



Mispricing and Investor Preference with Six Indicators of Blue-Chip Stocks' Future Returns

Iman Lubis^{1,*}, Syamruddin², Irwansyah³

^{1,2,3}*Economics Faculty, Pamulang University, Tangerang Selatan, Indonesia*

**Corresponding author e-mail address: dosen01479@unpam.ac.id*

Abstract

This research involves three variables: future returns, mispricing, and investor preference. The issue is that future returns in the markets are difficult to understand, especially for beginner, amateur investors. They are advised to focus on blue-chip stocks due to their safety in the market. The objective of this research is to find a connection from mispricing and investor preference to the future anomalies as indicators of mispricing and ten measurements as indicators of investor preference leading to three anomalies of mispricing and three measurements of investor preference. The three anomalies are asset growth, net operating assets, and total returns of blue-chip stocks. The methods used are descriptive statistics and associative statistics. In this research, we adopted eleven liabilities to total assets, while the three investor preferences are beta synchronous trading, book equity to market equity, and size. The descriptive statistics show that the asset growth, net operating asset, and size of eight companies are above the mean and the others are below it. Blue-chip stocks have excellent growth in assets, high operating assets, and high market capitalization. In addition, they have low liabilities (solvable), book value to market value (high return), and beta (low market sensitivity). The associative statistics used the multiple-regression cross-section Newey–West method and conducted the examination three times; that is, it tested mispricing with three indicators, investor preference with three indicators, and additional indicators between mispricing and investor preference. The result is not significant for the investor preference and mispricing index for the future returns of blue-chip stocks. The policy implication is that there is no divergence between fundamental and price security in the types of blue-chip stocks for future returns. Moreover, the institutional or individual investor does not impact future return's stocks.

Keywords: net operating assets, asset growth, book equity to market equity, size, total liabilities to total assets

1. Introduction

Indonesia has a weak-form efficient market (Andrianto & Mirza, 2016; Musnadi, Faisal, & Majid, 2018). This means that investors cannot depend on past price movements, volume, and earnings data to predict future stock prices. The idea of weak-form efficiency is that all the current information is reflected in the stock prices and past information has no relationship with current market prices. The key principle of weak-form efficiency is that the randomness of stock prices makes it impossible to find price

patterns and gain from price movements. In particular, daily stock price fluctuations are entirely independent of each other. This means that price momentum does not exist. In addition, past earnings growth does not predict current or future earnings growth. Moreover, in a weak-form efficient market, technical analysis is not considered to be accurate and even fundamental analysis, at times, can be flawed. It is thus extremely difficult, under weak-form efficiency, to outperform the market, especially in the short term. For instance, if investors agree that this type of efficiency exists, they believe that there is no point in having a financial advisor or active portfolio manager. Nevertheless, investors who are encouraged to operate in a weak-form efficient market assume that they can randomly choose investments or portfolios that will provide similar returns.

Lin and Liu (2017) presented ten measurements of the types of individual investors who prefer individual stocks. First, the total stocks are held by the investors. Second, a number of trades are made. Individual investors engage in small trades. Third and fourth, the characteristically preferred stocks are chosen by investors, such as those with a low price level and high idiosyncratic volatility (IVOL). Fifth, individual investors prefer low market capitalization to high market capitalization. Sixth, low profitability is also preferred by investors, for which one of the proxies is earnings per share. Seventh and eighth, individual investors are also interested in a high market beta and a high book to market ratio. Ninth, individual investors are also considered to be net buyers of stocks with abnormal trading volumes due to attention snatching. Tenth, individual investors prefer non-dividend-paying stocks to dividend-paying stocks.

Investors have a preference for securities that show positive skewness, in which returns to the right of (more than) the mean are fewer but farther from it than returns to the left of (less than) the mean, and the result is that positive securities tend to be overpriced (Barberis et al., 2008). Accordingly, this study is interested in adding mispricing. Mispricing causes a divergence between the market price of a security and the fundamental value of that security. The law of one price states that the market price of a security is equal to the present discounted value of all the cash flows generated by the security. However, this is not always the case as asset prices can sometimes diverge from their fundamental values. The divergence can be due to a financial crisis or a current event in the economy. Many theoretical models exist to explain why the prices of assets diverge from their fundamental values. The ability of the participants in the market to obtain capital is a major reason why asset prices can be different from their fundamental values. The lack of funding causes assets to function independently from their fundamentals and does not allow investors to arbitrage the mispricing. The slow movement of investment capital to the number of trading opportunities is a cause of mispricing. Sometimes, the arrival of capital to take an investment opportunity can be delayed by a few seconds (an equity market) or by a few months (a risk insurance market).

