THE EFFECT OF TURNOVER ON PROFITABILITY IN MANUFACTURING COMPANIES LISTED IN INDONESIA STOCK EXCHANGE

AFILIASI
Akutansi Syariah, Fakultas Ekonomi dan Bisnis Islam, UIN Sunan Kalijaga

***Korespondensi:**
enggar.wulandari@gmail.com

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Kantor :
Jurusan Akuntansi, Fakultas Ekonomi
Universitas Wahid Hasyim
Jl. Menoreh Tengah X/22
Sampangan, Semarang 50236
Central Java, Indonesia.

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Abstract
This research aims to determine the effect of cash turnover, receivables, and supply on profitability in manufacturing companies. The independent variables used are Cash Turnover, Receivables Turnover, and Inventory Turnover. While the dependent variable used is Profitability. The population in this study is the financial statements of manufacturing companies totaling 120 companies over a period of six years listed on the Indonesia Stock Exchange (IDX) in 201 7-2020. Sampling is carried out by the proposive sampling method. The number of companies sampled in this study was 30 manufacturing companies. The analysis method of this study uses Linear Ordinary Least Square Regression (OLS) with a statistical analysis tool, namely the Eviews 8.0 program. The results of this study show that parally cash turnover has a significant effect on Return On Investment (ROI), receivables turnover has a significant effect on Return On Investment (ROI), and inventory turnover is not significant to Return On Investment (ROI). In terms of stimulant, the independent variables of cash turnover, receivables turnover, and inventory turnover together (simultaneously) significantly affect the Return On Investment (ROI) at α 1%.
Keywords: Cash Turnover, Receivables Turnover, Inventory Turnover, Profitability

INTRODUCTION

Currently, Indonesia is facing a weak rupiah exchange rate against the US dollar. Bank Indonesia stated that the depreciation of the rupiah against the US dollar that occurred since the beginning of the year until now has made many manufacturing companies experience financial difficulties. Initially, manufacturing industry players only predicted the limit of the rupiah exchange rate against the US dollar at Rp 13,600 to Rp 14,000. However, it turns out that the rupiah exchange rate against the US dollar reached Rp 14,000. Rupiah depreciation of up to RP 14,400 per US dollar, forcing manufacturing industry entrepreneurs to strategize to maintain their business. One of them, by increasing the selling price (www.bi.go.id).

For companies, one way to get maximum profit can be done byincreasing the number of production that has good performance. The ability of thedeer to make a profit over a certain period is called profitability. According to Fahmi (2016) profitability is a ratio to measure the effectiveness of overall management aimed at the magnitude of the level of profit obtained in relation to sales and investments. The better the profitability ratio, the better the company's profitability . In working capital, the company must also carry out management of accounts receivable. Management must be able to make policies regarding the collection of receivables. These policies can assist the company in collecting

its receivables in a timely manner (Van Horne and Wachowiez, 2007). The manager must analyze whether there are problems in the collection of receivables.

According to K.R Subramanyam (2010), receivables turnover is used to measure how long the collection of receivables takes during one period. The higher the turnover of receivables indicates that the working capital invested in receivables is getting lower and of course this condition is getting better for the company. The turnover of receivableswill have an impact on the company's profitability. By knowing the time it takes for a company to collect its receivables, the company can also know how far the company's policies can effectively support the collection of receivables. If a company takes too long to collect receivables then there will be an excessive investment in receivables and this will adversely affect the company because it is possible that the collectible receivables are difficult to realize. That could lower profitability.

Inventory or inventory as the main element of working capital is an asset that is also always in a rotating state, where it is constantly undergoing changes. The problem of determining the amount of investment or allocation of capital in inventory has a direct effect on the company's profits. Errors in the determination of the amount of investment in inventories will suppress the company's profits. The existence of investments in inventory that are too large compared to the need to increase interest expenses, increase the cost of storage and maintenance in warehouses, increase the possibility of losses due to damage and falling quality, so as to reduce the company's profitability. Similarly, the existence of an investment that is too small will result in the company lacking materials and the company cannot work optimally. This will increase the average production costs, which will eventually reduce the profits obtained by the company (Riyanto, 2001).

This research takes the object of companies engaged in manufacturing. A manufacturing company is a company engaged in the manufacture of products. Manufacturing companies are required to always have a sufficient amount of working capital in order to use their working capital efficiently. The existence of sufficient working capital is very important for a company because with sufficient working capital it is possible for the company to operate as economically as possible and the company will not experience difficulties or face dangers that may arise due to a crisis or financial chaos. However, the existence of excessive working capital , especially in the form of cash and securities, can harm the company because it causes a large gathering of funds without productive use. This leads to the loss of the company's opportunity to make a profit.

Several previous studies have examined the effect of Working Capital Turnover, Cash Turnover, Receivables Turnover, Inventory Turnover on Profitability. Research by Mutlasih (2014), the result is that the level of receivables turnover, inventory turnover rate and working capital turnover rate simultaneously and partially affect the level of profitability of the company. Another study by Naibaho and Rahayu (2014), the results showed that the turnover of receivables partially has a significant effect on profitability, the turnover of inventory partially has a significant effect on profitability. Simultaneously the turnover of receivables and the turnover of inventories have a significant effect on profitability.

Another study by Warrad (2013), the results of his study showed a significant impact of the variable free working capital turnover on the dependent variable of return on assets between chemical industries listed on the Amman Stock Exchange during period. However, in research Warrad and Al Omari (2015)

stated that there is no significant impact of turnover ratio to profitability of service sector companies in Jordan. Based on previous theories, phenomena, and studies, the author was attracted to conduct a study about the effect of cash turnover, receivables turnover and inventory turnover on profitability in manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2015-2020.

