

**ANALYSIS OF DIFFERENCES OF PRICE EARNING RATIO (PER)  
AND STOCK LIQUIDITY BEFORE (10 DAYS) AND AFTER (10 DAYS)  
STOCK SPLIT IN GO PUBLIC COMPANY IN INDONESIA STOCK  
EXCHANGE PERIOD 2009 – 2016**

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**ABSTRACT**

*The purpose of this research is to know (1) difference of stock liquidity level before and after stock split (2) difference of Price Earning Ratio (PER) before and after stock split. The population used in this study are all companies listed on the Indonesia Stock Exchange. While the sample selection is taken by using purposive sampling method. The number of samples used by researchers are 62 companies listed on the Indonesia Stock Exchange and stock split in the period 2009-2016. Based on the results of research indicate that there is a significant difference in Price Earning Ratio (PER), either before stock split or Price Earning Ratio (PER) after stock split. With paired sample t-test results obtained t test with t count > t table (3,912 > 2,000) can be concluded then Ho accepted means there is a difference between price earnings ratio (PER) of each sample company, either before stock split or price Earnings ratio (PER) after the stock split event. With paired sample t-test obtained t test results with t count > t table (1,844 > 2,000) can be concluded then Ho accepted means there is no difference between the stock liquidity of each sample company, either before the stock split and the liquidity of stock after the event Stock split.*

**Keywords:** Stock Liquidity, Price Earning Ratio (PER), Stock Split

**A. INTRODUCTION PREFACE**

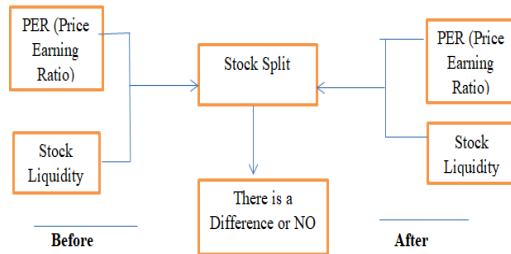
*Capital market as one means to obtain external sources of funds The steps taken include managing the company well and transparently, resulting in good corporate performance and doing go public by selling shares in the capital market. "Stock split has become one of the tools used by management to shape the firm's market price" (Marwata, 2001: 152).*

*Investors decide to buy or sell the shares based on an assessment of whether the stock price is under valued (too low) or over valued (too high). Assessment of under valued or over valued can be done through Price Earning Ratio.*

*According to Retno Miliasih (2000: 134-135) those who support the stock split believe that lower stock prices will increase the ability of such shares to be traded at any time and improve market*

efficiency will attract small investors to invest,

**Framework of thinking**



**figure 1.**  
**Framework of thinking**

**Hypothesis**

1. There is difference of Price Earning Ratio (PER) before and after stock splits (stock split) in company that go public in Indonesia Stock Exchange (BEI) period 2009-2015.
2. There is a difference of Stock Liquidity before and after stock splits (stock split) in companies that go public in Indonesia Stock Exchange (BEI) period 2009-2015.

**B.RESEARCH METHODOLOGY**

**Research variable**

Variables This study compares between firms doing stock split both before and after stock split (X) with Price Earning Ratio (Y1) and Stock Liquidity (Y2).

**Population and Sample Research**

The population in this study are all companies listed in the Indonesia Stock Exchange (IDX) period of 2009-2016. The company's total population is 88 companies.

**Descriptive Analysis**

Descriptive analysis is intended to provide a description and explanation of the variables used in this study. (standard deviation) of each variable to be studied.

**Test Data Normality.**

The assumption of data normality is a requirement of most statistical procedures. Normality assumptions are used to test normal distributed data or not.

**Hypothesis**

Ho = residual data is normally distributed

H1 = residual data is not normally Distributed

Normality testing is done by looking at Asymp.Sign (2-Tailed). If Asymp.Sign (2-Tailed) > 0.05 then the data comes from a normally distributed population and vice versa if the Asymp.Sign (2-Tailed) < 0.05 then the data is from the non-distributed population. This test uses two-sided test

that is by comparing the probability (p) obtained with a significant level (α) 0.05.

