



# THE VALUE PREMIUM IN THE VIETNAMESE EQUITY MARKET

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## ABSTRACT

In recent decades, the Efficient Market Hypothesis has been the subject of debate among professionals and academics. In this hypothesis, the value premium is a key aspect that challenges market efficiency. The main objective of this study is to comprehensively investigate the value versus growth anomaly in the Vietnamese market between 2013 and 2023. Based on the empirical data, value portfolios have yielded a greater average return than growth portfolios in the Vietnamese stock market during this period. Although their levels of market risk (measured by beta) are nearly the same, the added-risk level of value portfolios is substantially higher than growth portfolios. Therefore, the value premium in Vietnam is compensated for bearing a higher risk level, consistent with the risk-based explanation.

Keywords: value premium; asset pricing models; efficient markets; Vietnam

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## INTRODUCTION

Since being presented in the 1960s, the Efficient Market Hypothesis (EMH) has played an important role in modern finance. Many financial theories are based on the assumption of market efficiency (Ali et al., 2023); hence, if EMH does not hold, many theories could be incorrect. Although numerous efficiency tests on various markets have provided significantly positive results, the precision of EMH has been doubted by academics and professionals who have discovered several solid proofs challenging market efficiency. These are known as anomalies.

The value premium is the tendency of a value portfolio to earn a greater risk-adjusted return in comparison to a growth portfolio. Value stocks are low-priced compared to their fundamental factors, such as book value, profits, cash flow, etc., while growth stocks are expensive compared to their fundamentals. According to EMH, investors cannot make a superior riskadjusted return based on past information. The higher the expected return, the higher the risk level. As a result, the value versus growth anomaly contradicts market efficiency.

There are a huge number of studies regarding the value premium in developed markets such as the US, the UK, the European market, etc. Early research was carried out by McWilliams (1966) and Basu (1977). They reveal the existence of the value versus growth anomaly in the US stock market. Fama and French also discovered proof of the value premium concept on a global scale (1998, 2006, 2012, 2017). Hanauer and Linhart (2015) and Leite et al. (2018) looked at emerging markets and ascertained the value premium in



the Latin American, Eastern European, and Asia-Pacific markets. The value premium haas also been uncovered in China and Brazil (Kostin et al., 2022), and Morocco (Taib and Benfeddoul, 2023).

Although the value premium is extensively investigated in developed markets as well as several emerging markets, to the best of the author's knowledge, the number of studies regarding the value premium in the Vietnamese stock market is limited. This paper offers new insights into stock returns in the Vietnamese market, including the Ho Chi Minh Stock Exchange (HOSE) and the Hanoi Stock Exchange (HNX). Companies listed in these exchanges are categorized into six portfolios based on their market-to-book ratio and capitalization. Then, the Fama-French Three-, and Five-factor analyses are used to estimate portfolio betas. Ultimately, the betas and average returns are compared among portfolios to discover proof of the value premium. The key research question is whether or not the value portfolio yields a superior riskadjusted return than the growth portfolio in the Vietnamese stock market. There are two valueenhancing aspects in the field of market finance being examined in this paper. First, this study comprehensively investigates the value premium in the Vietnamese context. It not only determines whether the value-investment strategy could be applied in the Vietnamese stock market but also has implications for stock analysts who make forecasts on the performance of Vietnamese firms. Second, the Fama-French Three-, and Five-factor analyses are used to describe Vietnamese stocks' return. Then, the basis for calculating the expected returns on Vietnamese stocks is set up.

The rest of the paper is structured as follows: Section 2 gives a brief presentation of the literature review; the data sample and methodology are described in Section 3; and finally, the empirical findings are summarized and discussed.

## LITERATURE REVIEW

The difference in average returns between value and growth equities is known as the value premium. Value stocks are those with lower market pricing compared to their underlying metrics. The typical characteristics of value shares consist of a high book-to-market (B/M) ratio, high dividend yield, low price-to-earnings ratio (P/E), low sales growth rate, and/or high cash flow-to-price. Growth stocks, also known as glamour stocks, on the other hand, are more expensive in comparison to their fundamentals.

The value premium has been discovered in many markets over various periods. Initial studies on the value premium were conducted by McWilliams (1966). Examining the US stock market between 1953 and 1964, McWilliams (1966) proved that investing in the value portfolio is better. The annual average return of the highest P/E portfolio is only 15%, while the yearly average return of the lowest P/E portfolio is nearly doubled, at about 30%. Loughran and Wellman (2011) ranked non-financial NYSE, AMEX, and NASDAQ stocks on their B/M ratios between June 1963 to June 2009. Then, they estimated the equal-weighted return for each B/M-sorted decile. The difference between returns on the high-B/M (or value) and low-B/M (or growth) deciles was 1% per month. Based on data collected from the CRSP over the period 1972-2012, Hou et al. (2015) reported a value premium of 0.4% per month, with a t-statistic of 2.6. Jaffe et al. (2020) documented the value premium in all stocks for which Compustat and the CRSP provided sufficient data between July 1973 and June 2016. The average excess return of the highest B/M quintile was 0.75% per month, whereas the lowest B/M yielded a monthly average excess return of only 0.28%.

