The Effect of Net Income, Equity, Cash Dividend, Average Price and Volume to Corporate Market Capitalization

Stocks in LQ45 Index of Indonesia Stock Exchange Period 2008 – 2018

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ABSTRACT

One of three aspects that influences the success of stock investment, uses to understand the various data and information available in the financial market for investor’s decisions. There is two analysis, fundamental and technical. The fundamental analysis applies Net Income, Equity, and Cash Dividend, while technical analysis applies Average Prices and Volume. All of these variables will be examined their effect on the Corporate Market Capitalization. Samples are stocks that have been or currently in the LQ45 index for the period 2008 - 2018. This research utilized path analysis for the analytical method, on the SPSS program. All variables need to be transformed to get through the normality test. It transformed again with the Cochrane Orcutt method because of autocorrelation. The method applied outlier data tests, multicollinearity, the Sobel test without heteroscedasticity. The results show that Net Income and Equity simultaneously or individually, have a positive and significant effect on Cash Dividend, which is a mediating variable to the Corporate Market Capitalization. Furthermore, Net Income, Equity, Cash Dividend, Average Price, and Volume simultaneously or individually, have a positive and significant effect on the Corporate Market Capitalization.

Keywords: net income, equity, cash dividend, average price, corporate market capitalization

INTRODUCTION

Investment uses for preparing short, medium- and long-term financial planning. Investment is a commitment of funds made at this time within a certain period, to obtain compensation payments in the future: (1) the time the funds are allocated, (2) the expected level of inflation during that period, and (3) uncertainty payment in the future (Reilly & Brown, 2012). Determining investment choices also needs some consideration, usually prioritizing investments that provide maximum returns. Based on comparative data of investment returns for 1 USD from 1926 to 2000, the greatest return on investment been obtained from stock investments. Therefore, stock investment be a very attractive choice for people who want to invest (Faerber, 2008).

Stocks are a very risky investment. Referring to the Indonesia Stock Exchange (IDX) website, there is profit like dividends and capital gains, also loss like capital loss and liquidation risk, at stocks investing. Knowing the potential gains and losses, it needs to study and understand the influence factors of the corporate market capitalization movement. So, investors can maximize all the benefits potential and minimize losses potential. The existence of potential losses in investing can be a gap between the investment objectives and the reality obtained, so it becomes a problem for investors. For this reason, we need further studies on
One of the grand theory that is widely followed by investors, known as "Graham's main investing principle and winning philosophy'. Benjamin Graham (1894 - 1976) conveyed this on his books, Security Analysis (1934) and The Intelligent Investor (1949) (Bierig, 2000). Complementing on these principles and philosophies, Alexander Elder gives similar views related to the main aspects that influence success investment. In general, three main aspects affect the success of investing, namely: methods or analysis, mind or psychology, and money or risk management (Elder, 2002).

Analysis is useful for simplification the various data and information available at the financial market for investors decisions. Therefore, this research will focus on examining the variables of fundamental and technical analysis to corporate market capitalization. Principles related to money and portfolio management, also trading psychology are not discussed in this research. Net Income, Equity, and Cash Dividend will be variables related to fundamental analysis, while Average Prices and Volume become technical analysis variables. The conceptual framework, examining the effect of Net Income and Equity to Corporate Market Capitalization, which is mediated by Cash Dividends. Then, examining all of the variables, Net Income (PBER), Equity (EQUI), Cash Dividend (DIVID), Average Price (HARR), and Volume (VOLM) to Corporate Market Capitalization (KAPPR).

The originality of this research are: first, the selection of the corporate market capitalization as the dependent variable, because other studies usually use stock prices. The consideration because of the research period. With eleven years period, there are very limited samples if it uses the stock price without split or reverse stocks action. Companies usually do a stock split or reverse policy to maintain the liquidity and volatility of their stock price. Second, the sample selection. It also considers the representation of nine sectoral indexes. It supposes to this research results are not dominated by some sectors.

The samples are stocks that have been or currently in the LQ45 index for 2008 - 2018 period. The LQ45 index is an IDX index containing stocks that have high liquidity, large capitalization, and good fundamentals. For other limitations, it choose companies that always make a profit, actively distribute dividends at least eight times (8x) in the research period. The data are quantitative and secondary, get from financial statements and annual reports from the IDX website, Mirae Asset Securities application, Yahoo Finance, Investing, and corporate official website.

The analytical method utilizes path analysis on the IBM SPSS Statistics 24 program. From the normality test, all of the variables transformed into Ln formulation. Then because of autocorrelation, it needs to be transformed again using the Cochrane Orcutt method. The method equipped with an outlier data test, multicollinearity without a heteroscedasticity test. The Sobel test for Net Income and Equity to Cash Dividend as mediation variables. The final stage is path analysis for total effect, direct and indirect of Net Income, Equity, Cash Dividend, Average Price, and Volume to Corporate Market Capitalization.

The results describe that Net Income and Equity simultaneously or individually, have a positive and significant effect on Cash Dividends. Corporate dividend policy usually is determined by the profits and the internal capital conditions of companies. Cash Dividends mediates the relationship between Net Income and Equity to Corporate Market Capitalization. Companies tend to actively distribute dividends and providing capital gains for their investors if they generate profit and have stable equity. Net Income, Equity, Cash Dividends, Average Prices, and Volume simultaneously or individually have a positive and significant effect on Corporate Market Capitalization. The increase of Net Income, Equities, Cash Dividends, and Average Prices improve the quality of stocks that have an impact on investor confidence and interest. This will increase Volume that indicates the increasing demand for the stock, thereby increasing the Corporate Market Capitalization.


