

# Price to Earnings Multiple and Stock Selection: Evidence from Malaysian Listed Firms

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**Abstract** - Selection of appropriate portfolio for investment is an issue of great concern amongst investors across the globe. Investors have to choose between stocks that are highly price (growth stock) by the market and stocks undervalued by the market (value stocks). This research investigated the influence of price to earnings PE multiple in predicting the value of growth and value securities. The study utilized data of 233 randomly selected listed firms in Malaysia covering the period of 2008-2013. Pooled Ordinary Least Square OLS was used to estimate the regression however failed to satisfy the post estimation tests. Then random effect and fixed effect models are used to estimate the regression and selection test between the models favoured the random effect model. The results reveals a significant positive relationship between price to earnings multiple and the stock returns. The implication is that, growth stocks provide higher stock returns compared to the value stock. The low R2 suggests that prediction of stock returns is not only determined by price to earnings multiple, but, by combination of various factors. **Copyright** © 2016 Penerbit Akademia Baru - All rights reserved.

**Keywords:** price to earnings multiple, value stock, growth stock, Malaysia

## 1.0 INTRODUCTION

There are basically two classes of stocks for investment (low and high price stocks). The low price stocks are those stocks believed to have been undervalued by the market also referred to as value stocks. While the highly price stocks are those overvalued by the market also referred to as growth stocks. In making investment decision, investors have to choose between value and growth securities. There are several arguments on whether investment in value stock yield more return compared to investment in growth stock [16]. Some studies established that growth securities signify the crucial investment decision in long duration. This is because some stockholders preferred to hold stocks/shares of strong companies (growth stocks) and avoid firms that are weak (value stocks). As a result of upsurge demand in this type of stock (growth stocks) reduces the return and increases price. On the other hand, value stock enjoyed higher return with low price [11]. In addition, Chen and Zhang [6] reports that, Value securities offer consistently higher returns compared to the growth securities. Value investors search for stocks which they believe are undervalued in the market although not known by many investment communities [24]. Value investing involve an investing style where the investor looks for stock with prices that are excessively lower than the intrinsic value [24]. Furthermore, research conducted by Bauman et al [2] reveals that, value stock provide better returns compared to growth stock. Therefore, investment analysts have the duty of advising their client on whether to invest in value or growth securities for maximum shareholders return. Researches reveal

conflicting findings on the performance of growth and value securities thus, making the issue inconclusive. Investment analysts in developed and developing markets are usually required by their clients to help them make appropriate investment decision for the future maximum returns. Besides, most the studies conducted on the performance of growth and value stocks are in developed markets, not much is known in the emerging markets [8, 10, 20]. Malaysia being an emerging market has a lot of investment opportunities hence it is important to empirically investigate whether growth stocks have more predicting power to stock price compared to the value stocks. Thus, this study filled a gap in the literature by looking at price to earnings PE multiple and stocks selection in Malaysia.

## **2.0 LITERATURE AND HYPOTHESES**

The price to earnings multiple valuation technique is used to estimate a company share price as the creation of earnings and P/E multiple is determined from set of comparable companies [5]. One of the avenues to reflect any company assets worth is by looking at multiple of returns generated by a particular asset. In buying shares, it is usual for investor to consider the paid amount as multiple of earnings per share that the company generates [7, 18]. In addition to the more broad context, the study of Liu, Nissim and Thomas [17] established that, the performance of equity value multiples in the U.S equity prices can be best by explain earnings multiple.