A series of papers conducted by Fama and French (1998, 2006, 2012, 2017) demonstrated the existence of value premiums on an international scale. According to Fama and French (1998), the value portfolio provided an excess return in 12 out of 13 stock markets from 1975 to 1995. The average differential between returns on international value and growth portfolios is 7.68% per year. Using merged data collected from MSCI for 14 markets outside the US, Fama and French (2006) constructed valueweighted size-B/M portfolios. The monthly value premium was 0.53% during the period 1963-2004, which is 2.63 standard errors from zero. In three regions (Europe, Japan, and Asia-Pacific), there are value premiums in average stock returns between November 1990 and March 2011 (Fama and French, 2012). More recently, stock returns in 23 developed markets in four regions from 1990 to 2015 were also taken into account (Fama and French, 2017). In all regions, the value premium was significantly positive with a high t-statistic, except for North America.



The highest value premium belonged to the Asia-Pacific region, at 0.59% per month, while monthly value premiums for Europe and Japan were almost equal, at 0.32% and 0.36%, respectively. When examining the US stock market for 1991-2019, however, Fama and French (2021) recorded reliable evidence of a severe decrease in the expected value premium compared to the 1963-1991 period.

Evidence of the value of premium has also been discovered in developed European countries. Dissanaike and Lim (2010) investigated all listed UK firms from 1987 to 2001 and stated that the portfolio strategy based on the B/M ratio yields a risk-adjusted return of 0.77% per month in the framework of the Fama-French three-factor model. Daniel and Chris (2014) concentrated on all MSCI Europe Index participants' stocks between January 1990 and April 2010. The annualized value premium was 8.92% with a tstatistic of 1.84. Similarly, Foye (2016) stated that the value premium was present on a Europewide basis, at about 0.209% per month during 1998-2013. Chakroun and Hmaied (2019) also found evidence of the value premium in the French stock market.

There is some evidence of the value premium in the emerging markets. Cakici et al. (2013) found strong evidence for the value effect in 18 emerging markets in three regions-Asia, Latin America, and Eastern Europe-between 1990 and 2011. The value factor in Eastern Europe earned the highest mean monthly return, at 1.88%, with a t-statistic of 3.6. According to Hanauer and Linhart (2015), the value factor is substantial and significant for 21 emerging markets over the time period 1996-2012, with an average of 0.93% per month. It was nearly twice as high for the global portfolio, with a value of 0.47%. Leite et al. (2018) reaffirmed the presence of the value premium in 12 emerging markets from 2007 to 2017 with significant and positive returns of the value minus growth portfolios. Kostin et al. (2022) reported monthly value premiums in China and Brazil during the 2000-2020 period at 0.27% and 0.24%, respectively. The Moroccan Stock Exchange's value minus growth portfolio vielded a significantly positive return of approximately 0.8% per month (Taib and Benfeddoul, 2023).

#### DATA

Since this paper concentrates on the Vietnamese stock market, only firms published in the HNX and the HOSE are considered (Le and Nguyen, 2022; Kim, 2022). A monthly data interval is chosen because using daily or weekly intervals might lead to a non-trading bias (Abo. 2022). The non-trading bias arises because the returns in non-trading periods are zero, although the market may move up or down significantly in those periods. For small firms and illiquid stocks, there could be several non-trading days, so using daily or weekly intervals may lead to a downward bias in estimating their betas. Damodaran (2012) also proved that using monthly returns in the asset pricing model would substantially reduce the non-trading bias. As a result, the monthly stock prices for Vietnamese listed companies are collected from 2013 to 2023. Since the sample comprises massive data, only the descriptive statistics of six formed portfolios and factors are described. The data is gathered from Fiin Group, a leading Vietnamese financial information company.

## METHODOLOGY

## **Construction of Portfolio**

Firstly, the monthly continuous returns on stocks are calculated using the formula of natural logarithm:

 $R_t = ln(P_t) - ln(P_{t-1})$ 

where  $P_{t-1}$  is the closing price at time (t-1) and  $P_t$  is the closing price at time t. There are 120 monthly observations between  $1^{st}$  July 2013 and  $1^{st}$  July 2023.

