



The Effect of Activity Ratios to Company Profitability in the Trading, Services, and Investment Sectors

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Abstract

Profitability is a ratio that can be used to determine a company's ability to generate profits. Information related to profitability is used to assess a company's success in achieving its set goals. Profitability can also determine how effectively and efficiently a company's activities have been carried out. This information is essential for potential investors to determine whether or not to invest in a company. This research was conducted to obtain information related to company profitability through activity ratios. The results are expected to be helpful for companies in assessing profitability. The subjects used in this study are companies engaged in the trade, services, and investment sectors listed on the Indonesia Stock Exchange (IDX) from 2015 to 2019. A purposive sampling method was used and a total sample of 126 companies from eight sub-sectors was obtained. The analysis showed that the effects of working capital turnover and inventory turnover do not significantly impact profitability. In contrast, cash turnover was found to have a substantial impact on company profitability. Simultaneously, this study shows that working capital turnover, cash turnover, and inventory turnover significantly affect profitability. It also indicates that, simultaneously, a firm's profitability is influenced by the activity ratio.

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1. Introduction

Profitability is the outcome of a company's business activities. A profitability assessment was carried out to determine a company's success based on its business activities and its success in achieving its strategic objectives, eliminating the occurrence of waste, and the company's ability to present information at the right time. Information related to profitability ratios is needed for investors because this information describes the company's efforts to obtain *returns* that can be seen in the company's annual financial statements.

Profitability is a ratio that can be used to determine the company's ability to generate profits. One form of profitability ratio that is commonly used is return on assets (ROA). Several ratios affect profitability, including accounts receivable turnover ratio, inventory turnover ratio, working capital turnover ratio, and cash turnover ratio.

Companies need to know the amount of working capital required to support their business activities, which is generally done by calculating the amount of working capital turnover required to be able to produce a certain level of sales, such as financing the purchase of raw materials, paying employees' wages and salaries, general overhead costs, as well as other expenses.

If the use of working capital is high, this indicates that it is being used in a profitable manner. The amount of working capital used to support operations and is expected to be immediately reacquired from the sale of merchandise or products. Furthermore, the working capital will be used again to finance the company's operations. Thus, working capital will continue throughout the life of the company (Djarwanto, 2010).

A company also needs to know how many times its cash can rotate in one period through sales or cash turnover. By understanding how many times the cash turns over, a company can measure its efficiency against the use of available cash.

Furthermore, a company must also measure how long it takes to sell its inventory, which is known as inventory turnover. The speed at which a company can sell its stock will impact its profitability.

A company will analyze information relating to the activity ratio to determine its working capital needs, cash requirements, and the need for inventories expected to affect the profitability, especially for companies engaged in the trade, services, and investments sectors listed on the Indonesia Stock Exchange.

The trade, services, and investment sectors consist of several sub-sectors, such as wholesale goods production, retail, and software, which show significant growth, and the existence of stocks in the sectors much demanded by investors shows good liquidity.

Table 1 shows 126 companies listed in the trade, services, and investment sub-sectors listed on the Indonesia Stock Exchange.

Table 1. Companies registered in the trade, services, and investment-based sub-sectors in 2015.

No.	Sub-sector	Quantity
1	Manufactured goods	36
2	Retail	23
3	Restaurants, hotels and tourism	25
4	Advertising, printing and media	15
5	Health	5
6	Computers and other electronic devices	6
7	Investment	10
8	Other	6
Total		126

Previous studies have produced different results. Research conducted by Haryono and Lisiantara (2018) shows that cash turnover, inventory turnover, and accounts receivable turnover do not affect profitability (ROA). However, the results of Sanjiwani and Suardana (2019) show that cash turnover, accounts receivable turnover, inventory turnover, and working capital turnover have a significant effect on profitability.

The results of research conducted by Verawati & Oetomo (2014) show that working capital turnover, inventory turnover, and accounts receivable turnover in textile companies listed on the Indonesia Stock Exchange simultaneously and significantly affect profitability. In part, functional capital turnover was found to have no significant effect on profitability, and accounts receivable turnover and inventory turnover have a substantial impact on profitability.

Likewise, the research conducted by Dewi and Rahayu (2016) and Rajesh and Reddy (2011) state that cash turnover and inventory turnover do not affect ROA.

Karamina and Soekotjo (2018) state that working capital turnover has a negative and insignificant effect on profitability, cash turnover has a negative and significant impact on profitability, inventory turnover has a positive but negligible effect on profitability, and accounts receivable turnover has a positive and significant impact on profitability.

Based on the above, there are both differences and similarities in previous research. It was felt necessary to obtain empirical evidence and examine company profitability using the ratio of company activities in the trade, services, and investment sub-sectors, considering that information on company profitability greatly influences stakeholders' decisions regarding investment in a company.