**Test Statistical Hypothesis**

**Uji Paired Sample T-Test (Two Different Test Difference)**

Paired sample t-test or better known as pre post design is an analysis involving two measurements on the same subject to a particular influence or treatment. According to Gozali in Lizti Nadia Nilam (2010), paired t-test is a parametric test used to test the same or not different hypothesis (Ho) between 2 variables. The data were derived from measurements of 2 different observation periods drawn from the same research subjects. Paired t-test is a parametric statistic test tool that the sample data being studied should be normally distributed. So the hypothesis in this study are as follows:

H0:  $\mu_1 = \mu_2$ , which means that there is no difference in Price Earning Ratio (PER) and Liquidity of shares between the company doing the stock splitting and not doing stock splitting

H1:  $\mu_1 \neq \mu_2$ , which means that there is a difference of Price Earning Ratio (PER) and Liquidity of shares between companies doing stock splitting and not doing stock splitting.

The formula used to find the value of t in paired sample t-test is as follows:

$$t_{hitung} = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}}$$

Where:

x is the sample average;

$\mu_0$  is the population average;

s is the sample standard deviation;

n is the number of samples.

The criteria of decision making by using two-tailed t test based on the ratio of profitability and alpha (0.05), are as follows:

Ho : Rejected if  $< \alpha$

Ho : Accepted if :  $p > \alpha$

**Wilcoxon Signed Ranks Test (Wilcoxon)**

The wilcoxon signed rank test is a nonparametric statistical test used if the data is not normally distributed. This test is used to test different pair data and is an alternative to paired paired t test. Basis of decision making by looking at the probability and alpha numbers (0.05), under the condition :

Ho : Rejected if  $p < \alpha$

Ho : Accepted if :  $p > \alpha$

**C.RESULTS AND DISCUSSION**

This study aims to determine the differences in Price Earning Ratio (PER),

stock liquidity, before and after stock split on the company go public in Indonesia Stock Exchange period 2009-2016. This study uses secondary data obtained from the financial statements and Data on bid and ask price prices in 2009-2016 listed on the Indonesia Stock Exchange and The Indonesia Market Institute (TICMI) through the official website of Indonesia Stock Exchange ([www.idx.co.id](http://www.idx.co.id)). The population in this study are all companies listed on the Indonesia Stock Exchange period 2009-2016, Sampling using purposive sampling method.

**Table 1. Recapitulation of the number of Companies doing Stock Split.**

Amount of Companies doing stock split Years 2009 - 2016	88
Companies that are not actively doing stock split tahun 2009 – 2016	26
Companies that are active in stock split from t Years 2009 – 2016	62

Sources :: [www.idx.co.id](http://www.idx.co.id) ,data processed.

**Table 2. Price Earning Ratio (PER) Before dan After Stock Split Years 2009 -2016**

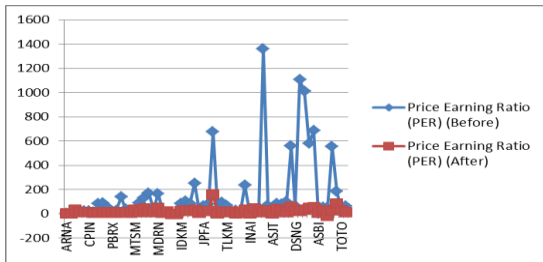
NO	STOCK CODE	PER		+ / -
		BEFORE	AFTER	
1	ARNA	5.74	2.87	-2.87
2	KKGI	3.44	4.46	1.02
3	CTRA	28.05	34.41	6.36
4	TURI	31.07	12.08	-18.99
5	DVLA	23.91	11.82	-12.09
6	CPIN	22.96	13.63	-9.33
7	BBRI	13.48	10.73	-2.75
8	LSIP	85.1	9.04	-76.06
9	BTPN	89.19	13.77	-75.42
10	INTA	51.59	8.02	-43.57
11	PBRX	15.88	15.59	-0.29
12	MAIN	30.19	8.1	-22.09
13	AUTO	139.35	12.49	-126.86
14	SSIA	37.2	13.09	-24.11
15	JTPE	27.16	6.66	-20.5
16	MTSM	26.47	33.68	7.21
17	PWON	87.01	14.49	-72.52
18	HERO	127.95	45.39	-82.56
19	ASII	168.56	15.83	-152.73

20	IMAS	36.86	18.28	-18.58
21	MDRN	166.06	47.5	-118.56
22	DKFT	16.85	7.55	-9.3
23	KREN	7.89	18.33	10.44
24	BFIN	2.04	0.63	-1.41
25	TOTO	5.67	0.7	-4.97
26	IDKM	83.56	23.94	-59.62
27	KLBF	106.25	28.65	-77.6
28	SCMA	83.56	23.94	-59.62
29	ACES	251.69	32.83	-218.86
30	BRNA	30.38	9.68	-20.7
31	JPFA	65.43	21.79	-43.64
32	ARNA	78.1	25.63	-52.47
33	TOWR	676.47	161.76	-514.71
34	AMRT	15.44	2.65	-12.79
35	JRPT	95.8	19.3	-76.5
36	TLKM	66.89	14.59	-52.3
37	JKON	23.15	20.59	-2.56
38	MDLN	29.63	2.01	-27.62

