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控制會計保守與盈餘成長估計權益資金成本之研究

Controlling Accounting Conservatism and Earnings Growth to Estimate the Implied Cost of Equity Capital[1]

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摘要

當財務領域之資本資產評價理論（CAPM）未能解釋股票之報酬，套利評價理論（APT）及 Fama & French (1993) 之三因子模式（Three-factor Model）實證應用上仍存在問題時，運用會計基礎評價模式估計權益資金成本，毋寧是一種出路。本研究延續此會計基礎推算隱含權益資金成本之脈絡，應用 Ohlson (2005) 之會計基礎評價模式，並援引 Dechow & Dichev (2002) 對會計應計項目估計錯誤之衡量，用以推算及替代會計保守處理之衡量，進一步探討在考慮會計保守性及盈餘成長情形下，隱含權益資金成本之估計。

本研究之實證結果顯示，控制會計保守及盈餘成長之模式解釋股價變異之能力優於未控制之模式。進一步比較會計基礎估計之權益資金成本與 CAPM 市場模式估計之權益資金成本解釋未來股票報酬之能力，結果發現，如以會計基礎估計之權益資金成本或 CAPM 市場模式估計之權益資金成本為單獨的自變數解釋未來股票報酬之變異，則會計基礎模式並未優於 CAPM 市場模式。但 CAPM 市場模式估計之權益資金成本與未來股票報酬間卻呈現負相關，此一現象與 CAPM 模式之預期相違背，呼應財務領域估計權益資金成本存在問題之事實。另外，如將兩者納入同一迴歸式中，用於解釋未來股票報酬之變異，結果發現，會計基礎權益資金成本之係數大多大於 CAPM 市場模式估計之係數，而此結果主要導因於後者之係數大多為負數之故。

關鍵詞： 權益資金成本、會計基礎評價模式、會計保守性、盈餘成長

Abstract

Combining the models of Ohlson (2005) and Dechow & Dichev (2002), this study estimates the implied cost of equity capital by simultaneously controlling the measures of accounting conservatism and earnings growth. When the Capital Asset Pricing Model (CAPM), Arbitrage Pricing Theory (APT), and Fama & French (1993) Three-factor Model got problems in estimating the cost of equity capital, the method based on accounting valuation models may play an important role in this field. The findings show that the model controlling for accounting conservatism and earnings growth exhibits greater explanatory power to the variation of stock prices than the one without controlling. Furthermore, when comparing the relative explanatory power to the future stock returns, there exists no evidence that the accounting-based estimation of the cost of equity capital is superior to that estimated by the CAPM. However, the negative relation between the cost of equity capital estimated by the CAPM and future stock returns is inconsistent with the CAPM's prediction. Further tests of the incremental magnitude between the coefficients of the accounting-based estimation of the cost of equity capital and those estimated by the CAPM, in explaining the variation of future stock returns, show that the former dominates the latter, largely because of the negatively significant coefficients of the cost of equity capital estimated by the CAPM.

Key words: Cost of Equity Capital, Accounting-based Valuation Model, Accounting Conservatism, Earnings Growth

1.INTRODUCTION

The estimation of cost of equity capital is vital to the measurement of an enterprise's overall cost of capital or its weighted average cost of capital. There are two approaches for this purpose. One is the finance-based approach, using models such as Capital Asset Pricing Model (CAPM), Arbitrage Pricing Theory (APT), and Fama & French (1993) Three-factor Model, etc. The other is the accounting-based approach, mainly following the models of Ohlson (1995), Feltham & Ohlson (1995), and Ohlson & Juettner-Nauroth (2005), etc.

The finance-based model originated from the CAPM (Sharpe, 1964; Lintner, 1965; Mossin, 1966), which establishes a prediction model for the expected stock returns using the systematic risk (βeta). However, Fama & French (1992) use data over the period 1963-1990 and find that the relationship between stock returns and βeta is very weak. Earlier findings of Black et al. (1972) and Fama & MacBeth (1973) that the stock returns are related to βeta can not be extended to the later periods. Fama & French (1993) further suggest that market premium (market returns minus risk free rate, RM-RF), size, and book-to-market equity (B/M) can explain most variation of stock returns, which is the so called Three-factor Model. Kothari et al. (1995) analyze 1972-1990 annual data and find that βeta can still explain the variation of stock returns. They argue that B/M in Fama & French (1992) model becomes significant is due to the survivor bias effect. Fama & French (1996) reply that solely the survivor bias effect can not wholly eliminate the strong relationship between B/M and stock returns. They point out that solely βeta can not explain the variation of stock returns and it should be combined with size and B/M, i.e. the Three-factor Model, to form an appropriate risk model.

Except the CAPM and the Three-factor Model, Ross (1976) presents the APT, which uses factor analysis to extract the common factors of stock returns. Shanken (1982) suggests that this approach can not find consistent factors to explain the variation of stock returns and investors can hardly get the sense of these factors. Chen et al. (1986) first identify some economic meaningful factors and then test their relationship with stock returns. They find industrial production growth rate, changes in default risk premiums, unexpected inflation rate, and the interest rate spread between long-term and short-term government bonds can explain the variation of stock returns. But this approach does not completely follow the rule of factor analysis.

When the finance-based models got problems in estimating the cost of equity capital, the accounting-based models may play an important role in this field. The accounting-based models originated from Ohlson (1995) and Feltham & Ohlson (1995), followed by Ohlson & Juettner-Nauroth (2005) and Ohlson (2005). Ohlson (1995) and Feltham & Ohlson (1995) use book values and future abnormal earnings to explain the variation of stock prices, which is so called Residual Income Valuation model (hereafter, RIV model). Gebhardt et al. (2001), Christensen et al. (2002), Easton et al. (2002), and Hribar & Jenkins (2004) adopt the RIV model to estimate the implied cost of equity capital. This approach requires an estimation of forecast horizon and terminal value, which causes much uncertainty in the estimation of implied cost of equity capital.

Ohlson & Juettner-Nauroth (2005) extend the concept of savings account to derive the cost of equity capital, which is so called OJ Model. Gode & Mohanram (2003) use the forthcoming earnings per share (eps_1), forthcoming dividends per share (dps_1), two-year-ahead eps (eps_2), and an assumed perpetual growth rate gamma (γ) to estimate the implied cost of equity capital. The feature of their approach is that they use only two-year-ahead forecast earnings, but they still need to assume a long-term growth rate for earnings. Easton (2004) also adopts the OJ model but only uses two-year-ahead forecast earnings to estimate the implied cost of equity capital and earnings growth rate simultaneously. Hribar & Jenkins (2004) examine the effect of accounting restatements on a firm's cost of equity capital, which is estimated concurrently by the RIV and OJ models. The results show, no matter the model used, accounting restatements lead to increases in the firm's cost of equity capital.