Secondly, a ratio is recommended as a reiteration to divide stocks into growth and value stocks. Fama and French (2007) pointed out that value portfolios based on B/M provided more consistent and considerably higher returns than portfolios categorized by other multiples. Furthermore, utilizing the P/E ratio to classify stocks might lead to two drawbacks (Berk and DeMarzo, 2023). In the first place, the P/E cannot be used to compare firms with different leverages since it is very sensitive to the firm's leverage. Secondly, there are various firms in the sample with negative P/Es, which are subject to be meaningless. Given this backdrop, the B/M ratio is selected as the valuation criterion.

The B/M ratios are calculated for all firms in each year. The yearly financial reports obtain the





equity book value and the number of outstanding shares. These reports are collected from Fiin Group. Next, the market capitalization of each firm is estimated by multiplying the number of outstanding shares with the stock price at the year-end. The formula of the B/M ratio is:

$$B/M ratio = \frac{Book value of equity}{Market Capitalization}$$

The next step is to establish six portfolios based on the B/M ratio and capitalization. Following the technique of Fama and French (1993), all firms are assigned into a big or small group based on capitalization. Next, in the big group, thirty percent of stocks with the lowest B/M ratios are put into the big-growth (BG) subgroup, and forty percent with the second-lowest ratios are put into the big-neutral (BN) subgroup. The rest of the stocks are assigned to the big-value (BV) group. An identical technique is employed for the small group, which leads to three subgroups: small-growth (SG), small-neutral (SN), and small-value (SV). Then, each portfolio's equally weighted monthly returns are computed for the next 12 months. An important assumption underlying this technique is that investors purchase stocks on 1<sup>st</sup> July and hold them for the next whole year. Their position is not changed until 1<sup>st</sup> July of the next year, meaning that investors ignore movements in stock prices or any relevant news. Each B/M portfolio could be viewed as a mutual fund with the strategy of buying stocks with a given B/M class on 1<sup>st</sup> July and holding them for one year. On 1<sup>st</sup> July of the next year, proceeds from disposition are reinvested in the identical B/M class. This procedure is repeated each year from 2013 to 2023.

**Table 1:** Descriptive statistics of six formed portfolios' returnsUnit: %

	BG	SG	BN	SN	BV	SV
Mean	-0.6233	0.0915	0.2158	-0.2171	0.3636	1.9120
Median	-0.9548	0.3794	0.1330	-0.1380	0.2704	0.8045
Maximum	25.7362	26.4689	30.2735	27.7849	28.8761	30.8895
Minimum	-17.1500	-20.6921	-22.9604	-28.0091	-26.3675	-19.6484
Std. Dev.	6.5204	6.8623	7.6787	8.9558	7.8305	9.6983
Skewness	0.8105	0.1555	0.3641	-0.0140	0.0315	0.7283
Kurtosis	6.3747	4.9323	5.0584	4.3240	5.2978	3.6633
Probability	0.0000	0.0001	0.0000	0.0125	0.0000	0.0017
Observations	120	120	120	120	120	120

Source: author's work.

The small-value returns have the highest mean at around 1.91%, with the highest standard deviation of approximately 9.7%. The lowest mean belongs to the big-growth portfolio, at -0.62%. This portfolio also has the smallest standard deviation, at roughly 6.52%. The average return of small-neutral is -0.2171% per month, which is the second lowest; however, its standard deviation is the second highest, at nearly 9%. The monthly average returns for bigvalue and big-neutral are 0.3636% and 0.2158% respectively. Notably, the standard deviations of all time series are close to 7%, except for the SN and SV. The Kurtosis statistics for all portfolios' returns (except for SV) are considerably higher than the critical value at the significance level of 5% (3.841); hence, all series have fat tails (except for SV). The p-values of the Jarque-Bera tests are 0, which rejects the null hypothesis of normal distribution at the significance level of 5%. Thus, six-time series are concluded to be not normally distributed.

## THE FAMA-FRENCH ASSET PRICING MODELS

Following Fama and French (2017), two asset pricing models are run. The first is the Fama-French Three-factor model:

$$\begin{array}{rrrr} R_{it} & - & R_{ft} = a_i + & b_i & \ast \left[ \begin{array}{cc} R_{mt} & - & R_{ft} \end{array} \right] + & s_i & \ast \mbox{SMB}_t \\ & + & h_i & \ast \mbox{ HML}_t & + & \epsilon_t \end{array}$$

The second is the Fama-French Five-factor model:



