THE STUDY OF CURRENT EARNINGS ABILITY TO EXPLAIN EXPECTED FUTURE EARNINGS IN RELATION TO STOCK RETURN

By

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Research report submitted in partial fulfillment

of the requirement for the degree of

Master of Business Administration

April 2003

ACKNOWLEDGEMENT

I would like to express my gratitude to my supervisor , Associate Professor Dr. Fauziah Md. Taib and co-supervisor Dr. Zamri Ahmad for giving me valuable assistence and guidance to pursue this research work.

I also wish to thank my supportive wife Puan Norita Bt. Youmil and my sons Abdul Rasyhid and Abdul Ghani and to my daughter Nurfarahin for their encouragement and moral support.

I am also grateful to all my lecturers for their patience and support throughout my study, and to all my friends who had helped me in one way or another to complete my project paper.

Lastly thanks to the MBA coordinator, Associate Professor Dr. Zainal Ariffin Ahmad for his valuable advice and guidance.

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ABSTRAK

Kemampuan pendapatan semasa dan maklumat lain yang mencerminkan jangkaan pendapatan masa hadapan seperti ratio P/E, ratio B/P dan ROE menjadi satu isu untuk menerangkan jangkaan pendapatan untuk masa hadapan dalam hubungkait antara pendapatan-pulangan dalam kajian "ex-ante". Kajian ini menunjukkan bahawa pendapatan semasa mempunyai kemampuan untuk menerangkan jangkaan pendapatan masa hadapan jika ia dihubungkaitkan dengan maklumat kewangan seperti ratio pendapatan sesaham (P/E) dan pulangan keatas equity (ROE) dan nilai buku sesaham (B/P). Kajian ini mengunakan data sekunde daripada Bursa Saham Kuala Lumpur dan mengunakan kaedah hubungkait dan regresi. Kandungan pendapatan seperti pendapatan tetap dan sementara memberi sumbangan yang penting untuk menentukan keterusan pendapatan. Hasil kajian menunjukkan bahawa adanya hubungkait diantara pendapatan semasa dan jangkaan pendapatan masa hadapan dan kemampuan ratio kewangan seperti kumpulan P/E rendah dan ROE rendah dan P/E rendah dan ROE tinggi untuk menerangkan hubungkait dalam situasi "ex-ante" dengan pendapatan masa hadapan dan keterusan pendapatan di pasaran saham di Malaysia.

ABSTRACT

The ability of current earnings and other information that reflects expected future earnings such as P/E ratio, B/P ratio and ROE will be the focus in explaining the expected future earning in "ex-ante" study. The study indicates that current earnings have the ability to explain expected future earnings if they are correlated with other information such as combination of P/E, ROE and B/P. The study used secondary data from Kuala Lumpur Stock Exchange and it utilized the correlation and regression methodology. Components of earnings such as permanent earnings and temporary earnings can be important elements in determining the existence of earnings persistence. The result showed an existence of correlation between current earnings changes and expected earnings changes in "ex-ante" relationship and the ability of Low P/E and Low ROE and Low P/E and High ROE groups in explaining expected future earnings and earnings persistence in Malaysia equity market.

Chapter 1

INTRODUCTION

1.0 Introduction

The Malaysian government is planning to achieve a fully developed capital market and enhancing its international positioning in areas of comparative and competitive advantage by the year 2010. It is hoped that Malaysia can attain to become one of the leading financial centers in the region. To achieve these objectives, the Malaysian government, through the Securities Commission has introduced the Malaysian Capital Market Master Plan which is intended to ensure that capital market is well positioned to support national economic growth and to meet future challenges from regional competition and globalization (*www.sc.com.my*).

The process of capital market development will ensure efficiency in operation and valuation. This will encourage investors, who are seeking the investment opportunities to evaluate their risk and return. The opportunity in investment activities will influence the financial analysts to study the fundamental of the company in search for the fair value of the company either by traditional method such as Price Earnings (P/E) ratio, Return on Equity (ROE), Book Value Per Share at beginning price (B/P), Earnings Forecast as explained by Lev and Thiagarajan (1993) or by studying the new approach such as Economic Value Added (EVA).

