A STUDY ON CASH FLOW SUSTAINABLE GROWTH OF SELECTED IT COMPANIES IN INDIA '

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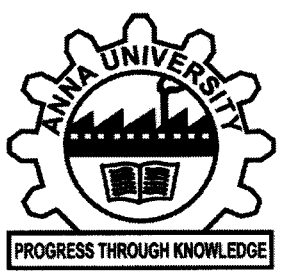

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ABSTRACT

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In the recent years, India has made a commendable advance in the Industrial Front. In this scenario of tremendous growth in the economy, one sector which holds its head high is Information Technology (IT) sector. The ever increasing significance and the role of the IT sector have attracted people from all walks of life. It is essential for the IT companies in India to keep a breath of the current innovation to attain a status of technological leaders. But IT Industry at present is facing a recession.

At this juncture the question of survival and sustainability of an IT Company in the market depend not only on external issues but also on internal issue, which could be its financial performance. Liquidity is one of the important criteria determining the financial performance of a company. Keeping this background an attempt has been made to analyze the liquidity position and the cash flow sustainability of the Indian IT sector.

For analyzing the liquidity position of the IT sector, five year data has been used (2003-2004 to 2007-2008). In selecting the sample, the official directory of CMIE namely "Prowess" has been used. All these companies which have continuous data during the study period are selected for analysis and it has resulted in 70 companies.

The study aims to analyze the liquidity position of selected companies and rank them as liquid and less liquid. The study also attempts to ascertain the Cash Flow Sustainable Growth of the IT sector as a whole.

Thirteen Ratios have been employed to know the liquidity position of the selected IT companies. Then Numerical Scoring System has been employed to rank the companies. CFSGR model has been employed to ascertain the CFSGR of the IT Industry.

The study reveals that majority of the firms are having rapid growth. The liquidity has been good. Only in the later part of the study CFSGR has shown a sign of growth. Thus the study revealed that the IT companies has to take necessary steps like realizing the profits in cash quickly accelerate cash flows, productive use of cash flows, and designing of good liquidity management policies, to make its liquidity position appreciable and cash flow sustainability.

ABBREVIATIONS

ABBREVIATIONS USED IN THE STUDY

AR	Accounts Receivable
AP	Accounts Payable
C.A.	Current Assets
C.L.	Current Liabilities
TA	Total Assets
S. Drs.	Sundry Debtors
S. Crs.	Sundry Creditors
CMIE	Centre For Monitoring Indian Economy
ASG	Actual Sales Growth
CCC	Cash Conversion Cycle
CFSGR	Cash Flow Sustainable Growth
C.V.	Co-efficient Of Variation
PBDIT	Profit Before Depreciation Interest And Taxes
PBIT	Profit Before Interest And Taxes
ROI	Return On Investment
NLB	Net Liquid Balance
OI	Net Of Non-Recurring Transactions
SGR	Operating Income
IT	Information Technology
WCFO	Working Capital Funds From Operation
CFFO	Cash Flow From Operations
CR	Current Ratio
QR	Quick Ratio
ALR	Absolute Liquid Ratio
ARTO	Accounts Receivable Turnover Ratio
APTO	Accounts Payable Turnover Ratio
WCTO	Working Capital Turnover Ratio
PAT	Profit After Tax
Adj. CR	Adjusted Current Ratio

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LIST OF COMPANIES

NAME LIST OF COMPANIES

S.NO	NAME OF THE COMPANY	ABBREVIATION
1	A B M Knowledge ware Ltd.	ABM
2	Abacus Computers Ltd.	ACL
3	Ace Software Exports Ltd.	ASE
4	Adam Comsof Ltd.	ADM
5	Aftek Ltd.	AFT
6	Ask Me Info Hubs Ltd.	AMI
7	Brels Infotech Ltd.	BRL
8	B 2 B Software Technologies Ltd.	B2B
9	C M C Ltd.	CMC
10	California Software Co. Ltd.	CAL
11	Cauvery Software Engg. Systems Ltd.	CSE
12	Clio Infotech Ltd.	CLI
13	Computers International Ltd.	CMI
14	Cranes Software Intl. Ltd.	CRN
15	Datasoft Application Software (India) Ltd.	DAS
16	E-Serve International Ltd.	ESI
17	European Software Alliances Ltd.	ESA
18	Financial Technologies (India) Ltd.	FNT
19	Frontier Information Technologies Ltd.	FIT
20	G T L Ltd.	GTL
21	Goldstone Technologies Ltd.	GOL
22	Hexaware Technologies Ltd.	HEX
23	I C S A (India) Ltd.	ICS
24	I E C Softwares Ltd.	IEC
25	Ideaspace Solutions Ltd.	ISL
26	I-Flex Solutions LTd.	IFS
27	Info- Drive Software Ltd.	IDS
28	Infosys Technologies Ltd.	INF
29	Infotech Enterprises Ltd.	IFE

30	Infotrek Syscom Ltd.	ISC
31	Jetking Infotrain Ltd.	JET
32	K L G Systel Ltd.	KLG
33	Kirloskar Computer Services Ltd.	KCS
34	Lan Eseda Inds. Ltd.	LEI
35	Lee & Nee Softwares (Exports) Ltd.	LNS
36	Mastek Ltd.	MST
37	Melstar Information Technologies Ltd.	MIT
38	Mindteck (India) Ltd.	MNT
39	Mphasis B F L Ltd.	MPB
40	N I I T Ltd.	NIT
41	Netvista Information Technology Ltd.	NVT
42	Nucleus Software Exports Ltd.	NSE
43	Odyssey Technologies Ltd.	OTL
44	Omega Interactive Technologies Ltd.	OMT
45	Orient Information Technology Ltd.	OIT
46	P S I Data Systems Ltd.	PSI
47	Panoramic Universal Ltd.	PUL
48	Polaris Software Lab Ltd.	POL
49	R S Software (India) Ltd.	RSS
50	Ram Informatics Ltd.	RAM
51	Rolta India Ltd.	ROL
52	S R G Infotech Ltd.	SRG
53	S S I Ltd.	SSI
54	Siemens Information Systems Ltd.	SIS
55	Silverline Technologies Ltd.	STL
56	Sonata Software Ltd.	SOS
57	Sparc Systems Ltd.	SPS
58	Svam Softwares Ltd.	SVS
59	Synergy Log-In Systems Ltd.	SLS
60	T C I L Bellsouth Ltd.	TCI
61	Tata Elxsi Ltd.	TEL

