Working Capital Management in Mahindra & Mahindra Ltd. - A Case Study

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Abstract

Working capital is the lifeblood of the business organization. Merely having the investment in fixed assets does not determine the success of a business organization, it is also important to have efficient management of working capital. The objective of working capital management is to maintain a satisfactory level of working capital through the management of current assets and current liabilities. If a satisfactory level of working capital is not maintained the organization is likely to become insolvent and may even be forced to bankruptcy. Therefore, for the smooth running of the business efficient management of working capital is required. This paper highlights on concepts of working capital, working capital policy, component of working capital and factors affecting working capital of Mahindra & Mahindra Ltd during last seven years and identifies which factors are responsible for the improvement of working capital of the company.

Working Capital Management is the lifeblood of a business. Just as circulation of blood is essential in the human body for maintaining life, working capital is essential to maintain the smooth running of business. No business can run successfully without an adequate amount of working capital. Working capital refers to a firm's investment in short term assets. Working capital can also be regarded as that portion of the firm's total capital, which is employed in current operations. It refers to all aspects of current assets and current liabilities. Current assets are those assets, which in the ordinary course of business can be or will be converted into cash within one year without undergoing a diminution in value and without disrupting the operations of the firm. The major current assets are, cash, marketable securities, accounts receivables and inventory. Current liabilities are those liabilities, which are intended at their inception to be paid in the ordinary course of business within a year out of the current assets or earnings of the concern. The basic current liabilities are: accounts payable, Bills payable, Bank overdraft, and outstanding expenses.

The movement of funds from working capital to income and profits and back to working capital is one of the most important characteristics of business. This cyclical operation is concerned with utilization of funds with the hope that they will return with an additional amount called income. If the operations of a company are to run smoothly a proper relationship

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between fixed capital and current capital has to be maintained.

Sufficient liquidity is important and must be achieved and maintained to provide the funds to pay off obligations as they arise or mature. The adequacy of cash and other current assets together with their efficient handling virtually determine the survival or demise of the company. A businessman should be able to judge the accurate requirement of working capital and should be quick enough to raise the required fund to finance the working capital needs.

Because of its close relationship with day to day operations the management of working capital is very important for a business firm. It is being increasingly realized that inadequacy or mismanagement of working capital is the leading cause of business failures. Neglect of management of working capital may result in technical insolvency and even liquidation of a business unit. Inefficient working capital management may cause either inadequate or excessive working capital, which is dangerous.

Working capital management is concerned with the management of firm's current accounts, which include current assets and current liabilities. The goal of working capital management is to manage the current assets and current liabilities of a firm in such a way that a satisfactory level of working capital is maintained i.e. it is neither inadequate nor excessive. This is so because both inadequate as well as excessive working capital position are bad for any business. Inadequacy of working capital may lead the firm to insolvency and excessive working capital implies idle funds, which earn no profits for the business.

In this article, a modest effort has been made to analyse the working capital management of Mahindra & Mahindra Ltd. during the period of 1998-99 to 2004-05.

Profile of the company: Mahindra & Mahindra Ltd (M & M) is the flagship company of around us$ 2.5 billion, Mahindra Group, which has a significant presence in key sectors of the Indian economy. A consistently high performer M& M is one of the most reputed company in the country.

Set up in 1945 to make general-purpose utility vehicle for the Indian market M&M soon branched out into manufacturing agricultural tractors and Light commercial vehicles (LCVs).
M&M has two main operating divisions:

(i) The automobile division manufactures utility vehicles, light commercial vehicles, and three wheelers

(ii) The tractor (farm equipment) division makes agricultural tractors and implements that are used in conjunction with tractors, and has also ventured into manufacturing industrial engine. The tractor division has won the coveted Deeming Application Prize 2003 making it the only tractor manufacturing company in the world to secure the prize.

