Proposal of solutions for efficient working capital management at Gama Joint Stock company

Bc. Tang Thi Mai

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Tomas Bata University in Zlín
Faculty of Management and Economics
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MASTER'S THESIS ASSIGNMENT

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Thesis Guidelines:

Introduction

Define the objectives and the application methods used in the Master thesis.

I. Theoretical part

- **Elaborate a critical literature review in the field of optimizing working capital management of companies.**

II. Practical part

- **Analyze selected company and the sector in which the company operates in changing macroeconomic environment.**
- **Identify key factors influencing company's working capital.**
- **Propose solutions for efficient working capital management at selected company and provide applicable recommendations for optimization of the working capital structure to increase financial performance of the company, for corporate finance executives.**
- **Submit your project to risk and cost analysis.**

Conclusion

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Thesis Supervisor: **Ing. Jana Vychytilová, Ph.D.**
Department of Finance and Accounting

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L.S.

doc. Ing. David Tuček, Ph.D.
Dean

prof. Dr. Ing. Drahomíra Pavelková
Head of Department

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ABSTRAKT

Pracovní kapitál je jedním z klíčových faktorů ovlivňujících přežití a rozvoj každého podniku. Proto je nutné důkladně tomuto faktoru porozumět a podrobně jej analyzovat, aby byla identifikována vhodná řešení pro zlepšení finanční situace v podniku. Hlavním cílem diplomové práce je proto navrhnout praktická řešení pro zlepšení řízení pracovního kapitálu v akciové společnosti Gama. Teoretická část práce se věnuje struktuře pracovního kapitálu a identifikuje determinanty optimální úrovně pracovního kapitálu. Praktická část se skládá z provedené finanční analýzy a z ohodnocení struktury pracovního kapitálu ve vybrané společnosti, zadruhé, a dale z projektové části vedoucí k vyvození praktických řešení, jak efektivně zlepšit řízení pracovního kapitálu ve vybraném podniku.

Klíčová slova: pracovní kapitál, řízení pracovního kapitálu, kapitál, finanční analýza, finanční poměr

ABSTRACT

Working capital is an extremely factor affecting to survival and development of every business. It is necessary to thoroughly understand and analyze in detail to have proper solutions and improve the financial situation of any companies. Therefore, the aim of this Master's thesis is to propose solutions to enhance working capital management in Gama Joint Stock company. The theoretical part of the thesis concerns about aspects of components, structure of working capital as well as its determinant. The practical part mainly mentions about actual structure of working capital evaluated by detailed financial analysis. The main objective of this part is to propose solutions to enhance working capital management relying on actual company's situation and used method as well as generally acknowledged.

Keywords: working capital, working capital management, capital, financial analysis, financial ratio.

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To complete this thesis and the Master program, I have received many supports from my professors and colleagues. In particular, I would like to express the deepest appreciation to my supervisor - Ing. Jana Vychytilová, PhD for her experts, sincere and valuable guidance extended to me.

CONTENTS

INTRODUCTION

In doing business, the requirement of working capital is extremely large, requiring businesses to manage and use working capital in the most effective way to achieve highest profit and minimizing costs. It is therefore important to think seriously about managing working capital. It is daily source for operation because daily business require regular amount of cash to make rotation payments, cover the expense and merchandise raw materials which are used in production process.

In this the Master's thesis the management of the working capital at Gama Joint Stock company operating in the Vietnamese coffee industry is assessed. The financial data relies on the financial and public financial information of the company.

The theoretical part of the thesis concerns the structure of the working capital and identifies determinants of optimal level of working capital.

The practical part firstly, consist on the conducted financial analysis with a special focus on evaluation of the structure of the working capital in the selected company and secondly, of the project leading to practical solutions proposal how to efficiently enhance the working capital management at the selected company.

In particular, the whole thesis consists of two main parts : theoretical part and practical part. The theoretical part presents the literature review focused on working capital structure, explaining the aspects of the company's working capital structure, the definition, the importance, its components and features, as well as, factors affecting to working capital management. In Practical part, on the basis of selected company indicators and current working capital structure of Gama Joint Stock company, efficient of using working capital is analyzed, evaluated and compared in the past three years to take an actual look into the current situation of working capital management in the mentioned company. Based on proceed analyses, a concrete plan for optimizing working capital is designed in the project part.

The content and insights presented in this Master's thesis can be a valuable source for interested entities, while the development plan of Vietnam's coffee industry published by the Ministry of Agriculture and Rural Development recently stresses that the total investment value of the whole society for investment in coffee will be more higher and tend to growth through years.

OBJECTIVES AND METHODS OF MASTER'S THESIS PROCESSING

The research problem how to enhance working capital is a particular company is widely considered as an important and is of interest of company financial executives, because the identification of key factors affecting the survival and development of every company, including the determination of the optimal level of working capital.

The main aim of this Master's thesis is to propose solutions to enhance working capital management in a selected company – Gama Joint Stock company.

In order to fulfill the above mentioned main aim, the following particular objectives were initially specified :

- Elaborate a critical literature review in the field of optimizing working capital management of companies.
- Analyze selected company and the sector in which the company operates in changing macroeconomic environment.
- Identify key factors influencing company's working capital.
- Propose solutions for efficient working capital management at selected company and provide applicable recommendations for optimization of the working capital.

The following research methods were used in this Master's thesis:

- *Synthesis* of theoretical knowledge.
- *Analysis* of financial data, using for instance SWOT and financail analysis.
- *Induction* from obtained theoretical and analytical conclusions.
- *Comparision* between three operation years.
- *Mathematical* methods for particular series of financial estimations.

I. THEORY

1 WORKING CAPITAL

1.1 Definition

The term working capital initiated from the old Yankee Peddle, who would load his wagon with goods to peddle his wares by going his route. The merchandiser was called working capital as he actually sold it and then earned profits. In this case, his fixed assets were wagon and hours. He owned them, so they can be seen as “equity capital” in finance, but he bought his merchandise by credit (maybe from his suppliers) or borrowing from a bank. These were called working capital loans. And after each business trip, they had to be repaid to continue a new loan.

The word “working capital” is the combination of “working” and “capital”. In business, the word ‘working’ in relation to capital means rotation of capital from one form to another form day to day operations while “capital” shows all asset’s monetary values.

It can simply understand as the capital required for day-to-day working in a business such as to purchase raw material.

Working capital can be defined as “*the excess of current assets over current liabilities*” (Panda, 2012, p.80).

According to Afrifa and Padachi (2016, p.50), “*Almost every activity of business or everything that happens in the business is related to working capital decisions. In fact, the reason for working capital not being able to optimize itself is that there are various functional areas influencing it, and these primarily take care of their own needs*”.

Brealey, Myers and Allen (2014, p.225) has pointed out that working capital is only a part of the capital structure of a business and create an interlacement part of the total business system. So it may not be seen as an independent, unrelated entity.

According to Bender (2014, p.78),“*Most commonly working capital is defined as the excess of current assets of a business (cash, accounts receivable, inventories) over current items owned to employees and others (such as salaries, wages, accounts payable, taxes owned to Government)*”

According to Accounting Principles Board of the American Institute of Certified Public Accountants, USA, working capital, *“Sometimes called net working capital and is represented* *by the excess of current assets over current liabilities and furthermore, identifies the relatively liquid portion of total enterprise capital which constitutes a margin or buffer for maturing obligations within the ordinary operating cycle of the business".*

1.2 Importance of working capital

It is important to think seriously about managing working capital. It is daily source for operation because daily businesses require regular amount of cash to make rotation payments, cover the expense and merchandise raw materials which are used in production process. Working capital is also called as circulating capital or floating capital. (Rafuse, 1996, p.248)

Working capital is used as a prevalent metric for valuation in efficiency, solvency, overall health in a business. It can assess the performance of various activities such as revenue, debt, inventory management and payments to suppliers.

According to Sabri (2012, p.183), working capital management plays more important role for small company. The reason is that in the small firm, investment in current assets like cash, inventories and receivables tends to be higher than in fixed assets.

In unexpected case, when a firm cannot cover its obligations due to shortage working capital, it will have to face to some legal troubles, liquidation of assets, even be bankruptcy. So it is essential to all firms to manage the working capital sufficiently.

Weston and Brigham (1977, p.317) have had rightly view that, *"There are many aspects of working capital management which make it an important function of the financial manager. On the one hand it maintains proper liquidity while on the other hands it helps in increasing the profitability to the concern".*

Working capital involves in every activity of the structure, encourages and gives strength to management and personnel, assimilates all the raw material which are used by its continual and regular flow and turn back to cash flow for another cycle. Thus, if lacking or decelerating working capital, the financial efficiency will equal to zero or junk.

1.3 Concepts of working capital

Working capital is a part of total assets in which change from one form to another form in the normal business operations. Two concepts of working capital in generally are : gross working capital and net working capital. (Schaefer al., 2010, p.352).

Gross working capital is the amount of funds invested in current assets used in operation, while net working capital is the difference between current assets and current liabilities. (Panda, 2012, p.40).

1.3.1 Gross working capital

The gross working capital refers to the total value investments in current assets which can be converted into cash in short-time period, normally an accounting year. These are cash and bank equivalents, short-term investments, receivable, loans, inventory.

Economists such as Brigham and Ehrhardt (2014, p.253) and Smith and Fletcher (2009) pointed out that all the current assets of the business which have been financed both from long-term and short-term funds, are the working capital.

According to Weston and Brigham (1977, p.365), all the firm investments in short-term like cash, receivables, inventories are the gross working capital. *''Use of this concept is helpful in providing for the current amount of working capital at the right time so that the firm is able to realize the greatest return on investment".*

Understanding concept of working capital is useful to make estimation of working capital correctly. This concept can be usable to see insight the profitability to manage the current assets.

1.3.2 Net working capital

Net working capital is the difference between current assets and current liabilities. Current liabilities according to Afrifa and Padachi (2016, p.95) *'' It is all liabilities of the business that are often to be settled in cash within the fiscal year of the operating cycle of a given firm, whichever period is longer"*

Net working capital expresses the total amount of current assets which stays behind all the paid current liabilities. Celik and Bilen (2016, p.227) and Arnold (2014, p.319), Hill, Kelly and Highfield (2010, p.785) had the same opinion with above. The famous economists like, Lincoln, and Stevens, supported this concept and pointed out that it helps investors and creditors to evaluate the firm's financial strength.

This concept is useful in determining the financial position of the firm. Only current assets do not depict exactly financial position without comparing with current liabilities.

From above explanation, we can assert that both concepts of working capital have their own significance. Using gross working capital concept, a firm should maintain an optimum level to avoid unnecessary work stoppage of insolvency due to insufficient working capital. Besides, net working capital is the amount that current assets minus current liabilities. Net working capital can be positive or negative.

1.4 Features of working capital

Below are main summarized main features of working capital :

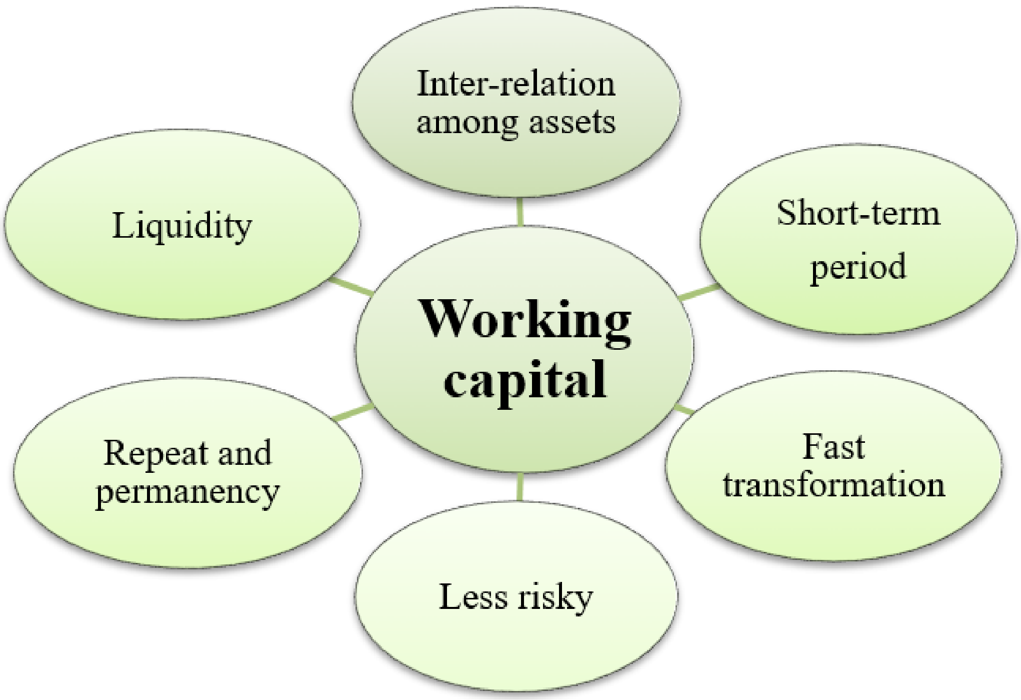


Figure 1 : Features of working capital

(Source : own processing with using Vahid, Mohsen and Mohammadreza, 2012)

- *Short-term period* : Current assets such as cash and cash equivalents, receivable, inventories, ..are short term life cycle within in one year or a period. Life cycle of working capital depends on the lenght of firm's operating cycle. It's life span is decided by time from procurement of raw material, production process, sales, collection of receivables. (Vahid, Elham, Mohsen and Mohamamdreza, 2012, P.1398).
- *Fast transformation* : As the first feature, it has short life span, it also means that working capital is fast transformation. It is the transformation of current assets to

another form. Such as cash is used for buying raw materials. Raw materials transfer to working process and then finished products which are sold and creates account receivables. Based on that, we can collect back cash. This is repeated from period to period. (Vahid, Mohsen and Mohammadreza, 2012, p.1398)

- *Repeat and permanency* : Working capital is important for business operation. Cash, receivables, inventories,..relate directly to working capital. These components appear frequently and continuously in a business. (Vahid, Mohsen and Mohammadreza, 2012, p.1399)
- *Liquidity* : Working capital is more liquid when comparing with fixed capital. It easiler and faster to convert into cash without much losses. (Vahid, Mohsen and Mohammadreza, 2012, p.1399)
- *Inter-relation among assets* : Current assets has feature that it swiftly transfers into other form so they are of course inter-related to each other. Any decisions related to these assets also affect to other current assets. (Vahid, Mohsen and Mohammadreza, 2012, p.1401)
- *Less risky* : Fund invested in fixed assets will take a long time period and can not be converted into cash easily. Investing in fixed assets pregnant with a lot of dangers such as machinery, when having any technological innovations, we have to pay cost to change the obsolete. So it is easy to see that investment in current assets is less risky than fixed assets due to it's short-term period. Working capital is frequent and continuous day by day. It can convert into cash again and again. (Vahid, Mohsen and Mohammadreza, 2012, p.1402)

1.5 Factors affecting working capital

There is a number of factors affecting working capital in business. An efficiency evaluation of these factors help management to formulate working capital policies and approximate its requirement suitably. According Smith and Fletcher (2009, p.138) observes, "*although no definite rule can be established for determining working capital requirements, we can arrive at some general principles. Certain influences, some inherent in the nature of the business and the others arising out of business management policies, affect each of the item of current capital*".

Important factors affecting to working capital can be summarized as below :

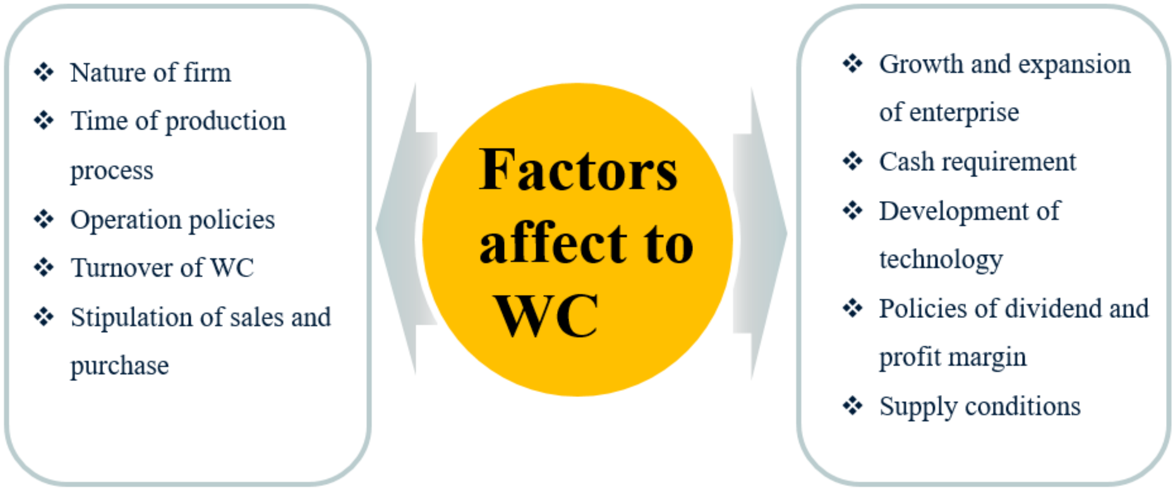


Figure 2 : Factors affect to working capital (Source : own processing)

Below are short explanation of the above factors:

1.5.1 Nature of the firm

Each kind of form of enterprise, working capital requirement is different. For example, trade and commerce company require much more investment in working capital than fixed assets. But in manufacturing business, current assets is invested substantially and normal amount for fixed assets. In contrast public utilities have a limitation in working capital, while a merchandising unit depending on inventory and receivables need a high amount of working capital. Hence, the requirement of working capital in each kind of firm is different to each other. (Valipour, Moradi, Farsi, 2012, p.305)

1.5.2 Time of production process

Time of production process is operation cycle. It is the time required for transferring from raw material to finished products. Level of working capital is determined by the time production time which requires to manufacture goods. More time in production will lead more time for displaying and then it will be taken more time to turnover working capital. By the way, it will cause more cost and more used working capital. (Valipour, Moradi, Farsi, 2012, p.320)

1.5.3 Operation policy

According Smith and Fletcher (2009, p.273) *‘‘If a firm has the choice of maintaining steady production over the year, it will require a higher average amount of working capital to finance the longer holdings of inventory and similarly, if a firm has the choice of concentrating production during a few months just before delivery time, it will require lower average amount of working capital”.* In industries, demand is also subject to variations from seasonal features or operation policies. Working capital of these companies is changed accordingly to satisfy with the demand. Strong seasonal changes create distinct working capital and requirements. (Valipour, Moradi, Farsi, 2012, p.315)

1.5.4 Turnover of working capital

The velocity of completing working capital is a cycle converting cash into raw material and storing inventory of raw material into finished goods. These goods after that will be displayed in the market and switched to account receivable and then converted into cash account. working capital turnover rate is determined by the ratio of sales to current assets. If the faster speed of sales will lead the larger of the turnover, therefore, the working capital requires will be lesser and vice-versa. It plays a significant and decisive role in the assessment of working capital. (Arnold, 2014, p.118).