NO	STOCK CODE	PER		+ / -
		BEFORE	AFTER	
39	NIPS	3.79	6.91	3.12
40	ROTI	234.14	32.67	-201.47
41	INAI	20.83	4.11	-16.72
42	ALMI	7.08	45.04	37.96
43	TOTO	32.22	13.38	-18.84
44	CMPP	1,360.00	14.83	-1345.17
45	BALI	69.65	29.37	-40.28
46	ASJT	9.9	5.41	-4.49
47	CEKA	82.87	40.66	-42.21
48	LMSH	81.65	28.75	-52.9
49	LION	98.94	11.93	-87.01
50	MIKA	557.89	61.54	-496.35
51	DSNG	62.41	23.58	-38.83
52	DLTA	1,104.82	21.85	-1082.97
53	HMSP	1,010.75	34.82	-975.93
54	IMPC	582.13	48.3	-533.83
55	KREN	686.08	51.66	-634.42
56	ASBI	2.72	8.64	5.92
57	ICBP	52.43	27.75	-24.68
58	BTON	49.54	-15.18	-64.72
59	MYOR	554.55	26.97	-527.58

60	ASMI	184.82	84.35	-100.47
61	TOTO	24.65	30.5	5.85
62	SMSM	64.32	12.41	-51.91

Source: [www.idx.co.id](http://www.idx.co.id) ,data processed



**Figure 2**  
**Grafik Price Earning Ratio (PER**  
**Price Earning Ratio (PER) :**

*Is one of the most basic measures in fundamental stock analysis. Easily, the PER (Price Earning Ratio) is a 'comparison between the stock price and the firm's net income', where the stock price of an issuer is compared to the net profit generated by the issuer within a year. Because the focus of the calculation is the net profit that has been generated by the company, then by knowing the PER (Price Earning Ratio) of an issuer, we can know whether the price of a stock is fair or not in real and not in futures alias estimates. From the above table.*

*we can consider the value of Price Earning Ratio (PER) before and Price Earning Ratio (PER) after stock split from 2009 to 2016 as many as 62 companies Average Price Earning Ratio (PER) means in general if the company has a lower Price Earning Ratio (PER). The lower the P / E Ratio of a share, the*

*cheaper the stock shares in respect of the company's earnings.*

**Table 3. Statistik Deskriptif Variabel Penelitian Price Earning Ratio (PER)**

Statistics		PER BEFORE	PER AFTER
N	Valid	62	62
	Missing	0	0
Mean		157.9710	22.8508
Std. Error of Mean		35.64197	3.11286
Median		57.4200*	15.7100*
Mode		83.56	23.94
Std. Deviation		280.64514	24.51067
Variance		78761.692	600.773
Range		1357.96	176.94
Minimum		2.04	-15.18
Maximum		1360.00	161.76
Sum		9794.20	1416.75

Output : SPSS Version 22.00

*From Table 3, it is shown that the Price Earning Ratio (PER) before stock split has a minimum value of 2.04, the maximum value of 1360.00, the mean value of 157.97108 and the standard deviation of 280.64514. The mean value (mean) is greater than the standard deviation of 157.97108 < 280.64514. Price Earning Ratio (PER) before the highest stock split occurred at PT Centri Multipersada Pratama Tbk (CMPP) of 1360.00, while the Price Earning Ratio (PER) before the lowest stock split occurred at PT. BFI Finance Indonesia Tbk (BFIN) of 2.04.*

*Based on the above table shows that the Price Earning Ratio (PER) after the stock split has a minimum value of*

1.99, the maximum value of 166.67 average value (mean) of 26.7933 and standard deviation of 37.11622. The average value (mean) is smaller than the standard deviation of 26.7933 <37.11622. Price Earning Ratio (PER) before the highest stock split occurred in PT Sarana Menara Nusantara Tbk of 161.76, while the Price Earning Ratio (PER) before the lowest stock split occurred at company of PT Betonjaya Manunggal Tbk equal to -15.18.