 $\begin{aligned} \textbf{R}_{it} ~-~ \textbf{R}_{ft} &= \textbf{a}_i + \textbf{b}_i ~* [~\textbf{R}_{mt} ~-~ \textbf{R}_{ft}~] + ~s_i ~*~ \textbf{SMB}_t \\ &+~ \textbf{h}_i ~*~ \textbf{HML}_t ~+~ \textbf{r}_i ~*~ \textbf{RMW}_t + ~c_i \\ &*~ \textbf{CMA}_t + ~\epsilon_t \end{aligned}$ 

Where  $R_{it}$  is the return on the formed portfolio at time t.  $R_{mt}$  and  $R_{tt}$  are the returns on the market

**Table 2:** Descriptive statistics of five factors' returnsUnit: %

portfolio and the riskless rate at time t.  $SMB_t$ ,  $HML_t$ ,  $RMW_t$ ,  $CMA_t$ , and  $WML_t$  are the returns on the size, value, profitability, investment, and momentum factors.

	R <sub>m</sub> -R <sub>f</sub>	SMB	HML	RMW	СМА
Mean	0.7391	1.1874	2.6236	2.2523	1.8278
Median	0.9169	1.3807	1.0234	3.3530	2.1218
Maximum	29.3881	22.9001	41.6315	29.6710	24.9697
Minimum	-17.5291	-17.7326	-18.0816	-25.5346	-26.7587
Std. Dev.	6.2871	7.1869	9.5925	8.2643	8.2452
Skewness	0.5259	0.1303	1.2966	-0.5777	-0.2539
Kurtosis	5.9471	3.5007	5.6779	4.8869	4.8267
Jarque-Bera	48.960	1.59	69.48	24.48	17.97
Probability	0.00	0.45	0.00	0.00	0.00
Observations	120	120	120	120	120

Source: author's work.

**Table 3:** Correlations among five factors

	R <sub>m</sub> -R <sub>f</sub>	SMB	HML	RMW	CMA
R <sub>m</sub> -R <sub>f</sub>	1	-0.142	0.098	-0.217	-0.203
SMB	-	1	0.413	-0.524	0.227
HML	-	-	1	-0.284	0.492
RMW	-	-	-	1	-0.293
СМА	-	-	-	-	1

Source: author's work.

All factors have a positive mean. The monthly average return for the mimic HML portfolio is the highest (2.62%) with the highest standard deviation (9.59%). In contrast, the lowest average return (0.7391) belongs to the market factor with the lowest standard deviation (6.28%). The average returns for RMW and CMA are 2.25% and 1.82%, respectively. Their standard deviations are nearly the same, at approximately 8.2%. For the SMB factor, the Skewness statistic is close to zero (0.1303) and the Kurtosis statistic (3.5) is lower than the critical value at the level of 5% (3.841). Additionally, the p-value of the Jarque-Bera test is 0.45, which is substantially higher than the significance level of 0.05. As a result, the SMB returns can be concluded to be normally distributed. For the other factors, the Kurtosis statistics are considerably higher than the critical value at the significance level of 5% (3.841);

hence, they have fat tails. The p-values of Jarque-Bera tests are 0, which strongly rejects the null hypothesis of normal distribution at the significance level of 5%. Consequently, HML, RMW, and CMA factors can be concluded to be not normally distributed.

#### DISCUSSION

#### The Value Premium

The value premium over the whole period can be observed in Table 4. The small-value portfolio outperforms other portfolios in 8 out of 10 years (except for 2013 and 2023). During 2013-2023, holding the small-value portfolio could bring an extremely high return, at about 230%, while maintaining the big-growth portfolio leads to a largely negative return, at -74.8%. The big value also produces the second-highest accumulated





return, at 43.63%. An investor who places his fund in the small-growth and big-neutral

portfolios would be able to earn the accumulated returns of 10.98% and 25.89%, respectively.

	BG	SG	BN	SN	BV	SV
2013	80.71	52.18	64.57	19.92	57.91	51.71
2014	-26.75	-14.55	-6.23	-6.47	-17.37	4.14
2015	-73.75	-69.6	-84.11	-89.88	-76.37	-53.22
2016	-11.76	-7.75	21.13	9.34	29.23	57.72
2017	0.76	22.77	13.59	16.63	26.29	53.55
2018	-4.69	18.75	25.38	38.04	20.11	51.16
2019	-17.41	2.68	-11.01	6.14	3.48	14.53
2020	-0.80	3.07	0.62	-3.24	9.21	16.2
2021	-0.36	11.05	1.81	-6.27	12.18	13.4
2022	13.63	12.11	11.22	-3.32	9.75	40.04
2023	-34.16	-19.73	-11.07	-16.77	-30.79	-19.8
Period	-74.8	10.98	25.89	-35.9	43.63	229.44
Average	-12.87	1.05	2.33	-4.35	7.51	26.93

**Table 4:** The annual average returns of formed portfolios during 2013-2023Unit: %

Note: The annual average return of each portfolio is the sum of 12 monthly returns. The returns during the entire period are the accumulated return over ten years and are computed as  $R = (1 + R_{2013}) * (1 + R_{2013}) ... * (1 + R_{2023}) - 1$ . The average returns are the geometric means, which are calculated as  $(1 + R)^{\frac{1}{10}} - 1$ .

