

CHAPTER V

SUMMARY AND CONCLUSION

5.1. Research Summary

This research exists because the curiosity about the contradictory between google trend ability to predict a stock return and the claim of the random walk theory. Based on that, this research studied the relationship between a google trend and a profit in a stock in Indonesia market. The market is LQ45 index in Indonesia Stock Index. The number of companies are 44 of 45 companies. A companies removed because the data is not available. The period is 270 weeks. The start week is in a week between October 26 – November 1, 2014. Then, the end week is in a week between December 22 – 28, 2019. To processing the data in order to reach the research objective, the chose Autoregressive Integrated Moving Average (ARIMA) model. This is not a panel data, but time series. In other word, this research generated 44 ARIMA models for every 44 companies. There are 3 things that need to take into account. They are plot for correlation, significance test and plot of forecast. The plot for correlation is to see the correlation between 2 trends of return and google trend. Significance test is to see a significant effect of google trend when combined to adjusted close price. And plot of forecast is to see the ability of best ARIMA model to forecast the future return. Based on the obtained results, it found that only a few companies showed a correlation between its google trend to its stock return. Then also, only a few companies showed a meaningful prediction (not flat or not in small movement). And last, the majority of companies showed none significant effect from its google trend to its stock return.

5.2. Research Synthesis

Four combination of ideas form this research synthesis. First, previous research claimed that a google trend of company can predict its stock return (Aouadi et al, 2013; Bank et al, 2011; Bijl et al, 2016; Da et al, 2011; Dimpfl & Jank, 2016; Hu et al, 2018; Kim et al, 2019; Moussa et al, 2017; Padungsaksawasdi et al, 2019; Swamy & Dharani, 2018; Takeda & Wakao, 2014; Tantaopas et al, 2016; Vlztakis & Markellos, 2012; Vozlyublennaia, 2014). Second, the argument of this research stated that if a stock return can be predicted, nobody suffer a loss in stock investing but in the reality, it is not like that. Third, the grand theory of this research which is Random Walk Theory claims that no stock is predictable (Bachelier, 1900; Cootner, 1964; Fama, 1965; Kendall, 1953; Malkiel, 1973; Regnault, 1863). From that 3 ideas, this research seek the truth which the fourth idea. Fourth, based on the result of this research, a google trend can not be used to predict a stock return.

5.3. Research Implication

The result of this research supports a result of previous research that has similar objective. That research studied the effect of google trend to stock return in Indonesia Stock Market especially LQ45. That research utilized a data panel. The result of that research is presented in the next page.

| Dependent Variable: RETURN Method: Panel EGLS (Cross-section random effects) Date: 11/17/21 Time: 08:11 Sample (adjusted): 11/15/2020 11/07/2021 Periods included: 52 Cross-sections included: 43 Total panel (balanced) observations: 2236 Swamy and Arora estimator of component variances | | | | |
|---|-------------|--------------------|-------------|--------|
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | -41.39687 | 18.72868 | -2.210347 | 0.0272 |
| TRENDCOMP | 0.720078 | 0.431663 | 1.668148 | 0.0954 |
| Effects Specification | | | | |
| | | | S.D. | Rho |
| Cross-section random | | | 0.000000 | 0.0000 |
| Idiosyncratic random | | | 475.7618 | 1.0000 |
| Weighted Statistics | | | | |
| R-squared | 0.001255 | Mean dependent var | -15.04574 | |
| Adjusted R-squared | 0.000808 | S.D. dependent var | 473.8767 | |
| S.E. of regression | 473.6852 | Sum squared resid | 5.01E+08 | |
| F-statistic | 2.807169 | Durbin-Watson stat | 1.875695 | |
| Prob(F-statistic) | 0.093984 | | | |
| Unweighted Statistics | | | | |
| R-squared | 0.001255 | Mean dependent var | -15.04574 | |
| Sum squared resid | 5.01E+08 | Durbin-Watson stat | 1.875695 | |

Figure 1: Result of Previous Research with Data Panel

Source: Processed data (2021)

The google trend represented by TRENDCOMP and the stock return represented by RETURN. Based on the figure above, it can be seen that google trend has no significant individual effect, google trend only explains the change of stock return less than 1%, and google trend has no significant simultaneous effect to stock return.

