THE IMPACT OF FINANCIAL RATIOS ON PRICE TO BOOK VALUE (PBV) IN AUTOMOTIVE AND COMPONENT SUB SECTOR LISTED IN IDX WITHIN 2007-2016 PERIODS

DAMPAK DARI RASIO KEUANGAN TERHADAP HARGA PADA NILAI BUKU PADA SUB SEKTOR OTOMOTIF DAN KOMPONEN YANG TERDAFTAR DI BEI SELAMA PERIODE 2007-2016

By
Theresia C. Lebo[1]
Hizkia H. D. Tasik[2]

[1,2] Faculty of Economics and Business
International Business Administration Program, Management Department
Sam Ratulangi University Manado

email:
[1]theresialebo5@gmail.com
[2]hizkiatasik1@gmail.com

Abstract: *An automotive industry has an important role in boosting Indonesia's economic growth. Every company has an expectation to sustainably operate, but there are financial risks that may interupt the operation. Therefore the automotive and component industries need an assessment of financial performance as a description of the financial condition. If the financial performance is good then the firm value will be good. One indicator that affects the firm value is price to book value (PBV). PBV can be used to indicate about the stock value. The purpose of this research is to determine the impact of financial ratios on the price to book value (PBV). For this purpose the study, use the data of 12 companies listed in IDX from 2007-2016 periods and a panel data regression with random effect model. Based on results, there are a positive relationships among ROA, current ratio and debt to asset ratio, and the price to book value. In addition, the effect of ROA on price to book value is significant. While the current asset and debts to asset ratio have no significant effect on price to book value.*

Keywords*: roa, current ratio, debt to asset ratio, price to book value, panel data regression*

Abstrak: Industri otomotif memiliki peran dalam mendorong pertumbuhan ekonomi Indonesia. Setiap perusahaan memiliki harapan untuk beroperasi secara berkelanjutan, namun ada risiko finansial yang dapat mengganggu operasi. Oleh karena itu, industri otomotif dan kompenen memerlukan penilaian kinerja keuangan sebagai gambaran kondisi keuangan. Jika kinerja keuangan bagus maka nilai perusahaan akan bagus. Salah satu indikator yang mempengaruhi nilai perusahaan adalah harga pada nilai buku (PBV). PBV dapat digunakan untuk menunjukkan nilai saham. Tujuan dari penelitian ini adalah untuk mengetahui dampak rasio keuangan terhadap harga pada nilai buku (PBV). Untuk keperluan penelitian ini, menggunakan data 12 perusahaan yang terdaftar di BEI selama periode 2007-2016 dan regresi data panel dengan model efek acak. Berdasarkan hasil, ada hubungan positif antara ROA, rasio lancar, dan rasio hutang terhadap aset dan harga pada nilai buku. Selain itu, pengaruh ROA terhadap harga pada nilai buku signifikan. Sedangkan rasio lancar dan rasio hutang tidak berpengaruh signifikan terhadap harga pada nilai buku.

Kata kunci: roa, rasio lancar, rasio hutang terhadap aset, harga pada nilai buku, regresi data panel

INTRODUCTION

Research Background

The manufacturing industry is a sector that has an influence on the Indonesian economy. Economic growth and manufacturing industry is currently experiencing a very rapid growth that resulted in increasingly tight global business competition. This should be paying attention every company by creating new innovations, especially increase productivity. The manufacturing sector is a sector that investors are interested in as one of their investment targets because they think it is a good prospect to make a profit. As a good exporting company is still in the form of raw or already in though, this could have an impact on the company's financial performance.

Indonesia has 10 main commodities in boosting economic growth, one of that is automotive industry. The automotive industry has long been instrumental in boosting Indonesia's economic growth. The automotive industry is one of the priority industry priorities to be developed to enhance the growth of product competitiveness for the manufacturing sector to give an increasing contribution to the value of exports and economic growth. In its development, the automotive industry company needs to evaluate the financial performance of the company is a description of the financial condition of a company presented through quarterly or annual financial reports to provide an overview of the results achieved and the company's financial condition can be controlled properly and efficiently. Assessment of financial performance can be seen from the measure of several ratios, one of which is intended to determinant the ratio of profitability, liquidity, and solvency of the company. Some studies have discussed these ratios (Antou & Tasik, 2017., Prasetya & Tasik, 2017).