The turnover of M&M in 2004-05 is Rs.7804 crores and Net profit is Rs.513 Crore. At present M&M is largest company in producing LCV in the country and world's 4th largest tractor maker. The M&M has also joint ventures in USA, Italy, Serbia, Russia, Uruguay, South Africa, West Asia, China, Australia, and SAARC Countries.

M&M has employees around 11500 people and has six state of the art manufacturing facilities spread over 5 lac square kilometers. It has a network of over 780 dealers across the country.

Objectives of the study:

(i) To assess significance of working capital by selecting few important parameters such as working capital ratio, Acid test Ratio, current assets to Total assets ratio, total assets to sales ratio, inventory turnover ratio, age of inventory, debtors turnover ratio, and average collection period etc.

(ii) To make item wise analysis of the elements or component of working capital to identify the items responsible for changes in working capital.

(iii) To study liquidity position of the company by taking four measures at a time namely, inventory, to current assets, debtors to current assets, cash and bank to current assets and loan and advances and other current assets to current assets.

Scope and limitation of the study:

(i) The study is limited to seven years (1998-99 to 2004-05) performance of the company.
(ii) The data used in this study have been taken from published annual reports only. As per the requirement and necessity some data are grouped and sub grouped.
(iii) For making a clear-cut opinion ratio technique of financial management has been used.

Data and methodology of the study:

The data of Mahindra & Mahindra for the years (1998-99 to 2004-05) used in this study have been taken from secondary sources e.g. published annual report of the company. Editing classification and tabulation of the financial data, which are collected from the above mentioned sources, have been done as per the requirement of the study. For assessing performance of the working capital position in this study the technique of ratio analysis have been used. The collected data have been analyzed in the following way:

(i) Analysis of liquidity Ratio
(ii) Analysis of liquidity position.
(iii) Item wise analysis of component of gross working capital
(iv) Liquidity ranking.

For assessing the behavior of ratios, statistical techniques have been also used e.g. mean, growth rate, standard deviation and co-efficient of variation in this study.

FINDINGS AND ANALYSIS:

Current Ratio : The current ratio is calculated by dividing current assets by current liabilities . Current assets mean all those assets, which are convertible into cash within a year, such as marketable securities, debtors, stock, cash, bank, and prepaid expenses. Current liabilities included the obligation maturing within a year like creditors, Bills payable, outstanding expenses, bank overdraft, and income tax liability. The current ratio is thus measure of short-term solvency. It indicates the availability of current assets in rupees for every one rupees of current liability. A ratio of greater than one means that the firm has more current assets than current claims against it. Ideal of current ratio is 2:1 in normal condition.

As per table I current ratio of Mahindra & Mahindra only in 1998-99 is 2.11: 1. In all the years it is less than 2:1. So it shows that the company does not have sufficient current assets to meet current liabilities as per the standards. Overall average 1.63 which is below 2:1, this is not satisfactory so far as the standard is concerned.

It does not show sound working capital position during the study period.

Liquid ratio : Liquid ratio or quick ratio or acid test ratio is more rigorous test to liquidity than the current ratio. The term 'liquidity' refers to the ability of firm to pay its short-term obligation as and when they become due. The two determinant of current ratio is current assets and current liabilities. Current assets include inventories and prepaid expenses, which are not easily convertible into cash within a short period. Quick ratio may be defined as the relationship quick assets and current liabilities. An asset is said to be liquid if it can be converted into cash within short period without loss of value. In that sense cash in hand and cash at bank are most liquid assets. Ideal ratio is 1:1.

As per table I acid test ratio is in satisfactory position. Ratio is always ahead than ideal position 1:1 except in the year 2003-04(0.76) and 2004-05 (0.89). Highest ratio during the study period is 1.27 in 1999-2000 and lowest in 2003-04 is 0.76. Average of the acid test ratio is 1.10. In the last few years it has been decreased due to increased share of inventory. The average ratio is 1.10, which is greater than the standard 1:1. This shows that the liquidity position of the company is satisfactory.

