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RESEARCH ARTICLE

THE PREDICTION OF COMPANY FINANCIAL PERFORMANCE BANKRUPTCY BY RATIO, STOCK AND Z-SCORE(PT MAIN TBK).

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Abstract

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The objective of this study is to analyze The Predict of Company Financial Performance Bankruptcy By Ratio, Stock An Z-Score whether it is good or bad with PT Main TBK as the study object.

Based on the study objective , the hypotheses are : 1) Campany financial performance is good if it is measurement by using the ratio analysis tool; 2) Company financial performance is good if it measured uses stock analysis tool; 3) Company financial performance is good if it uses Z-score analysis tool.

The study design used was descriptive study, while the study method used was through documentation approach. The study sample is financial report from 2014 to 2017 of PT Main TBK. The sampling technique used area sampling (Sugiono,2009)). Analysis methods used were ratio analysis, stock analysis and z-score analysis to answer the hypotheses.

The study result based on descriptive analysis toward variable used on company financial performance is proven to be good. The study result based based on the three analysis tools toward variable used on company financial performance is proven to be good. The three analysis result analysis toward the hypotheses test based on the empirical data of 3 hypotheses proven are the ratio analysis result toward company financial performance is proven to be good , the stock analysis toward company financial performance is proven to be good, and the Z score analysis result toward company financial performance is proven to be good.

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Introduction:-

Online business rapidly grows nowadays. This global business has reached all over the world and one of this is retail online business. This business does not need huge investment . With just a little amount of money, this business can run well as long as the products suit the customers' taste or interest. Buyers do not need to come to see the stuff since they just need to use their cell phone to look for the items needed. The order is via online, then pay it by using e-money. Finally the order will be delivered to their front door. The industry that has the impact of the advanced technology is retailed industry such as Ramayana, Pasar Raya, Hypermart, Carefour etc that start fall apart (Kompas newspaper, 2017). Meanwhile , the retail survived is PT Main TBK even though some branches have been closed down (Pre-research)

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Bankruptcy is a major problem that needs to be wary about by every company . If the company is bankrupt it means the company is failed in running its business. Therefore, there must be an early analysis on bankruptcy prediction (Demitras,2005)

Company ability to pay its debt, not only the short term but also the long term, company ability to provide working equity, company ability to run the business, company ability to make profit and pay devidend to the investors are the profile of healthy company. PT Main TBK becomes the object of the study where the researchers will predict the financial performance. Financial healthy performance will be analyzed throught ratio analysis,stock analysis and z - score analysis

Identification and Study Framework:-

1. Is the financial performance condition of PT Main TBK good if it is measured by Ratio Analyisis
2. Is the financial performance condition of PT Main TBK good if it is measured by Stock Analyisis
3. Is the financial performance condition of PT Main TBK good if it is measured by Z-score

Literature:-

Company financial perdormance:-

Dimitras (2005) stated that company financial performance is an attainment achieved by the company that is stated in form of money value and described in a form of company financial report. Company financial performance can be measured by using ratio analysis,stock analysis and z-score analysis.

Ratio Analysis:-

Ratio analysis is an analysis tool used to measure the company financial performance from the liquidity, solvability, activity and profitability (Athur *et.al.* , 2000)

Stock Analysis:-

According to Jacobson *et.al*. (2004) stock is a form of possession of company under the name of sameone in form of paper

Stock analysis is used to measure stock price and company condition with the measurement tools of earnings per share, price earning ratio, devidend per share, devidend yield and book value (Jacobson *et.al*., 2004)

Z-score Analysis:-

Z-score is an analysis tool of acceptable bankruptcy prediction and can be used to predict future possibility of a company image whether it is in normal or bankrupt condition. Zscore is current assets , current liability, working capital , total assets (A); earning before tax , total assets (B) ; earning before tax , current liability (C); sales, total assets (D) , (Altman , 1968)