LITERATURE REVIEW

Agency Theory

Jensen and Meckling (1976) put forward an agency theory that explains the relationship between company management (agents) and shareholders (principals). Agency relationship (agency relationship) there is a contract of one or more persons (principals) that instructs other persons (agents) to perform a service on behalf of the principal and authorizes the agent to make the decision that is best for the principal. The principal can also limit the divergence of its interests by providing a decent level of incentive to the agent and being willing to incur monitoring costs to prevent hazards from the agent. However, on the contrary, agency theory can also imply the existence of information asymmetry. Intergroup conflict or agency conflict is a conflict that arises between the owner, and the manager of the company where there is a tendency for managers to be more concerned with individual goals than company goals. Several factors that cause the emergence of agency problems (Colgan, 2001), namely Moral Hazard,

1) *Earnings Retention*
   This problem revolves around the tendency to make excessive investments by the management (agents) through improvement and growth with the aim of enlarging power, prestige, or appreciation for himself, but can destroy the welfare of shareholders.
2) Time Horizon
   This conflict arises as a result of cash flow conditions, with principal management putting more emphasis on cash flow for a future whose conditions are uncertain, while management tends to emphasize matters related to their work.
3) Managerial Risk aversion
   This problem arises when there are limitations on portfolio diversification that relate to managerial income on the performance it achieves, so the manager will try to minimize the risk of the company's shares from investment decisions that increase its risks. For example, management is more happy with equity funding and tries to avoid borrowing debt, due to bankruptcy or failure.

Signal Theory

Signal theory states that a good quality company will deliberately give a signal to the market, thus the market is expected to be able to distinguish between a good quality and a poor quality company (Hartono,2005:38). For the signal to be effective, it must be captured by the market and perceived well, and not easily imitated by companies of poor quality (Hartono, 2005).

Companies that have confidence that the company has good prospects in the future will tend to communicate the news to investors (Ross, 1977). In this study, a good company will give a good signal by submitting financial statements in a timely manner because this cannot be imitated by companies with bad financial statements that cannot submit their financial statements in a timely manner. In this study, good companies are declared as good news while companies with bad

financial reports are declared as bad news.

Financial Statements

According to Financial Accounting Standard No.1 of 2015, financial statements are part of a complete financial reporting process, usually including balance sheets, income statements, statements of financial position, notes and other reports as well as explanatory materials that are an integral part of financial statements, in addition to industry and geographical segments and disclosure of price changes. Accordingto Subramanyam dan Wild (2010), financial statements are a product of the financial reporting process that is regulated by accounting standards and rules, intensive managers, and mechanisms for implementing and supervising companies. Financial statements are the final result of the accounting process which has a function as a medium of information and communication between internal parties (companies) and external parties (other parties) who have an interest in data or reports from the results of the company's activities presented.

From the above it can be said that financial statements are records of financial information of an enterprise or organization in an accounting period that can be used to describe the performance of such a company or organization. Financial statements are a summary of the recording process which is a summary of financial transactions that occurred during the relevant financial year. This report is made by the management with the aim of accounting for the duties charged by the owner of the company.

Financial statements provide information about the company which includes:

a) Assets
b) Obligation
c) Capital or Equity
d) Expense income, including profits and losses
e) Cash flow

Financial Management

Finance or *Finance* can be interpreted as the way a person or an organization improves, allocates and uses monetary resources in line with time and calculates its risks. According to F.W.Paish, Finance can be interpreted as the position of money at the time of desire. Whereas according to Howard and Upton (in the book *Business Finance,* Roberto G. Medina (1988), Finance can be defined as an administrative area or set of administrative functions in an organization related to the management of cash flows so that organizations have the means to carry out their goals as efficiently as possible and fulfill their obligations that will be due.

So basically, Finance is the art and science of money management. The concept of finance itself is not only money but also includes capital and funds that can be used in personal affairs and business affairs. Meanwhile, financial management is all company activities related to efforts to obtain company funds at a low cost and efforts to use and allocate these funds efficiently (Sutrisno 2012).

Profitability

Profitability is a ratio used to measure a company's ability to generate profits from normal business activities (Hery 2015). Profitability is the ability of a company to make a profit in relation to the sale of total assets as well as its own

capital. From this definition it is clear that the goal to be sought is the company's profit. Rasio profitability is a ratio used to measure a company's ability to seek profit. This ratio provides a measure of the level of effectiveness of the management of an enterprise. This is shown from the profit generated from sales and investment income.

There are several measurements of the company's profitability where each measurement is related to sales volume, total assets, and own capital. Overall these three measurements will allow an analyzer to evaluate the level of earnings in relation to sales volume, number of assets, and certain investments (Syamsuddin, 2011) There are three profitability measurement ratios in relation to the sales volume used. These ratios are:

1) *Gross profit Margin*
   Gross profit margin is a percentage of gross profit (*sales-cost of goods sold*) compared to sales. The greater the *gross profit margin*, the better the state of operation of the company. Conversely, the lower the *gross profit margin*, the less good the company's operations. *Gross profit margin* can be calculated as follows:
   $$Gross\ Profit\ Margin\ = \frac{Sales - Cost\ of\ goods\ sold}{\text{Sales}}\ X\ 100\%$$
2) *Operating Profit Margin*
   This ratio describes what is commonly called *the "pure profit"* received on every rupiah from sales made. *Operating profit* is called pure in the sense that this amount is actually obtained from the results of the company's operations by ignoring financial obligations in the form of interest and obligations to the government in the form of tax payments. As with *gross profit margin*, the higher the *operating profit margin ratio*, the better the operation of a company. *Operating profit margin* is calculated as follows:
   $$Operating\ Profit\ Margin\ = \frac{\text{Operating Profit}}{Sales}\ X\ 100\%$$
3) *Net Profit Margin*
   Net profit margin is the ratio between net profit (*net profit*) i.e. sales after deducting all *expenses* including taxes compared to sales. A *net profit margin* that is said to be good will largely depend on the type of industry in which the company is trying. The calculation of *net profit margin* is as follows:
   $$Net\ Profit\ Margin = \frac{Net\ Profit\ After\ Taxes}{Sales}\ X\ 100\%$$

Return on investment (ROI)