Source: author's work.

As a result, the average return varies with the B/M classification. The lower the B/M ratio, the lower the average return.





The value premium between 2013 and 2023 is clearly outlined in Figure 1. The returns on the

growth portfolio are the equally weighted returns of big-growth and small-growth.



Similarly, the returns on value portfolio are the weighted-average returns of big-value and small-value. The growth portfolio outperforms the value portfolio in only the year 2013. Since then, the value portfolio has dominated the growth portfolio. The returns on both portfolios are virtually equal in 2015, 2021, and 2022. In 6 out of 10 years, the value portfolio outperforms the growth portfolio. On average, the yearly spread between the value' return and the growth' return is about 12.56%. In other words, if the transaction costs and taxes are not considered, an investment strategy that is long in value stocks and short in growth stocks could earn a considerable return of 13% per year.

#### RESULTS OF THE FAMA-FRENCH THREE-FACTOR MODEL

Based on the statistical perspective, the Fama-French Three-factor regressions accurately describe the excess returns of six formed portfolios (see Table 5). The average adjusted R<sup>2</sup> is about 0.4. On average, the Three-factor model explains around 40% of the variation in the monthly excess returns of portfolios. At the significance level of 5%, the excess market return is a significant explanatory variable for growth and neutral portfolios. The SMB factor is significant in all regressions. The t(s) values are substantially higher than the critical value at 0.05 (1.96), which rejects the null hypothesis that the s coefficient equals zero. Similarly, the HML factor is significant in all regressions with high t-statistics.

The HML plays a crucial role in describing the excess returns of portfolios. As mentioned in section 4.2, the equation for the Three-factor model is:

$$E(R_i) = R_f + b_i * [E(R_m) - R_f] + s_i * E(SMB) + h_i * E(HML)$$

Applying the above equation for the cases of small-value and small-growth portfolios:

$$E(R_{SV}) = R_f + 0.3101 * [E(R_m) - R_f] + 0.1218$$
  
\* E(SMB) + 0.4994 \* E(HML)

$$\begin{split} E(R_{SG}) &= R_{f} + 0.3286 * [E(R_{m}) - R_{f}] + 0.1014 \\ &* E(SMB) + 0.2409 * E(HML) \end{split}$$

Since  $R_f$ ,  $E(R_m)$ , E(HML), and E(SMB) stay unchanged for both portfolios, the expected return on SV and SG depends on their slopes or coefficients. The b coefficients for SV and SG are around 0.3. Similarly, the s coefficients for the two portfolios are virtually equal, at 0.1218 and 0.1014, respectively; however, the h coefficient of the SV portfolio is 0.4994, nearly two times the h coefficient of BV (0.2409). Because the monthly average return on the HML factor is positive, at 2.62%, a higher HML slope leads to a higher expected return for the small value.

$R_{it} - R_{ft} = a_i + b_i * [R_{mt} - R_{ft}] + s_i * SMB_t + h_i * HML_t + \varepsilon_t$								
Size	Growth	Neutral	Value	Growth	Neutral	Value		
		а		t(a)				
Big	-0.0031**	-0.0024	-0.0010	-2.9945	-1.8959	-0.8222		
Small	-0.0006	-0.0007	-0.0027**	-0.5340	-0.4559	-2.4728		
	b				t(b)			
Big	0.2816	0.4200***	0.3556***	5.3686	10.1594	10.3690		
Small	0.3286***	0.4582***	0.3101***	9.6177	9.8233	8.7605		
		S		t(s)				
Big	0.1279***	0.0890**	0.1203**	4.4353	2.5249	3.5191		
Small	0.1014**	0.2901***	0.1218**	2.4252	7.2944	4.0354		
		h		t(h)				
Big	-0.3587***	0.2241***	0.2062***	-16.7585	8.5645	8.1303		
Small	0.2409***	0.2555***	0.4994***	9.6690	8.6567	22.2930		
	Adj. R <sup>2</sup>							
Big	0.3719	0.3276	0.3245					
Small	0.3400	0.3451	0.5990					

**Table 5:** Results of the Fama-French Three-factor model



Note: t() stands for the t-statistic of the coefficient. ", ", implies the significance at the level of 1%, 5%, and 10%, respectively.

