

Debt to Assets Ratio and Management Asset on Financial Performance: an Evidence of Chemical Companies in Indonesia Stock Exchange

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Abstract. *This study aims to analyze the effect of Debt to Asset Ratio and Management Asset on Financial Performance in chemical companies listed on the Indonesia Stock Exchange. The population used in this study are chemical companies listed on the Indonesia Stock Exchange. The sample used in this study was 9 companies in 2015-2019, so that 36 research samples were obtained. In this study, Management Asset is measured using the Inventory Turnover proxy and Financial Performance using the Return on Assets proxy. Based on research, simultaneously, Debt to Asset Ratio and Management Asset have a significant effect on Financial Performance. While partially the Debt to Asset Ratio has an influence on the Return on Asset and Management Asset has no effect on the Return on Asset. Debt to Assets and Inventory Turnover ratios contributed 53.8% to Return on Asset.*

Keywords: *Debt to Asset Ratio, Management Asset, Financial Performance*

Abstrak. Penelitian ini bertujuan untuk menganalisis pengaruh *Debt to Asset Ratio* dan Manajemen Aset Terhadap Kinerja Keuangan pada perusahaan kimia yang terdaftar di Bursa Efek Indonesia. Populasi yang digunakan dalam penelitian ini adalah perusahaan kimia yang terdaftar di Bursa Efek Indonesia. Sampel yang digunakan dalam penelitian ini sebanyak 9 perusahaan pada tahun 2015-2019, sehingga diperoleh 36 sampel penelitian. Dalam penelitian ini, Manajemen Aset diukur dengan menggunakan proksi Perputaran Persediaan dan Kinerja Keuangan menggunakan proksi *Return on Asset*. Berdasarkan hasil penelitian, secara simultan, *Debt to Asset Ratio* dan Manajemen Aset mempunyai pengaruh signifikan terhadap Kinerja Keuangan. Sedangkan secara parsial variabel *Debt to Asset Ratio* mempunyai pengaruh terhadap Kinerja Keuangan dan Manajemen Aset tidak mempunyai pengaruh terhadap *Return on Asset*. *Debt to Asset ratio and Inventory Turnover contributed 53.8% to Return on Asset.*

Kata Kunci: Debt to Asset Ratio, Manajemen Aset, Kinerja Keuangan

Introduction

Companies can take advantage of the increasing number of capital market investors to obtain additional funds or capital from external parties. In making investment decisions, external parties consider the financial performance stated in the financial statements. This is because the more efficient a company's financial performance is, it is expected that the company will be able to generate maximum profits and be able to provide returns, so that it will attract investors to invest. Financial performance provides information in the form of a reflection of how well the management of the company refers to financial reports that have been published in a certain period which are usually measured from the aspects of capital adequacy, liquidity, and profitability (Jumingan, 2006). How well a company's financial performance can be seen from the information contained in financial statements can be one of the bases for users of financial statements to see the company's financial performance in the past so they can predict how its future financial performance will be.

Financial performance is important as a means of information for various parties. For the company, the more efficient the company's financial performance illustrates the success in achieving the company's goals of generating profits. Information from these financial reports can be used by managers as a basis for making decisions, whether in investing, maximizing operations, and distributing a number of profits to shareholders. For external parties to the company, the company's financial performance is also an important aspect in decision making. Investors will certainly be more interested in investing in companies with good financial performance. A company with good financial performance is a company that can generate maximum profit so that it is expected to have a high rate of return. As an investor, the more maximum the company's financial performance indicates the more efficient the level of company management is and is expected to generate high profits so that it can provide a favorable return for investors. For banks or creditors, good financial performance indicates the better management of the company's operations in generating maximum profits so that it guarantees the company's ability to pay debts and interest and can convince banks or creditors to provide credit to the company. Financial performance also displays corporate profits and taxes which also benefit state income in the form of taxes, which are the main source of state revenue. The better the financial performance of a company, which is indicated by the higher the profit generated by the company, the more funds the government will receive as the driving force of the country's economy. The financial performance of a

company can be measured by the profitability ratio. Investors also tend to judge based on profitability ratios. This ratio states the company's ability to earn profits in relation to sales, total assets and own capital (Utami and Pardanawati, 2016). In this study, in measuring profitability, the writer used the Return on Asset (ROA) ratio.

