

Stock Performance Analysis Before and after Stock Split on Basic Industry and Chemical in Indonesia

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Abstract. The research concern on how stock performance performs before and after stock split that seen enough through the stock value and stock trading volume or technical analysis also from earning per share and price earning ratio or fundamental analysis. Besides researching and comparing the stock performance, researcher finds which indicator that more significant for the decision making of investment. The comparison of stock performance and more significant indicator before and after stock split are better viewed from technical analysis which is stock value, because each company have quite significant differences when the stock splits. Whereas in trading volume, not every company have significant change, and for fundamental analysis, stock split is not giving any significant differences. In the previous research, written by Kevin L. Kemerer in the journal *Stock Split and When-Issued Trading: A Test Of The Signaling Theory* stated that Although research has indicated that stock-splitting tend to outperform non-splitting firms and has shown the market reacts positively to these announcements there has been inadequate evidence that the positive reaction is related to any future earnings or increased dividends. Signaling theory suggests firms may attempt to send a signal via stock split announcements that they expect to continue to outperform non-stock-splitting firms.

Keywords: Stock Split, Fundamental Analysis, Technical Analysis, Stock Performance Basic Industry And Chemical In Indonesia

1. Introduction

Investment climate of Indonesia in 2007 shown a good tendency following the legitimated constitution No. 25 of 2007 about Capital Investment with the other regulation of the legislation of implementation. One of the indicators of the better investment climate in 2007 was the increase of investment realization within 2007, whether from the Foreign Direct Investment (FDI) or Domestic Direct Investment (DDI). Total investment realization within 2007 totaling Rp 127,93 trillion, that consist of DDI that totaling Rp 34,87 trillion or had an increase of 67,80 percent compared with the investment realization of 2006 that reached Rp 20,78 trillion. The investment realization from DDI totaling Rp 93,06 trillion or had an increase for about 73,19 percent compared with the investment realization number in 2006 that reached Rp 53,73 trillion.

However the national industry has ever decreased in 2007, becoming 5,15 percent compared with the one in 2006 that reached 5,27 percent. This was because of the increase of oil and world's energy prices and agricultural commodity such as wheat, milk, corn, bean, and palm oil. Besides, the monetary crisis of United States (subprime mortgage) was considered as the affection of industrial performance at the end of 2007.

The decrease of national industry in 2007 was not giving any effect to the industrial group of cement and excavation goods, chemical fertilizer and rubber, also pulp and printed matter that had an increase. This increase was caused by the mass usage of "green energy," so just some industrial groups that had the decrease.

This growth has a huge impact for the business sector especially on Indonesia Stock Exchange (IDX), because foreign investor donated almost 57 percent from domestic total investment totaling Rp 65,27 trillion, although 43 percent of investment came from domestic totaling Rp 28,37 trillion. In 2007, recoded growth in total asset, total equity, and sales reached maximum performance, approximately 25 percent. And Indonesia Composite Stock Price Indexes (IHSG) reached the highest level which was 2.745,8 with 58,9 percent of transaction value growth.

As many as 59 companies that registered in basic industrial sector and chemical were struck by those positive impacts above, so that some companies had an increase that quite significant that valued too high, the stagnation of stock movement and the low level of liquidity. Because of that reason these companies did the stock split. Afterwards, they gave more interest to the investors for buying stock of these companies.

2. Research Method

Research method which is used in this research is descriptive research method. According to Sekaran (2004; 121):

A descriptive study is undertaken in order to ascertain and be able to describe the characteristics of the variables of interest in a situation.

Meanwhile this research is a causal comparative, which compares situations before and after an event occurred (event study) to test how certain event affect the condition after the event. The population of this research is Basic Industry and Chemical that registered in Indonesia Stock Exchange. While the sample of company is the companies that registered in Basic Industry and Chemical that did the stock split within 2006—2009. The companies that do the stock split are PT. Duta Pertiwi Nusantara Tbk (DPNS), PT. Ekadharman Internasional Tbk (EKAD), PT Semen Gresik Tbk (SMGR), PT Sorini Agro Asia Corporindo Tbk (SOBI), PT Charoen Pokphand Indonesia Tbk, and PT Arwana Citrwamulia (ARNA)

Stock performance is measured by two indicators there are technical analysis and fundamental analysis.

There are two indicators that described in technical analysis, the sales price of shares and stock trading volume, which is only seen from fifteen days before and fifteen days after the stock split. And there are also two indicators in fundamental analysis, Earning Per Share and Price Earning Ratio which is only seen from three months before and three months after the stock split.

Analysis used in testing is T-test Paired Two Samples test. With level of significance for the study was 5% with moderate freedom $df = n - k - 1$, to determine the t_{table} as limiting the acceptance and rejection of H_0 . With the formulation of the null hypothesis is as follows:

Addition to looking at the size of the T-table, can also be seen from the magnitude paired sample correlation.