The study conducted by Aras and Yilmaz [1], found that the, price to earnings multiple play a significant role towards stock returns forecast of 12 selected countries during the period of 1997-2003 analysis. Price to earnings PE multiple provides better explanation in forecasting of price returns in comparison with other price/market multiples (price to cash flow multiple, price to book value multiple, and price to sales multiple [22]. Similarly, Fama and French [11] conducted a research of firms listed on the New York Stock Exchange (NYSE) during the period of 1963-1990. The results from the study reveal a significant positive association between earnings to price and stock returns of the companies. Also, Fairfield [10] proposed a model of predicting the influence of price to earnings multiple on stock price. The result reveals that PE multiple has a positive relationship with future return of companies. In addition, the model suggests that numerous combinations of variables are related to firm's future value. Growth stocks are found to have larger market value compared to their value stocks counterparts [13]. As reported by Fama and French [13], high market capitalization of firms is from growth stocks indicating their performance is more than the value stock. Furthermore, price to earnings multiple for some highly growth stocks stay constant over a period of time, this is attributed to periodic reappraisal of the firm's prospects within the market [13]. value stocks are found to be riskier compared to growth stocks especially during bad times period when the expected premium market risk is high [19]. Growth stocks are more flexible in adjusting for worsening economic situations compared to the value stock firms [16]. Forward looking investors prefer investment in growth stock because they expected to favourable reaction ahead of stocks that are lacking in growth and provides means to increase portfolio duration averagely where liability composition is required [9].

On the other hand, Fama and French [12] conducted extensive research of some selected sample firms across different markets of the world. Evidence from the study revealed that, most of the markets studied, including developing markets, the return for the value stocks seem to be greater compared to return from growth stocks. Average returns on value stocks in the United States is a reflection global phenomenon [12]. Bauman, Conover and Miller [12] used data from stock market of 21 countries for 10 years annual reports, the result established that

value stocks outperform the growth stocks. Also, Rozeff and Zaman [21] used US data and suggest that, company insiders logically prefer to sell stocks that are less risky (growth stocks) and buy stocks that are more risky (value stocks). But, because of lack of theoretical bases for that insider behaviour, the interpretation becomes implausible. The study Gonenc and Karan [14], established that value stocks have superiority of performance compared to growth stocks in the analysis of developed and developing markets

The price to earnings multiple is a model that is consistent with the present value (PV) theory principles. It is derived directly from the current value (CV) method, and assumes exact mixtures of growth earnings (GE) values. Therefore, portfolio analysts, growth and value investors can emphasise on PE multiple assumptions. The assumption is that positive relationship between price to earnings and stock price signify that growth investors have advantage over the value investors for example prices of value stocks tend to lie below fundamental value and prices of growth stocks tend to lie above the fundamental values [21]. Based on the literature explorations as presented above, the arguments on the performance of growth and the value stocks are mixed making the matter inconclusive. This is because some of the studies favoured growth stocks while others favoured value stocks. Therefore, this study makes the following proposition.

H1: Growth stocks of Malaysian firms perform better compare to value stocks

H2: Value stocks of Malaysian firms perform better compare to growth stocks

### 3.0 METHODOLOGY

The study used secondary data from the published financial statements of the sampled listed firms in Malaysia. The data are extracted from Thompson and Reuter's data stream for the period of five (6) years (2009, 2010, 2011, 2012, 2013 and 2014). The period is selected for the following reasons. Firstly, this is the period of post global financial crises that has affected virtually most countries of the world, Malaysia inclusive. Secondly, the period is characterized by a loss of huge amount of money by investors as a result of drastic fall in stocks prices. The population of the study consists of public companies listed in Malaysia and 233 are drawn from the sample at random based on the availability of information. The study used Random effect model to estimate the regression after failure of the Pool Ordinary Least Square (OLS) to satisfy the post estimation tests. The study controls for company type (financial and non-financial) and company size to avoid spurious regression result.

#### 3.1 Variable Definition

Table 1 below presents variable definition

**Table 1: Variable Definition and Measurement**

<b>EVM Variables</b>	<b>Measurements</b>
Stock price	Stock price for each company for the period at the end of the year
Price-to-earnings multiple	Stock price per share divide by earnings per share for every company over the period
Company type	Dummy of 1 and 0 between financial and non-financial companies
Total Asset	Natural log of total asset

### 3.2 Model Specification

$$SP_{it} = \beta_0 + \beta_1 PE_{it} + \beta_2 CT_{it} + \beta_3 + LTA_{it} + \varepsilon_{it}$$

