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CONSERVATISM AND THE COST OF EQUITY CAPITAL: A MULTI-DIMENSIONAL MEASUREMENT APPROACH

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ABSTRACT

Conservatism is a permanent phenomenon and issue in the accounting practice. It has been developing in two forms, ex ante and ex post, measured in various ways—the accruals, valuation model, and book-to-market measures. Prior studies document inconclusive findings on the association between conservatism and the cost of equity capital. These inconsistent findings motivate us to examine whether the various measures of conservatism have different effects on the relationship between conservatism and the cost of equity capital. We find that the accruals measure explains the relationship, while the valuation model and book-to-market measures do not. Our findings suggest that different measures of conservatism relate differently to different articulations. Researchers, therefore, should be cautious in interpreting the relationship between conservatism and the cost of equity capital.

Keywords: *ex ante and ex post conservatism, cost of equity capital, various measures of conservatism*

INTRODUCTION

As a phenomenon in accounting, conservatism has lasted for centuries. Its existence as well as its effect on accounting practice is still developing and attracting researchers. Conservatism has been affecting accounting practice for more than 500 years and has become the most influential valuation standard in accounting (Sterling, 1970; Basu, 1997). Some studies have examined the effect of conservatism on debt contracting, litigation, taxes, and accounting regulation.

Watts (2003a) conceptually states that conservatism in accounting is something important and improves financial reporting. Nevertheless, in order to achieve neutrality, the FASB (2010) through the new SFAC No. 8 excludes conservatism, a principle it used before 2010. Such effort disregards the reasons of the practice of conservatism and might be fruitless or even cause unfavorable consequences. LaFond and Watts (2008) argue that conservative financial reporting is a mechanism of management to minimizes as well as to control the incentives for managers to overstate their financial performance and to increase the expected cash flow and, in turn, the firm's market value. Some of the consequences of conservatism prohibition are the change in managerial behavior and the prominent cost to the investors.

One of the interesting issues is concerned with the relationship between conservatism and the cost of equity capital. Such issue becomes interesting since conservatism, as an alternative policy of management, defines the information published in financial reports. How it affects the cost of equity capital, therefore, needs empirical confirmation. However, prior studies show in-

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consistent results. Francis et al. (2004), using the asymmetric timeliness of earnings measure, find that conservatism positively associates with earnings quality, but it does not explain the cost of equity capital. On the contrary, Lara et al. (2011) find that conservatism negatively relates with the cost of equity capital. In addition, Lara et al. (2011) explain that conservatism reduces information risk and the information risk, in turn, affects the cost of equity capital. Lara et al. (2011), using the conservatism ratio (Callen et al, 2010), also argue that the measurement of conservatism might cause Francis et al. (2004) failed to demonstrate the relationship between conservatism and the cost of equity capital.

Francis et al. (2004) motivated Chan et al. (2009) to conduct similar study under different perspective, that is, accounting information. By differentiating the level of conservatism into the ex ante as well as ex post conservatism, Chan et al. (2009) empirically examine the effect of conservatism on the cost of equity capital and found that different levels of conservatism show different effects. That is, the ex ante level of conservatism using the book to market ratio shows a positive effect on accounting information quality and a negative effect on the cost of equity capital. The ex post level of conservatism using the asymmetric timeliness of earnings (Basu, 1997), on the contrary, indicates a negative effect on accounting information quality and a positive effect on the cost of equity capital. However, Chan et al. (2009) state that their study has some limitations in its proxy to measure conservatism, which may alter the results of their study.

It can be suggested by the studies mentioned above that various measures of conservatism are an important issue to study. Different results documented by previous studies might come from different measures of conservatism. We attempt to make some deeper insights into this matter. We address the following fundamental question: "Do different measures of conservatism result in different effects on the relationship between conservatism and the cost of equity capital?" We empirically examine this relationship, within the context of the ex ante and ex post conservatism dimensions, using a variety of measures. We contribute to the extant theory on the association between conservatism and the cost of equity capital by demonstrating that various measures of conservatism produce different associations between the two constructs.

Our study is based on the following logical arguments. First, under decision theory, rational investors tend to avoid risks when making decisions where uncertainty exists. When making their decisions where uncertainty exists, if investors are provided with some alternatives type of accounting information to select, the investors tend to choose the conservative one. The advantages of conservatism as a consistent and useful approach to value assets and earnings are the reason for the investor's choice. Second, we follow Watts (2003b) who states that the measures play a major role in explaining conservatism. The variety of measures added to other alternatives to explain the different results of association between conservatism and the cost of equity capital.

We find that conservatism applied by sample companies exists only in the form of ex ante conservatism, not in the form of ex post conservatism. We also find that different measures of conservatism produce different associations between conservatism and the cost of equity capital. These findings support our proposed hypothesis.

