

# LIQUIDITY MANAGEMENT OF SOFTWARE COMPANIES IN INDIA (A CASE STUDY OF TATA CONSULTANCY SERVICES AND WIPRO PVT. LTD)

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## **Abstract**

The paper relates to the study of liquidity position of two major contributing companies in Indian software industry: TCS & Wipro. The liquidity position has been tested through various ratios and statistical tools. Liquidity study relates to the short term paying capacity of any firm and directly or may be indirectly and thus leaves an impact on the market value of the firm.

**Keywords:** Liquidity, current assets, turnover, inventory.

In this paper a comparative analysis regarding the liquidity management in software industry of the two selected companies Tata Consultancy Services and Wipro Pvt. Limited for the period 2007-08 to 2011-2012. The analysis is expected to reveal a comparison belonging to the same industry regarding the various aspects of their liquidity management.

## **About the companies:**

Tata Consultancy Services Limited (TCS) is an Indian multinational information technology (IT) services, business solutions and outsourcing services company headquartered in Mumbai, Maharashtra. TCS is a subsidiary of the Tata Group and is listed on the Bombay Stock Exchange and the National Stock Exchange of India. It is one of India's most valuable companies and is the largest India-based IT services company by 2012 revenues. TCS and its subsidiaries provide a wide range of information technology-related products and services including application development; business process outsourcing; capacity planning; consulting; enterprise software; hardware sizing; payment processing; software management; and technology education services.

## **WIPRO**

Wipro Limited (formerly Western India Products Limited) is an information technology (IT) consulting and outsourcing service company located in Bangalore, Karnataka, India. As of 2012, the company had 140,000 employees in 54 countries.

Wipro is the second largest IT services company in India. Its subsidiary, Wipro Enterprises Ltd., offers consumer care, lighting, healthcare, and infrastructure engineering. Wipro Technologies, the global IT business of Wipro Limited is a leading Information Technology, consulting and outsourcing company with a comprehensive portfolio of services and an organization wide commitment to sustainability and innovation. The IT Products segment sells a range of Wipro personal desktop computers, Wipro servers and Wipro notebooks. It is also a value added reseller of desktops, servers, notebooks, storage products, networking solutions and packaged software for international brands.

## **Objectives of the study:**

- To assess the liquidity of both the enterprises by selecting a few important parameters related to liquidity management such as current ratio (CR), quick ratio (QR), current asset to total asset ratio (CTTR), inventory turnover ratio (ITR) and debtors turnover ratio (DTR).
- To analyse the liquidity of the companies under the study more precisely by using Motaal's Comprehensive Test.
- To quantify the closeness of associations between liquidity and profitability of the two companies by computing spearman's rank correlation Coefficient and to test the significance of such coefficient.
- To make necessary suggestions for enhancing the efficiency in liquidity management of the companies under the study.

## **Methodology:**

The data of the two companies selected for this study is of software industry for the period 2007-08 to 2011-2012 which has been collected from the secondary sources i.e. from the annual reports of TCS and Wipro Pvt. Limited. For the purpose of analysing the performance of the liquidity management of companies in this study. The

technique of ratio analysis, Motaal's Comprehensive rank test, Simple statistical techniques like measure of central tendency, spearman's rank correlation analysis etc has been used. To test the significance of the rank correlation coefficient "t" test has been applied.

### **Hypothesis of the study:**

There is no significant relation between the Liquidity and Profitability of the two selected companies

### **Data interpretation and findings:**

To assess the liquidity position of the selected companies during the period under the study following five ratios namely current ratio (CR), quick ratio (QR), current asset to total asset ratio (CTTR), inventory turnover ratio (ITR), debtor turnover ratio(DTR) have been computed.

**Current Ratio:** The Current Ratio is one of the best known measures of financial strength. It measures firm's short-term solvency. It indicates firm's ability to cover its current liabilities with its current assets.