Measurement of financial performance using the ROA proxy shows the company's operational ability to generate profits using its assets. The results of a high ROA ratio will indicate the higher the company's ability to generate profits from its assets. Factors that can affect financial performance include liquidity, solvency, asset management and company size. In this study, the authors only include solvency and asset management factors. Solvency is the ability of a company to pay long-term obligations if the company is liquidated (Ashari & Darsono, 2005). The level of solvency is measured by the Debt to Asset Ratio (DAR). The higher the level of solvency, which is indicated by a low DAR level, indicating that the fewer assets the company obtains by using debt. The smaller the amount of debt and interest expense borne by the company results in the funds owned by the company in addition to paying off debt and interest expenses, it can also be allocated to the company's operational activities. In operations, existing funds are used to purchase company assets which will be managed to obtain sales for a profit. High profits accompanied by efficient asset management will result in a high ROA level.

The activity ratio according to Raharjaputra (2009) is a ratio that measures how effectively (the results) a company uses its resources. From this activity ratio, it can be used to assess the ability of a company's asset management. In this study, asset management is measured using Inventory Turnover (INVTO). Inventory Turnover Ratio is a ratio that measures the average speed of inventory moving out of the company (John, Subramanyam, and Robert, 2005). An increase in inventory is caused by an increase in activity, or because of a change in inventory policy. If there is an increase in inventory that is not proportional to the increase in activity, there will be waste in managing inventory. The purpose of this study is to obtain empirical evidence regarding the effect of solvency and management asset on financial performance in chemical companies listed on the Indonesia Stock Exchange.

Theoretical Framework

Solvency

The solvency ratio is a ratio that measures a company's ability to survive in the long term (Weygandt et al., 2015). In this study, solvency was measured using the Debt to Assets Ratio (DAR). According to Gunde, et al., (2017) the debt to assets ratio measures how much the company's assets are financed by debt or how much debt the company has on asset management. The higher the DAR, the greater the source of funds owned through loans used to finance assets. The greater the DAR, the greater the level of dependence of the company on external parties (creditors) and the greater the burden of debt costs (interest costs) that must be paid so that it will reduce profits.

Management Asset

The activity ratio describes the activities the company carries out in carrying out its operations both in sales, purchasing, and measuring the company's effectiveness in utilizing its resources through its operations. In this study, asset management is measured using the Inventory Turnover (INVTO) ratio. Inventory turnover is a company activity that is very important to be used and taken into account, because to be able to find out the cost efficiency which is useful in getting big profits or profits. Inventory turnover according to Munawir (2015), namely the ratio between the total cost of goods sold and the average value of inventories owned by the company. This inventory turnover shows the number of times the amount of merchandise inventory is replaced in one year (sold and replaced). To find the average inventory stored in the warehouse can be determined by dividing the number of days in a year by the turnover of inventory.

Financial Performance

Financial performance is the determination of certain measures that can measure the success of a company in generating profits (Tjahjono, 2014). The company's financial performance can be measured using the ratios contained in the company's financial statements that are issued periodically (Solechan, 2017). In this study, financial performance was proxied using Return on Asset (ROA). ROA is the ratio used to measure a company's ability to generate net income based on a certain asset level (Fajrin and Laily, 2016). A high ROA level illustrates the better the company's financial performance.

Debt to Asset ratio and Financial Performance (ROA)

The debt to asset ratio is used to measure how much company assets can be used to finance company debt. The higher the debt to total asset ratio, the greater the financial risk. The increased risk in question is the possibility of default because the company is funding too many assets from debt (Purnamasari, 2017). A very high DAR will reduce the company's profitability because it increases interest costs and the risk of default. But if DAR increases naturally it will help the company's operational funding capacity to increase profitability.

Management Asset (Inventory Turnover) and Financial Performance (ROA)

Asset management, which is reflected in the level of inventory turnover, can affect financial performance because inventory turnover measures a company's ability to generate income through its inventory (Ehrhardt & Brigham, 2011). Companies that manage the assets (including inventories) of the company effectively and efficiently will generate good corporate income. Optimizing asset management as reflected in inventory turnover will improve the company's financial performance (Return on Assets) (Utami & Pardanawati, 2016).

Debt to Asset Ratio, Management Asset and Financial Performance (ROA)

Sales growth from year to year shows that demand for merchandise has increased. It causes the company's ability to manage inventory turnover to get a profit to show that the company is good at asset management. Likewise, the debt to assets ratio, the ratio used to measure the proportion of debt to assets (Hery, 2016). The smaller the ratio of debt to assets, the better for the company in paying debt through assets. From the above statement, both the debt to asset ratio and inventory turnover affects profitability (ROA).

Method

The research population used is chemical companies listed on the Indonesia Stock Exchange (BEI) 2016-2019. The sample collection technique is purposive sampling with the following criteria: (a) Chemical companies that consecutively present their financial reports and are not delisted in the 2015-2019 period, (b) Chemical companies that provide the data needed in this study are total liabilities, total assets, sales, inventory, and net income.