This study adopts Ohlson (2005) model to estimate the implied cost of equity capital instead. Ohlson (2005) suggests that the existence of accounting conservatism and earnings growth causes an enterprise's stock price to be greater than its book value per share. We therefore control the accounting conservatism and earnings growth and then extend Ohlson (2005) model to estimate the implied cost of equity capital. The feature of this study is that we use a new model, that is, Ohlson (2005) model, which differs from the RIV and OJ models in two ways. First, in addition to the past data, this study only uses one-year-ahead earnings data in estimating the cost of equity capital, as shown in Section 2. Second, while the RIV and OJ models include earnings growth as a vital factor in estimating the cost of equity capital, this study adds the accounting conservatism as a necessary control variable. This study has the advantage of completeness in estimating the cost of equity capital empirically.

The findings show that the model controlling for accounting conservatism and earnings growth exhibits greater explanatory power to the variation of stock prices than the one without controlling. Furthermore, when comparing the relative explanatory power to the future stock returns, the accounting-based estimation of the cost of equity capital is not superior to that estimated by the CAPM, whereas the tests of the incremental information content show the opposite results, largely because of the negatively significant coefficients of the cost of equity capital estimated by the CAPM.

The remainder of this paper is organized as follows. Section 2 develops the testing hypotheses. Section 3 describes the sample selection, research design, and descriptive statistics. Section 4 presents the empirical findings and Section 5 concludes.

2.DEVELOPMENT OF HYPOTHESES

This study extends Ohlson (2005) model, concurrently controlling the accounting conservatism and earnings growth, to estimate the implied cost of equity capital. Ohlson (2005) suggests that, if accounting is unbiased, the following condition will be satisfied, that is, $P_t = b_t$ or $P_t = x_{t+1}/r$. But if accounting is biased, the scenario will become $P_t > b_t$ or $P_t > x_{t+1}/r$ for large *t*, largely because of accounting conservatism and earnings growth (Feltham & Ohlson, 1995; Zhang, 2000; Ozair, 2003; Ohlson, 2005). In a relatively standard setting with accounting conservatism and earnings growth, the relationship between P_t and b_t can be shown as follows.

$$P_t = b_t + \varepsilon_t \tag{1}$$

where P_t and b_t are the stock price and book value per share at the end of year *t*, respectively. ε_t is the difference between P_t and b_t and is normally positive because of accounting conservatism and earnings growth. Ohlson (2005) points out that, in equilibrium condition, the following equation holds:

$$P_{t+1} + d_{t+1} - P_t = r \cdot P_t \tag{2}$$

where d_{t+1} is the dividend net of capital contribution of the year *t+1* ; *r* is the cost of equity capital.

Assume X_{t+1} to be the all inclusive earnings of the year *t+1*, the following clean surplus relation (CSR) holds.

$$d_{t+1} = b_t + X_{t+1} - b_{t+1} \tag{3}$$

Replace Eq. (3) and Eq. (1) into Eq. (2), P_t can be shown as follows.

$$\begin{aligned} P_t &= \frac{1}{r} \cdot \left[b_{t+1} + \varepsilon_{t+1} + d_{t+1} - b_t - \varepsilon_t \right] \\ &= \frac{1}{r} \cdot \left[\left(b_{t+1} + d_{t+1} - b_t \right) + \left(\varepsilon_{t+1} - \varepsilon_t \right) \right] \\ &= \frac{1}{r} \cdot \left[\left(b_{t+1} + b_t + X_{t+1} - b_{t+1} - b_t \right) + \left(\varepsilon_{t+1} - \varepsilon_t \right) \right] \end{aligned}$$

$$= \frac{1}{r} \cdot X_{t+1} + \frac{1}{r}(\varepsilon_{t+1} - \varepsilon_t) \tag{4}$$

Under unbiased accounting, $(\varepsilon_{t+1} - \varepsilon_t)$ would be zero. Empirically Eq. (4) can be reduced as:

$$P_t = \alpha'_0 + \alpha'_1 X_{t+1} + \xi'_t \tag{5}$$

Under biased accounting, $(\varepsilon_{t+1} - \varepsilon_t)$ would not be zero. The empirical model of Eq. (4) can be shown as:

$$P_t = \alpha_0 + \alpha_1 X_{t+1} + \alpha_2 CG_{t+1} + \xi_t \tag{6}$$

where CG_{t+1} is $(\varepsilon_{t+1} - \varepsilon_t)$ in Eq. (4), which could be resulted from accounting conservatism and earnings growth (Ohlson, 2005).

Prior research always uses earnings as a sole variable in explaining the variation of stock prices, which is equivalent to assuming unbiased accounting. But a relatively standard setting is always with accounting conservatism and earnings growth, so we predict that the explanatory power to the variation of stock prices of Eq. (6) is superior to that of Eq. (5).

H1：The explanatory power to the variation of stock prices of Eq. (6) is superior to that of Eq. (5).

Under biased accounting, α_1 and α_2 in Eq. (6) would be equal, as referring to Eq. (4). We thus develop the following hypothesis:

H2：The coefficients of earnings (X_{t+1}) and combined measure of accounting conservatism and earnings growth (CG_{t+1}) in Eq. (6) would be equal.

The term CG_{t+1} is a combined measure of accounting conservatism and earnings growth. If we can extract its component of accounting conservatism, then its component of earnings growth can also be estimated. This study adopts Dechow & Dichev (2002) model to estimate a proxy measure of accounting conservatism. As a beginning, accounting accruals are defined as follows.

$$X_t = CF_t + Accruals_t \tag{7}$$

where CF_t and $Accruals_t$ are cash flows and accounting accruals per share of the year *t*. CF_t can be divided into three groups.

$$CF_t = CF_t^{t-1} + CF_t^t + CF_t^{t+1} \tag{8}$$

where:

CF_t^{t-1} = Cash collections or payments at year t but they are accrued at year t-1,

CF_t^t = Cash collections or payments at year t and they are also recognized at year t,

CF_t^{t+1} = Cash collections or payments at year t but they are deferred to year t+1.