Either way, it creates demand or supply shocks in the market because there is too little capital available to absorb the shock. Shocks cause asset mispricing in the economy. Eventually, the capital will enter the market to meet the investment need and the asset mispricing will be reversed. Many theories suggest that there is a direct correlation between the asset prices and the capital provided by financial intermediaries. In such a case, asset mispricing can occur when there are constraints on raising capital through the sale of shares (equity capital). For example, an arbitrageur can provide liquidity to other traders who are looking to reduce their risk exposure; however, if their ability to provide insurance is constrained by equity capital, it can exert a large impact on the asset prices. While the theory is similar to funding liquidity in terms of capital constraints, the key difference is the way in which the capital is raised. Funding liquidity refers to debt capital constraints, while intermediary capital refers to equity capital constraints.

Illiquidity refers to the inability to sell stocks or shares without suffering a major loss. It can contribute to asset mispricing. Investors often incur high transaction costs while trading securities. This creates a difference between the cash flow of the securities and the amount of money that the investors actually receive. The disparity can affect the market prices of stocks. This research, following Stambaugh, Yu,

and Yuan (2015), uses 11 anomalies to form portfolios, in which mispricing is evaluated by idiosyncratic volatility. The relationship between alpha and Idiosyncratic Volatility (IVOL) are positive among underpriced stocks but negative and stronger among overpriced stocks (the alpha–IVOL relationship involves mispricing). Liu, Stambaugh, and Yuan (2018) researched the beta anomaly, whereby a negative alpha has a high beta but a positive alpha has a low beta. The beta–IVOL relationship is significant only within overpriced stocks and only in periods when the beta–IVOL correlation and the likelihood of overpricing are simultaneously high. Research (Bali, Brown, Murray, & Tang, 2017) has indicated that the lottery demand is a strong driver of the beta anomaly, so the beta anomaly no longer exists.

Firms in the blue-chip stock category are large companies, which have a good ethos, performance, and fundamentals and are managed by professional people. Moreover, these firms are engaged in an industry in which the results are needed by many people. It is also certain that these blue-chip stock category companies have big profits that are routinely distributed to investors. This type of blue-chip stock is very suitable for use as a long-term investment and to earn continuous income because companies that are given this injection do not play games in running their business. In addition, companies with blue-chip stocks are not easy for dealers to corner a market because of their very large market share. Stocks that fall into this category are stocks with a large market capitalization figure of over IDR 40 trillion. Of course, with such a large stock market value, companies that are classified as having blue-chip stocks are not fakes.

Table 1. Eight blue-chip companies' stock prices

Date	UNVR	TLKM	PTBA	PGAS	JSMR	INDF	BSDE	ASII	JKSE
01/01/2018	1	1	1	1	1	1	1	1	1
01/02/2018	0,973166	0,907029	1,32	1,393768	0,875	1,009836	1,102941	1,033133	1,038238
01/03/2018	0,965564	0,922902	1,228	1,473088	0,847656	1,019672	1,088235	0,972892	1,039496
02/04/2018	0,898032	0,823129	1,236	1,354108	0,723438	0,963934	1,044118	0,909639	0,981904
01/05/2018	0,829159	0,877551	1,372	1,155807	0,682813	0,914754	0,994118	0,861446	0,943194
01/06/2018	0,815742	0,825397	1,584	1,240793	0,695313	0,927869	1,002941	0,831325	0,941463
02/07/2018	0,81127	0,839002	1,6	0,923513	0,654688	0,855738	0,894118	0,753012	0,90417
01/08/2018	0,800089	0,793651	1,796	0,98017	0,751563	0,842623	0,811765	0,900602	0,949331
03/09/2018	0,781306	0,77551	1,6	1,133144	0,7	0,836066	0,702941	0,855422	0,938946
01/10/2018	0,828265	0,820862	1,836	1,291785	0,701563	0,790164	0,685294	0,88253	0,935327
01/11/2018	0,754919	0,893424	1,68	1,13881	0,64375	0,777049	0,641176	0,96988	0,918175
03/12/2018	0,783542	0,857143	1,6	1,184136	0,696875	0,872131	0,802941	1,036145	0,962707
31/12/2018	0,812165	0,85034	1,72	1,201133	0,66875	0,977049	0,738235	0,990964	0,974666