2. Literature Review

2.1. Company Activity Ratio

Management must know how effectively a company can use all its resources. The tool that companies generally use to measure effectiveness is the activity ratio, which is used to compare sales and investments in various types of assets owned by the company. Using ratio activity is expected to provide an appropriate balance between sales and other elements of a company's assets, such as inventory, fixed assets, and other assets.

According to [Kasmir \(2018\)](#), assets turnover, working capital turnover, cash turnover, fixed assets turnover, and accounts receivable turnover belong to the activity ratio.

This study investigates the variables of working capital turnover, cash turnover, inventory turnover, and profitability.

2.2. Working Capital

The definition of working capital put forward by several experts, including [Brigham and Houston \(2014\)](#); [Munawir \(2014\)](#); [Subramanyam \(2018\)](#), is that it is a measure of current assets that reflect safeguards for creditors and measures the available liquidity reserves to meet contingencies and uncertainties associated with imbalances between cash inflows and cash outflows.

The efficiency of using working capital is assessed by comparing the total sales earned by the average magnitude of working capital turnover. Working capital turnover illustrates the relationship between working capital and sales. Thus, an advantage of working capital can occur due to low inventory turnover, accounts receivable turnover, or cash balances that are too large. It shows that the cycle of working capital in a company is low.

2.3. Cash Turnover

According to [Rosdiana \(2008\)](#), a statement of cash flow is a financial statement that shows sources and uses of cash entering or exiting a business. Companies need to determine the turnaround time of their cash to generate revenue.

2.4. Inventory Turnover

According to [Munawir \(2014\)](#), inventory turnover is the ratio between the total cost of goods sold and the average value of the inventory owned by a company. [Amaliyah \(2009\)](#) defines the inventory cycle as the speed of replacement of supplies within a certain period, usually within one year.

2.5. Profitability

Profitability, according to [Riyanto \(2012\)](#) and [Fahmi \(2015\)](#), is a company's ability to generate profits from sales, total assets, and capital owned during a specific period.

A company's effectiveness in generating profits by exploiting the assets that it owns can be measured by using ROA. This is the most critical ratio among the current profitability ratios.

2.6. Previous Research

[Haryono and Lisiantara \(2018\)](#); [Verawati and Oetomo \(2014\)](#); [Dewi And Rahayu \(2016\)](#), [Karamina and Soekotjo \(2018\)](#), and [Rajesh and Reddy \(2011\)](#) show that cash turnover, inventory turnover, working capital turnover, and accounts receivable turnover do not affect profitability (ROA). Meanwhile, according to [Sanjiwani and Suardana \(2019\)](#) and [Reni Atikah](#), cash turnover, accounts receivable turnover, inventory turnover, and working capital turnover significantly affect profitability.

2.7. Framework

Following the theoretical overview, the following framework is put forward.

2.8. The Effect of Working Capital Turnover on Profitability (ROA)

The relationship between working capital and sales can be obtained by calculating a company's working capital turnover.

The working capital turnover ratio is used to measure or assess a company's working capital effectiveness during a specific period, indicating how much working capital rotates during a particular period. Better profitability will only be achieved if it is supported by a higher turnover of the company's working capital.

2.9. The Effect of Cash Turnover on Profitability

A company's ability to generate cash income can be seen in the number of times cash rotates in a given period. The power of a company's cash can be measured through its current cash flow. This means that the higher the cash turnover, the higher the profit generated. Thus, it can be assumed that cash turnover has an effect on profitability.

2.10. The Effect of Inventory Turnover on Profitability

The cycle efficiency of inventories can indicate how many times the funds are embedded in the stock exchange period. A high inventory turnover will affect how efficiently a company will earn a profit. It can therefore be assumed that inventory turnover has an influence on the profitability of a company.

2.11. The Simultaneous Effect of Working Capital Turnover, Cash Turnover, and Inventory Turnover on Profitability (ROA)

The ratio activity used in this study consists of the ratio of working capital turnover and the ratio cycle of cash and inventory turnover together, which affects the profitability and is indicated by the level of efficiency in the use of working capital to finance production activities.

Figure 1 shows the design of the study, which assumes that working capital turnover (X_1), cash turnover (X_2), and inventory turnover (X_3) affect firm profitability (Y), both partially and simultaneously.

