

DETERMINING THE OPTIMAL WORKING CAPITAL MANAGEMENT (CASE STUDY: PT ULTRAJAYA MILK INDUSTRY & TRADING COMPANY TBK)

Mutiara Alya Shofa Irawan¹
Asep Darmansyah²

¹School of Business and Management, Institut Teknologi Bandung (SBM-ITB), Indonesia,
(E-mail: mutiara-alyashofairawan@sbm-itb.ac.id)

²School of Business and Management, Institut Teknologi Bandung (SBM-ITB), Indonesia,
(E-mail: asep.darmansyah@sbm-itb.ac.id)

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Abstract: *PT Ultrajaya Milk Industry & Trading Company Tbk (ULTJ) is one of the leading producers of food and beverage products in Indonesia. The Company introduced the technology of Ultra High Temperature (UHT) processing combined with aseptic packaging in carton packs. The business issue in this research is working capital management in ULTJ is not optimal. ULTJ has the problem that their Cash Conversion Cycle (CCC) is getting longer from year after year. This situation makes the company needs to manage their working capital. The research framework of this research is to optimize CCC of ULTJ. The results in this study from sensitivity analysis show that inventory is the most sensitive variable compared to account receivable and account payable. From the calculation, the optimal inventory affects the Average Age of Inventory (AAI). The AAI is smaller than the current AAI value in the company. The analysis results also show that the decrease in the AAI causes the reduction of CCC value. Therefore, based on the analysis the author recommends ULTJ should consider to modifying inventory management in running its business in order to create good working capital management.*

Keywords: *Working Capital Management, Cash Conversion Cycle, Average Age of Inventory, Inventory Management, Profitability.*

Introduction

The International Monetary Fund (IMF) projects the world economy to grow minus in 2020. The reason is the COVID-19 pandemic that has hit the world in recent months. However, in the first quarter of 2020, with a Consumer Confidence Index of 127, Indonesia remained the 4th most optimistic market worldwide. Regarding the growth of Fast-Moving Consumer Goods (FMCG), consumer trust, in turn, would have an impact on consumer product spending. Data shows that FMCG still developed quite positively in Q1 2020. In Indonesia, competition in the FMCG industry has become an interesting issue, and the business competition process is always

increasing. Indonesia's promising macroeconomic outlook and favorable demographics will continue to provide future growth opportunities for businesses. It is supported, with quite strong economic growth in Indonesia. Indonesia having a steady GDP growth rate from year to year. The situation will also provide companies engaged in the FMCG industry to expand their business processes. Currently, consumption growth in Indonesia has decreased quite sharply. Based on TheGlobalEconomy.com in Q3 of 2020, even consumption growth in Indonesia is negative. With these circumstances, companies operating in Indonesia still must try to find the best way to maintain or increase competitiveness among their rivals. To anticipate this situation, the company should manage working capital to fulfill their need. According to Gitman and Zutter (2015), a survey of CFOs from firms worldwide suggests that working capital management is at the top of the list of most valued finance functions. One of the parameters used to do working capital management is the cash conversion cycle (CCC). The CCC considers elements of the management of present properties. The cash conversion cycle calculates the amount of time needed for a business to convert money spent in its activities to cash earned as a result of its activities. Based on Financial statement from 2017-2019, PT Ultrajaya Milk Industry & Trading Company Tbk has the problem that their Cash Conversion Cycle is getting longer from year after year because PT Ultrajaya Milk Industry & Trading Company Tbk has long days of Average Age of Inventory (AAI) and Average Collection Period (ACP), and short days of Average Payment Period (APP). As for the purpose of this research are to understand the impact of optimizing cash conversion cycle and to analyze the solution that can optimize the cash conversion cycle of PT Ultrajaya Milk Industry & Trading Company Tbk.

Literature Review

Working Capital Management

According to Al-Mohareb working capital management is the most important aspect of the economic performance of a firm that contributes to enhancing profitability and providing directly liquidity to the firm (Chary & Kumar, 2011). In theory, planning and controlling current assets and liabilities are considered as responsibilities of efficient working capital management that contributes to eliminating the inability risk of the meeting short-term obligations and to avoiding excessive investment in these assets (Eljelly, 2004) (2019:82). The goal of working capital (or short-term financial) management is to manage each of the firm's current assets (inventory, accounts receivable, marketable securities, and cash) and current liabilities (notes payable, accruals, and accounts payable) to achieve a balance between profitability and risk that contributes positively to the firm's value (Gitman and Zutter, 2015:654).