Absolute liquid ratio: Although receivables, debtors and bills receivables are generally more liquid than inventories yet there may be doubts regarding their realization into cash immediately or in time. Hence some authorities are of opinion that the absolute liquid ratio should also be calculated together with current ratio and acid test ratio so as to exclude even receivables from the current assets and find out the absolute liquid ratio. Absolute liquid assets included cash in hand and cash at bank and marketable securities. The acceptable norm for this ratio is 0.5:1 or 1:2.

As per the table I absolute liquid ratio fluctuated from 0.16 to 0.37 during the study period. It is nearest to .30 in the first two years and in 2004-05. It's average is 0.25 which is lower than the standard; this shows that the company does not maintain sufficient absolute liquid assets.

Inventory turnover ratio: Inventory turnover ratio establishes relationship between the cost of goods sold with average stock. This ratio measures the velocity of conversion of stock into sales. Usually a high inventory turnover indicates efficient management of inventory because more frequently the stocks are sold the lesser amount of money is required to finance inventory. A low inventory turnover ratio indicates an inefficient management of inventory over investment in inventory, sluggish business, poor quality of goods and lower profit as compared to total investment. A high inventory turnover may be the result of a very low level of inventory which result in shortage of goods in relation to demand and a position of stock or the turnover may be high due to a conservative methods of valuing inventories at lower value or the policy of the being to buy frequently in small lot.

As per table I inventory turnover ratio fluctuated during the study period: It is in 1998-99, 8.46 times, in 1999-2000,9.01times, in 2000-01 7.99 times, in 2001-02 7.61 times, in 2002-03 7.92 times, in 2003-04 10.22 times and in 2004-05 10.37 times. It decreased from 8.46 times to 7.61 times during the time period 1998-99 to 2001-02, which shows that during this period the inventory as compared to sales, was not satisfactory. But from2002-03 onwards it started increasing and has gone to 10.37 times in 2004-05, which shows that the management started controlling the inventory and increases sales, it will improve the liquidity position.

Age Of Inventory: Age of inventory indicates duration of inventory in organization. It shows moving position of inventory during the year. If age of inventory is minimum it means companies activity position is satisfactory, they are able to sell their product within shorter period of time which indicate sound liquidity position of organization. On the other if age of inventory is too high it indicate slow moving of stock due to lower demand of product or excessive production by company, due to stocking policy, which affected directly liquidity position of company. Inventory is one of the major items in current assets, which shows investment of working capital in stock.

As per table I age of inventory shows improving trend during the last years of the study period. It increased from 40 days(1999-2000) to 47days(2001-02) and decreased from 47days(2002-03) to 35 days(2004-05). This shows that the company improved its management of inventory, which has a positive impact on working capital management.

Debtors Turnover Ratio: Debtors turnover ratio indicates the velocity of debt collection of the firm. In simple words, it indicates the number of times the debtors are turned over during a year. Generally the higher value of debtors' turnover the more efficient is the management of debtors or more liquid are the debtors. Similarly low debtor turnover implies inefficient management of debtors and less Liquid debtors. But a precaution is needed while interpreting a very high ratio may imply a firm's in ability due to lack of resources to sale on credit thereby losing sales to profits. There is no rule of thumb, which may be used as a norm to interpret the ratio, as it may be different from firm to firm depending upon the nature of business. This ratio should be compared with ratio of other firm doing similar business and a trend may also be making a better interpretation of the ratio.

As per table I it indicates that debtors turnover ratio was in the 1998-99, 7.26 in 1999-2000, 8.14 times in 2000-01 7.80 times in 2001-02, 6.07 times in 2002-03, 6.30 times in 2003-04, 10.62 times in 2004-05, 14.32 times. It is clear that during the study period it has been increased in the last years of study period. It shows the improvement in the efficiency of management of debtors of the company.

