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Analysis of Working Capital Management at an Automotive Headliner Manufacturing Industry

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Abstract:

The term "Working Capital Management" is used for the management of current assets. The assets that are converted into cash in a period of one year are called current assets. Hence the management of inventories, cash, current liabilities, trade receivables and marketable securities can be considered as working capital management. There is a necessity to prepare a working capital management schedule to know the liquidity position of the company and where the control can be accessed. In this study, the liquidity position of Grupo Antolin India Pvt. Ltd. is determined through comparative analysis and ratio analysis. After comparing the data from the Balance Sheet of two consecutive years, it was found that there was an increase in the company's working capital. The cash flow statement of the company, which uses a First-in First-out (FIFO) method for the various incoming raw materials / components was analysed. Based on the various analysis carried out, some suggestions have been given, which will aid the company to manage its working capital in a more efficient way.

Keywords **—Working capital management, cash flow statement, inventory management, balance sheet, profit and loss account, ratio analysis.**

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I. INTRODUCTION

Management of working capital is a major aspect for the success of a business. It is necessary that a firm should maintain sound liquidity position and also keep in mind that the level of investment in the working capital components should not exceed. As it can lead to the mis-management of working capital, and it is one of the main reasons for a business failure. The working capital requirement of a company is affected by several factors and as a result, there is no specific way of determining it. The criticality of these factors varies with time and the type of business involved [1]. Therefore, in order to yield the estimated working capital required, these factors are to be studied thoroughly. Some of the factors that affect the working capital requirement are nature & size of business, business fluctuations, production policy, firm's credibility, credit availability, growth & expansion activities and price level changes.

A company's net **working capital** can be determined by deducting the current liabilities from its current assets. A higher value of the current assets represents a healthy liquidity position of a business firm and it indicates that the firm can carry out its business operations smoothly. But it should not exceed, as the company cannot yield more return. When a company is unable to manage its current liability through its current assets, usually liquidity problem arises. This can threaten the future existence of a company. So, the better a company can manage its working capital, the lower the company's credit requirements [2].

Grupo Antolin India Pvt. Ltd., located at the Bidadi Industrial Area Sector-II, Bidadi, Karnataka, India, is an MNC specialized in the manufacturing of automobile headliners. A financial analysis of the company is carried out, giving an insight into the profit and loss accounts, balance sheets of the company and thus comparing the growth of the company, both in its amount of sales and its profits with the previous financial year. By that we can see that the company's day to dayexpenses is increasing. And the company needs a working capital management, so that it can manage its current assets as well as current liabilities in an efficient way, as there can be enough funds available to the company for carrying its day-to-day activities smoothly. And, even it helps the company to pay off its short-term liabilities like creditors, bills payables on time without any delay in payment and to ensure the company's daily availability of funds for a smooth business.

In this work, a financial analysis of the company is carried out, giving an insight into the profit and loss accounts of the company, balance sheets and thus comparing the growth of the company, both in its amount of sales and its profits with the previous financial year.

We were able to deduce the company's increase in the working capital by comparing the data from the Balance Sheet of two consecutive years provided to us. This study intends to determine the liquidity position of Grupo Antolin India Pvt. Ltd. through comparative analysis and ratio analysis.

1.1 Working Capital

- **DETERMINANTS OF WORKING CAPITAL**

The working capital requirement of a company is affected by several factors and as a result, there is no specific way of determining it. The criticality of these factors varies with time and the type of business involved. Therefore, in order to yield the estimated working capital required, these factors are to be studied thoroughly. A few of these factors are as explained below:

➢ **Nature of business:** The amount of working capital required is largely dependent upon the business's nature involved. The portion of the total investment that goes into the working capital depends upon the type of the businesses, i.e., a trading type business or a service type.

In trading business, the working capital required is more as the cash flow involves procuring inventory and settlement with creditors and debtors, which is more, while for service industries, working capital required is less.

➢ **Size of business:** The size of any business plays a vital role in determining the required amount of working capital. The scale of an operating cycle is the measure of the size of the business. The size of the working capital is directly proportional to the scale of operating cycle.

➢ **Seasonal Fluctuations:** All the businesses face seasonal and cyclical fluctuations irrespective of whether they are service oriented or product oriented. The requirement of working capital varies directly in response to these fluctuations.

During the peak season of the business activity, the working capital requirement is also at its peak, while it is the other way around during the recession. Thus, the working capital requirement must be projected well in advance so that planning for these fluctuations can be made.