Return on investment is a profitability ratio calculated from net profit after deducting taxes to total assets. *Return on investment* is useful for measuring the company's overall ability to generate profits against the number of assets as a whole available to the company. The higher this ratio means that the better the condition of an enterprise. ROI can also be interpreted as a return on investment, this ratio sees the extent to which the investment that has been invested is able to provide a return on profits as expected (Fahmi 2016: 82). The following is the return *on investment* formula :

$$ROI\ = \frac{\text{Net Profit After Taxes}}{\text{Total Assets}}\ X\ 100\%$$

Working Capital

a. Definition of Working Capital

Working capital is the excess of current assets against short-term debt. This excess is called *net working capital*. This excess is the amount of current assets

derived from long-term debt and own capital (Jumingan 2011). Sutrisno (2007) explains the meaning of working capital as follows: "*Working capital is the funds needed by companies to meet daily needs, such as the purchase of raw materials, payment of labor wages, paying debts, and other payments*." Meanwhile, according to Cashmere (2008) working capital is the capital used to carry out the company's operating activities. Working capital is defined as an investment invested in current assets or short-term assets, such as cash, banks, securities, receivables, inventories and other current assets.

b. Types of Working Capital

The types of working capital according to Suyadi Prawirosentono (2002) are classified into:

1) Permanent working *capital* (PWC) isthe minimum amount that must be available so that the company can run smoothly.
2) Working capital variabel (*variable working capital*/VWC) yaitu whose amount changes – change according to changes in the area of production business.

c. Working Capital Element

Basically, the elements in current assets can be considered as elements of working capital, which consist of:

1) Cash
   According to Munawir (2000) gives the following understanding of cash, Cash is a means of payment that is ready and free to be used to finance the general activities of the company.
2) Receivables
   Receivables are an important asset in the company and can be a large part of the company's liquidity. The size of the receivables is influenced by several factors. According to Weygant et.al (2007), receivables are classified into:
   a) Accounts *receivable (account receivable*),
   b) Wesel tagih (*notes receivable*),
   c) Other *receivables*.
3) Supplies
   Inventory is the largest investment in current assets for most industrial companies. Inventory is needed to be able to carry out the production process, smooth sales, inventory of raw materials and goods in the process are needed to ensure the smoothness of the production process, while goods must always be available as "*buffer stock*" to allow the company to meet the demand that arises. There are three main forms of the company's inventory, namely raw material inventory, in-process goods inventory and finished goods inventory. (Lukman Syamsuddin, 2011).

d. Sources of Working Capital

According to Cashmere (2008) The need for working capital is absolutely provided by the company in any form. To meet these needs, sources of working capital are needed that can be sought from various sources available by considering the profit and loss of these sources of working capital.

Several sources of working capital that can be used, including:

a. Results of the company's operations
b. Profit of sale of securities
c. Sale of shares
d. Sale of fixed assets
e. Sale of bonds.

f. Obtaining a loan
g. Grants

e. Use of Working Capital

A manager is required to use working capital appropriately, in accordance with the goals that the company wants to achieve. The use of funds for working capital can be obtained from the increase in assets and the decrease in pasiva. The following explanation of the use of working capital that results in a reduction in current assets is as follows:

1. Payment of salaries, wages and other operating costs of the enterprise
2. Purchase of raw materials or merchandise
3. Cover losses resulting from the sale of securities
4. Formation of funds
5. Purchase of fixed assets
6. Long-term debt repayment
7. Purchase or recall of outstanding shares
8. The collection of money or goods for personal use, and the owner of the company takes the goods or money used for personal purposes.
9. Other uses.

Working Capital Turn Over

Working capital management according to K.R Subramanyam (2010) is an activity that includes all management functions over current assets and short-term liabilities of the enterprise. Effective working capital management becomes very important for the long-term growth of the company's sustainability. Working capital management in this study was proxied using the cash ratio (Cash Ratio), cash turnover, receivable turn over, inventory turnover (*Inventory Turn Over*), and profitability in this case Return On Asset (ROA). Working Capital Turnover is a ratio used to measure the effectiveness of working capital (current assets) owned by the Company in generating Sales of Hery (2015: 218). The Working Capital Turnover Formula is:

$$\text{Working capital turnover} = \frac{\text{Net Sales}}{\text{Working Capital}}$$

Cash Turnover

The cash turnover rate is a measure of the efficiency of the use of cash carried out by the company. Because the cash turnover rate describes the speed at which cash flows return cash that has been invested in working capital. According to K.R Subramanyam (2010): Cash turnover is a comparison between sales and the average amount of cash. The amount of cash can also be related to the amount of sales or sales, the ratio of sales to the average cash amount describes the level of cash turnover. According to James O. Gill, this ratio serves to measure the level of adequacy of the company's working capital needed to pay bills and finance sales. This means that this ratio is used to measure the level of cash availability to pay bills (debts) and costs related to sales.

Cash turnover is to show the ability of cash to generate income, so it can be seen how many times cash rotates in a certain period (Rahma 2011). The formula for calculating cash turnover according to (Sutrisno 2008). Cash turnover formula:

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

The higher the cash turnover rate means the higher the efficiency of cash use and the faster the return of cash inflows to the company. Thus, cash will be able to be

reused to finance operational activities so as not to interfere with the company's financial condition.

Receivables Turnover

Receivables are one of the elements of working capital that is always in a rotating state. Where the receivables turnover period begins when the cash is issued to obtain inventory, then the inventory is sold creditively so as to cause receivables, and the receivables change back to kassaat received receivables from debtors (Riyanto, 2004). According to Soemarso S.R (2010), it states that the turnover of receivables is:

> *"Shows how many times an enterprise has collected its receivables in a period. The turnover of receivables shows the efficiency of the companyin managing its receivables. Low receivables turnover shows that billing efficiency is getting worse during that period due to the length of time the division is carried out".*

Meanwhile, according to Cashmere (2014), receivables turnover is a ratio used to measure how long it takes to collect receivables for one-fifth or how many times the funds invested in these receivables rotate in one period. The higher the ratio indicates that the working capital invested in receivables is getting lower (compare with the ratio of the previous year) and certainly this condition for the company is still good. The high and low turnover of receivables will have an effect on the size of the capital invested in receivables. The faster the turnover means that the shorter the time of bonding of capital in receivables, so to maintain the sale of certain credit, with the increase in turnover, a smaller amount of capital is needed invested in the receivables (MunawirSjadzali, 2004).