**Analysis Description Statistics Stock Liquidity**

**Table 4. Stock liquidity Before and After Stock Split Years 2009 - 2016**

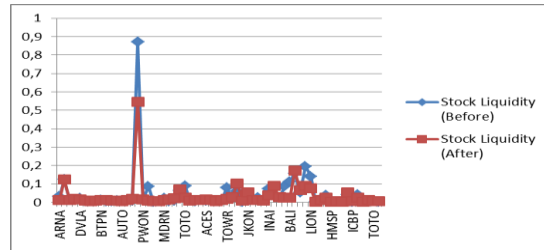
NO	STOCK CODE	NAME OF EMITEN	STOCK LIQUIDITY		Y1
			BEFORE	AFTER	
1	ARNA	Arwana Citramulia Tbk	0.032	0.013	-0.019
2	KKGI	Resource Alam Indonesia Tbk	0.124	0.124	0
3	CTRA	Ciputra Development Tbk	0.013	0.014	0.001
4	TURI	Tunas Ridean Tbk	0.012	0.018	0.006
5	DVLA	Darya Varia Laboratoria Tbk	0.023	0.015	-0.008
6	CPIN	Charoen Pokphan Indonesia Tbk	0.008	0.009	0.001
7	BBRI	Bank Rakyat Indonesia (Persero) Tbk	0.006	0.007	0.001
8	LSIP	London Sumatera Plantation Tbk	0.006	0.011	0.005
NO	KODE SAHAM	NAMA EMITEN	STOCK LIQUIDITY		CODE STOCK
			BEFORE	AFTER	
9	BTPN	Bank Tabungan Pensiunan Nasional Tbk	0.012	0.012	0
10	INTA	Intraco Penta Tbk	0.007	0.014	0.007
11	PBRX	Pan Brothers Tbk	0.006	0.011	0.005
12	MAIN	Malindo Feedmill Tbk	0.009	0.01	0.001
13	AUTO	Astra Otopart Tbk	0.006	0.007	0.001
14	SSIA	Surya Semesta Internusa Tbk	0.007	0.014	0.007
15	JTPE	Jasindo Tiga Perkasa Tbk	0.009	0.019	0.01
16	MISM	Metro Realty Tbk	0.871	0.547	-0.324
17	PWON	Pakuwon Jati Tbk	0.014	0.015	0.001
18	HERO	Hero Supermarket Tbk	0.088	0.01	-0.078
19	ASII	Astra Internasiona Tbk	0.004	0.007	0.003
20	IMAS	Indomobil Sukse Internasional Tbk	0.006	0.007	0.001
21	MDRN	Moder International Tbk	0.022	0.014	-0.008
22	DKFT	Central Omega Resources Tbk	0.006	0.015	0.009
23	KREN	Kresna Graha Sekurindo Tbk	0.011	0.022	0.011
24	BFIN	BFI Finance Indonesia Tbk	0.065	0.072	0.007
25	TOTO	Surya Toto Indonesia Tbk	0.09	0.026	-0.064
26	IDKM	Indosiar Karya Media Tbk	0.011	0.011	0
27	KLBF	kalbe Farma Tbk	0.008	0.012	0.004
28	SCMA	Surya Citra Media Tbk	0.013	0.012	-0.001
29	ACES	Ace Hardware Indonesia Tbk	0.009	0.015	0.006
30	BRNA	Berlina Tbk	0.009	0.013	0.004
31	JPFA	Japfa Comfeed Tbk	0.009	0.006	-0.003

32	ARNA	Arwana Citra Mulia Tbk	0.01	0.013	0.003
33	TOWR	Sarana Menara Nusantara Tbk	0.081	0.018	-0.063
34	AMRT	Sumber Alfaria Trijaya Tbk	0.024	0.03	0.006
35	JRPT	Jaya Real Property Tbk	0.061	0.102	0.041
36	TLKM	Telekomunikasi Indonesia Tbk	0.005	0.01	0.005

37	JKON	Jaya Konstruksi Tbk	0.049	0.055	0.006
38	MDLN	Modeland Realty Tbk	0.012	0.012	0
39	NIPS	Nipress Tbk	0.026	0.013	-0.013
40	ROTI	Nippon Indosari Corpindo Tbk	0.013	0.01	-0.003
41	INAI	Indal Aluminium Industry Tbk	0.075	0.038	-0.037
42	ALMI	Alumindo Light Metal Industry Tbk	0.037	0.089	0.052
43	TOTO	Surya Toto Indonesia Tbk	0.025	0.029	0.004
44	CMPP	Centris Multipersada Pratama Tbk	0.085	0.027	-0.058
45	BALI	Bali Towerindo Sentra Tbk	0.112	0.027	-0.085
46	ASJT	Asuransi Jasa Tania Tbk	0.157	0.171	0.014
47	CEKA	Wilmar Cahaya Indonesia Tbk	0.054	0.068	0.014