If the company's financial performance is good then the firm value will be good. One of the indicators that affect the value of the firm is the price to book value (PBV). Price to book value (PBV) is used by investors to know the value of the stock. Price to book value (PBV) is obtained by dividing the stock price in the stock market with the book value of the stock. Price to book value (PBV) has an important role as a consideration for investors to choose shares to be purchased. Price to book value (PBV) shows how far a company is able to create a company's value on the amount of capital invested.

There are 12 automotive companies listed on IDX in the last 10 years namely, Astra International, Astra Otoparts, Indomobil Sukses International, Multistrada Arah Sarana, Good Year, Nipress, Multi Prima Sejahtera, Gajah Tunggal, Selamat Sejahtera, Indokordsa, Indospring and Prima Aloy Steel Universal. There are some trend ratios in the automotive and its components sub-sector listed on IDX 2007-2016:

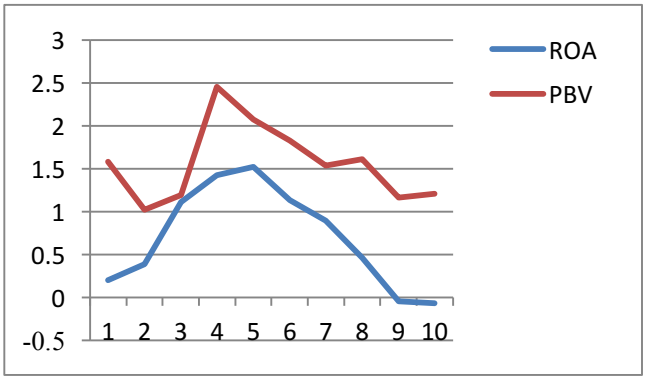

Figure 1 Trend ratio of return on asset on price to book value (PBV) within 2007- 2016 In automotive and component industries

Source: Data Processed, 2017

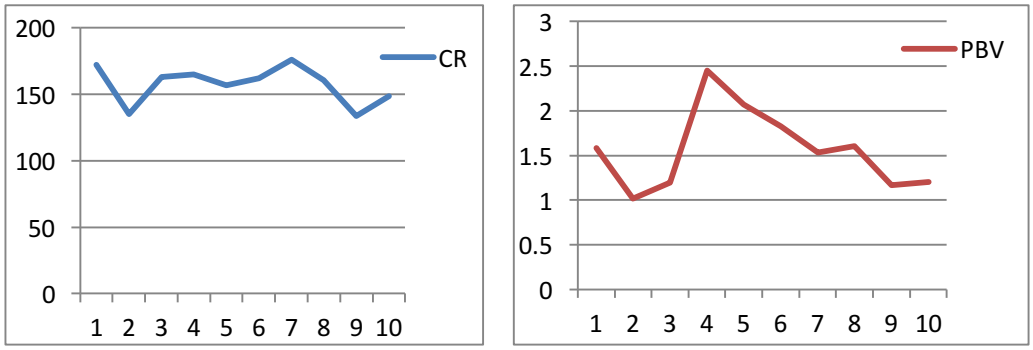

Figure 2 Trend ratio of current asset to current liabilities on price to book value within 2007-2016 In automotive and component industries

Source: Data Processed, 2017

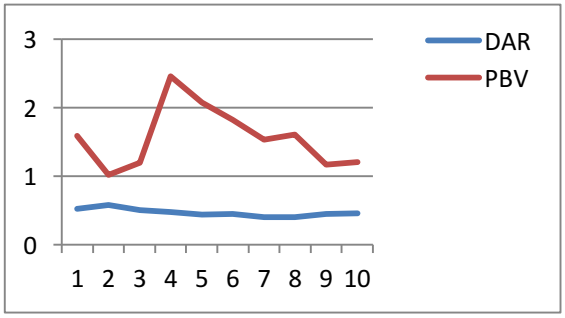

Figure 3 Trend ratio of total debt to total assets on price to book value within 2007-2016 In automotive and component industries

Source: Data Processed, 2017

Based on the condition, the healthier the company's financial condition signifies the value of the company is good and value of price to book value (PBV) is also good. This research will be conducted to identify the influence of financial ratios, especially profitability, liquidity and solvency ratios with the price to book value (PBV).

Research Objectives

The purpose of this research is to find out if the return on assets (ROA), current ratio (CR) and debt to asset ratio (DAR) have a significant effect on price to book value (PBV).