According to K.R Subramanyam (2010), the position of receivables and the estimated time of their collection can be assessed by calculating the level of turnover of receivables, that is, by dividing the total sales of net credit by the average receivables. Sometimes credit sales figures for a certain period cannot be obtained so that what is used as credit sales is the total sales figure. The number of days of sale in receivables provides a benchmark for the length of time trade receivables are in circulation. The greater the ratio of the age of receivables the greater the ratio of uncollectible receivables. The change in the ratio between credit sales and the average receivables is caused by many things, including:

a. Decrease in sales and increase in receivables
b. Decrease in receivables followed by a decrease in sales of a larger amount
c. The increase in sales is followed by an increase in receivables in larger amounts
d. Decrease in sales with fixed receivables
e. Rising receivables while sales are unchanged

According to Darsono (2006), the age of receivables is the period from the time the sale transaction is recorded until the time the receivables list is made. Receivables as an element of working capital in a rotating condition, namely from cash, commodity processes, sales, receivables, back to cash. The faster the turnover of receivables, the better the company's financial condition. *Receivable turnover* can be presented by calculation: net sales on credit divided by the average receivables. The Receivables Turnover Formula is as follows (Darsono, 2006):

$$\text{Receivable Turnover} = \frac{\text{Net Sales}}{\text{Average of receivable}}$$

It can be concluded that the level of receivables turnover can be used as an illustration of the effectiveness of receivables management, because sethe higher the

level of turnover of receivables of a company means the better the management of its receivables. The turnover rate of receivables can be increased by tightening the policy of selling credit, for example by shortening the payment period.

Inventory Turnover

Inventory turnover is a ratio used to measure the number of times funds embedded in inventory will rotate in one period or how long (in days) the average inventory stored is in the warehouse so that it is finally sold (Hery 2015). In evaluating the position of inventory, the same procedure as in evaluating receivables can be used, namely by calculating the turn over or the level of inventory turnover. Inventory turnover rate is a ratio between the amount of cost of goods sold and the average value of inventory owned by the company. Companies can evaluate their inventory by calculating *inventory turn over* or inventory turnover. It is necessary for the company to do this to find out whether the inventory is liquid or illiquid. The occurrence of illiquid inventory means idle *inventory*, which will harm the company because this will increase the cost of inventory. Meanwhile, liquid or rotating inventory will greatly benefit the company.

According to K.R Subramanyam (2010), inventory is the ratio between the amount of goods sold and the average value of inventory owned by a company. Inventory turnover is a turnover that shows the number of times inventory is sold and replaced over a period.

Inventory Turnover = Cost of Goods Sold

Average−Average Inventory = Initial inventory+Inventory akhir

Charles T.Horgen et al (2008), argue that a high inventory turnover rate indicates ease in the sale of inventory while a low inventory turnover indicates difficulty in the sale of inventory. So the company can measure the level of liquidity by calculating the level of inventory turnover. If the liquidity ratio is high and reflects the inventory sold and no inventory accumulates, it has a positive impact on the company. Meanwhile, if the low turnover ratio reflects unsold inventory, it will have a negative impact on the company. According to Darsono (2005) the ideal ratio for supply turnover is 6 times. A ratio that is too high risks a shortage of inventory that results in the flight of customers, while a ratio that is too low causes too many idle assets. FormulaSubmitmentsAvailable :

$$\text{Inventory Turnover} = \frac{\text{cost of goods sold}}{\text{Average of inventory}}$$

HYPOTHESIS DEVELOPMENT

The Effect of Cash Turnover on Profitability

Cash turnover is a comparison between sales and the average cash amount. Cash turnover shows the ability of cash to generate income so that it can be seen how many times the cash rotates in a given period. The higher this cash turnover will be the better. Because this means that the higher the efficiency of cash use and the greater the profit obtained (Riyanto, 2001). To achieve the desired profit, companies should take various financial policies. One of them is the working capital policy. Working capital management is very important to do for the smooth running of the company's operational activities. Cash, and inventory are components of working capital that always rotate under certain circumstances so that cash turnover, and inventory turnover can affect the short length of time the capital is tied which will ultimately affect profitability. The period of turnover of working capital begins when cash is invested in the components of working capital until the moment it returns again to cash. As an element of working capital, cash needs to be

considered for its turnover. The faster or higher the cash turnover rate means that it indicates the shorter the time of bonding of capital in cash. This shows efficiency in the use of working capital which will later increase the level of profitability and can also increase the profit to be achieved. If profits rise, profitability also rises. From the explanation above, it can be concluded that the higher the cash turnover, the greater the profit obtained by the company. Therefore the relationship between cash turnover and profitability proxied with profitability is positively related.

Research by Haryanto, Akhmad Sodikin, and Ella Siti Chaeriah (2018), the results showed that cash turnover, receivables turnover, and inventory turnover simultaneously affected profitability. The variable of cash turnover partially affects profitability. Variable receivables turnover partially affects profitability. Inventory turnover variables partially affect profitability. According to the results of research by Roma Aryani (2012), Made Sri Utami, and Made Rusmala Dewi S. (2016) stated that the level of cash turnover has a positive and significant effect on profitability. Based on previous theories and research, the hypothesis of this research is as follows:

H1: cash turnover has a positive and significant effect on profitability.

Effect of Receivables Turnover on Profitability

Receivables turnover is a ratio used to measure the effectiveness of receivables management. If the faster the turnover of receivables, the more effective the company will be in managing its receivables (Susan Irawati, 2006). This receivables turnover provides insight into the quality of the company's receivables (accounts receivable) and the company's success in collecting such accounts receivable. This ratio shows how fast the collection of receivables is. The bigger the better because the collection of receivables is carried out quickly. Receivables are one of the components of the company's current assets. Receivables are the most liquid current assets after cash and cash equivalents compared to other current asset components. The slower it is to collect receivables, it can affect the turnover of receivables which will result in a smaller *cash ratio* of the company, and will slow down the company in fulfilling its short-term obligations.