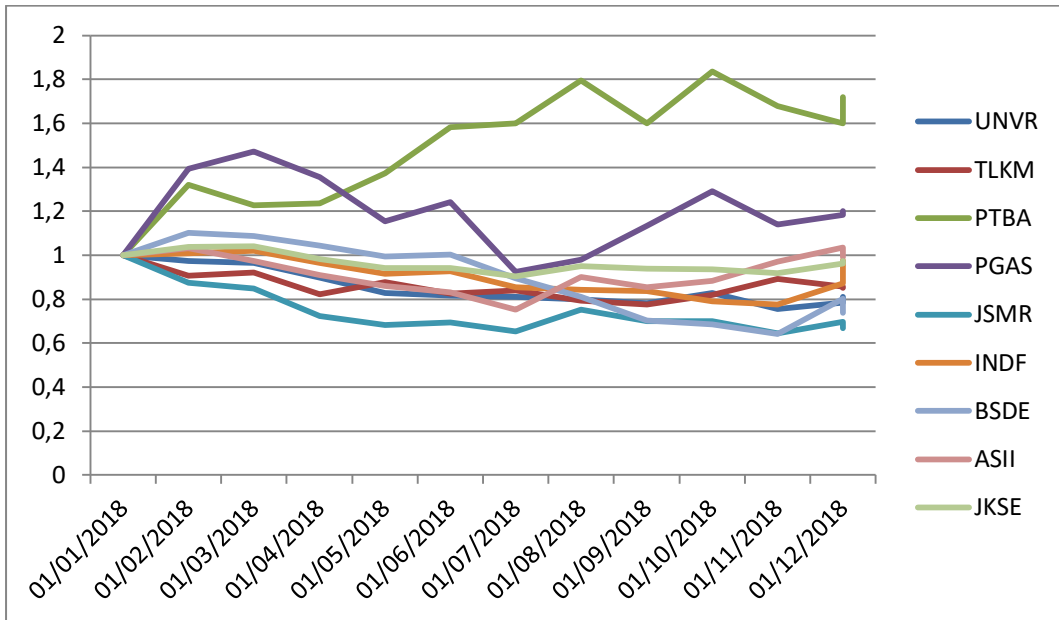


Figure 1. The common monthly prices of the blue-chip companies' stocks in 2018

The picture above shows that PTBA and PGAS increased their price from January 2018 to December 2018. Meanwhile, the other six stocks have lower percentages than in January 2018.

The identification problem is that, at the end of 2018, six blue-chip stocks were underpriced in relation to the beginning of 2018. This fact shows that investors found it difficult to gain a future return. That probably happens using either mispricing or investor preference as an independent variable. The problem is how mispricing and investor preference signify future returns. The purposes of this research are to identify the partial and simultaneous effects of mispricing and investor preference on future returns. The benefits of this research are that it will help investors to maximize their gains and give investors more opportunity to structure their preferred return.

2. Literature Review

2.1 Mispricing (Average 11 Anomalies)

Mispricing consists of 11 anomalies. First of all, financial distress is proxied by failure probability (Campbell, Hilscher, & Schilagyi, 2008) and the O-score (Ohlson, 1980). Second, Loughran and Ritter (1995) and Ritter (1991) illustrated that, after the issuing years, equity issuers underperform matching non-issuers with similar characteristics. This was supported by Fama and French's (2009) research, which showed that net stock issues and subsequent returns are negatively correlated. Daniel and Titman (2006) also found that issuers underperform non-issuers using a measure that they denoted as composite equity issuance, which is defined as growth in the firm's total market value of equity minus the stock rate of return. It is calculated in the same manner as in Daniel and Titman's (2006) study. In addition, Sloan's (1996) research on total accruals showed that firms with high accruals earn abnormally lower average returns than lower accruals and suggested that investors overestimate the duration of the accrual component of earnings when forming the earnings expectation. The net operating assets anomaly is from Hirshleifer, Hou, Teoh, and Zhang (2004). Momentum (Titman & Jegadeesh, 2016) is the most robust anomaly in asset pricing. It shows that high (low) past returns forecast low (high) returns. Momentum portfolios are ranked based on cumulative returns from month-11 to month-2, and the holding period for