➢ **Production Policy:** The working capital requirement of a business varies directly with the cyclical and seasonal fluctuations, so does its production policy. As a result, no two businesses with different seasonal and cyclical fluctuations will have the same production policy and working capital requirement at any given point of time.

➢ **Availability of Credit:** The terms involved while claiming credits from its suppliers directly affects the working capital requirement of a company. Credit acquired on liberal conditions and in a short duration result in the company requiring a lesser working capital relative to when the credit is acquired on stern terms. Hence the terms on which a company is granted credits largely decides its working capital requirement.

➢ **Growth and Expansion activities:** As the sales / fixed assets of a company grow, the working capital requirement also grows. The exact relationship between the sales and working capital required cannot be determined precisely, but it is always seen that a growth in the sales is followed by an increase in the working capital requirement. Thus, the working capital required needs to be planned in case of a business growth or expansion.

➢ **Changes in Price Level:** An increase in the price level results in the increase of working capital required as price of the commodities required also increases with the increase of the price level.

If a company can adjust the price levels of these commodities with the increase of the price level, then it faces least changes in its working capital requirement compared to others. A changed price level doesn't affect everyone in the same way. The reaction of the price changes will be reflected differently upon the different companies and thus on their working capital requirement.

- **CLASSIFICATION OF WORKING CAPITAL**

Working capital can be divided into two types:
Based on the concept, working capital is classified as follows:

1. **Gross Working Capital:** It is nothing but the company's investment in the current assets. Current assets are those which can be transformed into cash within one year. Current assets involve receivables, stock, loans and advances.

2. **Net Working Capital:** It is assessed by dividing the current liabilities in the current assets. Current liabilities involve payables, provisions and outstanding expenditures.

Based on time, working capital is classified as follows:

1. **Permanent Working Capital:** The firm must have enough money to maintain the movement of current assets and to ensure the efficient use of fixed facilities.

2. **Temporary Working Capital:** It changes with the volume of business is termed as Variable Working Capital.

- **COMPONENTS OF WORKING CAPITAL**

Working capital includes;
a) Inventory management
b) Cash management
c) Receivables management

a) INVENTORY MANAGEMENT

Inventory is the stock that the firm requires to meet its present and future requirements of production and sales. Inventory management is a juggling process. Excess inventory can be very burdensome for a company's financial resources. And due to improper inventory, there may be lost sales, customer delays etc.

Inventory of a firm includesraw materials, work-in-progress, finished goods, stores and spares of production e.g., spare parts, lubricant oil, cotton etc.

Objective: To keep the inventories (stock) in such a way that it is neither overstock nor understock and supply them as and when required.

Motives of holding inventory:Production and sales motives**,** Precautionary motives**,** Speculative motives.

The inventory policy of Grupo Antolin is as under,

- **Safety Stock:** It is a stock to handleany natural calamity. It should be always kept.

- **Minimum Stock:** It is a stock to handle any Production run in a smooth manner. Stock should not go to minimum level at any point of time.

- **Maximum Stock:** It is a stock to control the inventory (unnecessary pile up). Stock should not go above this maximum level at any point of time.

- **Order Point:** The point when the order must be made to supplier. This point is calculated based on the supplier supportability. This is a crucial point and it will be with respect to the supplier's location.

b) CASH MANAGEMENT

Cash is a major short-term asset of the firm in the long run. Floating capital surplus is still inactive and leads to loss of profits. Therefore, the firm should make sure that there is enough cash to meet the requirements of the firm at any point of time or throughout its life, neither more nor less.

The firm should ensure that it has sufficient cash in all areas of the organization and make sure that the funds are not inactive; this is called management of cash.

Objective: To maintain liquidity and to meet the requirements of the working capital.

c) RECEIVABLES MANAGEMENT

Receivables are the debtowed to the firm by its clients, which is caused when goods are sold on credit basis or performed a normal business transaction. It is a major component of working capital next to inventories; therefore, it should be given due importance.

Objective: To promote sales and profit, control credit cost, and to maintain optimum investment level in receivables.

Management of receivables has three aspects;

1. Establishment of credit policy for the firm.
2. Establishment of collection policy for the firm.
3. Controlling of debt.