62	Tata Infotech Ltd. [Merged]	TIL
63	Tech Mahindra Ltd.	TML
64	Tricom India Ltd.	TRI
65	Trigyn Technologies Ltd.	TGN
66	V J I L Consulting Ltd.	VJL
67	V M F Soft Tech Ltd.	VMF
68	Vakrange Softwares Ltd.	VSL
69	Wipro Ltd.	WIP
70	Zensar Technologies Ltd.	ZTL

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INTRODUCTION

CHAPTER I – INTRODUCTION

1.1 RESEARCH BACKGROUND

One sector which has contributed largely for the growth of Indian Economy is Information Technology sector. Indian IT sector has gradually climbed up the technological ladder by diversifying the geographical and the market segments.

Presently due to the global economic slow down, one sector which has got a heavy blow is the IT sector. It resembles the burst of '.com' companies during the year 1999 and 2000.

1.2 ABOUT INDIAN IT INDUSTRY

Information Technology essentially refers to the digital processing, storage and communication information of all kinds. Therefore IT can potentially be used in every sector of economy. India's Information Technology sector has gradually climbed up the technological ladder with its diversified geographical and market segments.

The true impact of IT on growth and productivity continues to be a matter of debate, even in the United States, which have been a leader and largest adopter of IT. However there is no doubt that the IT sector has been a dynamic one in many developed countries and India has stood out as a developing country were IT, especially software exports has grown dramatically, despite the countries relatively of low level of income and development.

Information Technologies broader impact can also be witnessed from the Information Technology Enabled Services (ITES). It is a broad category covering many different types of data processing and voice interactions that use some IT Infrastructures as inputs, but do not necessarily production IT inputs. India's figures for the size of IT sectors typically include such services. Thus IT Industry includes hardware, software and Information Technology Enables Services-Business Process Outsourcing (ITES-BPO).

Information Technology may have a special role to play in growth and development due to its empirical characteristics applied during the reason times. The recent continuing rapid innovation in IT has made it a dynamic sector, contributing to economic and industry growth. Information Technology is a sector in which India can enjoy a comparative advantage.

The phenomenal structure of IT Industry in India is primarily a contribution of Indian young prfessional and private firms who have spread computer literacy to the millions. The Government on its part has given a lot of fiscal incentives to the IT Industry.

In this decade, the success of the IT Industry can be witnessed by examining the prospects. For India to capitalize on the opportunity and to sustain a proportionate need in the Global IT space, even during the world economic recession, the focus on the following are considered necessarily:

- Enhancing the talent pool advantage-focus on skilled development to leverage the world's largest working population.
- Strengthening urban infrastructure in existing and emerging cities and continuous emphasis on proactive regulatory reform to facilitate greater ease of doing business.
- Insisting operation excellence among the industry players.
- Catalyzing domestic market development.

1.3 STATEMENT OF THE PROBLEM

The question of survival and sustainability of IT Company in the market depend not only external issues like domestic and global competition but also on internal issues, namely their Financial Performance.

In determining the financial performance of a company 'Liquidity' plays a vital role. Liquidity Management is aimed at managing companies cash flow that could provide for a successful and productive fulfillment of its objectives.

Keeping the tremendous growth and success of IT Companies and the present economic recession, in view, an attempt has been made to study the cash flow sustainable growth of selected Indian IT Companies.

1.4 OBJECTIVES OF THE STUDY

The study aims at that analyzing the liquidity position of selected IT Companies in the Indian IT sector. The following are the objectives of the study:

1. To analyze the liquidity position of the companies.
2. To rank the selected companies based on numerical scoring system.
3. To identify the sustainability of selected companies based on cash sufficiency.

1.5 SCOPE OF THE STUDY

The study attempt to analyze the liquidity and, cash flow sustainable growth of selected IT Companies in India. Hence the study is pertaining to the Indian IT Companies in India. The scope of liquidity is very wide and the study will be based upon accounting information

LITERATURE SURVEY

CHAPTER II – LITERATURE SURVEY

2.1 REVIEW OF LITERATURE

It is mandatory to review the literature available with respect to the area of the study. Liquidity Analysis is a vital area that refers to the ability of a business to realize value in money and pay in cash the obligation that are due. Several studies have been undertaken to analyze liquidity in the corporate sector. In this chapter a brief review of various studies conducted by analysts in the area of liquidity are presented.

Vijayakumar (1996) has studied the short-term liquidity position in twenty eight selected sugar factories in co-operative and private sectors. Adiscriminant analysis has been undertaken to distinguish the good risk companies from poor risk companies based on current and liquidity ratios. Discriminating z scores have been calculated with the help of discriminate function and according to the z scores the companies are ranked in the order of liquidity.

B.H. Desai (1997) has made a Comparative Study of a few cotton mills of Ahmadabad in respect of their liquidity performance, their relationship with profitability, the pattern of financing of current assets and the turnover of working capital.

Chang- Soo- Kim, Mauer and Sheman (1998) in their study, "the determinants of corporate liquidity: Theory and evidence" have predicted the optimal investment in liquidity is increasing the cost of external financing, the variance of future cash flows, and the return on future investment opportunities white it is decreasing in the return differential between the firms physical assets and liquid assets.

Jane and Claire (1998), their study revealed that the relationship between merchandising ratio and traditional ratios are tested and positive correlation between return on assets and merchandising ratio is identified. According to them the lengthening of the Cash Conversion Cycle cannot be sustained without a negative impact on profitability.