The ability of financial analysts to forecast accurately the future earnings from financial statement analysis will ensure the efficiency in their valuation. In forecasting earnings changes as explain by Kormendi and Lipe (1987). The ability of current earnings and other information that reflect expected future earnings in explaining return-earnings association will be the focus of this study, since investors are more interested in obtaining information which can reflect future value of the company.

This study will focus on relationship between current earnings and other information such as P/E ratio which is explained by Beaver and Morse (1978), B/P ratio and ROE by Penman (1991). Their empirical evidence found that the above variables have the ability to explain or predict expected future earnings. Schroff (1995) studied the combination of the P/E ratio, B/P ratio and ROE in explaining expected future earnings in "ex-ante" relationship and her empirical evidence showed that the above variables have the ability to explain or predict future earnings in combination of High P/E and High ROE with Low B/P ratio. This study was previously carried out in the New York Stock Exchange in 1995 and this will be the first study of "ex-ante" relationship that uses the combination of P/E ratio, B/P ratio and ROE in explaining expected future earnings in the Malaysian environment.

1.1 Research Problem

The price of equity can be determined by the current accounting earnings and other information deriving from financial statements analysis that will reflect expected future earnings. Many investors rely on traditional accounting measures such as P/E ratio, ROE and B/P ratio, to make decision whether to buy, sell or hold shares. Often these decisions are not based on either logical theoretical or empirical evidence, but rather more on what is commonly practiced by others. For example, Malaysian investors reported P/E ratio. Very little is known whether current earnings and other information could predict or explain expected future earnings. Hence, this study intends to narrow the gap and to provide the evidence to helps investors to make this important decision.

1.2 Research Objective

The purpose of this study is to ascertain whether traditional accounting measures are able to explain future earnings. This study will create a better understanding about investors information such as P/E ratio, B/P ratio and ROE that reflects expected future earnings in explaining return-earnings association. It will also help to explain whether the available information surrounding earnings components will help investors to enhance their confident and secure their required return on equity investment. The specific objectives are :

1. To examine whether current P/E Ratio, B/P ratio and ROE have the ability to explain or predict expected future earnings in Malaysia equity market.
2. To examine whether there exist correlation between current earnings and future earnings changes because characteristic (ability) of P/E ratio, B/P ratio and ROE in explaining the relationship.
3. To examine whether changes in earnings are related to permanent or temporary earnings changes.

1.3 Significance of Study

This study will validate the ability of ROE, B/P and P/E ratio as relevant information in confirming the validity of the previous studies done in other developed nations. The empirical validation in the Malaysian environment will provide a better understanding of the relationship between return-earnings and enable investors to make good decisions about their investment.

Chapter 2

LITERATURE REVIEW

The literature review will focus on the theoretical and empirical development in major markets of the developed countries since the empirical works of the related topic in Malaysia is limited.

2.1 Returns-Earnings Concept

Ball and Brown (1968) in their classic paper about the scientific study of the relationship between stock prices and accounting information. The evidence showed that accounting earnings was part of the information which will influence the stock return. There is a significant association between the sign of prices changes and the sign of earnings changes. The finding is based on earnings information to abnormal returns from 12 months before and six months after an earnings announcement. Their study concentrated on changes association between earnings and prices. They concluded that earnings changes as a relevant information to the study of future earnings and stock return.

Beaver, Clark and Wright (1979) used regression equation's in their attempt to study the relationship between return and size of the earnings changes when they incorporated the magnitude of the earnings changes. The relationship between earnings and return was revised from the earlier study and concentrated more on the price changes. Further study was done to examine the information content of price with the change in earnings as the independent variables. The magnitude of the earnings changes can explain either changes of earnings is permanent or temporary which can be a basis in predicting future earnings.

Beaver, Lambert and Morse (1980) studied the relationship between price changes and earnings changes by using additional information available to market participants such as prices, as an explanatory variables to the future earnings. Their studied were revised association between price changes and earnings changes as previously observed by Ball and Brown (1968). They argued that the analysis of quarterly earnings might provide little or no additional insights for forecasting future earnings.

Lev (1989) studied on quality of accounting earnings and argued that the correlation between earnings and stock returns is very low, sometimes negligible. The low relation between the two is due to the low quality of accounting earnings. They concluded that because of the low quality of earnings it will be irrelevant information in predicting future earnings.