LITERATURE REVIEW

One of the grand theory that is widely followed by investors, known as "Graham's main investing principle and winning philosophy'. Benjamin Graham (1894 - 1976) conveyed this on his books, Security Analysis (1934) and The Intelligent Investor (1949). In December of 1994, Buffett and other former students of Graham participated in a conference called "A Tribute to Ben Graham'. Buffett remarked that three basic ideas are important for an intellectual framework in the stock market. These three basic ideas are: (1) the investor should look at stocks as part ownership of a business; (2) the investor should look at market fluctuations in terms of Graham’s Mr. Market example by essentially profiting from folly rather than participating in it; and (3) the most three important words in investing are “margin of safety' (Bierig, 2000). Complementing on these principles and philosophies, Alexander Elder gives similar views related to the main aspects that influence success investment. In general, three main aspects affect the success of investing, namely: methods or analysis, mind or psychology, and money or risk management (Elder, 2002).

Analysis is useful for simplification the various data and information available at the financial market for investors decisions. There are two analysis methods, fundamental and technical. Fundamental Analysis is knowledge of the rules and fixed steps access to its objectives of determining the intrinsic value of shares in stock markets, through a general framework to study the expected economic forecasts, leading to sectors which generate an increase in sales and profits, therefore measure strength financial companies, efficiency of management and business opportunities based on historical financial statements and current conditions. Thus determine the stock fair value, and then compare them to market values resulting from interactions of supply and demand, to identify investment opportunities (profit or loss) (Wafi et al., 2015). Technical Analysis, even if deliberated as pure conjecture, it's still acknowledged as additional information by brokerage companies. Technical analysis becomes important from its benefit for investors, to take investment decisions based on historical trends of stock price and volume (Masry, 2017). This analysis will examine their effect on Corporate Market Capitalization, hereafter referred to as KAPPR.

Market Capitalisation represents the market value of a firm on the stock market as obtained by the current share price multiplied with the total number of shares in circulation. The market capitalization may be used as a key determinant of firm price while in the case of a takeover or merger (Edmans, Goldstein and Jiang, 2012: Majanga, 2017). KAPPR means the corporate market value, is the share price multiplied by the number of shares outstanding (Krantz, 2010). There are two share prices in the stock market, namely the closing price and the adjusted closing price. For KAPPR, the share price refers to the closing price. KAPPR is the market value of the company, often referred to as market cap. KAPPR changes over time, although the definition includes market values for each category, the classification of market value changes time by time. From the difference of KAPPR so that it classified as big-cap shares, medium-cap, and small-cap (Faerber, 2008). Previous researches related to stock investment, usually apply stock prices or stock returns as a dependent variable.

Cash Dividend (DIVID)

Dividends are a portion of a company's profit distribution that paid to shareholders, which is submitted and managed by the company's board of directors. Dividends must be approved by shareholders through their voting rights when a General Meeting of Shareholders (GMS) is held. Announcement of dividend payments, generally accompanied by a proportional increase or decrease in the company's stock price. Dividends are usually cash dividends, hereafter referred to as DIVID (James Chen, Investopedia : 2020). DIVID is a common way of returning capital to shareholders in the form of cash payments. Usually it paid regularly, as if monthly or yearly or semi-annually. Announced cash dividends will become
liabilities or debts for the company. It is usually a current liability because its payment required immediately (Caroline Banton, Investopedia: 2020). Determining the amount of dividends is a difficult financial management decision. Companies that pay dividends on an ongoing basis are very reluctant to reduce or eliminate their dividends. They fear that the stock market will see this action negatively. As a result, companies that have paid cash dividends will make every effort to continue it (Kieso et al., 2014).

Previous research related to dividend policy, the "dividend information hypothesis" explain the strong relationship between stock returns and dividend yields. As mentioned in the literature, cash dividend announcements are used as signaling tools by managers to convey information to investors and generally to market participants about changes in their expectations of the firm prospect. The stock prices may be changed temporarily as a response to dividends change because the market may believe it indicates something about the probable future course of earnings. If it clear that the change was not affected by changes in future earnings, this temporary effect will be lost. The database used in this study consisted of a time series of monthly market indices. The UK real stock price index is the FT Actuary Investment Index weighted value: End-of-month figures for the period of January 1955 to December 1996. The dividend series is the corresponding dividends for the same period (Tsoukalas & Sil, 1999). Dividend policy, as if Dividend Per Share has a positive and statistically significant relationship to shares price listed in the Nairobi Securities Exchange for the period 2010-2014. It recommends for companies, come up with an optimal dividend policy as dividends affect the shares price. This research applies the ordinary least square method (Murira et al., 2017).

As the opposite of the above result and theory, there is Irrelevancy Theory. It was conveyed by Modigliani and Miller (1958), they prove that under certain assumptions, a firm’s total value does not depend on the mixture of debt and equity, demonstrating capital structure irrelevancy. Modigliani and Miller suggested that in a perfect world with no taxes or bankruptcy cost, the dividend policy is irrelevant. They proposed that the dividend policy of a company does not affect the stock price of a company or the company’s capital structure. Cash paid as dividends, leaves the firm with less equity and potentially a greater need to raise additional stock or debt in the future (Ang & Ciccone, 2011).

H1: The more increase the variable Cash Dividend (DIVID), the higher the variable Corporate Market Capitalization (KAPPR)

Net Income (PBER)

Net Income is an amount after revenue reduced by cost of goods sold, selling expenses, general administrative expenses, interest expenses, taxes, and other expenses directly incurred to generate income (Ross et al., 2015). Variables that are typically similar to Net Income apply on research, as if Earning Per Share (EPS), Net Profit Margin (NPM), Net Interest Margin (NIM), etc.

Previous researches that apply variable profitability related to dividends. The study examines the determinants of dividend payout ratio for Indian companies during the period 1994–1995 to 2012–2013. From the trend analysis, it found that the larger and profitable firms have a high dividend payout ratio, a significant positive relationship between profitability, which has been proxied by return on assets (Labhane & Mahakud, 2016). The analyses use data derived from the financial statements of firms listed on the Ghana Stock Exchange for the period 1998-2003 also applying the Ordinary Least Squares model. The results show positive relationships between dividend payout ratios and profitability, cash flow, and tax. Profitability has been proxied with earnings before interest and taxes/total assets. The results suggest that profitable firms tend to pay a high dividend (Amidu & Abor, 2006). The results show that three fundamentals - i.e. profitability, investment opportunities, and size - are the main factors
that determine the decision in dividend payment. Dividend-paying companies tend to be large and profitable with earnings on the order of investment outlays. Companies that never pay dividends are smaller and less profitable than dividend-paying companies, but they have more investment opportunities. Their investment outlays larger than their earnings (Fama & French, 2001).