- Technical Analysis

$H_0: \bar{x}_a = \bar{x}_b$: There was no significant difference to the increase in closing price of shares performance and the increase in stock trading volume performance before and after stock splits.

$H_1: \bar{x}_a \neq \bar{x}_b$: There are significant differences to the increase in closing price performance and the increase in stock trading volume performance before and after stock splits.

- Fundamental Analysis

$H_0: \bar{x}_a = \bar{x}_b$: There is no significant difference to the increase in EPS and PER performance before and after a stock split.

$H_1: \bar{x}_a \neq \bar{x}_b$: There is a significant difference to the increase in EPS and PER performance before and after stock splits.

Addition to looking at the size of the T-table can also be seen from the magnitude paired sample correlation.

3. Result

Here are the a results of statistical calculations based on tests conducted paired sample firms that do stock split on Basic Industry and Chemicals sectors based on Technical and Fundamental analysis.

Based on statistical calculations for the data average closing price that has been processed, the result of t tabel is 2.571. a results of t count is 1.099 then the hypothesis test H_0 is accepted, it means that if the closing price averaged there was no significant difference before and after stock split.

Statistical calculation of the closing price on ARNA that has been processed, the result of t table is 2.145. A results of t count was 29.570 with significant 0.00, then the hypothesis test of H_0 is rejected, it means ARNA price has significant differences before and after stock split.

Statistical calculation of the closing price on CPIN that has been processed, the result of t table is 2.145. A results of t count was 57.748 with significant 0.00, then the hypothesis test of H_0 is rejected, it means CPIN price has significant differences before and after stock split.

Statistical calculation of the closing price on DPNS that has been processed, the result of t table is 2.145. A results of t count was 113.942 with significant 0.00, then the hypothesis test of H_0 is rejected, it means DPNS price has significant differences before and after stock split.

Statistical calculation of the closing price on EKAD that has been processed, the result of t table is 2.145. A results of t count was 36.032 with significant 0.00, then the hypothesis test of H₀ is rejected, it means EKAD price has significant differences before and after stock split.

Statistical calculation of the closing price on SMGR that has been processed, the result of t table is 2.145. A results of t count was 149.433 with significant 0.00, then the hypothesis test of H₀ is rejected, it means SMGR price has significant differences before and after stock split.

Statistical calculation of the closing price on SOBI that has been processed, the result of t table is 2.145. A results of t count was 97.522 with significant 0.00, then the hypothesis test of H₀ is rejected, it means SOBI price has significant differences before and after stock split.

Based on statistical calculations for the data average data of stock trading that has been processed, the result of t tabel is 2.145. A results of t count is -1.049 with significant 0.342 then the hypothesis test H₀ is accepted, it means that if the trading volume averaged there was no significant difference before and after stock split.

Statistical calculation of the trading volume on ARNA that has been processed, the result of t table is 2.145. A results of t count was -0.949 with significant 0.363, then the hypothesis test of H₀ is accepted, it means ARNA trading volume there was no significant differences before and after stock split.

Statistical calculation of the trading volume of CPIN that has been processed, the result of t table is 2.145. Results of t count were -9.289 with significant 0.00, then the hypothesis test of H₀ is rejected, it means CPIN trading volume has significant differences before and after stock split.

Statistical calculation of the trading volume on DPNS that has been processed, the result of t table is 2.145. A result of t count was 0.986 with significant 0.504, then the hypothesis test of H₀ is accepted, it means DPNS trading volume has no significant differences before and after stock split.

Statistical calculation of the closing price on EKAD that has been processed, the result of t table is 2.145. a results of t count was -0.375 with significant 0.772, then the hypothesis test of H₀ is accepted, it means EKAD trading volume has no significant differences before and after stock split.

Statistical calculation of the trading volume on SMGR that has been processed, the result of t table is 2.145. a results of t count was -4.227 with significant 0.001, then the hypothesis test of H₀ is rejected, it means SMGR trading volume has significant differences before and after stock split.

Statistical calculation of the trading volume on SOBI that has been processed, the result of t table is 2.145. a results of t count was -5.807 with significant 0.00, then the hypothesis test of H₀ is rejected, it mean SOBI trading volume has significant differences before and after stock split.

Based on statistical calculations for the Earning Per Share that has been processed, the result of t table is 2.571. A results of t count is 1.245 then the hypothesis test H₀ is accepted, it means that Earning Per Share there was no significant difference before and after stock split.

Based on statistical calculations for the Price Earnings Ratio that has been processed, the result of t table is 2.571. A results of t count is 4.24 then the hypothesis test H₀ is accepted, it means that if the Price Earnings Ratio there was no significant difference before and after stock split.