Hypotheses:-

Financial performance condition is measured by ratio analysis:-

Financial performance condition is good measured by ratio analysis

Financial performance condition is measured by stock analysis:-

Financial performance condition is good measured by stock analysis

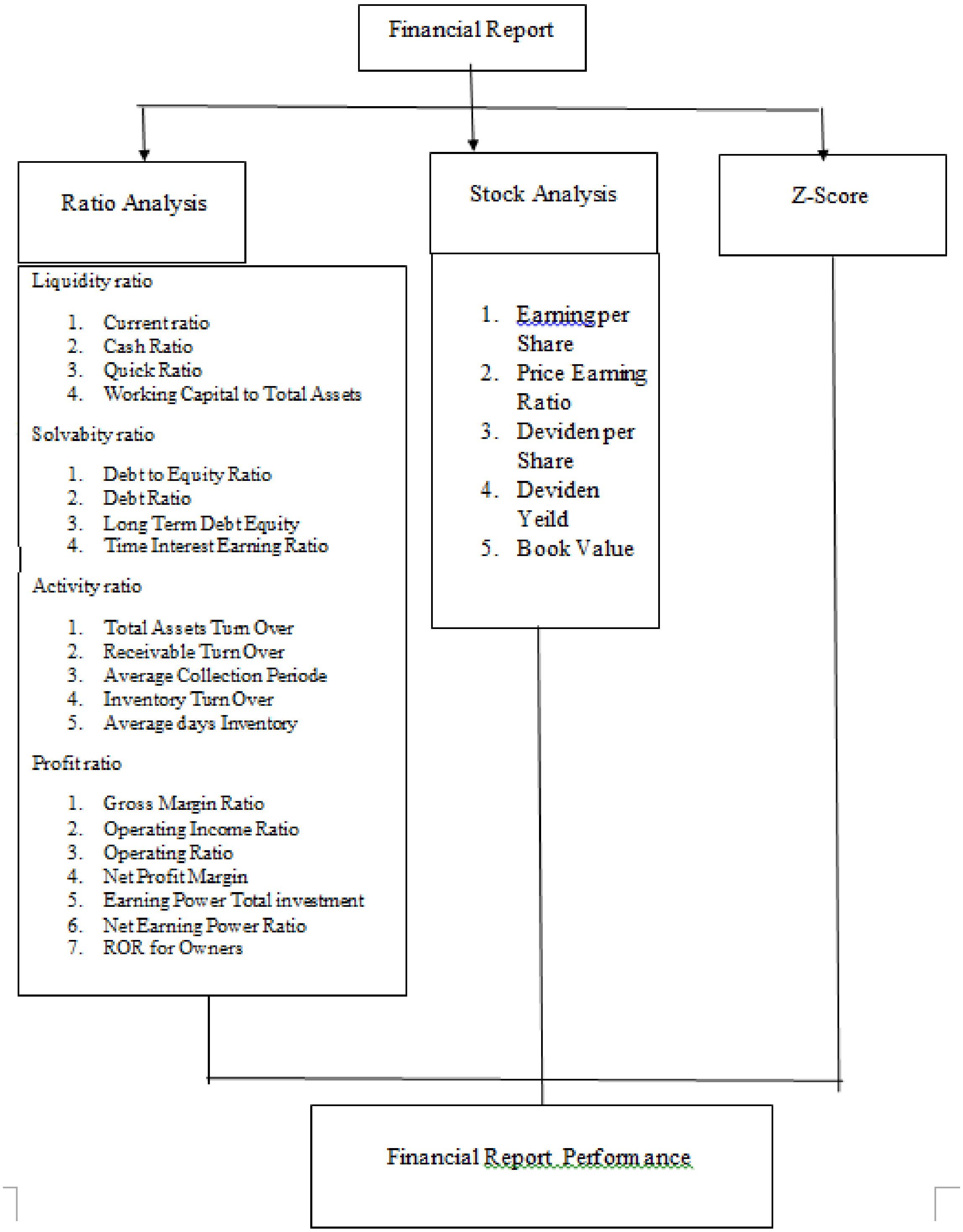
Financial performance condition is measured by z-score analysis:-

Financial performance condition is good measured by z-score analysis

Study Concept:-

According to the study context , it creates study conceptual model The Prediction of Company Financial Performance Bankruptcy by Ratio, Stock and Z- score, and the analysis tools are ratio analysis, stock analysis and z-score with PT Main TBK as the study object **Figure 1.**

Figure 1:-Conceptual Model



Study Methodology:-

The design of this study uses descriptive study through secondary data approach . the number of samples are 4 periods of financial report in PT Main TBK, stars from 2014 to 2017 in Jakarta , Indonesia. The sampling technique is area sampling (Sugiono, 2009)

Analysis tools used to describe the study variables are by using ratio analysis, stock analysis and z-score.