NO	STOCK CODE	NAME EMITEN	STOCK LIQUIDITY		Y1
			BEFORE	AFTER	
48	LMSH	Lionmesh Prima Tbk	0.196	0.089	-0.107
49	LION	Lion Metal Works Tbk	0.142	0.078	-0.064
50	MIKA	Mitra Keluarga Karyasehat Tbk	0.002	0.002	0
51	DSNG	Dharma Satya Nusantara Tbk	0.013	0.014	0.001
52	DLTA	Delta Jakarta Tbk	0.04	0.025	-0.015
53	HMSP	HM Sampoerna Tbk	0.003	0.004	0.001
54	IMPC	Impack Pratama Industri Tbk	0.004	0.006	0.002
55	KREN	Kresna Graha Investiana Tbk	0.006	0.005	-0.001
56	ASBI	Asuransi Bintang Tbk	0.042	0.054	0.012
57	ICBP	Indofood CBP Sukse Makmur Tbk	0.003	0.006	0.003
58	BTON	Betonjaya Manunggal Tbk	0.042	0.026	-0.016
59	MYOR	Mayora Indah Tbk	0.006	0.004	-0.002
60	ASMI	Asuransi Kresna Mitra Tbk	0.009	0.012	0.003
61	TOTO	Surya Toto Indonesia Tbk	0.008	0.008	0
62	SMSN	Selamat Sampurna Tbk	0.005	0.007	0.002

Source: [www.idx.co.id](http://www.idx.co.id), data processed



**Figure 3**  
**Stock Liquidity Graph**

**Table 5. Descriptive Statistics of Research Variables Stock liquidity**

Statistics		Stock Liquidity (before)	Stock Liquidity (after)
N	Valid	62	62
	Missing	0	0
Mean		.046177	.034742
Std. Error of Mean		.0145379	.0093380
Median		.012000	.014000
Mode		.0060	.0070*
Std. Deviation		.1144715	.0735273
Variance		.013	.005
Range		.8690	.5450
Minimum		.0020	.0020
Maximum		.8710	.5470
Sum		2.8630	2.1540

Output : SPSS Version. 22.00

Based on the above table shows that the stock liquidity before stock split has a minimum value of 0.0020, the

maximum value of 0.8710, the average value (mean) of 0.046177 and the standard deviation of 0.1144715. The mean value (mean) is greater than the standard deviation of 0.046177 < 0.1144715. Stock liquidity before stock split is highest in PT. Metro Realty Tbk (MTSM) equal to 0.0871, while stock liquidity before stock split lowest happened at company PT. Mika Keluarga Karyasehat Tbk (MIKA) of 0.002.

**Normality Test Price Earning Ratio (PER)**

Normality test aims to determine whether the data is normally distributed or not. If the data is normally distributed then the paired sample t test is used. Whereas if the data is not normally distributed then used stat test Man Whitney. As in the normality test used Kolmogorov-Smirnov test with the rule of use decision used is: (Singgih Santoso, 2001)

- If P value > 0,05 then data is normally distributed
- If P value < 0,05 then data is not normal distribution

The result of normality test by using computer program SPSS version 24 is as follows:

**Table 6. Normality Test Results**

One-Sample Kolmogorov-Smirnov Test			
		PER BEFORE	PER AFTER
N		62	62
Normal Parameters <sup>a,b</sup>	Mean	157.9710	22.8508
	Std. Deviation	280.64514	24.51067
Most Extreme Differences	Absolute	.331	.167
	Positive	.331	.167
	Negative	-.289	-.166
Test Statistic		.331	.167
Asymp. Sig. (2-tailed)		.000 <sup>c</sup>	.000 <sup>c</sup>

Output : SPSS version 22.00

From result of analysis of calculation of normality of Price Earning Ratio (PER) before stock split with Absolute value 0,331. When compared with kolmogorov table in sample N = 62 is 0.17272, then 0.331 > 0.17272 which means the data is normally distributed. This is evidenced by the results of probability test on SPSS that is seen on Asymp value. Sig. (2 tailed) value is 0.00 where < 0,05 means that the data is not normally distributed.

In the calculation of normality test Price Earning Ratio (PER) after stock split with Absolute value 0.167. When compared with kolmogorov table in sample N = 62 is 0.17272, then 0.167 < 0.17272, which means the data is not normally distributed. This is evidenced by the results of probability test on SPSS that is seen on Asymp value. Sig. (2 tailed) value is 0.00 where < 0,05 means that the data is not normally distributed.