1.5.5 Stipulation of sales and purchases

A lower amount of working capital is applied in the business unit which purchases on credit bases and sells the finished goods on cash basis. Because it requires less investment in current assets and contrary. On the other hand, the credit period and efficiency of debt collection affect to amount of working capital. Setting credit term is the important decision of management affected by prevailing trade activities and the change in conditions of economic. (Valipour, Moradi, Farsi, 2012, p.345)

1.5.6 Growth and expansion of enterprises

When a company grows, it will require more working capital to satisfy the demand of expansion. Growth and expansion means that it will have a comprehensive increase in investment. It is clear that together with increasing in fixed assets for enlarge sales, beside financing for increasing capacity of raw material, working capital is also expanded in upholding of inventory and supply credit to customers. (Valipour, Moradi, Farsi, 2012, p.355)

1.5.7 Cash requirements

Cash is a part of current assets which is a vital element affect to efficiency of operation. For difference purposes, the bigger requirement of cash, the higher demand of working capital used in the company. Holding excessive cash is not a good way in using the capital but a minimum cash amount must be necessary to maintain the production. Proper cash also creates good credit relations. (Boisjoly, 2009, p.50).

1.5.8 Development of technology

Every change in technologies effects to efficiency in operation of a business. It leads to positive enhancement in managing raw materials, diminishing excess, productivity and speed of production higher. Apply new technology with these improvements, the firm can reduce input of production.

1.5.9 Dividend policy and profit margin

Policies of dividend and profit margin in a company decide the importance of working capital. A high net profit margin can decrease the working capital needed in a business as it tends to contribute to working capital group. Equally, high rate distribution of profit in the form of cash dividend leads exhaustion of cash resources and thus bringing about decreasing in working capital. To consolidate working capital position in a firm, the management can use constructive dividend policy and retain bigger net profits segment. (Smith and Fletcher, 2009, P.97; Tobin and Golun, 1998).

1.5.10 Supply conditions

Level of working capital also depends upon the inventory of raw materials and spares. If the supply of them is as normal, a business can sustain minimum inventory and less working capital is required. In contrast, irregular supply of raw material will lead the acquiring stocks until available for maintaining production. So there, the company must sustain larger inventory average. This makes requiring more working capital.

2 WORKING CAPITAL MANAGEMENT

2.1 Definition

The definition of working capital management has been expressed in a number of ways and some of them will be covered and summarized. For example :

In the view of Weston and Brigham (1977, p.287), it is all aspects of the administration of both current assets and liabilities.

According to James Van Horne, "*current assets, by definition, are assets normally converted into cash within one year. Working Capital Management is concerned with the administration of these assets- namely cash and marketable securities, receivable and inventories*"

The objective of Working Capital Management in the view of Greg Person (2015, p.45) is to minimize the Cash Conversion Cycle (CCC) the amount of capital which is in the firm's current assets. It concerns to monitor account receivable and collection process, administering the investment in inventory. It is fundamental for all business survival, continuousness and performance.

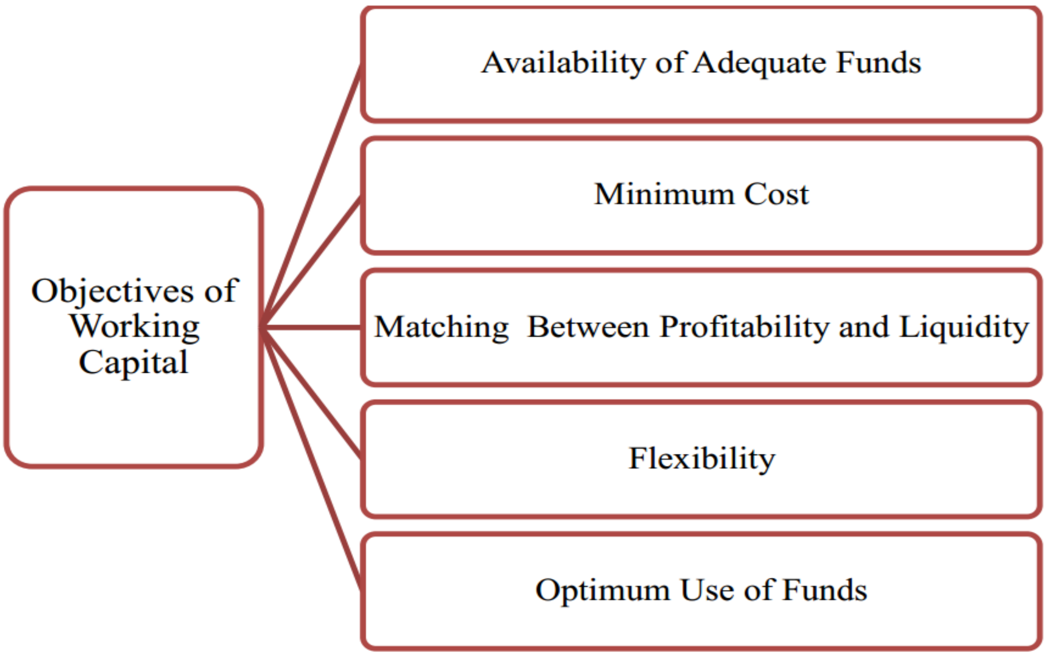


Figure 3. Objectives of working capital (Source : Greg Person, 2015)

2.2 Working capital components

2.2.1 Inventory management

Depending upon production characteristics in each business, the composition of an inventory is different. Raw materials, work in progress, finished goods, good for resales are the main components of inventory. For most firms inventory is one of the mandatory cost.

- *Raw material* : Raw materials are the inputs switched into finished goods via manufacturing. According Roger (2004, p.98), raw materials are the goods delivered by the supplier to purchaser of warehouse but have not yet been producted. Minimising the raw materials is expectation and attemt in working capital management. The available order quantities from suppliers is important element to achieve this expectation.
- *Work in progress* : It is inventory stage between raw material and finished goods. Work in progress is seen as semi-finished products which has gone away from material storage until become finished products. Working capital in this process must be judged in form of reducing the cushion stocks, eradicating the production process, deminishing production life cycle. This process must be examined cautiously to minimize time from semi-productions to sale.
- *Finished goods* : Finished goods are the stocks placed in warehouse which are completely manufactured and ready for sale and delivery to customers. They are the buffer stocks between production and market. The finished goods can be reduced or eliminated if having proper sales and operations strategies. According to **Maness and Zietlow (2005, p.99)**, the inventory management is one of the main challenges in control working capital for managers who expect to minimize the inventory at the lowest level to shorten the cash alteration cycle and reduce expenses. However if an inventory is minimized down to close to zero, it will cause the running out of needed materials in production or interrupt production progress. Such situation not only not offset losed revenues but also cause much more cost due to purchasing inventories in short time to maintain production. The research of **Brealey, Myers and Allen (2000, p.820)** mentioned about ‘‘just-in-time‘ approach. It is a strategy helping to minimize inventory properly and manage inventory efficiently. Its purpose is to constitute the orders that from raw materials to finished productions and deliver just in time when having requirement. Using this way, both raw material stock and work

in progress will be miniminzed or eradicated as almost the stocks are now in form of finished goods.

- *Goods for resales* : The returned goods that are still salable.

Inventories and inventories cost

Inventories are assets held for sale during production and business periods. Two costs directly related to inventory management are ordering and storage costs.

Total storage cost can be evaluated as below :

Total inventory cost = Ordering cost + storage cost **(1)**

The model EOQ (Economic Ordering Quantity) will be applied in this company. So we will explain more about this model. The Economic Ordering Quantity is a quantitative inventory management model using to determine the optimal inventory level for business, based on two types of cost : ordering cost and storage cost.

To simplify the process of cost analysis to determine order size, the EOQ model gives the following assumptions :

Assumption 1, even and determined level of using inventory

Assumption 2, the unit price of goods does not change according to the size of order.

Assumption 3, the entire volume of goods is delivered at the same time.

Assumption 4, the time of ordering is enough so that when the order reaches the inventory level, there is no shortage

Assumption 5, the cost of ordering and taking orders does not depend on the size of order.

Assumption 6, inventory costs are linear according to the number of inventory items.

The goal of EOQ is to find the optimal order size, Thus, the model will aim to find an order level at which the costs associated with the order size are minimize. This production-scheduling model was developed in 1913 by Ford Harris.

Formula for EOQ is :

$$\mathbf{Q} = \sqrt{\frac{2DS}{H}} \quad \mathbf{(2)}$$

Where :

Q : EOQ units

D : Demand in units (Typically on annual basis)

S : Order cost (Per purchase order)

H : Holding cost (Per unit, per year)

The EOQ model has the basis advantage of showing the optimal order level on the basis of minimum order and inventory costs for a specific need. However, the major drawback of this model is based on too many assumptions that are difficult to achieve in practice. Therefore, the EOQ model needs to be practiced by phasing out assumptions, accepting the actual conditions.

2.2.2 Account receivable management

Account receivables are the current assets representing money owned by entities to the firm from the sale of goods or services on credit. They play an important role in a firm's fundamental analysis. Account receivables is one of the criteria to evaluate a business liquidity or affordability for short-term obligations devoid of cash flows. So it is essential to have management policies proper to minimize the account receivables cycle.

Account receivables management is the set of policies, procedures and practices that a firm applies to ensure money from sales is collected on time and credited into proper account in the boo-keeper. (Tahir and Anuar, 2016, p.673). Good account receivables management help to decrease bad debt and contribute to firm's profit. In this case, better cash flow and higher available liquidity guarantee for investment or procurement. Thus it contributes to enhance a business‘s valuation.

The company should consider comprehensively both benefits and costs of different policies before applying receivable policies. Three below factors should be noticed :

- *Profit* : The company should forecast the different posibilities and examine specifically how they effect to future profits. Additional sales or losses of sales due to each proposed policy should be considered carefully with the cost of assets associated with receivables, cost of collection, bad debt losses and the cost of discount for before time payment.
- *Growth in sales* : Short-term setbacks relating to profits are unavoidable in production in case the company can give the new proper policy to increase appreciably its sales. A particular policy can be applied to acquire a foothold in the

market. Because the importance of a company is not only profit but also growth and this should be noticed as a separate factor in asertaining receivables policies. (Eleonora, 2013, p.136).

- *Possible problem* : Together with attempt to increase sales and profits, the company should care about the possible problems happening during applying any policies.

2.2.3 Cash management

"The financial manager must ensure that the firm has enough cash on hand to meet its day-to-day obligations. This job, also commonly known as managing working capital, may seems straightforward, but in a young or growing company, it can mean the difference between success and failure" (Berk and DeMarzo, 2017, p.42)

According to Polak and Kocurek (2007, p.148) ,*"Cash management refers to a broad area of finance involving the collection, handling, and usage of cash. It involves assessing market liquidity, cash flow, and investments"*

In the view of **Block and Hirt (1992, p.574)**, cash management is more and more popular in the global and electronic age of the 1990s because the last dollar is squashed out of managing cash strategies by the financial manager's effort.

The research of Lantz about cash management in 2008 expressed that the management of account receivables and payables follow the term of cash management. Below are short explanations about what cash management involves to reduce cash conversion cycle :

- Lengthen credit time for account payables
- Diminish credit time for account receivables
- Set up the advantageous condition for managing account payables and account receivables, such as internet banking,..

Minimizing the cash conversion time to limit the bad effect to profits but during the process they cannot avoid the cost. The company must consider carefully this problem and keep some cash for possibilities occurring in the production. Lantz's (2008) research has explained about the motives why firms should retain the cash as below :

- *The transaction motive* : Beside the receivable from customers, the firm must have capacity to perform their own obligations such as payments to suppliers. Because sometimes the receivable from customers will not be payed in time. This will lead corollaries related to production.

- *The speculative motive* : The market is not predicted exactly so everything can be happened out of expectations. The opportunities could turn up and down at any time and the companies should have a thorough grasp of chance. Having a amount available money helps the business easilier to implement the investments when the opportunities come.
- *The precautionary motives* : As i mentioned above about the unpredictable characteristic of market, the companies should have the plan to deal with such expected or unexpected forecast. The unexpected like broken machines, higher price of some primary materials or variance of demand and so on can occur and cause some adverse influence for the production.

2.2.4 Account payable management

The research of **Maness and Zietlow (2005, p.256)** about working capital management in 2005 pointed that the time of payments is one of the general regulation for optimizing the account payables management. Every companies would like to prolong the time for payment as much as possible because they can use the advantage of their debt from suppliers to element their investments. Another argument for extending the payment time is in case of manufacture firms, for example, they need more time to implement their raw material into products and get the re-turnover.

To encourage the customers pay their payment before due date, almost suppliers offer a discount rate which seems enticing but it is not really best option for profit. Every companies must be heighten vigilant with such discount and consider between benefit they receive with the opportunities cost. A discount will be benefit for the buyer if its rate can be higher than the interest rate the firm must pay such as the loan having same period with the discount period. In case no offered discount, the company should use the advantage of the credit period and executive their payment on maturity date. Because if the payment is payed after due date it will result unnecessary cost like late fees.

2.3 Approaches for measuring efficiency of working capital management

2.3.1 Indicators reflecting the speed of working capital turnover in general.

The rate of working capital is a general indicator to evaluate the efficiency of using working capital. The increase in working capital turnover will represent the more effectiveness of working capital used.

Number of working capital turnover (WCT)

The number of working capital turnover carried out in a period reflects how much revenue can be generated by using 1 unit of working capital. (Afrifa and Padachi 2016, p.589)

$$\textbf{Working capital turnover} = \frac{\textbf{Total revenue}}{\textbf{Average working capital}} \quad \textbf{(3)}$$

The high rate of working capital turnover, the higher efficiency of using working capital. On the contrary, low turnover of working capital turnover indicates that the company have encountered difficulties in managing working capital.

Days of working capital turnover

Days of working capital turnover reflects the average necessary days to implementing 1 cycle of working capital or the time of a working capital cycle.

$$\textbf{Days of working capital turnover} = \frac{\textbf{360}}{\textbf{working capital turnover}} \quad \textbf{(4)}$$

The number of days of working capital turnover is contrast with the working capital turnover. If the enterprise shortens the working capital turnover, it will increase the days of working capital turnover. Therefore, it is important to save the working capital reasonably and improve the total working capital cycle and help to use working capital effectively.

Saving working capital level

The amount of saving working capital reflects the amount of working capital saved by increasing speed of working capital in the comparison between plan period and reporting period. In other words, the level of working capital does not change but the speed of working capital increasing will help businesses save more money.

$$\textbf{Saving WC} = \frac{\textbf{Revenue of plan period}}{\textbf{360}} \textbf{*(days of WCT in plan period – days of WCT in reporting period)} \quad \textbf{(5)}$$

Or

$$\textbf{Saving WC} = \frac{\textbf{revenue of plan period}}{\textbf{days of WCT in plan period}} - \frac{\textbf{revenue of plan period}}{\textbf{days of WCT in reporting period}} \quad \textbf{(6)}$$

Coefficient of working capital

The coefficient of working capital reflects the working capital required to achieve a net revenue. The smaller this coefficient reflects the higher the efficiency of using working capital.

$$\textbf{Coefficient of WC} = \frac{\textbf{Average of WC}}{\textbf{Net revenue}} \qquad \textbf{(7)}$$

2.3.2 Average number of day's inventory

According Fabozzi and Markowitz (2002, p.238) *''Average number of day's inventories is an efficiency ratio that measures the average number of days the company holds its inventory before selling. The ratio measures the number of days funds are tied up in inventory. Inventory levels (measured at cost) are divided by sales per day (also measured at cost rather than selling price)"*

A lower number of days will help to shorten the cash conversion cycle. The average amount is calculated by sum of the beginning and ending balance of inventory taking from financial statement in a year, then divided with two. Then taking this result divide to cost of goods sold. After all, we multiply with 360 days (days in a year) as below :

$$\textbf{Average number of day's inventory} = \frac{\textbf{Average inventory}}{\textbf{cost of good sold}} * \textbf{360} \qquad \textbf{(8)}$$

The research of Deloof (p.207) published in Journal of Business finance and accounting in 2003 showed that relationship between gross operating income and number of day's inventory is a substantial negative relation. This is a proper explanation for the increasing of the inventories is a consequence from the decreasing in sales causing to lower profit.

The point of view of Boisjoly (2009, p.367) represented the increasing of inventory turnover in a period of fifteen years and saw that the firm's inventory management has been ameliorated. Some manufacturing operating approaches are settled in order to improve inventory management, for example, just-in-time process, make-to-order process, lean manufacturing initiatives to improve their operating procedures, quality programs.

2.3.3 Average number of days accounts receivable

The average number of day's account receivable is mentioned in the research of Lantz in 2008 as the measure of account receivable policy. It is the average number of days resulting from collecting of the firm's credit from its customers. It is calculated by dividing the sum of beginning and ending balance of account receivables with two and then divide with the net sales, finally, multiply the result 360 days (days in a year). A low result is the firm expectation as it helps to shorten cash conversion cycle.

$$\textbf{Average number of days account receivable} = \frac{\textbf{average account receivable}}{\textbf{net sales}} \textbf{*360} \qquad \textbf{(9)}$$

Similar with above for inventory, it also has substantial negative relationship with the gross operating income. The research of Boisjoly in 2009 (p.395) proved that in fifteen years, the firms have special noticed to improve account receivable management as in his observation, their account receivable turnover increased in this period. Some methods such as reinforce their collection process, offer discount rate and trade credit can be applied to improve the account receivable management.