Source: author's work.

Therefore, most of the spread between SV and SG returns comes from the difference between HML slopes.

As presented in Table 5, betas for value and growth stocks are nearly the same, at around 0.3. The slopes of SMB are also slightly different; however, the HML slopes increase drastically from growth to value portfolios. As a result, the expected returns should increase from growth to value portfolios, consistent with the annual average returns reported in Table 4.Although it accurately explains the value premium, the Three-factor model fails to describe the returns on neutral portfolios. The beta coefficients for small-neutral and big-neutral portfolios are highest, at 0.42 and 0.4582, respectively. The misleading beta estimation for neutral portfolios is because the HML factor is designed to capture the difference between value and growth stocks' returns, which may not explain the variation of neutral stocks' returns.

To sum up, thanks to being able to capture the added risk, the Three-factor model produces a precise description of portfolios' returns. Value stocks are subject to a higher exposure to the HML factor or a higher added-risk level than growth stocks. As a result, the expected returns on value stocks should be higher, consistent with the risk-based explanation.

#### RESULTS OF THE FAMA-FRENCH FIVE-FACTOR MODEL

The results of FF 5-factor regressions are summarized in Table 6. Statistically, Five-factor

regressions are slightly better than Four-factor regressions. The average adjusted R<sup>2</sup> increases slightly. As shown in Table 6, the coefficients and t-statistics of the market excess return, SMB, and HML are nearly the same as the figure in Table 5. As previously discussed, most of the value premium also comes from the differences among HML slopes; however, the profitability and investment factors seem to be redundant. At the significance level of 5%, the RMW and CMA variables are statistically insignificant with tstatistics being lower than the critical value of 1.96 in four out of six regressions. While RMW is a significant factor explaining returns of the biggrowth and small-value portfolios, CMA is a significant explanatory variable to the smallneutral and big-value portfolios only. This is in line with the research conducted by Fama and French (2017) and Leite et al. (2018). They stated that the evidence of the investment factor's explanatory power to the average returns is mixed outside the US market. Furthermore, the concepts of aggressive and conservative stocks are relatively unfamiliar in Vietnam. Most Vietnamese stock companies and investors focus on the P/E and the dividend of firms rather than their increase in total assets (Nguyen and Nguyen, 2019). Therefore, the number of institutional and individual investors who have strong investment tilts is very limited. As a result, the profitability and investment factors have little impact on stocks' returns.

$R_{it} - R_{ft} = a_i + b_i * [R_{mt} - R_{ft}] + s_i * SMB_t + h_i * HML_t + r_i * RMW_t + c_i * CMA_t + \varepsilon_t$							
Size	Growth	Neutral	Value	Growth	Neutral	Value	
	a (%)				t(a)		
Big	-0.0028***	-0.0025**	-0.0011	-2.6989	-2.0024	-0.8858	
Small	-0.0007	-0.0007	-0.0025**	-0.6053	-0.4781	-2.2923	
	b			t(b)			
Big	0.1812***	0.4201***	0.4156***	5.3812	10.2121	10.4693	
Small	0.3787***	0.4581***	0.3098***	9.6137	9.9373	8.9041	
		S			t(s)		
Big	0.1185***	0.0899**	0.1184**	4.0928	2.5414	3.4671	
Small	0.0828**	0.2858***	0.1114**	2.4440	7.2086	3.7247	

**Table 6:** Results of the Fama-French Five-factor model



49

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labi	e	<b>b</b> :	Cont	tını	led

		h			t(h)	
Big	-0.3692***	0.2157***	0.1929***	-16.9368	8.0977	7.5040
Small	0.2384***	0.2371***	0.4790***	9.3481	7.9439	21.2656
		r			t(r)	
Big	-0.0893**	-0.0342	-0.0693	-2.5219	-0.7911	-1.6598
Small	-0.0051	-0.1030	-0.1389**	-0.1233	-1.1246	-3.7962
		С			t(c)	
Big	-0.0324	0.0942	0.1023**	-0.9585	1.2782	2.5652
Small	0.0436	0.1171"	0.0504	1.1005	2.5270	1.4417
	Adjusted R <sup>2</sup>					
Big	0.3777	0.3341	0.3373			
Small	0.3391	0.3601	0.6127			

Note: t() stands for the t-statistic of the coefficient. ", ", implies the significance at the level of 1%, 5%, and 10%, respectively.

Source: author's work.