- **SOURCES OF WORKING CAPITAL**

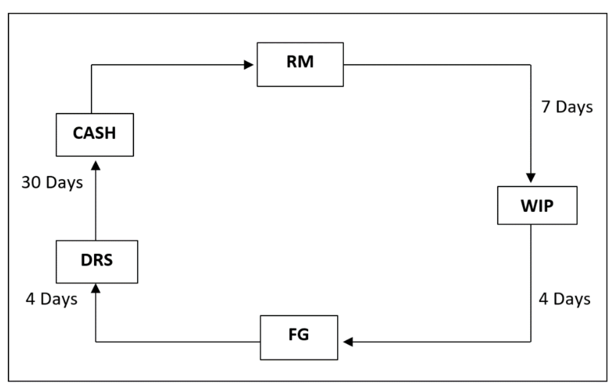
1. Fixed or Permanent Working Capital

a. Shares
b. Debentures
c. Public Deposits
d. Ploughing back of profits
e. Financial institutions

2. Short-Term Working Capital

a. Bankers
b. Trade Credits
c. Instalment Credit
d. Advances
e. Deferred Income
f. Accounts Receivables
g. Accrued Expenses
h. Commercial Bank

1.2 Operating Cycle:



Grupo Antolin's operating cycle is 45 days.

The time period starts with the commitment of cash stock till the receivables recovery from the products sold is a company's operating cycle.

It is the average time during which an organisation must earn money to produce and sellgoods, as well asreceive cash from clients for goods sold. This is useful for assessing the amount of working capital needed to run a business.

1.3 Cash Conversion Cycle:

CCC is the time required by a firm to change its investments into inventory and other sources into cash from sales [1]. It is calculated as below;

CCC = IITD + ACP - APP

Inventory turnover in days (ITID): It is the average time required to convert the raw materials into the product and till the finished goods are sold.

Average collection period (ACP): It is the average time required to convert the receivables into cash.

Average payment period (APP): It is the average time between purchasing the materials and cash payment to creditors.

2 Literature Review

Dr. John Kwaku Mensah Mawutor used a sample size of four companies listed on the Ghana Stock Exchange (GSE) for the years 2006 to 2010. The results showed a negative significant relationship between the profitability and CCC, APP and ACP. The ITID showed a positive relationship with profitability. Hence, his study recommended that trading companies should maintain their working capital more efficiently.

Sherry Bulin et.al. have conducted research on 50 companies in Bursa Malaysia from 2011-2015. The collected data was analysed using descriptive means. Their findings showed insignificant relationship between ITR, WCTR and Collection Period (CP) on ROA. The significant relationship lies only between CCC and ROA.

Mohammad Alipour has utilized CCC as a measure of the efficiency of WCM. The research was conducted from 2001-2006 on the companies accepted in Tehran stock exchange using multiple regression and Pearson's correlation. The results revealed that in these companies, the significant relation lies between WCM and profitability as it had a great effect on the company's profitability and by decreasing receivables and stock the managers could make value for shareholders.

Sumathi A and Narasimhaiah T concluded that the firm's liquidity position was majorly dependent upon the inventory size maintained but other factors like debtors, advances and loans, cash & bank balances, bills receivables etc., were also responsible. They suggested that the management of Infosys must try to properly utilize the inventory and try to hold the required inventory, so that liquidity will not be interrupted.

Divya Jindal et.al. measured profitability using Return on Capital Employed from a period of 2011 to 2016 in 6 companies. Their findings indicated a significant positive relationship between debtor's turnover ratio and profitability of the firm. It was concluded that the profitability in the industry could be improved by focussing more on the receivables management.

Sukhmani Bhatia and Navdeep Barwal collected data for five real estate firms from secondary sources and ratio analysis was made. It was found that the inventory and receivables turnover for all the companies could be improved. Pearson correlation coefficient calculated showed that the profitability was positively related to current and quick ratios. The regression analysis carried out showed that the profitability of the firms increased with the increase in quick assets.

Sanjay Kumar Sinha et.al. have measured the capital management potency by calculating the operative cycle and by establishing the relationship with margin quantitative relation at Cipla Ltd. It was found that the turnover ratios were not satisfactory, surplus amount was involved in financing the working capital and the overall correlation & regression analysis results were not satisfactory. Based on the results, it was concluded that the working capital management of Cipla was not satisfactory as the working capital cycle was fluctuating.

S. Praveen Kumar et.al. used trend analysis, ratio analysis, cash flow statement and method of least squares to study the effectiveness of cash management by using secondary data and analytical research methodology was implemented. Based on the findings, it was suggested that the company should adopt a better credit policy for its customers as the trend of debtor was increasing in nature and that there was a poor management of debtors in the organisation. Also, it was suggested to accelerate the cash inflow in the company as the working capital of the company was very low.