2.2 Accounting Information in Returns-Earnings Concepts-The Role of Information.

The purpose of accounting and financial reporting is to provide information for investors decision making and that information will alter the beliefs of the investor about the probability of occurrence of future states. The investor will always prefer the information derived from the information system that is associated with the highest expected utility.

Financial analysis will investigate how detailed is the financial statement data (fundamental signal) and translate it to the financial information that can be used in examining whether current changes in fundamental signals are informative about subsequent earnings changes.

Lev and Thiagarajan (1993) concluded that a major use of the fundamental analysis is to allow investors to assess earnings persistence and growth, by showing how certain fundamental signals from the current financial statement could improve the prediction of future earnings.

Abarnell and Bushee (1997) found that financial analysts appeared to under use the fundamental signals in search for future earnings but they fully concentrated on the information from the financial statement.

Penman's (1992) study shows that financial statements is vital in providing relevant information for evaluating earnings changes. The analysis has produced two sets of information which could be used to evaluate the pricing of earnings changes. First the contemporaneous financial information could indicate the persistence of earnings in the future and secondly, current financial statement information could predict the extent of anticipated future earnings.

2.3 Earnings as Information to Measure Value

Users of financial statements really want an earnings figure that can predict future earnings. The ideal set of accounting rules is the one that makes the earnings (P/E ratio) as constant as possible and can be used as relevant information. The reported earnings figure is an aggregate number that can be classified under two dimensions. First, the earnings is temporal where annual earnings are an aggregate of four individual quarterly earnings. Second, the earnings is compositional, where annual earnings are on aggregate of time equivalent sub series (sales and cost of good sold). Both dimensions of earnings

The earnings figures will take into account of everything that is valuable about the firm, including past earnings growth as explained by Black (1980).

Burgstahler and Dicher (1997) examines the equity valuation based on a convex function of both earnings and equity book value, where the function depends on the relative values of earnings and equity book value. Their study mention that earnings provides a measure of how the firm resources are currently used. The book value provides a measure of the value of the firm resources are currently used independently. Their study found, that equity value is a function of both expected earnings and equity book value. They agreed that this evidence has implications for a variety of users and there is a need for further study particularly with regard to how to incorporate changes in both value into earnings response coefficient (ERC) models.

Penman's (1998) studied on the combination of earnings and equity book value in equity valuation. The study emphasized on weight factor in analyzing the above combination. They found that the weights vary between earnings and equity book value over different period of time. When earnings are smaller than book value, the weights would be different when the earnings are larger than the book value and the variation is nonlinear.

Black (1980) found that the current earnings figure is a better measure value compared to the equity book value figure, because current earnings can explain everything about future earnings.

Ou and Sepe (2002) studied the importance of earnings and equity book value in concluded that when forecasting earnings of a firm that is close to its reported current earnings, that current earnings will be considered as a good value and a relevant information in explaining stock price by market participant. Which imply that a firm current earnings has the ability to explain future earnings. However when the current earnings are diverted from reported current earnings, then equity book value will be used as indicator in valuation the equity.

2.4 Earnings Persistence

Earnings persistence refers to quality and continuity of earnings that is derived from activities of the company. It depends on where the earnings are derived from, either permanent or temporary earnings contributed from the firm's activities for the whole year. The activities of the company such as investment and accounting policy will classify the earnings and they influence the performance and future earnings of the company.

Kormendi and Lipe (1987) studied the components of earnings which refer to permanent earnings and temporary (transitory) earnings. They concluded that if unexpected (abnormal) earnings persisted into the future, this will result an increase in permanent earnings. The investors will be more confident to use the earnings as value relevant information rather than temporal earnings derived from unexpected earnings. The temporary earnings will dampen the investors confident about earnings ability to explain future earnings.

In statistical explanation they concluded that, this will result in a lower earnings response regression model.

Easton and Harris (1991) examines earnings changes using the random walk theory which states that earnings innovations are permanent and this will persist into the future earnings and if there is a temporary earnings in measurement for earnings as independent variables, it will create a bias, since that temporary earnings will be a proxy to the unexpected earnings.

