WORKING CAPITAL MANAGEMENT AND PROFITABILITY: AN EMPIRICAL ANALYSIS OF INFORMATION TECHNOLOGY SECTOR IN INDIA

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ABSTRACT

Purpose: The paper seeks to empirically investigate the relationship between liquidity and profitability. It also examines the impact of working capital management on profitability and the impact of investment & financing policies on profitability and risk.

Design/Methodology/Approach: The analysis is based on 14 companies of Information Technology Sector (as per BSE 200 index) in India in respect of whom data from 2000-2010 has been taken from CMIE database. Karl Pearson correlation and regression analysis has been used.

Findings: It was found that there is a strong significant relationship between the measures of liquidity and corporate profitability. The regression analysis reveals that there is a negative relationship between profitability and accounts receivables days, inventory days and cash conversion cycle but a positive relationship between profitability and accounts payables days. There is a negative relationship between degree of aggressiveness of investment policy and accounting measures of returns. However there is a positive relationship between degree of aggressiveness of financing policy and return. The results also indicate a positive relationship between the degree of aggressiveness of investment policy & financing policy and relative risk.

Practical Implications: The findings suggest that managers can increase profitability by efficiently managing liquidity. Managers can create value for their firms by reducing the days inventory is held, days of accounts receivables and reducing cash conversion cycle.

Originality/Value: The paper addresses gap in literature relating to working capital management of Indian companies.

KEYWORDS: Liquidity, Profitability, Working Capital Management, Investment Policy, Financing Policy, Return on Assets, Return on Equity

INTRODUCTION

Information technology (IT) industry in India has played a key role in putting India on the global map. It has been one of the most significant growth contributors for the Indian economy. IT/ ITeS industry has led India’s economic growth and this sector's contribution to the national GDP has risen from 1.2 per cent in 1997-98 to an estimated 7.5 per cent in 2011-12 (Nasscom). The industry has played a significant role in transforming India’s image from a slow moving bureaucratic economy to a land of innovative entrepreneurs and a global player in providing world class technology solutions and business services. The industry has helped India transform from a rural and agriculture-based economy to a knowledge based economy.
Information Technology has made possible information access at gigabit speeds. It has made tremendous impact on the lives of millions of people who are poor, marginalized and living in rural and far flung topographies. Internet has made revolutionary changes with possibilities of e-government measures like e-health, e-education, e-agriculture, etc. Today, whether its filing Income Tax returns or applying for passports online or railway e-ticketing, it just need few clicks of the mouse. India’s IT potential is on a steady march towards global competitiveness, improving defence capabilities and meeting up energy and environmental challenges amongst others.

Today IT and ITeS sectors lead the economic growth in terms of employment, export promotion, revenue generation and standards of living. As per NASSCOM estimates, IT/ITeS sector (excluding hardware) revenues are estimated at USD 87.6 billion in FY 2011-12; and the industry is expected to grow by 19 per cent during FY 2012-13. By 2015, IT sector is expected to generate revenues of USD 130 billion (NASSCOM) which will create a transformational impact on the overall economy. The market size of the industry is expected to rise to USD 225 billion by 2020 considering India’s competitive position, growing demand for exports, Government policy support, and increasing global footprint(NASSCOM)

The IT/ITeS sector has led to employment opportunities, both direct and indirect, of nearly 2.8 million and around 8.9 million respectively. This growth is expected to increase to more than 14 million (direct and indirect) by 2015 and to around 30 million by 2030. As per the Economic Survey 2011-12, the IT/ITeS industries has added 7.96 lakh jobs in one year, in the period ending September 2011. According to NASSCOM, employee base in the rural areas is expected to increase by over 10 times by 2013-14, compared to 5000 in 2009-10.

In the twelfth Five Year Plan (2012-17), the Department of Information Technology proposes to strengthen and extend the existing core infrastructure projects to provide more horizontal connectivity, build redundancy connectivity, undertake energy audits of State Data Centers (SDCs) etc. The core infrastructure including fibre optic based connectivity will be leveraged and additional 150,000 Common Service Centres (CSCs) will be setup to create the right Governance and service delivery ecosystem at the Panchayats.