We have organized the rest of this paper as follows. First, we will discuss the theoretical background and develop our hypothesis. Second, we will explain our research method and, then, research results. Third, we will discuss at length our findings. Finally, we will conclude the paper by presenting our conclusion and limitations.

THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

Conservatism Measurement

Measurement plays a major role in research, especially the quantitative ones. The foundation of measurement is the operational definition of the concept. Conservatism as a concept needs measurement as foundation to measure its existence in the real world. Various definitions of

conservatism cause various measurements. Watts (2003b) states that previous researches use the variety of measurements to measure whether conservastism exist.

The definition of conservatism in our study refers to Basu (1997). Basus's (1997) definition is adopted later by Watts (2003b) to summarize the types of conservatism measurement used in previous research. The definition by both researchers is the asymmetric verification required for gains and losses. It is interpreted as the level of conservatism; the greater the difference in verification level required for gains compared to losses, the higher the conservatism level (Watts, 2003a).

Based on the definition above, Watts (2003b) elaborates three basic measurements of conservatism. The first is net asset measures, emphasizing asset understatement in which assets are stated at below their market value. There are two models for these measures, valuation model measures and book-to-market measures. The second is earnings/accruals measures, putting the emphasis on the estimation of earnings distribution, the change in earnings, and accruals. There are also two models for these measures, earnings measures and accruals measures. The third is earnings/stock returns relationship measures, emphasizing that the relationship between earnings and stock return is reflected differently during periods of gains and losses.

Such different measurements have been applied both to investigate the existence of conservatism (Stober, 1996; Myers, 1999; Ahmed et al., 2000) and to examine the impact of conservatism to some elements, such as the quality of earnings reporting (Penman and Zhang, 2002; Ball and Shivakumar, 2005) and the cost of equity capital (Francis et al., 2004; Chan et al., 2009). Studies on these subjects demonstrate the existence, as well as the impact, of conservatism. Until recently, however, there was no single study that examines the consistency of the relationship between conservatism and the cost of equity capital when all three basic measurements of conservatism were used. Our study addresses that question.

The Impact of Various Conservatism Measurements

The variety of conservatism measurements shows indirectly that conservatism is a concept which is observable under various aspects. Such a variation also gives a positive impact, that is, conservatism becomes a highly active subject for empirical research. Lots of studies regarding conservatism are available. On the other hand, the variation also causes some negative impacts, for instance, the result consistency among various measures, and the tendency to use favorable measures.

Wang et al. (2009) state each measurement of conservatism contains a number of problems, such as the uncertainty of the statistical validity of the conclusion. The widely used conservatism measures are the asymmetric timeliness measure of Basu (1997), the asymmetric cash flow to accrual measure of Ball and Shivakumar (2005), the market to book ratio measure by Watts (2003), the hidden reserves measure of Penman and Zhang (2002), and the negative accrual measure of Givoly and Hayn (2000). These measures according to Wang et al. (2009) show low validity. The four types of validity examination on the above mentioned conservatism measures are convergent validity, concurrent validity, statistical conclusion validity, and internal consistency. They show unsatisfactory results. Such low validity may lead to inconsistent results. Another impact is called mono-operation bias, due to frequent usage of one favorable measure. When examining one construct, if one measure shows a positive direction then the other measures somehow show positive or negative directions. This bias causes negative correlation among the measures when examining the same construct. An example is the negative correlation between the asymmetric timeliness measure (Basu, 1997) and the market to book ratio measure (Watts, 2003).

The negative impact of various conservatism measures does not mean that the measures are unusable or that one best measure must be selected in order to obtain reliable results. The negative impact must be solved so that the phenomenon of conservatism can be explained more

comprehensively. Basu (1997) has set an example by explaining the negative correlation of the asymmetric timeliness and market to book ratio measures. Beaver and Ryan (2005) state that the negative correlation is not a contradiction with theoretical prediction, instead, it explains the levels of conservatism, conditional and unconditional conservatism, which both measures tend to correlate negatively.

Regarding the negative impact, some solutions have been proposed (Wang et al., 2009). These solutions are first, classifying the real definition and properties of conservatism and the relation among available conservatism measures; second, controlling the confounding factors within empirical design; third, employing various measures within one study and designing a study with a combination of measures. Our study uses the third one by examining the relationship between conservatism and the cost of equity capital.