Accounting accruals can be divided into two groups, cash flows occur before/after the corresponding revenues and expenses are recognized in earnings. These two groups of accounting accruals have a common feature, that is, they all need an opening accrual entry and a closing accrual entry to record the timing difference between cash collections/payments and the recognition of earnings. If the opening accrual entry contains an estimation error, it will be corrected by the related closing accrual entry. This situation will normally be found when cash flows occur after the corresponding revenues and expenses are recognized in earnings. However, when cash flows occur before the recognition of earnings, there exist no estimation error problems.

Following Dechow & Dichev (2002), the relationship among earnings, cash flows, and estimation errors can be shown as follows.

$$X_t = CF_{t-1}^t + CF_t^t + CF_{t+1}^t + (\mu_{t+1}^t - \mu_t^{t-1}) \tag{9}$$

where:

μ_{t+1}^t = estimation errors related to CF_{t+1}^t, because cash flows occur after the recognition of earnings,

μ_t^{t-1} = estimation errors related to CF_t^{t-1}, because cash flows occur after the recognition of earnings.

$(\mu_{t+1}^t - \mu_t^{t-1})$ in Eq. (9) is the estimation errors related to CF_{t+1}^t minus the estimation errors related to CF_t^{t-1}, which can be used as a proxy measure of accounting conservatism. Empirically, we can test the following regression.

$$X_t = \phi_0 + \phi_1 CF_{t-1} + \phi_2 CF_t + \phi_3 CF_{t+1} + v_t \tag{10}$$

where $v_t = \mu_{t+1}^t - \mu_t^{t-1}$. Thus, $(v_{t+1} - v_t)$ implies the accounting conservatism component of $(\varepsilon_{t+1}-\varepsilon_t)$ in Eq. (4). Dechow & Dichev (2002) suggest that ϕ_1, ϕ_2, and ϕ_3 are likely to be biased toward 0, and R^2 will be reduced, because the empirical version in Eq. (10) uses total CFOs instead of CF_t^{t-1}, CF_t^{t}, and CF_t^{t+1} in Eq. (9) .

Using data of $(\varepsilon_{t+1}-\varepsilon_t)$ from Eq. (1) and $(v_{t+1}-v_t)$ from Eq. (10), Eq. (6) can be transformed to:

$$P_t=\varphi_0+\varphi_1 X_{t+1}+\varphi_2 CM_{t+1}+\varphi_3 EG_{t+1}+\eta_t \tag{11}$$

where:

CM_{t+1} = $(v_{t+1}-v_t)$, where v_{t+1} and v_t are the residuals of Eq. (10) at years *t+1* and *t*,

EG_{t+1} = $[(\varepsilon_{t+1}-\varepsilon_t)-(CM_{t+1})]$, where ε_{t+1} and ε_t are derived from Eq. (1) at years *t+1* and *t*.

CG_{t+1} in Eq. (5) are divided into components of accounting conservatism (CM_{t+1}) and earnings growth (EG_{t+1}) in Eq. (11). We expect that the explanatory power to the variation of stock prices of Eq. (11) is grater than that of Eq. (6). The testing hypothesis is:

H3：The explanatory power to the variation of stock prices of Eq. (11) is grater than that of Eq. (6).

The inverse of φ_1 in Eq. (11) is an estimation of implied cost of equity capital (Acoc). φ_2 and φ_3 represent the coefficients of accounting conservatism and earnings growth, respectively. Similar reasons as H2, φ_1, φ_2, and φ_3 would be equal. The testing hypothesis is:

H4：The coefficients of implied cost of equity capital, accounting conservatism, and earnings growth (that is, φ_1, φ_2, and φ_3 in Eq. (11)) would be equal.

The contribution of this study is to control accounting conservatism and earnings growth and then to estimate the implied cost of equity capital. Because the CAPM got problems in explaining the variation of future stock returns, we then develop the following hypothesis:

H5：After controlling accounting conservatism and earnings growth, the accounting-based estimation of the implied cost of equity capital is superior to that estimated by the CAPM in explaining the variation of future stock returns.

H5 can be tested by the relative explanatory power model and the incremental magnitude of coefficients model. The test on the relative explanatory power model focuses on residual sums of squares when $Acoc_{EP}$ or $ExRt_{EP}$ is used as the sole explanatory variable in explaining the variation of future stock returns. The models used are as follows:

$$r_F = \theta_0 + \theta_1 Acoc_{EP} + \psi \tag{12}$$

$$r_F = \pi_0 + \pi_1 ExRt_{EP} + \zeta \tag{13}$$

where:

r_F = the stock returns of the forecast period,

$Acoc_{EP} = 1/\varphi_1$, where φ_1 is the coefficient of X_{t+1} in Eq. (11) for the estimation period,

$ExRt_{EP}$ =the expected stock returns estimated by the market model of CAPM for the estimation period.

In addition to the above relative explanatory power test, we also carry out the incremental magnitude of coefficients test by putting $Acoc_{EP}$ and $ExRt_{EP}$ in the same regression model and then examine the difference between the coefficients of them. The model used is as follows:

$$r_F = \lambda_0 + \lambda_1 Acoc_{EP} + \lambda_2 ExRt_{EP} + \omega \tag{14}$$

3. DATA AND RESEARCH METHODOLOGY

3.1 Data and Sample Selection

The initial sample comprises all listed firms in Taiwan Stock Exchanges (TSE) and Over-the-Counter (OTC) markets from 1991 through 2006. The sample firms must have financial and stock price data available for at least ten consecutive years. Initially there are 1798 listed firms with observations from 1991 to 2006. We firstly remove 459 firms of financial and banking industries from the Taiwan Economic Journal (TEJ) database. Furthermore, 982 firms with observations less than 10 years from 1991 to 2003 are excluded, resulting in a total of 357 firms in the sample. All related data are extracted from the TEJ database.

Panel A of Table 1 presents the descriptive statistics for stock prices (P_t), stock returns (r_t), earnings (X_t), book value (b_t) and cash flows (CF_t). All variables are on a per share basis. Panel B of Table 1 shows the Pearson correlations (on the upper diagonal) and the Spearman correlations (on the lower diagonal) of the variables. The correlations of P_t and X_t (ρ=0.729), P_t and b_t (ρ=0.721), and X_t and b_t (ρ=0.782) are high. Because the models used in this study have their theoretical foundation, we choose the do-nothing approach as supported by Kennedy (1992).