Table 1 depicts in TCS it was noticed that in the year 2007 and 2008 this ratio was 2.04 times which is considered to be an idle one. But in the preceding years it was observed that there was a slight downfall in the ratio and it came down to 1.88 and 1.48 times in 2009 and 2010 respectively. But in the next subsequent year i.e. in 2011 the company has managed to reach at again at a optimum level of 2.42 times. On an average it was observed that the current ratio was 1.97 times which is again approximately 2 times and is a very good sign of liquidity.

In case of Wipro it was seen that the current ratio from the year 2007 to 2011 has oscillated. It was observed that in the year 2007 it was 1.65 times which was satisfactory, but in the next year it has raised to 2.35 times by just doubling its current asset with a very insignificant increase in their current liabilities and had a significant current ratio. But again in the preceding year it was seen that current ratio came down to 1.82 times which was a huge downfall than previous year. However in the last two years the company has managed to reduce the current liabilities increasing trend and have increased their current assets remarkably to maintain its current ratio. On an average of five years current ratio was at 2.15 times which is suggested as a bench mark in current ratio.

### **QUICK RATIO:**

The Quick Ratio is sometimes called the "acid-test" ratio and is one of the best measures of liquidity. The quick ratio measures firm's current financial

condition. It indicates a firm's ability to meet its current liabilities with its most liquid (quick) assets. This ratio serves as a supplement to the current ratio in analyzing liquidity. This ratio is same as current ratio except it excludes inventories - presumably the least liquid portion of current assets. A quick ratio of 1 : 1 is considered as satisfactory. The Quick Ratio is a much more exact measure than the Current Ratio. By excluding inventories, it concentrates on the really liquid assets, with value that is fairly certain.

Table one reveals that TCS quick ratio in the year 2007 and 2008 has been 2 times which indicates that liquidity position of the company is excellent. In next years 2009 and 2010 it has reduced to 1.89 and 1.48 times respectively which still is above the bench mark. Further in the year 2011 it has increased to 2.42 times which is again outstanding. This fluctuating trend gives us an idea of an average quick ratio at 1.97 times which indicates the sound liquidity position of the company. It is at state to face it current challenges with a less reliability in external debts for a short span of time. In Wipro the company has more than required liquid assets in possession to meet its current obligations. It was keenly observed that quick ratio of Wipro is also superb and they too have a sound liquidity position.

In contrast, it was noticed that both of them have excess of liquidity but it is not to that extent which is harmful for the business.

### **Current asset to total asset Ratio:**

This ratio helps us to ascertain the extent of the total funds invested to meet the working capital requirement. In the table 1 it was analysed that in TCS this ratio is fluctuating in the years. the CTTR ratio was highest in 2011 during the five years analysis. It was 0.48 times in the year 2007 and has reduced to 0.39 times in 2008. Further in the year ahead it has increased from 0.39-0.59 times. The company in the latter years has increased their CTTR showed overall good working capital. Where as in Wipro this ratio has shown a very unique trend. It was 0.47 in 2007 raised suddenly to 0.99 in the year 2008 and in the further years has remain constant with a ratio of 0.54 times.

### **Inventory Turnover ratio:**

Inventory turnover measures how quickly a company is moving inventory off the shelves to customers. It indicates how many times, during the course of a quarter or year, a company sells and replaces its inventory of component parts, materials and final products. An item whose inventory is sold (turns over) once a year has higher holding cost than

one that turns over twice, or three times, or more in that time. Stock turnover also indicates the briskness of the business.

In TCS this high ratio is because TCS has a very small inventory cycle. Inventory is almost negligible in relation to sales. In all the five years it was observed that inventory amounted very less in contrast to the sales. Whereas in Wipro as it is a manufacturing concern also and unlike any other manufacturing concern this ratio is up to the mark. It was 70.33 times in the year 2007 but has continuously managed its level of inventory and has reached to 39.49 times. Its ITR in months have increased every year. It was 0.17 months in the starting and till the year 2011 it has reached to 0.30 months. On an average ITR was at 51.39 times which is satisfactory.