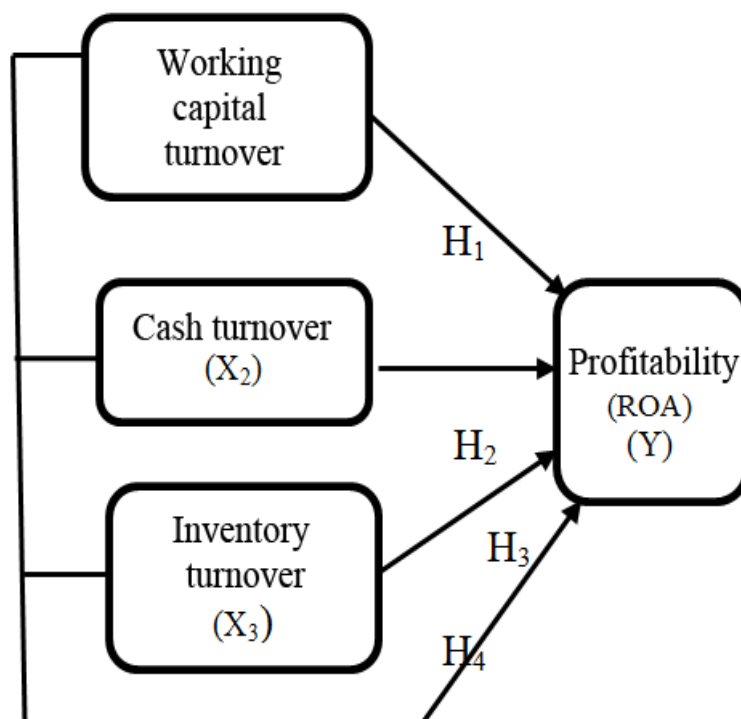


Figure 1. Research design.

2.12. Research Hypotheses

The hypotheses that will be tested in this study are as follows:

H_1 : Working capital turnover significantly affects profitability in the trade, services, and investment sub-sectors.

H_2 : Cash turnover significantly affects profitability in the trade, services, and investment sub-sectors.

H_3 : Inventory turnover has a significant effect on profitability in the trade, services, and investment sub-sectors.

H_4 : Rotation of working capital, cash turnover, and inventory cycles simultaneously significantly affect the profitability of the trade, services, and investment sub-sectors.

3. Research Method

3.1. Data Source

The data used in this study are secondary data obtained from Bank Indonesia, the Indonesian Stock Exchange, and other data taken through the IDX website.

3.2. Population and Research Sample

The population of this research comprises all of the companies listed in the trade, services, and investment sub-sectors that are listed on the Indonesia Stock Exchange from 2015 to 2019.

3.3. Sampling Technique

A purposive sampling technique was used in this research. This technique selects a particular target group from which to obtain information that can represent the study population. The sample used were determined using specific criteria, which are as follows:

1. The company was registered on the IDX for a year before the research period.
2. The company was listed on the Indonesia Stock Exchange from 2015 to 2019, according to the Indonesian Capital Market Directory (ICMD).
3. The company is a member of the trade, services, or investment sub-sectors during the study period.
4. The company has good liquidity that can finance short-term needs.

Table 2 shows the list of companies used as samples in this study.

Table 2. Companies used in the research sample.

No.	Issuer code	Company name
1	EMPT	PT Enseval Mega Trading Tbk
2	MPPA	PT Matahari Putra Prima Tbk
3	HEXA	PT Hexindo Adi Perkasa
4	RALS	PT Ramayana Lestari Sentosa Tbk
5	ASGR	PT Astra Graphia Tbk
6	FAST	PT Fast Food Indonesia Tbk
7	BMTR	PT Global Mediacom Tbk
8	MTDL	PT Metrodata Electronics Tbk

3.4. Definition of Variables

3.4.1. Operational Definition of Profitability as a Dependent Variable (Y)

Profitability describes the company's ability through the general funds invested in assets used in supporting company operations to generate profits, formulated as follows (Munawir, 2014):

$$ROA = \frac{\text{Net Income after Tax}}{\text{Total Assets}} \times 100\%$$

3.5. Operational Definition of Independent Variables

3.5.1. Working Capital Turnover (X₁)

Working capital turnover is a ratio that shows the relationship between working capital and sales and shows the number of sales that the company can obtain for every rupiah of working capital, formulated by Riyanto (2012) as follows:

$$\text{Working Capital Turnover} = \frac{\text{Sales}}{\text{Current Assets} - \text{Current Liability}}$$

3.6. Cash Turnover (X₂)

This is a comparison between sales by the average amount of cash that shows cash turnover rate. To calculate cash turnover, the following Horne et al. (2012) formula can be used:

$$\text{Cash Turnover} = \frac{\text{Net Sales}}{\text{Average Cash}}$$

3.7. Inventory Turnover (X_3)

Inventory turnover shows the number of times funds invested in an inventory revolve in a period. Inventory turnover can be expressed by the following formula (Stice et al., 2011):

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

4. Research Results and Discussion

This study tested empirical findings related to the influence of the rotation of working capital, cash, and inventory turnover stock on ROA. A sample of eight companies in the trade, services, and investment sub-sectors was used that were listed on the Indonesia Stock Exchange from 2015 to 2019.