Table 1

Descriptive Statistics and Correlations

Variable	P_t	r_t	X_t	b_t	CF_t
Panel A:	Descriptive	Statistics			
Mean	$25.1214	0.1219	$0.7740	$14.3502	$1.2084
Std.	17.4647	0.1449	1.3888	4.1149	1.4052
Minimum	4.2375	-0.2694	-4.6663	4.6588	-6.7233
Maximum	147.0357	0.9632	8.0644	35.2478	6.9938
Median	20.6750	0.1058	0.6978	13.8117	1.1111
Panel B:	Pearson and	Spearman	Correlations [a]		
P_t	1.000	0.406*** (0.0001)	0.729*** (0.0000)	0.721*** (0.000)	0.527*** (0.0000)
r_t	0.428*** (0.0000)	1.000	0.471*** (0.0000)	0.415*** (0.0000)	0.217*** (0.0000)
X_t	0.697*** (0.0000)	0.515*** (0.0000)	1.000	0.782*** (0.0000)	0.662*** (0.0000)
b_t	0.705*** (0.0000)	0.434*** (0.0000)	0.787*** (0.0000)	1.000	0.527*** (0.0000)
CF_t	0.550*** (0.0000)	0.273*** (0.0000)	0.707*** (0.0000)	0.560*** (0.0000)	1.000

Note:

1. [a] The upper diagonal elements are the Pearson correlations of the variables, whereas the lower diagonal elements are the Spearman correlations of the variables (p-value in parentheses).

2. *, **, and *** indicate that the correlation is significantly different from zero at 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).
3. All variables are on a per share basis. P_t = stock prices at the end of year *t*, r_t = stock returns of year *t*, X_t = earnings of year *t*, b_t = book value at the end of year *t*, CF_t = cash flows from operating activities of year *t*.
4. The table above provides descriptive statistics and variable correlations for the sample of 357 firms from the period 1991-2006.

3.2 Research Methodology

Ohlson (2005) suggests that it would be better to estimate the implied cost of equity capital by concurrently controlling the accounting conservatism and earnings growth. However, prior research always uses earnings as a sole variable in explaining the variation of stock prices as shown in Eq. (5), which is equivalent to assuming unbiased accounting. In reality, a relatively standard setting is always with accounting conservatism and earnings growth, so H1 tests if the inclusion of a combined measure of accounting conservatism and earnings growth, i.e. CG_{t+1} in Eq. (6), could increase the explanatory power to the variation of stock prices. This hypothesis can be tested by conducting a *t*-test of the coefficient of CG_{t+1} in Eq. (6).

Under conservative accounting and referring to Eq. (4), H2 is developed to examine that the coefficients of earnings (X_{t+1}) and the combined measure of accounting conservatism and earnings growth (CG_{t+1}) in Eq. (6) would be equal. Similarly, H4 tests if the coefficients φ_1, φ_2, and φ_3 in Eq. (11) are equal. The hypotheses can be tested by conducting a *Wald* test as follows (Maddala, 2001):

$$W = \frac{(RRSS - URSS)}{URSS / N} \tag{15}$$

where $RRSS$ and $URSS$ are the residual sum of squares computed from the restricted and unrestricted regressions, respectively. The *W* value in Eq. (6) is distributed as a χ^2 distribution with 1 df. Similarly, the *W* value in Eq. (11) is distributed as a χ^2 distribution with 2 df. H2 and H4 will be supported if the computed *W* values are statistically significant at a given level of α. We calculate and report the Newey-West (1987) Heteroskedasticity and Autocorrelation Consistent (HAC) standard errors throughout the paper.

CG_{t+1} in Eq. (6) is divided into components of accounting conservatism (CM_{t+1}) and earnings growth (EG_{t+1}) in Eq. (11). We expect that the explanatory power to the variation of stock prices of Eq. (11) is grater than that of Eq. (6). H3 is developed to examine the superiority of Eq. (11) over Eq. (6) in explaining the variation of stock prices. Using similar approach, we test that the accounting-based estimation of the implied cost of equity capital (Eq. (12)) is superior to that of CAPM (Eq. (13)) in explaining the variation of stock returns (H5).

Vuong (1989) proposes a *Z*-statistic for the comparison of non-nested models. Dechow (1994) applies the test using a simplified model, which we follow:

$$m_i = \frac{1}{2}\log\left(\frac{RSS_{(r)}}{RSS_{(s)}}\right) + \frac{N}{2}\left(\frac{e_{r_i}^2}{RSS_{(r)}} - \frac{e_{s_i}^2}{RSS_{(s)}}\right) \tag{16}$$

where

$RSS_{(r)}$= residual sum of squares of Eq. (*r*);

$RSS_{(s)}$= residual sum of squares of Eq. (*s*);

e_{r_i} = residuals obtained from estimating Eq. (*r*) for firm *i* over time period;

e_{s_i} = residuals obtained from estimating Eq. (*s*) for firm *i* over time period;

N= total number of sample firms.

To compare non-nested models, Vuong's *Z*-statistic is calculated as follows:

$$Z = t_m \times \sqrt{\frac{N-1}{N}} \tag{17}$$

where t_m is the statistic to test if the mean of m_i in Eq. (16) is different from zero. Vuong (1989) test is directional and its asymptotic distribution is standard normal. Significantly positive *Z*-value implies that the explanatory power to stock returns of Eq. (*s*) is superior to that of Eq. (*r*) at a given level of α.

4. EMPIRICAL RESULTS

H1 tests if the inclusion of a combined measure of accounting conservatism and earnings growth, i.e. CG_{t+1} in Eq. (6), could increase the explanatory power to the variation of stock prices. Table 2 shows the estimation results of Eq. (5) when the earnings (X_{t+1}) is the sole explanatory variable in explaining the variation of stock prices. The coefficients of X_{t+1} are all significant in all testing periods and the $\overline{R}^2$s range from 0.1803 to 0.2335. When CG_{t+1} is added to Eq. (5), resulted in Eq. (6), $\overline{R}^2$s increase relative to those of Eq. (5), ranging from 0.3928 to 0.4689 as shown in Table 3. The coefficients of X_{t+1} in Eq. (6) are all positively significant whereas the coefficients of CG_{t+1} are all negatively significant. H1 is supported. However, the negative signs of the coefficients of CG_{t+1} imply that the market weighs the information of the combined measure of accounting conservatism and earnings growth differently from that of the earnings per se. Interestingly, when CG_{t+1} increases, the stock prices react negatively, which may be resulted from the information of accounting conservatism or the information of earnings growth. Therefore, we further investigate the separate information content of accounting conservatism versus earnings growth by examining H4.

