

Effect of Conservatism of Intellectual Capital (Ex Ante) and Conservatism of Earnings (Ex Post) on Relevance of Earnings

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Abstract: This paper reviews the effect of both conservatism namely, conservatism of intellectual capital and conservatism of earnings on relevance of earnings. This paper shows that the decrease in the relevance of earnings is probably due to ex ante and ex post conservatism. Review of this paper suggests that researchers, practitioners, and accountants are required to seek and resolve this long standing issue by extending the horizon of research, which measures the role of conservatism of intellectual capital and conservatism of earnings. Therefore, this paper proposes a model that examines the effect of conservatism of intellectual capital (ex ante) and conservatism of earnings (ex post) on relevance of earnings.

Key words: Conservatism of Intellectual Capital, Conservatism of Earnings, Relevance of Earnings

INTRODUCTION

According to FASB No. 2 (1980) “relevance and reliability are two primary criteria to improve the quality of accounting information”, which help stakeholders in decision process. This defines relevance as “accounting information capable of making a difference in a decision”. However, for two decades the relevance of earnings has decreased due to non-recognition of intellectual capital (hereafter represents by IC) (Collins *et al.* 1997; Francis and Schipper, 1999; Lev and Zarowin, 1999). Hendriksen (1992) and Shi (2002) stated that uncertainty and risk of the intangible’s expected future benefits cause the non-recognition of IC. On the other hand, conservatism of IC (it calls also ex ante or balance sheet conservatism) leads to non-recognition of IC and consequently reduction of relevance of earnings. For instance, research and development (R&D) expenditure is immediately recognized as expense instead of recognized as asset. Aligned with the conservatism of IC, the second type of conservatism which might affect the decreasing of relevance of earnings is conservatism of earnings (it is also called ex post conservatism, conditional conservatism, market-based, and news-dependent). A notable example of ex post conservatism is lower-of-cost-or-market (LCM) rule. Therefore, this paper proposes that along with conservatism of IC, conservatism of earnings influences the relevance of earnings.

2. Literature Review:

Financial statement is a significant and valuable source of information, which is valued the most by investors when evaluating the firms’ stock. FASB No. 2 states relevance and reliability as two primary indicators, which make accounting information useful for guiding decisions. Empirical researches well document the usefulness of accounting information about earnings, which decreased over the years as economies became knowledge intensive (Brown *et al.* 1996; Chang, 1998; Collins *et al.*, 1997; Francis and Schipper, 1999; Lev and Zarowin, 1999). Whereas, contemporary literature reveals that capitalization of IC increases the value relevance of earnings compared to the recognizing of IC as an immediate expense (Aboody and Lev, 1998; Ahmed and Falk, 2006; Lev and Sougiannis, 1996). Brooking Research Institute (1996) pointed out that 62% of the entire company represents its physical capital and 38% represents IC. However, recent reports note that physical capital has decreased to 38% and IC has increased to 62%, which indicates that IC has substantial impact on financial information with respect to firm’s earnings.

Collins *et al.* (1997) examined the changes in the value-relevance of earnings and book value over time. They revealed that value-relevance of earnings has not declined for the period 1953-1994 based on NYSE, AMEX and NASDAQ firms sample, though; bottom line of value relevance of earnings has declined and replaced by increasing value-relevance of book value. They reported that much of the shift in value-relevance from earnings to book value can be explained by increase in the frequency of negative earnings, magnitude of in-time items, change in average firm size and intangible intensity across time. Correspondingly, Francis and Schipper (1999) in their study noted that decrease in value-relevance of high-technology stocks is greater compared to low-technology industries. Chang (1998) documented the declining trend in the value-relevance of both earnings and book value for the period 1953-1996. They asserted that recognition of Research and

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Development (R and D) as an immediate expense leads to the decrease in value relevance of accruals. Lev and Zarowin (1999) examined the usefulness of financial information (earnings and book value) for investors compared to market value. The result of the study noted the continuous decline in relationship between return on earnings and accounting information (earnings) for the period of 1978 to 1996. All these studies illustrate that un-recognition of IC leads to decrease of value relevance of accounting information.

Literature on IC discusses the significant effect of IC on value relevance of accounting information. Goodwin and Ahmed (2006) examined whether or not capitalization of intangibles had an effect on value relevance. The authors pointed out that firms with capitalized intangible assets had increased their earnings value relevance. Reinita (2007) stated that with the increase of research and development cost (R and D), value relevance of the market price on EPS and book value has also increased. The study concluded that research and development costs (R and D) increase the value relevance of the market price on EPS and book value. Goodwin and Ahmed (2006) and Reinita (2007) show the role significance of recognizing IC leads to increase in value relevance of accounting information. Thus, the critical question arises why GAAP and accounting standards do not permit the recognition of IC as an asset.

Non-recognition of IC has increased the gap between market and book values of firms (Amir and Lev, 1996; Brennan, 2001; Holland, 2003; Lev, 2001) and moreover, GAAPs and accounting standards, which discourage the recognition of many intangible assets, make financial information less relevant (Collins *et al.*, 1997; Francis and Schipper, 1999; Lev and Zarowin, 1999). It is recently contended by the researchers that conservatism has an essential role in recognizing IC (intangible asset), and stands as a premier source of gap between market value and book value and also diminishes the relevance of earnings over time.