Average collection period: The average collection period represents the average number of days, for which a firm has to wait before their receivables are converted into cash. It measures the quality of debtors. Generally shorter the average collection period the better is the quality of debtors as a short collection period implies quick payment by debtors. Similarly, a higher collection period implies an inefficient collection performance, which in turn adversely affects the liquidity or short term paying capacity of a firm out of its current liabilities. Moreover longer the average collection period, larger is the chance of bad debts. But a precaution is needed while interpreting a very short collection period because a very low collection period may imply a firm's conservative policy to sale on credit to its customers and thereby losing sales and profit.

As per table I average collection period had been increased from 44 days (1999-2000) to 59 days (2001-02) but after that it had decreased to 25 days in the year 2004-05. It indicates that the company properly collects its receivables during last years of the study. It shows the improvement in the efficiency of management of collection policy.

Working capital turnover ratios. Working capital of a concern is directly related to sales. The current assets like debtors, bills receivables, cash, stock changed with the increase or decrease in sales. The working capital is taken as working capital= current assets – current liabilities. This ratio measures the efficiency with which the working capital is being used by a firm. A higher ratio indicates efficient utilization of working capital and a low ratio indicates otherwise. But a very high working capital turnover ratio is not a good situation for any firm and hence care must be taken while interpreting the ratio.

As per table I, working capital turnover ratio of Mahindra & Mahindra fluctuated during the study period. Minimum ratio is 4.18 in 1998-99 and Maximum ratio is 11.55 in 2004-05 with over all average is 9.22 times during the study period. It indicates the improvement in the working capital of the company.

Current assets to total assets ratio: This ratio express the relationship between the amount of current assets and the amount of investment in total assets. It helps to assess the importance of current assets of a concern.

As per table I it is clear that on an average near about 3/5 of the total assets of the company i.e60% are current assets. It indicates that during the period of the study the major portion of the total investment of the company has been made for working capital purpose. Table I shows that current assets to total assets in the year 1998-99 to 2004-05 is 0.68, 0.56, 0.54, 0.60, 0.56, 0.55 and 0.71 times, respectively. Which shows that portion of current assets to total assets is regularly increasing since 1999-2000.

Current Assets to sales ratio: This ratio indicates the efficiency with which working capital turns into sales. A lower ratio implies by and large a more efficient use of funds. Thus a high turnover rate indicates reduced lock up of fund in working capital. An analysis of current assets to sales ratio over a period of time shows the overall efficiency of working capital management of a firm.

As per table-I in the years 1998-99 to 2004-05 it is 0.46, 0.39, 0.40, 0.45, 0.44, 0.31 and 0.35 times, with overall average of 0.40 times . It decreases in last years of study, which is positive from efficiency point of time.

Current liabilities had increased with a growth rate of 101.29% during the study period from Rs. 87027 lacs to Rs. 175180 lacs. Overall average during the study period is Rs112882 Lacs, Standard Deviation is Rs 28955 and coefficient of variation is .26, which is greater than the growth of current assets and liquid assets.

Working capital of Mahindra & Mahindra Ltd. had decreased from Rs.96258 lacs to Rs.56558 lacs between 1998-99 to 2004-05. Working capital registered a decline of 41.24%. Working capital decreased to such an extent because of higher increase in the current liabilities as compared to current assets. It indicates that working capital had decreased during the study period, which is not a good sign for the company.

Compositions of Gross Working Capital :

An element wise analysis of gross working capital enables one to examine in which element the gross working capital funds are locked up and to find put the factors responsible for the significant changes in working capital in different years. In the Table-III the share of each element has been calculated in percentage separately for each of the years under study and the average share percentage for all years has been also calculated. Out of the four elements namely debtors contributed highest in Working capital from 32.30% to 22.07% between 1998-99 to 2004-05 with an average of 30.73%. Where as the inventory contributes the second highest portion

23.84% to 32.79% between 1998-99 to 2004-05 with an average of 29.79% towards the working capital. During the period of study a remarkable change in share of different elements of Working capital. The loan and advances fluctuated from 25.95% to 18.11% between 1998-99 to 2004-05 and it played third position in total current assets. The share of cash and bank fluctuated from 27.22% to 15.80%.