Table 2

The estimation results of Eq. (5) where the earnings (X_{t+1}) is the sole explanatory variable of the variation of stock prices

$$P_t = \alpha_0' + \alpha_1' X_{t+1} + \xi_t'$$

Sample Period	$\hat{\alpha}_0'$ (t($\hat{\alpha}_0'$))	$\hat{\alpha}_1'$ (t($\hat{\alpha}_1'$))	F	$Adj\text{-}R^2$
1991-2000	33.9964*** (26.94)	6.3722*** (5.19)	429.07***	0.1803
1991-2001	31.9561*** (28.45)	7.1064*** (5.95)	619.71***	0.2119
1991-2002	29.3843*** (31.11)	7.3283*** (6.91)	793.22***	0.2297
1991-2003	27.6393*** (33.01)	7.2406*** (7.52)	918.25***	0.2335
1991-2004	25.8045*** (33.25)	7.0168*** (7.79)	987.76***	0.2266
1991-2005	24.6488*** (34.51)	6.6186*** (8.10)	1046.02***	0.2192
1991-2006	23.7608*** (36.12)	6.3886*** (8.52)	1151.70***	0.2202

Note:

1. *, **, and *** indicate that the test statistics are significantly different from zero at 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).
2. t-values in parentheses which are based on Newey-West heteroskedasticity and autocorrelation consistent (HAC) corrected standard errors.
3. All variables are on a per share basis. P_t = stock prices at the end of year t, X_{t+1} = earnings of year $t+1$.
4. This table uses the data of 357 firms from the period 1991-2006.

H2 examines that the coefficients of earnings (X_{t+1}) and combined measure of accounting conservatism and earnings growth (CG_{t+1}) in Eq. (6) would be equal. Table 3 indicates that the coefficients of X_{t+1} are greater than those of CG_{t+1}. Therefore, H2 is not supported.

Table 3

Tests that the coefficients of earnings (X_{t+1}) and combined measure of accounting conservatism and earnings growth (CG_{t+1}) in Eq. (6) would be equal.

$$P_t = \alpha_0 + \alpha_1 X_{t+1} + \alpha_2 CG_{t+1} + \xi_t$$

Sample Period	$\hat{\alpha}_0$ $t(\hat{\alpha}_0)$	$\hat{\alpha}_1$ $t(\hat{\alpha}_1)$	$\hat{\alpha}_2$ $t(\hat{\alpha}_2)$	F	Adj-R^2	$H_0: \alpha_1 = \alpha_2$ *Wald*-statistic (*p*-value)
1991-2000	30.7947***	7.6076***	-0.6906***	630.41***	0.3928	49.78***
	(23.02)	(6.85)	(-7.11)			(0.000)
1991-2001	28.3287***	7.4157***	-0.7135***	925.02***	0.4454	65.62***
	(25.18)	(7.70)	(-9.81)			(0.000)
1991-2002	26.3394***	7.6779***	-0.7220***	1108.59***	0.4548	84.58***
	(28.20)	(8.74)	(-10.57)			(0.000)
1991-2003	24.8471***	7.4095***	-0.7563***	1330.21***	0.4689	101.24***
	(30.84)	(9.46)	(-12.14)			(0.000)
1991-2004	23.4169***	7.2242***	-0.7781***	1466.46***	0.4653	110.44***
	(31.53)	(9.83)	(-12.72)			(0.000)
1991-2005	22.4198***	6.8273***	-0.7885***	1559.01***	0.4556	119.67***
	(32.84)	(10.18)	(-12.87)			(0.000)
1991-2006	21.6852***	6.6156***	-0.7775***	1638.54***	0.4455	127.97***
	(34.04)	(10.54)	(-12.60)			(0.000)

Note:

1. *, **, and *** indicate that the test statistics are significantly different from zero at 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).
2. t-values in parentheses which are based on Newey-West heteroskedasticity and autocorrelation consistent (HAC) corrected standard errors.
3. All variables are on a per share basis. P_t = stock prices at the end of year *t*, X_{t+1} = earnings of year *t+1*, CG_{t+1} = the combined measure of accounting conservatism and earnings growth of year *t+1*.
4. This table uses the data of 357 firms from the period 1991-2006.

H3 tests that the explanatory power to the variation of stock prices of Eq. (11), which includes independent variables of earnings (X_{t+1}), accounting conservatism (CM_{t+1}) and earnings growth (EG_{t+1}), is grater than that of Eq. (6), which combines accounting conservatism and earnings growth into an independent variable CG_{t+1}. The results of Vuong (1989) Z-tests are shown in Table 4. The significantly positive *Z*-statistics for all sample periods indicate that the explanatory power of the models will be improved by dividing CG_{t+1} in Eq. (6) into separate components of accounting conservatism (CM_{t+1}) and earnings growth (EG_{t+1}) in Eq. (11). H3 is supported.

Table 4

Results of the likelihood ratio tests developed by Vuong (1989) for nonnested model selection; a significant positive Z-statistic indicates that performance Eq. (6) is rejected in favor of performance Eq. (11)

$$P_t = \alpha_0 + \alpha_1 X_{t+1} + \alpha_2 CG_{t+1} + \xi_t \quad (6)$$

$$P_t = \varphi_0 + \varphi_1 X_{t+1} + \varphi_2 CM_{t+1} + \varphi_3 EG_{t+1} + \eta_t \quad (11)$$

Comparison of Eq. (6) vs. Eq. (11)		F	$Adj\text{-}R^2$	Vuong's Z-statistic	p-value
1991-2000	P_t vs. .X_{t+1}, CG_{t+1}	630.41	0.3928		
	P_t vs. X_{t+1}, CM_{t+1}, EG_{t+1}	443.87	0.4057	5.7499***	<0.001
1991-2001	P_t vs. X_{t+1}, CG_{t+1}	925.02	0.4454		
	P_t vs. X_{t+1}, CM_{t+1}, EG_{t+1}	655.34	0.4604	22.2756***	<0.001
1991-2002	P_t vs.X_{t+1}, CG_{t+1}	1108.59	0.4548		
	P_t vs. X_{t+1}, CM_{t+1}, EG_{t+1}	802.51	0.4752	11.3932***	<0.001
1991-2003	P_t vs. X_{t+1}, CG_{t+1}	1330.21	0.4689		
	P_t vs. X_{t+1}, CM_{t+1}, EG_{t+1}	977.34	0.4931	12.0045***	<0.001
1991-2004	P_t vs. X_{t+1}, CG_{t+1}	1466.46	0.4653		
	P_t vs. X_{t+1}, CM_{t+1}, EG_{t+1}	1104.86	0.4958	14.4846***	<0.001
1991-2005	P_t vs. X_{t+1}, CG_{t+1}	1559.01	0.4556		
	P_t vs. X_{t+1}, CM_{t+1}, EG_{t+1}	1174.62	0.4860	14.6786***	<0.001
1991-2006	P_t vs. X_{t+1}, CG_{t+1}	1638.54	0.4455		
	P_t vs. X_{t+1}, CM_{t+1}, EG_{t+1}	1241.84	0.4773	13.9281***	<0.001