Burger and Hamman (1999) in their study on the relationship between the Accounting Sustainable Growth Rate and the Cash flow Sustainable Growth Rate (CFSGR) have found out the significance of CFSGR over the ASGR. CFSGR is defined on the rate at which a Company can grow whilst still maintaining a target cash balance in the balance sheet. They found that ASGR is not affected by non-cash components of working capital, nor by any changes in the non-cash components of working capital, but the CFSGR is affected by these.

Gary.W. Emery (2000) has made a study on sustainable growth for Credit Analysis. He has observed that analysts can sharpen their predictions about companies' future credit condition by making sustainable growth rate analysis as an integral part of routine credit analysis.

Anjan Kumar Ghatak (2001) in his study has started that there is a positive relationship between working capital and sales. According to him, the ideal level of working capital is one that equilibrates return from investment in working capital with the firms' ability to assume risk. He has argued that the type of capital used to finance working capital directly affects the amount rise that the firm assumes and also the opportunity for gain or loss.

Rajeswarie (2002) in her case study of the liquidity management of TamilNadu Cement Corporation Ltd., she has found that the liquidity position of TANCEM is not stable during two financial years.

Satish Chandra (2003) has made a case study on "Trade Credit and Company Liquidity" with special reference to steel Authority Of India Ltd., and Tata Iron and Steel Ltd., to find out if more liquid companies give relatively more net trade credit in squeeze years.

Sankaran (2004) has made a study on performance evaluation of pharmaceutical companies in India. A set of ten companies which comprises of five Indian and five MNC's has been selected for analysis. The financial performance has been analyses with the help of liquidity, profitability and solvency.

Olubunmi and Faleye (2005) in his study on "cash and corporate control", has focused on the takeover deterrence effects of corporate liquidity and suggest the proxy context as an effective alternaive control mechanism.

Adolphus (2006) has made a study entitled "Empirical Survey of corporate liquidity management practices of Nigerian- quoted manufacturing enterprises". The study has been intended to investigate and subsequently improve the capability of corporate finance executives in handling a cute liquidity shortage through optimal cash flow management with in a risk return frame work.

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METHODOLOGY

CHAPTER III - METHODOLOGY

3.1 TYPE OF PROJECT

This project entitled "A study on Cash Flow Sustainable Growth Of Selected IT Companies in India" is a descriptive study based on the published data. These data are analyzed by using important financial and statistical tools, for selected IT Companies to know the liquidity position and it's Cash Flow Sustainable Growth.

3.2 SOURCES OF DATA

The Secondary data used in the study cover a period of five years from 2003-04 to 2007-08. In selecting the sample the official directory and database of the center for monitoring Indian Economy namely 'PROWESS' has been extensively used along with the annual published financial reports of the company and Economic Survey of India.

3.3 SAMPLING METHOD

The database of CMIE has classified the listed companies of IT sector into two Categories via (Computer Software and Information Technology Enabled Services).

There is a completion of 231 companies during the study period. All those companies which have continuous data from the year 2003-04 to 2007-08 are selected and it has resulted in 70 companies. Hence 70 listed companies are shortlisted as sample for the study.

The companies for which the data are not available for more than one year in between, or in the beginning, or at the end of the study period have been dropped. The companies which have been merged have been considered as a single company.

3.4 FRAMEWORK OF ANALYSIS

To analyze the Liquidity Position and the cash flow sustainability of selected IT companies, the following tools and models have been applied:

1. RATIO ANALYSIS:

One of the best tools and analyzing and comparing the time series data of different firms, an extensive use of ratios has been resorted to in the process of analyzing the data. Ratios are computed to study the liquidity measures.

2. MEAN, MEDIAN, STANDARD DEVIATION AND CO-EFFICIENT OF VARIATION:

The five yearly Mean of the liquidity ratio has been calculated to study the variation in the ratios, standard deviation and co-efficient of variation. Median has been used to discriminate the firms into liquid and less liquid groups.

3. NUMERCIAL SCORING SYSTEM:

Composite Liquidity Index has been used to quantity the overall liquidity of firm among the Industry as a whole.

4. CASH FLOW SUSTAINABLE GROWTH RATE MODEL:

This model was prescribed by J.H.Burger and W.D. Hamman. This model focuses on liquidity management based on cash flow. CFSGR is to be computed using the parameters, Profit after Tax, sales and cash conversion cycle.

3.5 LIMITATIONS OF THE STUDY

The study is subject to the following limitations:

1. Some of the companies have to be compulsorily excluded from analysis because of non-availability of data, either due to non-submission of statements or due to their closure/merger/suspension of operations during the study period.

2. The financial statements from which the data have been extracted are historical and quantative in nature. Hence the study incorporates all the limitations that are inherent in the financial statements.

3. Inflationary effects have not been considered in the present study.

4. The study has experienced the limitations of the measures of central tendency.

DATA ANALYSIS & INTERPRETATION

CHAPTER IV – DATA ANALYSIS AND INTERPRETATION

4.1 TESTS OF LIQUIDITY

Liquidity refers to the ability of the firm to augment its future cash flows to cover any unforeseen needs. The Liquidity position of the company is inevitable for its survival. The Liquidity should be also optimum.

The study analyses the Corporate Liquidity by ascertaining the various measures of liquidity. In this chapter an attempt has been made to find out the relationship between liquidity measures and the profitability of the firm.

Traditional Concept of liquidity means the availability of resources to pay off its debts due, whereas the modern concept of liquidity emphasis not only the feature of paying off the debts but also to replace its absolute plant & machinery to give a reasonable returns to its share holders, and also to take advantage of any favourable market situations emerging in the product market segments.

Liquidity is not only merely paying off the debts but also ensuring adequate productivity and profitability with sufficient credit rating and continuous re-engineering Process on the fixed asset, and paying a reasonable dividend for its share holders. Hence the liquidity is needed to support the total operations of the firm.