Many companies sell on credit in order to sell more products or services. From the sale of such credit comes receivables. Receivables in the balance sheet usually constitute a fairly large part of current assets and therefore the company needs to pay enough serious attention so that the forecast of these receivables can be organized in the most efficient way possible, so as to increase the profitability of the enterprise. There is also a connecting theory proposed by Bambang Riyanto (2008), mentioning that the greater the amount of receivables means the greater the risk, but at the same time it will also increase profitability. When the company's liquidity is formed, the state of the company's asset condition will be better. Improving the condition of the company's assets, which on this occasion focuses on current assets caused by receivables, this will contribute greatly to all or part of the company's activities, so that the company's profitability will increase. Based on the foregoing, the author can conclude that receivables can increase the level of profitability but the ratio that shows the duration for converting receivables into cash is called the turnover of receivables. So receivables affect profitability.

Research by Nanik Sulistiyo Rini, Endang Masitoh Wahyuningsih (2015), the results showed that the turnover of receivables and the efficiency of working capital together had a significant effect on profitability. The results of this study show that

the coefficient of profitability of 100% is influenced by the turnover of receivables and the efficiency of working capital. According to the results of research by Roma Aryani (2012), and Annas Wahyudi (2016) stated that the level of cash turnover has a negative and insignificant effect on profitability. Based on previous theories and research, the hypothesis of this research is as follows:

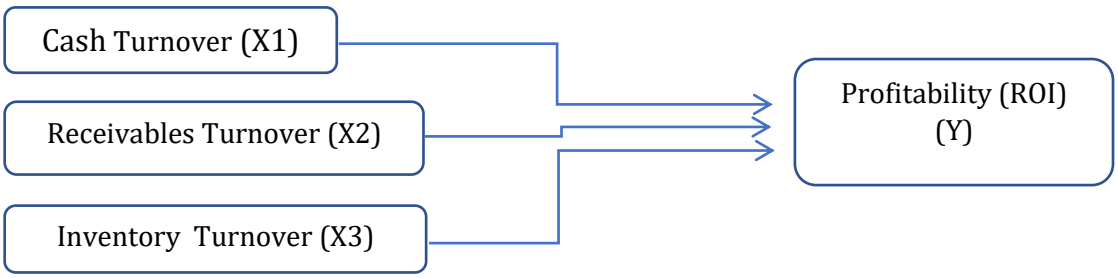
H2: the turnover of receivables has a negative and insignificant effect on profitability.

Effect of Inventory Turnover on Profitability

Dosage turnover is a ratio used to measure the number of times the funds planted in this *preparation (inventory*) rotate in a period. This ratio is known as the dosage turnover ratio (*inventory turnover*). It can also be interpreted that the turnover perpreparation is a ratio that shows how many times the number of prepared goods is replaced in one year. The smaller this ratio, the uglier and vice versa. The efficiency of the use of working capital can be seen from the period of working capital turnover which is influenced by the turnover of each component of working capital. In addition to cash, the working capital element of inventory also needs to be considered for turnover. To be able to achieve a high level of turnover, inventory planning and supervision must be held regularly and efficiently. If the faster the inventory turnover indicates that the company can operate optimally with *full capacity* so that it will increase the profit to be achieved. If the profit is high, then the profitability ratio is also high. So, it can be concluded that the higher the turnover of inventory, the greater the profit obtained by the company. Therefore the relationship between inventory turnover and profitability is positive.

Research by Caroline Nyambura Mwaura (2017), the results show there is a strong positive and statistically significant correlation between inventory turnover and the financial performance of large and large supermarkets in Kenya. Another study by Haryanto, Akhmad Sodikin, and Ella Siti Chaeriah (2018), the results showed that cash turnover, receivables turnover, and inventory turnover simultaneously affected profitability. The variable of cash turnover partially affects profitability. Variable receivables turnover partially affects profitability. Inventory turnover variables partially affect profitability. Based on previous theories and studies, the hypothesis of this study is as follows:

H3: inventory turnover has a significant positive effect on profitability.



Source: Canizio (2017)

Figure 1. Conceptual Framework

METHODOLOGY

In a study a researcher must use the right type of research. This is intended so that researchers can get a clear picture of the problem at hand and the steps used

in overcoming the problem. The research method used in this study is a quantitative research method. According to Sekaran (2011), quantitative research is a type of research that basically uses a deductive-inductive approach. This approach departs from a theoretical framework, the ideas of experts, and the understanding of researchers based on their experiences, then developed into problems and their solutions that are proposed to obtain justification (verification) or assessment in the form of empirical data support in the field. The quantitative method was chosen in this study because the study is presented with numbers. This is in accordance with the opinion of Sekaran (2011), which states that quantitative research is a research approach that is widely required to increase numbers, starting from data collection, interpretation of the data, and the appearance of the results.