" In a comfortably financed business cash and bank will probably run not less than 5% to 10% of current assets. Since the current liabilities are not expected to exceed half of the current assets." The cash percentage should run not under 10% to 20% of the same.

Table-III shows that the company did not maintain necessary cash and bank balance during study period except in 2004-05. This definitely affects adversely the profitability of the company.

Liquidity Ranking : The liquidity position of a firm is largely affected by the composition of working capital in as much as any considerable shifts from the relatively more current assets to the relatively less current assets or vice-versa will materially affect a firm's ability to pay its current debts promptly.

Therefore to determine the liquidity position of the company more precisely a comprehensive test has been done in Table IV. A process of ranking has been used to arrive at a more comprehensive measure of liquidity in which four factors – namely inventory to current assets ratio, debtors to current assets ratio, cash and bank to current assets ratio and loan land advances to current assets ratio, have been combined in a points score.. In case of debtors to current assets, cash and bank to current assets ratio, loan and advances to current assets ratio a high value indicates relatively favorable position and ranking has been done in that order. On the other hand a low inventory to current assets ratio shows a more favorable position and hence ranking has been done in that order. Ultimate ranking has been done on the principle that the lower points scored the more favorable is the liquidity position.

Table- IV shows that the year 1998-99 registered the most liquidity position and was followed by 2001-02.

The fluctuation in the liquidity position over different year's of the period of the study may be a point for investigation into the financial efforts of the concerns.

CONCLUSIONS:

(i) From view point of conventional standard of working capital ratio, acid test ratio, absolute test ratio, the short term liquidity is not very much satisfactory.
(ii) The mean percentage of current assets to total assets is .61 times which shows higher investment in current assets.
(iii) Age of inventory decreases, but the inventory as compared to sales is not satisfactory so it should be controlled.
(iv) Age of debtor's decreases, but still it requires further improvement.
(v) The element wise analysis of working capital reveals that Debtors constitute 32.30% to 22.70% of gross working capital, inventory constitutes 23.80% to 32.79% of gross working capital, Loan and Advances constitute 25.95% to 18.11% of gross working capital, cash and Bank constitute 17.49% to 27.22% of the gross working capital. Contribution of Debtors and Inventory are highest throughout the period of study.

In this study it is clear that the overall position of working capital of Mahindra& Mahindra is not satisfactory.

There is an immediate need of improvement in debtors and inventory. Because the Debtors and Inventory are not properly utilized by Mahindra & Mahindra ltd. during the study period. In Mahindra & Mahindra Ltd the major portions of current assets are in the form of Debtors and inventory. Whereas other current assets are properly utilized and maintained. The liquidity position mainly depends upon debtors and inventory but other components like loan and advances, cash and bank balances etc are also responsible. But in this study we found that there is an immediate improvement in debtors and inventory. The management of Mahindra & Mahindra ltd should try to properly utilization of debtors and inventory and also try to maintain the debtors and inventory as per their requirements so that liquidity will not be interrupted.

