

CHAPTER 2:
LITERATURE REVIEW

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2.1 Value Investing Overview

Value investing is the philosophy which was originated by Ben Graham and David Dodd when they taught the subject “Investment Principles” at Columbia Business School in 1928. It was a subject that based on the concept of investment and speculation. Graham & Dodd critically explained the difference between these two definitions as how it affects people when it comes in managing their money.

Through these lectures, they came up with the concept of value investing that subsequently being translated in a book entitled *Security Analysis* that was published in year 1934. In this book which regarded as the seminal studies of value investing for future to come, elucidated that idea that stocks that are not within the investors’ radar or out-of-favor stocks are normally marginalized by the market. Hence this will make it cheaper than ‘favored’ stocks. Graham & Dodd argued that should the investors aware of this opportunity; they could gain strong returns on these stocks provided the investment is made on the basis of qualitative and quantitative measures. This method of investing is now known as value investing.

Subsequently, another book *The Intelligent Investor* was published in 1949 by the same authors, which is the most sought book for any investor back then until now. This book outlines the mindset and temperament needed to become a successful value investor. This book has been regarded as the best book on investing ever written by billionaire investor Warren Buffet.

Whereas Graham and Dodd focused on the quantity aspect of investing, another author by the name Philip A. Fisher published another book entitled *Common Stocks and Uncommon Profits*. This book unlike Graham & Dodd that emphasis on accounting aspects of a company, it focuses on quality aspect of investing which includes valuation of the management of any selected company. This is where the famous 15 points of investing was included which adds value to the cornerstone of value investing. This will be further explained in the next section.

Even though value investing has taken numerous approaches and methodologies since its inception, it is commonly requires trading of stocks that appear to be lower in value based on its intrinsic values. Theoretically, stocks can be categorized as value stocks and growth stocks (Ding et al., 2005). Furthermore, value stocks can be grouped as stocks that are characterized by low ratios. Ding et al. (2005) added that these ratios could the starting point in identifying the type of stocks either it is a value or growth stocks. Growth stocks, however, is characterized by the highs of these ratios.

In the US market, studies show that value stocks consistently outperformed the growth stocks in the year 1998 and also 1999. With the exception in both years, the value of mean returns between the value stock portfolio and growth portfolio was positive. In addition, the distribution in these portfolios average to the amount of 13.5% a year for full interval. From the research, it can be concluded that value investing is indeed a superior method and could yield impressive returns in the US markets. This is further supported by the fact that

billionaire investor Warren Buffett is a true advocator of value investing which made him one of the top richest man in the world.

2.2 Previous Research

Starting with *Security Analysis* and *The Intelligent Investor*, many researches were done of the topic of value investing. Academicians were eager to know whether this philosophy of investing could really yield the returns that Graham and Dodd claimed could produce. However, in their books, the evaluation was merely done of the US market alone, namely American companies. So, it is sensible for these academicians to conduct this research in a more technical manner to establish the effectiveness of value investing.

A great amount of empirical investigation on value investing (Fama & French, 1992, 1998; Capaul et al., 1993; Loughran, 1997; Bauman et al., 1998; Arshanapalli et al., 1998; Chan et al., 1991; Mukherji et al., 1997) signifies that value stocks produce superior returns than growth stocks. The returns are more apparent for stocks with small-cap though occasionally it appeared on large-cap stocks. In the United States, previous researchers found the existence of value premium in the stock markets. By definition, value premium is the difference between the anticipated returns on growth and value portfolio (Fama & French 1993). This is based on the projected returns on a portfolio that is characterized by long high price-to-book and short low price-to-book ratios.

Stocks can be categories as value stock and growth stock (Fama and French, 1992; Lakonishok et al., 1994 and Chan et al., 1991; Jenn et al., 2004). Value (growth) stocks are distinguished as those stocks by the high (low) price-to-

earnings ratio (P/E), price-to-book value ratio (P/B) and price-to-cash flow (P/CF ratio). This definition has been used to conduct the performance of both growth and value stock in US and Japan. These researchers also found that the value stocks portfolio outperformed growth portfolio in these 2 countries.