H2: The higher the variable Net Income (PBER) , the better the variable Cash Dividend (DIVID)

Related to profitability on Corporate Market Capitalization, research on the financial performance of PT. Bank Rakyat Indonesia (Persero), Tbk. The study used the period 2004-2013 onto quarters, so 40 observations were analyzed using multiple regression models. The results of a partial analysis show that profitability as if a Net Interest Margin (NIM) variable has a positive and significant effect on stock returns (Zainuddin et al., 2014). To provide relevant information, financial statement variables have examined to shares price in prior research in Amman Stock Exchange and industrial sectors period 2000-2009. The results show that the probability value of the t-test for net income was significant but insignificant for book value and cash flows in both sectors. It means net income has a significant contribution in explaining the variance of share price (Shamki & Rahman, 2010). The empirical analysis of the daily stock returns for 300 days before and after the official shareholder meetings of the firms listed in the Helsinki Stock Exchange period 1977-1986. The results indicated that the market has typically reacted in the direction indicating by the sign of unexpected net income number. The drift upwards and downwards between the portfolios created based on positive and negative unexpected net incomes, was found about 170 days before the shareholders' meeting. This means that the financial statement information begins to be reflected in the market approximately in the middle of the financial statement year (Martikainen et al., 1993).

H3: The more increase the variable Net Income (PBER), the higher the variable Corporate Market Capitalization (KAPPR)

Equity (EQUI)

Equity is a right that is owned by shareholders if the company is sold and has made an obligation to pay debts, which is the difference between total assets and total debt (Ross et al., 2015). Equity represents the value of an investor's stock in a security or company. Owning shares in a company from time to time can produce capital gains and dividends for shareholders (Chris B. Murphy, Investopedia : 2019).

Previous researches that apply variable equity related to dividends. Firms with relatively high amounts of earned equity (retained earnings) are especially likely to pay dividends. Consistent with this view, the fraction of publicly traded industrial firms that pay dividends is high when the ratio of earned equity to total equity (total assets) is high, and falls with declines in this ratio, becoming near zero when a firm has little or no earned equity. The results observe a highly significant relationship between the decision to pay dividends and the ratio of earned equity to total equity or total assets, controlling for firm size, profitability, growth, leverage, cash balances, and dividend history. The samples consider only NYSE, NASDAQ, and AMEX firms that have securities with CRSP share code 10 or 11 and that are incorporated in the U.S. according to Compustat for the period 1973-2002. The method applies a broad variety of multivariate logit specifications (DeAngelo et al., 2004). Dividend-paying companies tend to be large and profitable with earnings on the order of investment outlays. Large companies have been determined with the total assets if the debt is constant then bigger the total asset so that bigger the total equity (Fama & French, 2001). Earnings, firm size, and investment have a positive significant effect, while debt and large shareholders have a negative
significant effect on dividend policy. The study examined 147 listed companies in the main market of Bursa Malaysia for the period 2006-2010. The methods applied fixed and random effects, pooled least squares model, robust standard errors on fixed-effects and random-effects models (Yusof & Ismail, 2016).

\[ H_4 : \text{The higher the variable Equity (EQUI), the better the variable Cash Dividend (DIVID)} \]

Previous researches that apply variable equity related to corporate market capitalization. Equity - as variable Book Value Per Share (BVS) - and dividend distribution have a significant effect on the stock price but net income and earnings per share have no significant effect. The study examined all of the Jordanian banks listed on the Amman Stock Exchange for the period 2010-2015. The methods use the Panel Data and the time series data, been completed with Hussmann Test (Al-Oshaibat & Al-Manaseer, 2018). There is strong evidence that share prices are influenced by the company’s earning and Earnings Per Share (EPS) rather than other variables. Book value and net operating cash flow have significant influences on share price too. The data were collected from the companies listed in the KSE-30 index of the Pakistan Stock Exchange for the period 2006-2013 and were applied OLS regression models to examine the relationships (Asif et al., 2016). The explanatory power of earnings and book value in the formulation of prices increases over time. In the last years, earnings have less diminishing role in the interpretation of stock prices than the book value. This research examined 38 companies listed in the Athens Stock Exchange for the period 1996-2008 also applied methodology focusing on the coefficients of determination of the regressions test (Glezakos et al., 2012).

\[ H_5 : \text{The more increase the variable Equity (EQUI), the higher the variable Corporate Market Capitalization (KAPPR)} \]

Average Price (HARR)

Average Price refers to Moving Average, a technical indicator that is used by technical investors for predicting the current and future possibility of the stock prices (Coulling, 2013). Average Price is the most common technical indicator that is applied by investors because it is easy to use and analyze to detect price movement trends. The average price was related to the adjusted closing price (Murphy, 1999).

Previous studies that applied average prices were related to the corporate market capitalization or stock prices. Moving averages are used in the financial market to smooth a series of stock prices and estimate a trend direction. Compliance criteria are defined by smoothness and accuracy. This study proposes using Custom Moving Average (CMA). This new method outperforms other methods in 99.5% of cases in synthetics and 91% in real-world data. Data points use the NASDAQ and NYSE exchanges for the period 13-08-1993 to 24-07-2013. Traders can use this new method to detect trends early and increase the profitability of their strategies (Raudys & Pabarškaitė, 2018). Technical analysis is used to visualize information. Applying trading rules in this context, gives the strongest interpretation that it were examples of information trading. Compared to the price crossovers rules, trading rules have a better ability to extract meaning or to understand information at the same price. Two new moving average trading rules are proposed and designed to capture trading practices. Trading rules are related to moving average trading through buy/sell signal generating mechanisms and changing the way the price crossover rule responds to buy/sell signals. The data consists of 45 years of daily closing and bid-ask prices for shares listed on the London Stock Exchange for the period 01-January-1965 to 30-June-2009 (Toms, 2011).