Thus in this chapter a detailed study has been made to examine liquidity of sample companies considering the various Measures of Liquidity.

Measures of Liquidity are categorized as Traditional and Modern Measures.

4. TRADITIONAL MEASURES

4.1.1 CURRENT RATIO:

It is calculated by dividing the total current assets by the total current liabilities and provisions.

TABLE 4.1.1

Mean Current Ratio Of The Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	8.87	14.05	158.40
2005	8.86	14.52	163.88
2006	10.26	17.72	172.71
2007	12.15	22.96	188.97
2008	16.52	53.95	326.57
Over All Mean	11.33	24.64	202.10

Source: Computed

Table 4.1.1 shows the year wise mean current ratio of the industry. It is observed that the overall mean is 11.33. The general norm for the current ratio is 2:1 but it is cannot be strictly applied to a service industry like IT sector. The average current ratio shows on increasing trend.

4.1.2 QUICK RATIO:

This ratio is a supplementary test to know the ability of business to meet its current obligation. This ratio is computed by comparing liquid assets which is current assets and inventories divided by the total liabilities and provisions.

TABLE 4.1.2

Mean Quick Ratio Of The Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	7.85	12.17	155.03
2005	8.03	13.06	162.64
2006	9.46	16.19	171.14
2007	11.31	21.75	192.31
2008	15.54	52.86	340.15
Over All Mean	10.44	19.21	204.25

Source: Computed

Table 4.1.2 reveals that the overall mean is 10.44. An increasing tendency is observed from the above table. The Co-efficient of variation is found to be very high in the year 2008.

4.1.3 ABSOLUTE LIQUID RATIO:

This ratio is arrived by dividing cash and bank with marketable investments by current liabilities and provisions. This ratio is used because cash and marketable investments are sufficient to cover 50 % of current liabilities only then a good sign of liquidity position prevails.

TABLE 4.1.3

Mean Absolute Liquid Ratio Of The Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	1.85	3.63	196.22
2005	1.51	2.44	161.29
2006	1.94	6.03	310.82
2007	2.97	13.41	415.52
2008	7.52	47.87	636.57
Over All Mean	3.16	14.68	351.34

Source: Computed

It is clear from the table 4.1.3 that the absolute liquid ratio is too high in the year 2088. There is a general increase in the trend except in the year 2005. The co-efficient of variation has found to increase tremendously in the last three years of the study period.

4.1.4 ACCOUNTS RECEIVABLE TURNOVER RATIO:

This ratio is determined by dividing credit sales with average receivables. It measures the velocity of debt collection of a firm. More the number of times the ratio, the greater will be the speed of collection form debtors.

TABLE 4.1.4

Mean Accounts Receivable Turnover Ratio of the Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	2.33	2.26	97.00
2005	1.88	2.31	122.87
2006	1.82	2.01	110.44
2007	1.79	1.98	110.61
2008	1.90	2.21	116.32
Over All Mean	1.94	2.154	111.45

Source: Computed

The mean value is found to be high in the year 2004 and there is a declining trend in the year 2006 and 2007. In the year 2008 the ratio tends to go up.

4.1.5 ACCOUNTS PAYABLE TURNOVER RATIO:

It is calculated by Annual Net Credit Purchase divided by the Average Accounts Payable. This ratio shows the efficiency of management in using the trade credit for financing the current assets. Lower the ratio, higher the dependence on trade credit.

TABLE 4.1.5

Mean Accounts Payable Turnover Ratio of the Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	2.17	3.03	139.63
2005	3.43	8.74	254.81
2006	2.72	3.71	136.40
2007	2.63	4.57	173.76
2008	2.57	5.95	231.52
Over All Mean	2.70	5.20	187.22

Source: Computed

It is inferred from the table 4.1.5 the accounts payable turnover ratio shows the declining trend from the year 2006 to 2008. The co-efficient of variation is high in the year 2005.

4.1.6 WORKING CAPITAL TURNOVER RATIO:

This ratio shows the proficiency of working capital utilization. This ratio is computed by dividing Operating Income with current assets less current liabilities and provisions. Higher the ratio indicates a good proficiency in the utilization of current assets to current sales.

TABLE 4.1.6

Mean Working Capital Turnover Ratio of the Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	1.28	6.78	529.69
2005	1.77	7.24	409.04
2006	3.08	7.60	246.75
2007	1.49	12.98	871.14
2008	1.76	11.47	651.70
Over All Mean	1.88	9.21	541.66

Source: Computed

Table 4.1.6 shows the working capital turnover ratio of the IT industry for the study period 2004 to 2008. There is a wide fluctuation shown during these years. It is very high in the year 2006 and low in the year 2004.

4.1.7 LONG TERM BORROWING TO NET WORKING CAPITAL:

This ratio is to find out the extent of the firms dependence on external long term funds for meeting its working capital requirements. It is found out by dividing long term borrowings by current assets less current liabilities and provisions. A higher ratio indicates an unfavorable situation the firm has to face because of the compulsory obligation of interest payments.

TABLE 4.1.7

Mean Long Term Borrowing To Net Working Capital of the Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	-0.07	1.77	-2528.57
2005	0.15	0.94	626.67
2006	0.29	1.18	406.90
2007	-0.24	2.37	-987.50
2008	-0.05	4.08	8160.00
Over All Mean	-0.05	2.06	-2128.50

Source: Computed

It is clear from the table 4.1.7 the mean value of long term borrowing to net working capital is highly fluctuating during the study period. The Mean value shows a good trend during the year 2005 to 2006. The overall mean of the industry is -0.05.

4.1.8 ACCOUNTS RECEIVABLE TO ACCOUNTS PAYABLE:

This ratio shows the extent to which the credit provided by the firm is financed by the credit supplied by the creditors. An increase in trend shows a satisfactory liquidity position.