these portfolios is one month; that is, the study employs the 11/1/1 momentum strategy. Moreover, Novy-Marx (2013) sorted the gross profit to assets, which creates abnormal benchmark-adjusted returns, with more profitable firms providing higher returns than less profitable ones. Cooper, Goolen, and Schill (2008) confirmed that companies that grow their total assets more earn lower future returns. Asset growth is calculated as the growth rate of total assets in the previous fiscal year. Fama and French (2006) discovered that more profitable firms earn higher expected returns than less profitable firms. Chen, Novy-Marx, and Zhang (2010) showed that companies with a higher past return on assets possess abnormally higher subsequent returns. Wang and Yu's (2010) profitability premium indicates that mispricing is due to a high arbitrage cost and high information uncertainty. The last anomaly, investment to assets (Wei, Xie, & Titman, 2001; Xing, 2008) shows that higher past investment predicts abnormally low future returns. Titman, Wei, and Xie (2004) blamed this anomaly on investors' initial under reaction to the overinvestment caused by managers' empire-building behavior. It is calculated as the annual change in gross property, plant, and equipment plus the annual change in inventories, scaled by the lagged book value of assets.

2.2 Individual Investor Preference Index

The individual investor preference index, according to the available literature, considers 10 stock characteristics, which are institutional ownership (Kumar & Lee, 2006), small trade fraction (Han & Kumar, 2013), price level (Kumar, 2009), idiosyncratic volatility (Kumar, 2009), market capitalization (Barbet & Odean, 2000; Gao & Lin, 2015; Gompers & Metrick, 2001), profitability (Gao & Lin, 2015), book-to-market ratio (Barber & Odean, 2000), market beta (Barber & Odean, 2000), abnormal trading volume (Barber & Odean, 2008), and dividend payments (Graham & Kumar, 2006). These stock characteristics form a monthly composite index that captures individual investors' focus on the cross-section of stocks.

One way to gauge which characteristics of stocks individual investors prefer is to examine their holdings. Since they do not have account-level information across the stock universe, they can only estimate it on the aggregate level through quarterly institutional ownership data. The higher the institutional own a stock, the lower the individual own a stock. If we assume that individual investors' trading volume is positively related to their holdings, then they anticipate that the negative relationship between stock returns and skewness either should be stronger or should only exist in stocks with lower institutional ownership. Thomson Reuters began to provide information on institutional ownership in 1980; however, they realize the shortcomings of the institutional ownership measure. For instance, small institutions do not have to file form 13F, which we rely on to calculate institutional ownership. Therefore, the institutional ownership measure constructed from 13F underestimates the real level of institutional ownership and thus overestimates individual holding and trading. Unlike the ownership measure, a more direct way of identifying the stocks preferred by individual investors is to examine their trading. A large literature stream has used small trades, which are identified as trades with a dollar volume of no more than USD 5,000, as a proxy for retail trades.

They construct a small trade fraction with a monthly horizon as the ratio of small trade volume to total volume. To account for changes in purchasing power over time, trade size is based on 1991 real dollars and adjusted using the Consumer Price Index. They require a minimum of 50 trades in a month to construct this ratio. A higher small trade fraction for a stock indicates that individual investors trade more in that stock. However, identifying investors through trade size is only effective before early 2000 because of the widespread introduction of decimalization and the growing use of computerized trading algorithms. Meanwhile, the TAQ database is not available before 1993. Therefore, they construct the small trade fraction beginning in 1993 and ending in July 2000 because decimalization was introduced in August 2000.

In addition to institutional ownership and the small trade fraction, they consider a low price level and high idiosyncratic volatility as characteristics preferred by individual investors, as outlined by Kumar (2009). They take the absolute value of the month-end price from CRSP (The Centre for Research in

Security Prices) the price level. Idiosyncratic volatility is constructed as the standard deviation of the residual obtained by fitting the Carhart (1997) and Fama and French (1993) four-factor model to the daily stock returns time series over the previous six months.