Based on normality test result above, it can be seen that all value of Earning Ratio (PER) on research day has P value smaller than 0,05 so it can be concluded that all Price Earning Ratio (PER) data is not Normal. As a result of the data that is not normal distribution then the next test statistic used is the Wilcoxon test.

Wilcoxon test against Price Earning Ratio (PER) is done to know the difference of Price Earning Ratio (PER) before and after stock split event.

**Table 7. Test Results Wilcoxon Variabel Price Earning Ratio (PER)**

Test Statistics <sup>a</sup>	
	PER AFTER - PER BEFORE
Z	-6.145 <sup>b</sup>
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test  
 b. Based on positive ranks.

Output : SPSS Version. 22.00

Table 7 describes different T test for Price Earning Ratio (PER) stock activity before and after stock split event. It can be seen that the probability for 0.05 and the value of t-hit -6.145<sup>b</sup> is smaller than t-table 2,000, it can be concluded that the average Price Earning Ratio (PER) activity after the stock split event is different from before the break event stock. In other words the hypothesis explains that there is a difference in Price Earning Ratio (PER) between before and

after a proven event. The image of the acceptance region of this hypothesis 1 is as follows:



**Figur 3**

**Test of Stock Liquidity Normality**

Normality test aims to determine whether the data is normally distributed or not. If the data is normally distributed then the paired sample t test is used. Whereas if the data is not normally distributed then used stat test Man Whitney. As in the normality test used Kolmogorov-Smirnov test with the rule of use decision used is: (Singgih Santoso, 2001)

- If P value > 0,05 then data is normally distributed
- If P value < 0,05 then data is not normal distribution

**Table 8. Normality Test Result**

One-Sample Kolmogorov-Smirnov Test			
		Stock Liquidity ( Before )	Stock Liquidity ( After )
N		62	62
Normal Parameters <sup>a,b</sup>	Mean	.046177	.034742
	Std. Deviation	.1144715	.0735273
	Most Extreme Differences		
	Absolute	.359	.332
	Positive	.273	.332
	Negative	-.350	-.332
Test Statistic		.350	.332
Asymp. Sig. (2-tailed)		.000 <sup>c</sup>	.000 <sup>c</sup>
a. Test distribution is normal			
b. Calculated from data.			
c. Lilliefors Significance Correction			

Output : SPSS Version 22.00



*On the calculateon of the normality test Stock liquidity before stock split with Absolute value 0.359. When compared with kolmogorov table on sample N = 62 is 0.17272, then 0.350 > 0.17272 which means data Distribution is not normal. This is evidenced by the results of probability test on SPSS that is seen on Asymp value. Sig. (2 tailed) value is 0.00 where <0,05 means that the data is not normally distributed.*

*On the normality test calculation Stock liquidity after stock split with Absolute value 0.332. When compared with kolmogorov table in sample N = 62 is 0.17272, then 0.332 > 0.17272 which means data is not normally distributed. This is evidenced by the results of probability test on SPSS that is seen on Asymp value. Sig. (2 tailed) value is 0.00 where <0,05 means that the data is not normally distributed.*

*Based on the normality test results above can be seen that all values Liquidity stock on the day of the study has a value of P value smaller than 0.05 so it can be concluded that all data Price Earning Ratio (PER) diffuses not Normal. As a result of the data that is not normal*

*distribution then the next test statistic used is the Wilcoxon test.*

*Wilcoxon's test of Stock Liquidity is done to know the difference between stock trading volume before and after stock split event. In the first paired test will be test based on the day of the event that is 10 days before and 10 days after the event of stock splitting. Below we will describe the results of the analysis of the different test of trading volume activity before and after the stock split event.*

**Table 9. Test Result Wilcoxon**

Test Statistics <sup>a</sup>	
	Stock Liquidity ( after) - Stock Liquidity( before )
Z	-.253 <sup>b</sup>
Asymp. Sig. (2-tailed)	.800

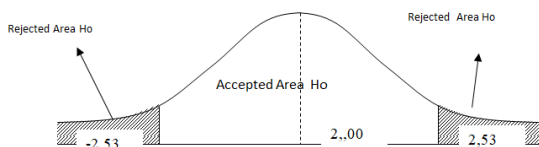
a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Output : SPSS Versi 22.00

*Table 9. describes different Z test for Liquidity Shares of stock activity before and after stock split event. It can be seen that the probability for 0.05 and the value of t-arithmetic -2.53b is smaller than t-table 2.00, it can be concluded that the average stock liquidity after stock split event is different from before stock split event occurs. In other words the hypothesis explains that there is a difference of stock liquidity between before and after a proven event.*

The image of the acceptance region of hypothesis 2 is as follows:



**Figure 4.**

**The Region of Acceptance of the Hypothesis 2**

**Analysis Price Earning Ratio (PER) and Stock Liquidity**

In this section is presented analysis of each Price Earning Ratio (PER) and Liquidity Shares of all samples. Hypothesis testing is done by using the level of significance ( $\alpha$ ) of 5% for the test on one side, the number of samples ( $n$ ) of 62 companies, degrees of freedom  $df = n - 1 = 61$ . So from table  $t$  distribution obtained  $t$  table value of 2000.