Ex Ante and Ex Post Conservatism

According to accounting literature, conservatism can be viewed from two dimensions, the ex ante (unconditional) and the ex post (conditional). Ex ante conservatism involves asset recording at lower than market value, eventhough the decrease in value of the assets has not actually occurred. Therefore, assets are recorded lower than their book value. The methods of recording assets at lower than market value include immediately expending the cost of intangible assets and shortening the economic life of tangible assets so that the depreciation value is greater than economic depreciation. Ex post conservatism comprises of a book value that is recorded lower under unfavorable conditions, and higher under favorable conditions. Referring to the definition by Basu (1997), this dimension of conservatism is the asymmetric response of earnings against economic gains and losses, so that economic losses are recorded earlier than gains.

Beaver and Ryan (2005) state that literature reviews on both dimensions have different emphasis. Ex ante conservatism reviews emphasize the difficulties of economic assets and liabilities valuation and determining their impacts on future earnings. Meanwhile, ex post conservatism reviews put the emphasis on increasing managers' contracting efficiency, based on the managers' tendency to report in an overstated way. Although both have a different emphasis, when reviewed more deeply, one review counteracts the other one. Beaver and Ryan (2005) state that ex ante conservatism prevents negative impacts of the ex post conservatism.

The comprehension about both dimensions of conservatism provides an illustration about the relationship between conservatism and accounting information. The application of both dimensions has different implications. Chan et al. (2009) argue that, under the ex ante and ex post conservatisms, the quality of accounting information about earnings is different. They state that the higher the level of ex ante conservatism, the higher the quality of earnings information and the higher the level of ex post conservatism, the lower the quality of earnings information. Different results are shown when applied to the cost of equity capital. A higher level of ex ante conservatism leads to a lower cost of equity capital. On the contrary, a higher level of ex post conservatism causes a higher cost of equity capital.

Hypothesis Development

The importance of conservatism in financial reporting has motivated some researchers to empirically investigate the existence and the impact of conservatism in accounting practices. One method to examine the existence and the impact of conservatism is by correlating conservatism with the cost of equity capital. Under the risk-averse assumption that investors tend to make decision with minimum risks, information asymmetry is a part of the risks which investors must face. Higher information asymmetry exposes higher risks to investors. High quality information in financial reports reduces information asymmetry. This is where conservatism plays its role. As one policy by management, conservatism helps to improve information quality and reduces information asymmetry

between management and investors (LaFond dan Watts, 2008).

Previous research provides inconsistent results, for instance, research by Francis et al. (2004), Lara et al. (2011), and Chan et al. (2009). The conjecture is that such inconsistencies originate from the different measurements of conservatism. This conjecture is based on Wang et al. (2009) that various measurements of conservatism and inconsistency among the measurements become the distinctive characteristics of research regarding conservatism. Wang et al. (2009) also state that some measurements of conservatism employed in theoretical and hypothetical examinations produce different results depending on the measurement used. This is because the concepts of accounting conservatism have not been universally accepted and are not well articulated by researchers. In the meantime, the facts of observed conservatism do not have any independent reference, and depend solely on the measurement applied.

The phenomenon of various measurements that lead to different results does not only occur with regard to conservatism. Kothari and Zimmerman (1995) investigated stock price and return models frequently used in stock market research. Their research wss motivated by the controversy about the advantages of the application and results of both models. Their study shows that each model has its own advantages and disadvantages when applied with rational reasons, either economic or econometric. They do not advise the use of one model to another. The combination of both models might provide a more reliable conclusion.

Wang et al. (2009) and Kothari and Zimmerman (1995) indicate that different measurements of conservatism might produce conclusive results when examining the relationship between conservatism and accounting information. Using this analogy, we propose that the variation of conservatism measures leads to different relationship between conservatism and the cost of equity capital. We, therefore, formally propose the following hypothesis (noted as H1).

H1: Different conservatism measures result in a different association between conservatism and the cost of equity capital.

RESEARCH METHODS

Data and Sampling Methods

We employ the *Osiris Database* from the Faculty of Economics and Business, Universitas Gadjah Mada. Our observation period is 2005-2009. The population targets were the stock markets of IDX (Indonesia), KLSE (Malaysia), SSE (Singapore), TSE (Thailand), and PSEi (Philippines). Data collected consisted of earnings, the stock book value, assets, liabilities, accruals in operating accruals and accounting accruals, the stock market price, ROE, future expected earnings, and the cash flow from operating activities.

We use the following criteria to select our sample: (1) manufacture companies, (2) companies having gains ($E_{it} > 0$), (3) companies having an increase in stock book value ($NB_{i,t+1} > NB_{it}$), (4) companies releasing the expected data, (5) companies distributing a dividend, and (6) companies having stock actively traded. The companies under the first criterion are expected to get more accruals reflected in conservatism. The second and third criteria aim to show the magnitude and level of conservatism in each company. The fourth criterion is used to show earnings movement. The fifth criterion is used to manipulate the cost of equity capital. The sixth criterion is useful to measure the relationship between earnings and stock return.