Some studies have also shown that individual investors prefer stocks with low market capitalization (Barber & Odean, 2000; Gao & Lin, 2015; Gompers & Metrick, 2001). Additionally, Gao and Lin (2015) argued that individual investors prefer stocks with low profitability, as a proxy by earnings per share. Thus, they also consider low profitability as a stock characteristic preferred by individual investors. To obtain a robust proxy for profitability and to mitigate the concern about data mining for a particular measure, they adopt five profitability measures (earnings per share, return on equity, return on assets, net income over total assets, and gross profit over total assets) and bundle them into a composite profitability rank. Specifically, they rank all the stocks in our sample by each of the five profitability measures. The higher a stock's profitability is the higher its rank. A stock's profitability rank is the arithmetic average of its ranking percentile across each of the five profitability measures.

Moreover, Barber and Odean (2000) argued that individual investors prefer stocks with a high market beta and a high book-to-market ratio. They construct the monthly market beta using daily returns following Dimson (1979) and Scholes and Williams (1977) to take into account nonsynchronous trading. The book value of equity is computed at the quarterly level.

Barber and Odean (2008) showed that individual investors are net buyers of stocks with abnormal trading volumes due to attention grabbing. Since they performed their study on the daily level, they construct a similar abnormal trading volume measure on the monthly level, that is, the maximum daily trading volume in month t divided by the average daily trading volume from month t_{-12} to month t_{-1} .

The final stock characteristic that they consider is dividend payment. Graham and Kumar (2006) showed that, in general, individual investors prefer non-dividend-paying stocks. Thus, at the end of each month, any stock that made a dividend payment in the previous year is classified as a dividend-paying stock.

3. Materials and Methods

3.1 Materials

We use eight companies, excluding Mandiri Bank, BRI, and BCA, which are well-known blue-chip stocks, as shown below:

Table 2. Research Object

No.	Name	Code
1	PT Astra International Tbk	ASII
2	PT Bumi Serpong Damai Tbk	BSDE
3	Jasa Marga (Persero)	JSMR
4	Unilever Indonesia Tbk	UNVR
5	Indofood Sukses Makmur Tbk	INDF
6	Bukit Asam Tbk	PTBA
7	Perusahaan Gas Negara	PGAS
8	Telekomunikasi Indonesia (Persero) Tbk	TLKM

The data used are secondary data. The population is all the stocks in the Indonesian stock market (IDX). The sample consists of blue-chip companies' stock in 2018.

3.2 Methods

This research uses descriptive statistics and associative statistics. Descriptive statistics describe the data through the mean, standard deviation, maximum, minimum, median, skewness, and kurtosis. Meanwhile, associative statistics describes the relationships among the variables.

We present the cross-section for the Newey–West averages of the slope coefficients from the following data yearly

$$R_{i,t+1} = \alpha_{i,t} + \beta_{1,t}ASSETG_{i,t} + \beta_{2,t}NOA_{i,t} + \beta_{3,t}TLTA_{i,t} + \epsilon_{i,t}$$

$$R_{i,t+1} = \alpha_{i,t} + \beta_{1,t}BETA_{i,t} + \beta_{2,t}SIZE_{i,t} + BEME_{3,t} + \epsilon_{i,t}$$

$$R_{i,t+1} = \alpha_{i,t} + \beta_{1,t}ASSETG_{i,t} + \beta_{2,t}NOA_{i,t} + \beta_{3,t}TLTA_{i,t} + \beta_{1,t}BETA_{i,t} + \beta_{2,t}SIZE_{i,t} + BEME_{3,t} + \epsilon_{i,t}$$

where $R_{i,t+1}$ is the realized return on stock i in month $t+1$.

$$R_{t+1} = LN \frac{P_{t+1}}{P_t}$$

BETA: Beta is the market beta. We use the lag and lead of both the market portfolio and the current portfolio when estimating the market beta to take into account nonsynchronous trading, following Dimson (1979) and Scholes and Williams (1977):

$$R_{i,d} - r_{f,d} = \alpha_i + \beta_{1,i}R_{m,d-1} - r_{f,d-1} + \beta_{2,i}R_{m,d} - r_{f,d} + \beta_{3,i}R_{m,d+1} - r_{f,d+1} + \epsilon_i$$

where $R_{i,d}$ is the return of stock i on day d , $R_{m,d}$ is the market return on day d , and $r_{f,d}$ is the risk-free rate on day d . We estimate the beta for each stock using daily returns every month. The market beta of stock i in month t is defined as the sum of the three beta coefficients. The risk-free rate uses the ORI coupon:

$$r_{f,d} = \frac{\text{Coupon ORI}}{245}$$

SIZE: Size is the firm size, measured by the natural logarithm of the market value of equity. The formula is

$$SIZE = LN \text{ MARKET CAPITALIZATION}$$

BEME: The book-to-market ratio is the book value over the market value. The formula is

$$BEME = \frac{\text{PAR VALUE} * \text{SHARES OUTSTANDING}}{\text{CURRENT PRICE} * \text{SHARES OUTSTANDING}}$$