**Analysis Price Earning Ratio (PER) Before and After Stock Split**

The result of different test of Price Earning Ratio (PER) before and after Stock Split gives the output as shown in Table 11 and Table 12

**Table 10. Average test results and standard deviation Price Earning Ratio (PER)**

Before and After Stock Split (Paired Samples Statistics)				
	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 PER SEBELUM	157.9710	62	280.64514	35.64197
PER SESUDAH	22.8508	62	24.51067	3.11286

Output : SPSS Version 22.00

In Table 10 Shown a summary of statistics for the mean (mean) and standard deviation of the Price Earning

Ratio (PER) studied through the sample. The mean for the year before the stock split and after the stock split (Stock Split) amounted to 157.9710 and after 22.8508. so the average value after the stock split decreased 135.1202. whereas the standard deviation value in the year prior to stock split is 35.64197 and after stock split is 3.11286.

**Table 11. Different t Test results for Paired samples Price Earning Ratio (PER) before and after Stock Split**

	Paired Samples Test						T	df	Sig. (2-tailed)
	Paired Differences			95% Confidence Interval of the Difference					
	Mean	Std. Deviation	Std. Error	Lower	Upper				
Pair PER 1 SEBELUM- PER SESUDAH	135.12016	271.99415	34.54329	66.04658	204.19374	3.912	61	.000	

Output : SPSS Version 22.00

Table 11 shows different test results  $t$  for paired sample test. Based on Table 4.12, the value of  $t$  arithmetic for the year prior to stock split and after stock split event is 3,912 with a significance of 0.000. As it is well known that the  $t$  value of the statistical table for  $n = 62$  and  $\alpha = 0.05$  for test on one side is 2,000. thus the value of  $t$  table  $<$ value  $t$  arithmetic (2.000  $<$ 3.912) so that the value of  $t$  arithmetic is in the rejection region  $H_0$ . While the value of significance obtained results  $\alpha$  hit  $0.059 > 0.00$  so that  $H_0$  is rejected. Thus it can be

concluded that  $H_0$  is rejected,  $H_1$  is accepted. This means that there is a significant difference in the increase in Price Earning Ratio (PER) at the company go public in Indonesia Stock Exchange between before and after doing stock split.

**Analysis Stock Likuidity before and after Stock Split**

Different  $t$  test results Stock liquidity before and after Stock Split gives the output as shown in Table 4. 11 and Table 12

**Table 12. Average Test Result and Standard Deviation of Stock Liquidity before and after Stock Split**

Paired Samples Statistics				
	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Stock Liquidity before	.046177	62	.1144715	.0145379
Stock Liquidity after	.034742	62	.0735273	.0093380

Output : SPSS Versi 22.00

In Table 12 Shows the statistical summary for the mean and standard deviation values of the stock liquidity examined through the sample. Mean value for the year prior to stock split and after stock split (Stock Split) is 0.46177 and after 0.34742. so the average value after stock split (stock split) decreased by 0.11435. whereas the standard deviation value in the year prior to stock split is 0.145379 and after stock split is 0.0093380.

**Table 13. Different  $t$  test result for Sample Pairwise Stock Liquidity before and after Stock Split**

Paired Samples Test								
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	Df	Sig. (2-tailed)
				Lower	Upper			
				Paired Differences				
Pair 1 Stock Liquidity before	.0114355	.0488177	.0061999	-.0009619	.0238329	1.844	61	.070

Output : SPSS Version 22.00

Table 13 shows different  $t$  test results for paired sample test. Based on Table 12, the value of  $t$  arithmetic for the year before stock split and after stock split (Stock Split) amounted to 1.844 with a significance of 0.000. As it is well known that the  $t$  value of the statistical table for  $n = 62$  and  $\alpha = 0.05$  for test on one side is 2,000. thus the value of  $t$  table  $<value\ t\ arithmetic\ (2.000) > 1.844$  so that the value of  $t$  arithmetic is in the rejection region  $H_0$ . While the value of significance obtained results  $\alpha\ hit\ 0.059 > 0.00$  so that  $H_0$  is rejected. Thus it can be concluded that  $H_0$  is rejected,  $H_1$  is accepted. This means that there is no significant difference in the increase of stock liquidity in the company go public in Indonesia Stock Exchange between before and after doing stock split.