Measurements of Conservatism and Cost Equity Capital

The measurements of conservatism are based on classification by Watts (2003b), namely, (1) Valuation Model Measures, (2) Book-To-Market Measures, and (3) Accrual Measures.

Valuation Model Measures

The valuation model measures originate from Feltham and Ohlson (1996) and are developed later by Ahmed et al. (2000) to estimate

conservatism. The model is used to estimate the level of undervaluation of the company's net assets by including the parameters that reflect the level of understatement of operating assets following the assumption that accounting depreciation exceeds economic depreciation. We estimate the conservatism by cross-sectionally regressing the firms' market value with earnings, total assets, and investment. The proxy of the firms' market value is the value of the firms' goodwill. The value of goodwill is obtained by subtracting the firms' market value with the book value of net assets per share. Our study uses random-walk earnings, that are the latest year's earnings are considered as the representatives of current year's earning. Total assets are adjusted by the change in total assets using lag (*t-1*). Investment is a total investment in operating assets made by the company in year t. The estimation model used is as follows:

$$G_{it} = a_0 + \beta_1 NX_{it} + \beta_2 TA_{i(t-1)} + \beta_3 Inv_{it} + e_{it} \quad (1)$$

Where G_{it} is the goodwill value of company *i* in year *t*, $\alpha_0$is a constant value, NX_{it} is the normal earnings of company *i* in year *t*, $TA_{i(t-1)}$ is the net asset of company *i* in year *t-1*, Inv_{it} s the investment of company *i* in year *t* obtained from the total assets subtracted by the account receivables and other fixed assets, and e_{it} is the error term of company *i* in year *t*, which in this study shows abnormal earnings. Estimated conservatism in the model (1) is expressed as β_2 value. Positive values indicate that companies tend to apply the practice of conservatism. So the β_2 value is expected to be significantly positive.

Book-To-Market (BTM) Measures

This measure wss developed by Beaver and Ryan (2000) and estimates the conservatism on the premise that, ceteris paribus, conservative accounting systems tend to suppress the firms' book value in comparison with the firms' economic value. A lower value of BTM indicates a higher level of accounting conservatism, and vice versa. The measurement of conservatism using BTM model follows the model of Feltham and Ohlson (1995) which was used by Chan et al. (2009), by comparing the market value of operating assets with the net book value of operating assets. It is stated as follows:

$$\lim_{\tau \to \infty} \frac{E_t oa_{t+\tau}}{E_t MV_{t+\tau}} < 1 \quad (2)$$

Where $oa_{t+\tau}$ is the opening firms' book value of operating assets of year *t*, $MV_{t+\tau}$ is the opening firms' market value of operating assets of year *t,* E_t is a notation of expected earnings generated from $oa_{t+\tau}$ and $MV_{t+\tau}$, and *lim* ($\tau \to \infty$) is a parameter which controls both $oa_{t+\tau}$ and $MV_{t+\tau}$. The measurement of conservatism using the formula (2) is done by comparing the two elements for each company. If a company has a value below 1, then the company applies conservatism and if the value is more than 1 then there is no conservatism. In our study, the measure used to estimate conservatism is the ratio between the book value and the market value (opening B/M ratio) as used by previous studies (Chan et al*.,* 2009; Ahmed and Duellman, 2007; Roychowdhury and Watts, 2006).

Accrual Measures

The accrual measure is used to determine the existence of conservatism by investigating the sign and the magnitude of accumulated accruals from time to time. The rationale of this measure usage is that accounting conservatism uses the accrual mechanism to defer recognition of economic gains and to accelerate recognition of economic losses. Through the postponement of gains recognition and the quickening of losses recognition, accumulated accrual company will gradually become more negative (Givoly and Hayn, 2000). Based on this argument, conservatism is therefore measured by looking at the trend of negative accruals increase. In our study, the firm's conservatism is measured by ranking the discretionary accruals. The firm's discretionary accrual is derived by using the modified Jones' model as follows:

$$TA_{it} = \beta_0 / A_{it-1} + \beta_1(\Delta OI_{it} / A_{it-1} - \Delta AR_{it} / A_{it-1}) + \beta_2(PPE_{it} / A_{it-1}) + e_{it} \quad (3.a)$$

$$NDA_{it} = \beta_0 / A_{it-1} + \beta_1(\Delta OI_{it} / A_{it-1} - \Delta AR_{it} / A_{it-1}) + \beta_2(PPE_{it} / A_{it-1}) \quad (3.b)$$

$$DA_{it} = TA_{it} - NDA_{it} \quad (3.c)$$

Where NDA_{it} is the nondiscretionary accrual of company i in year t, $A_{it\text{-}1}$ is the total asset of company i in year t-1, ΔOI_{it} is the operating revenue of company i in year t minus the previous year's revenue, ΔAR_{it} is the net accounting receivables of company i in year t minus the income of company i in year t-1, and PPE_{it} is the gross balance of fixed assets of company i in year t. DA_{it} is the discretionary accrual, obtained by TA_{it} minus NDA_{it}. The estimation of conservatism using the results of equation (3) is done by deciles-based discretionary accrual rank. Ranking results show that in the first deciles companies tend to apply the conservatism and vice versa.