They explained further that if last year's earnings were purely temporary, then this year's expected level of earnings is zero.

Brook and Buckmaster (1976) studied the relationship between earnings persistence and the price response. They concluded that earnings persistence will determine the strength of the price response and the firms that experience a very large abnormal earnings are seldom capable of maintaining the same level of earnings change in subsequent periods if unexpected earnings are classified as temporary surprises. The correlation between earnings changes because of temporary earnings and earnings persistence is negative. They concluded that temporary earnings surprises will have less impact on security prices than permanent earnings surprises.

Freeman and Tse (1992) concluded that tails of the unexpected earnings distribution will be dominated by temporary earnings, since permanent earnings are forecasted more accurately by analysts than temporary earnings. Analysts are more interested to study and invest more resources into forecasting permanent earnings than temporary earnings, since permanent earnings can influence future earnings and they

Parkash (1996) examines the earnings persistence in small and large firms and concluded that small firms have higher temporary components in earnings than larger firms. The predict in of future earnings in small firms are more complex compare to larger firms.

Ohlson (1999) studied the earnings as value relevant information in forecasting earnings. He shows that if temporary earnings are not relevant in forecasting next period's aggregate earnings and are unpredictable, that earnings value are irrelevant in forecasting future earnings.

Ray (2002) studies how the level of earnings alone, the change in earnings alone, or both, scaled by prices are use as independent variables for returns in levels and changes models. He shows that if earnings are either completely permanent or entirely temporary, the earnings response coefficient (ERC) should have positive relationship between the two models. However if the earnings are comprise of mixed process of permanent and temporary components, the ERC estimated by the levels model will differ from that estimated by the changes model.

Penman and Zhang (2002) studies the joint effect of investment and conservative accounting on how it can affect the quality of earnings as a good indicator of future earnings. They concluded that growth in investment will reduce reported earnings because by adopting conservative accounting it will lead to reporting lower earnings compare to liberal accounting policy. By lowering the earnings, it will create unrecorded reserves for reporting in future earnings. Reducing investment will reduce the quality of earnings if there are changes in investment either temporary or permanent. If the change in investment is temporary, then the current earnings is temporarily depressed or inflated and this is not a good indicator in explaining future earnings.

2.5 The Study in Malaysia Equity Market

Isa and Jin (2000) investigated the efficient market hypothesis in the Malaysian stock market in relation to firms current Price Earnings (P/E) ratios and market values. They found the evidence in the existence of small firm effect. A very weak P/E effect on stock return but no evidence of correlation between firms P/E ratios and size. This is because the P/E (also called earnings multiplier or the reciprocal of earnings yield) reflects investors assessment on the profitability of a firm. Firms with high earnings potential would be more valuable hence would command a high P/E ratio compared to firms with low earnings potential.

Pandey and Chee (2001) indicated that the result of the fixed effect univariate regressions of beta, size, book to market ratio (B/M), earnings price (E/P) ratio and dividend yield individually play a significant role in explaining stock returns. They explain that there is a simple positive correlation between E/P ratio and stock return. Their result showed that high E/P (Low P/E) stock still do better when size or B/M ratio is included in the regression. They also concluded that it is not reasonable to assume that current negative earnings is a proxy for the future earnings.

The above study concentrated on the issue of independent variables such as beta, The profitability and ability of earnings in explaining expected future earnings would be an issue for further investigation in the Malaysia equity market.

2.6 Relationship Between Current Earnings and Expected Future Earnings

Securities analysts' ability to forecast accurately future earnings will help investors forecast their returns in equity investment more accurately, since the factor such as earnings forecast volatility will be eliminated. The financial statements analysis will help analysts to identify relevant value information that is useful in explaining future earnings.

Ou and Penman (1989) examines the ability of financial statements analysis to predict future earnings and they found out that financial ratios (ROA, ROE, Changes in ROE, B/P, Debt to equity ratio, percentage change in dividend per share, percentage change in inventories) are relevant in predicting future earnings.

Ou and Penman (1989) concluded that accounting statements can provide more than a historical perspective on the firm. The financial statement analysis can indicate the future earnings of the company that is reflected in Price-Earnings (P/E) ratios, B/P, Return to Equity (ROE) and others financial ratios.