The effectiveness of the trading model can imply a strong correlation to the stock returns that allows predictions in future stock returns. The results in this study indicate a substantial return by pursuing buy and sell signals from trading rules in Emerging Asian
Markets even with the presence of large returns volatility and a general decline in market levels. The presence of a positive return in a bearish market is extraordinary because it is relatively more difficult to succeed in such an environment. On the other hand, using trading rules like this in developed markets does not produce significant profits. The method using five different Variable Moving Average (VAMA) trading models with bootstrapped simulation are compared to a simple buy and hold strategy. Data from Global Financial Data provides the daily local index closing levels for Taiwan (Taipei Weighted Price Index), Thailand (Bangkok S.E.T.) and the Philippines (Manila Composite Index) over the period February 1994 through March 1999. The inclusion of indices from the United States (S&P 500) and Japan (Nikkei 225) are for the purpose of comparison (Ahmed et al., 2000).

\[ H_6 : \text{The more increase the variable Average Price (HARR), the higher the variable Corporate Market Capitalization (KAPPR)} \]

**Volume (VOLM)**

Volume is data of buying and selling transactions that occur in a stock market. Volume is usually associated with the intensity and interest of investors to trade certain stocks. Also, volume can confirm stock price movements or price trends, as well as a liquidity parameter of a stock (Murphy, 1999). Price is the main indicator, but if not completed with volume data, it only provides an interpretation of the past data. Prices indeed summarize market sentiment at a particular time, but it needs volume because volume reveals the truth behind the market sentiment and supply-demand flow (Coulling, 2013).

Previous studies that applied volume were related to the stock prices or corporate market capitalization. The information on stock market trading volume helps forecast the stock price volatility. Furthermore, the stock returns and the price-volume relationship were affected by the exchange market volume information, which is achieved indirectly through the net capital into the stock market. This study was used method by comparing the relative advantages and disadvantages of the two main non-parametric methods mainstream, and taking the characteristics of the time series of the volume into consideration, the stochastic volatility with Volume (SV-VOL) model based on the APF-LW simulation. Samples from Shanghai and Shenzhen 300 Index (SS300) for the period 21-08-2015 to 8-12-2017 on daily stock market trading volume data (Chen et al., 2018).

Volume tends (on average) to be positively related to volatility. This observation stronger in the second period, although the inclusion of total volume traded does alter the persistence of GARCH effects during both periods. The paper examines the interaction of volatility and volume in 79 traded companies in Cairo and Alexandria Stock Exchange (CASE) over a period from January 1998 to May 2005 and provides support for the TGARCH specification for explaining the daily time dependence on the rate of information arrival to the market (Girard & Omran, 2009). The number of trades drives volatility-volume relations better than the size of trades in the Chinese stock market. This paper examines the roles of the trades numbers, trades size, and share volume for explaining the volatility-volume relation in the Shanghai Stock Exchange with high-frequency trade data used. The data ranks into different trade size categories and uses 566 listed stocks for the period from February 2001 to June 2002 (Song et al., 2005).

\[ H_7 : \text{The more increase the variable Volume (VOLM), the higher the variable Corporate Market Capitalization (KAPPR)} \]

**Conceptual Model**

The first thing in this research is to examine PBER, EQUI, and DIVID variables on KAPPR. In this case, the DIVID usually determines based on the performance and working
capital conditions of the company, used as a mediating variable, while PBER and EQUI become independent variables. For determining the mediating effect, will be conducted a path analysis and a Sobel test. Next is testing the HARR and VOLM together with PBER, EQUI, and DIVID variables on KAPPR to determine the direct, indirect, and total effect.

![Figure 1: The Conceptual Framework](image)

**RESEARCH METHOD**

**Location and Research Design**

This research takes place in Makassar, Indonesia from September 2019 to May 2020. As stated before, the investing challenge in the Indonesia stock market and world stock market in general, is the big risk potential that will affect capital loss. The worst case is a bankruptcy that affects share delisting. For this reason, investors must have the ability to analyze the stock market so they can choose potential stocks that will have price growth or Corporate Market Capitalization (KAPPR) growth. In this case, the analysis uses variables as if PBER, EQUI, DIVID, HARR, and VOLM to KAPPR. For examining the relationship between these variables, it applies the linear regression test, also path analysis because of the mediation variables.

**Table-1. Code and data of variables**

| Variabel                  | Code | Unit      | Time       |
|---------------------------|------|-----------|------------|
| Net Income PBER           | X1   | Rupiah    | Fiscal Year|
| Equity EQUI               | X2   | Rupiah    | Fiscal Year|
| Average Price HARR        | X3   | Rupiah    | Fiscal Year|
| Volume VOLM               | X4   | Each      | Fiscal Year|
| Cash Dividend DIVID       | M1   | Rupiah    | Cum Date Year|
| Corporate Market Capitalization KAPPR | Y1 | Rupiah    | Fiscal Year|

*Source: Various, 2019*

**Population or Samples**

The research sample was determined by the purposive sampling technique. It used stocks that ever or currently members of the LQ45 index for the period 2008 to 2018, have positive annual net income, and actively provided dividends for investors. This sampling method got 23 shares of samples. But the representation of 9 sectoral indexes is insufficient so that the category was adjusted become companies that distribute dividends at least 8 times in the study period. With this adjustment, it obtained 36 shares of samples.