TABLE 4.1.8

Mean Accounts Receivable To Accounts Payable of the Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	14.09	25.53	181.19
2005	14.63	27.99	191.32
2006	14.96	30.44	203.48
2007	16.17	40.53	250.65
2008	20.56	75.64	367.90
Over All Mean	16.08	40.02	238.90

Source: Computed

The overall mean of Accounts Receivable to Accounts Payable during the study period is 16.08. The mean value shows an increasing trend during the study period.

4.1.9 RATIO OF CURRENT LIABILITES & PROVISIOS TO GROSS FUND FLOW:

GFF comprises profit after taxation plus the net funds items of the firm. The ratio is calculated by dividing the total current liabilities by the gross funds flow and expressed in years. The lower the ratio the better is the ability of the firm to pay the short term obligations.

TABLE 4.1.9

Mean Ratio of Current Liabilities & Provisions to Gross Fund Flow of the Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	11.07	75.51	682.11
2005	-2.98	21.98	-737.58
2006	0.66	37.83	5731.82
2007	-16.53	122.93	-743.68
2008	-11.72	128.46	-1096.08
Over All Mean	-3.90	77.34	767.31

Source: Computed

The overall mean for the above measure is -3.90. During the years 2005 to 2007 and 2008. Negative values are shown. The table shows wide fluctuating trend during the study period.

MODERN MEASURES OF LIQUIDITY

The Traditional Measures of liquidity are balance sheet measures of liquidity which are static in nature. These measures do not consider the cash flow generating capacity of operations. They ignore the use of any available credit capacity and are subject to manipulation too.

A measure of liquidity for on-going firm is not really dependent on the liquidation value of its assets but rather on the operating cash flow generated. Hence to overcome these limitations of conventional ratio analysis, alternative measures have been developed over a period of time. They are highly dynamic hence they are called as Modern Measures of Liquidity.

4.1.10 NET TRADE CYCLE:

It indicates the number of days for which the working capital is to be mobilized. It provides are easy estimate for additional financing needs with regard to working capital expressed as a function of the project revenue growth.

NTC = Inventory Receivables of current year- advance payments of tax-(Current Liabilities -Share Application)*365/Operating Income.

When the NTC is shorter, higher is the present value of net cash flow generated by the asset and the higher is the value of the firm for its share holders.

TABLE 4.1.10

Mean Net Trade Cycle of the Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	4.88	8.36	171.31
2005	5.84	11.73	200.86
2006	179.49	1379.25	768.43
2007	30.86	203.70	660.08
2008	151.67	1204.54	794.18
Over All Mean	74.54	561.51	518.97

Source: Computed

Table 4.1.10 shows the Net Trade Cycle of the industry. The Mean during the year 2006 shows a very high. It means that more number of days are employed. There is an increasing trend between the year 2004 to 2006 and a sudden decrease in the year 2007.

4.1.11 ADJUSTED CURRENT RATIO:

This ratio is the liquidity version of the current ratio under which each current asset and its quality is weighed based on its nearness to cash.

TABLE 4.1.11

Mean Adjusted Current Ratio of the Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	-1.08	4.67	-432.41
2005	-2.39	10.60	-443.51
2006	-43.58	279.30	-640.89
2007	-9.58	30.71	-320.56
2008	-21.94	104.13	-474.61
Over All Mean	-15.95	85.88	-462.39

Source: Computed

The mean values are negative and a sudden decline in the ratio from the year 2005 to 2006 and a sudden increase in the ratio between the year 2006 to 2007 has been observed.

4.1.12 NET LIQUID BALANCES:

It is a measure that differentiated operational assets from liquid assets. It is found out as cash plus marketable securities less all liquid financial obligations and the current part of long term debt.

A positive Net Liquid Balance would indicate the true liquid surplus available with the firm to finance its working capital requirements. A negative balance would indicate a dependent on short term external funding. The net liquid balance is divided by total assets to find out the relative measures of liquidity.

TABLE 4.1.12

Mean Net Liquid Balance of the Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	18.81	83.64	444.66
2005	39.02	154.18	395.13
2006	56.53	225.19	398.35
2007	79.30	341.14	430.19
2008	88.87	391.15	440.14
Over All Mean	56.50	239.06	421.69

Source: Computed

The overall mean for Net Liquid Balance is 56.50. There is a tremendous increase in the measure during the study period.

4.1.13 OPERATING CASH FLOW TO CURRENT LIABILITIES:

This ratio recognizes the importance of cash flows in meeting the maturiting obligations. Since the liabilities are paid by cash, a Comparison of Operating cash flow to current liabilities is important. The higher the operating cash flow to current liabilities ratio, better is the liquidity of the firms.

TABLE 4.1.13

Mean Operating Cash Flow To Current Liabilities of the Selected IT Companies for the study period 2004 to 2008.

Year	Mean	S.D.	C.V
2004	0.04	1.87	4675.00
2005	0.88	2.88	327.27
2006	1.51	9.04	598.68
2007	-0.51	7.49	-1468.63
2008	1.23	6.02	489.43
Over All Mean	0.63	5.46	924.35

Source: Computed

It is clear from the table 4.1.13 that a high fluctuating trend is shown throughout the study period. The overall mean is 0.63 and the overall co-efficient of variation is 924.35.

4.2 QUANTIFICATION OF LIQUIDITY BASED ON NUMERCIAL SCORING SYSTEM

This system plays an effective role in corporate planning and control as it takes into effect. The important concept of all the ratios which represent the overall aspects of liquidity. Using this index the management of a firm will be able to identify its position in terms of liquidity in the industry. This approach is highly useful for analyzing the financial performance of the corporate sector.

While applying this measure, the liquidity ratios are integrated into a single measure. For this purpose the weights are assigned to them arbitrarily. The weights are maximum being 10 and minimum being 1.

As a second step a scale of these ratios has been devised considering their maximum and minimum values over the study period and dividing the range into 10 equal parts so that the total weights can vary from 10 to 130.