#### **Debtors Turnover ratio**

The Debtors Turnover ratio is also termed as Debtors speed ratio. It indicates the quickness in realization of sundry debtors. The main object of this ratio is to know how much credit time is allowed and capital blocked in debtors. Debtors' turnover ratio also shows the effectiveness in collection of debts due. Generally, higher ratio is the indication of efficient management of liquidity. The collection process of the credit transaction is reflected by this ratio. An increase in the debtor's turnover ratio indicates that the collection process has improved. On the other hand if the ratio has declined from that of the previous accounting duration, then it indicates that the collection process has to be strengthened by the company.

It clearly portrays in TCS how far does the debts are recovered for a given level of sales. It was noticed that this ratio ranged within 14% to 20% approximately. From the period 2007 to 2011 the company has a diversified trend. It was 18.47% in the beginning year, raised to 19.74% in the year 2008 and then further in the year 2009 and 2010 have reduced to 17 and 14.34% respectively. In the year 2011 it was observed that it slightly raised to 16.14% but was still less than the previous years. The company has a low ratio which shows that debtors are very nominal in relation to its sales. It clarifies they deal larger in cash than credit. They have managed to hold their grip which was seemed to be loosening in years before.

In Wipro the ratio of debtors to sales is almost constant during five years. It ranged between 18.59% to 21.98%. This gives a clear idea that the company has maintained and had a control over its debts which is a positive sign. The amount of debtors in relation to sales is also not so high which again

reveals that company has followed a stringent policy.

#### **Testing of Hypothesis**

In the table II the overall liquidity of the companies have been analysed by applying Motaal's comprehensive test. In the study this test is used to rank and measure the liquidity in which three ratios, namely, working capital to current assets ratio, inventory to current assets ratio and liquid resources to current assets ratio have been combined in a points score. A high value of these ratios shows greater liquidity and ranking has been done in that order. Whereas a low inventory to current assets ratio states a more favourable liquidity and thus ranking has been done in that order. The ultimate rank which is given is on the basis that lower the aggregate of individuals ranks the more is the liquidity and vice versa. This table shows that in case of TCS in the year 2009 it had the most sound liquidity position and was followed in the years 2010-11, in 2007-08, 2008-09 and in the year 2011-12 respectively. Whereas in Wipro it registered in both the years i.e. 2009-10 and 2010-11 captured the top most position in terms of liquidity and it was followed by 2008-09 and again the same liquidity position rank in the year 2007-08 and 2011-12. Its liquidity position has fluctuated in the study and overall had a mix grading.

In the table III an attempt has been made to analyse the degree of association between liquidity and profitability of the two selected samples of the study by computing Spearman's rank correlation coefficient. "T" test is applied to measure that computed value of such coefficients is significant or not. In this respect the current asset to total asset ratio (CTTR) has been used as the liquidity indicator and return on capital employed (ROE) has been taken to measure the profitability. It was clearly identified that rank coefficient correlation between CTTR and ROE of TCS was - 0.18501 and that of Wipro was - 0.14668 and both of them were insignificant at 0.05 level of significance. The critical value of  $t'$  at 0.05 level of significance where degree of freedom is 3 is 3.182. It states that there is a negative association and since calculated value is less than the critical value hence  $H_0$  is accepted and there is no correlation between liquidity and profitability of the companies.

#### **Conclusion:**

In this paper efforts have been made to judge the relationship between the impact of liquidity and profitability. Efforts should be taken by the management to increase their current assets and should try to keep their current liabilities nominal as liquidity is must for such firms. The liquidity position

of both the firms and is more than the standards. But the firms should try not to exceed its limits as it is a sign that more liquidity means cash remains idle and portrays ineffective management of the concerns. In TCS as it is not a manufacturing concern, the inventory in the company is either on software's under development or processed which is minimum where as in Wipro apart from a software concern it is a manufacturing unit too so like any other manufacturing company they maintain significant inventory. Inventory is available in raw materials, work in progress and finished goods. Wipro should implement scientific methods of assessment of inventory levels and should maintain inventory at those levels. The companies under the study should try to maintain its debtors collection policy and should be more stringent in their collection. ROE has been fluctuating due to the slowdown in this period but companies should try to improve it in future.