Cash Conversion Cycle

The cash conversion cycle (CCC) is the length of time required for a company to convert cash invested in its operations to cash received as a result of its operations (Gitman and Zutter, 2015:657). In other words, the cash conversion cycle represents the length of time between paying for labor and materials and collecting on receivables. Thus, the cash conversion cycle equals the average length of time a dollar is tied up, or invested, in current assets. During this period, the firm must find ways to finance the operating cycle (Besley and Brigham, 2018:270). To calculate CCC, previously we must calculate the operating cycle. The Formula is:

$$OC = AAI + ACP$$

According to Gitman and Zutter Average Age of Inventory (AAI) is average number of days sales in inventory. AAI calculation can be started with inventory turnover calculation, where inventory turnover is a common measure of the activity, or liquidity, of a firm's inventory (2015:121). Inventory turnover and AAI can be defined as

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

$$\text{AAI} = \frac{365}{\text{Inventory Turnover}}$$

According to Gitman and Zutter Average Collection Period (ACP) is the average amount of time needed to collect accounts receivable. The average collection period, or average age of accounts receivable, is useful in evaluating credit and collection policies (2015:122). ACP can be defined as

$$\text{ACP} = \frac{\text{Accounts Receivable}}{\frac{\text{Annual Sales}}{365}}$$

However, the idea of developing and selling a goods often entails the purchase, on account, of processing inputs (raw materials), resulting in accounts payable. Accounts payable decrease the number of days in the financial period where the finances of a company are locked up. The typical payout period is the time it takes to settle the accounts payable, calculated in days. According to Gitman and Zutter average payment period is the average amount of time needed to pay accounts payable (2015:123). The average payment period (APP) can be defined as

$$\text{APP} = \frac{\text{Accounts Payable}}{\frac{\text{Annual Purchases}}{365}}$$

Calculation of cash conversion cycle is measures in elapsed time by reducing the operating cycle (OC) and the average payment period (APP). If written in the formula is as follows:

$$\text{CCC} = \text{OC} - \text{APP}$$

or

$$\text{CCC} = \text{AAI} + \text{ACP} - \text{APP}$$

Profitability

Profitability is the net result of a number of policies and decisions. profitability shows the combined effects of liquidity management, asset management, and debt management on operating results and the firm's ability to generate income (Besley and Brigham, 2018:35). In this research, profitability is only calculated by return on assets. According to Zakari and Saidu return on assets (ROA) is a widely used financial tool to determine the level and intensity of returns that a firm has generated by employing its total assets. Firms are usually considered well off when they generate returns that can attract further investors and lenders, and in trouble if they need to raise the finance required for growth or capital needs, or if their ROA does not convince financiers (Ali, 2011) (2016:344). Return on Assets (ROA) can be defined as

$$\text{Return on Assets} = \frac{\text{Earnings Available for Common Stockholders}}{\text{Total Assets}}$$

Previous Related Research

Many researchers advocate the principle of working capital management using the Cash Conversion Cycle (CCC) as a methodology that can contribute to business profitability as a key criterion. This table below shows summary of the previous related research.

Table 1: Summary of the previous related research

No	Author	Research Title	Research Result
1	Niko Sianipar, Syamsu Alam, Mursalim Nohong (2020)	Analysis of Working Capital Management and Cash Holding on Profitability of Manufacturing Companies Listed in IDX Period 2014-2018	CCC has a favorable and non-significant effect on asset returns. The impact of the ICP on Return on The optimistic and substantial effects of Cash Holdings on the return on assets
2	Manar Al-Mohareb (2019)	Cash Conversion Cycle and Profitability Evidence from Jordan	The management of working capital reflecting the cash conversion cycle has a direct influence on the performance of businesses in the manufacturing sector.
3	Ade Rizky, Mega Mayasari (2018)	The Impact of Cash Conversion Cycle on Firm Profitability of Retail Companies	This suggests that the CCC has a negative impact on the sustainability of retail enterprises. The negative association means that earnings would increase the lower the amount of the CCC or the shorter the duration of the CCC.
4	Nufazil Altaf, Farooq Ahmad Shah (2018)	How does working capital management affect the profitability of Indian companies?	The correlation between utility of working capital and company profitability is driven by the quadratic specification. Company profitability improves at lower CCC levels and firm profitability declines at higher levels.
5	Murtala Zakari, Sani Saidu (2016)	The Impact of Cash Conversion Cycle on Firm Profitability: Evidence from Nigerian Listed Telecommunication Companies	This framework assumes a beneficial relationship between the cycle of cash conversion and profitability.