Where

SP= is the price of stock for every company over time,

$\beta$  = constant,

$\beta$  = explanatory variable parameter,

PE= price to earnings multiple

CT=company type (financial and non-financial)

TA=log of total asset

$it$  = mixture of cross sectional data and of the sample companies and

$\varepsilon$  = error term for variables not captured in the regression model

Stock price is directly extracted from the data stream for all the companies over the period. Price of stock per share is first determined before dividing it with earnings per share to arrive at price to earnings multiple

### 3.3 Technique of Analysis

To estimate the regression, Pool Ordinary Least Square (OLS) was used and after the post estimation tests the result violated the following OLS assumption. Nonlinear relationship between the variables; expected error term value not equal zero i.e. coefficients are biased; error term variance are not constant for all the observations; auto correlation amongst the error terms and lastly the distribution of the error terms are not normal [15, 23]. Following the failure of the OLS to satisfy the post estimation test, fixed and random effect models were estimated and Hausman test was conducted to choose the best model between fixed and random effect models. ( $H_0$  random effect model is more appropriate). Hausman test produced a probability of 0.67 suggesting that we do not have sufficient evidence to reject the null hypothesis. Therefore, random effect was found to be the most appropriate model, but to confirm the appropriateness of the random effect estimator, Lagrange Multiplier (LM) test by Breusch and Pagan [3] was also conducted (choose between pool OLS and random effect). The result also favoured the random estimator implying that we use the random effect model result.

### 4.0 RESULTS AND DISCUSSIONS OF FINDINGS

The results of the study are presented below, starting with table 2 descriptive statistics, table 3 correlation matrix and table 4 the regression results. Table 2 below presents descriptive statistics

The descriptive results revealed the mean and standard deviation SD values of 3.380454 and 1.2923 for SP, 2.126582 and 1.150534 for PE, 0.21641 and 1.3281 for CT, and 3.379871 and 5.23571 and 3.846509 for LTASSET respectively. The minimum SP is -2.0402 and a maximum of 5.1245, PE has a minimum of 1.124 and maximum of 13.2356 and log of total asset has a minimum of 1.232333 and maximum of 7.323873. The standard deviation values are clustered around the mean average suggesting the normality of the data set. Table 4.2 present correlation matrix result.

The correlation matrix revealed a positive correlation of 0.35015 between price to earnings multiple and stock price, while company type has a negative correlation of -0.2462 and LTASSET has a positive correlation of 0.0179 to stock price of the sampled firms. The variable with highest correlation is company type to log of total asset with value of 0.4541 suggesting that, the model is free of multicollinearity. Table 4 presents regression results.

**Table 2: Descriptive Statistics**

Variable	Mean	Std.Dev.	Min	Max
SP	3.380454	1.2923	-2.0402	5.1245
PE	2.126582	1.150534	1.124	13.2356
CT	0.21641	1.3281	0	1
LTASSET	5.23571	3.846509	1.232333	7.323873

Note: SP =stock price, PE = price-to-earnings multiple, CT = company type, LTA = natural log of total asset

**Table 3: Correlation Matrix Results**

Variable	SP	PE	CT	LTASSET
SP	1.0000			
PE	0.35015***	1.0000		
CT	-0.2462	0.0331	1.0000	
LTASSET	0.0179**	-0.1507	0.4541	1.0000

Note: significance at \*\*\* 1% and \*\* 5% respectively

**Table 4: Regression Results**

Variable	Coeff	T-value	Probability
PE	0.61406	3.12***	0.003
CT	-0.2302	-4.33	0.120
LTASSET	0.0280	0.28**	0.040
Cons	1.1793	1.71	0.390
R square	0.1723		
Prob Chi	0.0006		

Note: \*\*\* significant at 1%, \*\* significant at 5%.