In another literature, value stocks, is also defined as securities with low price to earnings (P/E), price to sales (P/S) and high dividend payout ratios, (Eakins & Stansell, 2003). Their study also indicates that value stock outperformed the growth stock over the period of 40 years. Also this is achieved through gaining a substantial return with a minimal risk than any other benchmark used in this study.

2.3 Previous Results

As previously discussed, a large number of studies have been done on the topic of value and growth investing (Fama and French, 1992 & 1996; Lakonishok et al., 1994 and Chan et al., 1991) regarding their stunning results on their returns. Many discussions arouse due to value investing outstanding return and majority has reached the consensus of it superiority. However the rationale of why it becomes so superior has also been the sub topic of discussion. In this context, “behavioralists” (Kahneman & Riepe, 1998; Gilovich, Griffin, and Kahneman (2002), state that the perception that most investors are more prone to overpay for growth stocks as they seem to “grow’ in the future which later fail to rise to their expectation.

Chan (1998) argued that the excess of returns on value stocks were merely an illusion as a result of survival bias and data snooping. He argued that value and growth stocks perception grow from investors pre perception and one-sided judgment which also include the agency problem largely in institutional investing. In addition, Phalippou (2008) reported that the value premium is more highly influence to mispricing and also expensive to arbitrage. Also, he added that in most cases, the value premium relates more to stock with large individual ownership. However, this has been refuted with proof by various researchers (Fama & French, 1992; Davis, 1994; Daniel and Titman, 1997; Haugen, 1995).

De Bondt and Thaler (1985) conducted a research that resulted in finding of results that parallel to their contrarian stratagem that is based on buying shares with low past returns and the initial indicator and premise of investor overreaction behavior. In their research, they found out that price-to-book ratio has been the most effective indicator for stock's future return. This has been supported by Fama & French (1992) that concluded that size, in addition to price-to-book ratio collectively could influence the potential return when their research was done on the US market. These findings have raised numerous issues relating to the efficiency of the market in particular if one were to point to the capital asset pricing model (CAPM), as Lakonishok, Schleifer and Vishny (1994) stressed out.

Outside the US capital market, there are large evidence that support the existence of value premium as evidenced by Capaul et al. (1993) via their

study on France, Germany, Switzerland, United Kingdom and Japan. They concluded that value stock (categorized as low P/B) did better than those from growth stocks (high P/B). This is further supported by Haugen & Baker (1996) by the similar conclusion even after managing the risk, liquidity, growth probable and historical prices. Bauman et al. (1998) extended Capaul et al. (1993) study by including stocks from the MSCI-EAFE and Canada.

Moreover, there is evidence value premium existence outside the US capital market. Chan, Hamao, and Lakonishok (1991) found that a significant value premium exists in Asia country like Japan. Capaul, et al. (1993) extended the conclusion that value premium do exists in the international capital market. However, their sample period under study was rather brief with only 10 years was used in the research as compared to previous researches that would include sample period as long as 25 years.

Fama & French (1992) explained that the Capital Asset Pricing Model (CAPM) was inefficient as an indicator to expound that returns on stock to any significant extent. Furthermore, they explained that value stocks, characterized by high price-to-book ratio, carried lower risk but provide better returns compared to any other stocks. This is further supported by Haugen (1995) argument that apart from price-to-book ratios, other usage of alternative ratios such as price-to-earning, price-to-sales and price-to-cash flow could also provide better return with minimum risk in addition with longer time span performance when compared to random picking stock strategies. After the revelation by these previous researchers, others have questioned the concept of market efficiency (Jegadeesh & Titman, 1993; Scott, 1997).

Lakonishok, Shleifer & Vishny (1994) drew similar conclusion on the topic of value investing. In their research with the time span between 1968 until 1994, they have formed portfolios consist of value stocks and growth stocks. These stocks are characterized by price-to-book, price-to-cash flow and price-to-earnings ratios. Additionally, they also use sales growth as their independent variables in the study. In their conclusion, they concluded that, though a myriad of definition used to define value stocks and growth stocks, value stocks have consistently without fail outperformed growth stocks with significant margins.