Methods

The analysis starts by identifying the external condition of PT Ultrajaya Milk Industry & Trading Company Tbk using PEST analysis to study about the market in Indonesia and porter's five forces analysis to analyse about industry and competition. Next Step is doing internal analysis using SWOT analysis and financial ratio analysis to analyse UL TJ current business process. The researcher collecting secondary data from annual report of PT Ultrajaya Milk Industry & Trading Company Tbk. Not only UL TJ but also researcher collects data from another company in same sector for comparisons when analysing. The data collected from 2015-2019. After that, the author proposed solutions to solve the problem using the sensitivity analysis and make scenario from sensitive variable. The goal is to optimize cash conversion cycle of PT Ultrajaya Milk Industry & Trading Company Tbk.

External and Internal Analysis

PEST Analysis

PESTLE analysis, which is sometimes referred as PEST analysis, is a concept in marketing principles. This concept is used as a tool by companies to track the environment they're operating in or are planning to launch a new project/product/service etc. (pestleanalysis.com, 2020).

Political Factors

Indonesia is a constitutional democratic country. Indonesia is currently characterized by the nation sovereignty manifested in the parliamentary and presidency elections every five years. Indonesia entered a new era since the end of the government regime in the new order in the middle of 1998. This political decentralization has given greater power to the local government. Particularly in Indonesia, the largest political issue is the presidential election in 2019. The political year does not affect the state of food and beverage industry. But the situation of the rupiah exchange rate against the United States dollar will still be the biggest challenge, because it will affect the cost of industrial production due to the cost of buying raw materials increased.

Economic Factors

Indonesia is a country whose economic growth is arguably good compared to other countries during uncertain world economic conditions. Indonesia has the largest economy in Southeast Asia, the world's largest economy in terms of purchasing power parity. According to BPS Indonesia's economic QI-2020 towards the QI-2019 grew by 2.97%, slowing down compared to QI-2019 of 5.07%. In 2020, Central Bank of Indonesia already declining 6 times of BI 7-day (Reverse) Repo Rate. From 5% in the beginning of 2020 to 3.75% on 17 December 2020. The decrease in interest rates was needed to encourage domestic economic growth to slow down due to the Covid-19 outbreak. while the current inflation rate is at 1.59% on 30 November 2020. Currently, the handling of the Covid-19 pandemic in Indonesia is still a concern for foreign investors in the capital market. The addition of cases above 6,000 per day at the end of 2020 made the Composite Stock Price Index (IHSG) closed weaker in trading at the end of November 2020. While IHSG is a reflex of economic activity, from the growth outlook, if the market falls, expectations of future growth will also decrease.

Sociocultural Factors

Indonesia is the fourth most populated country in the world, Indonesia's population is 271,936,596 by December 2019, comprising 3.51% of the world's population. The government ensures freedom of religion and ethnically the country is also very diverse. Indonesia is also the largest Muslim country in the world. Around 25.1 million Indonesians still live below the poverty line, with a population of around 267.3 million. In Indonesia, the largest population is in Java and Sumatra island. The more the population, the more also the demand for households.

Technological Factors

Over the years Indonesia has made some good innovations in technology adoption. The government has announced a plan for making Indonesia 4.0, to increase technology use to stimulate growth and increase industrial capacity. The food and beverage industry itself are one of the industries that is a demonstration of the application of the 4.0 Industrial Revolution. But based on the data released by the combination of food and beverage entrepreneurs all over Indonesia (GAPMMI) from 6,875 Industries food and beverage large-scale, currently 20% are already headed for the 4.0 industry.

Porter's Five Forces Analysis

Porter's Five-Forces Model of competitive analysis is a widely used approach for developing strategies in many industries. The intensity of competition among firms varies widely across industries (David, 2011:74).