Schroff (1995) argued that there is another source of information-determined relationship between earnings and return. Her study revealed that earnings exhibit a high explanatory power of return if they are positively correlated with other value relevant information that reflects future earnings such as Price to Earnings (P/E) ratio, Schroff (1995) gave more emphasis on other information such as P/E ratio, ROE, B/P ratio and unrecorded goodwill in explaining future earnings if they are correlated with current earnings, whereas Ou and Penman (1989) explained the ability of P/E ratio B/P ratio and ROE in explaining future earnings, since P/E ratio is related to earnings forecast and ROE is more related to profitability which B/P is a based. The combination of the above variables can explain further about earnings growth and its persistence.

2.7 The Role of ROE, P/E and B/P in Explaining Earnings Growth

In general, growth is a positive factor to a general value of the company. Company with high profitability will experience growth in future earnings and analysis of ROE will help analysts to predict future earnings of the company. P/E ratio as an earnings multiple will help financial analysts to predict growth in subsequent years if there is earnings persistence in the company.

Beaver and Morse (1978) in their empirical study suggested that a high P/E ratio will indicate that earnings will increase in the future, but at the early period , earnings will be temporarily depressed. The study explains, that there is a strong positive correlation between P/E and earnings growth because of relatively low earnings growth during the year and that earnings contain temporary components.

Wilcox (1984) concludes that the P/E ratio actually is just equity price to book ratio (P/B) divided by Return to equity (ROE) or (P/B) / (ROE). Historical ROE can be used as a predictor of future growth and there is a positive relation between P/E ratio model.

Penman (1991) explains the existing relationship between ROE and equity book value to price (B/P) ratio. Their empirical evidence shows that high (low) ROE firms with low (high) B/P ratios can expect higher (lower) ROE in subsequent years compared to firms with high (low) ROE and high (low) B/P ratio. The study of ROE is called profitability analysis which can influence growth in earnings. When analysts are able to predict the future profitability, it indicates that there is a sustainable growth in the earnings or elements of permanent earnings which is relevant in predicting future earnings.

Penman (1996) studies further evidence from Wilcox (1984). He concluded that P/E ratio is the summary of a number in the income statement which indicate future growth in earnings. P/B ratio is the summary of a number in the balance sheet which indicates future growth in book value. The relationship between the two is more of an accounting transaction and equation. Each ratio actually is a transformation from the equation developed by Wilcox (1984), P/B = P/E times ROE, P/E = P/B divide by ROE and ROE = P/B divide by P/E. Their empirical evidences indicate that ROE is a differential of P/B ratios but not P/E ratios, except in the extremes where ROE is strong serial correlation and can predicts future profitability (earnings growth) on which the P/B is based.

The above literature reviews, explain the existing positive correlation between earnings growth, profitability and earnings multiple. By studying the relationship of ROE, P/E and P/B ratio, it can be used to explain future earnings.

2.8 Relationship Between P/E, ROE and B/P in Explaining Future Earnings.

The study from Beaver and Morse (1978), Wilcox (1984) and Penman (1991) explained that each relevant information from the financial statement analysis have the ability to explain future earnings. Shroff (1995) further predicted the relationship between changes in current year earnings and changes in future earnings after grouping the P/E ratio and ROE on which the B/P ratio is based as follows:

a. *High P/E and High ROE (with Low B/P ratio)*

Firm with high current ROE and a low B/P ratio indicates subsequent permanent increase in earnings because high profitability will influence growth in subsequent permanent earnings. High P/E ratio indicates that earnings will increase in the future and therefore, current earnings of these firms are expected to have high positive correlation with future earnings changes.

b. *High P/E and Low ROE (with Medium B/P ratio)*

Earnings will be temporarily depressed in short period and expected to increase in the next period because high P/E ratio indicates that earnings will increase in the future but because of low ROE (low Profitability) the temporary earnings will dominate the components of earnings in subsequent periods. The negative temporary components in current earnings will influence the next period earnings and can be expected to be normal. The correlation between current and future earnings changes are likely to be negative.

c. *Low P/E and Low ROE (with High B/P ratio)*