THEORITICAL FRAMEWORK

Financial Management

Brigham, *et al.* (2010), financial Management also called corporate, focuses on decisions relating to how much and what types of assets to acquire, how to raise the capital needed to buy assets and how to run the firm to maximize its value.

Financial Ratio

Financial ratio is a ratio calculation by using financial statements that serve as a measuring tool in assessing the financial condition and performance of the company (Hery, 2016). Overall financial performance through financial ratios describes the achievements of the company in its operational activities. Financial statement shows investors the base of company financial health and how the company is doing, current state and financial policies (Brigham, *et al.* 2010).

Profitability Ratio

This research focuses on the return on total asset.

Return on Asset

The return on assets ratio is an important investment metric that is a good indicator of operational efficiency. It measures the sales generated by each dollar invested in tangible assets (Booker, 2006).

$$Return\ on\ Assets = \frac{Net\ Income}{\text{Total Assets}}\ x\ 100\%$$

Liquidity Ratio

This research focuses on current ratio.

Current Ratio

The current ratio is a ratio to measure a company's ability to fulfill the short-term liabilities that are soon due by using all current assets available (Hery, 2016). The current ratio is calculated by dividing current assets by current liabilities (Koh, *et al.* 2014):

$$Current\ Ratio = \frac{\text{Current Assets}}{\text{Current Liabilities}}\ x\ 100\%$$

Solvency Ratio

This research focuses on debt to asset ratio

Debt to Asset Ratio

The debt ratio is used to measure how much a company's assets are financed by debt, or how much the company's debt affects asset financing (Hery, 2016). It measures the percentage of funds provided by current liabilities and long-term debt (Koh, *et al.* 2014):

$$Debt\ ratio = \frac{\text{Total liabilities}}{\text{Total assets}}\ x\ 100\%$$

Company Value

This research uses price to book value (PBV) as an indicator in assessing the company value.

1. **Price to Book Value**

Price to book value ratio is a valuation ratio that is used by investment advisors, fund managers and investors to compare a company's market value (market capitalization) to its book value (shareholders' equity) (Marangu & Jagongo, 2014).

$$Market\ per\ book\ ratio = \frac{\text{Market price per share}}{\text{Book value per share}}$$

Comparative Ratios and Industry Comparison

Industry Comparisons

Another way to judge whether a firm's ratio is too high or too low is to compare it with the ratios of other firms in the industry (this is sometimes called cross-sectional analysis, or benchmarking) (Gallagher & Andrew, 2007)

Previous Research

Article by Batool K. Asiri and Salwa A. Hameed (2014) focused on Financial Ratios and Firm's Value in the Bahrain Bourse. This research finds the relationship between ratios, and to detect the existence of multicollinearity in the models if any. In all cases is rejected at the 5% level of significance or less. This research attempts to measure how financial ratios explain the firms' value through price earnings ratio or market to book ratio in the Bahrain Bourse. Using all the main categories in financial ratios such as profitability, liquidity, efficiency, and debt, the paper found that return on assets (ROA) is the most determinant factor in explaining the market value followed by financial leverage and beta.

Article by Kenneth Marangu & Ambrose Jagongo (Ph.D.) (2014) focused on Price to Book Value Ratio and Financial Statement Variables (An Empirical Study of Companies Quoted At Nairobi Securities Exchange, Kenya). This study to establish the relationship between price to book value ratio and the following financial statement variables: dividend payout ratio, return on total assets, return on equity, and return per share, dividend per share and growth rate of earnings after tax. The result is return on total assets, return on equity and return per share all had a positive relationship (positively affected) the price to book value ratio while dividend per share had a negative relationship (negatively affected) the price to book value ratio.

Article by Rifat Karakus and İbrahim Bozkurt (2017) focused on the Effect of Financial Ratios and Macroeconomic Factors on Firm Value: An Empirical Analysis in Borsa Istanbul. This research using panel

data analysis to determine the effect of financial ratios and macroeconomic factors on firm value. According to analysis results, there is a negative relationship between debt ratio and stock returns. On the other hand, return on assets and net working capital turnover affects stock returns positively. In addition, the effect of macroeconomic factors on the stock return is significant. While inflation negatively affects stock returns, unemployment, gross domestic product, net inflows of portfolio equity and exchange rates positively affect stock returns.