Table - 1 Selected Liquidity Ratios of Mahindra & Mahindra Ltd. (1998-99 to 2004-05)

Year	Current Ratio	Liquid Ratio	Absolute Liquid Ratio	Inventory turnover Ratio	Age of Inventory	Debtors turnover Ratio	Average Collection Period	Working Capital Turnover Ratio	Current Assets to Total Assets Ratio	Current Assets to Total Sales Ratio
1998-99	2.11	1.26	0.37	8.46	43	7.26	50	4.18	0.68	0.46
1999-2000	1.84	1.27	0.29	9.01	40	8.14	44	5.64	0.56	0.39
2000-2001	1.85	1.25	0.16	7.99	45	7.8	46	5.42	0.54	0.4
2001-2002	1.65	1.2	0.18	7.61	47	6.07	59	5.7	0.6	0.45
2002-2003	1.47	1.06	0.22	7.92	45	6.3	57	7.07	0.56	0.44
2003-2004	1.15	0.76	0.18	10.22	35	10.65	34	24.97	0.55	0.31
2004-2005	1.32	0.89	0.36	10.37	35	14.32	25	11.55	0.71	0.35
Mean	1.63	1.10	0.25	8.80	41.43	8.65	45.00	9.22	0.60	0.40

Source: Compiled from annual reports of Mahindra & Mahidra Ltd.(from 1998-99 to 2004-05)

Table-II Liquidity Position of **MAHINDRA & MAHINDRA LTD.**(1998-99 to 2004-05)

Year	Current Assets	Liquid Assets	Current Liabilities	Working Capital	Increase/ Decrease
1998-99	183285	109588	87027	96258	—
1999-2000	166085	114531	90021	76064	20194
2000-01	171365	116112	92704	78661	2597
2001-02	173237	126333	105074	68162	-10499
2002-03	161348	115673	109478	51870	-16292
2003-04	150257	100287	130687	19569	-32301
2004-05	231738	155755	175180	56558	36989
Mean	176759	119754	112882	63877	
Growth Rate	0.26	1.01	0.42	-0.41	
S.D.	24380	16383	28955	22662	
C.V.	0.14	0.14	0.26	0.35	

Source : Compiled from annual reports of Mahindra & Mahidra Ltd.(from 1998-99 to 2004-05)

Table-III Component of working capital with respective percentage of Mahindra & Mahidra Ltd. (from 1998-99 to 2004-05)

Year	Inventory to Current Assets	Debtors to Current Assets	Cash & Bank To Current Assets	Loan & Advances to Assets
1998-99	23.84 %	32.30 %	17.49 %	25.95 %
1999-2000	31.04 %	27.79 %	15.98 %	24.78 %
2000-01	32.24 %	36.88 %	8.44 %	22.14 %
2001-02	27.08 %	37.39 %	11.00 %	24.34 %
2002-03	28.31 %	32.05 %	14.93 %	24.52 %
2003-04	33.25 %	26.65 %	15.53 %	24.28 %
2004-05	32.79 %	22.07 %	27.22 %	18.11 %
Mean	29.79 %	30.73 %	15.80 %	23.45 %

Source : Compiled from annual reports of Mahindra & Mahindra Ltd. (from 1998-99 to 2004-05)

Table - IV Statement of Ranking in order of Liquidity of Mahindra & Mahindra Ltd. (from 1998-99 to 2004-05)

Year	Inventory To Current Assets	Debtors to Current Assets	Cash & Bank to Current Assets	Loan & Advances to Current Assets	Liquidity Bank				Total	Ulti mate Bank
	1	2	3	4	1	2	3	4		
1998-99	23.84 %	32.30 %	17.49 %	25.95 %	1	3	2	1	7	1
1999-2000	31.04 %	27.79 %	15.98 %	24.78 %	4	5	3	2	14	3
2000-01	32.24 %	36.88 %	8.44 %	22.14 %	5	2	7	6	20	5
2001-02	27.08 %	37.39 %	11.00 %	24.34 %	2	1	6	4	13	2
2002-03	28.31 %	32.05 %	14.93 %	24.52 %	3	4	5	3	15	4
2003-04	33.25 %	26.65 %	15.53 %	24.28 %	7	6	4	5	22	7
2004-05	32.79 %	22.07 %	27.22 %	18.11 %	6	7	1	7	21	6

Source : Compiled from annual reports of Mahindra & Mahidra Ltd.(from 1998-99 to 2004-05)

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