3 Methodology

- **OBJECTIVES OF THE STUDY**

➢ To get familiar with the topic of working capital management at Grupo Antolin India Pvt. Ltd.

➢ To assess the effectiveness of the use of working capital and how to manage it.

➢ To determine how the performance of the company is affected by the management of working capital.

➢ To analyse and evaluate liquidity position of the company.

➢ To study the various components of working capital management.

- **SCOPE OF THE STUDY**

This study is conducted in the Bengaluru plant of Grupo Antolin India Pvt. Ltd. This study covers the whole analysis and interpretation of the working capital management and its components over two consecutive accounting years, i.e., 2017 and 2018.

The study provides a clear picture of the working capital management at Grupo Antolin India Pvt. Ltd. and its influence on the overall performance of the company. This study conducted with the help of the secondary data helps in identifying the areas where proper control and reforms can produce real time improvements.

- **LIMITATIONS OF THE STUDY**

➢ Data confidentiality has been maintained, and hence approximated data has been presented in some places and also data like actual sales figures have not been revealed for the period of study.

➢ Data analysis is carried out only with the help of ratio analysis.

➢ This study deals only with the available data; hence the results do not reflect the entire working of the company.

➢ The analysis and interpretation are valid only for two accounting years, so it does not reflect the exact location of the company's working capital.

3.1 Research Design

In this study both primary and secondary research methodologies have been used. Various analytical tools and statistical tools such as ratio analysis, comparative analysis and schedule of changes in the working capital have been used to analyse and interpret the data.

Descriptive research method has been used to ascertain the facts about the company by discussing with senior finance officer. The quantifiable information has been gained through balance sheet and income statement of the company, provided to us.

3.2 Collection of Data

The primary data required for the research was collected by observing the day-to-day transactions of the company to know how the current assets and current liabilities are managed and also through discussions with the finance officer of Grupo Antolin India Pvt. Ltd. were made several times a day.

The secondary data required for the research was collected by referring the financial statements, Balance Sheet, Profit & Loss Account and Cash Flow Statement of Grupo Antolin India Pvt. Ltd. for the years 2016-17 and 2017-18.

3.3 Hypotheses

Hypotheses 1

H0: There is no relationship between receivable days and profitability.
H1: The receivable days and profitability are negatively related – more the receivable days, lesser the profitability.

Hypotheses 2

H0: There is no relationship between payable days and profitability.
H1: The payable days and profitability are positively related – more the payable days, more the profitability.

Hypotheses 3

H0: There is no relationship between inventory days and profitability.

H1: The inventory days and profitability are negatively related– more the inventory days, lesser the profitability.

4 Analysis & Interpretation

In this study we have used comparative analysis and ratio analysis to analyze the working capital. The analysis and interpretation are valid only for two accounting years, as this study deals only with the available data and because of data confidentiality, the company's exact location of working capital is not reflected.

4.1 Comparative Analysis

The comparative analysed data of the working capital is given in table 1.

TABLE 1: COMPARATIVE ANALYSIS OF WORKING CAPITAL

As at 31/3/2017 (Rs. In crores)	As at 31/3/2018 (Rs. In crores)	Absolute Changes (Increase/ Decrease)	Percentage Changes (%) (Increase/ Decrease)
30	54	24	80%

The comparative statement shows that the working capital of Grupo Antolin has been increased in the year 2018 compared to 2017. The working capital has been increased by 80% in the year 2018 (i.e, from 30 crores to 54 crores).

This is due to the variations in the components ofworking capital such as current assets and current liabilities. The current assets have increased, and the current liabilities have decreased in the year 2018. The company can convert the current assets into money and/or pay the liabilities within the given time and use it for other purposes, as the company has much working capital on hand.