Research Result:-

Ratio analysis:-

The result of liquidity ratio can be seen in **Table 1.**

Table 1:-Liquidity ratio (Rp . million)

		2014	2015	2016	2017
1	Current Ratio Current assets Current liability	83% 2.111.327 2.518.524	93% 2.272.741 2.439.014	115% 2.974.000 2.586.354	113% 2.973.745 2.610.824
2	Cash Ratio Cash Current liability	31% 785.895 2.518.521	39% 946.658 2.439.014	66% 1.712.844 2.566.354	61% 1.582.817 2.610.824
3	Quick Ratio Carent assets - Inventory Current liability	46% 2.111.517- 955.811 2.518.521	47 % 2.272.741- 1.107.811 2.439.014	77% 2.974.000- 995.276 2.566.354	75% 2.973.745- 1.005.484 2.610.824
4	Working Capital to Total Assets Current assets -C. liabilities Total assets	-16 % 2.111.507- 2.518.521 2.421.954	5 % 2.272.741- 2439.014 2.889.291	7 % 2.974.000- 2.586.3534 4.858.878	6 % 2.973.745- 2.610.824 5.427.426

The result of solvability ratio can be seen in **Table 2.**

Table 2:-Solvability ratio (Rp . million)

		2014	2015	2016	2017
1	Debt to Equity Ratio Total liability Equity	2108 % 3.253.691 150.263	259% 2.783.124 1.106.167	161 % 3.003.635 1.855.243	130% 3.099.441 2.377.965
2	Debt Ratio Total liability Total Assets	95% 3.253.691 3.412.954	71 % 2.783.126 3.889.291	62 % 3.003.635 4.858.878	57 % 3.099.441 5.427.426
3	Long term Debt Equity Long term liability Equity	490 % 735.170 150.263	31% 344.110 1.106.167	22 % 415.281 1.855.243	20 % 488.617 2.377.965
4	Time Interest Earning Ratio EBIT	11 X	30 X	230 X	159 X

	Interest of long term liability	1.850.594 169.097	2.244.621 73.702	2.532.666 11.750	2.396.300 15.474

The result of activity ratio can be seen in **Table 3.**

Table 3:-Activity ratio (Rp . million)

		2014	2015	2016	2017
1	Total assets turn over Sales Total assets	2.3 X 7.925.547 3.412.254	2.3 X 9.006.893 3.889.291	2 X 9.897.046 4.858.878	1.8 X 10.023.961 5.427.426
2	Receivable turn over Sales Average of receivable	220 X 7.925.547 36.716	140 X 9.006.893 64.327	471 X 9.897.046 21.469	589 X 10.023.961 17.763
3	Average collection periode Receivable X 360 Sales	1.66 hari 36.716 X 360 7.925.547	2.57 hari 64.327 X 360 9.006.893	0.78 hari 21.469 X 360 9.897.046	0.63 hari 17.763 X 360 10.023.961
4	Inventory turn over Cost of goods Inventory	3.5 X 3.335.638 955.231	2.8 X 2.877.507 1.007.811	3.1 X 3.085.279 995.276	3.7 X 3.762.021 1.005.484
5	Average days inventory Inventory X 360 Cost of goods	103 hari 955.231 X 360 3.335.638	126 hari 1.007.811 X 360 2.877.507	116 hari 995.276 X 360 3.085.279	98 hari 1.025.484 X360 3.762.021

The result of profit ratio can be seen in **Table 4.**

Table 4:-Profit ratio (Rp . million)

		2014	2015	2016	2017
1	Gross margin ratio Gross profit sales	73 % 5.818.040 7.925.543	62 % 5.671.255 9.006.893	62 % 6.211,767 9.897.046	62 % 6.261.940 10.023.961
2	Operating income ratio Operating income Sales	23% 1.850.544 7.925.543	24 % 2.244.821 9.006.893	35% 3.532.666 9.877.046	23 % 2.395.300 10.023.961
3	Operating ratio GGS + expenses Sales	207 % 2887.507 + 2.937.013	75% 3.335.638 + 3.341.741 +	74% 3.685.279 + 3.683.671 +	76% 3.762.021 + 3.852.299 +

