How to Manage Working Capital: An Empirical Study of Maruti Suzuki India Limited

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Abstract

Efficient liquidity management involves planning and controlling current assets and current liabilities in such a manner that eliminates the risk of the inability to meet due short term obligations on the one hand and avoids excessive investments in these assets on the other. This is, due in part, to the reduction of the profitability of running out of cash in the presence of liquid assets.

The working capital approach to liquidity management has long been the prominent technique used to plan and control liquidity. The working capital includes all the items shown on a company's balance sheet as short term or current assets, while net working capital exclude current liabilities. This measure is considered a useful tool in assessing the availability of funds to meet current operations of companies. Based on this theoretical background, this research paper evaluates the liquidity, profitability and risk trade-off of Maruti Suzuki India Limited (MSIL), a premier car manufacturer and the biggest seller in India.

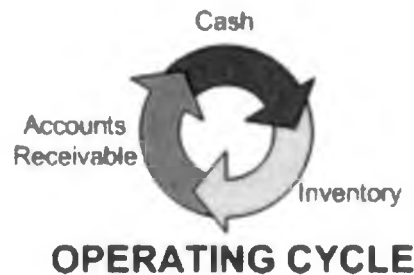*Keywords: Working Capital Management, Liquidity, Profitability, Risk Trade off*

INTRODUCTION

Working capital policies affect the future returns and risk of the company; consequently they have an ultimate bearing on shareholders' wealth. Working Capital is like the blood to human body. It is the most vital ingredient of the business. Working capital refers to the firm's investment in the short-term assets i.e. cash, short term securities etc. It refers to all aspects of current assets and current liabilities.

All elements of working capital are quick moving in nature and require constant monitoring for proper management. A firm should maintain adequate level of working capital to meet the current obligations and maintain uninterrupted business operations. It should ensure that it does not suffer from lack of liquidity since lack of sufficient liquidity is highly risky and it will result in bad credit image, loss of creditors' confidence, high cost emergency borrowing, unnecessary legal battles of the firm. At the same time, if the level of working capital is more, holding cost of current assets would be more, thus badly affecting the profitability.

The working capital requirement of the firm depends upon the operating cycle of the firm. Operating Cycle may be defined as the time duration starting from

procurement of goods or raw material and ending with sales realization.

Cash

OPERATING CYCLE

Working Capital Management

Working Capital Management is concerned with current assets and current liabilities and their relationship to the rest of the firm. Working capital management if carried out effectively, efficiently and consistently, will ensure the health of an organization. The goal of working capital management is to ensure that the firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short-term debt and upcoming operational expenses.

Sufficient liquidity is necessary and must be achieved and maintained to provide that funds are adequate to pay off obligations as they arise or mature. The adequacy of cash and other current assets together with their efficient handling virtually determines the survival of the company. The efficient working capital management is necessary to maintain a balance of liquidity and profitability. If the funds are tied up in idle current assets it represents poor and inefficient working capital management, which affects firm's liquidity as well as profitability.

Liquidity vs. Profitability Analysis, a risk-return trade off

Risk-return trade off involved in managing the firm's working capital is a trade off between firm's liquidity and its profitability. This trade off between risk and returns depends on the level of investment in current assets. When the firm invests more in current assets it reduces the risk of liquidity but suffers losses in terms of profitability, since the opportunity of earning from the excess investment in current assets is lost. The firm therefore is required to strike a right balance.

Research Methodology

Basic objective of data analysis is to convert data into information for which it is necessary to develop a hypothesis. A hypothesis can be defined as a statement, the researcher sets out to accept or reject based on data collected. The researcher has to state the hypothesis into two forms; H0 & H1, which are chosen because the sample is drawn. After formulating the hypothesis, it is to be tested. In this paper *spearman's rank coefficient of correlation* has been used and significance of correlation has been tested using *'t' test.*

Hypothesis used for analyzing liquidity & profitability

Ho- there is negative relationship between liquidity and profitability

Hypothesis used for analyzing profitability & risk

Ho- there is no relationship between profitability and risk.

Sample

For this analysis the sample drawn is based on nine years' data from MSIL. These data have been derived from the financial statements of MSIL.