On the same note, Black (1993) and MacKinlay (1995) added that value premium is rather concentrated of the sample of stock itself. They argued that as illustrated in the earlier US stock return, the result was more luck in nature that would not likely materialize to future returns. They also mentioned that, to accept this premise, another research has to be conducted to verify this argument with a different set of samples. However, Davis (1994) mentioned that the value premium actually existed way earlier than 1963 and not only during the period when Fama & French and other researchers did their researches.

However, in their study, Fama and French (1996) disputed that stocks with excessive valuation ratios like growth stocks are extra prone to financial distress and are therefore riskier than value stocks.

In addition, Fama & French (1998) conducted a similar research on value investing, this time more concentrative on capital market outside the US. This

is to identify whether value premiums do exist in other countries other than US. With the time sample of 1975 to 1995, they found that 12 out of 13 major equity markets, value stocks have managed to outperform the growth stocks. This finding actually supersede the argument made by Lakonishok, Schleifer and Vishn (1994) that value premium existence was more relevant to certain specific sample only and assumed to only exist in the U.S market.

The robust and rising attention in global investing induces the reservation whether a combination value strategy such as explained in the previous section (in which value and growth were defined by P/CF, P/E, and P/S) can too be successfully applied to non-U.S. markets.

In the East Asian markets, Chan et al. (1991, 1993) studied the Japanese stocks market and concluded that variables (P/E, P/B, P/CF and size) have a major relation to returns. Value premium also has been demonstrated to be present in Indonesia (Roll, 1995) and Korea (Mukherji et al., 1997).

Fama and French (1998) extended the research by broaden the outcomes for an extensive sample of countries all over the world which includes Japan and Singapore. In this study, they defined the value and growth stocks by a variety of indicators- BV/MV (book-to-market value), P/E, P/CF, and dividends to price (D/P). Same indicators were used in their previous studies as to determine the consistency of results. The final result was consistent with their previous findings.

A study made by Kargin (2002) on value investing in emerging markets based on P/B ratio and P/E ratio allow them to generate significantly higher investment returns. In his study, emerging market used in his study were Argentina, Brazil, Chile, Colombia, Mexico, Peru, Venezuela, India, Sri Lanka, Indonesia, Korea, Malaysia, Pakistan, Philippines, Taiwan, Thailand, China, Greece, Turkey, Hungary, Poland, Czech Republic, Romania, Russia, Slovakia, Israel, Egypt, Morocco, South Africa and Zimbabwe.

In contrast, Griffin et al. (2003) found that Asian stocks market showed the weakest returns amongst the 39 international markets under their studies. This means that the returns of Asian countries are not as strong as those evidenced in the Western market.

Though Fama & French (1998) and Davis et al (1994) conducted additional confirmation that the existence of value premium using the international data and longer time span data in the US but the number of Asian countries (Japan & Singapore) only were relatively small both in size (for Singapore only 0.7%). Based on the findings, Yen et al (2004) extended the research in depth on the performance of value and growth stocks in Singapore and concluded that value stock surpassed growth stock in the country. However, Yen et al. (2004) indicated that the value premium is relatively short-lived in Singapore (only 2 years) as compared to the West.

2.4 Previous Methodology

Graham and Dodd (1949) and Fisher (1958) recommended these 5 elements that should be the determinants of selecting stock if one to adhere to value investing approach:-

- The company's general long term prospects
- The quality of its management
- Its financial strength and capital structure
- Its dividend record
- And its current dividend rate.

However, these elements can only be applied on company level, that is when the company has been selected rather than preliminary approach prior selecting stocks which started off by its ratios. Academicians, on the other hand, would prefer ratios as the starting point when selecting stocks.

The methodologies adopted by these academicians were somehow similar. Fama and French (1992, 1996) and Lakonishok, Shleifer, and Vishny (1994) as demonstrated in their research for U.S. stocks showed that there are a strong value premium in mean returns by adopting these approaches. In their studies, they indicated that high Book/Market (or price-to-book ratio), Price-to-earnings (P/E) ratio, or Price-to-Cash Flow (P/CF) stocks have higher average returns than low B/M, P/E, or P/CF stocks.