2.3.4 Average number of days account payable

This ratio is a metric to evaluate account payable policy of a company. It shows the average number of days that the companies implement their payment to their suppliers. Together with two previous metric, this ratio is desired to have more number of days account payable.

$$\textbf{Average number of days account payable} = \frac{\textbf{average account payable}}{\textbf{cost of goods sold}} \textbf{*360} \qquad \textbf{(10)}$$

Similar with two previous metrics, the research of Deloof in 2003 (p.320) also represents the significant negative relation between average number of day's account payable and profit as a firm having less profit takes more time to implement their payment. A specific example in his study is about Belgian companies, in some case, the suppliers offer a significant discount rate to cash payment customers which indicate to increase profit.

2.3.5 Cash conversion cycle

According to *(*Greg Person (2015, p.234). *''The cash conversion cycle (CCC) measures how long a firm will be deprived of cash if it increases its investment in inventory in order to expand customer sales. It thus a measure of the liquidity risk entailed by growth. However, shortening the CCC creates its own risk : while a firm could even achieve a negative CCC by collecting from customers before paying suppliers, a policy of strict collections and tax payments is not always sustainable"*

The view of Gitman (2009, p.439) shows that cash budget plays as a forecast role for inflows and outflows of cash of the business in the future and how it is operated in the production.

However, cash conversion cycle is the time period that cash is attached to account receivables and inventory. So we can say that the cash conversion cycle (CCC) relate to the time that resources of a business are tied up.

Refer from research of Gitman in 2009, the equation of CCC is as below :

CCC = Average account receivables + Average inventories – Average account payable (11)

The process purchasing inventory and presenting credit to customers is attached with the cash. Despite cash will be transmuted into stock and services through procedure, but the delaying in supplier credit affects directly to it. On the other hand, through the transforming inventory into debtors (account receivables) on credit, cash will be collected after that. Gitman (2009, p.445) specify that the length time to collect receivables from customers is the average collection period.

Increasing in cash conversion cycle (CCC) will lead to decrease profit of a company. To minimize the negative effect, the managers can handle the cash conversion cycle (CCC) adequately and make an optimal level for each different composition.

However, CCC does represent its role well in some companies which do not have much requirement for inventory management. For example, software companies are the companies that sell their computer programs through licensing, the sales and profits can be controlled without managing stockpiles. Insurance or brokerage firms do not need to apply CCC.

On the other hand, in case of retailers as Walmart Inc., Target Corp , Costco Wholesale Corp, CCC has a great meaning. Because their activities mainly purchase and sell goods. Amount of inventories reflect directly result of their operation. In contrary, other businesses have negative CCC such as online retailers eBay, Amazon,.. In the online process, they will receive funds in their account for goods before transfer them to customers. They play an intermediary role between third-party sellers and customer. However, the sellers will not receive the money from these companies immediately after the sale. It will be pay back to the sellers by monthly or threshold-based payment cycle. In this case, these companies can keep the cash in a longer time, so they often have negative CCC. By the way, if the third-party sellers transfer the good directly to customers, the online retailers do not keep any inventory in store.

So it is necessary to understand about a business characteristic to evaluate efficiency of CCC applied.

2.4 Working capital management policy

Working capital policy is a strategy which becomes the lodestar management for current assets and current liabilities in a proper way to reduce the risk (Afza and Nazir, 2007, p.657). The business must consider carefully in managing short-term assets and liabilities. The most important in working capital policy is the liquidity. The firm must focus if current assets can offset the current liabilities.

2.4.1 Cash conversion cycle policy

In a business cycle, current assets are constantly transformed through all forms such as cash, inventory, account receivables and back to cash. This cycle is the cash conversion cycle. The effective working capital policy must minimize the time from paying for raw materials to selling goods.

The cash conversion cycle involves the period from when the company pays its debts until collected cash. During that period, there are the following factors (Paramasivan and Subramanian, 2009, p.683)

- *Inventory conversion cycle* : It is the average time required to convert raw materials into final products and sell them to customers. It means that this period includes the average time of raw material in stock, entire production cycle time, average time of product inventory.
- *Average collection period* : Is the period of time to transfer the amount to be collected in cash. It means that the the time required to collect money from customers from the time of billing.
- *Average payment period* : is the lenght of time from purchasing materials or hiring workers to the company implement their payments.

The company can shorten the cash conversion cycle by :

- Shortening the cash conversion cycle
- Reducing inventory conversion cycle by promoting the production and consumption process of goods.
- Extend payment time by delaying payment time for suppliers.

2.4.2 Current asset investment policy

How much should be invested in current assets, and which assets to invest? The structure and quality of liquid assets determines the budget in response to financial obligations.

How to make current asset decisions : assuming other factors are fixed, then:

- Firstly, the higher the movable assets, the higher ratio of payment assets, the more likely the company's solvency will increase.
- Secondly, the higher the movable assets, the higher the ratio of payment assets, the lower turnover rate of total assets.
- Thirdly, the more increasing the movable assets, increasing the ratio of payment assets, the profitability of total assets decreases.

Under low risk condition, the forecast of sales, costs and payment periods are quiet accurate, the company should maintain current assets at minimum level. Increasing current assets may lead to an increase in external funding demand without a corresponding increase in profits. (Thanh Liem Nguyen and My Huong Nguyen, 2009, p.407).

Under risky conditions, the company must maintain a minimum amount of cash and inventory based on cost estimates, revenue with plus provision to help the company handle situations when the cash flow deviated from the expected value. (Thanh Liem Nguyen and My Huong Nguyen, 2009, p.407)

With a limited current assets investment policy, the company only maintains cash and inventories at a safe minimum although this may lead to a risk of losing revenue. The limited current assets investment policy often gives the company the highest level of expected return on investment, but it contains the most risks while a relaxed policy gives back results. (Thanh Liem Nguyen, Thanh Huong Nguyen, 2009, p.408).

2.4.3 Financing current assets policy

Demand for working capital consists of two components : *regular demand and seasonal demand.* This analysis helps us to have a direction on how to make a decision to fund current assets based on characteristics and needs of each assets.

"Self-guarantee" approach

The "self-guarantee" approach is how business attach a term of short-term debt corresponding to the life cycle of the current assets. It means that seasonal short-term assets are funded by short-term capital, requirement of short-term are often throughout the business cycle funded by long-term funding including long-term debt and equity.

Tendency of financing current assets policy

Working capital policy is mainly focusing on the liquidity of current assets to meet current liabilities. If a company has too high level of liquidity, it means that there are a lot of idle resources. The company does not only earn any profit from idle resources but also bear the cost of them. However, too low liquidity may cause lack of resources to take its current liabilities (Arnold, 2011, p.448). Because of importance of current assets, working capital policies must consider based on how the level of current assets meet current liabilities (Afza and Nazir, 2007, p.356).

Defensive policy : Long term debt and equity is used in this policy to fund its fixed assets and main part of current assets. Applying this approach, a financial scheme can be achieved satisfying the expected assets life span with the expected life of sources to sponsor for finance assets (Paramasivan and Subramanian, 2009, p.683). According to Weston and Brigham in their research about working capital in 1977, time for asset turnover can be funded by the loan with the same period, for example, inventory estimated to be sold in 30 days might be supported by a 30 day bank loan, a 5-year loan for expected 5 years span of machine, a 20 year mortgage bond fund for a 20-year building and so on.

Applying this policy may take longer cash conversion cycle. But it helps to against the financial trouble in case lack of funds to satisfy short term liability. But as mentioned above, the cost of financing will be increased which caused by high interest rate from long term debt. Similar, due to generous policy, the funds tied up in a business and create opportunities costs. Thus, applying this policy might diminish the profitability and make the cost going over the benefits of the policy (Arnold, 2008, p.530)

Aggressive policy : The firms can carry out aggressive policy through supporting its current assets with short term debt as it has low interest rate. However, the risk in this case compared with the long term debt is higher. In this policy, short term sources must support for all the estimated requirement of current asset even a part of fixed assets financing sponsored from short-term funds (Paramasive and Subramanian, 2009, p.724). Despite more risky in finance mix, this policy helps to reduce costs and increase profitability. Moreover, more risk by financing long term asset with short terms is not ideal with most managers and this policy might make a negative working capital.

Conservative policy : Some companies do not want to accept too much risky from both above policies. So they would like to keep balance the risk and profitability by applying the conservation approach. It is mixed by defensive and aggressive working capital policy. In this approach, in the view of Weston and Brigham in 1977 (p.718), the short term borrowings will finance the short term assets showed in the balance sheet and long term debts support for fixed assets and eternal current assets. So there, the managers using this policy can take the balanced level of working capital with risk and return. According opinion of Paramasivan and Subramanian (2009) it can be understood as ‘‘low profit and low risk‘‘ concept.

By the way, level of working capital also base on the level of sale as sales are key of revenue. According Arnold’s research in 2008 (p.534-535), the working capital can be affected by sales as below :

- In case sales increase working capital increase accordingly with the same percentage, so the lengh of cash conversion cycle (CCC) does not change.
- In case the proportion increasing of working capital is lower than sales
- In case the sales increase the working capital increase with higher proportion, this rising is seen as misappropriate manner

To take the aggressive policy, a company should have stable sale or growth because it has sustainable future cash inflows and can fulfill its short term liabilities on due date. And contrary with the company having fluctuant sale or future cash flows. In such situation, implementing the aggressive policy is similar to requiring a suicide. Thus, other approach will be the better choice.

2.5 Profitability and liquidity measurement

“Though this financing of working capital needs is done routinely in most firms, financial ratios have been devised to keep track of the extent of the firm’s exposure to the risk that it will not be able to meet its short-term obligations” (Damodaran, 2014, p. 48)

Profitability ratios are financial metrics to evaluate efficiency operation of a company through income generated compare to revenue, balance sheet assets, operating costs and shareholder’s equity in a specific period. Fabozz Peterson (2003, p.733) has shown in his research that high profitability ratio has important role to attract external investment as creditors, investors and suppliers are willing to invest in such a firm, they will receive high turnover for their investments. Below are some measures of profitability with short summaries.

2.5.1 Profitability measures

Return on asset (ROA)

Return on assets (ROA) is a financial ratio representing how much percentage of profit is generated from total assets. It is measured as net income divides to total assets. Net income is this case is profit after taxes and taken from income statement. This ratio expresses how company can do with its sources such as how much they earn from each dollar of assets. It is expedient tool to compare the firms in the same industry. Different industry will have different ROA rate. ROA shows the level of capital intensity of a firm influenced by industry; The firms requiring large preliminary investments have lower return on assets. A ROA rate over 5% is can be acceptable (Susan Crosson, 2008, p.209).

$$\mathbf{ROA} = \frac{\textbf{Net income}}{\textbf{Average total assets}} \mathbf{*100\%} \qquad \mathbf{(12)}$$

Using this ratio, the level and the trend in operating profits in percentage of total assets can be determined. Measuring this ratio by using earnings before interest after tax (EBIAT) can give users to evaluate the profitability of operations devoid any of effects of how to finance the assets (Bertoneche and Knight, 2001, p.77).

Using ROA can help to solve the question ''How efficiency can you use your available assets?". So we can understand the higher ROA will be seen as the management is better. But it does not mean exactly when comparing with every companies in every industries. This will be objective in comparing companies in the same industries. ROA is released internally in companies to keep track of the asset used over time, to observe the performance of business with industry and to examine efficiency of different operations. ROA can give the signal how efficiency assets used and level of low capitalization.

Profitability ratio of working capital

This indicator reflects the remaining profit after paying interest on bank loans and fulfilling obligations to the state, it effectively measures how much profit is generated by using 1 unit of working capital. The higher value of this indicator, the better efficiency of using the working capital.

$$\textbf{Profitability ratio of WC} = \frac{\textbf{Profit after tax}}{\textbf{Average WC}} \mathbf{*100\%} \qquad \mathbf{(13)}$$

2.5.2 Liquidity measure

Current ratio

Current ratio expresses the ability of a firm can fulfill its short term debts by using funds. In others words, it represents relationship between current assets and current liabilities :

$$\textbf{Current ratio} = \frac{\textbf{Current assets}}{\textbf{Current liabilities}} \qquad \textbf{(14)}$$

According to Fabozzi and Markowitz (2002, p.733), *"it is a measure of general liquidity and it is the most widely used to make the analysis for short term financial position or liquidity of a firm"*.

Each industry has different acceptable current ratios. In most cases, it is better to have a high current ratio as it shows that the company has ability to fulfill its short term debts. But it does not mean that high ratio is always good signal because if the ratio is too high it may be a signal for not using current assets or its short-term financing facilities efficiently.

If the ratio is less than 1, it means that the current assets is lower than current liabilities and the business have troubles in meeting its short term debts. However some business can organize the current ratio below 1 in case having much more inventory transfers to cash promptly over the due date accounts payable. Value of the inventory is at the difference of the cost of goods sold and revenue from selling goods. Because its valuation is determined at the cost of purchasing inventory and the price that the firm sell. So on the balance sheet, the value of sale will higher than the value of inventory. Low current ratios in this case can be explained that cash is collected from customers long before the firms need to take their payment to suppliers.

Quick ratio

According to **Bellouma (2011, p.465)** *''The quick ratio, also known as the acid-test ratio is a type of liquidity ratio which measures the ability if a company to use its near cash or quick assets to extinguish or retire its current liabilities immediately. Quick assets include those current assets that presumably can be quickly converted to cash at close to their book values"*

It is the ratio between quickly available or liquid assets and current liabilities and it is represented as below

$$\textbf{Quick ratio} = \frac{\textbf{Current asset-Inventory}}{\textbf{Current liabilities}} \qquad \textbf{(15)}$$

In this ratio, inventory is excluded. This ratio is useful in examination of feasibility of a firm entities without giving a whole view of the business's health. In case of big amounts of account receivables which will be turned after long period (example after 120 days) and vital operation expense and account payable having to pay immediately, the quick ratio may show healthy while in fact that the company face to run out of cash.

Generally, it is acceptable if the quick ratio is equal to 1 or higher. However, each industries has their own proper ratio. The users need to consider about the sector to have a judicious view of a company's financial health. Analyzing of all primary payables and receivables more particularly in line with market and regulate input data accordingly will achieve more expected results.

3 THEORETICAL CONCLUSION

The main purpose of this chapter was to give the reader a theoretical framework and working capital management .It accounts a high proportion of total assets, especially with fast turnover, it can increase rapidly causing the decrease of business efficiency without strict management. Working capital turnover affects the solvency of the enterprise. Therefore, the decision on cash flow management strongly affects the profit and risk of business.

The working capital management aims to solve two basis issues : the reasonable amount of current assets that the company should maintain for each asset category as well as entire current assets and the resources that can finance for working capital.

From these two basis contents, the research expresses the basic policies on working capital management include decisions on scale, asset structure and measures to finance working capital; managing the constituent elements of working capital including cash, receivables and inventories.

This chapter also refers to the analysis and evaluation of the working capital management through the measurements factors . Thereby, it can help to determine the essential elements as well as the efficiency of using working capital.

II. ANALYSIS AND PROJECT

4 SELECTED COMPANY INTRODUCTION

4.1 Company characteristics overview

Gama Joint Stock company was established in 1996 according to business registration license No.5900183556 issued by Planning and Investment Department of Gia Lai province on 25 July 1996.

Gama Joint Stock company is a small company with only 1,5 billion VND in initial business capital. Till now it has 96 employees in 9000 square meters with 2 warehouses and drying ground, 2 lorries, total equity is 147 billion VND.

Main business activity of company is trading agricultural coffee tied up with seasonal characteristic. This trait affects to structure of working capital, it will increase rapidly when the season comes and decrease sharply when it ends. The advantage of this product is that it can be stored in long time with low storage cost but its price fluctuate erratically according to the price of coffee in the world.

The company mainly purchases coffee from farmers, agents and domestic enterprises.

The output market is mostly in domestic such as Olam Ineral and Noble Americas company.

Most customers of the company are traditional customers so there is not much bad debts but that is also the reason affecting to recover capital due to overdue dates.

The company has total 96 employees with 24% graduated from university, 35% from colleges and remain from other education.

The level of human resource in the company is too low so it affects to give the policies and propose solution in managing working capital.