Ex Post Conservatism

The measurement results of conservatism that are used in equation (1), (2), and (3) shows the level of ex ante conservatism. In accordance with the research objectives, our study also measures ex post conservatism based on the results of ex ante measurement. The type of ex post conservatism measurement is based on the measurement model of Chan et al. (2009) with some development adjusted to the research objectives. The measurement model used is as follows:

$$Z_{itj} = \alpha_0 + \alpha_1 D_{it} + \beta_0(R_{it} - R_{mt}) + \beta_1(R_{it} - R_{mt})D_{it} + u_{it} \quad (4)$$

Where Z_{ijt} is the conservatism measure of company i in year t based on j (1-3), namely the ranking of the valuation model measures, the book-to-market (BTM) measures, and the accrual measures. α_0 is a constant value. D_{it} is the dummy variable of company i in year t with value 1 if the value of specific stock return ($R_{it} - R_{mt}$) is negative and value 0 otherwise, R_{it} is the stock return value of company i in year t, R_{mt} is the market return value, and u_{it} is the residual value. The estimation of conservatism in the model (4) is base on the β_1 value. If this β_1 value is positive, then the investor reaction is not conservative. In other words, in these conditions there is no ex post conservative and vice versa.

Cost of Equity Capital

The measurement of the cost of equity capital in this study uses a model developed by Ohlson and Juettner (2005). The formulation is as follows.

$$r_e = A + \sqrt{A^2 + \frac{eps_1}{P_0}\left[g_2 - (\gamma - 1)\right]} \quad (5)$$

Note $A = \frac{1}{2}\left[\gamma - 1 + (dps_{it} / P_0)\right]$,

$g_2 = \frac{\Delta eps_{it}}{eps_{it-1}}$, and $\gamma = \frac{eps_{it}}{eps_{it-1}}$

Where r_e is the cost of equity capital, dps is the dividend per share of company i in year t, P_0 is the stock price for company i in year t, Δeps_{it} is the earnings per share of company i in year t (eps_{it}) minus the earnings per share for company i in previous year ($eps_{it\text{-}1}$).

Hypothesis Examination

Our study examines the association between conservatism and the cost of equity capital. The examinations are performed three times in accordance with three different approaches in measuring conservatism. The different approaches are supposed to provide different associations. The examinations conducted are mutually exclusive, using the following regression equation.

$$CoC_{it} = \alpha_0 + \alpha_1 BETA_{it} + \alpha_2 LEV_{it} + \alpha_3 SIZE_{it} + \alpha_4 CON\_RANK_{it} + e_{it} \quad (6)$$

Where CoC_{it} is an estimation of the cost of equity capital of company i in year t obtained from the result of equation (5), α_0 is a constant value, $BETA_{it}$ is the beta CAPM of company i in year t, LEV_{it} is the leverage of company i in year t measured by its debt-to-equity ratio, $SIZE_{it}$ is a natural logarithm of the market value of equity of company i in year t, CON_RANK_{it} is the deciles rank of conservatism of company i in year t, and e_{it} is the residual value.

Furthermore, our study identifies the consistency of the t-value coefficient for conservatism measure, namely CON_RANK_{it} variables from valuation model measures, book-to-market (BTM) measures, and accrual measures. CON_RANK_{it} is also used in the deciles-based sample partition. Each CON_RANK_{it} coefficient is used to define the influence of conservatism on the cost of equity capital. The coefficient, which is interpreted as an increase in the cost of equity capital, is positive for ex ante conservatism and negative for ex post conservatism. On top of that, the coefficient also shows the influence of conservatism on the cost of equity capital.

RESEARCH RESULT

Sample and Descriptive Statistics

The overall number of samples obtained from the Osiris database are 1,181 manufacturing companies. Total final sample used for the 2005-2009 observation period for all target populations is as many as 581 companies. This result is obtained as a consequence of the predetermined sampling criteria and is related to the data completeness. Details of the final sample size in each of the target population is presented in Table 1.