Note:

1. *, **, and *** indicate that the test statistics are significantly different from zero at 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).
2. All variables are on a per share basis. P_t = stock prices at the end of year t, X_{t+1} = earnings of year $t+1$, CG_{t+1} = the combined measure of accounting conservatism and earnings growth of year $t+1$, $CM_{t+1} = (v_{t+1} - v_t)$, where v_{t+1} and v_t are the residuals of Eq. (10) at years $t+1$ and t, $EG_{t+1} = [(\varepsilon_{t+1} - \varepsilon_t) - (CM_{t+1})]$, where ε_{t+1} and ε_t are derived from Eq. (1) at years $t+1$ and t.
3. This table uses the data of 357 firms from the period 1991-2006.

Based on the similar reasons as H2, we develop H4 to examine whether the coefficients of implied cost of equity capital, accounting conservatism, and earnings growth (that is, φ_1, φ_2, and φ_3 in Eq. (11)) are equal. The results in Table 5 show similar patterns with those in Table 3. H4 is not supported. In addition, Table 5 shows that the coefficients of CM_{t+1} are all negatively significant, ranging from -4.7245 to -3.8345, and the coefficients of EG_{t+1} are also negatively significant, ranging from -0.7471 to -0.6641. Obviously, the market puts more negative weights on the information of conservative accounting than those of earnings growth, indicating that investors are naïve to the magnitude of earnings and can not see through the information of conservative accounting.

Table 5

Tests that the coefficients of implied cost of equity capital, accounting conservatism, and earnings growth (that is, φ_1, φ_2, and φ_3 in Eq. (11)) would be equal.

$$P_t = \varphi_0 + \varphi_1 X_{t+1} + \varphi_2 CM_{t+1} + \varphi_3 EG_{t+1} + \eta_t \quad (11)$$

Sample Period	$\hat{\varphi}_0$ $t(\hat{\varphi}_0)$	$\hat{\varphi}_1$ $t(\hat{\varphi}_1)$	$\hat{\varphi}_2$ $t(\hat{\varphi}_2)$	$\hat{\varphi}_3$ $t(\hat{\varphi}_3)$	F	$Adj\text{-}R^2$	$H_0: \varphi_1 = \varphi_2 = \varphi_3$ *Wald*-statistic (*p*-value)
1991-2000	30.4303***	8.0560***	-3.8345***	-0.6641***	443.87***	0.4057	61.15***
	(22.61)	(7.17)	(-6.74)	(-6.85)			(0.000)
1991-2001	27.8521***	8.0300***	-4.1140***	-0.6845***	655.34***	0.4604	76.55***
	(24.49)	(8.16)	(-7.26)	(-9.47)			(0.000)
1991-2002	25.6173***	8.4416***	-4.3094***	-0.6974***	802.51***	0.4752	96.96***
	(27.19)	(9.33)	(-8.85)	(-10.66)			(0.000)
1991-2003	24.1238***	8.2914***	-4.5007***	-0.7234***	977.34***	0.4931	117.43***
	(29.50)	(10.14)	(-10.32)	(-11.94)			(0.000)
1991-2004	22.7818***	8.1922***	-4.7245***	-0.7397***	1104.86***	0.4958	145.51***
	(30.67)	(10.81)	(-12.59)	(-12.46)			(0.000)
1991-2005	21.7471***	7.8397***	-4.5000***	-0.7471***	1174.62***	0.4860	141.22***
	(31.42)	(11.08)	(-11.78)	(-12.41)			(0.000)
1991-2006	20.9918***	7.5935***	-4.3616***	-0.7378***	1241.84***	0.4773	173.34***
	(32.41)	(11.43)	(-12.55)	(-12.35)			(0.000)

Note:

1. *, **, and *** indicate that the test statistics are significantly different from zero at 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).
2. t-values in parentheses are based on Newey-West heteroskedasticity and autocorrelation consistent (HAC) corrected standard errors.
3. All variables are on a per share basis. P_t = stock prices at the end of year *t*, X_{t+1} = earnings of year *t+1*, $CM_{t+1} = (v_{t+1} - v_t)$, where v_{t+1} and v_t are the residuals of Eq. (10) at years *t+1* and *t*, $EG_{t+1} = [(\varepsilon_{t+1} - \varepsilon_t) - (CM_{t+1})]$, where ε_{t+1} and ε_t are derived from Eq. (1) at years *t+1* and *t*.
4. This table uses the data of 357 firms from the period 1991-2006.

We estimate the implied cost of equity capital ($Acoc_{EP}$) by controlling accounting conservatism and earnings growth for the estimation periods, which could be obtained by inversing the estimated coefficient φ_1 in Eq. (11). Meanwhile, $ExRt_{EP}$ could be estimated from the market model of the CAPM for the estimation period. We wish to compare the explanatory power to the variation of future stock returns of the implied cost of equity ($Acoc_{EP}$) with that of the CAPM ($ExRt_{EP}$). Since the CAPM got problems in explaining the variation of stock returns, we expect that the accounting-based estimation of the implied cost of equity capital is superior to that of the CAPM in explaining the variation of future stock returns.

When $Acoc_{EP}$ and $ExRt_{EP}$ are sole independent variables in explaining the variation of future stock returns, we therefore test the relative explanatory power of $Acoc_{EP}$ (Eq. (12)) versus $ExRt_{EP}$ (Eq. (13)) using Vuong (1989) *Z*-tests. Table 6 shows that $ExRt_{EP}$ is superior to $Acoc_{EP}$ in explaining the variation of future 1-year, 2-year, 3-year, and 4-year stock returns in various estimation periods, that is, the estimation periods of 1991-2001 and 1991-2005 for 1-year, 1991-2000, 1991-2001 and 1991-2002 for 2-year, 1991-2001 for 3-year, and 1991-2000 and 1991-2001 for 4-year future stock returns. That is, $ExRt_{EP}$ outperforms $Acoc_{EP}$ in 8 out of 21 testing periods, whereas $Acoc_{EP}$ gets nothing. In summary, the relative explanatory power version of H5 is not supported.

