varepsilon_{it} \quad (1)$$

The independent variable in this study is the accounting conservatism (CON). Following Ahmed & Duellman (2013), accounting conservatism is measured by accrual methods, which are calculated by the following formula:

$$CON_{it} = \frac{NI_{it} - CFO_{it} + Dep_{it}}{TA_{it}} \quad (2)$$

Where:
NI = net income;
CFO = cash flow from operations;
Dep = depreciation;
TA = average assets.

The dependent variable in this study is the cost of equity capital (COEC) which is calculated using the PEG model, as proposed by Easton (2004):

$$COEC_{PEG} = \sqrt{\frac{EPS_2 - EPS_1}{P_0}}$$

Where:
EPS_2 = expected earnings per share for the period t = 2;
EPS_1 = expected earnings per share for the period t = 1;
P_0 = current year share price.

The two assumptions for this model are: (1) no abnormal profit change outside the forecasting timeframe; and (2) no dividend payment before profit forecasting. NI is profit before extraordinary items, CFO is cash flow from operations, Dep is depreciation expense, and TA is the average assets. CON is computed on average for five years, i.e. t-1, t1, and t+1, then multiplied by negative 1. The computation of an average time of five years is intended to reduce large and temporary accruals effects. When CON is positive, it's getting more conservative. The concept that underlies this measurement is that accounting for conservatism results in persistent negative accrual (Givoly & Hayn, 2000). The five-year average also guarantees a large mitigating temporary accrual, as accruals tend to reverse in one or two periods (Richardson *et al.*, 2005). This research uses two control variables, namely company size (SIZE) as measured by the natural log of total assets and profitability (PROF) as measured by return on assets or ROA.

➲ Analysis and discussion

Based on the sample determination process above, this study used the data from 142 manufacturing companies listed on the Indonesia Stock Exchange between years 2015 and 2019. Thus, the number of observations used in this study is 710 (*firm-years*).

■ Analysis of univariate

Table 1 presents descriptive statistic data for all the variables. The results indicate that all variables used in the assessment model have a sensible variation level. Equity capital costs (COEC) as dependent variables have a mean of 0.258 with a standard deviation of 0.303. With a minimum of 0.007 and a maximum of 2.368, the COEC data range is not very spread, so the probability of having an outlier is very small. Accounting conservatism (CON) which is an independent variable has a mean value of -15.390 with a maximum value of 156.198 and a minimum of -469.487. With a median value of -2.147, this data implies that the concentration of ownership is very dense and close to the maximum.

Table 1. Descriptive statistics

	Mean	Median	Maximum	Minimum	Std. Dev.
COEC	0.258	0.175	2.368	0.007	0.303
CON	-15.390	-2.147	156.198	-469.487	49.281
SIZE	6.364	6.280	8.523	4.604	0.677
PROF	0.061	0.043	0.921	-0.550	0.108

■ Bivariate analysis

The bivariate analysis presented in Table 2 has two objectives. First, this analysis was used to look at the correlation between the two variables studied, to find out whether or not there is a multicollinearity between independent variables. The results of the analysis show that the correlation coefficient between variables is quite reasonable and no number exceeds the tolerance limit. Second, this analysis aims to assess the initial influence of independent variables, in this case, CON, on dependent variables, in this case, COEC. The results showed that the correlation coefficient of the two variables was -0.035 and significant at the level of 5%. This is an early indication that accounting conservatism negatively affects the cost of equity capital. However, a more in-depth investigation into the effect of accounting conservatism on the cost of equity capital as well as to test hypotheses will be conducted in the next section using regression analysis.

Table 2. Pearson correlation

	CON	SIZE	PROF	COEC
CON	1	-.304	-.390**	-.035*
SIZE	-.034	1	-.100*	.053
PROF	-.390**	.100*	1	.034
COEC	.035*	-.053	-.034	1

**, *: Correlation is significant at 0.01 and 0.05 respectively (2-tailed).

■ Multivariate analysis

The hypothesis test was conducted using the ordinary least squares (OLS) method. Before the test, the researchers conducted a classic assumption test first. From the test results, it was proven that the data was distributed normally and there were no problems with multicollinearity, heteroscedasticity, and autocorrelation and there were no outliers in the data. The results of the regression analysis are presented in Table 3. From Table 3 it can be seen that the F-value is statistically significant at the level of 1%. This indicates that the research model can be used to predict the association between independent variables and dependent variables. Adj. R^2 has a value of 0.683 which means that variables entered in the regression equation together contribute to affecting dependent variables by 68.3%.