Table 1. Detailed Sample

Country	Overall Sample	Eliminated	Final Sample
Malaysia	455	195	260
Philippines	51	37	14
Singapore	300	165	135
Thailand	220	99	121
Total	**1,181**	**600**	**581**

The results of descriptive statistics for the research key variables and conservatism measures are presented in Table 2. The results indicate that goodwill shows a significant, positive value with a mean of 0.738. These results indicate that most of the sample firms tend to apply the practice of conservatism in their financial statements. It also can be seen in the positive value of the mean value of earnings, total assets, and investments. Likewise, the book to market value and accrual measures follow the trend of goodwill. The trend is expected to support the objectives of our study.

The mean value of the cost of equity capital is 1.085 with a standard deviation of 7.135. The relative magnitude of this standard deviation in comparison with its mean suggests that companies tend to be optimistic even in the conservative category. This is also shown by the pattern of beta descriptive statistics which are similar to

Table 2. Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
Goodwill	-67.442	453.828	0.738	20.617
Normal Earnings	-0.988	91.246	0.502	4.222
Total Assets	-0.462	3.830	0.124	0.323
Investment	-0.757	1.243	0.044	0.168
Book-to-Market Ratio	0.031	13.571	2.073	1.697
Accruals Measures:	-789.740	462.013	-2.775	51.095
Operating Revenues	-4.647	0.788	-0.262	0.565
Plant, Property, and Equipment	0.001	2.286	0.551	0.353
Firms Return	-1.000	32,999	151.180	1,519.419
Market Return	0.310	1.620	0.554	0.361
Cost of Equity Capital	-1.05×10^{-16}	148.081	1.085	7.135
Control Variables:				
Market's Beta	-0.260	454.34	158.905	124.352
Leverage	0.001	1.918	0.375	0.200
Size	7.816	25.157	13.187	2.957

the cost of equity capital. Likewise, the tendency of the descriptive statistics of the two other control variables, leverage and size, are similar.

Conservatism with Valuation Model Measures

Ex ante conservatism with this measure uses the regression in equation (1). The test results are presented in Table 3 Panel A. The test results indicate that the coefficient of total assets is 3.728 and significant with the t-value (probability value) of 2.149 (0.032). The coefficient shows a significant, positive value as expected. Thus, our interpretation is that companies apply the practice of ex ante conservatism in their financial reports.

Furthermore, our study examines the existence of ex post conservatism. The tests are carried out by using regression equation (4) using the ranked data obtained from equation (1). The test results are presented in Table 3 Panel B. The results show that the β_1 coefficient, an indication of ex post conservatism, is significantly positive. These results provide evidence that ex post conservatism does not exist, meaning that investors do not respond to the conservatism applied by companies. However, these results do not impede the testing of the conservatism influence on the cost of equity capital using this measurement model.

Conservatism Examination using Book-To-Market Measures

The examination of ex ante conservatism using this measure is based on the ratio between the book value and market value (opening B/M ratio), which is then ranked to divide the types of companies which apply, and which do not apply the conservatism practice. Companies are ranked based on equation (2). The results reveal that of the 581 companies, only 131 companies can be included in the category that applies conservatism. Thus, our study concludes that only 131 companies use ex ante conservatism practices in their financial statements. These results are then used in equation (4) to determine the existence of ex post conservatism. Ex post conservatism examination results are presented in Table 4. Table 4 shows that the β_1 coefficient is not statistically positively significant. As with the valuation model measures, this examination result also provides evidence of the absence of ex post conservatism.

Conservatism Examination Using Accruals Measure

Examination of the ex ante conservatism is conducted by ranking the discretionary accruals obtained from equation (3). The results are presented in Table 5 Panel A. Analysis of discretionary accrual rank shows the result that only 289 of 581 companies indicate the application of

Table 3. Ex Ante and Ex Post Conservatism Examination Using Valuation Measures

	Coefficient	*t*	*Sig.*
Panel A: Ex Ante Conservatism Examination			
Intercept	-0.263	-0.590	0.555
Earnings	-0.003	-0.040	0.968
Total Assets	3.728	2.149	0.032 **
Investment	-1.072	-0.429	0.668
F-Test = (1.543; 0.203) ; R^2 = 0.011			
Panel B: Ex Post Conservatism[a] Examination			
Intercept	4.987	22.717	0.000 ***
D	1.920	4.080	0.000 ***
$R_t - R_m$	-4.954×10^{-6}	-0.625	0.532
$(R_t - R_m)$ D	1.043	2.798	0.005 **
F-Test = (6.102; 0.000) ; R^2 = 0.041			

*** significant at 1%, ** significant at 5%, * significant at 10%, [a] Sample used in analysis is 429 companies.

Table 4. Examination of Ex Post Conservatism[b] Using Book-To-Market Measures

	Coefficient	*t*	*Sig.*	
Intercept	5.209	15.933	0.000	
D	0.971	1.047	0.297	
$R_t - R_m$	-1.441×10^{-3}	-1.786	0.076	*
$(R_t - R_m)$ D	0.004	0.005	0.996	
F-Test = (2.611; 0.054) ; R^2 = 0.058				

***significant at 1%, **significant at 5%, *significant at 10%, [b] Sample used in analysis is 131 companies.

ex ante conservatism. The 289 companies are then used in equation (4) to identify the existence of ex post conservatism.