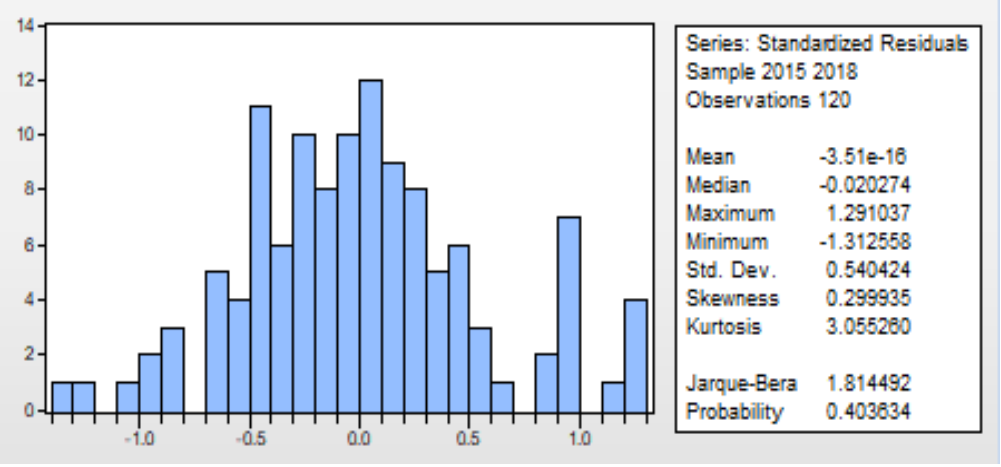
The population in this study is the financial statements of manufacturing companies totaling 232 companies over a period of six years, the period from 2015 to 2020. The sample is the part of the population that is expected to represent the study population (Mudrajad, 2003). Because the number of manufacturing companies is 232 companies, not all are taken as samples. The technique used in data collection is documentation every year on manufacturing companies for a period of six years, the period from 2015 to 2020 published by the Indonesia Stock Exchange (IDX), the Indonesia Capital Marker Directory (ICMD) and can also be seen in the *Indonesia Stock Exchange* (IDX) for the period 2015 to 2020.

RESULTS AND DISCUSSION

Data Analysis

This study used the Linear Ordinary Least Square (OLS) Regression analysis method with a statistical analysis tool, namely the Eviews 8.0 program. Linear Ordinary Least Square (OLS) regression is a statistical test that can be tested using several types of statistical software, one of which is eviews. OLS linear regression requires assumptions to be met, it is necessary to perform a classical assumption test post OLS linear regression.

1. Normality Test



Source: Eviews Test Results, 2022

Figure 2. Normality Test

The purpose of conducting a normality test is to see whether in the regression model the bound variables and free variables have a normal distribution or not (Sekaran, 2011). A good regression model is a normally distributed

regression model. The data is required to be normally distributed to avoid bias in data analysis. If the data is *outlier* (abnormal), then the data must be discarded because it causes bias in interpretation and affects other data. The normality test criteria are seen from the Probability value. It is said to be nomal if the Probalility > α 5%. The results above show a Probability value of 0.403834 > α 5%. So that it can be concluded that the distribution of data is normal (see Figure 2).

2. Multicollinearity Test

The multicollinearity test is a test carried out to test whether the regression model found a correlation between free variables (Sekaran (2011). A good regression test model is a regression model in which there are no symptoms of multicollinearity. To detect the presence or absence of symptoms of multicollinearity are as follows:

a. The R^2 value generated by an estimation empirical regression model is very high, but individually many free variables do not significantly affect the bound variable.
b. Analyze correlations between free variables. If between free variables there is a fairly high correlation (above 0.90) then this is an indication of multicollinearity.
c. Multicollinearity can also be seen from the VIF, if the VIF < 10, then the degree of choleribility is tolerable.
d. Eigenvalues of one or more, free variables close to zero provide clues to the presence of multicollinearity.

This study used a correlation test in assessing mulcholinearity. Here are the test results:

Table 1. Multicollinearity Test

	Correlation		
	cash_turnover_X1	receivables _ turnover_X2	inventory_ turnover_X3
cash_turnover_X1	1.000000	0.053888	-0.066250
receivables _ turnover_X2	0.053888	1.000000	-0.438526
inventory_ turnover_X3	-0.066250	-0.438526	1.000000

Source: Eviews Test Results, 2022

The criterion of the multicholinearity test is that if between free variables there is a fairly high correlation (above 0.90) then this is an indication of the existence of multicollinearity. The results showed the correlation value of Cash Turnover to Receivables Turnover of 0.053888, and the correlation value of Cash Turnover to Inventory Turnover of -0.066250. The results showed the correlation value of Receivables Turnover to Cash Turnover of 0.053888, and the correlation value of Receivables Turnover to Inventory Turnover was -0.438526. The results showed a correlation value of Inventory Turnover to Cash Turnover of -0.066250, and a correlation value of Inventory Turnover to Receivables Turnover of -0.438526. The overall correlation value of the variable < 0.90 so it can be concluded that the whole variable is indicative of the absence of multicollinearity.

3. Autocorrelation Test

The autocoleration test is a test carried out to see whether there is a correlation between the intruder error in the t period and the t-1 period in the linear regression equation (Sekaran, 2011). If there is a correlation, it indicates an auto-acoleration problem. Auto-aculatation issues may occur in *time series data* . A good regercy model is an autocolerated-free regression model.

Table 2. Autocorrelation Test

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	0.138628	0.738857	0.187625	0.8516
cash_turnover_X1	0.631213	0.991393	0.636693	0.5260
inventory_ turnover_X3	0.215560	0.261952	0.822899	0.4128
receivables _ turnover_X2	-0.004967	0.016017	-0.310118	0.7572
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.239816	Mean dependent var		0.417384
Adjusted R-squared	-0.039791	S.D. dependent var		0.341152
S.E. of regression	0.347873	Akaike info criterion		0.954460
Sum squared resid	10.52838	Schwarz criterion		1.721020
Likelihood logs	-24.26761	Hannan-Quinn criter.		1.265764
F-statistics	0.857689	Durbin-Watson stat		2.738432
Prob(F-statistics)	0.681221			

Source: Eviews Test Results, 2022

One way to test for autocoleration is with the Durbin-Watson Test. This test is only used for *first-order autocorrelation* and requires the presence of intercepts (constants) in the regression model and there are no more variables between the free variables. The decision-making conditions in the Durbin-watson test can be seen in the table below:

Table 3. Decision Making whether or not there is Autocoleration

Testing Criteria	If
No autocoleration occurs	(4-dl) < dw < dl
Positive autocoleration occurs	dw < dl
Negative autocoleration occurs	Dw > (4-dl)
Results are inconclusive	Dw is located between (4-du) and (4-dl)

Source: Sekaran (2011)

Based on the results of the autocorrelation test, it shows that the DW value is 2.738432, the dL value with the number of samples N: 120, K : 3, and α 5% is 1.6513. The test criteria did not occur autocorrelation (4-dl) < dw < dl = 2.387 < 2.738432 < 1.6513. So it can be concluded that no autocorrelation occurs.