Sample size

9 years

Statistical tool used for analysis

Spearman's Rank Coefficient of correlation

$$r = 1 - \frac{6\,SD^2}{N\,(N^2-1)}$$

Where,

r	= rank coefficient of correlation
D	= absolute difference between ranks i.e. R1 - R2
N	= No. of pairs of observation

Test applied

T Test

$$T = \frac{r\,\ddot{O}(N-2)}{\ddot{O}(1-r^2)}$$

where,

t	= test of significance
r	= rank coefficient of correlation
N	= No. of pairs of observation

COMPANY PROFILE

Maruti Suzuki India Limited (MSIL, formerly Maruti Udyog Limited), a subsidiary of Suzuki Motor Corporation of Japan, is India's largest passenger car company, accounting for over 50 per cent of the domestic car market. More than half the number of cars sold in India wear a Maruti Suzuki badge. Its manufacturing facilities are located at two places Gurgaon and Manesar south of New Delhi. Its turnover for the fiscal year **2008-09 stood at Rs. 203,583 Million & Profit After Tax at Rs. 12,187   Million.**
Product quality, safety and cost consciousness are embedded into our

manufacturing process, which we have inherited from our parent companyMSIL's. From the Japanese work culture we imbibed simple practices like an open office, a common uniform and common canteen for everyone from the Managing Director to the workman, daily morning exercise, and quality circle teams. Maruti Suzuki exports entry-level models across the globe to over 100 countries and the focus has been to identify new markets. Some important markets include Latin America, Africa and South East Asia.

Interestingly with a brand new offering A-star, Maruti Suzuki is ready to take on European markets. In recent years, Suzuki Motor Corporation has made major strides towards making Maruti as Suzuki's Research and Development hub for Asia. In the process, Maruti has introduced upgraded versions of all its existing products completely designed and styled in-house. Maruti engineers were called to work with Suzuki engineers in Japan for the design of hugely successful Swift.

Maruti Suzuki sold 53,024 units during 2007-08. This is the highest ever export volume in a year for the company, and marked a growth of 35 per cent over the previous year.
Be it a motorsport enthusiast, an amateur or a professional, Maruti Suzuki offers the thrill and joy of motorsport to all of them. what makes the Maruti Suzuki motorsport calendar an attraction in India (and internationally too) are Maruti-Suzuki Raid-de-Himalaya, Maruti Suzuki Rally Desert Storm and Maruti Suzuki Monsoon Car Rally of Kerala.

LIQUIDITY POSITION

TABLE – 1

Year	CA	CL	CR (CA/CL)	WC (CA- CL)
2001 – 2002	16,402	14,558	1.127	1,844
2002 – 2003	22,073	14,786	1.493	7,287
2003 – 2004	14,445	15,318	0.94	(873)
2004 – 2005	23,638	16,080	1.47	7,558
2005 – 2006	29,747	19,771	1.51	9,976
2006 - 2007	29,218	25,015	1.168	4,203
2007-2008	20,506	24,492	.84	(3986)
2008-2009	55,100	30,358	1.82	24,742
2009-2010	37,724	35,678	1.06	2,046
			Avg. = 1.269	

Table I shows the various components of working capital and liquidity. Current ratio has been calculated to test the short term solvency of a business and its ability to meet its short term commitments. It measures the liquidity and margin of safety position of a company. Higher ratio means assurance to creditors about being paid in full on time. Average current ratio of MSIL for 9 years from 2001-02 to 2009-10 is

1.269:1 which provides a measure of degree to which current assets cover over current liabilities. The excess of current assets over current liabilities provides a measure of safety margin available against uncertainty in realization of current assets and flow of funds. It must be interpreted carefully because window-dressing is possible by manipulating the components of current assets and current liabilities.

PROFITABILITY POSITION

TABLE – 2

Year	(1) CA	(2) FA	(3) TA (1+2)	(4) CL	(5) TA - CL	(6) EBIT	(7) ROCE (6/5) *100
2001 – 2002	16,402	24,301	40,703	14,558	26,145	1,947	7.5
2002 – 2003	22,073	22,557	44,630	14,786	29,844	3,379	11.32
2003 – 2004	14,445	18,308	32,753	15,318	17,435	8,132	46.64
2004 – 2005	23,638	18,737	44,375	16,080	26,295	13,409	50.99
2005 - 2006	29,747	16,952	46,699	19,771	26928	17,704	65.7
2006 - 2007	29,218	26,597	55,815	25,015	30,800	23,174	75.24
2007-2008	20,506	32,965	53,471	24,492	28,979	25,624	88.4
2008-2009	55,100	40,708	95,808	30,358	65,450	17,268	26.4
2009-2010	37,724	50,247	87,971	35,678	52,293	36,260	69.3

Table 2 shows the profitability position with the help of Return on Capital Employed (ROCE). The above table indicates that profitability of MSIL has increased more than ten times in a span of seven years i.e. from 7.5% in 2001-02 to 88.4% in 2007-08. But a lot of fluctuation is observed in the next two years. In the year 2008-09 the ROCE had decreased tremendously to a very low level that is 26.4 % but in the next year they tried to cope up and increase to a great extent and reached 69.3 %. This is a drastic change in the two years of MSIL.