Bargaining power of suppliers (Medium)

Looking at the industrial situation in Indonesia, the relatively large number of suppliers in the FMCG industry and supported by the relatively large number of FMCG companies in Indonesia and the growing population in Indonesia makes the level of product demand relatively high so that suppliers' bargaining power is quite high.

Bargaining power of buyers (High)

At this time, buyers or customers have been considered critical factors in maintaining the company's survival and obtaining many buyers or customers, which can mean that the company wins competition in an industry with other companies. Therefore, the company must continue to improve the quality of the company's products and services so that consumer satisfaction is maintained so that buyers do not turn to other companies that are now starting to come and begin to develop.

Threat of new entrants (Medium)

Given the substantial investment costs required, licensing, access to raw materials, access to distribution channels, brand loyalty is still small. It makes those who will set up a company must have a reasonably difficult preparation to compete with existing companies in Indonesia.

Threat of substitute product or service (High)

Measured by the many choices of people when they want to buy the goods they want. Companies should think of strategic steps to maintain customer loyalty to the product. It makes the banking substitution product relatively high.

Rivalry among existing firms (High)

Nowadays, many consumer goods companies are established and offer almost the same products in Indonesia, such as packaged beverages, snacks, etc. It caused high competition from FMCG companies in Indonesia. The variety of Indonesian society segments is also one of the factors that FMCG companies in Indonesia compete to get consumers.

SWOT Analysis

SWOT (strengths, weaknesses, opportunities, and threats) analysis is a framework used to evaluate a company's competitive position and to develop strategic planning. SWOT analysis is a simple but powerful tool for sizing up a company's strengths and weaknesses, its market opportunities, and the external threats to its future well-being (Thompson, Peteraf, Gamble and Strickland, 2014:90).

Table 2: SWOT Analysis

Strength	<ol style="list-style-type: none"> 1. Sustainable economic growth in Indonesia. 2. Indonesia is the southeast Asia's largest potential market. 3. Consumer loyalty to ULTJ UHT milk products. 4. Large size and scale of the organization, including multinational business operations.
Weakness	<ol style="list-style-type: none"> 1. Lack of technology. 2. High production cost. 3. Limitations of raw materials that still often rely.
Opportunity	<ol style="list-style-type: none"> 1. Have a high opportunity in making new innovations in consumer goods products that can compete in the industry. 2. Almost all people drinking milk. 3. Indonesia's growing growth rate.
Threat	<ol style="list-style-type: none"> 1. Global economic crisis. 2. No legal protection for employers. 3. Frequently changing government policies for business processes. 4. Promotion of similar products from competitors.

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

Financial Ratio

Ratio analysis involves methods of calculating and interpreting financial ratios to analyze and monitor the firm's performance. The basic inputs to ratio analysis are the firm's income statement and balance sheet (Gitman, Zutter, 2015:115)

Liquidity Ratios

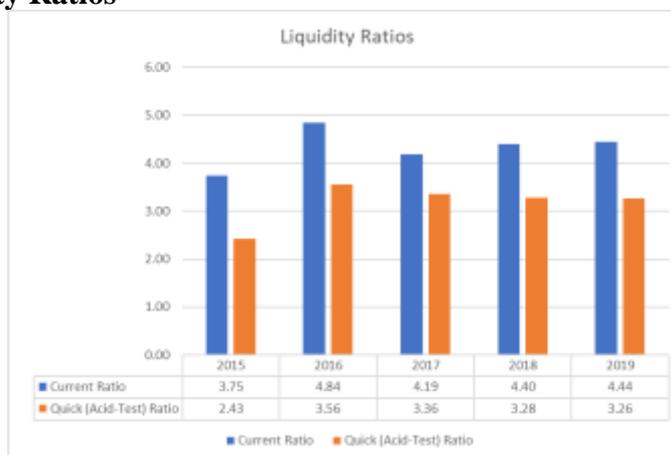


Figure 1: Liquidity Ratios

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

Liquidity in ULTJ is good because the resulting value is more than one. It indicates that short-term liabilities can be fully closed. The higher the liquidity level, the higher the protection buffer of the company to satisfy its current obligations, in general. A liquidity ratio greater than 1 implies that the company in question has stable financing and is less likely to face financial challenges. Although there is a decrease in the company's performance that can be seen from the quick (acid-test) ratio, this is still fair. This position implies a decline in the capacity of ULTJ to repay the short-term obligations of the company, which can be met in the shortest period by selling all liquid assets.