Management of working capital is an important component of corporate financial management because it directly affects the profitability of the firms. Empirical results show that ineffective management of working capital is one of the important factors causing industrial sickness (Yadav, 1986). Modern Financial management aims at reducing the level of current assets without ignoring the risk of stock outs (Bhattacharya, 1997). Efficient management of working capital is, thus, an important indicator of sound health of an organization which requires reduction of unnecessary blocking of capital in order to bring down the cost of financing. However, short-term assets and liabilities are important components of total assets and needs to be carefully analysed. Management of these short-term assets and liabilities warrants a careful investigation since the working capital management plays an important role for the firm’s profitability and risk as well as its value (Smith 1980). The optimal level of working capital is determined to a large extent by the methods adopted for the management of current assets and liabilities

In the light of the above, an attempt is made in this study to look into the working capital management of companies in Information Technology Sector in India.

The Paper is Organized as Follows

In section II, deals with a brief review of literature on the management of working capital. Section III covers the objectives, database and methodology adopted in this study; the empirical analyses are presented in section IV and conclusions are reported in section V.
A significant portion of financial research is concerned with the management of working capital. This issue has been extensively investigated at both conceptual and empirical levels. Some of the brief reviews are presented below.

Working capital management, which deals with the management of current assets and current liabilities, is very important in corporate finance because it directly affects the profitability and liquidity of the firm (Appuhami, 2008; Christopher and Kamalavalli, 2009; Dash and Ravipatti, 2009; Deloof, 2003; Eljelly, 2004; Raheman and Nasr, 2007). The purpose of working capital management is to manage the firm’s current assets as to maintain a desired balance between profitability and liquidity (Ricci and Vito, 2000). Shin and Soenen (1998) found that efficient working capital management is an integral component of the overall corporate strategy towards creating shareholder value.

Management of working capital is essential as it has a direct impact on profitability of the company (Rajesh & Reddy, 2011). It is crucial for all businesses to better handle the whole working capital cycle, and the drivers behind it. Working capital management is a key issue for any business's survival and sustainability. Working capital is an important issue during financial decision making since its being a part of investment in asset that requires appropriate financing investment.

Working capital management affects profitability of the firm, its risk, thus its value (Smith, 1980). In other words, efficient management of working capital is an important component of the general strategy aiming at increasing the market value (Howorth & Westhead, 2003; Deloof, 2003; Afza & Nazir, 2007). Extensive empirical research on WCM was carried out worldwide by the academia in order to hypothesize firms’ performance (example, Shin and Soenen, 1998; Narware, 2004; Lazaridis and Tryfonidis, 2006; Padachi, 2006; Sayaduzzaman, 2006; Afza and Nazir, 2007; Chowdhury and Amin, 2007; Ganesan, 2007; Raheman and Nasr, 2007; Christopher and Kamalavalli, 2009; Uyar, 2009; Azarberahman and Azarberahman, 2011; Chary et al, 2011; Hussain et al, 2012; Kieschnick, Laplante and Moussawi, 2012).

Ganesan, (2007) found evidence that even though “day’s working capital” is negatively related to the profitability, it is not significantly impacting the profitability of firms in telecommunication equipment industry. Chowdhury and Amin (2007) found positive correlations between WCM with financial performance of the Pharmaceutical industry in Bangladesh. Narware (2004) signifies that working capital management and profitability of the company disclosed both negative and positive association. He also found evidence that increase in the profitability of a company was less than the proportion to decrease in working capital.

The study done by Raheman & Nasr, (2007) demonstrates a strong negative relationship exists between variables of the working capital management represents by liquidity and debt with profitability of the firm. Afza and Nazir (2007) found a negative relationship between the profitability measures of firms and degree of aggressiveness on working capital investment and financing policies.

Padachi (2006) founds that high investment in inventories and receivables is associated with lower profitability. Christopher and Kamalavalli, (2009) signify that working capital component negatively influence profitability. Lazaridis and Tryfonidis (2006) that showed there is a statistical significance between profitability, measured through gross operating profit, and the cash conversion cycle.

In the studies conducted by Shin & Soenen (1998), Deloof (2003), Raheman & Nasr (2007) and Teruel & Solano (2007) it was concluded that there is a negative relationship between profitability of a firm and cash conversion cycle.
SECTION III
OBJECTIVES

- To study the relationship between liquidity and profitability of the firms in Information Technology sector.
- To study the impact of working capital management on profitability.
- To study the impact of working capital investment and financing policies on profitability and risk.

METHODOLOGY

- Relationship between liquidity and profitability

The Following Parameters Have Been Used for Liquidity

- Current Ratio
- Quick Ratio
- Acid Test Ratio
- Cash Conversion Efficiency
- Working Capital ratio
- Current Assets to Total assets
- Current Assets to Sales

The Following Parameters Have Been Used for Profitability

- Return on Capital Employed
- Return on Total Assets
- Return on Equity
- Income to Total Assets
- Income to Sales

Karl Pearson’s Correlation shall be calculated between each of these factors and tested at 0.5% and 0.05% level of significance.