Support that research, this chapter returned a similar result. In chapter 4, sub chapter 4.4. calculated that a google trend of company has no significant

effect to its stock return and the forecasting results based on every company's best ARIMA models returned meaningless outcomes. The result of hypothesis testing also returned that it accepted the null hypothesis. The google trend can not be used to predict a stock return. This research delivers one advice, do not rely on google trend to make profit from stock.



5.4. Recommendations

This research recommends that in investing, invest in the long term. In the long term, a stock price tends to grow. See figures below.

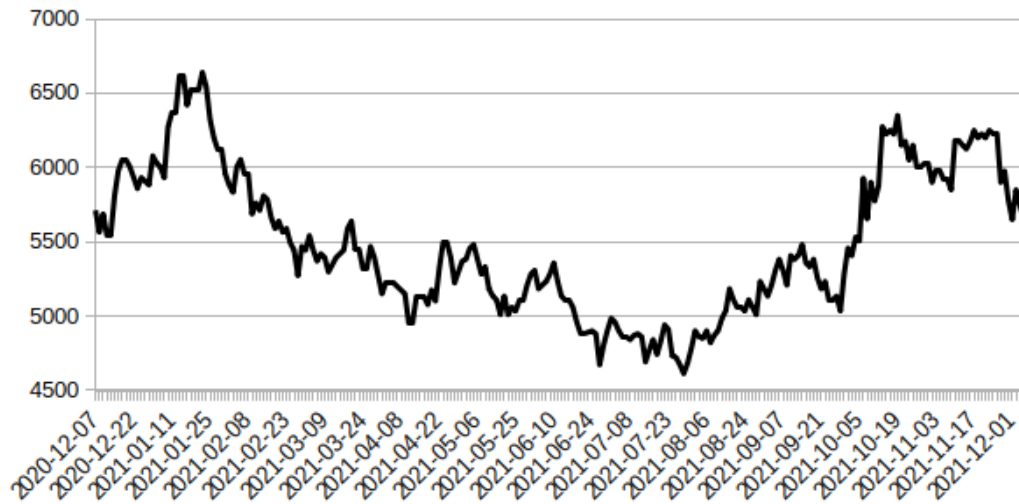


Figure 2: Adjusted Close Price of ASII from Year 2020

Source: Yahoo Finance (2021)



Figure 3: Adjusted Close Price of UNVR from Year 2020

Source: Yahoo Finance (2021)

Based on the figures above, if invest from December 2020 (a year before this research conducted), there are no profit to take. From December 2020 to December 2021, the growth rate of Astra International Tbk. is -1.0856% . From December 2020 to December 2021, the growth rate of Unilever Indonesia Tbk. is -43.4807% . The conclusion is a loss was generated if invested in that 1 year.