(Source : Report from organization department of Gama company)

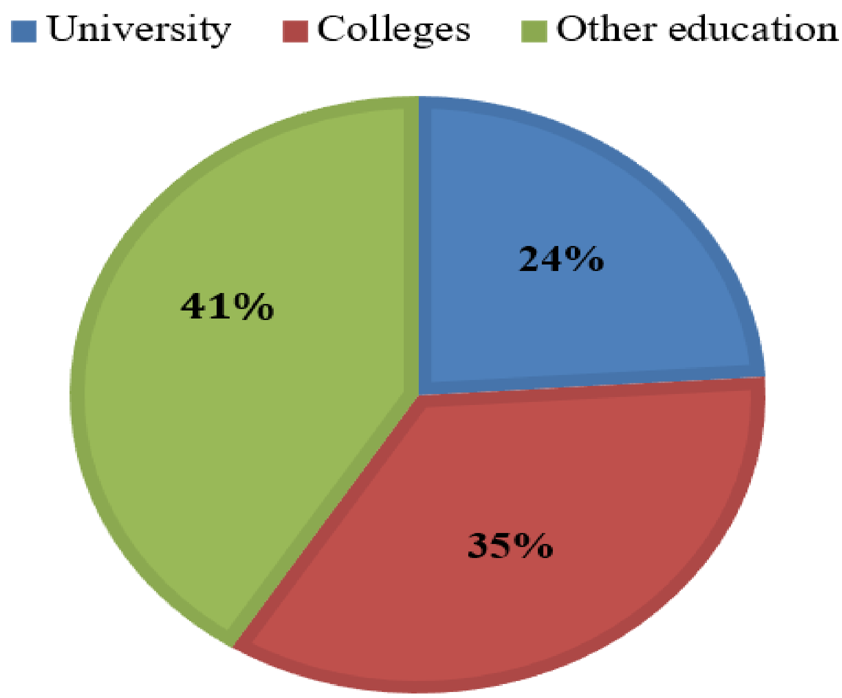


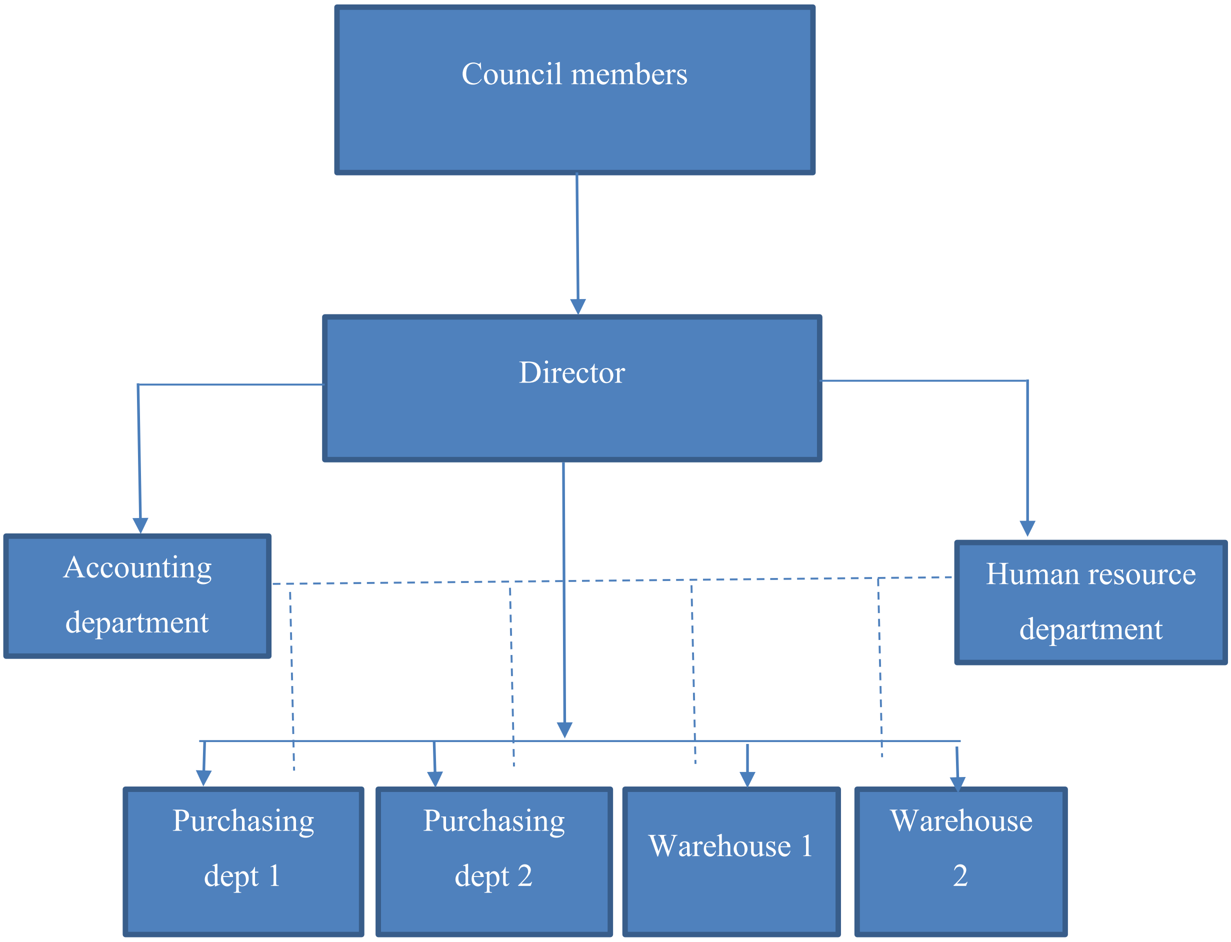
Figure 4. Qualification of employees of company 2018 (Source : Report from organization department of Gama company, 2018).

4.2 Organization structure overview

Gama Joint stock company is an enterprise having full legal acts in accordance with the law, carrying out independent accounting, self-responsibility for its business results.

Functions and duties of each department in the company:

- *Director* is the person having highest management authority, who manages all business activities of the company.
- *Human resource department* has responsibility in managing personnel, organization, labor, salary,..
- *Accounting department* has task in managing accounting and statistics. Simultaneously, it provides financial data, economics information to support the preparation and monitoring of the implementation of the plans, analysis and evaluation of the business performance.
- *The purchasing department* is responsible for purchasing agricultural products in residential and business areas and then reselling them to coffee exporting enterprises; managing labors.



Directly relationship

Co-ordination relationship

Figure 5. Organization of the company (Source : report from organization department of the company, 2018)

4.3 Current business plan

Gama Joint stock is an agricultural coffee products company, customers mainly are coffee export enterprises. The development orientation of the Gama company is to become the strongest and highly specialized agricultural coffee business.

In order to meet the future development strategies, the company has proposed solutions to achieve the goals as below :

- Propose objectives and business plan

- Improve the financial management in general and working capital in particular in accordance with the company's performance and ensure properly allocation and using efficiently the company's resources.
- Improve the labor quality, enhance the managerial staff with higher ability and further strategy vision.

All above are the strategies of the company in general and and below for working capital:

- The company must always understand the market to capture customers information, seek for high quality products at low price.
- The company must promote market research to grash and deal with economic informations and give the accurate predictions for demand and development of the market then look for new potential markets that the company has not yet exploited or exploited incompletely.
- The company will accelerate working capital cycle to increase the working capital turnover.

5 THE VIETNAMESE COFFEE INDUSTRY

5.1 Overview of the industry

Coffee was first introduced to Vietnam in 1857 by French colonists. It has become one of the Vietnamese traditional drink ever since. So far, our country has become the second giant in the world for producer and exporter of coffee, after Brazil. The coffee production in 2018 was about 29,9 million bags, at a 2% increase compared to the year 2017 due to advantageous weather during the flowering period. (Source: ICO).

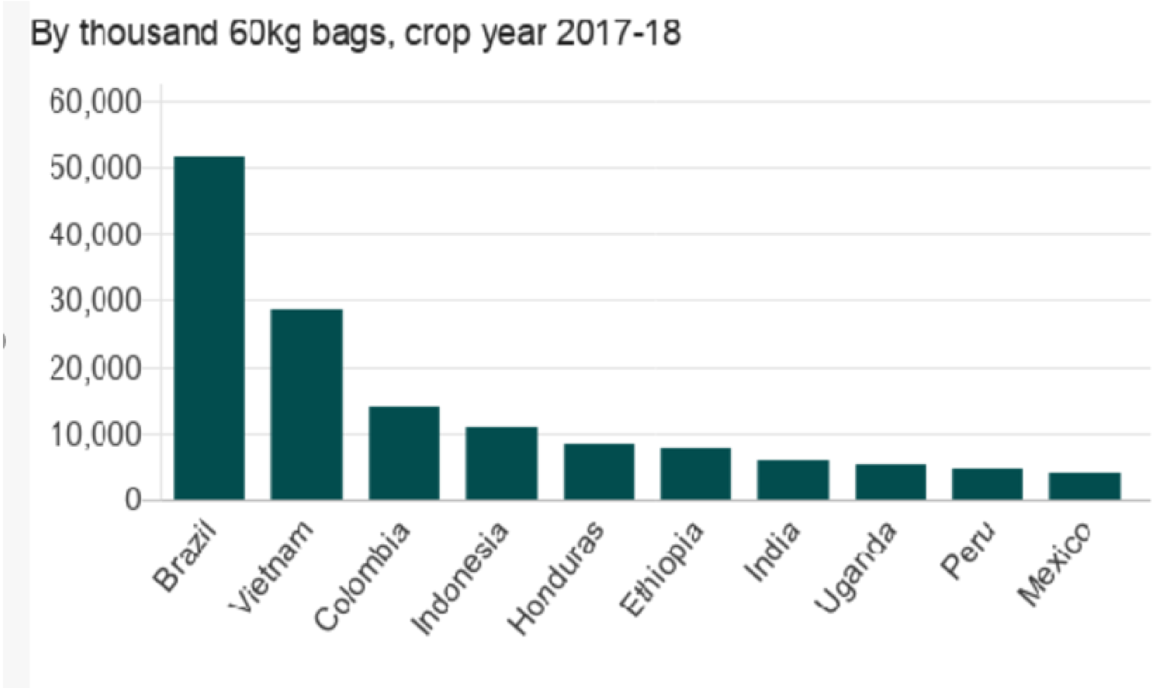


Figure 6. Top 10 coffee producers in the world 2018 (Source : ICO)

In the past four years, many farmers have been substituting other cash crops like black pepper, avocado, and passion fruit for coffee as they can increase income. However, according to report 2017 Coffee Semi-annual, some farmers are turning back to grow coffee because of dropping price of black pepper. Moreover, the farmers still mainly choose coffee as it can be stored and sold once the limited supply occurs in the market. (Source : ICO)

Thanks to better land management, high replanting rates, the availability of inputs and the significant participation of private sector, the export volume of coffee bean stably 24-25 million bags in recent years. Export coffee contributes high income in exporting agricultural products of Vietnam. It remarks the third position with 19% in total.(Source: ICO)

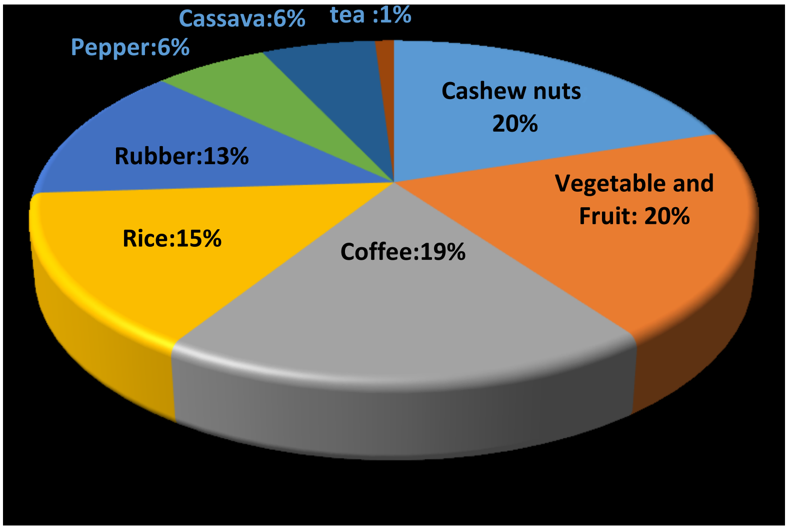


Figure 7 : Export rate of main agricultural products (Source : ICO,2018)

Robusta coffee makes 90% of total input and remain 4% for Arabica. Vietnamese Ministry of Agriculture plan to promote the Arabica rate into 8% by 2020. The domestic price of coffee averaged 1,42 USD per kilo in 2018, while the export price was slight higher at 1,54 USD per kilo. Germany, United State, Italia, Spain, Japan are the mainly Vietnamese importing coffee market.

From the April of 2018, mild cooler weather and some off-season rains has helped for flowering of coffee trees. Thanks to the compensation from last year's bumper crop, the farmers can buy inputs for crop of this year. Moreover, it also helps to increase production of 2018 to 29,9 million bags, an increasing 2% over 2017.

Total coffee area in Vietnam by 2020 will be 500.000 hectares and the output of coffee beans will reach 1.112.910 tons. Besides, the government's plan is to expand the processing capacity to 125.000 tons, of which about 50.000 tons of instant coffee, the export turnover will be from 2,1-2,2 billion USD.

Arabica production marks about 4% in total Vietnamese coffee production, and about 6% of the total coffee area. Arabica trees can produce good cherries at the high at least 1000 meters above the sea. Most of Vietnamese coffee farms are not enough high to grow it, it the reason that it is only grown at few province. Lam Dong is the province having largest Arabica production area in Vietnam.

The orientation to 2030 : total coffee area will achieve 479.000 hectares, the output of coffee beans will reach 1.122.675 tons, continue to expand processing capacity to 135.000 tons, of which instant coffee is about 60.000 tons, the export turnover will get over 2,2 billion USD.

The key area for coffee development includes 4 Central Highlands provinces : Dak Lak, Lam Dong, Dak Nong and Gia Lai. By 2020, the coffee area will be 447.00 hectares marking 89,4% of the total Vietnamese coffee area. Vision to 2030 it will be 433.000 hectares, equal to 90,4% total Vietnamese coffee area. The remain coffee areas are in Kon Tum, Dong Nai, Binh Phuoc, Ba Ria, Vung Tau, Quang Tri, Son La and Dien Bien.

The domestic coffee market of Vietnam has had the slow growth because of strong competition. The same coffee products are sold in many shops and cafes. On the other hand, Vietnamese coffee drinkers prefer roasted and ground coffee than instant coffee. In Vietnam, instant coffee has low levels of consuming, but it become more popular in the western expatriates. Overall, the Vietnamese domestic coffee market only marks about 10% of total Vietnamese coffee production.

5.2 SWOT analysis of the industry

SWOT analysis is a technique for businesses identify its strengths, weaknesses, opportunities and threat related to business competition or planning projects. Its purpose to specify the objectives of the business and identify the internal and external factors to achieve the objectives. Based on SWOT, the company can determine their proper strategy and which the business should concentrate on to improve their weakness and take advantage their strong to get expected goal.

Strengths and weakness are mainly related to internal factors while opportunities and threats commonly express external environment. Below are short explanation about the meaning of SWOT :

- *Strengths* : Characteristics of the enterprises or project which are the advantages over others in the same industry.
- *Weakness* : The limitations from inside of the company. They are the disadvantage relative to others.
- *Opportunities* : The external factors that the business or project could exploit to its advantage.

- *Threats* : The factors come from outside environment that are the trouble for the business or project.

Each industry has its own characteristics. It is important to understand its strengths and weaknesses of the business environment as well as opportunities and threats to help the company have proper strategies to catch up the others in the market. In this case, we will mention SWOT analysis of Vietnam Coffee industry.

➢ **Strength**

Natural conditions of Vietnam such as weather, land, etc.. is advantage for growing coffee, which can guarantee for coffee trees growing well with high yield and special tastes. With the advantage from large arable land area that are fertile and rich in nutrients makes Vietnam achieve high coffee output, ensure an ample input to meet the demand of market.

Besides, Vietnam is known as an abundant cheap labor force country, high rate of young population with specific characteristics such as hard-working, persistent, enthusiastic. These advantages help cultivation, harvesting and production to be promoted.

Moreover, with high growth of coffee exports and maintaining a stable market share in EU and other markets are the opportunities to attract concessional resources, funding and technology from foreign investors for Vietnam's coffee sector.

Coffee is one of major export commodities of Vietnam which always receive high attention of agencies and government such as the investment policies, encouragement and support for farmers and business.

➢**Weakness**

Through the competitiveness assessment of ICO, the Vietnam's coffee quality is very low. The amount of coffee being tossed out and inferior standard marks the highest proportion in the world. The coffee export prices and coffee exports is affected from these factors.

As we know, seedlings play important role in the quality of coffee beans. But in Vietnam, coffee seedling is poor, the business as well as farmers have not focused mainly on this period, in three provinces with the largest coffee area of Vietnam have only 29-40% of the areas planted with the seed coffee plant selection (ICO). In addition, there are still many coffee areas having old coffee plantations. Coffee plantation's rate in Vietnam aged 20-25 years marks 30%, while for plantation age under 12 years account about 50%. This the reason for slow growth coffee trees, smaller beans. (Nguyen Cong Luan, 2018)

The knowledge in taking care of coffee trees of Vietnamese farmers is still limited, mainly based on their experience making degrade the fertility of the soil and low quality of coffee. With the limitation in knowledge the farmers and small businesses have not had correct way in harvesting and preservation requirement. Due to some social problems such as in time of high coffee prices, the occurrence of theft will make fearing to farmers, so they have harvested unripe coffee and ripe coffee at the same time. Also, the farmers only dry coffee by using empty land around their house which is not enough space for big amount of coffee. This makes coffee beans become black and mold infections. This leads to low quality of coffee beans.

Most of Vietnam coffee enterprises are small and medium-scale which have limited capital resources, less foreign relationship compared with foreign firms. The weak connection between the businesses in the same industry, poor coordination across sectors are the reasons making not facilitate the distribution system in import countries. Besides, Vietnam's coffee exports mainly indirectly through intermediary firms abroad, so we cannot manage the consuming situation as well as intervene to sales policies which we would like to drive the market accordingly.

Regarding the Vietnam coffee brand, most of people over the world only know Trung Nguyen and suppose Vietnam coffee are Trung Nguyen. Because most of Vietnam coffee business just focus only export sales without much mindfulness of the importance of brand and even only export through intermediary firms abroad. The market research, trade promotion and international marketing are not taken much attention, lack of depth. This the reason makes Vietnam coffee being lower than competitors, as well as difficult to penetrate into the distribution system in the import countries. (Vietnam News, 2018)

➢**Opportunities**

The trend of world economic development is to towards co-operation, stability and investment in each other. And Vietnam is one of countries that have the most stable political situation in the world. The BCI index of Vietnam has rebounded strongly since 2013 till now expressing the increasing of belief and business prospects of the European business community in Vietnam. This help to bring the peace of mind and safety for foreign investors to participate in Vietnam market. Nowadays, Vietnam has strongly shifted to a market economy, creating conditions for enterprises to develop co-operation.

Coffee is has the high proportion in export of Vietnam, so it has been received much attention of government in developing and promoting the products.

Social and cultural fields have had positive changes, people's life has been more improved. These are basic advantages for the development of industries, including coffee industry. Moreover, our labor force is abundant.