Table 4.2.1 shows the 13 ratios and their respective weights corresponding to different ranges. In order to rank the sample firms in terms of composite liquidity, ratio wise scores are aggregated for each company and the firm getting the highest total score has been ranked as 1, while the firm getting the lowest score has been ranked as 70.

TABLE 4.2.1

Score/ Ratio	1	2	3	4	5	6	7	8	9	10
L1	<=0.5 & >=3.9	0.5 to 3.9	0.70 to 3.70	0.90 to 3.50	1.10 to 3.30	1.30 to 3.10	1.50 to 2.9	1.70 to 2.7	1.9 to 2.5	2.1 to 2.3
L2	<=0 & >=3.1	2.9 to 3.1	2.7 to 2.9	2.5 to 2.7	2.30 to 2.5	2.10 to 2.30	1.9 to 2.1	1.7 to 1.9	1.5 to 1.7	0 to 1.5
L3	<=0.5 & >=1.56	1.49 to 1.56	1.42 to 1.49	1.35 to 1.42	1.28 to 1.35	1.21 to 1.28	1.14 to 1.21	1.07 to 1.14	1.0 to 1.07	0.5 to 1
L4	<=0.45	0.45 to 0.90	0.90 to 1.35	1.35 to 1.80	1.80 to 2.25	2.25 to 2.70	2.70 to 3.15	3.15 to 3.60	3.60 to 4.05	>=4.05
L5	>=3.60	3.20 to 3.60	2.8 to 3.2	2.40 to 2.8	2.0 to 2.40	1.60 to 2.0	1.20 to 1.60	0.80 to 1.20	0.40 to 0.80	<=0.40
L6	<=0.0	0.0 to 0.25	0.25 to 0.75	0.75 to 1.25	1.25 to 1.75	1.75 to 2.25	2.25 to 2.75	2.75 to 3.25	3.25 to 3.75	>=3.75
L7	<=0	>=0.9	0.8 to 0.9	0.6 to 0.8	0.5 to 0.6	0.4 to 0.5	0.3 to 0.4	0.2 to 0.3	0.1 to 0.2	0.0 to 0.1
L8	<=0.5 & >=3.9	0.5 to 3.9	0.70 to 3.70	0.90 to 3.50	1.10 to 3.30	1.30 to 3.10	1.50 to 2.9	1.70 to 2.7	1.9 to 2.5	2.1 to 2.3
L9	<=0.0	>=5.75	5.0 to 5.75	4.25 to 5.0	3.75 to 4.25	3.0 to 3.75	2.25 to 3.0	1.50 to 2.25	0.75 to 1.5	0.0 to 0.75
L10	<=0	>=8	7 to 8	6 to 7	5 to 6	4 to 5	3 to 4	2 to 3	1 to 2	0 to 1
L11	<=0	0 to 0.1	0.1 to 0.2	0.2 to 0.3	0.3 to 0.4	0.4 to 0.5	0.5 to 0.6	0.6 to 0.7	0.7 to 0.8	>=0.8
L12	<=0	0 to 0.3	0.3 to 0.6	0.6 to 0.9	0.9 to 1.2	1.2 to 1.5	1.5 to 1.8	1.8 to 2.1	2.1 to 2.4	>=2.4
L13	=0.10	-0.10 to 0.0	0.0 to 0.10	0.10 to 0.2	0.2 to 0.3	0.3 to 0.4	0.4 to 0.5	0.5 to 0.6	0.6 to 0.7	>=0.7

L1-Current Ratio L4-Accounts Receivable Turnover Ratio L7-Long Term Borrowing/Net Working Capital L10-Net Trade Cycle L13-Net Liquid Balance/Total Assests	L2-Quick Ratio L5-Accounts Payable Turnover Ratio L8-AR/AP L11-Adjusted Current Ratio	L3-Absolute Liquid Ratio L6-Working Capital Turnover Ratio L9-C.L&P/Gross Fund Flow L12-Operating Cash Flow/C.L

4.2.2 COMPOSITE LIQUIDITY INDEX

TABLE 4.2.2
COMPOSITE LIQUIDITY INDEX

Companies	2004	2005	2006	2007	2008	Total	Rank	Liquidity Group (Median= 256.5)
ABM	74	59	53	42	47	275	41	H
ACL	52	53	52	54	54	265	44	H
ASE	59	54	37	32	52	234	52.5	L
ADM	48	56	40	44	51	239	49.5	L
AFT	60	62	58	59	60	299	33	H
AMI	44	44	42	48	33	211	61	L
BRL	53	37	51	42	40	223	55	L
B2B	53	59	60	42	50	264	45	H
CMC	71	76	76	79	69	371	13.5	H
CAL	84	59	55	55	71	324	26	H
CSE	36	41	34	34	34	179	65.5	L
CLI	39	40	35	34	49	197	62	L
CMI	68	64	67	68	60	327	23	H
CRN	52	88	72	73	57	342	18	H
DAS	35	25	41	33	42	176	67	L
ESI	65	60	69	69	79	342	18	H
ESA	32	38	27	40	33	170	68	L
FNT	80	49	59	74	64	326	24	H
FIT	41	64	35	43	54	237	51	L
GTL	78	58	63	65	68	332	22	H
GOL	79	49	78	80	85	371	13.5	H
HEX	59	55	49	84	78	325	25	H
ICS	51	45	35	44	77	252	46	L