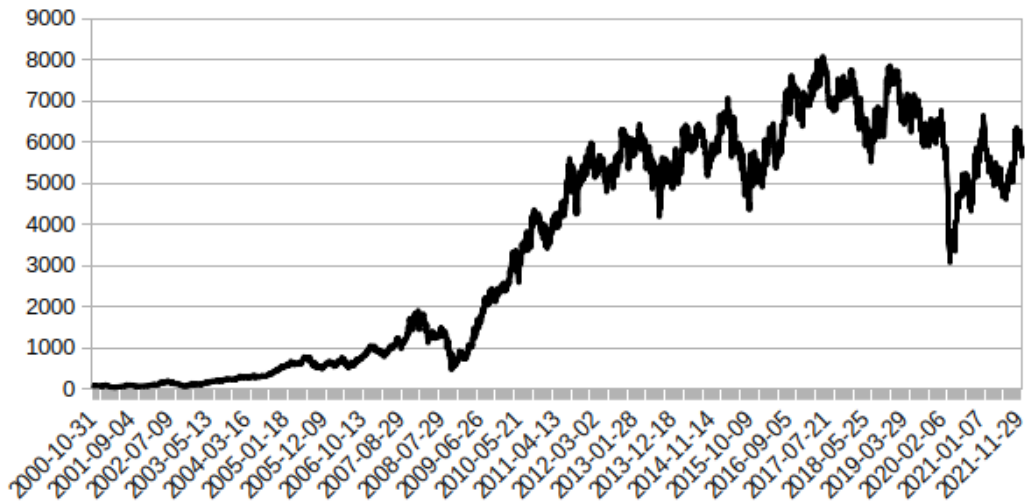


Figure 4: Adjusted Close Price of ASII from Year 2000

Source: Yahoo Finance (2021)

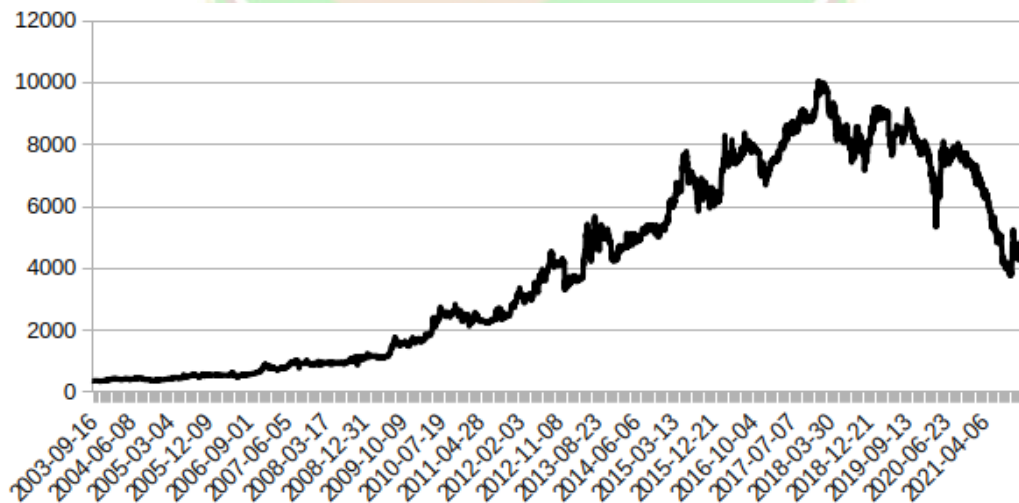


Figure 5: Adjusted Close Price of UNVR from Year 2003

Source: Yahoo Finance (2021)

Based on 2 figures above, the 2 companies grow high. On October 10, 2003, the adjusted close price of Astra International Tbk is around 249 Rupiah and on December 6, 2021, the price is 5650 Rupiah. The price growth rate is around 2169%. For Unilever Indonesia Tbk., the price on October 10, 2003 is around 397 Rupiah and on December 6, 2021, the price is 4,310 Rupiah. The price recorded a growth rate of around 984%. The summary of the example companies is in table below.

Table 1: Growth Percentages of 2 Examples Companies in The Long Term

| Code | Adjusted Close on December 1, 2003 (Rp) | Adjusted Close on December 1, 2021 (Rp) | Growth Rate (%) |
|--------------------------|--|--|--------------------|
| Astra International Tbk. | 249.0015 | 5650 | 2169.0626 |
| Unilever Indonesia Tbk. | 397.5563 | 4310 | 984.1232 |

Source: Processed data (2021)

The recommendation from this research is if you are going to invest, be a long term investor. If your objective of investing is to gain profit as much as possible, wait for that company to grow. Be patient and wait for it to grow.