Conservatism of Earnings and Investor Protection

Dr. Saudah Sofian
Department of Management and Human Resource Development
Universiti Technologi Malaysia, Skudai Johor, Malaysia
Email: saudah@utm.my

Dr. Siti Zaleha Abdul Rasid
International Business School
Universiti Teknologi Malaysia, Jalan Semarak, 54100 Kuala Lumpur
Email: sitizaleha_utmkl@yahoo.com

Mohammadghorban Mehri
PhD Scholar, Department of Management and Human Resource Development
Universiti Technologi Malaysia, Skudai Johor, Malaysia
Email: mehri_6916@yahoo.com

Abstract

This paper reviews the conservatism of earnings and cost of equity to enhancement and improvement of quality information pertaining to earnings quality that leads to the reduction of information asymmetry (information risk) and consequently reduces cost of equity. Review of this paper suggests that managers should disclose more quality information particularly related to earnings in order to increase investor's willingness to invest in capital market. Therefore, this paper intends to resolve the issue of information asymmetry by determining the role of conservatism of earnings on cost of equity.

Keywords: Conservatism of Earnings, Information Asymmetry, Cost of Equity.

1. Introduction

Today's capital market is considered as one of the main bases of economic growth and development in each country. Investment is the most important determinants indicator of economic destiny of each country. Capital market along with other markets, such as money, labor and commodity, has the responsibility to assign optimum capital. In order to guide decision-making correctly in optimum capital assignment, information plays a substantial role in reducing the uncertainty and risk associated to the investor's decision criteria. It is recently contended among the accounting researchers that information asymmetry (uncertainty and risk) can be reduced through the disclosure. Thus, enhancement and improvement quality information particular earnings quality leads to the reduction in information asymmetry (information risk), thereby, increasing the willingness of investors to invest and consequently reduces the cost of equity (hereafter represents by CofE) _ (Diamond and Verrecchia, 1991; Easley and O'Hara, 2004; Glosten and Milgrom, 1985).

Earning is deemed the most significant accounting information, which is accorded decisive by accounting researchers in literature as it guides the decision process. Several researches has documented that poor quality of earnings lead to the increase in information asymmetry (risk) and consequently, higher cost of equity (*CofE*), and that reduction in information asymmetry results in decreased *CofE*. The firms that concern about quality of earnings disclose more information pertaining to earnings (Aboody, Hughes and Liu, 2005; Bhattacharya, Desai and Venkataraman, 2007; Francis *et al*., 2004, 2005; Lara, Osma and Penalva, 2010; Ng, 2008; Verdi, 2008).

Among attributes of earnings quality, conservatism is derived from the view that accounting earnings are intended to evaluate economic income. FASB No. 2 (1980) defines conservatism as "prudent reaction to uncertainty to try to ensure that uncertainties and risks inherent in business situations are adequately considered." Accounting conservatism literature illustrates two types of conservatism: (1) ex ante conservatism; and (2) ex post conservatism. Ex ante conservatism stems from the application of GAAP and accounting standards, which reflect reduced book value of net assets (primarily due to unrecognized intangible assets) for instance, immediate expensing of expenditure on research and development (R&D). On the other hand, ex post conservatism is also called conditional conservatism, marked-based, and news-dependent conservatism and is associated to more timely recognition of bad news than of good news.

Several researches have examined the effect of conservatism of earnings on earnings quality, information asymmetry and consequently *CofE* (Chan, Lin and Strong, 2009; Francis *et al*., 2004; Lara, *et al*., 2010; Pae, Thornton and Welker, 2005; Penman and Zhang, 2002). It is contended in literature that high conservatism of earnings is linked to greater earnings quality, lower information asymmetry and consequently lower *CofE* (Lara *et al*., 2010; Petruska, 2008). Accordingly, this study contends that information asymmetry amid firm and a user of financial statement (investor) is a critical problem area. Therefore, this paper intends to undertake this issue by determining the role of conservatism of earnings on *CofE*. This study expects that the more (less) the conservatism of earnings, the higher (lower) the quality of earnings and consequently the lower (higher) the *CofE*. The following literature review discusses the effect of conservatism of earnings on *CofE*.

