

H₂: Portfolio value stocks carry higher risk adjusted performance than the portfolio of glamor stocks.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Data and Data Gathering Methods

3.1.1 Research Data

The following are data used in this research study:

- a. The company listed in the periodic year of 2012 until 2016 in Kompas100 and the financial report in the annual report that published in IDX.
- b. **Daily Closing Price:** for calculating the expected return for each stock portfolio. The data taken from Yahoo Finance.
- c. **Price Earnings Ratio (PER):** the ratio for valuing a company that measures its current share price relative to its per-share earnings. The data taken from financial report of the listed company that published in IDX.
- d. **Return on Equity (ROE):** the amount of net income returned as a percentage of shareholder's equity. Return on equity measures a corporation's profitability by revealing how much profit a company

generates with the money shareholders have invested. The data taken from financial report of the listed company that published in IDX.

- e. **Dividend Yield:** a dividend expressed as a percentage of a current share price. The data taken from financial report of the listed company that published in IDX
- f. **Rank period:** Past market performance based on historical data price of companies or in composite index.

3.1.2 Data Collection Methods and Data Sources

a. Library Research

Library research applied in this study by reading some books, website, and journal of finance in order to acquired deeper knowledge about behavioral finance, risk adjustment and return of the glamor stock and value stock. Library research and theoretical background needed to explain hypothesis, helping the research and this discussing the results.

b. Secondary Data Sources

Data of listed company in Kompas100 with the data of Price to Earnings Ratios, Return on Equity, and Dividend Yield from the annual report that published from years 2012 until 2016.

3.2 Population and Sample

The sample of this research were select using a purposive (judgment) sampling technique, it means the samples had to meet some criteria that have been determined (Uma Sekaran, 2000). This research is taking sample from Kompas100. The data are the stock listed in the range of August 2012 until January 2016. Not all the stock listed in KOMPAS100 are included in this research. The researcher use the stock that consistently in KOMPAS100 from year 2012 until 2016. The stock selection to be included in this research are the one that have the characteristic to be included as the Glamor and Value stock category. The data of PER, ROE, and DY taken from annual report that published in IDX of each company listed from year 2012 until 2016.

3.3 Method of Analysis

- a. Researcher collecting data from **Kompas100**. The data are the stock listed in the range of August 2012 until January 2016. The data of PER, ROE, and DY are taken from annual report that published in IDX of each company listed from year 2012 until 2016. The daily closing price are taken from Yahoo Finance.

- b. Data Analysis Method

Methods of data analysis used in this research is to use quantitative analysis.

Analysis was conducted on the portfolio is formed by a combination of

variables PER and ROE and then DY and ROE of stocks listed on KOMPAS100 were sorted into value and glamor stocks.

Stock Return Portfolio

Establishment of efficient portfolio required some assumptions about the behavior of investors in making investment decisions. Reasonable assumptions are investors tend to avoid risk (risk-averse). Risk-averse investors are those who when faced with two investments with the same expected return and risk, then he will choose investments with lower risk levels. (Fabozzi, 2003).

Portfolio return can be calculated by using the formula:

$$E(R_p) = \sum (R_i) X_i \text{ or,}$$

$$E(R_p) = W_A.R_A + W_B.R_B + \dots + W_n.R_n$$

$$(\text{Where: } W_A + W_B + \dots + W_n = 1)$$

Notes:

$E(R_p)$ = The rate of profit / expected return of a portfolio

$E(R_i)$ = Expectations return of securities i

R_i = One outcome of securities i

X_i = The proportion of funds / assets invested in stocks i

Sharpe Risk Evaluation

This measurement method is based on risk premium. Risk premium is the difference between the average performance of the stock portfolio produced with an average risk-free investment performance. Formulations of this method is to divide the risk premium with a standard deviation (Tandelin, 2001).

$$sp = \frac{Rp - Rf}{\sigma}$$

Where,

Sp = Sharpe Ratio

Rp = Stock Return Portfolio

RF = Risk-free return

σ = Standard Deviation (total risk)

3.4 Hypothesis Testing

Analysis of variance (ANOVA) is a method of analysis to compare the average population is not diverse population. The data type is right for ANOVA is data on a nominal or ordinal independent variables and the dependent variable ratio data. This study uses ANOVA to analyze the return value stock portfolio (glamor) PER and ROE based strategy and DY & ROE and evaluate the performance of each portfolio using the Sharpe ratio.

3.4.1 Normal Distribution

As conditions in the ANOVA test, the data will be examined to be normally distributed beforehand. Normality test aims to test whether the data has been tested normally distributed or not so that the data can be used on a parametric analysis (Ghozali, 2013).

3.4.2 Test of Homogeneity Variance

Before the ANOVA test, each group must come from the same population and variance. Test of homogeneity Variance aims to test applies whether or not the assumptions for ANOVA, namely whether these portfolios have the same variant or not. If the significance of Levene's test of homogeneity of variance showed more than 0.05, then H_0 otherwise accepted so that these portfolios have the same variance.

3.4.3 ANOVA test

Once the terms of the ANOVA assumptions are met, then the data is worth to be tested by using ANOVA. ANOVA testing was conducted to investigate the difference between the return value stock portfolio (glamor) based from the strategy of

PER & ROE and DY & ROE. In addition, the ANOVA test was also performed to compare the performance of each portfolio is determined by using the Sharpe ratio.

Based on the testing, the researcher can compile the hypothesis testing for this research. In this research, the researcher uses two hypotheses testing:

H_1 = Portfolio value stocks provide higher return than the portfolio glamor stocks.

Where,

H_{01} = Portfolio value stocks provide higher return than the portfolio glamor stocks.

H_{a1} = Portfolio value stocks provide lower return than the portfolio glamor stocks.

H_2 = Portfolio value stocks carry higher risk adjusted performance than the portfolio of glamor stocks.

Where,

H_{02} = Portfolio value stocks carry higher risk adjusted performance than the portfolio of glamor stocks.

H_{a2} = Portfolio glamor stocks carry higher risk adjusted performance than the portfolio of value stocks.

Basis for decision-making (Ghozali, 2005) is to use a figure of significance probability, which is:

- a. When the significant probability > 0.05 , then H_0 accepted and H_a rejected.
- b. When the significant probability < 0.05 , then H_0 rejected and H_a accepted