Article by Alo, Ebenezer Adebisi, Akosile, Akindele Iyiola and Ayoola, Akinjobi Olayemi, (2016) focused on The Statistical Evaluation of the Performance of Financial Ratio Analysis in Nigerian Manufacturing Industry: An Empirical Study of Guinness Nigeria PLC. The result of the application of current ratio to evaluate the liquidity of the firm shows that Guinness Nigeria Plc attained the set standard in the three years under study, though the current ratio dropped in 2014. The application of quick ratio as a test of liquidity shows that the results of the computation for the years 2012 and 2013 were lesser than the acceptable limit of 1.1 which means a less profitable position for the company in 2014 and 2013. Applying the net profit margin to measure the success of Guinness Nigeria Plc with respect to earnings on sales, it was found that the management needs to investigate the reasons for the decrease in 2012 compared with the increase in 2013.

Article by Nabil M. Al-Nasser (2014) focused on the impact of financial analysis in maximizing the firm's value "a case study on the Jordanian Industrial Companies". This study concluded that financial analysis has a significant positive effect on helping managers in taking effective decisions that can increase the profitability and the value of the firm.

RESEARCH METHOD

Type of Research

This research approach is a quantitative approach, in which the researcher tries to explain the relationship between the independent variables of this research including return on assets, current ratio and debt to asset ratio.

Place and Time of Research

The research was conducted from April - August 2017.

Population and Sample

The population in this research is automotive and components industry companies listed on the Indonesia Stock Exchange (IDX) and the total sample is 12 companies that have been listed in Indonesia Stock Exchange (IDX) during the period of 2007-2016.

Data Collection Method

Data collected from this research is secondary data as the main sources

Variable and Operational Definition

Table 1. Variable and Operational Definition

No.	Variable	Definition	Measurement
1.	Price to Book Value (Y)	Price to book value is used to measure stock price levels whether overvalued or undervalued.	$\frac{Market\ Price\ per\ share}{Book\ Value\ per\ share}\ x\ 100\%$
2.	Return on Asset (X1)	Return on asset is measured a company's ability to generate profits by using total assets.	$\frac{Net\ Income}{Total\ Asset}\ x\ 100\%$
3.	Current Ratio (X2)	The current ratio measures the extent to which a company is able to fulfill the short-term liabilities by using current assets.	$\frac{Current\ Asset}{Current\ Liabilities}\ x\ 100\%$
4.	Debt to Asset Ratio (X3)	Debt to asset ratio shows the company's ability to pay off all existing debts by using total assets.	$\frac{Total\ Liabilities}{Total\ Asset}\ x\ 100\%$

Source: Data Processed, 2017

Data Analysis Method

The panel data regression model Price to Book Value (PBV) of company i at time t is the following:

$$PBVit = \alpha + \beta 1ROAit + \beta 2CRit + \beta 3DARit + \varepsilon it$$

Where α is the constant, β's are coefficient parameter of the independent variable and εit is the error term.

RESULT AND DISCUSSION

Descriptive Statistics

Table 2 Descriptive Statistics

	PBV	ROA	CR	DAR
Mean	1.566167	0.700417	157.3248	0.467583
Median	1.020000	0.075000	132.5850	0.460000
Maximum	9.040000	10.60000	497.0000	0.920000
Minimum	0.110000	-1.220000	8.000000	0.000000
Std. Dev.	1.473313	2.038093	75.07991	0.212559
Skewness	2.056303	3.339689	1.549612	-0.012763
Kurtosis	8.314504	13.55184	6.523275	2.648085

Source: Data Processed, 2017

Descriptive statistics explains the data characteristics used in this research. Price to book value (PBV) standard deviation is 1.473, and the mean is 1.5661, the value of mean is above 1% standard. The mean value of return on asset of automotive and components company is 0.7004. The current ratio of automotive and components company on average is 157.32 the value of mean is under 200% standard. Debt to asset ratio as measured by total debt to the total asset has a mean value of 0.4675%.

Analysis Method Result

This research used fixed effect and random effect models to investigate the differences in the magnitude of effect of the financial ratios.

Fixed Effect Model

The fixed effect test is performed to see which is more appropriate in the use of panel regression technique in this study using chow test with the redundant test to know which panel regression technique is more appropriate, fixed effect model or common effect model.

Table 3 Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	13.625047	(11,105)	0.0000
Cross-section Chi-square	106.417787	11	0.0000

Source: Data Processed, 2017

The result of the chow test with redundant test has a probability value of 0.0000 is smaller than the 0.05 significance level ($0.0000 < 0.05$), then the appropriate model is to use fixed effect.