With the Vietnam-EU Free Trade Agreement (EVFTA), after the effective date from 2018, it will help 99% of import tax lines between the two sides removed within 7-10 years. This can be considered as the highest commitment level that Vietnam has achieved in the signed FTAs so far. Many items enjoy 0% tax rate as soon as this agreement taking effect like coffee (currently basis tax rate is 0-11,5%); pepper (0-4%); natural honey (17,3%),..EU is currently the second largest market for Vietnamese exports with key commodities such as coffee, cashew nuts and pepper. (Vietnamese statistic, 2018)

➢**Threats**

Vietnam is one of the five countries in the world most affected by climate change. In the last few years, climate has caused extreme weather phenomenon, causing erratic rain, depleting irrigation water and causing land to degrade faster.

Now, the replanting progress in the Central Highland provinces, except for Lam Dong province is slow because the replanting of this tree has high risk and requires a large investment. In addition to equity, producers face many obstacles in accessing loans.

Currently, Vietnam's coffee industry has less than 10% of the coffee area processed into trade coffee, according to Vietnam Cocoa Coffee Association, Vietnam has very high agricultural coffee production but processing quality, raising the value is not too much.

Another problem facing the coffee industry is the competition from other higher value crops. Many higher value crops such as pepper, durian, avocado, and lemon are encroaching on coffee, especially after Government ordered the closure of the forest. The planned pepper industry by 2020 will reach an area of 50000 ha, but so far will be increased to 100000 ha. (Source : Vietnamese statistic 2018)

Like many other agricultural products of Vietnam, although the export volume is the second proportion in the world, Vietnamese coffee is still in the situation of 'brocaded robe going in night' when mostly export coffee raw and un-branded exports.

The success of EVFTA commitment also gives more threaten for Vietnam. The trend of reinforcing the protection of agricultural production of large agricultural importing countries is through strengthen the application of technical barriers, regulations on quality standards, food hygiene and safety, traceability as well as anti-dumping, anti-subsidy and sell-defense measures,.. will be major challenge for Vietnamese agricultural products. In addition, the mandatory requirements of labor standards, environment, intellectual property in new generation FTAs are very difficult to meet in a short time, especially for small and medium enterprises.

6 FINANCIAL OVERVIEW OF GAMA JOINT STOCK COMPANY

Main business activity of the company is in agricultural coffee product depending heavily on the season. As a small business, the company faces the difficulties in mobilizing capital in peak season.

Below is the overview of Gama's operation

Table 1. Overview of Gama's operation from 2016 to 2018 (Unit : Million VND)

	2016	2017	2018
Total assets	152.451	161.071	162.248
Owner equity	9.376	9.112	10.882
Total revenue	373.184	516.914	360.839
Operating profit	27	388	2.664
Profit/revenue	0,01%	0,08%	0,74%
Profit/owner equity	0,29%	4,26%	24,48%

(Source : Financial statement of the company)

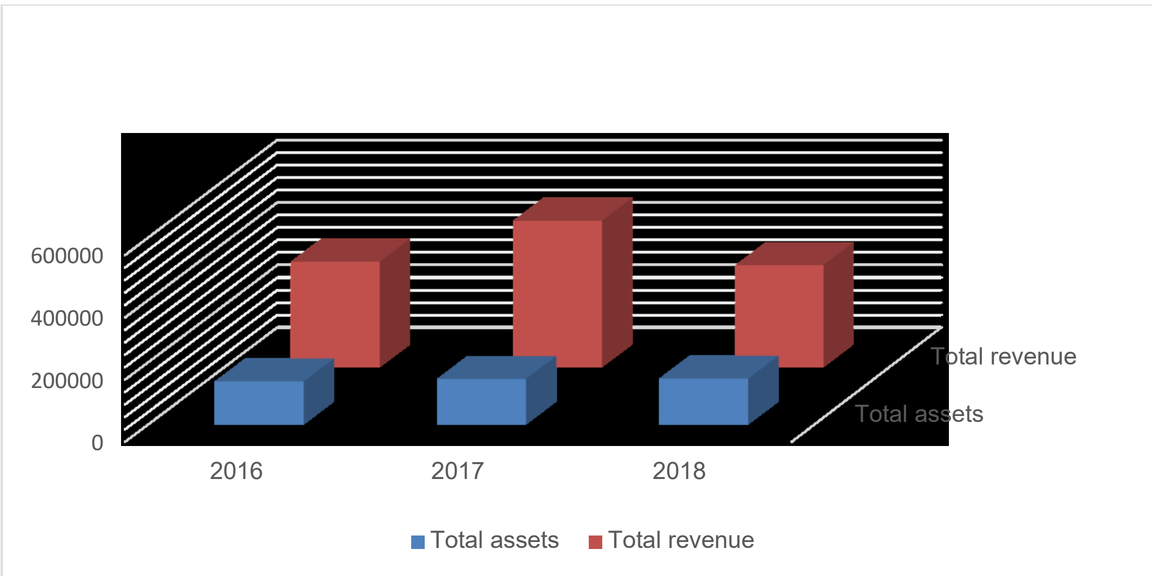


Figure 8. Total assets and total revenue in period 2016-2018 (Source : own processing)

Below are some recommendation from above table :

Overall, total assets increased in three years, total revenue achieved high amounts. In 2017, total revenue soared 38,51% compared to 2016 equivalent to an increase of 143 billion VND. But in 2018, it fell sharply and had the lowest amount in three years. Although the profit margin increased these years, it was still low.

In 2017, the business performance was better than 2016. Total assets and total revenue increased due to high coffee price and quickly turnover of goods. Although total revenue increased by 138,51% compared to 2016, profit margin was still low and only reached 0,08% of revenue.

In 2018, the business performance faced difficulties in price, low turnover of goods and investment so it is important to control more closely the management and use of capital.

7 SWOT ANALYSIS OF GAMA JOINT STOCK COMPANY

Besides the SWOT factors of the industry, the company also needs to analysis its own SWOT in order to have the detailed view in internal and external problems as each company has its own strengths and weaknesses as well as its opportunities and challenges.

➢**Strengths**

Gama Joint Stock Company has been operated as a coffee business for 14 years at Dak Lak province. With the large area and fat basalt red soil, it is advantage for growing coffee. Besides, the geographical location is also an reason making this province has the largest coffee area in Vietnam.

Gama Joint Stock company's products have met almost domestic and foreign demands, conquering difficult markets. It manages severely from seed selection, concentration of intensive farming and caring to ensure high quality clean coffee. Harvesting has planned and the quality is attached special importance from the harvest selection period. Besides, it has more notice in quality of purchasing products. The number of growth is diverse over the years.

Regarding human resources, it has strictly fulfilling commitments with employees to make good organization culture, meeting the aspirations of all members, the motto "productivity, quality, prestige and efficicency' is the secret to success. On the other hand, the employees of the company mainly the inhabitant in province. Farming coffee has been their traditional jobs so they had well experience in cultivating them.

Marketing strategy focusses on "ethnicity", creating a great force in marketing. Doing this strategy, the spiritual values and business values are tied together.

➢**Weakness**

Due to defective in havesting, processing and storage, the coffee quality is very limited leading to low competitiveness. The company has too high humidity so it is easy to get moldy because of drying, inadequate preservation. In addtion, the products also has remained many impurities and unripe fruit. Moreover, the machines is backward making an increase production cost and time.

According the servey, enterprises have not paid much attention to the its price position compared to competitors. This partly reflects the limitations of enterprises in accessing domestic and foreign information as well as unrenewed business views.

Gama Joint Stock company has not yet built own brand for its products. This is also the general situation of Vietnamese coffee producing enterprises. In addition, the company mainly focuses on researching on seed, land planning and less in development on product quality. These make its products not having much difference and easily mistaken with other brands.

In order to consume products at high prices, every enterprises must understand the market through the forecast information system. But Gama Joint Stock company have not had advanced information to apply market forecasting methods and tools, only mainly based on their production and business experience. It have not had a team of specialists in forecasting. Besides, there is not much officer having high qualifiaction in the company. Thus, there is no trading floor here so that business can make decision in accordance with market reactions.

The company only concentrates in promoting products when there is a slowdown or slow consumption or the occurence of competitors in the battle for the market.

Businesses are only interested in promoting products when there is a slowdown or slow consumption or there are competitors in the battle for the market.

In addition, due to weak in promote products and unrenewed technology as well as quality, the company has faced difficuties in mobilizing fund.

➢**Threats**

Vietnam is more and more integrating with the world economy nowadays. In order to easier in integration, the legal regulations must be adjusted according the international standard. This integration makes weakly competitive enterprises bankrupt. Besides, exporters and consumers are increasingly selective, requiring businesses to improve product quality. Gama Joint Stock company is a small business that lacks modern equipment, machines and is one of the units at the bottom of the ranking of competitiveness, so it will face difficulties to compete in the market.

Although the legal document system has been gradually improved, it is still very complicated, which is also the reason why foreign enterprises hesitate to invest in Vietnam. (For example, applying for an investment license takes up to 3 months).

There are still technologies that are not applicable in Vietnam due to high costs, so they have to be imported from abroad with the high prices and can not take advantages of the abundant labor resources available in Vietnam. Vietnam's technology department is far behind many countries around the world, leading to low competitiveness. Besides, Vietnam's infrastructure is generally too inferior.

Regarding the competitiveness, with the integration, many foreign companies have placed their headquarters in Vietnam. These companies are both customers and strong competitors for Gama Joint Stock company such as : Atlantic Vietnam, Olam Vietnam, Neuman group Vietnam, Americas Vietnam,..They are now gradually getting used to the Vietnamses legal fame and market. These companies have strong finance, modern machinery, equipment, warehouse as there is huge amount of foreign capital invested into business in Vietnam. Besides, they also have extensive experience in international trade and the qualification employees due to high salary and good remuneration policies. The company does not only face the cutthroat competition from foreign businesses but also from internal companies such as Trung Nguyen, Generalexim,..These enterpriese has qualificable human resource, strong marketing strategy, modern technologies.

Coffee is not an essential necessity in daily life, so the demand is limited. Customers have confusion between various product.

The market that we export coffee is also the place where the leading countries in agricultural coffee products such as India, Brazil,..Especially, the Vietnamese coffee quality has not been much apprepriated so the competitiveness is still weak. On the other hand, the export market of the company is still small. Real customers for coffee bean of Gama Joint Stock company is domestic and foreign direct roasters. The company should determine these businesses as the long-term customers. Therefore, right now, Gama Joint Stock company must have a proper strategic orientation for its export market because otherwise it will gradually lose its market when its customers become professional export clues.

Beside coffee bean, there are many substitue products such as tea, high quality powder coffee, other drinks,..Example nowaday, the trend of countries is moving towards tea as it is more healthy and cheaper. Especially in Japanese market where the beginning place of tea ceremony.

➢Opportunities

The trend of world economic development is to towards co-operation, stability and investment in each other. And Vietnam is one of countries that have the most stable political situation in the world bringing the peace of mind and safety to foreign investors to participate in Vietnam market. Nowadays, Vietnam has strongly shifted to a market economy, creating conditions for enterpriese to develop co-operation, high exchange rates, and more chance for exporting coffee abroad. It helps to attach more outside capital and the company will have more choices accordingly and more information can be accessed to understand more about market. Moreover, Vietnamese enterprises have the opportunity to work as well as learn experience from forgeign partners. Market expansion policy helps Gama Joint Stock company can assess to many customers.

Together with the integration, Vietnam’s legal documents system is gradually being revised and improved to catch up the international standard.

Social and cultural fields have had possitive changes, people’s life has been more improved. These are basic advantages for the development of industris, including coffee industry. Moreover, our labor force is abundant.

Currently, the coffee is popular and its prices are rising. And now, the company has exported to countries such as England, France, USA,..and even teh fastidious market like Japan.

8 ANALYSIS OF THE CURRENT SITUATION OF THE LEVEL OF WORKING CAPITAL IN GAMA JOINT STOCK COMPANY

8.1 Working capital management policies in the company

8.1.1 Cash conversion cycle

In a business cycle, mobile assets are constantly transformed through all forms, from cash to inventory to receivables and back to cash. The effective of working capital policies must minimize the time from purchasing goofs to collecting money.

Below table is the cash conversion cycle of the Gama Joint Stock Company in the period 2016-2018.

From the date in table 2, we can see that the cash conversion has increased sharply over the three years, in particular, in 2017 increased by 82,53%, equivalent to an increase of 24 days compared to 2016, and 2018 continued to increase 106,82% corresponds to an increase of 53 days compared to 2017. The reason is that the company pay for their supplier earlier, while the cycle of average of inventory and collection period increase.

Early payment to suppliers may increase the company's prestige but inventory still in selling process and appropriated capital. In this case the company may lack cash for business operations.

Table 2. The cash conversion cycle in the period 2016-2018

	2016	2017	2018
Total revenue	373.184	516.914	360.839
Cost of goods sold	370.917	513.511	346.187
Average of receivable (Million VND)	21.286	58.524	52.685
Average of inventory (Million VND)	44.090	58.466	60.690
Supplier payable (Million VND)	35.913	42.476	7.888
Inventory turnover (round)	8	9	6
Days of inventory turnover(days)	*43*	*41*	*61*
Revceivable turnover	*18*	*9*	*7*
Days of receivable turnover(days)	*21*	*41*	*53*
Payable turnover	*10*	*12*	*46*
Average payment cycle (Date)	*35*	*30*	*8*
Cash conversion cycle (Date)	*28*	*52*	*105*

(Source : Financial statement of Gama Joint Stock Company)

8.1.2 Investment policies in current assets

Table 3. Investment policies in current assets (Unit : Million VND).

	2016	2017	2018
Working capital	145.596	129.495	137.238
Total capital	152.451	161.071	162.248
Short-term assets	149.687	157.273	156.517
Short-term debt	143.075	151.958	151.364
Profit before tax	723	376	2.670
Working capital/total capital (%)	96%	80%	85%
Net working capital	6.612	5.314	5.152
Profit before tax/total assets (time)	0,005	0,002	0,016

(Source : Financial statement of Gama Joint Stock Company)

From table 3, several comments can be concluded as below :

The structure of the total capital in the company has distinct difference. Its working capital always accounts for a large proportion, specifically the working capital marks for an average of 87% of total capital. Thus, the working capital is an important factor affecting the business performance.

Net working capital are positive over the three years, it means that short-term assets are higher than short-term debts. In this case, we can understand that the company use all its short-term debts and a part of its long-term capital to invest into short-term assets.

The company invests a large amount in mobile assets, accumulating more than paid assets, since then, profitability will be lower. The average profitability of the company is too low, only 0,01 times. 2018 has the highest rate of return with 0,16 times, higher than in 2017 and 2016. It means that in 2018, for every VND of capital, it will earn 0,016 VND profit before tax. This ratio tends to increase recent years so we can be look forward to a satisfactory results.

8.1.3 Financing policies in current assets

The demand for working capital of the company includes two components, regular demand and seasonal demand. With the agricultural coffee products, the seasonal falls in the third and fourth quarters every year. At this time, the demand for working capital of the company increase significantly. Therefore, the company uses short-term debt to finance seasonal current assets, short-term assets needed frequently during production process will be sponsored by long-term capital such as own equity.

Long-term financing not only supports regular fixed assets but also is a part of seasonal current assets. Therefore, the tendency financing the company's current asset is a conservative trend. The conservative is priority over safety, it helps to avoid the risk of being unable to repay the debt, but in return, the company must accept higher costs.

8.1.4 Planning the policies in working capital

Every year, when the seasonal coming, based on market demand and prices, the company plans expected revenue, profit, business plan and target objectives. But it does not have any specific plan for determining the need of essential working capital for production. This leads to be out of control the situation of working capital such as the stagnant and wasting capital in many stages of production. Therefore, finding funding also becomes passive and spontaneous.

In order to timely meet capital needs during the peak season, the company has to determine the necessary working capital needed for production to have timely solution.

8.2 Overview of working capital of the company in the period 2016-2018

8.2.1 Overview structure of assets and resources

Table 4 below includes the structure of assets and resources in the period 2016-2018

Table 4. Structure of assets and resources in the period 2016-2018

	Amount (million VND)			Percentage			Difference (million VND)		Difference (%)	
	2016	2017	2018	2016	2017	2018	2017/2016	2018/2017	2017/2016	2018/2017
Assets	152.451	161.071	162.248	100%	100%	100%	8.620	1.177	105,65%	100,73%
Short-term assets	149.687	157.273	156.517	98,19%	97,64%	96,47%	7.586	-756	105,07%	99,52%
Long-term assets	2.764	3.798	5.731	1,85%	2,42%	3,66%	1.034	1.933	137,41%	150,88%
Resource	152.451	161.071	162.248	100%	100%	100%	8.620	1.177	105,65%	100,73%
Short-term resource	143.075	151.958	151.364	93,85%	94,34%	93,29%	8.884	-594	106,21%	99,61%
Long-term resource	9.376	9.112	10.883	6,15%	5,66%	6,71%	-264	1.771	97,18%	119,44%

(Source : Gama Joint Stock Company's financial statement)

Table 4 expresses that :

Total assets increases over the three years, however, the fluctuation of short-term assets and long-term assets are not consistent with the general fluctuation of total assets. Specifically, short-term assets tends to decrease, especially in 2018 decreases by 0,48% compared to 2017, equivalent to a decrease of 756 million VND, long-term assets tends to increase. This shows that in the production process, the company meets some difficulties that narrowed the scale of operation.

Assets : Short-term assets always account for a high proportion of total assets, averaging over 97% of total assets, tending to decrease, mainly receivables and inventory tends to decrease. Long-term assets of the company tends to increase, this shows that the company pays great attention to investing in fixed assets (cargo trucks, warehouses).

Resources : The company resources is mainly short-term capital, short-term capital accounts for 93% of the total capital. The company's long-term capital is mainly equity, the proportion of long-term capital accounts for an average of 6% of the total capital, which is a relatively low rate, indicating that the company will face difficulties in financial issues, mainly due to market fluctuations, low levels of financial security, difficulties in creating trust for customers and credit institutions.