		+ 255.951 / 2.925.593	123.660 / 9.006.893	31781 / 9.877.046	18.273 / 10.023.961
4	Net profit margin	17 %	20 %	20%	19 %
	Profit after tax / Sales	1.419.116 / 7.925.543	1.780.848 / 9.006.893	2.019.705 / 9.877.040	1.907.077 / 10.023.960
5	Earning power total invesment	54 %	57 %	68 %	44 %
	Earning before tax / Total Assset	1.850.546 / 3.421.954	2.244.821 / 3.899.291	3.352.666 / 4.858.878	2.395.300 / 5.427.421
6	Net earning power ratio	41 %	45 %	41 %	35 %
	Earning after tax / Total asets	1.419.116 / 3.421.954	1.780.848 / 3.899.291	2.019.705 / 4.858.878	1.907.077 / 5.427.421
7	ROR for owners	946 %	160 %	108 %	80 %
	Earning after tax / Equity	1.419.116 / 150.763	1.780.848 / 1.106.167	2.019.705 / 1.855.243	1.907.077 / 2.377.965

Stock analyis:-
The result of stock analysis can be seen in **Table 5.**

Table 5:-Stock analysis (Rp . million)

		2014	**2015**	**2016**	**2017**
1	Earning per share	486.498	610.506	692.391	653.780
	Earning after tax / Number of shares	1.419.116 / 2.917.	1.780.848 / 2.917.	2.019.905 / 2.917.	1.907.077 / 2.917
2	Price earning ratio	112 %	89 %	78 %	83 %
	Stock market price / Earning per share	5.450 / 486.408	5.450 / 610.506	5.450 / 692.391	5.450 / 653.780
3	Deviden per share	164	291	427	491
	Deviden payment by cash / Number of shares outstanding	480.448 / 2.917	851.448 / 2.917	1.246.826 / 2.917	1.434.023 / 2.917
4	Deviden Yeild	3 %	5 %	7 %	9 %
	Deviden per share / Stock market price	164 / 5.450	291 / 5.450	427 / 5.450	491 / 5.450
5	Book value	51.478	379.213	636.010	815.209
	Owner's equity / Number of shares outstanding	150.163 / 2.917	1.106.167 / 2.917	1.855.243 / 2.917	2.377.965 / 2.917

Z-score:-
The result of Z-score analysis can be seen in **Table 6.**

Table 6:-Z- score (Rp . million)

	2014	**2015**	**2016**	**2017**
Current Assets	2.111.327	2.272.741	2.974.000	2.973.745
Current liability	2.518.521	2.439.014	2.566.354	2.610.824
Working Capital (CA- CL)	(407.014)	(166.273)	407.651	362.921
Total Assets	3.421.954	3.889.291	4.858.878	5.427.426
A (WC :TA)	-0.11	- 0.04	0.08	0.66
Earning before tax	1.850.546	2.244.821	3.532.666	2.395.300
Total Assets	3.421.954	3.889.291	4.858.878	5.427.426
B (E : TA)	0.54	0.57	0.72	0.44
Earning before tax	1.850.546	2.244.821	3.532.666	2.395.300
Current Liability	2.518.521	2.439.014	2.566.354	2.610.824
C (E : CL)	0.73	0.92	1.97	0.91
Sales	7.925.453	9.006.893	9.877.048	10.023.967
Total Assets	3.421.954	3.889.291	4.858.878	5.427.426
D (S: TA)	2.31	2.31	2.03	1.84
Z -Score (A+B+C+D)	3.67	3.84	4.2	3.25
Company condition Z -score > 0.862	3.67 > 0.862 Good	1.84 >0.862 Good	4.2 >0.862 Good	3.25 > 0.862 Good

Result and Discussion:-

Ratio analysis value

Liquidity ratio analysis:-

Campany liquidity is good when a company is able to fulfil its short -term debt with current assets as seen in **Table 7.**

Table7:-Liquidity ratio

		2014	**2015**	**2016**	**2017**	**Condition**
1	Current ratio	83%	93%	115%	113%	Good
2	Cash ratio	31%	39%	66%	61%	Good
3	Quick ratio	46%	47%	77%	75%	Good
4	Working capital ratio	-16 %	5%	7%	6%	Good

Current Ratio:-

The ability of current assets to pay for the current liability from 2014 to 2016 increased . In 2017 current ratio of 113 % where current liability Rp 1,- guaranteed by current assets of Rp.1,3 with meant the company is still able to fully pay current liability by using current assets as seen in **Table 7**.