Activity Ratios

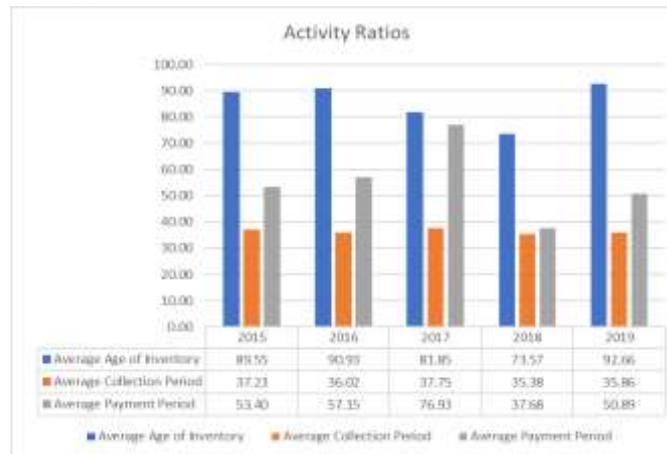


Figure 2: Activity Ratios

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

The average age of inventory showed an increasing trend from 2017 to 2019. The growing trend can indicate that the selling goods not right, the selling not quickly as same as before. Besides, from the average collection period, ULTJ still not optimal in manage the collection of payment from retail or distributor. Also, the ULTJ app has already given an increase compared to the previous year.

Debt Ratio



Figure 3: Debt Ratios

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

ULTJ has excellent debt ratios. If the result is less than one can be said, the company is right in the debt ratio. Also, ULTJ's debt ratio has always decreased from year to year. It indicates a good thing because ULTJ can reduce funding of operations from the debt process. The lower the ratio of debt to capital, the lower the debt or the company's obligation to pay off the debts payable in both the short and long term. Therefore, companies with a small debt ratio will be more comfortable to get funding from investors.

Profitability Ratios



Figure 4: Profitability Ratio

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

The profitability ratio of UL TJ is in good condition. Year after year, the ratio is always increasing. It indicates, overall, it can be said that the effectiveness and efficiency of UL TJ management have been outstanding year by year. The profitability ratio reveals the outcome of all financial policies and operational decisions undertaken by the management of a company where the recording system has also been influential.

Business Solution

The Sensitivity Analysis

The sensitivity analysis determines how, under a given set of conditions, various values of an independent variable influence a dependent variable. The analysis will focus on three variables inventory, account receivable and account payable. The author assumes that there are a swing increase and decrease of 20% of each variable of the current assumption that is stabilized from the value stated in the UL TJ financial statements in 2019.

Table 3: Sensitivity Analysis

	Current CCC	+20% Swing CCC	-20% Swing CCC	Percentage +20% Swing	Percentage -20% Swing	Absolute
Account Receivable	77.633	84.805	70.460	9.239%	-9.239%	18.478%
Account Payable	77.633	67.455	87.810	-13.110%	13.110%	26.219%
Inventory	77.633	96.164	59.101	23.871%	-23.871%	47.741%

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

The results of sensitivity analysis are also displayed in the form of tornado charts. The tornado chart below will show the order of which variables are most susceptible to the insensitive.