ASSETG: Assetg is the yearly asset growth rate. Following Cooper et al. (2008), asset growth is defined as the growth rate of total assets, that is, DATQ/ATQ .

$$ASSETG = \frac{\Delta \text{TOTAL ASSET}}{\text{TOTAL ASSET}_{t-1}}$$

NOA: The net operating asset is (Operating Assets – Operating Liabilities) / Total Assets-1. The formula is

$$NOA = \frac{(OPERATING ASSETS - OPERATING LIABILITIES)}{TOTAL ASSET_{t-1}}$$

TLTA: The formula for total liabilities to total assets is

$$TLTA = \frac{TOTAL LIABILITIES}{TOTAL ASSET}$$

3. Results and Discussion

Table 3 Return t+1

Firms	Return t+1
ASII	-0.17204
BSDE	0
INDF	0.061808
JSMR	0.189886
PGAS	0.00939
PTBA	-0.49163
TLKM	0.041782
UNVR	-0.07784

Table 3 shows the return from the end of 2018 to 2019. The return for ASII is -0.17204; that for BSDE is 0; that for INDF is 0.061808; that for JSMR is 0.189; that for PGAS is 0.00939; that for PTBA is -0.49163; that for TLKM is 0.041782; and that for UNVR is -0.07784.

Table 4 BETA from Nonsynchronous Trading

Firms	JKSE(-1)	JKSE	JKSE(1)	BETA
ASII	0.045995	1.097054	0.151346	1.294394
BSDE	0.100535	1.2513477	-0.00066	1.351226
INDF	0.107176	1.187819	-0.07773	1.217263
JSMR	-0.05298	1.124241	-0.04298	1.028288
PGAS	0.570625	-0.310588324	1.61695	1.876984
PTBA	0.139909	0.22053978	0.653735	1.014183
TLKM	-0.08684	-0.209736505	1.238316	0.941736
UNVR	-0.08966	1.067197	-0.04007	0.937463

Table 4 presents the parameter market a year ago, now, and one year in the future. Nonsynchronous trading adds the parameter market portfolio a year ago, now, and one year in the future. The betas for ASII, BSDE, INDF, JSMR, PGAS, PTBA, TLKM, and UNVR are 1.29494, 1.351226, 1.217263, 1.028288, 1.876984, 1.014183, 0.941736, and 0.937463.

Table 5. SIZE

Firms	Share Outstanding	Stocks' Prices		SIZE
		December 31, 2018	SO*P	
ASII	40483553140	8225	332977224576500	33.4391
BSDE	19246696192	1255	24154603720960	30.8155
INDF	8780426500	7450	65414177425000	31.81176
JSMR	7257871200	4280	31063688736000	31.06706
PGAS	24241508196	2120	51391997375520	31.5705
PTBA	11520659250	4300	49538834775000	31.53378
TLKM	99062216600	3750	371483312250000	33.54853
UNVR	7630000000	9080	69280400000000	31.86918

Table 5 shows the natural logarithms of market equity for ASII, BSDE, INDF, JSMR, PGAS, PTBA, TLKM, and UNVR. They are 33.4391, 30.8155, 31.81176, 31.06706, 31.5705, 31.53378, 33.54853, and 31.86918.

Table 6 BEME

Firms	Book Value	Market	
		Capitalization	BEME
ASII	1.74363E+14	332977224576500	0.523648
BSDE	3.02869E+13	24154603720960	1.253877
INDF	4.89168E+13	65414177425000	0.747801
JSMR	2.0199E+13	31063688736000	0.650244
PGAS	4.44645E+13	51391997375520	0.865203
PTBA	1.62697E+13	49538834775000	0.328423
TLKM	1.17303E+14	371483312250000	0.315769
UNVR	7.60813E+12	69280400000000	0.109817

Table 6 shows that the book value to market equity for the eight firms, except for BSDE, is lower than 1. That means that the market capitalization of blue-chip companies' stocks is above the book equity.