2. Literature Review

2.1 Conservatism of Earnings and *CofE*

Diamond and Verrecchia (1991) and Diamond (1985), contended that high disclosure quality decreases information asymmetry among investors and consequently reduces the cost of capital. Welker (1995) concluded that disclosure of information is negatively related to information asymmetry and positively associated to liquidity in equity markets. Easley *et al.* (2002) also revealed that disclosure quality reduces information asymmetry. Empirical researches provide substantiation that disclosure of high quality public relates to low cost of capital (Botosan, 1997; Botosan and Plumlee, 2002; Lang and Lundholm, 1996).The overall results of researches show that quality of disclosure is linked to information risk and cost of capital. Liu *et al.* (2002) stated that earnings is the premier source of public financial disclosure; one would expect that the information asymmetry is affected by quality of earnings.

Several researchers have assessed the influence of conservatism of earnings on *CofE*. Penman and Zhang (2002) stated that change in investment coupled with accounting conservative leads to poor-quality earnings. Lara *et al.* (2010) recently examined the relation amid ex post earnings conservatism and *CofE*. Unlike Francis *et al*. (2004) who found no relationship evidence between conservatism and *CofE*, Lara *et al.* (2010) found that ex post earnings conservatism negatively related to *CofE*. Pae *et al.* (2005) on the other hand examined whether ex post earnings conservatism is connected to price-to-book ratio. Their study contributed meaningfully to the earnings literature: first by reporting that conditional conservatism and P/B ratio has a negative relationship and second, accrual element earnings lead to make this negative relationship not operating element earnings. Chan *et al.* (2009) investigated the affect of different perspectives of conservatism (Ex ante/unconditional conservatism is accounting-based and ex post/conditional conservatism is market-based) on cost of capital. The result of their study revealed that conditional conservatism is linked to low quality of earnings and high *CofE* and also unconditional conservatism is associated to high earnings quality and low *CofE*.

Cultivating from the discussion in above literature, this paper accordingly posits that high and low level of *CofE* depends mainly on the information's quality, which is related to earnings. Therefore, this study addresses the gaps in literature by extending the understanding on the relationship between earnings attribute (conservatism of earnings) and *CofE*, and to resolve the issue pertaining to information asymmetry, which complicates the decision environment for investors by hypothesing the relationship amid accounting earning attribute (conservatism of earnings) and *CofE*.

3. Proposed Framework and Hypothesis for relationship between conservatism of earnings and *CofE*

Cultivating from the discussion in literature pertaining to the conservatism of earnings and *CofE*, this paper classifies earnings attribute (conservatism of earnings) as independent variable, and *CofE* as dependent variable. And also identifies beta, firm size, and book-to-market value as its three control variables, which posit to influence the dependent variable "*CofE*" in this study. As stated earlier, this paper intends to determine the relationship amid earnings attribute (conservatism of earnings) and *CofE*. Next section of the paper discusses the explicit relationships among the independent, dependent, and control variables and accordingly hypothesis is proposed.

3.1 Independent Variables

3.1.1 Conservatism of Earnings

FASB No. 2 (1980) defines conservatism as "prudent reaction to uncertainty to try to ensure that uncertainties and risks inherent in business situations are adequately considered". Accounting conservatism literature describes two types of conservatism:

(1) ex ante conservatism (unconditional, accounting-based, and news-independent conservatism); and (2) ex post conservatism (conditional, marked-based, and news-dependent conservatism). This paper is based on ex post conservatism, as this paper intends to assess the role of conservatism on earnings. It is contended in literature that high conservatism of earnings is linked to greater earnings quality and lower *CofE* (Lara *et al*., 2010; Petruska, 2008). Lara *et al*. (2010) evaluated the relationship between earnings conservatism (ex post conservatism) and cost of capital and revealed that ex post conservatism (earnings conservatism) is negatively associated to *CofE*. They concluded that lack of enough accounting conservatism leads to uncertainty and risk of future prices and consequently enhances the cost of capital. Petruska (2008) on the other hand examined the effect of accounting conservatism on cost of capital and found that accounting conservatism is negatively related to cost of capital. Following Basu (1997), Givoly and Hayn (2000), and Francis *et al*. (2004), this paper intends to examine conservatism of earnings as the ratio of the coefficient on bad news to the coefficient of good news, i.e. $(\beta_{1,i} + \beta_{2,i})/\beta_{1,i}$ using following firm-specific regression.

$$EPS_{it}/P_{i,t-1} = \alpha_0 + \alpha_1 DR_{it} + \beta_0 R_{it} + \beta_1 R_{it} DR_{it} + \varepsilon_{it}$$

Where:

EPS_{it} = earnings per share before abnormal of firm i in year t,

$P_{i,t-1}$ = price per share three months after the beginning of the financial year,

R_{it} = return of the firm i over the 12 months beginning nine months prior to the end of year t,

DR_{it} = dummy variable set equal to 1 if Rit is negative and 0 otherwise, and

Conservatism = $-(\beta_{1,j} + \beta_{2,j})/\beta_{1,j}$, that means the negative of the ratio of the coefficient on bad news to the coefficient on good news, and

ε_{it} = error term in year t for firm i.