In summary, regarding the assets structure, short-term assets accounted for a large proportion, long-term assets accounted for a small proportion is reasonable for agricultural coffee products business model, regarding capital structure, maintaining the proportion of low long-term capital will cause financial instability.

8.2.2 Overview of general fluctuation of working capital

Because of characteristics of the company is agricultural coffee products, the working capital accounts for a large proportion, the change in working capital has an important influence on the entire operation of the company.

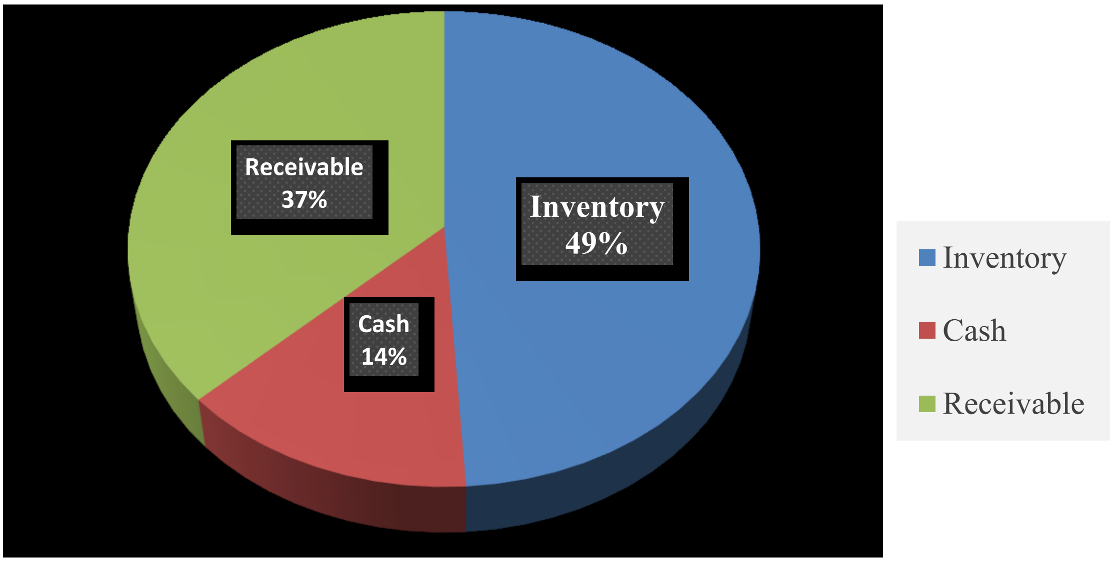


Figure 9. Structure of working capital (Source : own processing)

Above figure 9 and below table 5 show that :

Total current assets in 2017 decreases by more than 16 billion VND with corresponding decreasing rate of 11,06%, mainly due to declining inventories; in 2018, total current assets increases to 7,7 billion VND, equivalent 5,98% mainly in increasing inventories while cash and receivables tends to decrease.

Cash and cash equivalents account for an average of 14% of total current assets. In 2017, an increase of 4 billion VND is equivalent to 21,98%, but by in 2018, it decreases 5,2 billion

VND, equal to a reduction rate of 23,11%. Revenue from goods sold are the strongest and most significant impact on the items of cash and cash equivalents.

Short-term receivables marks an average of 37% of total current assets, which is the second largest proportion of current assets, the most stagnant place. In 2017, receivables increase by 31,9 billion VND compared to 2016, equal to 74,96% while in 2018, it deceases more than 53 billion VND, equivalent to 58,5%. Sales revenue has a strong impact and mainly on short-term receivables.

Inventories account for an average 49% of total current assets, which is the largest proportion and the main reason for fluctuation of current assets over the years. In 2017, inventories decrease more than 52 billion VND with the corresponding reduction rate of 61,63%; in 2018, inventories increases to 56,5 billion VND, nearly 3 times higher than 2017. In terms of proportion, billion overpayment of receivables and inventories is too large in total working capital. Most customers are traditional customers, so it can limit the occurrence of bad debts, but that is also reason affecting to the company's capital recovery due to overdue debts.

Table 5. Structure of working capital in the period 2016-2018

	Amount (million VND)			Percentage			Difference (million VND)		Difference (%)	
	2016	2017	2018	2016	2017	2018	2017/2016	2018/2017	2017/2016	2018/2017
Cash and cash equivalents	18.520	22.591	17.371	12,72%	17,45%	12,66%	4.071	-5.220	121,98%	76,90%
Short-term receivables	42.570	74.480	30.911	29,24%	57,52%	22,52%	31.910	-43.569	174,96%	41,50%
Inventory	84.506	32.425	88.956	58,04%	25,04%	64,82%	-52.082	56.531	38,37%	274,35%
Total	145.596	129.495	137.238	100%	100%	100%	-16.101	7.743	88,94%	105,98%

(Source : Financial statement and own processing)

8.2.3 Analysis of general speed of working capital

In the period 2016-2018 : the number of net working capital turnover is very low and tends to decrease but days of net working capital turnover is very high and tends to increase over the years. It shows that the company does not manage the working capital well, thus wasting a huge amount of working capital and tends to increase over the years.

Specifically, in 2016, the number of net working capital turnover is highest with 4,95 time/year and needs 73 days per cycle; meanwhile in 2017 it is only 3,76 time/year with 96 days per round. In 2018, the number of working capital turnover continues to decrease to 2,71 time/year and requires 133 days/round.

Table 6. Speed of working capital

	Amount (million VND)			Difference (million VND)	
	2016	**2017**	**2018**	**2017/2016**	**2018/2017**
Total revenue	373.184	516.914	360.839	143.730	-156.075
Cost of goods sold	370.917	513.511	346.188	142.594	-167.323
Profit after tax	564	294	2.083	-270	1.789
Average working capital	75.334	137.545	133.366	62.212	-4.179
Working capital turnover	4,95	3,76	2,71	-1,196	-1,053
Days of working capital turnover	73	96	133	23	37
Saving working capital	-111.258	33.198	37.351	144.456	4.153
Coefficience of working capital turnover	0,202	0,266	0,370	0,064	0,104
Profitability ratio of working capital	0,75%	0,21%	1,56%	-0,53%	1,35%

(Source : Financial statement of Gama Joint Stock Company and own processing)

We exam the relative factors affect to efficiency of working capital turnover as below :

- In the period 2016-2017

Effect of total revenue :

$$\frac{TR_1}{WC_0}-\frac{TR_0}{WC_0}=\frac{516.914}{75.334}-\frac{373.184}{75.334}=1{,}91 \text{ (round/year)}$$

Effect of working capital :

$$\frac{TR_1}{WC_1}-\frac{TR_1}{WC_0}=\frac{516.914}{137.545}-\frac{516.914}{75.334}=-3{,}1 \text{ (round/year)}$$

Summarizing above results, we have : H_{WC} = 1,9 + (-3,1) = -1,19

Above result shows that the number of working capital turnover in 2017 decreased by 1,19 rounds compared to 2016 due to the impact of net revenue and working capital. In term of stable working capital as in 2016, efforts to increase sales in 2017 helped to improve speed of working capital to 1,91 rounds. However, in term stable of revenue as in 2017, the management of working capital is ineffective, particularly due to the excessive receivables, increasing the cost of debt recovery, which causes to slowly working capital turnover to 3,1 rounds.

Thus, the growth rate of working capital is not consistent with the rate of revenue growth which is also the reason for wasting 33.198 million VND of working capital.

- In the period 2017-2018

Effect of revenue :

$$\frac{TR_1}{WC_0}-\frac{TR_0}{WC_0}=\frac{360.839}{137.545}-\frac{516.914}{137.545}=-1{,}13 \text{ (round/year)}$$

Effect of working capital :

$$\frac{TR_1}{WC_1}-\frac{TR_1}{WC_0}=\frac{360.839}{133.366}-\frac{516.914}{137.545}=0{,}08 \text{ (round/year)}$$

Summarizing both results, we have H_{WC} = -1,13 + 0,08 = 1,05 round/year

Above results prove that the number of working capital turnover in 2018 decreased by 1,05 times compared to 2017 due to impact of both net revenue and working capital. In term of constant working capital as in 2017, the decrease in revenue in 2018 caused working capital turnover to more slowly by 1,13 rounds. However, in the term of constant revenue as in

2018, the reducing working capital made the number of saving capital cycles increase by 0,08 cycles. Thus, the growth rate of working capital is not consistent with the growth rate of revenue, which is also a reason for wasting 37.351 million VND working capital.

Coefficient of working capital turnover is high and increase gradually over the years showing that the its efficiency of working capital is very low. In 2016, in order to get 1 VND revenue, it needed 0,202 VND of working capital and in 2017 was 0,266VND. It is higher in 2018 with 0,370 VND working capital.

The profitability ratio of working capital is too low, average only 0,84%. In 2017, the average working capital increased by 82,58% compared to 2016, but the profitability ratio of working capital was low and only reached 0,21%, decreased 0,53% compared to 2016. But by the 2018, the average of working capital decreased 3.04% compared to 2017 but the profitability ratio of working capital increased higher than in 2017, reaching 1,56% and higher 1,35% than 2017. It means that in 2018, for every 100 VND of working capital can collect 1,56 VND of profit, this number is relatively low, but it is an optimistic sign of the company's effort in managing working capital.

In summary, through analyzing working capital management of the company in three years, we see that the approach of managing working capital is not good, still remain high inventories and receivables, the solvency is guaranteed due to the high autonomy of equity. Working capital turnover is too low and tends to decrease, but the days of it is too high and tends to increase over the years. The inconsistent between growth rate of working capital and net revenue is also the reason for wasting a large amount of working capital. The coefficient of working capital turnover is high while profitability ratio is too low. These prove that the efficiency of using working capital is not good, the company has to face difficulties in managing working capital. It is necessary for the company to review the problem and find out the proper solution.

8.3 Identification of the components of working capital management

8.3.1 Cash management

The company has two form of cash as cash on hand and bank deposits to guarantee for production. It must always maintain a certain amount of cash for trading, reserve and speculation.

Table 7.4 shows that the proportion of cash in total working capital is not high with only an average of 14%. In 2017, the capital in cash of the company increases sharply with 4 billion VND, equal to 21,98%, mainly due to high coffee prices, the company sold more goods. But in 2018, the capital in cash is reduced by 5,22 billion VND, equivalent to 23,11%, because of decreasing coffee price, the company stocked goods and waited until higher price. Thus the cash in this time was decreased.

In order to understand more about fluctuation of cash in the company through summaries cash flows statement in the period 2016-2018 as below table

Table 7. Summary cash flows statement in the period 2016-2018 (Unit : Million VND)

	2016	2017	2018
Net cash flows from operating activities	20.492	2.063	84.907
Net cash flows from investing activities	-2.133	3.021	697
Net cash flows from financing activities	-11.392	-457	-90.511
Net cash flows during the year	6.966	4.628	-4.906
Beginning cash and cash equivalents	378	7.344	11.972

(Source : Financial statement from Gama Joint Stock Company)

Above table 7 shows :

Net cash flows from operating activities fall sharply in 2017 and increases strongly in 2018. In 2018, business activities takes a high positive cash flow, but this cash flow is not from main business activities, it is from other gains and it is not stable over the years. If excluding other gains, net cash flows from operating activities is negative 28 billion VND. In 2018, net cash flow from operating activities is highest but only accounts for 7% of revenue. This shows that the actual of amount cash which the company earned during the year is too low.

Net cash flows from investing activities : In 2016, negative cash flow was generated due to spending for purchasing assets. By 2017, it became positive as the company received loan interest, but in 2018, the cash flow tended to decrease due to spending for purchasing assets, and loan interest reduced so the amount of cash decreased comparing to 2017.

Net cash flows from financial activities are negative over the years mainly due to the paying interest.

Although the total amount of cash and cash equivalents at the end of the year is positive but latent is the financial situation is weakening, the forecast of the cash flow is not good making the company to fall into shortage money.

Proportion and balance of cash fund is low and unreasonable. Because out of the daily spending needs, the company does not take into account the amount of cash needed in case of occurrence of risk factor or good opportunities for investment. In these situations, the company will be passive, easily lose opportunities, reduce the efficiency of using working capital.

8.3.2 Receivable management

Managing receivables plays important role in working capital management. If doing well in this factor, the company will be less debt, less appropriated fund and quickly cash turnover and vice versa.

Gama Joint Stock company is an agricultural coffee production, so its characteristics of receivables will follow the general industry characteristics, the time to collect receivables will depend on the situation of coffee prices.

Table 5 shows that short-term receivables accounted for an average of 37% of total current assets marking the second largest proportion of total current assets. Receivables are quiet high, the company has been appropriated a lot of capital while there are a lot of activities needing capital, so the increasing in demand of capital together with decreasing the revenue causes reducing working capital turnover and its efficiency.

In order to further analyze and assess the situation of receivables management, we consider the relationship between receivable from customers and the trade creditors through table 8 as below.

Table 8 shows that in 2 years, 2017 and 2018, the company is always in being appropriated a lot of capital, this amount tends to decrease but that is due to decrease in revenue not because of better debt management. The company must manage better the receivable from customers because this is not a small amount of capital contributing to reduce the strained on capital that the company needs to take advantage from this capital to finance its working capital. On the other hand, data in table 8 also shows the problem that the debt recovery is not effective.

Table 8. Status of receivables and payables in the period 2016-2018

	Amount (million VND)			Difference (million VND)		Difference (%)	
	2016	2017	2018	2017/2016	2018/2017	2017/2016	2018/2017
Payable	**89.010**	**49.697**	**19.930**	**-39.313**	**-29.767**	**55,83%**	**40,10%**
Trade creditors	69.177	15.776	-	-53.401	-14.342	22,81%	-
Deferred revenue	253	4.220	12.780	3.967	8.560	1667,83%	302,87%
Tax and other payables to the State budget	-	0,55	-	0,55	-0,55	-	-
Payble to employees	-	-	-	-	-	-	-
Accrued expense	-	-	-	-	-	-	-
Other short-term payable	19.580	29.700	7.150	10.120	-22.550	151,69%	24,07%
Receivable	**42.570**	**74.480**	**30.911**	**31.910**	**-43.569**	**174,96%**	**41,50%**
Receivable from customer	13.607	2.608	5.643	**-10.999**	**3.035**	**19,17%**	**216,36%**
Advanced payments to suppliers	26.664	71.872	25.268	**45.208**	**-46.604**	**269,55%**	**35,16%**
Other receivable	2.298	-	-	**-2.089**	-	-	-
Compare (I-II)	**46.440**	**-24.783**	**-10.981**	**-71.223**	**13.802**	**-53,37%**	**44,31%**

(Source : Company's financial statement and own processing)

In order to assess the receivable turnover of Gama Joint Stock Company we can see below table :

Table 9. Speed of receivable turnover

	2016	2017	2018
Total revenue	373.184	516.914	360.839
Average receivable	21.286	58.524	52.685
Receivable turnover	18	9	7
Days of receivable turnover	21	41	53

(Source : Company's financial statement and own processing)

Above table 9 shows that the number of receivables turnover has decreased continuously over the years while the days of receivables is relatively high and unbrokenly increases over three years. High receivables, long receivable collection period leads to a high capital appropriation and ineffective receivable management.

In fact, the company does not have any specific credit policy or credit customer assessment, its customers are mainly agricultural products trading companies which are traditional and long-term customers. This is both advantage and challenge for the company. The company only focuses on seeking contracts to increase the revenue without paying attention to expense, this will make the company fall into a fake profit, real loss in long run.

The company should focus on building reasonable credit policies, balancing the benefits and costs of expanding credit to increase revenue and pay attention to debt recovery to improve the receivable turnover simultaneously.

8.3.3 Inventory management

Inventory plays important role in structure of current assets. In the case of this company, the inventory mainly is agricultural coffee products.

In table 5, inventory accounts the biggest proportion in total current assets with an average of 49%.

In order to evaluate the inventory management of the company, we will analyze the speed of inventory turnover as below table 10 :

Table 10. Speed of inventory turnover in the period 2016-2018

	2016	2017	2018
Cost of goods sold	370.917	513.511	346.187
Average inventories	44.090	58.466	60.690
Inventories turnover	8	9	6
Days of inventories turnover	43	41	63

(Source: Company's financial statement and own processing)

Table 10 shows that the days of inventory turnover tends to increase over the years but the inventory turnover tends to decrease as below:

In 2017, the days of inventory turnover is 41 days, down 2 days compared to 2016 and the inventory turnover increases by 1 round.

In 2018, days of inventory turnover was 63 days increasing 33 days compared to 2017 corresponding 53,98% while the inventory turnover decrease by 3 times compared to 2017. The reason is that in 2018, the price of coffee dropped so the reserve was kept until the price increased again.

Through analysis of inventory management at the company, we can see that it is relatively flexible, consistent with the change of the general economic situation. The proportion of inventory changes to adapt to the change of revenue. However, the inventory management process is not good as inventories still remains too high. The company needs to have specific policies to determine reasonable inventory levels as it has the highest proportion in total current assets. Prolonging inventory time will cause wasting capital.

8.4 Assessment results of working capital management in the period 2016-2018

8.4.1 Achievement in working capital management

As a company specializing in trading agricultural products, facing many difficulties, the company still has constantly attempted to develop and improve its management strategy to match the real demand, economy. Over the past time, the company has made great efforts in the management of working capital and gotten following achievements:

- The company has mobilized a high amount of working capital to serve production and business activities. This capital is mobilized from various souurces such as short-term debt, capital appropriation ability. These capital soures are not too big, but they also make an important contribution to ensuring its working capital requirement.
- In business activities, the company has created a great prestige, good relationships with suppliers and banks. This help to make shorten working capital turnover to guarantee the productions.
- Cash and cash equivalents at the end of each year are possitive, so the company can still ensure the cash requirement without the strain on finance.