#### CONCLUSION AND RECOMMENDATION

There are many ongoing debates about the stock market's efficiency and anomalies. Although the value premium is extensively investigated in developed markets and several emerging markets, the number of studies regarding value premium in Vietnam is limited to the authors' knowledge. As a result, the key objective of this paper is to investigate the value premium in the Vietnamese stock market. The main research question is whether the value portfolio yields a superior risk-adjusted return than the growth portfolio in the Vietnamese stock market. Examining the monthly returns of firms listed in the Ho Chi Minh and Hanoi stock exchanges between 2013 and 2023, value stocks outperform growth stocks. During the sample period, holding the small-value portfolio could bring an extremely high return, at about 230%, while holding the big-growth portfolio leads to a largely negative return, at -74.8%. In six out of ten years, the value portfolio performs better than the growth portfolio. On average, the yearly spread between the value' return and the growth' return is about 12.56%.

Thanks to being able to capture the added risk, the Fama-French Three-factor model produces an accurate description of portfolios' returns. The average adjusted R<sup>2</sup> is about 0.4. On average, the Three-factor model explains around 40% of the variation in the monthly excess returns of portfolios. The value factor plays a crucial role in describing the excess returns of portfolios. Value stocks have a higher exposure to the value factor or a higher added-risk level than growth stocks. As a result, the expected returns on value stocks should be higher, giving a reasonable explanation for the value premium during the sample period; however, the value factor performs poorly on neutral portfolio returns, leading to the misleading beta estimation for the neutral portfolios.

The Five-factor regressions also produce good descriptions of the returns of six formed portfolios, but the profitability and investment factors seem to be redundant. At the significance level of 5%, the RMW and CMA are significant variables in two out of six portfolios. For the others, their explanatory power is limited.

Based on these empirical findings, value portfolios can be concluded to yield a higher average return compared to growth portfolios in the Vietnamese stock market during 2013-2023. Although their market risk (measured by beta) is nearly the same, the added-risk level of value portfolios is substantially higher than that of growth portfolios. The HML slopes increase drastically from growth to value portfolios; as a result, value stocks provide a higher return than growth stocks due to a higher risk level. This result aligns with Fama and French's (2017) riskbased argumentation.

There are several caveats applying to the findings of this research. The first limitation is the disregard of transaction costs and income taxes. The transaction costs could be considerable, which reduces the portfolio's return significantly. Similarly, the income taxes on the stock dividends and capital gains may also greatly impact the actual portfolio's return. Secondly, the chosen market portfolio is also



disadvantageous to a certain extent; for example, a great deal of funding is placed in foreign currency (USD), bank deposits, or financial derivatives in Vietnam. Thus, the market portfolio should consist of the stock market indexes and other financial assets.

Given this backdrop, several directions for further studies should be noted: first, the transaction costs and taxes should be incorporated in the return computation, and second, the chosen period and market portfolio should be enlarged.

#### REFERENCES

- Abo, R.M. (2022). The long-term effects of section transfers on return volatility: Intraday and overnight periods. *Studies in Economics and Finance*, *39*(*1*), 79-97. https://doi.org/10.1108/SEF-12-2020-0482
- Ali, S., Raza, S.A., Khan, K.A. (2023). Asymmetric market efficiency of the Eurozone using the MF-DFA: a comparison between global financial crisis and COVID-19 era. *European Journal of Management and Business Economics.* https://doi.org/10.1108/EJMBE-04-2021-0116
- Basu, S. (1977). Investment Performance of Common Stocks in Relation to Their Price-Earnings Ratios: A Test of the Efficient Market Hypothesis. *The Journal of Finance*, *32(3)*, 663-682. https://doi.org/10.1111/j.1540-<u>6261.1977.tb01979.x</u>
- Berk, J. & DeMarzo, P. (2023). *Corporate finance*. 6th edition, Harlow. England: Pearson.
- Cakici, N., Fabozzi, F. J., Tan, S. (2013). Size, value, and Momentum in emerging market stock returns. *Emerging Markets Review*, *16*, 46-65. https://doi.org/10.1016/j.ememar.2013.03.0 01
- Chakroun, A.Z. & Hmaied, D.M. (2019). Detecting Profitability and Investment Risk Premiums in the French Stock Market. Biswas, R. and Michaelides, M. (Ed.) *Essays in Financial Economics* (*Research in Finance, Vol. 35*), Emerald Publishing Limited, Bingley, 71-104. <u>https://doi.org/10.1108/S0196-</u> 382120190000035004
- Damodaran, A. (2012). *Investment Valuation Tools and Techniques for Determining the*

*Value of any Asset*, University Edition. Los Angeles: Wiley.