3.2 Dependent Variable

3.2.1 *CofE*

Common equity, preferred equity, and debt are three major components of most capital structures. This paper as stated in the objective will focus on the cost of common equity to evaluate the *CofE*, which arises from the issue of common stock. Common shareholders possess the right to claim on the value of the company at times when firm announces common shares, and the claim is repaid after debt. *CofE* is accorded as minimum rate of return, which proffers by the company to common shareholders. Literature review on *CofE* illustrates that disclosure of high quality public information related to low cost of capital (Botosan, 1997; Botosan and Plumlee, 2002; Diamond, 1985; Diamond and Verrecchia, 1991; Easley *et al*., 2002; Lang and Lundholm, 1996; Welker, 1995). To remain consistent with the leading accounting researches, this study will employ PEG model to measure the *CofE* (Botosan and Plumlee, 2005; Chen, Jorgensen and Yoo, 2004; Easton, 2004; Easton and Monahan, 2005; Francis *et al*., 2004; Francis, Nanda and Olsson, 2008; Lee, Walker and Christensen, 2006; Mangena, Pike and Li, 2010):

$$r_{PEG} = \sqrt{\frac{eps_2 - eps_1}{p_0}}$$

Where:

r_{PEG} = Cost of equity capital of the firm,

eps_2 = Mean value of all two-year-ahead analysts' consensus earnings forecast after annual report release date,

eps_1 = Mean value of all one-year-ahead analysts' consensus earnings forecast after annual report release dat, and

p_0 = Share price at annual report release date (time = 0).

3.3 Control Variables

Fama and French (1993) pointed out that beta, firm size, and book-to-market value are three common risk determinants which influence the cost of capital. To remain consistent with Fama and French (1993), this paper utilizes beta, firm size and book-to-market value as control variables, which posit to influence *CofE* in this study. Beta is measured through the CAMP model:

$$E(R_i) = R_f + \beta_i \lfloor E(R_M) - R_f \rfloor$$ Where:

R_f = risk - free of return,

$E(R_M)$ = expected rate of return on the market portfolio of risky assets, and

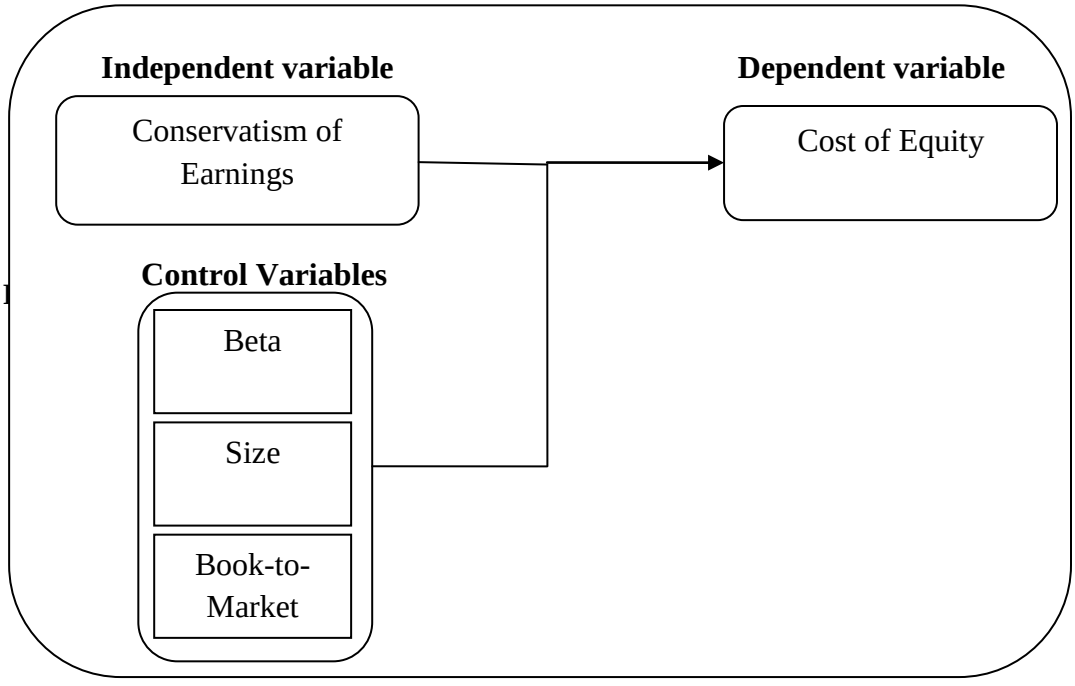
Beta is defined as covariance between its return R_i and the market return R_m, divided by the variance of the market's return. So the following formula is used to calculate beta:

$$\beta_i = \frac{\text{cov}(R_i, R_m)}{\text{var}(R_m)}$$

However, higher firm' beta is related to higher firm's *CofE*.