The results of ex post conservatism examination using this measure are presented in Table 5 Panel B. The results show that the coefficients of D, R_t - R_m, and (R_t - R_m)D, each is not statistically significant. We, therefore, document that there is no ex post conservatism using the accruals measure.

Conservatism and the Cost of Equity Capital

The association of conservatism and the cost of equity capital examination results are presented in Table 6. The examination employs regression equation (6). The first column in Table 6 shows the results using valuation model measures. The results show that the CON_RANK variable is not significant with a coefficient value of 0.052 and a t-value (probability value) of 1.053 (0.293). This means that the association between conservatism and the cost of equity capital is not confirmed. Apart from the CON_RANK coefficient that is not statistically significant, the coefficient of size variable shows statistically significant result. While other variables, beta and leverage, do not show statistically significant results.

The second column of Table 6 presents the results of association of conservatism and the cost of equity capital conservatism using the book-to-market measure. The results show that only size variable is statistically significant with a coefficient value of 0.091 and with a t-value (probability value) of 2.962 (0.004). While other variables such as beta, size, and CON_RANK do not show statistically significant results. The results do not provide evidence that conservatism and the cost of equity capital are related.

Table 5. Examination of Ex Post Conservatism Using Accruals Measures

	Coefficient	*t*	*Sig.*
Panel A: Ex Ante Conservatism Examination			
Intercept	-0.631	-0.157	0.875
OI	-3.275	-0.870	0.384
PPE	-5.446	-0.906	0.366
F-Test = (0.745; 0.475) ; R^2 = 0.003			
Panel B: Ex Post Conservatism[c] Examination			
Intercept	5.348	17.488	0.000
D	-0.44	-0.762	0.446
$R_t - R_m$	1.313×10^{-4}	0.686	0.493
$(R_t - R_m)$ D	-0.613	-1.439	0.151
F-Test = (0.898; 0.443) ; R^2 = 0.009			

***significant at 1%, **significant at 5%, *significant at 10%, [c] Sample used in analysis is 289 companies.

Table 6. Examination of Conservatism and Cost of Equity Capital

Var(s).	Pred.	Valuation Model Measures			Book-to- Market Measures			Accruals Measures		
		Coeff.	t-value	Sig.	Coeff.	t-value	Sig.	Coeff.	t-value	Sig.
Intercept	*?*	-1.929	-2.192	0.029 **	-0.816	-1.350	0.179	-10.262	-3.075	0.002 **
Beta	+	0.001	0.975	0.330	-0.001	-0.666	0.507	-0.094	-0.019	0.985
Leverage	+	0.365	0.513	0.608	0.696	1.476	0.143	4.065	1.466	0.144
size	-	0.150	2.932	0.004 **	0.091	2.962	0.004 **	0.602	2.963	0.003 **
Con_Rank	+	0.052	1.053	0.293	-0.036	-1.053	0.295	0.401	2.033	0.043 **
F-value			2.403	0.049 **		5.184	0.001 ***		4.609	0.001 ***
R2			2.2%			14%			6.1%	
Adj-R2			1.3%			11.3%			4.8%	
Observasi			429			131			289	

***significant at 1%, **significant at 5%, *significant at 10%

The third column of Table 6 presents the results of the association of conservatism and the cost of equity capital examination using the accruals measure. The examination using accruals measure yields two variables which are statistically significant, namely size, with a coefficient value of 0.602 and the t-value (probability value) of 2.962 (0.003) and Con_Rank with a coefficient value of 0.401 and a t-value (probability value) of 2.033 (0.043). Meanwhile, the other variables, namely beta and leverage, are not statistically significant. We also, therefore, show the absence of the association between conservatism and the cost of equity capital.

The examination of association between conservatism and the cost of equity capital using all three measures produces a *CON_RANK* with different directions of association and significance levels. A coefficient value (probability value) for 0.052 (0.293) for the valuation model measure. This indicates that, using the valuation model measure, we do not find the association between conservatism and the cost of equity capital. A coefficient value (probability value) of -0.036 (0.295) for the book-to-market measure. This also shows that, using this book-to-market measure, we do not find the association between conservatism and the cost of equity. On the contrary, to the two types of measures mentioned above, the accrual measure shows a significant positive association between conservatism and the cost of equity capital. This is indicated by a coefficient value (probability value) of 0.401 (0.043) for the accruals measure. Therefore, this study concludes that using different measures causes different associations between conservatism and the cost of equity capital. In other words, we find empirical evidence that supports our proposed hypothesis that different measures of conservatism result in different associations between conservatism and the cost of equity capital.