In previous studies, past researchers have revealed the correlation exist between the company size and its price-to-book ratio, whilst other studies

have also conducted research on the correlation between price-to-book ratio and also other similarity on returns. Asness (1997) and Daniel and Titman (1999) conducted a research to see the association between the result obtained in value portfolio and its historical returns and observed the high relation between those two variables. Chan, Lakonishok, and Sougiannis (2001) suggested the addition of the intangible assets in the book value calculation of the share on grounds that by including that portion, it would be able to enhance the implementation of the value investing approach. In relation to value investing approach, Piotroski (2000) utilized a number of financial data that is available to accurately define the characteristic of value stocks. On the other hand, Ferson and Harvey (1999) had used the conditioning information in assisting identification the value premium that exists in stocks. Their conclusion was that, by combination of number of investment methods in selecting stocks, such as value and momentum, it may allow investors to gain considerable amount of large returns rather than solely selecting stocks related to value and growth stocks criteria.

By far, James O'Shaughnessy (1997) published the most comprehensive study of the topic of value and growth investing. Whilst his approach was apparently compelling, however it was not that complicated. His study demonstrate that there may be various ways of selecting securities, rather than the unsystematic pick of stocks or stock selection at random.

In his study, O'Shaughnessy (1997) amassed a massive compilation of previous researches written relating to value investing, with the emphasis on the idea that value stocks outperform any other stocks. In this methodology,

he adopted 60 different investment methods in his stock selection and applied all those methodology separately. Upon selection based on methodology he chose, he would study the performance of each of the portfolio over the period of 40 years. In conclusion, he contended that stock picking based on value investing approach begun to increase much more higher in price with lower anticipated risks compared to any other investment strategies. This result is parallel with the findings by Fama and French (1998) and Haugen (1995), though the result was not similar with findings related to efficient market hypothesis and also CAPM. O'Shaughnessy also shared on what he found to be the most effective method of selecting securities. He recommended that to produce the maximum risk-adjusted returns in security selection, it entails the following three steps:-

- a) Identify stocks that have a market capitalization (market capitalization is equivalent to the stock price times the number of shares outstanding) of over US\$150 million that the research period.
- b) Once the stocks have been identified in (a), using the capitalization screen, select for any stocks that have a price-to-sales (P/S) ratio less than one.
- c) Upon selecting in (b), rank those shares surviving in (a) and (b) in order by studying how much price has increased that they have encountered for the period of the preceding 12 months on the date of the selection.

The portfolio is subsequently tested for risk and return alongside with other substitute strategies as studies by earlier researchers. O'Shaughnessy had obtained the outcome practically as superior by using P/E or P/B ratios as an alternative of the P/S ratio in (b) above. Dreman (1998) also reported the

same outcome similar to the one published by O'Shaughnessy. In summary, he concluded that value investing approach with the adoption of longer holding period would yield a higher return coupled with its associated level of risk as compared to any other choices he studied in his research. This claim is further supported by Jaffe et al., (1989) and Lakonishok et al., (1994) that value stocks offer greater risk-adjusted performance.

Chan et al. (1991, 1993) applied the same method and studied value investing method on the Japanese market using the P/E, P/B, P/CF and size as the variables in studying their performance and found that P/B and P/CF have the most significant negative on effect on anticipated returns.

In order to identify the consistency of the result, especially to market outside the US, Fama & French (1998) conducted further research as to identify whether the same method could be applicable to non-US markets. The similar value premiums existed when it is sorted based on book-to-market equity; P/E; P/CF, and P/S ratios. They found that value stocks surpass growth stocks in 12 of 13 major markets for the duration from the year 1975 to 1995. This indicates that the existence of value premium in up-and-coming markets around the world. Given that these results are out-of-sample relative to previously tests on U.S. data, the idea that the earnings of value premium for value stocks was indeed factual (Fama & French, 1998).