Cash Ratio:-

Measuring cash ability in paying for the current liability in **Table 7** from year to year has increased . In 2017 current liability Rp 1,- is guaranteed by cash Rp 0.61 .

Quick ratio:-
The ability of current assets decreased by stock to pay for current liability . In the **Table 7** it has increase in 2017 of 75 % not too different with the previous year.

Working capital ratio:-
Working capital ratio achived from total assets used for company operasional . In **Table 7** working equity to total assets is still minus, and started from 2015 to 2017 it was getting better.

Analisa Ratio Solfabilitas:-
Company solvability is assumed good if company has adequent assets to pay for all of its debts as seen in **Table 8.**

Table 8.:-Ratio Solfabilitas

		2014	2015	2015debt	2017	Condition
1	Debt to equty ratio	2108 %	259%	161%	130%	Good
2	Debt ratio	95 %	71%	62%	57%	Good
3	Long term debt equity	490 %	31%	22%	20%	Good
4	Time interest earning ratio	11 X	30 X	230 X	159 X	Good

Debt to Equity Ratio:-
Company fulfils its short-term and long-term debt by using its own equity. In **Table 8** , debt to equity ratio from year to year has decreased which meant the equty increased and debt decreased.

Debt Ratio:-
Company fulfils its short-term and long-term debt by using its total assets. In **Table 8** debt ratio in 2014 to 2017 decreased which meant the company increased total assets more and decreased debt

Long term Debt Equity:-
Company in long-term debt is paid by using its own equity as seen in **Table 8** long termdebt equity trend decreased . In 2017 it was 18 % which meant the company slightly depended on debt but dependent more its own equity.

Time Interest Earning Ratio:-
Time needed by the company to fully pay for its debt by using company earning is quite good as seen in **Table 8** where time interest earning ratio in 2014 to 2016 increased . Then, in 2017 it was 159 X with a little decrease compared with 2016

Activity ratio:-
Company activity ratio is assumed good where the company shows its effectiveness in using assets possessed

Table 9:-Activity ratio

		2014	2015	2016	2017	Condition
1	Total assests turn over	2.3 X	2.3 X	2 X	1.8 X	Ugly
2	Receivable tur over	220 X	140 X	471 X	589 X	Good
3	Average collegtion periode	1.66 days	2.57 days	0.78 days	0.63 days	Good
4	Inventory turn over	3.5 X	2.8 X	3.1 X	3.7 X	Good
5	Average days inventory	103 days	126 days	116 days	98 days	Good

Total assets turn over:-
Company assets turn over was not effective and efficient. In the **Table 9**, in 2014 to 2017 it decreased which meant sale to total assets increase has not been followed by total assets turn over .

Receivable turn over:-
Receivable turn over is measuring how many times receivable turn over to become cash in 1 year as seen in **Table 9** from 2014 to 2017 it has increase which last year it was 589 X .

Average collection periode:-
Receivable average periode is < 30 days , as seen in **Table 9,** in2014 to 2017 it showed receivable average period < 30 days (good).

Inventory turn over:-
Inventory turn over ran effectively as seen in **Table 9** in 2015 to 2017 increased which means the increase of good main proce is followed by increase in inventory

Average days inventory:-
Average days inventory is adequately good which is the average day of inventory becomes good stock year to year decreased . it meant inventory did not last long as stock. Inventory was used for goods and sold goods as seen in **Table 9**

Profit Ratio:-
Profitability ratio of the company in making profit in certain period is quite good as seen in **Table 10.**

Table10:-Profit Ratio

		2014	**2015**	**2016**	**2017**	**Condition**
1	Gross margin ratio	6.9%	62%	62%	63%	Good
2	Operating income ratio	23%	24%	35%	23%	Good
3	Operating ratio	76%	75%	74%	76%	Good
4	Net profit margin	17%	20%	20%	19%	Good
5	Earning power total investment	54%	57%	72%	44%	Good
6	Net earning power ratio	41%	46%	41%	35%	Good
7	ROR for owners	946 %	160%	108 %	80%	Good

Gross margin ratio:-
In **Table 10** company ability in having gross profit through sale activity from year to year has been increasing

Operating income ratio:-
Company operating income ratio ran well from 2015 to 2017 and keep growing as seen in **Table 10**

Operating ratio:-
Measuring main price and operasional expense compared with selling activity from year to year is quate stable with operating ratio between 74% and 76% as seen in **Table 10 Table 10**

Net profit margin:-
In **Table 10** Company net profit after taxes toward sale is between 17% and 19% the change is not significant which meant the company is still able to make net profit through sale .