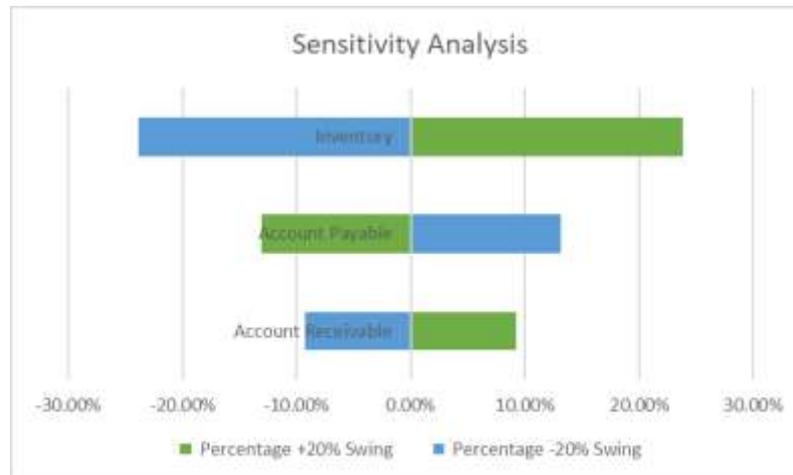


Figure 5: Tornado Chart Sensitivity Analysis

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

The sensitivity analysis results show that inventory is the most sensitive variable compared to account receivable and account payable. The sensitivity value of the inventory indicates more than 40% or more precisely 47.741%. The analysis shows that the company must find the best solution to manage the inventory to get an optimum cash conversion cycle.

Optimize Average Age of Inventory

Following the sensitivity analysis results, inventory is the most sensitive variable compared to the other two variables that affect the cash conversion cycle. So, it can be said that business solutions for the inventory management process in UL TJ are needed to provide better operational results and provide the result in the form of a small cash conversion cycle value. The goal for inventory management is to switch inventory over as soon as possible without reducing inventory sales. There are common approaches for inventory management that can be used. The author would offer business solutions by maximizing the inventory of the firm by assessing the average inventory turnover requirement to decrease the average inventory age and cash conversion cycle, which will also affect the profitability of the company. The optimum condition is that the business should turn inventory over as soon as possible. Here is the calculation for optimal inventory:

Table 4: Optimal Value Inventory

Year	Inventory	Inventory Turnover	Optimal Value Inventory Level
2015	Rp 738,803,692,770.00	4.076	Rp 701,961,378,395.32
2016	Rp 760,534,000,000.00	4.014	Rp 711,620,827,260.46
2017	Rp 682,624,000,000.00	4.459	Rp 709,535,299,730.75
2018	Rp 708,773,000,000.00	4.962	Rp 819,713,716,794.62
2019	Rp 987,927,000,000.00	3.939	Rp 907,147,599,521.62
Turnover Required		4.290	

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

According to Hiltunen (2017:38) the optimal value inventory level obtained from Cost of Goods Sold (COGS) divided by turnover required. While the turnover required itself is obtained from the average ULTJ inventory turnover value from 2015-2019. The optimum inventory value refers to the maximum inventory value with the lowest possible turnover. Therefore, the lower value is suitable and even preferable to obtain after calculating the optimal value followed by the inventory potential decrease. The potential decrease is obtained from the difference in optimal value inventory level and inventory.

Table 5: Potential Decrease

Year	Inventory	Optimal Value Inventory Level	Potential Decrease
2015	Rp 738,803,692,770.00	Rp 701,961,378,395.32	-Rp 36,842,314,374.68
2016	Rp 760,534,000,000.00	Rp 711,620,827,260.46	-Rp 48,913,172,739.54
2017	Rp 682,624,000,000.00	Rp 709,535,299,730.75	Rp 26,911,299,730.75
2018	Rp 708,773,000,000.00	Rp 819,713,716,794.62	Rp 110,940,716,794.62
2019	Rp 987,927,000,000.00	Rp 907,147,599,521.62	-Rp 80,779,400,478.38

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

From table 5 above, the deduction would stand for an average of 7.83% decrease from total inventory. After knowing the value of the potential decrease calculation, we can determine the value of the optimal inventory from 2015 to 2017. The optimal inventory will show in the table below:

Table 6: Optimal Inventory

Year	Inventory	Optimal Inventory
2015	Rp 738,803,692,770.00	Rp 701,961,378,395.32
2016	Rp 760,534,000,000.00	Rp 711,620,827,260.46
2017	Rp 682,624,000,000.00	Rp 655,712,700,269.26
2018	Rp 708,773,000,000.00	Rp 597,832,283,205.38
2019	Rp 987,927,000,000.00	Rp 907,147,599,521.62

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

Optimal inventory calculation is generated from inventory reduction with potential decrease. Following the analysis above, it can be seen from table 6 that the current inventory value is greater than the optimal inventory that the company should have. Its leads to high average age of inventory values in the company. The optimal inventory will affect the declining value of average age of inventory and cash conversion cycle.