**Table-2. Shares samples**

| No | Code | Company Name         | Sectoral | No | Code | Company Name         |
|----|------|----------------------|----------|----|------|----------------------|
| 1  | AALI | Astra Agro Lestari   | Agri     | 19 | JSMR | Jasa Marga           |
Data Collection Method

The data are quantitative and secondary that was obtained from the official website of the IDX (www.idx.co.id), Yahoo Finance (www.finance.yahoo.com), Investing (www.investing.com), Home Online Trading System application (HOTS) belongs to Mirae Asset Securitas (MAS), and the official website of each sample company.

Data Analysis Method

For statistical analysis, this study using the IBM SPSS Statistics 24 program, assuming the Multivariate Normality which means that each variable and all linear combinations of the variables are normally distributed (Ghozali, 2018). The stages of the test follow the classical assumption test method, consisting of normality test, data transformation, outlier data test, autocorrelation test, multicollinearity test, linearity test without heteroscedasticity test because the data used are time series. The next step is the path analysis completed with the Sobel test. Following the conceptual framework, KAPPR becomes a dependent variable, DIVID becomes a mediating variable, while PBER and EQUI become independent variables. To find out the direct, indirect and total effects on the conceptual frameworks, KAPPR becomes the dependent variable, DIVID becomes the mediating variable, while PBER, EQUI, HARR, and VOLM become the independent variables. This test uses Macro Syntax in the SPSS program for mediation testing with multicategory independent variables (Hayes & Preacher, 2014). The equations are as follows:

\[ M_1 = \alpha_0 + \rho_1 X_1 + \rho_2 X_2 + \varepsilon_2 \]  
\[ \text{(1)} \]
\[ \text{DIVID} = \alpha_0 + \rho_1 \text{PBER} + \rho_2 \text{EQUI} + \varepsilon_2 \]  
\[ \text{(2)} \]
\[ Y_1 = \alpha_1 + \beta_1 X_1 + \beta_2 M_1 + \beta_3 X_2 + \beta_4 X_3 + \beta_5 X_4 + \varepsilon_1 \]  
\[ \text{(3)} \]
\[ \text{KAPPR} = \alpha_1 + \beta_1 \text{PBER} + \beta_2 \text{DIVID} + \beta_3 \text{EQUI} + \beta_4 \text{HARR} + \beta_5 \text{VOL} + \varepsilon_1 \]  
\[ \text{(4)} \]

\( M_1 \) denotes mediating variable; \( \varepsilon_2 \) is the random error component; \( \alpha_0 \) is a constant parameter; the parameter of \( \rho_1, \rho_2 \) are the regression coefficient associated with \( X_1, X_2 \) as independent variables. With the same pattern, \( Y_1 \) denotes dependent variable; \( \varepsilon_1 \) is the random error component; \( \alpha_0 \) is a constant parameter; etc.
EMPIRICAL RESULTS

Descriptive Statistics

Statistics of research data are shown by the following Table-3.

Table-3. Statistic of research data

|       | PBER  | EQUI  | DIVID  | HARR  | VOLM  | KAPPR  |
|-------|-------|-------|--------|-------|-------|--------|
| N     | 382   | 382   | 382    | 382   | 382   | 382    |
| Mean  | 4.42E+12 | 2.27E+13 | 2.66E+12 | 5707.8 | 5.51E+09 | 7.62E+13 |
| Std. Error of Mean | 3.03E+11 | 1.65E+12 | 6.99E+11 | 484.0 | 4.06E+08 | 5.52E+12 |
| Median | 2.01E+12 | 9.39E+12 | 8.05E+11 | 2238.2 | 2.87E+09 | 3.50E+13 |
| Std. Deviation | 5.93E+12 | 3.22E+13 | 1.37E+13 | 9458.9 | 7.94E+09 | 1.08E+14 |
| Minimum | 9.04E+09 | 4.62E+10 | 1.36E+09 | 3.7 | 9.04E+06 | 2.17E+11 |
| Maximum | 3.24E+13 | 1.83E+14 | 2.59E+14 | 70824.9 | 4.69E+10 | 6.36E+14 |

Source : SPSS, April 2020

Prerequisite evaluations for linear regression test consisting of: normality test, outlier data test, linearity test, multicollinearity test, and autocorrelation test. From the normality graph test, research data produce substantial positive skewness graphs so that these data need transformation using Ln formulations. For example, Figure 2 shows the graphic changes that occur after transformation.

![Figure 2. Transformation data from normality test](image)

The next data test uses a linear regression plot with Ln_KAPPR as the dependent variable while Ln_PBER, Ln_EQUI, Ln_DIVID, Ln_HARR, and Ln_VOLM as independent variables. Outlier data test uses the Case Diagnostics, Studentized Residual (SRE_1) method with ABS > 3, and Mahalanobis Probability > 0.001. From these methods obtained 7 outlier data so that the research data, n = 375. The next test is the linearity test and multicollinearity test with tolerance, \( \alpha = 0.05 \). Table-4 shows the test result.
Table-4. The Result of linearity and multikolinearity test

| Model  | Unstandardized Coefficients | Standardized Coefficients | t | Sig. | Collinearity Statistics |
|--------|-----------------------------|---------------------------|---|------|-------------------------|
|        | B                           | Std. Error                | Beta |     | Tolerance | VIF |
| 1      | (Constant)                  | 2.364 | .576 | 4.102 | .000 | .106 | 9.412 |
|       | Ln_PBER                     | .671 | .049 | .621 | 13.841 | .000 | .106 | 9.412 |
|       | Ln_EQUI                     | .044 | .042 | .037 | 1.060 | .290 | .106 | 5.540 |
|       | Ln_DIVID                    | .198 | .031 | .210 | 6.477 | .000 | .106 | 4.923 |
|       | Ln_DIVID                    | .176 | .026 | .156 | 6.815 | .000 | .106 | 2.436 |
|       | Ln_VOLM                     | .074 | .021 | .065 | 3.432 | .001 | .106 | 1.699 |

a. Dependent Variable: Ln_KAPPR

Source : SPSS, April 2020

Table-4 shows that the results of the linearity test for the coefficients of all variables are positive. Moreover, only Ln_EQUI generates a significance value = 0.29 greater than tolerance 0.05. Multicollinearity test generates tolerance values > 0.1 and VIF < 10 for all variables, so there is no indication of multicollinearity. Next is the autocorrelation test because this study uses time-series data. With the amount of data, \( n = 375 \), then the type of testing used is the Lagrange Multiplier Test (LM Test). The LM test will produce a Breusch-Godfrey statistic, which is tested by regressing its confounding or residual variables (Ghozali, 2018).