Brown et al. (2008) conducted a research of the stocks in East Asian (Hong Kong, Korea, Singapore and Taiwan) market after the Asian Financial Crisis that occurred in the year 1997 to determine whether value investing has return to the market as previously studied (Ding et al., 2005). They found out

that value premium has in fact return to the Asian market with the exception of Taiwan. In Taiwan, the stocks with high liquidity, high price and small cap are prone to produce bigger value discount. This conclusion is similar with the results of Ding et al. (2005).

Fama & French (1998) in their research estimated the monthly earnings of the selected stocks by spreading the yearly dividend for a fiscal year spread among all months of the financial year with the perception that the compounding earnings of these stocks would actually replicate the actual annual return for the securities. They argued that this method retains the truth of mean returns. They also added that it assumes that the capital gain element of the monthly earnings, which is calculated precisely, reproduces the instability and covariance composition of total monthly returns. Campbell and Shiller (1988) however stated that dividend-price ratio dependence includes some information regarding anticipated returns and can be used for forecasting future returns. Yet this ratio is only applicable to dividend paying securities. Therefore they suggested the co-integration of dividend-price ratios in addition to the previous ratios as discussed on the value and growth portfolio –instead of individual securities as it is more proficient than using the stationary of individual ratios.

On the debate on relying only on one ratio instead various ratios, Fama & French (1998) stated that the value premium is less reliable when it sorted on P/E alone, therefore the addition of P/B and P/CF is deemed to have stabilized the selection criteria of the securities. Also, value premiums for individual countries are a bit less reliable when portfolios are created on

dividend yield only, although in their research, 10 out of 13 were positive. Thus multiple variables are then deemed appropriate in categorizing types of stocks.

Other variables which are considered one of the most successful forecaster of value premium is the value spread (difference between book-to-market ratios of value and growth portfolios) as Cohen et al. (2003) stated. This will be included in the supplementary information related to the history of prices and dividends and would improve the quality of forecast.

A number of benchmarks are established on variables that has been widely used by academicians in their studies; however none has been more significant other than price-to-book value (P/B) ratio. In all researches previously done, this ratio has emerged as a vital guide of a portfolio's direction with respect to either growth or value stocks (Chan & Lakonishok, 2004). Book value is the accountant's valuation on the worth of the company's net worth. In addition, book value has more benefit over returns, as it is more steadier over time (Jenn, 2004). Jegadessh and Titman (1993, 2001) also reported that buying stocks on momentum strategies which is trading previous winners and selling previous losers in intermediate-term investment horizons can also contribute to earning a considerable amount of returns.

Lastly, in their research, Ding et al. (2005) omitted the P/CF variables in their studies on grounds that not all countries under research would have accounts of depreciation which the important tool in calculating the cash flow. Brown et

al. (2008), in contrast place all sample stocks chosen from various countries into one basket instead their respective countries. This is to get the overall perception of value and growth stocks return on the regional level more accurately than the country level. They argued that this method was crucial in regard for the institutional investors for worldwide diversification objective.

2.5 Results Impact

The impact on the results obtained by these researchers on the topic of value investing was somehow controversial. Fama and French (1998) conclusion presented an astonishing argument to the effective ability of the capital asset pricing model (CAPM) and created discussion about the "death of beta". Even Basu (1977), illustrated that historically stocks with low P/Es consequently are more inclined to have higher average returns than stocks with high P/Es. This has been further supported by the question of the validity and reliability of CAPM.

In the east, Chan, Hamao, and Lakonishok (1991) studied the performance of value and growth securities on Japanese capital market and identified solid support for the better performance of value investment strategies. Jenn et al. (2004) also supported the argument by studying the performance of value and growth stocks in Singapore. Jenn et al. also somehow obtained similar results.

In a rational market, short-term disparity in profitability ought to have minor result on stock price and book-to-market-equity (Fama & French, 1995) whilst

P/B ratio ought to be related with long-term variation in profitability. Their study confirms this notion. They added that firms with low P/B ratio tend to be steadily distressed by the market.

Furthermore, Fama & French (1995) illustrated that based on their evidence, both profitability and P/E ratios that were somehow related to their market capitalization size and price-to-book ratio, are consistent with rational pricing. Thus, the substantiation presented here demonstrates that size and P/B ratio are associated with profitability.