DISCUSSION

The examination of the association between conservatism and the cost of equity capital using three types of conservatism measures, namely valuation model measures, book-to-market measures, and accrual measures, show some research findings. First, the examination results provide empirical evidence that the differentiation of conservatism level, namely ex ante and ex post, gives different interpretion of the existence of conservatism in accounting practices. The different results about the existence of conservatism practices at the ex ante and ex post level is evidence that the presence of ex ante conservatism is not always followed by the ex post conservatism. This means that the application of conservatism by management, as reflected in their companies' financial statements (ex ante), is not always treated by investors as a manifestation of conservatism in the market (ex post), and vice versa. This is probably closely related to the ability of investors to capture the intention and objectives of management when

applying conservatism. This condition leads to different perceptions between management and investors in interpreting the existence of conservatism. Additionally, the risk-adverse attitude of investors may be the underlying factor when explaining the phenomenon.

Second, the examinations using the three different types of conservatism measures, i.e. the valuation model measure, the book-to-market measure, and the accrual measure results in different company classification that applies conservatism. This is indicated by different number of companies in conservatism rank. This means that a company might be considered conservative when measured by one measure, but might be considered not conservative when measured by other measures.

Third, the use of different measures to estimate conservatism has different implications in determining the association between conservatism and the cost of equity capital. This is indicated by the difference in statistical significance of the association between conservatism and the cost of equity capital amongst the various types of measurements used. Our study, therefore, answers the addressed question why there is an inconsistency in the association between the construct conservatism and the construct cost of equity capital.

Fourth, our study finds that of the three types of conservatism measures, the most adequate measurement is modified Jones model (Givoly and Hayn, 2000). These results suggest that conservatism identified by accrual measures indicates that investors are more likely to pay intention toward accounting earnings rather than operating cash flows. Under valuation measure by Feltham and Ohlson (1995) and Ahmed et al. (2007), our study finds that investors do not respond to conservatism conducted by management. Thus, this suggests that investors merely digest book value of stockholders' equity whether or not it actually reflects the firm value. It also means that they fully concern with the share's premium value dominantly influenced by accruals.

Fifth, the results of the three types of measurements suggest that conservatism lies in ex ante conservatism only, not in ex post conservatism. The reason is that conservatism is indeed implemented by management referring to the conservatism in generally accepted accounting principles (GAAP), as the SFAC No. 1 asserts that conservatism is intended for investors' protection by presenting neutral accounting information. Meanwhile, ex post conservatism is still an academics concept and not contained in the accounting standards. It is, therefore, reasonabe to argue that ex post conservatism's association with the cost of equity capital cannot be demonstrated in empirical studies.

CONCLUSIONS AND LIMITATIONS

This study provides some empirical evidences about the impact of using different conservatism measures against the association between conservatism and cost of equity capital. The results of this study provide evidence that there are different associations of conservatism and cost of equity capital in all three measures, namely valuation model measures, book-to-market measures, and accrual measures. This means that the dependency on the measures becomes an important factor in determining the relationship of conservatism and cost of equity capital.

This study concludes that (1) conservatism levels lead to different consequences when interpreting the existence of conservatism in accounting practices, (2) the criteria for determining the companies that apply conservatism should vary according to the measures used, (3) the use of different measures in estimating conservatism has different implications in determining the association between conservatism and the cost of equity capital, (4) the most appropriate conservatism measures –identified in this study– to examine the association between conservatism and the cost of equity capital is the accrual measures, (5) actual conservatism in accounting practices lies more in ex ante conservatism, while ex post conservatism is still an academic concepts.

The result clearly indicates that generally accepted definition of accounting conservatism and articulated well by accounting researchers, particularly those related to conservatism, is ur-

gent. The discrepancy results obtained by the researchers should be enough reason that universal agreement on the definition of conservatism in accounting practices is long overdue.

This study has several limitations. First, this study used the capital markets of Southeast Asia countries which are likely weak efficiently form, so that stock return was not fully able reflect to the cost of equity capital. Second, the cost of equity capital is more likely to be higher in developing countries compared to developed countries. The high cost of equity capital is needed to sustain a high fixed interest rate. Third, this study is not fully comprehensive because it only uses three conservatism measures, namely the valuation model measures, the book-to-market measures, and the accrual measures. Meanwhile, there are two other kinds of conservatism measures, namely earnings measures and earnings/stock return relationship measures, which cannot be employed in this study because of data limitation.

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