Table 1
Company's name

No.	Company's Code	Company's name
1	BRPT	Barito Pasific Tbk
2	BUDI	Budi Starch & Sweetener Tbk
3	DPNS	Duta Pertiwi Nusantara Tbk
4	EKAD	Ekadharma International Tbk
5	ETWA	Eterindo Wahanatama Tbk
6	INCI	Intan Wijaya International Tbk.
7	SRSN	Indo Acitama Tbk
8	TPIA	Chandra Asri Petrochemical Tbk.
9	UNIC	Unggul Indah Cahaya Tbk

This research was conduct using descriptive statistics. Descriptive statistics used to describe data as seen from the mean, standard deviation, minimum value, and maximum value. The analysis technique used in this research is multiple linear regression. Before performing multiple linear regression analysis, the classical assumption test was performed first. The multiple linear regression equation is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \epsilon$$

Information: Y = Profitability (Return on Asset); α = Constant; $\beta_1 - \beta_2$ = Regression Coefficient; X1 = Debt to Assets Ratio; X2 = Inventory Turnover

Results

Table 1.
Correlation Coefficient

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.730	.532	.519	.04068

source: processed data

The table above shows that the correlation coefficient (r) is 0.730, which means that the debt to assets ratio has a positive and strong level of relationship to Return On Assets. And when the receivables increase, the Return On Assets will also increase. Meanwhile, the coefficient of determination (r-square) was found to be 0.532 or 53.2%. This means that the Debt to assets ratio contributed 53.2% to Return On Assets, and the rest was influenced by other variables.

Table 2.
Hypothesis Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.092	.012		8.027	.000		
	DAR	.141	.024	.767	5.811	.004	.803	1.246

source: processed data

The value of the hypothesis test shows that the value (sig) is $0.004 < 0.05$, which means that partially the Debt to assets ratio has a significant effect on Return On Assets. Simple linear regression for Return On Assets = $0.092 - 0.1415$ (Debt to assets ratio). A constant value of 0.092 means that if the Debt to assets ratio is 0, the Return on Assets already has a value of 0.092. And if the Debt to assets ratio increases by 1 unit, the Return on Assets will increase by 0.141, which means that the Debt to Assets ratio will have a positive contribution to the increase in Return On Assets.

Table 3.
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	-.256	.066	.038	.05751

source: processed data

The table above shows that the correlation coefficient (r) is 0.256, which means that Inventory Turnover has a negative relationship to Return On Assets. Meanwhile, the coefficient of determination (r-square) was found to be 0.066 or 6.6%. This means that Inventory Turnover contributes 6.6% to Return On Assets, and the rest is influenced by other variables.

Table 4.
Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.006	.025		.255	.800		
	INVTO	-.001	.001	-.209	-1.299	.203	.803	1.246

source: processed data

The hypothesis test value shows that the value (sig) is $0.203 > 0.05$, which means that Inventory Turnover has no significant effect on Return On Assets. Simple linear regression for Return On Asset = $0.006 - 0.001$ (Inventory Turnover). A constant value of 0.006 means that if the Inventory Turnover's value is 0 then the Return On Asset already has a value of 0.006. And if the Inventory Turnover's value increases by 1 unit, the Return On Asset will decrease by 0.001, meaning that the Debt to Assets Ratio contributes negatively to the increase in Return On Assets.

Table 5.
Correlation Coefficient

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.734 ^a	.538	.510	.04104

source: processed data

The table above shows that the correlation coefficient (r) is 0.734, which means that the Debt to assets ratio and Inventory Turnover has a positive and strong level of relationship to Return On Assets. Meanwhile, the coefficient of determination (r-square) was found to be 0.538 or 53.8%. This means that the Debt to assets ratio and Inventory Turnover contributed 53.8% to Return On Assets, and the rest was influenced by other variables.

**Table 6.
Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	.092	.012		8.027	.000		
	DAR	.141	.024	-.767	-5.811	.004	.803	1.246
	INVTO	-.001	.001	-.209	-1.299	.203	.803	1.246

source: processed data

**Table 7.
ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.065	2	.032	19.224	.000
	Residual	.056	33	.002		
	Total	.120	35			

source: processed data

The value of the hypothesis test shows that the value (sig) is $0.000 < 0.05$, which means that the Debt to assets ratio and Inventory Turnover have a significant effect on Return On Assets. Simple linear regression for Return On Assets = $0.092 - 0.141$ (Debt to assets ratio) $- 0.000$ (Inventory Turnover). A constant value of 0.092 means that if the value of the Debt to assets ratio and Inventory Turnover is 0, then Return On Assets already has a value of 0.092.