RELATIONSHIP BETWEEN LIQUIDITY, PROFITABILITY & RISK
Liquidity & Profitability Analysis of MSIL

TABLE – 3

YEAR	CR	R_2	ROCE	R_3	$D^2 (R_3 - R_2)$	D_2^2
2001 – 2002	1.127	6	7.5	9	3	9
2002 – 2003	1.493	3	11.32	8	5	25
2003 – 2004	0.94	8	46.64	6	-2	4
2004 – 2005	1.47	4	50.99	5	1	1
2005 – 2006	1.57	2	65.7	4	2	4
2006 – 2007	1.168	5	75.24	2	-3	9
2007-2008	.84	9	88.4	1	-8	64
2008-2009	1.82	1	26.4	7	6	36
2009-2010	1.06	7	69.3	3	-4	16
					Total	$SD2^2$ =168

Table 3 represents the relationship between liquidity and profitability. The current ratio is used as an indicator of liquidity and ROCE is used for measuring profitability. The Spearman's rank coefficient of correlation(r) between Current Ratio and ROCE has been shown for which the relevant formula has been used. The test used for determining significance of r is 't' test. The computed value of 't' is to be compared with the tabulated value of 't'.

In the above table **r = 0.4 and value of t = 0.1.157** since the table value of 't' at 5% level of significance for 8 degrees of freedom (n-1, Where n = 9) is equal to 2.306. Since the computed value is less than the table value we fail to reject the null hypothesis (Ho) which states that there is a negative relationship between liquidity and profitability

Profitability & Risk Analysis of MSIL

TABLE – 4

YEAR	Equity +Reserves & Surplus	Long Term Loans	FA	CA	R_k	Rank R4	ROCE (%)	Rank R_3	D3 (R_4-R_3)	D3^2
2001–2002	27,073	3000	24,301	16,402	0.35	1	7.5	9	-8	64
2002–2003	30,980	3000	22,557	22,073	0.51	2	11.32	8	-6	36
2003- 2004	35,912	1000	18,308	14,445	1.28	6	46.64	6	0	0
2004- 2005	43,788	700	18,737	23,638	1.075	3	50.99	5	-2	4
2005–2006	54,526	400	16,952	29,747	1.27	5	65.7	4	1	1
2006- 2007	68,539	5,674	26,597	29,218	1.62	7	75.25	2	5	25
2007-2008	84,154	9,002	32,965	20,506	2.94	9	88.4	1	8	64
2008-2009	93,449	6,989	40,708	55,100	1.084	4	26.4	7	-3	9
2009-2010	118,351	8,214	50,247	37,724	2.02	8	69.3	3	5	25
									SD3^2	228

Table 4 represents the relationship between profitability and risk. ROCE has been used to calculate profitability and the following formula has been used for measuring the risk factor.

$$R_k = \frac{(Ej+ Lj)-Aj}{Cj}$$

Where,

> R_k= Risk factor
>
> Ej= Equity + Reserves & surplus
>
> L = Long term Loans
>
> Aj = Fixed assets
>
> Cj = Current assets.

Then **Spearman's rank coefficient of correlation** (r) between ROCE & Risk Factor has been calculated. The "t" test is applied for determining significance of r. Then computed value of 't' has been compared with the tabulated value of 't'.

In the above table **r=0.9 and value of t = 5.482.** The table value of 't' at 5% level of significance for 8 degrees of freedom (n-1, Where n=9) is equal to 2.306. Since the computed value is more than the table value the null hypothesis (Ho) is to be rejected and therefore we can finally say that there is a relationship between profitability and risk.

FINDINGS

The efficient management of working capital plays a crucial role in the successful functioning of a firm. A comprehensive study has been conducted of MSIL, for assessing its working capital management policy. For this study, the various

components of working capital like working capital turnover ratio, Current ratio and ROCE have been calculated and relationship between Liquidity, Profitability and Risk in MSIL is being worked out with the help of these components.

The first Hypothesis states that if a firm decreases its Liquidity, the Profitability would be high. The result shows that there is a negative relationship between Liquidity and Profitability and we fail to reject the hypothesis.

The second hypothesis indicates that there is no relationship between profitability and risk. The results show that there exists a relationship between these two since null hypothesis has proved to be wrong.

CONCLUSION

Since the amount and risk involved in capital investment decision are very high, the firms give little importance to the issues related with working capital. But from the above study we can say that MSIL is giving due consideration to its working capital management policies. At the same time it should not stop formulating certain policies to keep a well-monitored working capital for better profitability, reliability and consistency.

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