Table 7 Asset Growth

Firms	Total Assets		Asset Growth
	2017	2018	
ASII	295830	344711	0.165233
BSDE	4.59512E+13	5.21015E+13	0.133844
INDF	88400877	95537796	0.080734
JSMR	79192772790	82418600790	0.040734
PGAS	8183180242	7939273167	-0.02981
PTBA	21987482	24172933	0.099395
TLKM	198484	206196	0.038855
UNVR	18906413	19552970	0.034198

Table 7 shows that the highest-growth asset of blue-chip stocks is ASII, followed by BSDE, PTBA, INDF, JSMR, TLKM, UNVR, and PGAS.

Table 8 NOA

Firms	2017	2018	Cash and Short-Term Investment	Operating Assets	Short-Term Debt	Long-Term Debt	Operating Liabilities	NOA
ASII	295830	344711	25784	318927	25941	40385	104022	0.726447622
BSDE	4,6E+13	5,21015E+13	9,07445E+12	4,3027E+13	5,77065E+11	1,31312E+13	8,1063E+12	0.759952975
INDF	88400877	95537796	12928189	82609607	4499822	7304935	34816239	0.540643596
JSMR	7,92E+10	82418600790	6086778657	76331822133	4067767107	26524168181	31627679703	0.564497755
PGAS	8,18E+09	7939273167	1401420410	6537852757	77088965	777248804	3883044687	0.324422534
PTBA	21987482	24172933	6301163	17871770	84484	233488	7585265	0.467834607
TLKM	198484	206196	18743	187453	10339	33748	44806	0.718682614
UNVR	18906413	19552970	351667	19201303	0	0	11944837	0.383809769

Table 8 indicates that the eight firms, ASII, BSDE, INDF, JSMR, PGAS, PTBA, TLKM, and UNVR, have a business value based on their operating activities of 0.726, 0.759, 0.540, 0.564, 0.324, 0.467, 0.718, and 0.3838.

Table 9 Descriptive Statistics

Statistic	Asset Growth	TLTA	NOA	BEME	SIZE	BETA	Return t+1
Mean	0.070398	0.515179	0.560786	0.599348	31.95693	1.207692	-0.05483
Standard Error	0.022036	0.047486	0.057986	0.128376	0.358117	0.110966	0.072582
Median	0.060734	0.491081	0.552571	0.586946	31.69113	1.122776	0.004695
Standard Deviation	0.062328	0.13431	0.164008	0.363103	1.012908	0.313858	0.205294
Sample Variance	0.003885	0.018039	0.026899	0.131844	1.025983	0.098507	0.042145
Kurtosis	-0.30823	0.183109	-1.52361	0.195439	-0.46302	2.658214	2.912893
Skewness	0.017878	0.550889	-0.13713	0.565641	0.908903	1.551633	-1.48353
Range	0.195039	0.427976	0.43553	1.14406	2.733029	0.939521	0.681518
Minimum	-0.02981	0.326946	0.324423	0.109817	30.8155	0.937463	-0.49163
Maximum	0.165233	0.754922	0.759953	1.253877	33.54853	1.876984	0.189886
Sum	0.563187	4.121431	4.486291	4.794783	255.6554	9.661538	-0.43865
Count	8	8	8	8	8	8	8

Table 9 shows that the asset growth, NOA, and size of the eight companies are above the mean and the others are below it. This means that blue-chip stocks have excellent growth in assets, high operating assets, and high market capitalization. In addition, they have low liabilities (solvable), book value to market value (high return), and beta (low market sensitivity).

Table 10 Correlation

	Asset Growth	TLTA	NOA	BEME	SIZE	BETA	Return t+1
Asset Growth	1						
TLTA	-0.51105	1					
NOA	0.704961	-0.34531	1				
BEME	0.167552	-0.01096	0.286	1			
SIZE	0.163969	-0.23569	0.357157	-0.51373	1		
BETA	-0.2319	0.09672	-0.25612	0.649008	-0.20374	1	
Return t+1	-0.39083	0.672501	0.147701	0.371433	-0.10663	0.139573	1

Table 10 shows that future returns have a low correlation with asset growth, net operating assets, book equity to market equity, size, and beta but a medium correlation with total liabilities to total assets. Future returns are negatively correlated with asset growth and size but positively correlated with total liabilities to total assets, net operating assets, book equity to market equity, and beta.