Table 6

Test the relative explanatory power of the accounting-based estimation of the implied cost of equity capital versus that of the CAPM.

$$r_F = \theta_0 + \theta_1 Acoc_{EP} + \psi \tag{12}$$

$$r_F = \pi_0 + \pi_1 ExRt_{EP} + \zeta \tag{13}$$

Estimation Period	Forecasting Period	Regressor	Coefficient	*t*-statistic	*Adj*-R^2	Vuong *Z*-statistic (*p*-value)
Panel A						
1991-2000	2001	*Acoc*	0.0080	0.43	-0.0026	1.1203
		ExRt	0.3659	2.50**	0.0615	(0.1313)
1991-2001	2002	*Acoc*	0.0039	0.08	-0.0028	2.6157***
		ExRt	-0.5920	-3.61***	0.0329	(0.0045)
1991-2002	2003	*Acoc*	0.0291	1.09	0.0006	0.6123
		ExRt	-0.2232	-1.91*	0.0075	(0.2702)
1991-2003	2004	*Acoc*	0.0097	0.49	-0.0021	1.1885
		ExRt	-0.2214	-2.58**	0.0156	(0.1173)
1991-2004	2005	*Acoc*	-0.0118	-1.37	0.0025	0.8336
		ExRt	0.2898	2.64***	0.0167	(0.2023)
1991-2005	2006	*Acoc*	-0.0050	-0.49	-0.0022	2.2263**
		ExRt	-1.0123	-4.06***	0.0422	(0.0130)
Panel B						
1991-2000	2001-2002	*Acoc*	0.0068	0.63	-0.0019	1.3813*
		ExRt	-0.2167	-2.54**	0.0171	(0.0836)
1991-2001	2002-2003	*Acoc*	0.0214	0.46	-0.0022	2.4182***
		ExRt	-0.4785	-3.22***	0.0258	(0.0078)
1991-2002	2003-2004	*Acoc*	0.0304	1.43	0.0029	1.9179**
		ExRt	-0.3437	-3.74***	0.0352	(0.0276)

(*continued on the next page*)

Estimation Period	Forecasting Period	Regressor	Coefficient	*t*-statistic	*Adj*-R^2	Vuong *Z*-statistic (*p*-value)
1991-2003	2004-2005	*Acoc*	-0.0246	-1.73*	0.0056	-0.4348
		ExRt	-0.0097	-0.15	-0.0028	(0.3319)
1991-2004	2005-2006	*Acoc*	-0.0116	-1.27	0.0017	0.1673
		ExRt	-0.1860	-1.58	0.0043	(0.4336)
Panel C						
1991-2000	2001-2003	*Acoc*	0.0106	0.95	-0.0003	1.1912
		ExRt	-0.2170	-2.46**	0.0159	(0.1168)
1991-2001	2002-2004	*Acoc*	0.0141	0.31	-0.0025	2.2817**
		ExRt	-0.4433	-2.99***	0.218	(0.0123)
1991-2002	2003-2005	*Acoc*	0.0361	2.33**	0.0124	-0.7377
		ExRt	0.0218	0.32	-0.0025	(0.2304)
1991-2003	2004-2006	*Acoc*	-0.0539	-2.93***	0.0211	-0.0708
		ExRt	-0.2165	-2.66***	0.0170	(0.4718)
Panel D						
1991-2000	2001-2004	*Acoc*	0.0063	0.57	-0.0022	1.7103**
		ExRt	-0.2630	-2.99***	0.0245	(0.0436)
1991-2001	2002-2005	*Acoc*	-0.0045	-0.21	-0.0027	1.3780*
		ExRt	-0.1444	-2.09**	0.0094	(0.0841)
1991-2002	2003-2006	*Acoc*	0.0773	3.69***	0.0346	-0.5019
		ExRt	-0.1449	-1.57	0.0041	(0.3079)
Panel E						
1991-2000	2001-2005	*Acoc*	0.0125	1.60	0.0050	-0.4370
		ExRt	0.0040	0.06	-0.0032	(0.3311)
1991-2001	2002-2006	*Acoc*	0.0149	0.49	-0.0022	0.9961
		ExRt	-0.2537	-2.54**	0.0152	(0.1596)
Panel F						
1991-2000	2001-2006	*Acoc*	0.0374	2.70***	0.0197	-0.4929
		ExRt	-0.0455	-0.41	-0.0027	(0.3110)

Note:

1. *, **, and *** indicate that the test statistics are significantly different from zero at 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).
2. All variables are on a per share basis. r_F = the stock returns of the forecast period, $Acoc_{EP}$ = $1/\varphi_1$, where φ_1 is the coefficient of X_{t+1} in Eq. (12) for the estimation period, $ExRt_{EP}$ = the expected stock returns estimated by the market model of CAPM for the estimation period.
3. This table uses the data of 357 firms from the period 1991-2006.

In addition to the test of the relative explanatory power of $Acoc_{EP}$ and $ExRt_{EP}$, we also test the difference between the coefficients of them using Eq. (14). Table 7 shows that the magnitude of coefficients of $Acoc_{EP}$ in explaining the variation of future stock returns is significantly larger than that of $ExRt_{EP}$ in 14 out of 21 testing periods, whereas $ExRt_{EP}$ outperforms $Acoc_{EP}$ only in 2 testing periods, that is, the estimation periods of 1991-2000 and 1991-2004 for explaining the variation of future 1-year stock returns. In summary, the incremental magnitude of coefficients test version of H5 is partially supported.

Table 7

Test incremental magnitude of coefficients of the accounting-based estimation of the implied cost of equity capital versus that of the CAPM

$$r_F = \lambda_0 + \lambda_1 Acoc_{EP} + \lambda_2 ExRt_{EP} + \omega \qquad (14)$$