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**Table 1.1**  
**Liquidity ratios of Tata Consultancy Services Ltd.**

Year	Tata Consultancy Services Ltd.				
	CR	QR	CTTR	ITR	DTR
2007	2.04	2.04	0.48	866.08	0.18
2008	2.04	2.03	0.39	1298.19	0.19
2009	1.88	1.89	0.49	1285.75	0.17
2010	1.48	1.48	0.48	1958.01	0.14
2011	2.42	2.42	0.59	4904.47	0.16

**Table 1.2**  
**Liquidity ratios of Wipro Pvt.Ltd**

Year	Wipro Pvt.Limited				
	CR	QR	CTTR	ITR	DTR
2007	1.65	1.59	0.47	70.33	0.18
2008	2.53	2.43	0.99	50.81	0.20
2009	1.82	1.76	0.54	47.38	0.20
2010	2.34	2.26	0.54	42.98	0.21
2011	2.29	2.20	0.54	39.49	0.21

**CR- Current Ratio, QR- Quick Ratio, CTTR- Current Assets to Total Assets, ITR-Inventory Turnover Ratio, DTR-Debtors Turnover Ratio**

**Table 2.1**  
**Statement of Ranking in order of liquidity of Tata Consultancy Services**

Tata Consultancy Services Ltd.								
Year	Working capital to Current Asset Ratio		Inventory to Current Asset Ratio		Liquid resources to current Asset ratio		Total Rank (A+B+C)	Ultimate Rank
	Ratio	Rank	Ratio	Rank	Ratio	Rank		
2007	16.63	3	0.23	4	0.998	3	10	4
2008	21.43	2	0.24	5	0.997	4	11	5
2009	14.54	4	0.18	3	1.00	1	8	2
2010	1.47	5	0.06	2	0.999	2	9	3
2011	32.17	1	0.03	1	0.996	5	7	1

**Table 2.2**  
**Statement of Ranking in order of liquidity of Wipro Pvt. Ltd**

Wipro Pvt. Limited								
Year	Working capital to Current Asset Ratio		Inventory to Current Asset Ratio		Liquid resources to current Asset ratio		Total Rank (A+B+C)	Ultimate Rank
	Ratio	Rank	Ratio	Rank	Ratio	Rank		
2007	12.60	5	3.78	4	0.962	4	13	4.5
2008	25.69	1	3.73	3	0.963	3	7	3
2009	14.50	4	3.41	1	1.082	1	6	1.5
2010	25.08	2	3.63	2	0.964	2	6	1.5
2011	19.80	3	3.93	5	0.960	5	13	4.5

**Table 3**  
**Analysis of Rank Correlation between liquidity and profitability of selected companies**

Year	Tata Consultancy Services				Wipro Pvt. Limited			
	Current assets to total assets		ROE		Current assets to total assets		ROE	
	Ratio %	Rank L1	Ratio %	Rank P1	Ratio %	Rank L2	Ratio %	Rank P2
2007	48.59	3	55.70	1	47.70	5	37.06	1
2008	39.53	5	49.58	2	99.28	1	26.19	2
2009	49.58	2	41.27	5	54.06	4	21.36	5
2010	48.07	4	45.20	4	54.99	2	24.92	3
2011	59.24	1	47.18	3	54.09	3	22.11	4

Rank correlation between liquidity and profitability (L1 and P1) in TCS is - -0.18501 and of Wipro is - 0.14668. The critical value of 't' at 0.005 level of significance and 3 degree of freedom is 3.182 which states that calculated value is less than the critical value.