Random Effect Model

Panel data model still have to be compared again between fixed effect models with random effect model. The random effect test is performed to see which is more appropriate in the use of panel regression technique in this study using Hausman test.

Table 4 Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.180008	3	0.7578

Source: Data Processed, 2017

The result of the Hausman test has a probability value of 0.7578 greater than the 0.05 significance level (0.7578 > 0.05), then the appropriate model is to use a random effect model.

Table 5 Estimation of Random Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.006481	0.699232	1.439409	0.1527
ROA	0.209385	0.066326	3.156901	0.0020
CR	0.000543	0.001914	0.283676	0.7772
DAR	0.700603	0.790305	0.886497	0.3772

Source: Data Processed, 2017

From the above data if inserted into the formula data panel regression, obtained the equation:

Y_{it}= 0.209385ROA + 0.000543CR + 0.700603DAR + 1.006481 + μi

Discussion

This research investigates automotive and component companies financial ratios. As well as any the internal factors of the company, the possibility of the risk of the liquidity of the company might happen. The performance of the automotive industry is a sector that can boost economic growth. This research analyzed the influence of the explanatory variables (Return on Asset, Current Ratio, and Debt to Asset Ratio) to the dependent variables (Price to book value).

Looking at the eviews output, ROA has estimated value of 0.209385. Based on the analysis we can conclude that for every increase of 1% of ROA, it will increase PBV by 0.209385% and for every decrease of 1%, it will also reduce PBV by 0.209385% assuming ceteris paribus. Based on t-test, p-value obtained from the variable ROA is 0.0020 or less than the level of significance of 5% (0.05) it can be concluded that the variable ROA significant influence on the PBV (Y) based on positive ROA coefficient it can be concluded also that the existing effect is positive. The significance level is at below 5% so the null hypothesis is rejected as ROA significantly influence PBV with the positive relationship. This is expected because the company's revenue source came from returning net income to total assets of the company. The ROA ratio of automotive and components companies going down from 1.52% in 2011 until -0.04583 in 2015. The going down of ROA ratio has a connection to the Indonesian economy which started experiencing the crisis in 2015.The value of PBV in 2015 decreased indicating that the value of the company also decreased. PBV has an important role as a consideration for investors to choose the stock to be purchased. When the financial performance is good, it can attract the attention of investors. The problem with ROA is a matter of external environment because it depends mostly on the country's economic condition.

The current ratio, as seen from eviews output has a positive effect on PBV. The estimated coefficient value is 0.000543 which means the increase of 1% in current ratio will increase PBV by 0.000543 % and the decrease of 1% will also decrease PBV by 0.000543%. Based on t test, the level of significance is 0.7772 or more than 5% significance level (0.05) the null hypothesis is cannot be rejected and this variable is considered do not significantly affects PBV.

The DAR variable has a positive impact to PBV. Assuming ceteris paribus, increase in debt to asset ratio by 1% will decrease PBV by 0.700603%. Based on t test, the significance level obtained is 0.3772 or more

than 5% significance level (0.05) it can be said the null hypothesis is cannot be rejected and this variable is considered do not significantly affects PBV.

CONCLUSIONS AND RECOMMENDATION

Conclusions

Based on the analysis, there are several conclusions that can be drawn from the result. The conclusions for this research is as follow:

1. Return on Asset Ratio has a positive impact on price to book value (PBV) with Significance level is at below 5% so the null hypothesis is rejected as ROA significantly influence PBV.
2. The current ratio or total current asset to total current liabilities has a positive impact and not affect the price to book value (PBV). The average value of the current ratio is not reaching 200%.
3. Debt to asset ratio has no effect on the price to book value (PBV). The lowest calculation value can be said that has a low debt value and vice versa. The highest total debt of automotive and components companies in 2008 amounted to 0.57% this is because in 2008 Indonesia experienced the impact of the global crisis that began in the United States in 2007 and began increasingly felt its impact to the world.

Recommendation

Based on the conclusions and the research findings, it is recommended that some strategies in order to increase the company value:

Company

The company should further increase its current ratio to 200% can be interpreted 2 current assets to cover 1 current liabilities, so as to fulfill the liabilities to be paid so as to avoid the risk of liquidation and not debt-induced.

Investor

For investors who will buy stocks in the automotive and component industry should look for companies whose profits are consistently rising, and the risk of bankruptcy is small seen from current ratio and debt to asset ratio.

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