Earning power total investment:-
The level of assets return through net profit before taxes in 2014 to 2016 increased. In 2017 earning power total assets decreased sharply to be 44% , however, this level is still considered good enough as seen in **Table 10**

Net earning power ratio;-
The level of assets return through net profit after taxes in 2014 to 2016 increased . In 2017 net earning power ratio slightly decreased to 35 % , this level is still considered good enough as seen in **Table 10.**

ROR for orners:-
Profit after taxes compared with owner equity in 2014 to 2016 increased . In 2017 ROR for Owners slightly decreased to 80 % , however, it is still consider good enough as seen in **Table 10.**

Stock analysis:-
Sock analysis measures company ability in making stocks interesting for the investors is assumed really good as seen in **Table 11.**

Table 11:-Stock analysis

		2014	2015	2016	2017	Condition
1	Earning per share	486.498	610.506	692.391	653.780	Good
2	Price earning ratio	112 %	89 %	78 %	83 %	Good
3	Deviden per share	164	291	427	491	Good
4	Deviden yeild	3%	5%	7%	9 %	Good
5	Book value	51.478	379.213	636.010	815.209	Good

Earning per share:-
Measuring company ability in making earnings per share as seen in **Table 11** , earning per share in 2014 to 2016 increased . In 2017 it was slightly decreased which meant the company is still able to earn profit.

Price earning ratio:-
Price earning ratio describes company earning toward stock price that shows the return is decrease and increases, the company condition is good that price pershare stable can be seen in **Table 11.**

Devidend per share;-
Deviden per share measures dividend return level given by company to the stock holder from 2014 to 2017 increased . In **Table 11** , in 2017 company was able to give dividend of Rp.514.226 per share distributed

Devidend yield:-
In **Table 11** dedivend yield measures dividend yield level given by each share compared with stock market price distributed shows increasing . In the last 2017 it showed devidend yield 9,1% .

Book value:-
Owner equity compared with distributed stock number increases every year which means equity increase is also followed by the increase number of share distributed as seen in **Table 11.**

Z-score:-
A good Z-score analysis of financial performance is > 0.862 as seen in **Table 12.**

Table 12:-Z- score analysis

	2014	2015	2016	2017
Current assets	2.111.327	2.272.741	2.974.000	2.973.745
Current liability	2.518.521	2.439.014	2.566.354	2.610.824
Working Capital	(407.014)	(166.273)	407.651	362.921
Total assets	3.421.954	3.889.291	4.858.878	5.427.426
A	-0.11	- 0.04	0.08	0.66
Ebit	1.850.546	2.244.821	3.532.666	2.395.300
Total assets	3.421.954	3.889.291	4.858.878	5.427.426
B	0.54	0.57	0.72	0.44
Ebit	1.850.546	2.244.821	3.532.666	2.395.300
Current liability	2.518.521	2.439.014	2.566.354	2.610.824
C	0.73	0.92	1.97	0.91
Sales	7.925.453	9.006.893	9.877.048	10.023.967
Total assets	3.421.954	3.889.291	4.858.878	5.427.426
D	2.31	2.31	2.03	1.84

Z -Score (A+B+C+D)	3.67	3.84	4.2	3.25
Condition	Good	Good	Good	Good

The analysis result of z-score in **Table 12** of financial performance condition from 2014 to 2017 where the z-score in this table is > 0,862, which means financial performance condition the company is good

The Conclusion of this study is hypotheses test based on empirical data is proven tobe good. There are three that are proven with are the ratio analysis result toward company financial performance is proven to be good , the stock analysis toward company financial performance is proven to be good, and the Z score analysis result toward company financial performance is proven to be good.

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