Conclusions

The empirical studies showed that the company has a good Debt to assets ratio and Inventory Turnover. On average, the company is stated to have a good level of Return On Assets. Debt to assets ratio has a strong relationship to Return On Assets and also has a significant effect on Return On Assets. Debt to assets ratio contributed 53.2% to Return On Assets. And the linear regression shows the results that each addition of 1 unit of Debt to assets ratio will increase the addition of Return on Assets by 0.092. Inventory Turnover has a strong and negative level of relationship to Return On Assets. However, it does not affect the Return On Assets. Inventory Turnover contributed 6.6% to Return On Assets. And the linear regression shows the results that each addition of 1 unit of Debt to assets ratio will increase the reduction in Return on Assets by 0.092. Debt to assets ratio and Inventory Turnover has a strong and positive level of relationship to Return On Assets. Likewise, it has a significant effect on Return On Assets. Debt to assets ratio and Inventory Turnover contributed 53.8% to Return On Assets. And linear regression shows the results that each addition of 1 unit of Debt to assets ratio will increase the addition of Return on Assets by 0.092. Meanwhile, each additional 1 unit of Inventory Turn Over will reduce the Return On Assets by 0.092. It is suggested that the results of this study can be used as a consideration for investors to assess or estimate the possible rate of return on assets obtained based on the role of the Debt to assets ratio and Inventory Turn Over variables. And also as a reference in determining decisions. I hoped that further researchers can test other variables that might affect the company's Return On Assets.

References

- Ashari & Darsono. 2005. *Pedoman Praktis Memahami Laporan Keuangan*. Yogyakarta: Andi.
- Ehrhardt, M.C & Brigham, E.F. (2011). *Financial Management: Theory and Practice* (13th Edition). Ohio: SouthWestern Cengage Learning.
- Fajrin, P. H., & Laily, N. (2016). Analisis Profitabilitas dan Likuiditas terhadap Kinerja Keuangan PT. Indofood Sukses Makmur, Tbk. *Jurnal Ilmu dan Riset Manajemen*, 5(6).
- Gunde, Y. M., Murni, S., & Rogi, M. H. (2017). Analisis Pengaruh Leverage terhadap Profitabilitas Pada Perusahaan Manufaktur Sub Industri Food and Beverages yang Terdaftar di BEI (Periode 2012-2015). *Jurnal EMBA*, 5(3), 4185-4194.
- Hery. (2016). *Analisis Laporan Keuangan—Integrated and Comprehensive Edition*. Bandung: Grasindo.
- John J Wild, K R Subramanyam, & Robert F Halsey. (2005). *Financial Statement Analysis*. Buku Dua, Edisi 8. (Alih bahasa: Yanivi S. Bachtiar dan S. Nurwahyu Harahap). Jakarta: Salemba Empat.
- Jumingan. (2006). *Analisis Laporan Keuangan*. Jakarta: PT. Bumi Aksara.
- Munawir. (2015). *Analisis Laporan Keuangan*. Yogyakarta: Liberty.
- Prastowo, D. (2011). *Analisis Laporan Keuangan*. Yogyakarta: Penerbit Sekolah Tinggi Ilmu Manajemen YKPN.

- Purnamasari, E., D. (2017). Analisis Pengaruh Leverage terhadap Profitabilitas Perusahaan yang Termasuk LQ45 Periode Agustus 2015 – Januari 2016 di Bursa Efek Indonesia. *Jurnal Ilmiah Ekonomi Global Masa Kini*. 8 (1), 41-45. 10.35908/jiegmk.v8i1.235
- Raharjaputra, H. S. (2009). *Manajemen Keuangan dan Akuntansi untuk Eksekutif Perusahaan*. Jakarta: Salemba Empat.
- Sartono, A. (2014). *Manajemen Keuangan Teori dan Aplikasi*, Edisi ke-4, Cetakan ke-7. Yogyakarta: BPF.
- Solechan, A. (2017). Pengaruh Efisiensi Modal Intelektual terhadap Kinerja Keuangan Perusahaan di Indonesia. *Jurnal Kajian Akuntansi*, 1(1), 87-100
- Tjahjono, R. S. (2014). Faktor-faktor yang Mempengaruhi Kinerja Keuangan pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia. *Jurnal Bisnis dan Akuntansi*, 16(3), 1-22.
- Utami, W. B., & Pardanawati, S. L. (2016). Pengaruh Likuiditas, Solvabilitas dan Manajemen Aset terhadap Kinerja Keuangan Pada Perusahaan Go Public yang Terdaftar Dalam Kompas 100 di Indonesia. *Jurnal Akuntansi dan Pajak*, 17 (01), 63-72.
- Weston, J., F., & Thomas E., C. (1992). *Manajemen Keuangan*. Jakarta: Binarupa Aksara.
- Weygandt, J.J., Kimmel. P. D., & Kieso, D. E. (2015). *Financial Accounting IFRS Edition* (3th Edition). New Jersey: John Wiley dan Son, Inc.