Table 7: Optimal Average Age of Inventory

Year	Inventory	AAI	Optimal Inventory	Optimal AAI
2015	Rp 738,803,692,770.00	89.546	Rp 701,961,378,395.32	85.081
2016	Rp 760,534,000,000.00	90.929	Rp 711,620,827,260.46	85.081
2017	Rp 682,624,000,000.00	81.854	Rp 655,712,700,269.26	78.627
2018	Rp 708,773,000,000.00	73.566	Rp 597,832,283,205.38	62.051
2019	Rp 987,927,000,000.00	92.657	Rp 907,147,599,521.62	85.081

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

As we see in the table above, that optimal inventory affects the average age of inventory. The average age of inventory is smaller than the current AAI value in the company. The lower size of the inventory average means that the company will move the inventory better than the current situation. The sooner a company can sell inventory at a gain, the more profitable it is. Changes in the average age of inventory can induce changes in the cash conversion cycle's value.

Table 8: Optimal Cash Conversion Cycle

Year	CCC	Optimal CCC
2015	73.375	68.910
2016	69.796	63.948
2017	42.666	39.439
2018	71.269	59.754
2019	77.633	70.057

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

The calculation of the cash conversion cycle above is assumed the value of the average age of inventory variable is adjusted to the AAI value calculated from the optimal inventory. In comparison, the average collection period and average payment period are unchanged. The analysis results show that the decrease in the average age of inventory causes the cash conversion cycle value is also reduced. The calculation concludes that the company can reduce the cash conversion cycle by managing inventory with an optimal inventory.

Table 9: Percentage of Optimal Inventory to COGS

Year	Optimal Inventory	%COGS
2015	Rp 701,961,378,395.32	23.31%
2016	Rp 711,620,827,260.46	23.31%
2017	Rp 655,712,700,269.26	21.54%
2018	Rp 597,832,283,205.38	17.00%
2019	Rp 907,147,599,521.62	23.31%
Average	Rp 714,854,957,730.41	21.69%

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

For further analysis, the author calculates the average percentage of optimal inventory with the cost of goods sold. Later the percentage is used for the assumption of making pro forma inventory to calculate the average age of inventory for the next five years. Based on table 9, the value of inventory is 21.69% of the COGS value. Also, there are several assumptions to get the pro forma for sales and COGS. Sales are expected to increase by 9.24% for the next five years based on average growth sales UL TJ from 2015-2019. The cost of goods sold is 64.5% from sales based on the average percentage of COGS to sales UL TJ from 2015-2019.

Table 10: Pro Forma Average Age of Inventory 2020-2024

Year	Sales	COGS	Inventory	AAI
2020	Rp 6,818,126,115,600.00	Rp 4,400,076,245,840.46	Rp 954,563,630,351.88	79.184
2021	Rp 7,448,120,968,681.44	Rp 4,806,643,290,956.12	Rp 1,042,765,309,796.40	79.184
2022	Rp 8,136,327,346,187.61	Rp 5,250,777,131,040.47	Rp 1,139,116,824,421.58	79.184
2023	Rp 8,888,123,992,975.34	Rp 5,735,948,937,948.61	Rp 1,244,371,218,998.14	79.184
2024	Rp 9,709,386,649,926.26	Rp 6,265,950,619,815.06	Rp 1,359,351,119,633.57	79.184

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

Table 10 above shows the average age of inventory for the next five years. The average age of inventory generated is smaller than the average age of inventory of UL TJ in the previous year. If the company can keep inventory value at this level, this will positively affect the average value of inventory and the cash conversion cycle later. The average age of inventory of UL TJ will be consistently in 79 days, where the value is outstanding because it is below the average age of inventory UL TJ at this time. The faster the average age of inventory value, the better for the company and will result in a low cash conversion cycle value.

Table 11: Cash Conversion Cycle Impact Inventory Management

Average Age of Inventory	79.184
Average Collection Period	35.863
Average Payment Period	50.887
Cash Conversion Cycle	64.160

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

With the assumption of the average age of inventory calculated above, the author also assumes that the average collection period and average payment period are equal to the value in 2019. So, this business solution offered generates a cash conversion cycle value of 64 days. Better than the cash conversion cycle in the previous year, except in 2017. Also, to apply this business solution, the company might consider cost and benefit, which is represented in the table below:

Table 12: Cost Benefit Analysis

No	Cost Benefit Analysis	
	Cost	Benefit
1	Reduced short-term demand.	Inventory turnover changes to high ratio.
2	Relationship with resellers and agents / distributors can stretch because inventory availability decreases.	Reduce liquidity problems because the possible receivables provided are also not as large as current situation.
3	Cannot support sales promotion.	Subtracting the values of net of allowance for obsolescence.
4	-	Improve working capital.
5	-	Increase the effectiveness and efficiency of the production process.