Residual data will be made for the LM test, namely RES_1 and RES_2. After that, a linear regression test is carried out with the equation:

\[
RES_1 = b_0 + b_1 \text{Ln}_\text{PBER} + b_2 \text{Ln}_\text{EQUI} + b_3 \text{Ln}_\text{DIVID} + b_4 \text{Ln}_\text{HARR} + b_5 \text{Ln}_\text{VOLM} + b_6 \text{RES}_2
\]

From the regression test show that the significance or probability value of \( \text{RES}_2 = 0.000 \) lower than tolerance 0.05, so there is autocorrelation. It means this data need autocorrelation treatment and needs Durbin Watson data which can be obtained by linear regression test, then \( \rho (\rho) \) is calculated with the Durbin Watson or Theil Nagar equation. After that the data transformation is continued by the Cochrane Orcutt method.

\[
\text{Ln}_\text{KAPPR}\# = \text{Ln}_\text{KAPPR} - \rho \text{Lag(Ln}_\text{KAPPR)}
\]

After all variables been transformed by equation (6), it is necessary to LM test again with regression test using \( \text{Ln}_\text{PBER}\#, \text{Ln}_\text{EQUI}\#, \text{Ln}_\text{DIVID}\#, \text{Ln}_\text{HARR}\#, \text{Ln}_\text{VOLM}\# \) as independent variables, while \( \text{Ln}_\text{KAPPR}\# \) as the dependent variable. Then make residual data (RES_3) and (RES_4) refer to equation (5). The data shows that the significance probability \( \text{RES}_4 \) is 0.528 greater than tolerance. So there is no autocorrelation anymore. From this classic assumption test, variable data transformation occurs, for example: from PBER to \( \text{Ln}_\text{PBER} \) then \( \text{Ln}_\text{PBER}\#. \) Path analysis will use the latest information.

Path Analysis

This research applies path analysis. To find out the mediating effect of DIVID as a mediation variable with PBER and EQUI as independent variables to KAPPR as the dependent variable, the Sobel test was conducted. Equations used:
\[ s_{ab} = \sqrt{b^2s_a^2 + a^2s_b^2 + s_a^2s_b^2} \quad \ldots \ldots (7) \]
\[ t = \frac{ab}{s_{ab}} \quad \ldots \ldots (8) \]
\[ \varepsilon = \sqrt{1 - R^2} \quad (9) \]

Initially, a regression test was performed between Ln_PBER# and Ln_EQUI# against Ln_DIVID# as Model 1, then regression test for Ln_PBER#, Ln_EQUI#, and Ln_DIVID# against Ln_KAPPR# as Model 2. The results we can see in Table-5 and Table-6.

### Table-5. Regression test result for Model 1

| R²   | F      | Sig. | Model | Unstandardized Coefficients | Standardized Coefficients | t     | Sig. |
|------|--------|------|-------|----------------------------|---------------------------|-------|------|
| 0.586| 262.032| 0.00 |       |                            |                           |       |      |
|      |        |      |       | B             | Std. Error | Beta |       |
| 1    | (Constant) | -0.268 | 0.721 | -0.372 | 0.710 |
|      | Ln_PBER#  | 0.713  | 0.076 | 0.601  | 9.341 | 0.000 |
|      | Ln_EQUI#  | 0.253  | 0.088 | 0.185  | 2.883 | 0.004 |

a. Predictors: (Constant), Ln_EQUI#, Ln_PBER#

b. Dependent Variable: Ln_DIVID#

Source : SPSS, April 2020

### Table-6. Regression test result for Model 2

| R²   | F      | Sig. | Model | Unstandardized Coefficients | Standardized Coefficients | t     | Sig. |
|------|--------|------|-------|----------------------------|---------------------------|-------|------|
| 0.850| 698.794| 0.00 |       |                            |                           |       |      |
|      |        |      |       | B             | Std. Error | Beta |       |
| 1    | (Constant) | 0.260  | 0.398 | 0.653  | 0.514 |
|      | Ln_PBER#  | 0.583  | 0.047 | 0.536  | 12.448 | 0.000 |
|      | Ln_EQUI#  | 0.278  | 0.049 | 0.223  | 5.684  | 0.000 |
|      | Ln_DIVID# | 0.209  | 0.029 | 0.229  | 7.309  | 0.000 |

a. Dependent Variable: Ln_KAPPR#

b. Predictors: (Constant), Ln_DIVID#, Ln_EQUI#, Ln_PBER#

Source : SPSS, April 2020

From the results of the data obtained from the regression test in Table-5 and Table-6, also equations (7), (8), and (9), it can be calculated t-statistic. For Net Income, the calculated t-statistic = 5.736, while the t-table for the tolerance of 0.05 one way (n = 374, k = 3 and df = 371) using the SPSS program obtained 1.649. Because the value of t-statistic > t-table, it can be concluded that there is a mediating effect by Cash Dividend which connects between Net Income against Corporate Market Capitalization. Meanwhile, for the calculation of t-statistic Equity obtained 2.661, so t-statistic > t-table. This indicates that there is a mediating effect by Cash Dividend on the relationship between Equity against Corporate Market Capitalization.