Companies	2004	2005	2006	2007	2008	Total	Rank	Liquidity Group (Median= 256.5)
IEC	67	48	38	61	62	276	40	H
ISL	70	65	57	55	38	285	36	H
IFS	53	51	62	55	59	280	38	H
IDS	32	48	47	44	44	215	59	L
INF	83	67	66	90	73	379	11.5	H
IFE	97	72	75	66	84	394	8	H
ISC	69	70	73	58	79	349	15	H
JET	65	76	75	85	87	388	9	H
KLG	43	71	55	67	73	309	29.5	H
KCS	51	37	36	35	36	195	63	L
LEI	32	32	33	34	34	165	69	L
LNS	31	30	28	34	41	164	70	L
MST	68	80	105	101	101	455	2	H
MIT	89	52	61	54	47	303	32	H
MNT	64	63	60	36	48	271	42	H
MPB	77	63	77	73	54	344	16	H
NIT	81	82	78	64	75	380	10	H
NVT	63	63	69	65	54	314	27.5	H
NSE	61	58	66	68	83	336	21	H
OTL	51	29	36	48	57	221	56.5	L
OMT	47	36	36	33	27	179	65.5	L
OIT	67	50	55	47	76	295	34	H
PSI	80	86	68	53	55	342	18	H
PUL	55	52	56	61	57	281	37	H
POL	65	57	64	61	67	314	27.5	H
RSS	54	63	76	63	83	339	20	H
RAM	59	38	30	43	51	221	56.5	L
ROL	57	60	50	41	41	249	47	L

Companies	2004	2005	2006	2007	2008	Total	Rank	Liquidity Group (Median= 256.5)
SRG	39	34	36	44	36	189	64	L
SSI	70	75	47	75	42	309	29.5	H
SIS	78	81	84	83	81	407	7	H
STL	51	59	41	29	34	214	60	L
SOS	81	59	51	44	53	288	35	H
SPS	41	45	44	47	57	234	52.5	L
SVS	53	50	50	36	36	225	54	L
SLS	54	63	45	45	61	268	43	H
TCI	68	73	89	72	77	379	11.5	H
TEL	84	87	78	84	83	416	4	H
TIL	86	74	82	100	94	436	3	H
TML	100	87	69	69	85	410	6	H
TRI	51	43	66	68	79	307	31	H
TGN	41	46	41	41	48	217	58	L
VJL	49	50	52	40	48	239	49.5	L
GMF	87	46	50	45	50	278	39	H
VSL	37	44	53	46	66	246	48	L
WIP	103	92	89	105	99	488	1	H
ZTL	82	72	85	80	94	413	5	H

L-Less Liquid, H-Liquid

Table 4.2.2 shows the year wise composite Index Score and the overall ranking of the sample firms. By applying the median score (256.5) the firms have been divided into two categories namely less liquid and liquid.

The highest Composite Index Score has been (488) secured by (WIP) and the lowest composite index score has been (164) secured by (LNS).

4.3 CASH FLOW SUSTAINABLE GORWTH

4.3.1 INTRODUCTION

This study is focused to make a study on the sustainable growth of cash flow in a business firm. The two core areas of strategic planning of any firm are strategic and financial objectives. Strategic objectives are imperative for the long-term health of a company, while the financial objectives are necessary for short –term acute problems. Both the objectives aim at 'growth' of the company. Strategic objectives consider 'growth' as growth in market share. Financial objectives assume 'growth' as the growth in profitability and growth in turnover.

Growth which is a pre-requisite for survival of a body corporate can be influenced by both internal and external factors. While the external factors like competition, changing demand trends and government policies are divergent and complex, the internal factors viz., financial policies and operating performance levels influence the 'growth' of any firm.

4.3.2 SUSTAINABLITY IN GROWTH

The consistency of a company's growth objectives and its financial policies can be tested by using a concept called sustainable growth. Sustainable Growth Rate (SGR) is the maximum annual percentage increase in sales, that can be achieved based on target operating, debt and dividend payout ratios. It is also called as Accounting Sustainable Growth Rate which implies the rate of growth in sales, assets, debt and equity that can be sustained indefinitely without the management altering the debt to equity relationship, the return on equity performance or the dividend payout rate. The management's ability to manage the growth of the company is an important criteria to make the company a value enhanced one, being differentiated from others.

If the Actual Sales Growth (ASG) of the company exceeds the SGR, the firm will be considered as a rapid growth firm and if the Actual Sales Growth Rate is lesser than the SGR the firm will be considered as a slow growth firm. The SGR can be calculated by using a model prescribed by Robert.C. Higgins namely,

SGR=P*R*A*T where,

P=Profit margin after tax

R= Reinvestment rate (Retention Rate)

A=Asset to equity (Leverage)

T=Turnover of Assets (Asset Turnover Ratio)

It is a powerful tool available to check the consistency between sales growth goals, operating performance and financial objective. According to R.C.Higgins sustainable growth represents the maximum sales or asset growth that a firm can support using both internally generated funds and external funds. Afirm is considered as 'cash sufficient' if the funds (or cash) available to the firm for investments equal the funds required by it's for investment.

A firm has to achieve financial balance by keeping a relationship between funds available and funds required over the years. The sustainable growth model included all the key factors that have a bearing on the cash flow potential of a business, thereby helping the management to focus its attention explicitly on the cash sufficiency issue. A company which is not in equilibrium can either curtail its growth in some segments or can take actions to alter other key variables to restore cash flow equilibrium.

4.3.3 CASH FLOW SUSTAINABLE GROWTH RATE

The sustainable growth rate is ascertained on an accrual basis which does not exactly reflect the cash position of a company. Hence, it becomes essential in the interest of the company, to take cognizance of the sustainable growth of cash flow and its implications on the company's growth and cash position. Cash Flow Sustainable Growth Rate (CFSGR) is defined as the rate at which company can grow while still maintaining a target cash balance in the balance sheet. Though both the SGR and CFSGR may be influenced by the profitability of the company, SGR is not affected by non-cash components of working capital, where as the CFSGR is subject to the change in the non-cash components of working capital.