Jenn et al. (2004) also indicate that value (growth) stocks indicate a low (high) earnings growth rate and low (high) profitability in subsequent years after the portfolio formation. Their study however, was only focus on Singapore capital market. Their finding also include that earnings growth is conspicuously overvalued for growth stocks but it is not undervalued for value stocks. This implies that the existence of one-way reaction, meaning investors tend to react excessively in the case of growth stocks but apparently do not do so in the case of value stocks. Finally Jenn et al. (2004) found proof of mean reversion for surplus return on equity (ROE) for value stocks but not for excess earnings growth stocks.

Brown et al. (2008) results were similar to previous researches. Whilst their method was slightly different (clustered Hong Kong, Korea, Singapore and Taiwan as 1 region rather than grouped them individually), the results were consistent. Taiwan market was consistently demonstrated value discounts while the three markets illustrate value premium existence.

Several rationales were shared on why value stocks tend to surpass growth stocks. Lakonishok et al., (1994) reported that irrational behavior when it comes to pricing would be able to explain certain aspects of the movement and also behavior of the revenue and return on equity (ROE) of both value and growth stocks. They added that the market responded poorly by unable to identify the short term nature of the growth in earning of these stocks year before the formation of the portfolio. Consequencely, the market would wrongly assume that the strong earnings growth by stocks with value stocks which normally categorize with low ratios and also the unimpressive growth by value stocks. This in turn would make value stocks to have lower than anticipated return in their post performance of the portfolio due to their weak earnings growth than what the market anticipated whilst stocks that categorize as growth would have higher average return due to their growth in earnings that perform better than expected.

Also, they added that the holding period played a pivotal role in realizing return on the securities, particularly the 'buy-and-hold' strategy. Because of this strategy, it was reported that buy-and-hold strategy's returns over a number of years following portfolio creation as practiced by value investors, yield superior returns as their outcomes are pertinent from the perception of a long-term investor s(Lakonishok et al.,1994).

Moreover, Lakonishok et al. (1994) and Haugen (1995) added that the existence of the value premium that occur in the average returns is due to the market reaction of it underrated distressed stocks coupled with overestimation

of the growth stocks. Therefore, when these divergences resolved, it will result with high returns for value stocks and low returns of the growth stocks

Interestingly, Fama & French (1995, 2007a & 2007b) affirmed that the behavior of relevant ratios and stock returns indicated that once stocks are assigned to portfolios according on their sizes and P/B ratios, the market create an impartial estimates of earnings growth on both value and growth stocks. They added that relocation of stocks across size and value portfolios are a factor to the particular value premium in average stocks returns. They also observed that capital gain from the value stock returns are produced from convergence in P/B ratio from mean reversion in profitability anticipated returns whilst negative convergence for growth stocks.

Ding et al. (2005) conducted a research of all the value and growth stocks in terms of portfolio prior to the occurrence of the 1997 Asian Financial Crisis. They studies various countries market in the Asian countries namely Hong Kong, Indonesia, Japan, Malaysia, Singapore, Taiwan and Thailand from 1976 until June 1997 when the crisis occurred. They found out that prior the crisis, the value premium did exist in Hong Kong, Japan, Malaysia and Singapore. However it was notably negative in Thailand and surprisingly insignificant in Indonesia and Taiwan. This means that value and growth portfolios behave differently in these countries when firm size, risk, liquidity and growth potential factors are taken into account. These factors are acknowledged as the factors of stock returns by Haugen (1995).

Specifically, there was a negative and significant relation between firm size and average return in value portfolio in Hong Kong and Malaysia and for growth portfolio in Japan, Malaysia, Singapore and Taiwan whereas in Hong Kong market, there was a positive relation between size and returns. Same affect applies to Japan, Malaysia and Singapore capital market.

Brown et al. (2008) were in the opinion that inadmissible of trading costs into the study might have considerable amount of effect in the result. This is due to the fact that trading costs and market effect would be vastly dissimilar across the many markets. Though they had no empirical evidence to support this, they deemed that this factor should be factored in for future research.