- Daniel, G., & Chris, M. (2014). The Sophisticated and the Simple: The Profitability of Contrarian Strategies from a Portfolio Manager's Perspective. E*uropean Financial Management, 20(1),* 152-174. https://doi.org/10.1111/j.1468-036X.2011.00627.x
- Dissanaike, G., & Lim, K.H. (2010). The sophisticated and the simple: the profitability of contrarian strategies. *European Financial Management*, *16*, 229-255. <u>https://doi.org/10.1111/j.1468-036X.2008.00466.x</u>
- Fama, E. F., & French, K. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*, *33*, 3–56. https://doi.org/10.1016/0304-405X(93)90023-5
- Fama, E. F., & French, K. (1998). Value versus Growth: The International Evidence. *The Journal of Finance*, *53(6)*, 1975-1999. https://doi.org/10.1111/0022-1082.00080
- Fama, E. F., & French, K. (2006). The Value Premium and the CAPM. Journal of Finance, 61(5), 2163-2185. https://doi.org/10.1111/j.1540-6261.2006.01054.x
- Fama, E. F., & French, K. (2007). The Anatomy of Value and Growth Stock Returns. *Financial Analysts Journal, 63(6),* 44-54. <u>https://doi.org/10.2469/faj.v63.n6.4926</u>
- Fama, E. F., & French, K. (2012). Size, value, and Momentum in international stock returns. *Journal of Financial Economics*, *105 (3)*, 457-472.

https://doi.org/10.1016/j.jfineco.2012.05.011

- Fama, E. F., & French, K. (2017). International tests of a five-factor asset pricing model. *Journal of Financial Economics*, *123*, 441-463. <u>https://doi.org/10.1016/j.jfineco.2016.11.004</u>
- Fama, E. F., & French, K. (2021). The Value Premium. *The Review of Asset Pricing Studies*, *11(1)*, 105-121. <u>https://doi.org/10.1093/rapstu/raaa021</u>
- Foye, J. (2016). A new perspective on the size, value, and momentum effects: Broad sample evidence from Europe. *Review of Accounting and Finance*, *15(2)*, 222-251. https://doi.org/10.1108/RAF-05-2015-0065



Hanauer, M.X., Linhart, M., (2015). Size, value, and momentum in emerging market stock returns: integrated or segmented pricing? *Asia-Pacific Journal of Financial Studies, 44*, 175–214.

https://doi.org/10.1111/ajfs.12086

Hou, K., Xue, C. & Zhang, L, (2015). Digesting anomalies: an investment approach. *The Review of Financial Studies, 28*, 650-705. https://doi.org/10.1093/rfs/hhu068

- Jaffe JF, Jindra J, Pedersen DJ, Voetmann T (2020). Can mispricing explain the value premium? *Financial Management*, *49*(*3*), 1– 19. <u>https://doi.org/10.1111/fima.12272</u>
- Kostin, K.B., Runge, P., Charifzadeh, M. (2022). An Analysis and Comparison of Multi-Factor Asset Pricing Model Performance during Pandemic Situations in Developed and Emerging Markets. *Mathematics, 10*, 142.

https://doi.org/10.3390/math10010142

Leite A.L., Klotzle M.C., Pinto A.C.F. and Silva A.F. (2018). Size, value, profitability, and investment: Evidence from emerging markets. *Emerging Markets Review, 36*, 45-59.

https://doi.org/10.1016/j.ememar.2018.04.0 06

- Loughran, T., & Wellman, J. (2011). New evidence on the relation between the enterprise multiple and average stock return. *Journal of Financial and Quantitative Analysis, 46*, 1629-1650. https://doi.org/10.1017/S00221090110004 <u>45</u>
- McWilliams, J. D. (1966). Prices, Earnings and P-E Ratios. *Financial Analysts Journal*, *22(3)*, 137-142.

Nguyen H. T. & Nguyen D. T. (2019). The impact of country-level and fund-level factors on mutual fund performance in Vietnam. *Journal of Economics and Development*, *21(1)*, 42-56. <u>https://doi.org/10.1108/JED-06-2019-0007</u>

Le, V. H. & Nguyen, M. H. (2022). The role of cash holdings during Covid-19 pandemic: Evidence from corporate risk-taking behavior of non-financial listed firms in Vietnam. *Journal of Eastern European and Central Asian Research, 9(3),* 462–470. https://doi.org/10.15549/jeecar.v9i3.849 Kim Quoc Trung, N. (2022). Determinants of stock market modern development:
Evidence from Vietnam. *Journal of Eastern European and Central Asian Research, 9(6)*, 951–964.

https://doi.org/10.15549/jeecar.v9i6.987

Taib, A. A. & Benfeddoul. S. (2023). The Empirical Explanatory Power of CAPM and the Fama and French Three-Five Factor Models in the Moroccan Stock Exchange. *International Journal of Financial Studies*, 11,47. https://doi.org/10.3390/iifs11010047

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