The next statistical test is path analysis for this research conceptual framework. There are two equations, equation (2) and (4) to be examined by the regression test. Equation (2) similar to Model 1 from the Sobel test, the result showed in Table-5. The regression test result for equation (4) showed in Table-7.
Table-7. Regression test result for Equation (4)

| R² | F  | Sig. | Model | Unstandardized Coefficients | Standardized Coefficients | t     | Sig.  |
|----|----|------|-------|-------------------------------|---------------------------|-------|-------|
| 0.864 | 468.47 | 0.00 | 1 (Constant) | 0.975 | 0.426 | 2.285 | 0.023 |
|     |     |      | Ln_PBER# | 0.546 | 0.045 | 5.02  | 0.000 |
|     |     |      | Ln_EQUI# | 0.198 | 0.049 | 0.158 | 0.000 |
|     |     |      | Ln_DIVID# | 0.172 | 0.028 | 0.188 | 0.000 |
|     |     |      | Ln_HARR# | 0.195 | 0.031 | 0.177 | 0.000 |
|     |     |      | Ln_VOLM# | 0.074 | 0.024 | 0.067 | 0.003 |

a. Predictors: (Constant), Ln_EQUI#, Ln_PBER#, Ln_DIVID#, Ln_HARR#, Ln_VOLM#

b. Dependent Variable: Ln_KAPPR#

Source : SPSS, April 2020

From result in Table-5, the F test with a probability = 0.000 lower than tolerance = 0.05, which means that all the variables simultaneously have a significant effect and this regression model can predict Cash Dividend. The independent variables as if Net Income and Equity can explain 58.6% of Cash Dividend variation. Based on the t-test and unstandardized coefficients of variables, Net Income and Equity individually have a positive and significant effect on Cash Dividend. It is suitable for the hypothesis on this research that the higher the variable Net Income and Equity simultaneously or individually, the better the variable Cash Dividend. It means $H_2$ and $H_4$ accepted.

Evaluation of direct, indirect, and total effect of Net Income and Equity on the Corporate Market Capitalization, through Cash Dividend, can be explained as follows:

- Net Income (X1) => Cash Dividend (M1) => Corporate Market Capitalization (Y1). Direct effect = 0.502, indirect effect = 0.601*0.188 = 0.113, total effect = 0.502 + 0.113 = 0.615.

- Equity (X2) => Cash Dividend (M1) => Corporate Market Capitalization (Y1). Direct effect = 0.158, indirect effect = 0.185*0.188 = 0.035, total effect = 0.158 + 0.035 = 0.193.

- Comparing the path coefficient between Net Income and Equity, the effect of Net Income through Cash Dividend on the Corporate Market Capitalization is greater than the path coefficient of Equity.

Evaluation of regression test in Table-7, the F test showed that all the variables simultaneously have a significant effect and this regression model can predict Corporate Market Capitalization. The independent variables can explain 86.4% of Corporate Market Capitalization variation. Based on the t-test and unstandardized coefficients of variables, Net Income, Equity, Cash Dividend, Average Price, and Volume individually have a positive and significant effect on Corporate Market Capitalization. These results are suitable for the hypothesis on this research that the more increase the variable Net Income, Equity, Cash Dividend, Average Price, and Volume simultaneously or individually, the higher the variable Corporate Market Capitalization. It means $H_1$, $H_3$, $H_5$, $H_6$, and $H_7$ accepted.

DISCUSSION

Dividends are part of the company's income distribution, made by management for their investors (James Chen, Investopedia: 2020). Companies can distribute dividends if they
have a good performance that can be measured using the net income variable. Net income is the most important parameter to know that company profit or loss at a certain period (Kieso et al., 2014); (Krantz, 2010). It means, the higher the variable net income, the better the variable dividend. It is consistent and suitable with the hypothesis and results in this study that net income has a positive and significant effect on dividend. The results of this study are also consistent with previous studies. The size, liquidity, and profit of the company have a positive and significant effect on dividends (Labhane & Mahakud, 2016). Profit has a positive and significant effect on dividends (Simanjuntak & Kiswanto, 2015). Profit, cash flow, and corporate tax have a positive and significant effect on dividends (Amidu & Abor, 2006). The greater the size and profit of the company, the greater the tendency to distribute dividends (Fama & French, 2001).

Equity is the right that is owned by shareholders if the company is sold and has made an obligation to pay debts, which is the difference between total assets and total debt (Ross et al., 2015). Equity is in the form of capital, share premium, retained earnings, accumulation of other comprehensive income, treasury shares, non-controlling interest, minority interest (Kieso et al., 2014). Equity represents the value of an investor's stock in a security or company. Owning shares in a company from time to time can generate capital gains or dividends for shareholders (Chris B. Murphy, Investopedia: 2019). From this explanation, equity is the company's strength or ability in the form of internal capital. A healthy company usually avoid debt for the company's expenses and use its equity. So bigger the equity, the smaller the debt, the bigger dividends for investors. It is consistent and suitable for this research hypothesis and results that equity has a positive and significant effect on dividend.

The results are consistent with previous researches. Companies tend to pay greater dividends if there is greater earned equity in total equity (DeAngelo et al., 2004). In general, companies do not distribute net income or overall profits in the form of dividends but be accumulated as retained earnings under the company policies. Retained earnings are part of the equity in the financial statement (Ross et al., 2015). The aims of retained earnings policy as a deposit and protection asset if the company suffers losses, funds for buyback, internal financing or investment, accumulated income so that company can pay dividends continuously year by year (Kieso et al., 2014). Besides, company size (based on asset value) has a positive effect on dividend policy (Fama & French, 2001). In this case, assuming that if the debt is constant, the increase in assets is an increase in the equity. While debt negatively affects dividend policy, the level of debt is a factor that significantly influences dividend policy. The results show that a higher level of debt results in lower dividend payments to shareholders. This is because companies with large debts have greater obligations to creditors to pay debts and interest charged. Since the company's priority is to creditors, the amount of dividends to be distributed to shareholders is lower because dividends depend on the available balance after completing debt obligations (Yusof & Ismail, 2016).