**Different Price Earning Ratio (PER) Before and After Stock Split**

Based on the analysis of data that has been done, it can be obtained Price Earning Ratio (PER) before stock split compared with after stock split for all samples shown by Table 13

**Table 14. Summary of Different Test Results t for Price Earning Ratio (PER) sample before stock split and after stock split for all samples**

Ratio	t count	t table	$\alpha$	Ha
PER	3.912	2.000	0.05	Rejected

Output : SPSS Version 22.00

As indicated by Table 4:14, Price Earning Ratio (PER) before stock split indicates Ho's rejection area, which means that the alternative hypothesis Ha for ratio before stock split is accepted by t value analysis (3.912) greater than t table value (2000 ) with significance level ( $\alpha$ ) 0.05 and sum (n) = 62.

It can be concluded that there is a difference of Price Earning Ratio (PER) before and after stock split as for the factors that cause the difference of Price Earning Ratio (PER) before and after stock split due to several factors namely Dividend Payout Ratio (DPR) , Earning Growth, Variance of Earning Growth, and Financial Leverage.

**Differences in Stock Liquidity before and after Stock Splits**

**Table 15. A summary of the different test results t for a sample of stock liquidity before stock split and after stock split for all samples**

Ratio	t count	t table	A	Ha
Stock Liquidity	1.844	2.000	0.05	Rejected

Output : SPSS Version 22.00

As indicated by Table 15, Stock liquidity before stock split indicates the rejection area of Ho, which means that the alternative hypothesis Ha for ratio before stock split is accepted by t value analysis (1.844) smaller than t table value (2,000) with significance level ( $\alpha$ ) 0.05 and number (n) = 62. And the rejection of the hypothesis Stock liquidity due to the value of t arithmetic (1.844) ratio Liquidity of stock is smaller than the value of t table (2,000) with significance level ( $\alpha$ ) 0.05 and number of samples (n) = 62. This means that the value of t arithmetic is in the rejection region Ho. While the value of significance obtained results a hit  $0.059 > 0.00$  so that Ho is rejected. Thus it can be concluded that Ho is rejected, H1 is accepted. This means that there is no significant difference in the increase of stock liquidity in the company go public in Indonesia Stock Exchange between before and after doing stock split.

*This is in accordance with the opinion of Jogiyanto (2010: 565). The absence of significant difference between bid ask spread before and after stock split announcement basically means that stock split announcement does not have enough information that can influence investor decision in making investment which in the end can not be considered as effort of company in increasing stock liquidity.*

#### **D. Conclusion**

*There is a significant difference in Price Earning Ratio (PER), either before stock split or Price Earning Ratio (PER) after stock split. According to the results of calculations by analysis with the normality test where the results of analysis of  $0.331 > 0.17272$ , which means data distribution is not normal. the result of hypothesis testing using non parametric test, Wilcoxon Sign Rank test with  $\alpha = 0.05$  obtained p-value smaller than alpha ( $\alpha$ ) which result  $-2, < 2,000$  then the result is difference Price Earning Ratio (PER), either before stock split and Price Earning Ratio (PER) after stock split. And with paired sample t-test obtained t test results with  $t \text{ count} > t \text{ table}$  ( $3,912 > 2,000$ ) can be concluded then  $H_0$  accepted means there is a*

*difference between price earnings ratio (PER) each sample company, either before stock split or price earnings ratio (PER) after the stock split event.*

*That there is no significant difference in stock liquidity, either before stock split or liquidity of stock after stock split. According to the calculation results with the analysis with the normality test where the results of analysis of  $0.167 < 0.17272$ , which means the data is not normally distributed. the result of hypothesis testing using non parametric test, Wilcoxon Sign Rank test with  $\alpha = 0.05$  obtained p-value smaller than alpha ( $\alpha$ ) which result  $-2,53 < 2,000$  then the result there is difference Liquidity of stock, either before stock split or Liquidity stock after stock split. And with paired sample t-test obtained t test results with  $t \text{ count} > t \text{ table}$  ( $1.844 > 2,000$ ) can be concluded then  $H_0$  accepted. meaning there is no difference between the stock liquidity of each sample company, either before stock split or liquidity of stock after stock split event.*

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