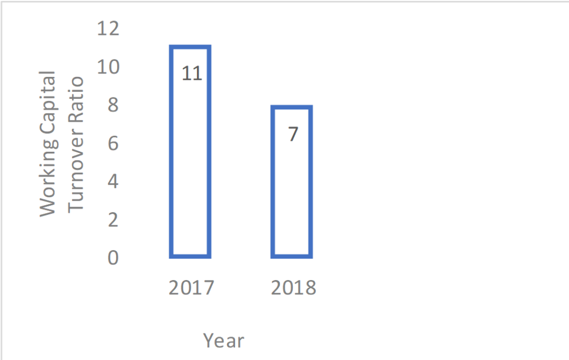
4.2 Ratio Analysis

The working capital turnover ratio is given below: Working Capital Turnover Ratio = $\frac{\text{Net Sales}}{\text{Working Capital}}$

TABLE 2: WORKING CAPITAL TURNOVER RATIO

Year	Working capital turnover ratio
2017	11 times
2018	07 times

FIG.1: GRAPH OF WORKING CAPITAL TURNOVER RATIO



The working capital turnover ratio has decreased from 11 times to 7 times in the year 2018, which shows that the company's working capital needed for day-to-day transactions has decreased over the last year compared to sales which has increased too speedily. But at the same time, the company's working capital has increased. So, there is not much problem for the company, as it is still maintaining its liquidity position.

The increase in the working capital shows that the firm's liquidity position is good, and it has enough funds to meet its daily needs.

4.3 CASH CONVERSION CYCLE:

CCC = IITD + ACP - APP

In the year 2017 = 94+78-123 = 49 days

In the year 2018 = 60+52-95 = 17 days

The CCC has decreased in 2018 to 17 days. It shows that the firm has enough cash to finance other activities, as cash can be generated and converted into investments and inventories early as compared to CCC in 2017.

Inventory turnover in days (ITID):

$$\text{ITID} = \frac{Inventory*365}{Cost\ of\ goods\ sold}$$

In the year 2017 = $\frac{54*365}{210}$ = 94 days

In the year 2018 = $\frac{47*365}{287}$ = 60 days

The ITID has decreased in 2018 to 60 days, which is a good sign of performance of production process. The raw materials will not be kept for a longer time, they are converted into cash within a shorter period.

Average collection period (ACP):

$$\text{ACP} = \frac{Receivables*365}{Sales}$$

In the year 2017 = $\frac{73*365}{342}$ = 78 days

In the year 2018 = $\frac{66*365}{456}$ = 52 days

The ACP has decreased in 2018 to 52 days, which is a good indicator. It indicates that the company collects money from its clients within a short period of time.

Average payment period (APP):

$$\text{APP} = \frac{Payables*365}{Cost\ of\ goods\ sold}$$

In the year 2017 = $\frac{71*365}{210}$ = 123 days

In the year 2018 = $\frac{75*365}{287}$ = 95 days

The APP has decreased in 2018 to 95 days, which means the company must pay the bills early. However, it maintains the status of the company, but the company will not be having much amount of cash in hand. So, it should increase its APP in order to have some cash in hand.

5 Conclusion & Suggestions

The better a company can manage its working capital, the lower the company's credit requirements.

The overall profitability position of Grupo Antolin India Pvt. Ltd. is satisfactory. In 2018 the company's growth is highly satisfactory as the profits have increased and sales have grown as compared to the sales in 2017. But cost of materials has also increased, so the company should try to decrease its cost of production, so that it can earn more profit in the upcoming years. There is also an increase in Reserves and Surplus, which is a healthy indicator.

The Working Capital Management frequently considered as a tool to maintaining competence of the business inside their operations [3].

Based on the above facts, the Working Capital Management of the company seems to be satisfactory.The net working capital has been increased in the year 2018, by 81.64% (i.e, 31 to 58 crores), which is a good indicator. The company is maintaining its liquidity position well over the years.

But the payment to be made to the Creditors is high, so the company should try to decrease the Current Liabilities and Provisions.

The company should try to maintain the stability of the current assets, so that it can convert the current assets into money and pay the liabilities within the given time and use it for other purposes, as the company has much working capital on hand.

The company should make some deductions, as per the Income Tax Act to reduce the profit available for tax purposes and to pay less taxes on its profit earned during the year. Improve the skillsets of the employees by conducting frequent training in the company by various industrial experts.

Train more than a single person for any given vital work, improve exchange of information between them and others in the department through frequent meetings, keep everyone updated. Hire more people and periodically rotate responsibilities assigned to them, so that individuals gain experience and the absence of anyone doesn't halt a work.

The company should clearly analyse, identify and prioritize investments by studying the cash flows. Quantitatively evaluate all the available alternatives and choose the best, and build a reliable database of cash flows and document them to lay the foundation for future investments.

Utilise the world class knowledge of the work experience and technological advancements to set the benchmark that becomes a new standard in the Indian automotive market.Expand dominance gradually using the above and grow strong enough to not to be eclipsed by larger competitors when they shift their focus.

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