8.4.2 Restriction in managing working capital

Besides above achievements, working capital management in the company still has many restriction as below :

- Conditions for bank loans are very difficult, out of the procedures, the bank only lends an amount of money that not exceeding its equity.
- The cash conversion is too long, especially in 2018. The reason is from the paying the suppliers too early while the inventory conversion cycle and average collection period take long days. This may lead to shortage cash for business.
- Working capital turnover is very slow, but the days of its is very high, due to impact of net revenue and average working capital. This shows the ineffective in working capital management, particularly due to excessive receivables, which leads to an increase in debt recovery costs, appropriated in capital also makes slowly working capital turnover. The inconsistent between growth rate of working capital and net revenue is the main reason for wasting big amount of working capital. Coefficiency of working capital is high and increasing gradually over the years while profitability ratio of working capital is too low proving the ineffective of using working capital.
- The company has not planned the requirement of working capital necessary for business operations. This makes the company passive in the process of using capital as well as seeking funding for the lack of capital.
- Regarding cash management : Proportion of capital in cash is quite low in total working capital. This will cause difficulties for company in payment, especially in

many cases where it is necessary to spend money immediately in high amount, but the other sources is limited due to time issues. Although the total amount of cash and cash equivalents at the end of the year is possitive but latent is the financial status is weakening gradually, the forecast of cash flow is not good making company easily to fall into shortage cash for production. On the other hand, the company has not yet developed a scientific model to determine the optimal level of cash reserves, only offered a minimum level of fundrasing based on experience. The actual cash balance also does not guarantee the minimum cash balance requirement.

- Regarding the management of account receivables : The proportion of receivables of the company in total current assets is still high ranking the second after inventory. Although in 2018, the value of account receivable decreased and lowest amount in 3 years but the days receivable turnover was highest in 3 years. This will cause the pressure on capital demand for the company. Therefore, it needs to develop a commercial credit policy to accelerate debt recovery, reducing the amount of capital appropriated.
- Regarding inventory management : Inventory accounts for the largest proportion of the total working capital. The inventory turnover is low and tends to decrease while the number of days of inventory turnover is too high and tends to increase. The company should have specific policies to determine reasonable inventory levels because it accounts for the highest porportion in the total current assets, prolonging the inventory period causes wasted capital.

The reason for the limitations in the management of working capital are :

- The company does not have a specialized department to serve the management and capital investment.
- Human resources has limited professional qualifications and experience.
- The company has not applied scientific measures in forecasting and determining the requirement of capital needing for production.

9 PROJECTAL PRACTICAL SOLUTIONS TO ENHANCE WORKING CAPITAL MANAGEMENT

As we mentioned before, Gama Joint Stock Company is an agricultural coffee trading company, the business depends heavily on the season. Therefore, the requirement of working capital is often concentrated in the peak season. In order to meet the demand for capital in peak season, the company must use short-term debt. As a small business, the company also faces difficulties in raising capital in the high season. Analysis of the current status of working capital management shows that the company has made great efforts in managing working capital and get certain achievements; however, it is still limited, such as the planning of unfulfilled working capital requirement, the small amount of cash reserves. These made the company easily fall into a shortage of cash, appropriated capital, inventory remains stagnant for a long time. Thereby, it helps for the company to grasp the strengths to promote and at the same time have solutions to overcome the weakness to improve the working capital management.

The company must always understand the market to capture information from customers and look for sources of high quality products with low prices.

It should promote market research to be able to capture and handle economic information, accurately predict the demand and developments of the market, and then seek new potential markets that the company not yet exploited or exploited im-completely.

The company should have specific policies in managing working capital.

It should strive to increase income for employees to encourage and create the best conditions for employees to feel secure to work.

Below are some proposal to enhance the using working capital in the company.

9.1 Shorten the cash conversion cycle

The cash conversion cycle shows one of the ability of measurement and controlling the efficiency of managing working capital on relative fundamental.

The cash conversion cycle is too long and increases sharply over the years. This is one of the cause to make shortage cash for business.

The company can shorten the cash conversion cycle by:

- Reduce inventory conversion cycle by promoting consumption of goods.
- Reduce the collection period by promoting proper sales and debt collection policies.
- Prolong payment time by delaying payment time for suppliers.

Based on the characteristics of customers and products, the company should shorten the cash conversion cycle by : reducing the collection period through promoting proper sales and debt collection policies, delaying payment time for suppliers.

In term of constant of cost of goods sold and net sales, the reduction of inventory conversion period and average collection period can be done by decreasing inventory and receivables, while the payment period will be increased due to the increase of debts. These approach will make to decrease net working capital.

Moreover, fixed assets can be reduced by indirect effects such as reducing storage area or warehouse space. These approaches reduce the demand of working capital requirement-with a constant cost of capital-resulting decrease the cost of capital.

In term of performance, cost of goods sold can be minimized by indirect methods, such as reducing transport inventory fee helping to have lower inventory cost, higher discount rate and higher liquidity accordingly. Cost of management can also be reduced through supplier optimization and order management. These indirect impacts will make better business result.

9.2 Form the demand of working capital

Planning the demand of working capital is construction the capital needed for investing in the next years depending on the aggregate demand of each part of working capital that needs to invest in. Forming the necessary working capital for business helps the company more initiative in seeking funding for its required capital and avoids the excess and shortage capital during the process.

There are many common methods to plan the capital requirement, but the commonly used method is indirect which is based on the relationship between the components of the capital turnover and net revenue in a period. Recently,

There are many commonly used methods for planning capital needs, but the commonly used method is: Indirect method, which is based on the relationship between the components of the capital turnover and the net revenue of the period. Recently, to determine the percentage by revenue and use this rate to determine the capital needs for the plan year to determine the percentage by revenue and use this rate to settle the demand of capital for the plan years.

Applying this method to plan the capital requirement for the plan year 2014 as below :

Based on the 2019 revenue plan is 429.000 million VND and the basis criteria on the balance sheet at 31/12/2018:

Actual revenue achieved in 2018 is 328,035 million VND.

Table 11. Difference of the seasonal citation in percentage with total revenue

	Amount	**Density/Revenue**
Current assets	**137.238**	**38,03%**
Cash and cash equivalents	17.371	4,81%
Receivable	30.911	8,57%
Inventory	80.869	22,41%
Current liabilities	**19.930**	**5,52%**
Trade creditors	-	-
Deffered revenue	12.780	3,54%
Tax and other payables to State budget	-	-
Payable to employees	-	-
Acrrued expense	-	-
Other short-term payable	7.150	1,98%

(Source : Company's financial statement 2018 and own processing)

Table 11 as below to calculate the percentage of the rate fluctuations with revenue:

The difference of current assets with current liabilities is : 38,03% - 5,52% = 32,51%. This difference indicates that for every 100 VND of additional revenue will need to increase 3,252 VND of working capital.

Thus, with expected 429.000 million VND revenue in 2019, the additional working capital necessary is :

(429.000 – 360.839)*32,51% = 22.159 (million VND)

Thereby, we can determine the working capital requirement in 2019 must increase by 22.145 million VND compared to 2018. Based on this result, the company will have appropriate methods to mobilize capital such as : funding from profits if it is enough to cover the additional capital, loan capital if the internal capital cannot finance for the additional capital.

Assuming the company's profit achieved as the average profit rate in the period 2016-2018 is 0,84%, the net profit in 2019 will be :

429.000 * 0,84% = 3.603,6 million VND

Thus, comparing with the increased capital requirement, the increased profit cannot fully cover the additional capital, so it should have a proper capital mobilization plan to guarantee no pressure and passive happen when lack of capital.

9.3 Improve the cash management

Effective cash management is especially important for Gama Joint Stock Company because: As a small company, it meets difficulties in borrowing capital and the loans is mainly from commercial bank; the development orientation of the company is to become the strongest business with the high specialized in the field of agricultural coffee. Due to rapid growth, it requires increasing inventory and receivables, in this case, more cash will be required.

9.3.1 Cash management techniques

The goal of cash management is to maximize the available time of cash. Effective cash management includes separate administration of fund entry and outflows, including : synchronizing cash flow, reducing invoice inspection time, speeding up cash conversion, controlling the payment process.

Quick collection method

There are many techniques used to speed up the debt collection and take the fund into necessary position. The most common techniques are :

- *Collection account system* : Customer's checks are sent to the mailbox located at the city's post office instead of to its headquarters. The local banks will check the mailbox several times a day and transferred the money to the company's account. The bank then reports to the company the recepts received during the day, usually via the electronic data transfer system as it allows online updates about the company receivables reports. The system of collection accounts is shown in Figure 8.1

There are two methods to form the cash requirement :

- *Indirect method* : Adjust net income report
- *Direct method* : Estimate the receipts and expenses of cash.

Gama Joint Stock Company should apply the direct method to make it easier to explain to the director who is not financially trained. This method is very useful for short-term cash plans.

By using this method, the company can estimate the total amount of cash collected and spent on the main items (such as : receivable collection, new loans, salaries, inventory purchases,..) for planning stage.

The main items may include :

Cash collection : Cash collected from sales, receivables, sale of property, interest received, other cash collection.

Cash payment : Amount payable, pay wage, social insurance, welfare, selling expenses, management costs, interest expenses, investment cost, income tax, other payments.

Balance the collection and expenses for each month, quarter.

Expected funding sources for the lack of money and investment of idle money when excessed.

According to the above method, we can plan cash in 2019 as below :

Based on the revenue plan in 2019 is 429.000 million VND, estimated revenue distribution by quarter is : Quarter 1 is 20%, quarter 2 is 10%, quarter 3 is 30%, and the remain quarter is 40%.

According to sales experience over the years, about 30% of sales revenue will be collected within 30-60 days, 70% of the remaining revenue will be collected in 5 months to 1 year.

The purchasing goods usually accounts for 97% of sales, when buying from suppliers, the company must pay immediately or only take up 30-40 days (pay immediately in the quarter).

The cost of goods sold and administrative expenses often depend on the achieved revenue and account for about 1,5% achieved revenue.

Based on the revenue-expense report we can have plan for cash management as below

Table 12. The cash revenue-expense plan in 2019

	Quarter 4 2018	Quarter 1 2019	Quarter 2 2019	Quarter 3 2019	Quarter 4 2019
Revenue plan					
Expected revenue	131.214	78.000	39.000	117.000	156.000
Revenue in quarter	39.364	23.400	11.700	35.100	46.800
Revenue next quarter	68.887	27.555	16.380	8.190	24.570
Total revenue in quarter		50.955	28.080	43.290	71.370
Expense plan					
Consumer goods		75.660	37.830	113.490	151.320
Sale and administrative expense		1.170	585	1.755	2.340
Income tax payment		257	129	386	515
Total expense in quarter		77.807	38.544	115.631	154.175
Difference between revenue and expense		-26.312	-10.464	-71.341	-82.805

(Source: Company's operation plan 2019)

Based on above table 12 for cash revenue-expense we can have budget plan for each quarter as shows in table 13:

Table 13. Budget plan in 2019 (own processing*)*

	Quarter 1 2019	Quarter 2 2019	Quarter 3 2019	Quarter 4 2019
Revenue in quarter	50.955	28.080	43.290	71.370
Expense in quarter	77.807	38.544	115.631	154.175
Difference between revenue and expense	-26.312	-10.464	-71.341	-82.805

Through the budget plan, we see that the cash requirement of the company is lacking in all quarters, but especially in the third and fourth quarters. This can be explained as the seasonal effect. In these period, the company has to invest capital to buy goods and then must immediately pay for the suppliers but in fact, revenue from goods sold has not been collected. Therefore, the company should proactively develop a plan to find funding to supplement for this case. It should estimate closely and relatively sources for revenue and expenditure in order to have timely working capital plans for the cash requirement. Besides, proper cash reserve is necessary to finance other costs occurred.

9.3.2 Cash management financial policies

Financial policies in cash management are develop based on the results of the cash flow. If the net cash flow is positive, the company must find short-term investment opportunities to make more profit. In contrast, if the net cash flow is negative, the company must arrange a short-term money source to temporarily finance the deficit.

Mobilizing short-term capital for cash requirement : capital mobilization sources are diverse, the company needs to compare the borrowing cost, loan term and advantages of borrowing sources to make proper decisions.

Investing in idle money : how to invest with the catalogue, how much money, how long it takes to make a balance between profit and risk, ensure liquidity and compatibility with forecast company budget.

9.4 Improve the receivable management

Receivable management is associated with the development and implementation of a credit sale policy to achieves company objectives in each period. Credit policy includes the following four variables : Credit standard, credit term, early payment discount, debt recovery policy.

Assess the credit policy

Credit criteria are used to determine which customers ensure normal credit standards and level of credit they can be inherited.

Analyze credit of business customers

The company analyzes the financial performance of an enterprise customer by analyzing the current financial parameters, thereby controlling the financial position of the business, The goal is to evaluate the solvency of customers.

Customer credit information usually includes the following key information :

- Balance sheet and report on business results,
- Important financial parameters
- Information from business suppliers indicates for the production and business activities of the enterprise.
- A description of business owners, including previous business bankruptcy, litigation,.. report.
- Analysis individual customers credit
- Individual customers credit ratings are similar, including income information, work experience, home ownership, land and credit information in the past.

Most of the company's customers are Intimex customers in provinces such as Olam ineral, Noble Americas, which are the traditional customers of the company, so it can limit the bad debt occurrence. But it is also the reason affect the company's capital recovery due to overdue debt.

The company's revenue plan in 2019 is 429.000 million VND with the average days of receivable turnover is 38 days. For a long time, the company has not applied credit to customers. And now, the company is considering to open additional credit for these companies.

Through understanding the information about these two customers, the company found that the customers had the following the reactions if it expands its credit sales.

Table 14. Estimation of the credit information on customers

	Olam Ineral	Noble Americas
Revenue increase rate	**10%**	**15%**
Delay rate in payment	**20%**	**30%**

(Source : Receivable management report)

From table 14, it can be seen that if the company open credit for Olam Ineral, sales will increases by 10% compared to the planned revenue and 25% in case of opening for Noble Americas (10% for Olam Ineral and 15% for Noble Americas). Increasing output does not make to increase fixed costs, so the fixed cost per unit of output with customers expansion will decrease.

With the 80% variable cost (the proportion of variable cost in revenue), capital opportunity cost is 20% (when the revenue increases, the company only loses its variable cost and the fixed cost are still steady).

Table 15 below shows that the company's profit increases when it open credit to Noble Americas, in case of happening loss, the loss will be entire of receivable. Loosening customer credit standards will increase the risk of loss, more capital investing in receivables and thus increasing the cost of capital. Through the table 8.5 we can see that if the company open the credit to Noble Americas, it will cause more cost of capital than open to Olam Ineral, equal to 494 million VND. However, the profit will increase to 10.416 million VND with 49 days of receivable turnover. Although high risk of loss, the profit in this case can cover cost of capital investing to receivable.

Table 15. Analysis the decision to open credit for customers.

	2019	Open to Olam Ineral	Open to Noble Amricas
Total revenue	429.000	471.900	536.250
Margin of revenue		42.900	64.350
Days of receivable turnover	42	50	54
Receivable turnover		7,18	6,62
Marginal of net revenue		8.580	12.870
Additional receivable		5.977	9.713
Capital invest to receivable		4.782	7.771
Cost of opportunities capital		956	1.554
Marginal of net profit		7.624	11.316

(Source : Company financial plan and own processing)

Assess time of receivable

The time of receivable expresses the time that credit is opened for a customer and discount rate if having early payment. Basically, there are some term of selling time as below :

- No credit : Receivable from selling goods is payable in cash.
- Credit : The company will determine the maximum date that the customers must carry out their payment.
- Discount rate : In addition to opening credit, the company may offer cash discount of the invoices is paid in the first period of the sales period. Cash discounts are offered to motivate customers to pay earlier.

Thus, the term of sale is a common variable consisting of two variables : credit term and prepaid discount.

Assess of credit time

Term of sales can have a high impact on selling goods.

When extending the sales term, the company must consider the trade-offs or offsetting between additional profits and additional expenses.

Total revenue expected in 2019 is 429.000 million VND, the company's current collection period is 41 days. The company would like to choose 2 options of credit term : Option 1 is 45 days and option 2 is 50 days. Capital opportunity cost in this case is expected about 15%, the marginal variable cost is 80%. Information on credit plan option is shown in table 16 :

Table 16. Information about loosening credit policy (own processing)

	Option 1	**Option 2**
Increasing rate of revenue	10%	12%
Delay rate in customers payment	2%	6%
Loss rate	1%	2%

Based on table 17, we can see that the option 1 has biggest profit of 2.777 million VND, increased profits can offset the opportunity cost due to investment capital financing for additional receivable. Thus, the company should apply the credit selling term of 45 days. The average turnover and collection period corresponding to the new credit sale term are : sales of 471.900 million VN, a sales term of 45 days, an average collection period of 45 days.

Table 17. Analysis the decision lengthen of credit time (own processing)

	Initial Plan	Option 1	Option 2
Revenue	429.000	471.900	480.480
Days of receivable turnover	42	45	53
Marginal of revenue		42.900	8.580
Marginal of net revenue		8.580	1.716
Receivable			
- For initial revenue	49.812	3.336	9.045
- For increasing revenue compared with the initial plan		4.862	1.137
- Capital investing to receivable	41.167	7.226	9.954
Marginal cost of capital		1.084	1.493
Loss		4.719	9.610
Marginal of loss		4.719	4.891
Marginal of profit		2.777	-4.668
Maximum profit		2.777	

Assess the proper discount rate

Cash discount is applied to speed up receivables recovery and reduce investment in receivables and related expenses. In return for these savings or benefits, the company must lose the discount cost on the revenue portion of the bill.

The customers of the company almost pay in time. Therefore, the company needs to apply cash discount to speed up receivables recovery and reduce investments in receivables and related expenses. In return for these savings or benefits, the company must lose the discount cost on revenue portion of the invoices.

The company sells credit with the Net 45 term and does not grant discounts. In order to speed up the recovery of receivables, the company wants to grant discount to customers in two options:

- *Options 1* : Credit sale with a period of 1/10 Net 45. The average collection period in the policy of 1/10 Net 45 drops to 35 days, with this policy 30% of customers receive a discount.
- *Option 2* : Credit sale with a period of 2/10 Net 45. The period of collection money in the policy of 2/10 Net 45 reduced to 25 days, with this policy, 50% of customers receive a discount.