Table 3. Descriptive Statistics.

	N	Minimum	Maximum	Mean	Std. deviation
Working capital turnover	39	1.47	33.88	7,2290	6.63282
Cash turnover	39	1.20	26.43	5.1126	5.87305
Inventory turnover	39	1.44	14.16	6.2726	3.28069
ROA	39	0.01	0.18	0.7360	0.03828
Valid N (Listwise)	39				

From the results of the descriptive statistical calculations in Table 3, the standard deviation results were obtained with a smaller value than the mean, indicating that the data variables' distribution is small and can thus be used to represent all data.

Table 4. Multiple regression analysis test results.

Coefficients ^a		Unstandardized coefficients		Standardized coefficients		
Model		B	Std. error	Beta	t	Sig.
1	(Constant)	0.097	0.012		7.883	0.000
	Working capital turnover	-001	0.001	-173	-874	0.388
	Cash turnover	-003	0.001	-0.537	-2.636	0.012
	Inventory turnover	0.000	0.002	0.024	0.170	0.866

Note: Dependent variable is ROA.

Table 4 shows the results of the analysis of the factors that affect profitability (ROA) with the following regression model:

$$Y = 0.097 - 0.001 X_1 - 0.003 X_2$$

Based on the results of the calculations, the working capital turnover variable (X_1) has a negative and insignificant effect on profitability (Y). This means that working capital turnover does not affect profitability. This shows that the company has not been able to manage its working capital turnover efficiently. This may be due to low inventory turnover, low accounts receivable turnover, or cash balances that are too large. This is in line with the results of the research conducted by Haryono and Lisiantara (2018); Verawati and Oetomo (2014); Dewi and Rahayu (2016); Karamina and Soekotjo (2018) and Rajesh and Reddy (2011). This means that hypothesis H_1 , which states that working capital turnover has a positive and significant effect on profitability, is rejected.

The cash turnover variable (X_2) is proven to have a negative and significant effect on profitability (Y). This is in line with the results of research by Karamina and Soekotjo (2018). The results of this study confirm hypothesis H_2 , that cash turnover (X_2) has a significant effect on profitability.

The inventory turnover variable (X_3) has no significant effect on profitability (Y), thus rejecting hypothesis H_3 . This means that the company has not managed its inventory correctly (lots of inventory building up), and this will result in longer storage periods and higher maintenance costs. This result is in line with the results of research conducted by Haryono and Lisiantara (2018); Dewi, Suwendra, and Yudiaatmaja (2016); Karamina and Soekotjo (2018) and Rajesh and Reddy (2011).

The results also show that working capital turnover, cash turnover, and inventory turnover have a simultaneous significant effect on profitability. This means that working capital turnover, cash turnover, and inventory turnover have been well managed, resulting in an increase in the company's profitability.

This is in line with Sanjiwani and Suardana (2019) and Verawati and Oetomo (2014), and confirms hypothesis H₄, which states that the cycle of working capital, cash, and inventory turnover significantly affect profitability simultaneously.

Table 5. Determination coefficient test results.

Model summary ^b				
Model	R	R-squared	Adjusted R-squared	Std. error of the estimate
1	0.677 ^a	0.458	0.411	0.02938

Note:

a. Predictors: (Constant), inventory turnover, working capital turnover, cash turnover.

b. Dependent variable: ROA.

In Table 5, the adjusted R-squared value is 0.411, which shows that 41.1% of companies' profitability can be explained by the variable rotation of working capital turnover, cash turnover, and inventory turnover. In comparison, the remaining 58.9% is influenced by variables not examined in this study.

5. Conclusion and Suggestions

The following conclusions regarding the proposed hypotheses can be drawn:

1. The turnover of working capital is negative and does not significantly affect profitability.
2. Cash turnover has a negative and significant effect on profitability.
3. Inventory turnover has no significant effect on profitability.
4. Working capital turnover, cash turnover, and inventory turnover have a simultaneous and significant effect on profitability.

Based on the above conclusions, the suggestions are as follows:

1. Companies must plan and supervise the working capital and inventory regularly and efficiently to minimize the risk of loss.
2. To maintain liquidity, the working capital turnover should be improved every year following an increase in sales to raise profitability.
3. To increase profitability, it is advisable to increase cash turnover by shortening the average life of receivables.
4. Inventory turnover can be optimized by making the inventory cost efficient.
5. For future research, additional variables can be included, such as accounts receivable turnover, the size of the company, and others which may affect profitability; and subsequent periods can be added so that the results can provide continuous information.

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