Firm size is classified as second control variable in this paper and is measured as the log of firm's market value (firm's market value is calculated by the market price of shares multiplied by the total number of shares outstanding) at the end of fiscal year. However, larger size of the firm is linked to lower *CofE* and lastly, book-to-market value (*B/M)*, which is calculated by log of book value of equity to market value of equity ratio at the end of fiscal year is a third control variable conjectured to have an influence on *CofE*. It is significant to note that higher B/M value is related to lower *CofE*.

The following section details and illustrates (Figure 1) the relationship amid conservatism of earnings and *CofE*.



As stated earlier, this paper intends to determine the relationships based on the association between conservatism of earnings and *CofE*. Accordingly, the research framework explains the linkages amid independent variable (conservatism of earnings), three control variables (beta, firm size, and book-to-market value) and one dependent variable (*CofE*). This paper conducts a cross –sectional analysis based on the following model:

$$CofE_{i,t} = \alpha_{0,t} + \beta_{1,t} Beta_{i,t} + \beta_{2,t} Size_{i,t} + \beta_{3,t} BM_{i,t} + \beta_{4,t} \text{Conservatism of earnings}_{i,t} + \varepsilon_{i,t}$$

Where:

CofC = estimate cost of equity,

Beta = firm i's CAPM beta,

Size = log of firm i's market value,

BM = log of firm i's book-to-market value ratio, and

ε = an error term.

3.4 Hypothesis Development for Framework (conservatism of Earnings and *CofE*)

The last three decades have witnessed the regular and methodical effects of accounting information on price and stock return. Diamond (1985) and Diamond and Verrecchia (1991) noted that high quality of disclosure reduces the information risk (information asymmetry) between market participants in financial markets and as a consequence reduces the *CofE*. Lang and Lundholm (1996); Botosan (1997); Botosan and Plumlee (2002); Easley, Hvidkjaer, and O'hara (2002) empirically examined and supported this conjecture. Watts and Zimmerman (1986) advocated the most significant reason for establishing regulations and standards for accounting information disclosure is to reduce the information asymmetry amid management and external users particularly investors. FASB No. 2 (1980) states that relevance and reliability are two primary determinants to assess the quality of accounting information and deemed useful for investors, which guide them in decision making process. Accounting information is valued by the investors in relation to their decisions to invest, as advocated by Liu *et al.* (2002) that earnings represent a premier source of public financial disclosure as one would expect the information asymmetry to be affected by the quality of earnings. Quality of information is a premier source, which guides investors in their decision criteria. On the other hand, literature advocates that poor quality of earnings increases information asymmetry and consequently, leads to higher *CofE*(Aboody *et al*., 2005; Bhattacharya *et al*., 2007; Francis *et al*., 2004, 2005; Lara *et al*., 2010; Ng, 2008; Verdi, 2008). Based on the discussion of the literature, this paper posits that high and low level of *CofE* depends mainly on the information's quality, which is related to earnings. With an aim to extend the understanding based on the relationship between conservatism of earnings and *CofE*, and also to resolve the issue pertaining to information asymmetry, which complicates the decision environment for investors, this paper posits the relationship amid conservatism of earnings and *CofE*:

H = There is an inverse relationship between CofE and conservatism of earnings.

4. Conclusion

Guiding decisions in optimum capital assignment, information plays a substantial role in reducing the uncertainty and associated risk attached to the investor's decision criteria. Contemporary research contended that information asymmetry can be reduced through disclosure of information. Thus, enhancement and improvement of quality information pertaining to earnings quality reduces information asymmetry (information risk) and concurrently increases the investor's willingness to invest and consequently reduces *CofE* (Diamond and Verrecchia, 1991; Easley and O'Hara, 2004; Glosten and Milgrom, 1985). Hence, this paper accordingly posits that high and low level of *CofE* depends mainly on the information's quality, which is related to earnings. Therefore, this study addresses the relationship between conservatism of earnings and *CofE* to resolve the issue pertaining to information asymmetry, which complicates the decision environment for investors.

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