4. Heteroskidasticity Test

Heteroskedasticity is performed to see that variable variance is not the same for all observations (Wijaya Tony, 2011: 126). If the variance from the residual of one observation to the observation of another is fixed or the same, then it is called homoskedasticity. A good regression model is one that is homoskedasticity or does not occur heteroskedasticity because *cross section* data has data that represents various sizes (small, medium, and large).

The test of classical assumptions in the next panel data is the heteroskedasticity test. The process of conducting heteroskedasticity testing on panel data analysis in this article is to use the glejser test. The glejaser test regresses free variables against residual abasolut. Residual is the difference between the

observation value and the predicted value, while *the absolute is* the absolute value. So, when the results of the analysis and selection of the selected regression model are fixed effect models (FEM), then the glejser test needs to be used. This is to see if there is a violation of the classical assumption of heteroskedastics in the regression model or not. Furthermore, if the data processing process and the selected model are random efffect models (REM), then the test can be said to be complete.

If the value of the prob. < 0.05 then there is heteroskedasticity. Conversely, if the probability value of each independent variable > 0.05 then it is free from heteroskedastic assumptions.

Table 4. Heteroskidasticity Test

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	0.138628	0.738857	0.187625	0.8516
cash_turnover_X1	0.631213	0.991393	0.636693	0.5260
inventory_ turnover_X3	0.215560	0.261952	0.822899	0.4128
receivables _ turnover_X2	-0.004967	0.016017	-0.310118	0.7572
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.239816	Mean dependent var		0.417384
Adjusted R-squared	-0.039791	S.D. dependent var		0.341152
S.E. of regression	0.347873	Akaike info criterion		0.954460
Sum squared resid	10.52838	Schwarz criterion		1.721020
Likelihood logs	-24.26761	Hannan-Quinn criter.		1.265764
F-statistics	0.857689	Durbin-Watson stat		2.738432
Prob(F-statistics)	0.681221			

Source: Eviews Test Results, 2022

Based on the results above, it can be seen that the Probalitity value of the Cash Turnover variable is 0.5260, the Probalitity of the Receivables Turnover variable is 0.7572 and the Probalitity value of the Inventory Turnover variable is 0.4128. Realizing the assumption of probability values in each independent variable > 0.05, it is free from violations of heteroskedastic assumptions. So it can be concluded that there is no heteroskedasticity in the data.

Commont Effect and Fixed Effect Test

In the next analysis test, a common effect or fixed effect test is carried out. This test is carried out to see which test is the best between common effects or fixed effects that will be used as interpretation of the results. The comparison is used if the result of the calculated F is greater (>) than the F of the table then H0 is rejected, which means that the most appropriate model used is fixed effect. Conversely, if F counts smaller (<) than F of the table then H1 is accepted and the model used is the common effect (Widarjono, 2009). The result of the redundant fixed effect or likelihood ratio for this model has a probability value of F smaller than Alpha (0.05), so H0 is rejected and H1 is accepted, the corresponding model of this result is fixed effect (Because the probability value of F is 0.0003 < 0.05). Here are the test results:

Table 5. Fixed Effect Model

Redundant Fixed Effects Tests
Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistics	d.f.	Prob.
Cross-section F	2.065891	(29,87)	0.0052
Cross-section Chi-square	62.870138	29	0.0003

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	-4.245961	0.931240	-4.559472	0.0000
cash_turnover_X1	7.072764	1.517338	4.661296	0.0000
inventory_ turnover_X3	0.052504	0.315945	0.166181	0.8684
receivables _ turnover_X2	0.067492	0.021899	3.081993	0.0028

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.695292	Mean dependent var	1.637342
Adjusted R-squared	0.583215	S.D. dependent var	0.753400
S.E. of regression	0.486386	Akaike info criterion	1.624788
Sum squared resid	20.58171	Schwarz criterion	2.391349
Likelihood logs	-64.48730	Hannan-Quinn criter.	1.936092
F-statistics	6.203726	Durbin-Watson stat	2.286055
Prob(F-statistics)	0.000000		

Source: Eviews Test Results, 2022

From these results can be read as follows:

Hypothesis:

H0: Common Effect

H1: Fixed Effect

Regression Result Evaluation

1. **Goodness Garis Reggression**

   The goodness of the regression line dapat is seen from R-Square with criteria $0 \leq R^2 \leq 1$. The value of R^2 in the model is 0.695292. This means that the variation in Cash Turnover, Receivables Turnover, and Inventory Turnover is 69.53%. While 30.47% is explained by other variables that do not enter the model.

2. **Eligibility Model**

   The feasibility of the model dapat is seen from the P-value or called the value of the significance of the model.

   $\beta_1 = \beta_2 = \beta_3 = 0$ (no effect)

   $\beta_1 \neq \beta_2 \neq \beta_3 \neq 0$ (effect)

   In the results of Prob regression (F-statistics), which is $0.0000 < \alpha\ 0.01$ (rejecting H_0). That is, the model is significant at α by 1%.

3. **Independent variable significance test (t test)**

The independent variable significance test can be seen from the P-value or significance value on each independent variable. With the following test criteria:

$\beta_1 = \beta_2 = \beta_3 = 0$ (no effect)

$\beta_1 \neq \beta_2 \neq \beta_3 \neq 0$ (effect)

a. Cash Turnover (X1)
   The P-value of Cash Turnover (X1) is 0.000. The P-value of 0.0000 < α 1%. So it can be concluded that the independent variable Cash Turnover (X1) is significant at α 1% (rejecting H_0).
b. Receivables Turnover (X2)
   The P-value of Receivables Turnover (X2) is 0.0028, or in one-sided tests it is 0.0028:2= 0.0014. The P-value of 0.0014 < α 1%. P-value Receivables Turnover (X2) is less than α 1%. So it can be concluded that the independent variable Receivables Turnover (X2) is significant in α of 1% (rejecting H_0).
c. Inventory Turnover (X3)
   The P-value of Inventory Turnover (X3) is 0.8684, or in one-sided tests it is 0.8684:2=0.4342.
   P-value of 0.4342 > α 1%
   P-value of 0.4342 > α 5%
   P-value 0.4342 > α 10%
   The P-value of Inventory Turnover (X3) is greater than α 1%, 5% or 10%. So it can be concluded that the independent variable Inventory Turnover (X3) is not significant in α (menerima H_0).