4.3.4 CASH FLOW SUSTAINABLE GROWTH-A MODEL BASED ON CASH CONVERSION CYCLE

CFSGR focuses on liquidity management which is based on cash flow unlike SGR which reveals the combined effect of fixed management and liquidity management. The traditional growth models consider that the assets and liabilities are a function of turnover but is a result of capital budget and the level of current assets is a function of working capital policy. The cash balance is sensitive to growth rate in sales (all things being equal) which is due to changes in the non-cash components of the working capital. Cash Flow From Operations is equal to profit after taxes minus changes in the non-cash components of working capital. The change in the cash balance is due to change (increase or decrease) in the cash from operations too. The growth rate if a company together with the policy in respect of activity period is very important for the cash balance of a company. Growth in sales may lead to decrease in the cash balance though a company can increase its operating efficiency. A company can grow at a high rate without negatively affecting its cash balanced, by decreasing its inventory and / debtor's period and increasing its creditor's period. Thus the change in the non-cash components of working capital is a function of cash conversion cycle and the growth in sales.

Changes in the non-cash components of working capital = (Sales per month of the current year * Cash Conversion Cycle of the current year) - (sales per month of the previous year * Cash conversion cycle of the previous year).

If the cash balance has to remain constant, the sales have to grow at a rate when the profit tax equals the increase in non-cash components of working capital i.e.

PAT = Increase in non-cash components in working capital. If PAT, is the profit after tax of the current year, PAT t-1 (1+G) = sales t-1 (1+G)/12 (CCC t) – sales t-1/12 (CCC t-1)]

gPat t-1 + (sales t-1/12 (CCC t-1) - (sales t-1/12 (CCC t)/(sales t-1 (CCC t)- PAT t-1)]

The 'g' is the Cash Flow Sustainable Growth Rate (CFSGR), which is the growth of sales at which a constant cash balance in the balance sheet in the balance sheet can be studied.

TABLE 4.3.1

Overall Mean of CFSGR for the study period 2004-2008

LIQUIDITY	LESS LIQUID	-193.57	2244.67
	LIQUID	-325.93	5688.34

Source: Computed

It is revealed from the above table that overall mean of less liquid companies is -193.57 and that of liquid companies is -325.93.

TABLE 4.3.2

Mean CFSGR of the Industry for the study period 2004-2008

Year	Mean	S.D.	C.V
2004	-72.86	945.35	-1297.49
2005	-328.99	2241.83	-681.42
2006	-43.59	655.97	-1504.86
2007	39.31	1181.75	3006.23
2008	45.83	2819.60	6152.30

Source: Computed

Table 4.3.2 reveals the mean CFSGR of the industry. The mean during the first three years of the study period shows a fluctuating trend with negative values. The CFSGR during the later part of the study shows a positive trend with a sign of growth.

CONCLUSION

CHAPTER V- CONCLUSIONS

5.1 SUMMARY OF FINDINGS

- For analyzing the liquidity position, 13 important ratios have been employed. The current ratio, Quick Ratio and Absolute Liquid Ratio have been calculated for the seleceted firms. The general norm for the current ratio (2:1) and liquid ratio (1:1) cannot be kept as the benchmark for the IT Industry as it is a service sector. Moreover IT Industry does not block its capital in inventories. All sample firms have shown a high CR, QR, ALR.

- The Accounts Receivable Turnover Ratio has shown an overall mean of 1.94. The Accounts Payable Turnover Ratio has shown a fluctuating trend.

- The Working Capital Turnover Ratio has been very high in the year 2006 (3.08) and low in the year 2004 (1.28). It has shown an increasing trend in the first 3 years and a declining trend in the fourth year, thereafter it again increase.

- Among the leverage measures of liquidity, long term borrowings to net working capital reveals a fluctuating trend during the study period. The ratio of AR to AP has shown an increasing trend between the years 2004-2008. The ratio of current liabilities and provisions to gross funds has show a wide fluctuating trend during the study period.

- Under the modern measures of liquidity, the Net Trade Cycle has been highest during the year 2006, and lowest in the year 2004. A refined measure of current ratio called Adjusted Current Ratio has been negative during the entire study period. The Net Liquid Balance, which differentiate operational assets from liquid assets, has shown a tremendous increase during the study period. Thus it is clearly evident that the sample firms has sufficient liquid assets to pay the liquid obligation.

- The operating cash flow to current liabilities ratio recognizes the importance of cash flows in meeting the maturing obligation. The ratio has been high in the year 2006, which means that the cash flow from operations has been large to payoff substantial portion of current liabilities.

- Composite Liquidity Index has been computed based on Numercial Scoring System. Weights have been assigned to each ratio in the range of 1 to 10, and thereby total liquidity score of each firm has been arrived at. The median of liquidity group has been (256.5) and it has been found that the company (WIP) has secured the highest composite score of (488) and the lowest composite score of (164) which has been secured by the company (LNS).

- The sustainability of the selected firms based on cash sufficiency has been ascertained by computing CFSGR. The CFSGR for the study period has been generally inconsistent. The overall mean shows negative values for less liquid firms and liquid firms.

  The CFSGR has shown positive values during the year 2007 and 2008.

5.2 SUGGESSTIONS

The study has resulted in the following suggestions for the improvement of liquidity for cash flow sustainable growth.

- Since liquidity is influenced by profitability of a concern, proper steps can be taken to realize the profits in cash quickly.

- Effective strategies can be adopted and modified suitably in order to accelerate cash flows and the productive use of the same, to maximize the returns.

- Good liquidity management portfolios can be designed to meet the short term cash needs of the firm.

- More thrust can be given to Net Trade Cycle. The firm install good collection mechanism to speed up cash inflows.

- Determination of CFSGR by the firm on an individual basis and their use as a guide in their strategic and financial planning helps to accomplish the objectives.

5.3 SCOPE FOR FURTHER RESEARCH

The current study has provided a 'birds' eye view on the problems of IT sector in the issue of liquidity and a sustainable growth. IT has tremendous information provided for furthering the scope of study. Some of the crucial areas the study could be conducted are

- ❖ Extrapolation of factors that lead towards cash insolvency in any industry.
- ❖ Making a comparative analysis between different industries to exhibit the changes in corporate liquidity.
- ❖ For service sector Net Trade Cycle can be used in lieu of cash conversion cycle.

APPENDIX

APPENDIX

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