Table 3. Regression analysis

$COEC_{it} = \alpha_{it} + \beta_1 CON_{it} + \beta_2 SIZE + \beta_3 PROF_{it} + \varepsilon_{it}$ (1)		
Variable	**Coefficient**	**t-Statistics**
Intercept	-0.374**	-2.544
CON	-3.171***	-3.437
SIZE	0.099**	4.302
PROF	-0.027	-0.504
Adj. R^2	0.683	
F-statistics	7.368***	

***, **, *: Variable is significant at 0.01, 0.05, and 0.10 respectively.

The variable of interest is CON. The results of the regression analysis presented in Table 3 show that the coefficient of CON is valued at -3.171 and significant at the level of 1% ($p < 0.001$). These results mean that the higher the accounting conservatism in accounting reports, the smaller or lower COEC or equity capital costs of the company. Thus, hypothesis which states that accounting conservatism lowers the cost of equity capital is proven and confirmed by empirical data.

This result confirms the previous research conducted by Artiach & Clarkson (2014), Lara *et al.* (2011), Khalifa & Ben Othman (2015), Li (2015), and Khalifa *et al.* (2018) reporting that accounting conservatism lowers the cost of equity capital. The above results also reinforce the findings of Goh *et al.* (2017) which prove that there is a decrease in equity capital costs when conservatism levels increase, Razzaq & Rui (2018) find that conditional conservatism lowers the cost of equity capital in Chinese companies, and Razzaq (2019) reports that conditional conservatism lowers the cost of equity capital in companies in Pakistan. These results also confirm the agency's theory that information asymmetry will decrease when accounting conservatism increases. With reduced information asymmetry, capital costs fall, and agency conflicts are also reduced.

From Table 3, it can also be seen that the size of the company (SIZE) has a positive effect on COEC. This result means that the larger the company, the higher the cost of equity capital or dividends paid. This condition is natural considering that large companies can pay dividends regularly while maintaining their reputation and share price stability. The results of the analysis in Table 3 also show that the company's profitability (PROF) does not affect the company's capital cost. This means that in implementing a dividend payment policy, the company does not use the measure of profit as a basis. That is, when a company earns a high profit, the company is very likely to not pay dividends, as well as when the company loses, the company may pay dividends. If it is associated with an explanation of the results for the size of the company, then dividend payments are more influenced by the company's efforts to maintain its reputation and maintain the company's share price.

➲ Conclusion

This study examines the influence of accounting conservatism on equity capital costs on companies listed on the Indonesia Stock Exchange. Using an accrual approach to measure conservatism and the PEG model to measure the cost of equity capital, the study obtained empirical evidence that accounting conservatism lowers the cost of corporate equity capital. These results not only confirm previous research that has been conducted in other countries, but also confirm the agency's theory which predicts that accounting conservatism decreases the asymmetry of information between the management of the company and shareholders, thereby affecting the decrease in equity capital costs.

This research has at least one theoretical implication, namely enriching the literature on accounting conservatism concerning capital costs, particularly equity capital costs. The use of accrual methods in measuring conservatism and PEG models to measure the cost of capital of companies was also able to confirm the results of similar research in other countries. Thus, both measurement models were tested in this study.

This research has limitations, namely using only the data of companies listed on the Indonesia Stock Exchange. Therefore, the generalization of results may be limited to Indonesian jurisdictions only or may be supplemented by other countries that have similar conditions to Indonesia. Second, this study does not test two types of conservatism at once, namely conditional conservatism (ex-post) and unconditional conservatism (ex-ante). This limitation opens up further research opportunities by expanding data by entering data of companies listed on other countries' stock exchanges, especially countries that have different cultures. Further research opportunities also consist in expanding this type of conservatism into ex-post conservatism and ex-ante conservatism.

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