Table 11 Mispricing of Future Returns

Variable	Coefficient	Std Error	t-Statistic	Prob.
ASSETG	-2.148827	0.554822	-3.873002	0.0179
NOA	1.029940	0.177930	5.788463	0.0044
TLTA	0.952602	0.349209	2.727885	0.0526
C	-0.971894	0.266110	-3.652230	0.0217
R-squared	0.795624	Mean dependent var.		-0.054831
Adjusted R-squared	0.642342	S.D. dependent var.		0.205294
S.E. of regression	0.122775	Akaike info. criterion		-1.050078
Sum squared resid.	0.060295	Schwarz criterion		-1.010357
Log likelihood	8.200311	Hannan–Quinn criter.		-1.317978
F-statistic	5.190592	Durbin–Watson stat.		1.810513
Prob. (F-statistic)	0.072759	Wald F-statistic		11.66872
Prob. (Wald F-statistic)	0.019030			

Table 11 shows that mispricing has no significant effect on future returns. The F-statistic is about 5.19, and the F-table is about 6.04. The result is that there is no significant effect of the three indicators of mispricing on the future returns of blue-chip stocks; either F-table > F-statistic is 6.04 > 5.19 or Prob (F-statistic) is more than 0.05, that is, 0.07275.

Table 12 Investor Preference to Future Returns

Variable	Coefficient	Std Error	t-Statistic	Prob.
BEME	0.330708	0.281672	1.174090	0.3055
BETA	-0.136859	0.088835	-1.540589	0.1983
SIZE	0.030653	0.101610	0.301671	0.7779
C	-1.067327	3.426575	-0.311485	0.7710
R-squared	0.171930	Mean dependent var.		-0.054831
Adjusted R-squared	-0.449122	S.D. dependent var.		0.205294

S.E. of regression	0.247131	Akaike info. criterion	0.349058
Sum squared resid.	0.244295	Schwarz criterion	0.388779
Log likelihood	2.603766	Hannan-Quinn criter.	0.081158
F-statistic	0.276837	Durbin-Watson stat.	2.011726
Prob. (F-statistic)	0.840160	Wald F-statistic	1.648360
Prob. (Wald F-statistic)	0.313252		

Table 12 shows that investor preference has no effect on the future returns of blue-chip stocks. The F-statistic is 0.840160 and the F-table is 6.04. The result is not significant; either F-table > F-statistic is $6.04 > 0.840160$ or Prob (F-statistic) is more than 0.05, that is 0.840160.

Table 13 Mispricing and Investor Preference to Future Returns

Variable	Coefficient	Std Error	t-Statistic	Prob.
BEME	1.285678	0.218391	5.887056	0.1071
BETA	-0.943476	0.173065	-5.451573	0.1155
SIZE	0.259238	0.068989	3.757687	0.1656
ASSETG	-1.349380	0.253030	-5.332883	0.1180
NOA	-1.022269	0.420432	-2.431471	0.2484
TLTA	0.988992	0.269084	3.675408	0.1691
C	-7.811672	2.020394	-3.866411	0.1611
R-squared	0.981545	Mean dependent var.	-0.054831	
Adjusted R-squared	0.870813	S.D. dependent var.	0.205294	
S.E. of regression	0.073788	Akaike info. criterion	-2.704686	
Sum squared resid.	0.005445	Schwarz criterion	-2.635175	
Log likelihood	17.81875	Hannan-Quinn criter.	-3.173512	
F-statistic	8.864154	Durbin-Watson stat.	1.501292	
Prob. (F-statistic)	0.251603	Wald F-statistic	111.0679	
Prob. (Wald F-statistic)	0.072506			

Table 12 shows that mispricing and investor preference simultaneously do not affect future returns; either F-statistic < F-table is $8.864154 < 238.9$ or Prob (F-statistic) is more than 0.05, that is, 0.251603.

4. Conclusion

The conclusion of this research is that there are no significant mispricing index with three indicators of future returns, no significant investor preference index with three indicators of future returns, and no significant investor preference index and mispricing index of future returns. This research illustrates that the future returns of blue-chip stocks are not affected by mispricing and investor preference. There is no divergence between the fundamental and the price's security, and investors do not have a preference as a basic consideration for choosing the types of blue-chip stocks. This research has a limitation because the indicators should consist of 11 anomalies for mispricing and 10 measurements for investor preference. The sample should contain all of the stocks in countries except the financial industry.

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