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

Relationship with Profitability

There is a correlation between the productivity of working capital and profitability of the firm. The management of working capital that illustrates the cash conversion cycle has an impact on the company's profitability. Using the return on assets is one means of measuring profitability. The return on total assets (ROA) calculates the total efficiency of management in producing income from its assets available. The larger the return of the company on total assets, the better.

Table 13: Profitability Calculation

	Net Income	Decrease Assets	Total Assets	Profitability
Existing	Rp 1,035,865,000,000.00		Rp 6,608,422,000,000.00	0.15675
Inventory Management	Rp 1,035,865,000,000.00	Rp 80,779,400,478.38	Rp 6,527,642,599,521.62	0.15869

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

Table 13 describes that with inventory management makes the company's profitability increase. Although the increase is less significant, the business solutions offered make the company better when viewed in terms of profitability.

Risk Assessment and Mitigation Plan

After offered the best solution for optimize cash conversion cycle, the next step is to make a risk assessment and mitigation plan. If the company already recognize risk from the beginning, then the company can anticipate early. Table 14 below will show the risk that might be happening and how the mitigation plan can be done by the company.

Table 14: Risk Assessment and Mitigation Plan

No	Kind of Risk	Risk Description	Mitigation Plan
1	Risk of Relationship with resellers and agents / distributors	Possibilities that occur due to inventory scenarios created less than the previous year that negatively affect brand perception.	Making some scenario that could affect public perception about the company.
2	Risk of Relationship with supplier	This pandemic condition makes some suppliers also have difficulty and the price of raw materials fluctuates, that indirectly affect the company.	Trying to find another supplier or making an agreement with supplier in the first place.
3	Risk of Covid-19 Pandemic	The impact of pandemic that occur around the world is causing unstable economy and could impact ULTJ business processes.	The company should prepare a business continuity plan in case of the declining overall sales and income in the company.
4	Risk of Liquidity	Risks that may arise because ULTJ products cannot be sold in a short period.	Making a scenario to obtain additional funding to pay the company's debt.
5	Risk of Fluctuation of Exchange Rate	The ups and downs of the dollar toward the rupiah changes every day, it becomes a challenge for ULTJ because it can affect the income of ULTJ. It is known that the export value of ULTJ also decreased in 2019. The weakening of the rupiah could be a considerable problem for ULTJ.	Doing hedging strategy as a solution to minimize the risk of exchange rate and forecasting correctly to know the number of export sales then the company could adjust the number of inventories.

Source: PT Ultrajaya Milk Industry & Trading Company Tbk Annual Report, 2021, Data Processed.

Conclusion

PT Ultrajaya Milk Industry & Trading Company Tbk has the problem that their Cash Conversion Cycle (CCC) is getting longer from year after year. A longer Cash Conversion Cycle means it takes a longer time for the company to generate cash. Based on the analysis in this research, optimizing working capital management by using Cash Conversion Cycle tools could lead to increase profitability of the company. From sensitivity analysis the results show that inventory is the most sensitive variable compared to account receivable and account payable. It shows that the company must find the best solution to manage the inventory to get an optimum Cash Conversion Cycle. The author provides business solutions by optimizing the company's inventory by determining the minimum requirement of inventory turnover to decrease the Average Age of Inventory and Cash Conversion Cycle.

From the calculation, the optimal inventory affects the Average Age of Inventory. The Average Age of Inventory is smaller than the current AAI value in the company. The analysis results also show that the decrease in the Average Age of Inventory causes the reduction of Cash Conversion Cycle value. Besides, for further analysis the author also makes proforma Average Age of Inventory and calculate Cash Conversion Cycle by using the assumption that ACP and APP will be the same number as in 2019. As a result, this business solution offered generates a Cash Conversion Cycle value of 64 days. In other words, the Cash Conversion Cycle of this solution is better than the Cash Conversion Cycle in the previous year. With these circumstances, the profitability of the company can also increase.

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