The following is a table that showing the performance stock before and after the stock split using technical and fundamental analysis.

As we seen on the table above, the comparison of stock performance before and after stock split on Basic Industry and Chemical using T-table is better seen on technical analysis. In technical analysis, exactly when the price and volume calculated by each company, it is clear that there are quite significant differences when stock split in each company.

In the decision making of investment that more significant when stock split occurs, viewed in investor's side, it is better to see from each company's price that did stock split. Because from table 3 shown that only stock price indicator which there are quite significant differences or H₁ Hypothesis accepted.

Comparison of stock performance before and after the stock split using Paired Sample Correlation in Basic Industry and Chemicals sector were better seen on fundamental analysis and technical analysis (average price and average volume) because before and after stock split have strong correlation.

In the investment decision is more significant when the stock split in terms of investor should look at of the price of each company are the stock-split and how the amount of EPS and PER before and after stock splits.

Table 1: Stock Performance Comparison Before and After Stock Split Based on Technical Analysis and Fundamental Analysis Using Paired Sample Correlation

Company	Performance Indicator											
	Technical Analysis						Fundamental Analysis					
	Price		Average Price		Volume		Average Volume		EPS		PER	
	r	r ²	r	r ²	r	r ²	R	r ²	r	r ²	r	r ²
ARNA	-0.656	43.03%	0.998	99.6%	-0.074	0.55%	1	100%	0.983	96.63%	0.94	88.36%
CPIN	0.775	60.06%			0.047	0.22%						
DPNS	0.563	31.70%			1	100%						
EKAD	0.026	0.07%			1	100.00						
SMGR	-0.48	23.04%			-0.282	7.95%						
SOBI	-0.347	12.04%			-0.388	15.05%						

If we use technical analysis, primarily by looking at movement of the stock of prices will be obvious trend which will happen in the future, whether the company's stock price will increase or decrease. While by looking the amount of EPS and PER before and after the stock split, investors will find out how many the amount of earnings is obtained if the investor still holding company's stock.

This following if the closing price and trading volume of share views of candle stick chart and line chart.

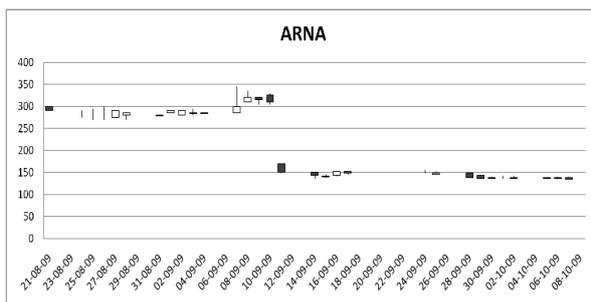


Chart 1: ARNA Candlestick

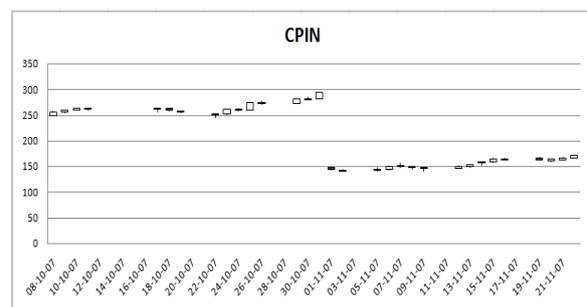


Chart 2: CPIN Candlestick

The chart 1 shows how the stock price ARNA using candlestick. The chart shows before the stock split, ARNA stock movement fluctuated. And after the stock splits stock prices tend to decrease and stable. The chart 2 shows how the stock price CPIN using candlestick. The chart shows before the stock split, CPIN stock movement increase. And after the stock splits stock prices CPIN increase.

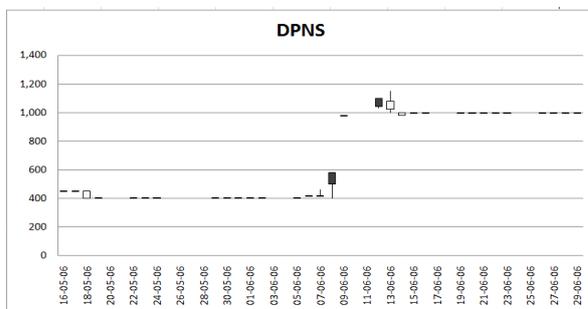


Chart 3: DPNS Candlestick

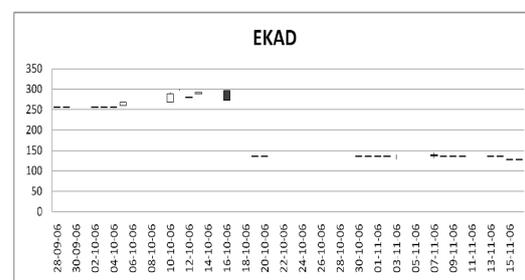


Chart 4: EKAD Candlestick

The chart 3 shows how the stock price DPNS using candlestick. The chart shows before stock split DPNS stock stable and after stock split stock price DPNS stable and increase. The chart 4 shows how the stock price EKAD using candlestick. The chart shows before stock split EKAD stock increase, but after stock split EKAD stock prices stable and decrease.