Estimation Period	Forecasting Period	$\hat{\lambda}_0$ t($\hat{\lambda}_0$)	$\hat{\lambda}_1$ t($\hat{\lambda}_1$)	$\hat{\lambda}_2$ t($\hat{\lambda}_2$)	F $Adj\text{-}R^2$	F-statistic (p-value) $\lambda_1 > \lambda_2$	$\lambda_1 < \lambda_2$
Panel A							
1991-2000	2002	0.1208***	0.0059	0.3838**	3.16**		5.79**
		(3.05)	(0.32)	(2.48)	0.0136		(0.0167)
1991-2001	2002	0.3167***	0.0082	-0.5926***	6.52***	12.09***	
		(6.73)	(0.16)	(-3.61)	0.0302	(0.0006)	
1991-2002	2003	0.3455***	0.0292	-0.2235*	2.44*	4.46**	
		(11.36)	(1.10)	(-1.92)	0.0081	(0.0354)	
1991-2003	2004	0.0809***	0.0043	-0.2194**	3.34**	6.67**	
		(4.16)	(0.42)	(-2.54)	0.0130	(0.0102)	
1991-2004	2005	-0.0476**	-0.0112	0.2859***	4.36**		7.35***
		(-2.04)	(-1.31)	(2.61)	0.0186		(0.0070)
1991-2005	2006	0.6919***	-0.0060	-1.0163***	8.43***	16.41***	
		(14.60)	(-0.61)	(-4.07)	0.0405	(0.0000)	
Panel B							
1991-2000	2001-2002	-0.3030***	0.0081	-0.2197**	3.50**	6.90***	
		(-13.14)	(0.75)	(-2.57)	0.0157	(0.0090)	
1991-2001	2002-2003	-0.0992**	0.0254	-0.4807***	5.33***	10.42***	
		(-2.33)	(0.56)	(-3.23)	0.0239	(0.0014)	
1991-2002	2003-2004	-0.2704***	0.0306	-0.3440***	8.10***	15.85***	
		(-11.32)	(1.46)	(-3.75)	0.0383	(0.0000)	
1991-2003	2004-2005	-0.4796***	-0.0252*	-0.0216	1.54		0.00
		(-33.81)	(-1.75)	(-0.34)	0.0031		(0.9547)
1991-2004	2005-2006	-0.2283***	-0.0120	-0.1901	2.12	2.30	
		(-9.09)	(-1.32)	(-1.62)	0.0063	(0.1307)	

Estimation Period	Forecasting Period	$\hat{\lambda}_0$ t($\hat{\lambda}_0$)	$\hat{\lambda}_1$ t($\hat{\lambda}_1$)	$\hat{\lambda}_2$ t($\hat{\lambda}_2$)	F $Adj\text{-}R^2$	F-statistic (p-value) $\lambda_1 > \lambda_2$	$\lambda_1 < \lambda_2$
Panel C							
1991-2000	2001-2003	-0.3746***	0.0119	-0.2214**	3.60**	6.78***	
		(-15.73)	(1.07)	(-2.51)	0.0163	(0.0096)	
1991-2001	2002-2004	-0.3219***	0.0173	-0.4446***	5.53**	8.74***	
		(-7.58)	(0.38)	(-3.00)	0.0195	(0.0033)	
1991-2002	2003-2005	-0.5386***	0.0361**	0.0214	2.76*	0.04	
		(-30.29)	(2.33)	(0.31)	0.0099	(0.8336)	
1991-2003	2004-2006	-0.4459***	-0.0596***	-0.2493***	8.96***	5.20**	
		(-24.69)	(-3.26)	(-3.02)	0.0433	(0.0232)	
Panel D							
1991-2000	2001-2004	-0.4843***	0.0078	-0.2658***	4.70***	9.37***	
		(-20.42)	(0.71)	(-3.01)	0.0230	(0.0024)	
1991-2001	2002-2005	-0.3219***	0.0173	-0.4464***	4.53**	3.72*	
		(-7.58)	(0.38)	(-3.00)	0.0195	(0.0547)	
1991-2002	2003-2006	-0.4610***	0.0775***	-0.1471	8.14***	5.79**	
		(-19.40)	(3.71)	(-1.62)	0.0390	(0.0167)	
Panel E							
1991-2000	2001-2005	-0.6360***	0.0125	-0.0005	1.28	0.04	
		(-37.56)	(1.60)	(-0.01)	0.0018	(0.8373)	
1991-2001	2002-2006	-0.4476***	0.0168	-0.2550**	3.36**	6.65**	
		(-15.59)	(0.55)	(-2.55)	0.0132	(0.0103)	
Panel F							
1991-2000	2001-2006	-0.5062***	0.0377***	-0.0595	3.77**	0.75	
		(-16.87)	(2.71)	(-0.54)	0.0175	(0.3885)	

Note:

1. *, **, and *** indicate that the test statistics are significantly different from zero at 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).
2. All variables are on a per share basis. r_F = the stock returns of the forecast period, $Acoc_{EP}$ = $1/\varphi_1$, where φ_1 is the coefficient of X_{t+1} in Eq. (12) for the estimation period, $ExRt_{EP}$ = the expected stock returns estimated by the market model of CAPM for the estimation period.
3. This table uses the data of 357 firms from the period 1991-2006.

Interestingly, as shown in Table 7, the coefficients of $ExRt_{EP}$ are negatively significant in Eq. (14) in 13 out of 21 testing periods, which are inconsistent with the CAPM's prediction. On the other hand, the coefficients of $Acoc_{EP}$ are positive in Eq. (14) in 16 out of 21 testing periods, but only 3 of them are significant. Consequently, $Acoc_{EP}$ is superior to $ExRt_{EP}$ in the incremental magnitude of coefficients test in 14 out of 21 testing periods.

5. CONCLUSIONS

The estimation of cost of equity capital is vital to the estimation of an enterprise's overall cost of capital or its weighted average cost of capital. There are two approaches for this purpose. One is the finance-based approach, using models such as CAPM, APT, and Fama & French (1993) Three-factor Model, etc. The other is the accounting-based approach, mainly following models of Ohlson (1995), Feltham & Ohlson (1995), and Ohlson & Juettner-Nauroth (2005), etc..

Ohlson (2005) suggests that the existence of accounting conservatism and earnings growth causes an enterprise's stock price greater than its book value per share. The special feature of this study is that we first adopt Dechow & Dichev (2002) model to estimate the component of accounting conservatism and then extends Ohlson (2005) model to estimate the implied cost of equity capital by simultaneously controlling the measures of accounting conservatism and earnings growth.

When the CAPM, APT, and Fama & French (1993) Three-factor Model got problems in estimating the cost of equity capital, the method using accounting-based valuation models may play an important role in this field. This study contributes to academics for synthesizing various accounting-based valuation models. The findings show that the controlling for accounting conservatism and earnings growth exhibits greater explanatory power to the variation of stock prices than the one without controlling. Furthermore, when comparing the relative explanatory power to the future stock returns, there exists no evidence that the accounting-based estimation of the cost of equity capital is superior to that estimated by the CAPM. However, the negative relation between the cost of equity capital estimated by the CAPM and future stock returns is inconsistent with the CAPM's prediction. Further tests of the incremental magnitude of the coefficient of the accounting-based estimation of the cost of equity capital relative to that estimated by the CAPM in explaining the variation of future stock returns show that the former dominates the latter, largely because of the negatively significant coefficients of the cost of equity capital estimated by the CAPM.

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