The main direction of this study is to investigate the influence of price to earnings multiple on the stock selection (growth and value stocks. The result from the regression reveals coefficient of determination (R-square) of 17% overall. The implication is that, 17% of the variation in the explained variable (stock price) is explained by the explanatory variable (price to earnings multiple). The remaining 83% of the variation in the dependent variable is explained by other variables not captured in the model. The coefficient of determination is valid and logical as there are several other factors that influence stock price. They include Lending Interest Rate,

Foreign Exchange Rate, Gross Domestic Product among others [4] Similarly, the regression results on the association between stock price and price to earnings multiple revealed a coefficient of 0.61 suggesting that for one ringgit (1RM) increase in price to earnings multiple stock prices will increase by MR 0.61.

The P/E multiple is statistically significant at (0.00) 1% in explaining stock price. The goodness of fit is very good suggesting that price to earnings multiple model alone is appropriate in modelling stock selection. The probability of P/E multiple is positive and significance at 1% suggesting a significant positive relationship between the variables. The evidence suggests that, hypothesis 1 which predict that growth stock perform better compared to the value stock is supported. The positive coefficient shows that, fundamental of stock price lies above market fundamentals suggesting the performance of growth compared to value stocks. The implication is that growth stocks (highly priced stocks) yield more returns to the investors compared to the value stocks (undervalued stocks) of the listed firms. The results conforms with the findings of Campbell et al [4] which established that growth stocks have better investment returns compared to the value stocks because they absorb shocks in the market volatility. They argued that value stocks are companies under distress, uncertainty in future incomes and having highly financial leverages. Thus, growth securities offer a likely solution for dividends that are growing based on sequence.

The study however contradicts the findings of Chen and Zhang [6] that though value stocks are more riskier, however, yield more returns to investors compared to growth stocks. Similarly, the value stocks yield better investment returns. Due to positive nature of the relationship between price to earnings multiple and the stock price of firms in Malaysia two classes of investors (growth and value investors) can use the results to make investment decision. Based on the findings growth investors are favoured as more expensive stocks (highly price stocks) perform better than the less expensive stocks (cheap stocks). This means that despite low performance of the coefficient of determination ( $R^2$ ) investors seeking to invest in growth stocks can use the price to earnings multiple and make their investment decision due to the positive nature of relationship. Deducting from the above, it is generally observed that the price to earnings multiple provided a positive relationship indicating high stock prices of growth investors compared to the value stocks. This suggests that growth stocks yield more returns to the investors compared to value stocks.

## **5.0 CONCLUDING REMARK**

The study investigated the influence of price to earnings multiple on the stock selection amongst sample listed firms in Malaysia. Evidence from the study suggests that, significance positive relationship exist between the explained and the explanatory variables. The implication is that growth stocks yield more investment returns to investors compared to their value stock counterparts. Growth stocks perform better in terms capital appreciation, this is possible due to goodwill they already earned in the market. Logically rational investors may prefer to invest in company that is already highly priced by the market to avoid risk of investing in stocks that are believed to have been undervalued. Although, Value stocks may have enjoyed dividend payment over the period of the study but in relation to share appreciation they performed little compared to the growth stocks. Thus, the study concludes that growth stock record more share price appreciation than the value stocks. Therefore, the study recommends investors to invest in more expensive stocks (growth stock) for more future stock returns. Further studies are recommended in this area for, example increasing the sample size and inclusion of additional equity value multiples for comparative analysis.



### **5.1 Implication of the Study**

The study provides further insight on the role of price to earnings multiple on portfolio and security selection (value and growth stocks). Results obtained from companies studied, suggest that growth stocks provides better investment returns to the stockholders. This could be due to their ability to withstand market shocks compared to the value stock that are sometimes companies under distress, uncertainty in future incomes and having highly financial leverage.

### **5.2 Limitation of the Study**

The study used price-to-earnings multiple to predict stock price of Malaysian firms, the study could therefore not make generalization on the role of other multiples like price to book. Therefore, other researchers could explore other valuations multiples and stock selection. The study controls for size and company type (financial and nonfinancial), others could also control for leverage, risk and other factors to validate this finding. The sample could also be extended to include more companies to ascertain the robustness of this finding.

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