Net income and equity also affect corporate market capitalization. Profitable companies will increase investor trust and interest in buying its shares, so that will increase the share prices. Equity can be a consideration for investors to estimate the basic value of a stock if the company bankruptcy or liquidated. Increasing the equity will effect increase corporate market capitalization. It is consistent and suitable with the hypothesis and results that net income and equity have a positive and significant effect on corporate market capitalization. The results are consistent with previous researches. In the banking sector, company profits in the form of Net Interest Margin (NIM) variables have a positive and significant effect on stock prices (Zainuddin et al., 2014); (Tasri et al., 2012). Net income has a positive and significant effect on stock prices (Rusdiyanto & Narsa, 2019); (Shamki & Rahman, 2010); (Martikainen et al., 1993). Equity has a positive and significant effect on the Corporate Market Capitalization, as well as being the dominant variable in the 5 years before the company goes bankrupt (Barth et
Equity in the form of a variable Book Value per Share (BVS) has a significant positive effect on stock prices (Al-Oshaibat & Al-Manaseer, 2018); (Asif et al., 2016); (Glezakos et al., 2012).

Companies that have paid dividends will make every effort to continue to do so (Kieso et al., 2014). Continuity in dividend distribution is an effort by the company's management to maintain investors' trust, also provide information that the company is profitable and promising in the future. Increasing investor interest will effect on rising share prices. So that the increasing cash dividend value, effect on increasing the corporate market capitalization. It is suitable with the hypothesis and research results that the cash dividend has a positive and significant effect on corporate market capitalization. The results are consistent with previous researches. There is a strong relationship between stock returns and dividend distribution. The announcement of the cash dividends distribution is used as a signaling tool by the company's management to investors, about the existence of growth hopes for the company's prospects (Tsoukalas & Sil, 1999b). The announcement of dividends has a positive effect, although not as much as the effect of announcements of company performance or profitability on rising stock prices (Lonie et al., 1996). Increasing the number of dividends for companies that continue to distribute dividends, has a higher impact on share prices than companies that only occasionally distribute dividends (Asem, 2009). There is a positive and significant effect of dividends per share on stock prices (Murira et al., 2017); (Sha, 2017). Dividend distribution is good news for investors who increase their interest in buying shares, thereby increasing share prices and also increasing the Corporate Market Capitalization.

Price data reveals what has happened before, then is used to interpret what might happen next (Coulling, 2013). Average Price is the most commonly used technical indicator because it is easy to use, analyze, and detect price movement trends (Murphy, 1999). The share price that moves in an upward trend will be an attractive signal for investors and pull the other investors that do not have it to buy. The higher the investor's interest, the higher the demand, which has an impact on increasing stock prices. So the higher the Average Price has a positive and significant effect on the Corporate Market Capitalization suitable with this research hypothesis and results. The results are consistent with previous researches. There is a positive correlation between the price moving average and stock return (Toms, 2011). The Custom Moving Average model developed in this study is the most accurate and smooth in predicting stock price movements (Raudys & Pabarškaitė, 2018). Variable Moving Average (VAMA) has a strong correlation to investment returns, making it possible to predict future investment returns (Ahmed et al., 2000).

Volume remains the data of buy-sell transactions that occur in a stock exchange. Usually, volume is associated with the intensity and interest of investors to trade certain stocks (Murphy, 1999). Volume implies a very important role for price movements analysis because the volume reveals the truth behind the market sentiment and supply-demand flow (Coulling, 2013). Increasing the stock volume means increasing the investors' interest, will increase the corporate market capitalization. It is suitable for this research hypothesis and results that volume has a positive and significant effect on the corporate market capitalization. The results are consistent with previous researches. Information on stock market trading volume is very helpful in estimating stock price volatility (Chen et al., 2018). Volume has a positive and significant effect on stock price volatility (Girard & Omran, 2009); (Dewi & Suaryana, 2016). Volume relationship with price volatility is influenced mainly by numbers of trade or frequency rather than trade size in the Chinese stock market (Song et al., 2005).

The better Net Income and Equity of the company will impact better on the determination of Cash Dividend distribution policy. From these three fundamental variables, a profile of the company's stock quality will be obtained. Good fundamentals certainly attract the interest and trust of investors, which showed in the rise of the Average Price trend.
accompanied by an increased Volume due to the high demand for the company's stocks. From these two technical variables, actual market transactions and conditions of the stocks can be obtained. So the fundamental analysis determines the quality of the company's stocks, while the technical analysis determines the conditions and transactions of the company's stocks in the market. The two ways of analysis are complementary. If the company's fundamental and technical conditions improve, it will improve the Corporate Market Capitalization. This result also proves that the analysis has a significant effect on the success of stock investment that suitable with the philosophy and principles proposed by Ben Graham and Elder.

CONCLUSION

The conclusions that could be taken from this research and discussion, Cash Dividends mediate the relation between Net Income and Equity to the Corporate Market Capitalization. It means, companies tend to share dividends for their investors if they generate profit and have stable equity. So investment benefits not only come from capital gains but also the dividends. Furthermore, the more increase the variable Net Income and Equity simultaneously or individually, the higher the variable Cash Dividends. Moreover, the better the variable Net Income, Equity, Cash Dividend, Average Price, and Volume simultaneously and individually, the better the variable Corporate Market Capitalization. Net Income and Cash Dividend will increase investor confidence and interest in company stocks. Equity will give investors information on the stock price value. Increasing Average Price will attract investors who do not yet own the stocks. Increasing Volume indicates a large number of share trade that occurs. Thus, the increase of Net Income, Cash Dividend, Equity, Average Price, and Volume give the information on stock quality, increasing demand for the stock, which effects increasing the Corporate Market Capitalization.

Acknowledgments

Thanks to Prof. Dr. H. Djabir Hamzah, MA and Andi Aswan, SE., MBA., M.Phil., DBA who have guided this research, also Prof. Dr. H. Muhammad Ali, SE., MS; Prof. Dr. H. Abd. Rakhman Laba, SE., MBA; and Dr. Mursalim Nohong, SE., M.Si who have examined it. Special thanks to my family and my friends who always support me.

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