4. Simultaneous Test (F Test)

To find out whether other variables affect the *Return On Investment (ROI),* a simultaneous test (F test) is carried out, which combines the independent variables of Cash Turnover, Receivables Turnover, and Inventory Turnover. This test does not rule out the possibility that together the independent variables of Cash Turnover, Receivables Turnover, and Inventory Turnover affect the *Return On Investment (ROI)*. The hypothesis of this combined test is as follows:

H_0: $\beta_2 = 0$ and $\beta_3 = 0$

Ha: $\beta_2 \neq 0$ and or $\beta_3 \neq 0$

Here are the results of simultaneous tests using the statistical program Eviews 8:

Table 6. F Test (Simultaneous)

Wald Test:
Equation: Untitled

Statistical Test	Value	Df	Probability
F-statistics	6.203726	(3, 120)	0.0000
Chi-square	33.93637	3	0.0000

Source: Eviews Test Results, 2022

The results of the simultaneous test can be seen in the F-count value of 6.203726 with a P-value of 0.0000. The P-value is smaller than α (rejecting H_0), so it can be concluded that the independent variables Cash Turnover,

Receivables Turnover, and Inventory Turnover together (simultaneously) significantly affect the *Return On Investment (ROI)* at α 1%.

Regression Coefficient Test

The Regression coefficient is used to interpret the influence of independent variables on dependent variables.

Table 7. Regression Coefficients

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	-4.245961	0.931240	-4.559472	0.0000
PKAS_X1	7.072764	1.517338	4.661296	0.0000
PPERSEDIAAN_X3	0.052504	0.315945	0.166181	0.8684
PPIUTANG_X2	0.067492	0.021899	3.081993	0.0028

Source: Eviews Test Results, 2022

The regression coefficient$\beta_1, \beta_2\ dan\ \beta_3$ in the linear log model is elasticity that is, the change of X to Y in the form of a percentage. Here is the interpretation of the regression coefficient based on the results of the analysis:

1) The Cash Turnover regression coefficient (X1) is 7.072764, meaning that Cash Turnover (X1) has a positive effect on *Return On Investment* (Y) because the coefficient is positive. If the average Cash Turnover (X1) increases by 1%, then the average *Return On Investment* (Y) increases by 707.27%.
2) The regression coefficient of Receivables Turnover (X2) is 0. 067492, meaning that receivables turnover (X2) has a positive effect on return *on investmentt* (Y) because the coefficient is positive. If the average Receivables Turnover (X2) increases by 1%, then the average *Return On Investment* (Y) increases by 6.75%.
3) The Inventory Turnover regression coefficient (X3) is 0. 052504, the turnover of receivables (X3) has a positive effect on *the Return On Investmentt* (Y) because the coefficient is positive. If the average Receivables Turnover (X3) increases by 1%, then the average *Return On Investment* (Y) also increases by 5.25%.

CONCLUSIONS AND SUGGESTIONS

Based on the test results that have been presented in chapter IV, conclusions can be drawn in this study, namely: The P-value of Cash Turnover (X1) is 0.000. The P-value of 0.0000 < α 1%. So it can be concluded that the independent variable Cash Turnover (X1) has a significant effect on *Return On Investment (ROI)*. The P-value of Receivables Turnover (X2) is 0.0028, or in one-sided tests it is 0.0028:2= 0.0014. P-value of 0.0014 < α 1%. P-value Receivables Turnover (X2) is less than α 1%. So it can be concluded that the independent variable Receivables Turnover (X2) has a significant effect on Return *On Investment (ROI)*. The P-value of Inventory Turnover (X3) is 0.8684, or in one-sided tests it is 0.8684:2=0.4342. P-value of 0.4342 > α 1%, 5%, 10%. The P-value of Inventory Turnover (X3) is greater than α 1%, 5% or 10%. So it can be concluded that the independent variable Inventory Turnover (X3) is not significant to the *Return On Investment (ROI)*. The results of the simultaneous test can be seen in the F-count value of 6.203726 with a P-value of 0.0000. The P-value is smaller than α (rejecting H_0), so it can be concluded that the independent variables

Cash Turnover, Receivables Turnover, and Inventory Turnover together (simultaneously) significantly affect the *Return On Investment (ROI)* at α 1%.

This research certainly has limitations, researchers will describe the limitations that exist in this study as follows: Variables used in the determination of *Return On Investment (ROI)* only use the variables of cash turnover, accounting turnover, and inventory turnover only. Even though there are many other variables that are suspected to affect *the Return On Investment (ROI).* The samples used are only in manufacturing companies, so the results cannot parallelize all companies. The observation period is only 4 (four) years, causing suspected non-optimal results.

Based on the conclusions and limitations in this study, the author will describe suggestions for companies and for subsequent researchers: For companies, in this study it is proven that the variables of cash turnover and inventory turnover affect *return on Investment (ROI),* especially the variable cash turnover which if the average Cash Turnover (X1) increases by 1%, then the average *Return On Investment* (Y) increases by 707.27%. Companies are advised to maintain cash turnover in order to continue to help increase *Return On Investment (ROI).* Meanwhile, in this study it was proven that the inventory turnover variable has no effect on Return *On Investment (ROI),* even though based on the theory of inventory turnover can increase *Return On Investment (ROI).* So it is advisable for companies to increase the amount of inventory and the number of orders in order to increase *return on investment (ROI).* For subsequent researchers, based on the limitations of this study, researchers were further advised to add other independent variables that were thought to affect *Return On Investment (ROI),* it was advisable to add to the sample company sector, and it was advisable to increase the research period.

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