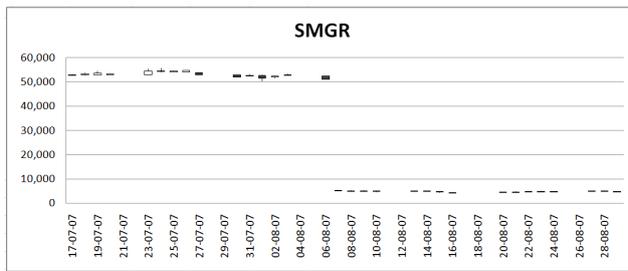


Chart 5: SMGR Candlestick

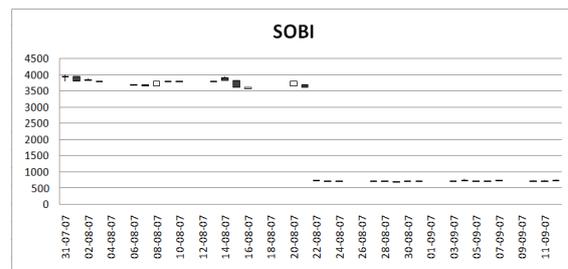


Chart 6: SOBI Candlestick

The chart 5 shows how the stock price SMGR using candlestick. The chart show before stock split SMGR stock price is stable, and after the stock split SMGR prices is stable and decrease. The chart 6 shows how the stock price SOBI using candlestick. The chart shows before stock split SOBI is fluctuative and tend to decline, and after stock split SOBI stock prices is stable.

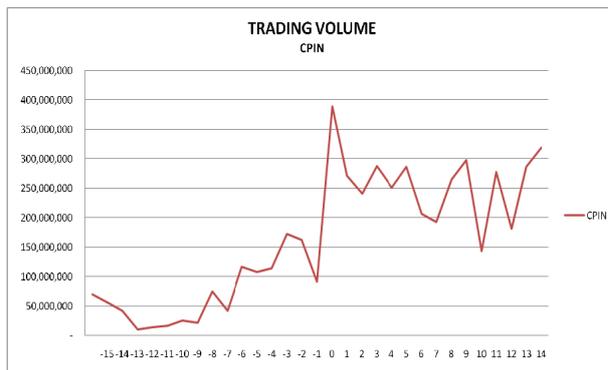


Chart 7: Trading Volume CPIN

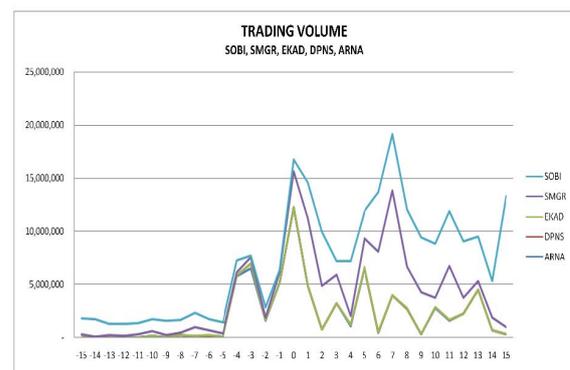


Chart 8: Trading Volume SOBI, SMGR, EKAD, DPNS, EKAD

The chart 7 and 8 shows the movement of stock trading volume. Because the gap big enough then CPIN trading volume is seperated. When viewed from the volume of stock trading, the stock looks CPIN, SOBI and SMGR before and after stock split occurred a significant increase. While for the stock EKAD, ARNA and DPNS before the stock split is fluctuated, after the stock split occurred a significant decline, especially in the stock DPNS.

4. Conclusion

Stock performances before and after stock split based from technical analysis shows that stock split creates differences in company value directly, while the differences in trading volume before and after stock split depends on investor's purchase power and the whether the company's stock are seed or not.

Stock performance before and after stock split based from fundamental analysis shows that stock split is not creating significant difference to the amount of EPS and PER if we seen on t-table, but if we seen on paired sample correlation EPS and PER have strong correlation before and after stock split.

The comparison of stock performances before and after stock split whether based from technical analysis or fundamental analysis shows that technical analysis is the better way because there are quite significant differences on every company that do stock split. While in decision making of investment, the more significant indicator is technical analysis.

5. Reference

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