As table 18 result, the company should issue credit with a period of 1/10 Net 45. Because with this time limitation, opportunity cost saving due to speeding up the collection rate are greater than the expenses for discount.

Table 18. Analysis the decision granting credit for customers (own processing)

	Net 45	1/10 Net 45	2/10 Net 45
Revenue	471.900	471.900	471.900
Days of receivable turnover	45	35	30
Discount rate		1%	2%
Percentage customers receive the discount		30%	50%
Receivable	59.119	45.879	39.325
Reduce the receivable		13.239	6.554
Reduce the capital investing in receivable		10.592	5.243
Saving the oppoturnity cost		1.589	787
Loss due to discount rate		1.416	4.719
Net profit		173	-3.933

Build the debt collection policy

The company needs to control the credit cycle, if the cycle is too long, it must accelerate this process. Debt recovery policy involves procedures that the company uses to recovery overdue debts. These procedures include activities such as sending letters to customers, phones, visits, ultimately, legal actions. One of the most fundamental variables of this policy of the amount of money spending on this procedures.

Changes in debt recovery policies affect sales, collection periods and debt losses. The company should take into account all these factors when developing credit policies.

The company needs to control the credit cycle. The credit cycle of the company is too long, it needs to accelerate this process. The reason are : credit term are too loose, procedures and ineffective withdraw system.

The debt collection policy aims to use the company's resources to conduct collection of overdue invoices. Accelerating the credit cycle also helps to reduce bad debt.

Debt collection procedures usually a reasonable process for the solution its applying in a general way : phone calls, letters, personal visit, legal activities. The debt collection procedure is both flexible and resolute, from sending letters with increasingly strict tone to phone calls, etc..

Table 19. Measures to recover receivables (own processing)

15 days over due date	Sending letters with reminding invoices and require payment
45 days over due date	Sending a letter with invoice information urging payment and recommend that the company reduce its credit worthiness.
75 days over due date	Send email with the information of the invoice notice that if the company does not pay within 30 days, you will cancel the credit value before.
105 days over due date	Send email, letter notices that you cancel the credit value of the customer even if the company have paid enough money. By the way, if the debt is too high, the debt should be claimed by law.
135 days over due date	Put the debt into bad debt and claim the law intervention.

Assess the credit customers information

When providing credit policies to customers, the company needs to conduct analysis to assess the risks involved and the ability of customers to pay debts as planned.

The process of credit customer assessment includes basic steps as below :

➢*Gather information related to credit customers*

Information to assess the credit worthiness of a customer formed from multiple sources includes the following sources:

- Financial statement submitted by customers : income statement and balance sheet (should use audited reports), and maybe even a budgets planning. This information can be used to assess customer's financial strenght and ability to pay credit debts.
- Bank : The company may collect detailed information about the payment debt structure and the financial situation of customers being investigated from banks with long-term relationships with that company.
- Based on the company's past experience with credit customers it can be extremely helpful to decide wether to continur to open credit, increase credit for that customer.

➢*Analyzing information to determine customer's credit.*

Some traditional guidelines can serve as a framework for analysis. These instructions are called as "credit 5C":

- Character-Characteristics : Relates to the willingness of customers to meet credit debt. The structure of past debt collection is useful when evaluating this factor.
- Capacity-The company can collect predictions about the capacity of customers by checking the solvency and the expected cash flow, assessing the balance sheet through financial parameters.
- Collateral – are the assets that customers can pledge as a guarantee of their credit level
- Conditions-Relates to the general economic situation and its impact on the customer's payment capacity. A customer has a good credit level during a favorabe period of potentially insolvency during a recession.

The company should focus on the first two C as they help ensure that the opening credit does not miss any important factor in the analysis.

Finally, the company will decide whether open credit for that customer or not based on most necessary analysis.

9.5 Improve the inventory management

By analyzing the situation of inventory management, the inventory of the company accounted for the highest proportion of total current assets up to 49%. This directly affects the efficiency of using circulating capital of the company. Therefore, the company needs to have better inventory management method.

For effective inventory management, there are many application models such as the economic order quantity model (EOQ), the production order quantity model (POQ), the model of output deduction,.. But in this thesis, the economic order quantity (EOQ) is recommended.

The EOQ model is a quantitative inventory management model used to determine the optimal inventory level based on two kind of cost : cost of ordering goods and spending storage charges. The goal of EOQ is to find the optimal order size. Thus, the model will aim to find an order level at which the costs associated with the order size are minimized.

9.6 Solutions for shortage of capital

The company can use the following funding sources : sponsorship and short-term loans.

The expected revenue in 2019 is 429.000 million VND, the company's cash plan in 2019 is shown in table 8.3 budget plan 2019.

In order to meet capital needs in 2019, the company can choose the following capital mobilization options :

- *Option 1* : Borrowing from a bank with monthy interest rate of 0,75%, the offset balance is 20%.
- *Option 2* : Take advantage of the monthy payable amount with the average purchase price of 28 million VND/quarter. Conditions of payment 2/10, net 30
- *Option 3* : Transfer receivables to banks with commission costs of 0,5% lending banks equal to 65% of the transfer. Procedure for appraisal of receivables is 0,25%, interest rate for this loan is 0,75%/month, the loss rate for accounts receivable is estimated at 3%, receivables is 3 months. The average receivables per month is 4 million VND.

Table 20. Determine the mobilizing capital option of company

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Additional short-term capital	26.132	10.464	72.341	82.805
Option 1 : real interest	0,93%	0,93%	0,93%	0,93%
Option 2 : real interest	3,21%	6,62%	1,76%	1,66%
Option 3 : real interes				
-Value of transfering receivable	12.000	12.000	12.000	12.000
-Interest rate after 3 months	587,97	235,44	1627,67	1863,11
-Estimate loss of receivable	360	360	360	360
-Difference the interest rate	227,97	-124,56	1267,67	1503,11
-The loans ensured by receivable	7.741,5	7.741,5	7.741,5	7.741,5
-Borrow from other sources	18.390,5	2.722,5	64.599,5	75.063,5
-Real interest rate	1,17%	0,40%	1,50%	1,52%
The smallest interest rate between 3 options	0,93%	0,40%	0,93%	0,93%
Choose option	Option 1	Option 3	Option 1	Option 1

(Source : own processing)

In order to meet the capital requirement, for the first quarter, the third quarter and the fourth quarter, the company should use the short-term loans and in the second quarter, the company should transfer receivable to banks to have the short-term source.

9.7 Summary of the working management policy

9.7.1 Shorten the cash conversion cycle

The goal of the company is to shorten the cash conversion cycle without affecting to the business operations of the company. The method of shortening cash conversion is that collection period is reduced by promoting reasonable sales and debt collection policies: the company provides credit with a period of 1/10 Net 45 with an average collection period of 35 days and lengthens the time payment for suppliers.

Table 21. Cash conversion cycle (Unit : million VND)

	2018	2019	Difference
Days of inventory turnover	61	62	0
Days of receivable turnover	53	30	-23
Days of payable turnover	8	24	16
Cash conversion cycle	105	68	-39

(Source : own processing and company's cash plan)

In 2018, the company's cash conversion cycle was 105 days. In 2019, it could reduce the cash conversion cycle to 68 days by delaying payment of accounts payable more than 16 days to finance working capital from outsides.

In 2018, the Company's cash conversion cycle was 107 days. In 2019, the Company could reduce the cash conversion cycle to 68 days by delaying payment of accounts payable more than 16 days and accelerating the debt recovery process. Since then, the Company can reduce the need to finance working capital from outside.

Forming the working capital requirement and proposal solutions for shortage capital.

Expected revenue in 2019 is 429.000 million VND, an increase of 18,89% compared to 2018. The working capital requirement for the production and business process in 2019 must increase 20,145 million VND compared to 2018. Through the budget plan, we see that the cash requirement of the company is shortage in all quarters, but especially in the third and fourth quarters. This can be explained as in these quarters, it is time for seasonal so the company has to invest capital to buy goods and then even the goods have not been sold, it has to element their payment to suppliers. Therefore, the company should proactively develop a plan to find funding to supplement the lacking capital.

In order to meet the capital requirement, for the first quarter, the third quarter and the fourth quarter, the company should borrow short-term bank, and the second quarter, it should transfer the receivables to the bank to get the bank loans.

9.7.2 Create the commercial credit

Identify customers selling credit : The company opens credit for both customers, Olam Ineral and Noble Americas, based on the expected outcome bigger than 0. The average collection period should be 48 days.

Determine the term of sales : The company should apply a sales term of 45 days, at which the time added profit can offset the opportunities cost due to increased investment in receivables. The average turnover and collection period corresponding to the new credit term are : the revenue is 471.900 million VND, the sales term is 40 days, the average collection period is 45 days.

Develop appropriate discount rates : the company should issue credit with a period of 1/10 Net 45. It means that the credit prepayment for payment is within 45 days from the date of invoice with discount 1% for the first 10 days payment.

9.7.3 Cost analysis

In order to implement the project to enhance the efficient working capital management, Gama Joint Stock must pay attention to the cost factors. Because it affects to all the side of the operation. In this part, all cost will be considered so that it will help to determine the minimum cost for project.

Cost of establish project team.

It'd better if the company can have more professional financial team to prepare and proposal for financial solutions. With the current situation of the company, it requires at least 3 employees with high qualification. The wages are estimate for team leader is 20 million VND per month and 15 million VND for the remain employees.

Total cost per month will be 15*2+20 = 50 million VND.

Cost for opening credit for customer.

As above analysis at part 8.4.1.2, table 8.5, the ability cost when open credit to Ineral and Americas is : 5.977 + 9.713 = 15.690 million VND.

Cost for lengthen credit time

As table 8.7, if the company open credit to customers and lengthen the credit time from 42 days as plan to 45 days, the cost will be 4719 million VND.

Cost for discount rate for customers payment.

Result from table 8.8, cost for discount policy 1 Net 45 will be 1416 million VND.

9.7.4 Risk analysis

Preparation for the new is not easy, especially with the small company as Gama Joint Stock. The business will face with the difficulties in mobilizing capital for innovation and guarantee for operation. In processing the project, it can happen some risks which can reduce effectiveness of project and cause problem making higher expenses for the company. Thus, it is necessary to predict possible risks and suggest some plans to minimize the loss due to risks.

Risk of lacking information before carrying out the innovation

The information of market such as coffee price, interest, inflation,etc.. and information from the co-operation company can affect to the orientation in collecting the receivable, mobilizing capital and revenue of the company.

By researching market, the company can know how coffee price fluctuation in current situation and properly adjustment for productions. However, the company must be careful with all the collected information as they may include some inappropriate information. This can cause some wrong evaluation and orientation for efficient plan.

To minimize this risk, it requires the company must have qualification employees with the experience in capturing market information with the predictability and then determine the necessary information and adjustment with the company's performance.

Risk of wrong calculation and orientation in setting target.

As mentioned above, wrong in determining the market information will lead some wrong in evaluation and orientation in setting targets. This can reduce the efficient of the working capital management process. Each employees taking part in this process must have enough ability as well as knowledge to implement the innovation.

Risk of lacking knowledge and responsibility

Decision makers need detailed knowledge because it has become clear that making the safer choices may only receive back the safe operation without improvement. With a sensitive business environment, the greatest risk today are more difficult to observe and evaluate than in the past.

Understanding the risk is not enough, because the managements rarely choose between risks. Rather, they choose between options, each of them expresses some risks and also benefits. Understanding and forecasting risk can be difficult, but it is also as difficult with understanding the benefits of a set of decision alternatives.

So it is necessary to have enough knowledge and each of decision makers must have responsibility in their choice to drive the operation in better way.

9.7.5 Project evaluation

Taking the inheritance and promoting the essays or scientific articles about "Improving the efficiency of using working capital", the thesis also has similarities with the views of the authors. Specifically, the thesis also evaluated both internal and external factors affecting the efficiency of working capital of Gama Joint Stock Company as well as proposed some solutions to improve the working capital management in the business.

My thesis "Solutions to enhance the efficient working capital management of Gama Joint Stock company" will contribute to summarize theory of working capital and method to improve working capital efficiency. Since then, it is as a premise to apply theory into practice at Gama Joint Stock company and made practical contributions to propose the strategies to enhance working capital management from analyzing and evaluating a general analysis of factors affecting to efficiency of using capital.

The research analyzed and provided solutions for a specific case as Gama Joint Stock company. However, it can be potential for analyzing the situation and proposing the solutions to improve the working capital management in general at other companies.

10 CONCLUSION

This Master's thesis aimed to offer practical solutions how can one particular Gama Joint Stock company enhance working capital management and to achieve the efficient level of working capital, which can be of interest of financial corporate executives.

In order to fulfill the main aim firstly, the theoretical background consisting mainly of recent scientific articles from well-known journals and books was conducted. Secondly, in this Master thesis, the selected corporate overview with a description of basis business characteristics, organization structure and the current business plan is followed. Thirdly, within the analytical part of this Master's thesis, the coffee industry in Vietnam in which the selected company operates was analyzed, including the conducted the SWOT analysis for the mentioned industry. After that SWOT analysis and overview of the key operations from financial statements were conducted. The main part of the thesis was covered by chapter 7 and chapter 8, concluding with practical solutions for Gama Joint stock company for enhancing the working capital management and for achieving an efficient level of working capital.

Through the development plan of Vietnam's coffee industry, the Ministry of Agriculture and Rural Development shows that : the total investment value of the whole society for investment in coffee will be more higher and it is always growth through years. For Gama Joint Stock company, as for a small enterprise so it is very difficult to mobilize capital from outside. In order to help this company to effectively manage the working capital, this research offers a number of complete solutions such as : improving the cash conversion cycle; planning the working capital requirement to help the managers allocate resources appropriately and planning to seek optimal funding or enhancing the cash management, receivable management and inventory management.

In conclusion, the thesis provides a general and relatively complete argument about the management of working capital in the company, one of the most important financial management activities. Also, the research evaluated both external and internal factors affecting the efficiency of working capital of Gama Joint Stock Company as well as proposed some solutions to improve the working capital management in the business.

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LIST OF ABBREVIATIONS

CCC	Cash conversion cycle
EOQ	Economic Order Quantity
POQ	Production Order Quantity
ROA	Return on assets
TR	Total Revenue
VND	Vietnam Dong
WC	Working Capital
WCT	Working Capital Turnover

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APPENDICES

APPENDIX P I: INCOME STATEMENT OF GAMA JOINT STOCK COMPANY IN THE PERIOD 2016-2018

ITEMS	Code	Note	2016	2017	2018
Revenue from sale of goods and services	**01**	VI.1	373.184.009.241	516.914.639.559	360.839.026.138
Deductions	02	VI.1			4.244.595.773
Net revenue from sale of goods and services	**10**	VI.1	373.184.009.241	516.914.639.559	356.594.430.365
Costs of goods sold and services	**11**	VI.2	370.917.751.735	513.511.194.144	346.187.893.797
Gross profit from sale of goods and services	**20**		2.266.257.506	3.403.445.415	10.406.536.568
Income from financial activities	21	VI.3	13.175.556.358	8.064.848.711	772.178.157
Expenses from financial activities	22	VI.4	9.015.210.862	6.060.926.310	4.571.722.165
- *In which: Interest expenses*	23		8.303.894.800	*5.494.651.349*	
General and administrative expenses	25	VI.6	6.399.461.693	5.018.414.678	3.943.061.921
Operating profit	**30**		27.141.309	388.953.137	2.663.930.640
Other income	31	VI.7	708.960.922		16.746.252
Other expenses	32	VI.8	12.592.899	12.043.860	10.032.000
Other profit	40		696.368.023	-12.043.860	6.714.252
Net profit before tax	**50**		723.509.332	376.909.277	2.670.644.891
Current corporate income tax expense	51	VI.9	159.172.053	82.920.041	587.541.876
Net profit after tax	**60**		564.337.279	293.989.236	2.083.103.015

APPENDIX P II: CASH FLOWS STATEMENT OF GAMA JOINT STOCK COMPANY IN THE PERIOD 2016-2018

CASH FLOW STATEMENT			
ITEMS	**2016**	**2017**	**2018**
I. CASH FLOWS FROM OPERATING ACTIVITIES			
Net profit before tax	368.570.919.826	544.260.762.521	386.265.472.456
Cash paid for suppliers	-341.951.848.968	-535.926.508.569	-374.459.310.789
Cash paid for wage expense	-365.640.000	-693.649.000	-815.848.000
Cash paid for interest	-8.303.894.800	-5.494.651.349	-7.153.016.807
Income tax	-159.172.053	-82.920.041	-587.541.876
Receivable from other activities	9.459.498.017		112.684.568.802
Payable from other activities	-6.757.730.653		-31.027.364.399
Net cash flows from business activities	20.492.131.368	2.063.033.562	84.906.959.386
II. CASH FLOWS FROM INVESTING ACTIVITIES			
Purchase and construction of fixed assets and other long-term assets	-2.213.221.140		-83.796.000
Proceeds from disposals of assets			9.212.387
Loans provided to related parties and other			
Collection of loans provided to related parties and other			
Payments for equity investments in other entities			
Proceed from collection investment in other entity			
Interest and dividend received	79.368.895	3.021.832.000	772.098.957
Net cash flows from investment actitivities	-2.133.852.245	3.021.832.000	697.515.344
III. CASH FLOWS FROM FINANCING ACTIVITIES			
Proceeds from issuance of ordinary shares			
Proceeds from short-term and long-term borrowings	219.350.560.000	185.852.270.405	251.657.318.382
Payments of loan	-230.742.690.640	-186.309.436.543	-342.168.387.242
Payments for principal of finance lease			
Dividend paid to owner			
Net cash flows from financing activities	**-11.392.130.640**	**-457.166.138**	**-90.511.068.860**
Net cash flows	**6.966.148.483**	**4.627.699.424**	**-4.906.594.130**
Cash and cash equivalents at the beginning of the period	**378.158.166**	**7.344.306.650**	**11.972.006.074**
Cash and cash equivalents at the end of the period	**7.344.306.650**	**11.972.006.074**	**7.065.411.944**