3. Proposed a Model For Measuring the Effect of Conservatism of IC and Conservatism of Earnings on Relevance of Earnings:

Cultivating from the discussion in the above literature, it is truly turning to be a matter of real concern for accounting researchers to figure out why relevance of earnings has decreased. Is it conservatism of IC that leads to this reduction or other factors are there that effect this decrease? This paper suggests that aligned with conservatism of IC, conservatism of earnings (ex post conservatism) might reduce the relevance of earnings. Following discussion explains both kind of conservatism namely, ex post conservatism and ex ante conservatism, which propose diminishing of relevance of earnings.

Ex ante conservatism (conservatism of IC) an accounting based conservatism is suggested by Falthem and Ohlson (1995). Recent empirical researches have suggested that the increase in market-to-book value ratios over time is due to non-recognizing of intangible assets such as research and development expenditure (R and D) and human resources (Amir and Lev, 1996; Beaver and Ryan, 2005; Ohlson and Zhang, 1998). These studies used the opening market-to-book and (M/B) as a proxy for ex ante conservatism. Amir and Lev (1996) documented that the increase in the market-to-book value ratio over time is due to failure of recognizing intangible assets, such as R&D expenditure and human resource. They noted that the high-tech industries, such as telecommunication, biotechnology, and software have heavily invested in intangible assets. Because of traditional accounting, these investments are recognized as expenses in financial reporting. Therefore, the earnings and book value are unrelated to market values. Givoly and Hayn (2000) also used sets of measure to evaluate the degree of accounting conservatism, namely: (1) CFO-to-Assets ratio; (2) earning-return association; (3) Skewnes of earnings; (4) variability of earnings; and (5) Market-to-Book ratio. They utilized M/B ratio as a proxy for the degree of accounting conservatism. Gioly and Hayn (2000) analyzed data from 1968 to 1998 of 896 companies. Their result showed that M/B ratio has decreased from 2.0 in 1968 to 1.0 in 1980 and also the ratio has increased from 1.0 in 1980 to 3.5 in 1998. The result reflects that the observed variation in the Market-to-Book ratio over time may show change in the market expectations of growth. Stober (1996) used the M/B ratio to measure accounting conservatism. He concluded that there is an association between conservative biases in accounting book values to market value. Beaver and Ryan (2005) stated that unconditional (ex ante) conservatism and conditional (ex post) conservatism are interrelated and have negative association with each other. They also found that the empirical evidence on conditional conservatism without controlling for unconditional conservatism is biased because unconditional conservatism is able to restrict the opportunistic conditional conservatism. However, as mentioned above following Amir and Lev (1996); Beaver and Ryan (2005); Feltham and Ohlson (1995); Ohlson and Zhang (1998), this paper employs Market-to-Book (M/B) value ratio to measure conservatism of IC.

On the other hand, the second type of conservatism is conservatism of earnings, which is also called conditional conservatism, market-based, ex post and news-dependent. This kind of conservatism is linked with timely recognition of bad news. A notable example of ex post conservatism is lower-of-cost-or-market (LCM) rule. Thus, ex post conservatism effects on earnings streams may be less predictable and persistent.

Following Givoly and Hayn (2000), Basu (1997), and Francis *et al.* (2004), this paper applies conservatism of earnings as ratio of the coefficient on bad news to the coefficient on good news, i.e. $(\beta_{1,j} + \beta_{0,j})/\beta_{0,j}$ from the 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 R_{it} is negative and 0 otherwise, and

Conservatism = $-(\beta_{1,j} + \beta_{0,j}) / \beta_{0,j}$, that means the negative of the ratio of the coefficient on bad news to the coefficient on good news.

Cultivating from the above discussion, this paper will employ the following model to measure the effect of conservatism of IC (ex ante) and conservatism of earnings (ex post) on relevance of earnings.

$$P_{it} = \alpha_0 + \beta_1 E_{it} + \beta_2 BV_{it} + \beta_3 \frac{M}{B}_{it} + \text{Conservatism of earnings} + \varepsilon_{it}$$

Where;

P_{it} = stock price of the firm at the end of year t + 3,

E_{it} = earnings per share of firm for year t,

BV_{it} = book value of firm's common equity per share,

$\frac{M}{B}_{it}$ = the market value and the book value of firm' equity, and

ε_{it} = an error term.

Conclusion:

During the past two decades, due to non-recognition of IC, relevance of earnings has decreased (Collins *et al.* 1997; Francis and Schipper, 1999; Lev and Zarowin, 1999). Hendriksen (1992) and Shi (2002) stated that uncertainty and risk of the intangible's expected future benefits cause the non-recognition of IC. On the other hand conservatism of IC leads to non-recognition of IC and consequently reduction of relevance of earnings. Aligned with conservatism of IC, this paper suggests conservatism of earnings as another factor that might reduce the relevance of earnings. The paper also proposes a model that evaluates the effect of conservatism of IC and conservatism of earnings on the relevance of earnings.

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