- Impact of working capital management on profitability

Regression analysis has been used to investigate the impact of Working Capital Management on corporate profitability. The various parameters used for the study are:

**Dependent Variable**

ROA (Return on Total Assets.)

**Independent Variables**

AR Days (Number of Days Accounts Receivable)  
INV Days (Number of Days Inventory)  
AP Days (Number of Days Accounts Payable)  
CCC (Cash Conversion Cycle.)

**Control Variable**

Size f (Size of the firm i.e logarithm of assets)  
GR Sales (Growth in Sales i.e. (Sales1-Sales0)/ Sales0)  
Size S (Size of Sales i.e. logarithm of sales)
Debt (Financial Debt Ratio i.e Debt / Total assets)
CATA (Current Assets to Total assets)
CLTL (Current Liabilities to Total Liabilities )
CATR (Current Assets Turnover Ratio)

The following regression equations have been developed.

Regression equation 1
\[ \text{ROA}_t = \beta_0 + \beta_1 \text{AR Days}_t + \beta_2 \text{Size}_t + \beta_3 \text{GR Sales}_t + \beta_4 \text{Sales S}_t + \beta_5 \text{Debt}_t + \beta_6 \text{CATA}_t + \beta_7 \text{CLTL}_t + \beta_8 \text{CATR}_t + \epsilon_t \]

Regression Equation 2
\[ \text{ROA}_t = \beta_0 + \beta_1 \text{INV Days}_t + \beta_2 \text{Size}_t + \beta_3 \text{GR Sales}_t + \beta_4 \text{Sales S}_t + \beta_5 \text{Debt}_t + \beta_6 \text{CATA}_t + \beta_7 \text{CLTL}_t + \beta_8 \text{CATR}_t + \epsilon_t \]

Regression Equation 3
\[ \text{ROA}_t = \beta_0 + \beta_1 \text{AP Days}_t + \beta_2 \text{Size}_t + \beta_3 \text{GR Sales}_t + \beta_4 \text{Sales S}_t + \beta_5 \text{Debt}_t + \beta_6 \text{CATA}_t + \beta_7 \text{CLTL}_t + \beta_8 \text{CATR}_t + \epsilon_t \]

Regression Equation 4
\[ \text{ROA}_t = \beta_0 + \beta_1 \text{CCC}_t + \beta_2 \text{Size}_t + \beta_3 \text{GR Sales}_t + \beta_4 \text{Sales S}_t + \beta_5 \text{Debt}_t + \beta_6 \text{CATA}_t + \beta_7 \text{CLTL}_t + \beta_8 \text{CATR}_t + \epsilon_t \]

The impact of Investment and financing policies on profitability and risk

The following regression equations have been used to study the impact on profitability

Regression Equation 5
\[ \text{ROA} = \alpha + \beta_1 \left( \frac{\text{TCA}}{\text{TA}} \right)_t + \beta_2 \left( \frac{\text{TCL}}{\text{TA}} \right)_t + \epsilon \]

Regression Equation 6
\[ \text{ROE} = \alpha + \beta_1 \left( \frac{\text{TCA}}{\text{TA}} \right)_t + \beta_2 \left( \frac{\text{TCL}}{\text{TA}} \right)_t + \epsilon \]

Where
- \( \text{ROA} \) = Return on Total Assets
- \( \text{ROE} \) = Return on Equity

\( \frac{\text{TCA}}{\text{TA}} \)_t = \text{Investment policy i.e Total Current Assets to Total Assets Ratio of Firm}_t \text{ for time period } t

\( \frac{\text{TCL}}{\text{TA}} \)_t = \text{Financing Policy i.e Total Current Liabilities to Total Assets Ratio of Firm}_t \text{ for time period } t

\( \alpha \) = intercept

\( \epsilon \) = error term of the model

The impact of Working capital management and Financing Policies on relative risk has been measured by following regression equations

Regression Equation 7
\[ \text{Standard Deviation}_\text{Sales}_t = \alpha + \beta_1 \left( \frac{\text{TCA}}{\text{TA}} \right)_t + \beta_2 \left( \frac{\text{TCL}}{\text{TA}} \right)_t + \epsilon \]

Regression Equation 8
\[ \text{Standard Deviation}_\text{ROA}_t = \alpha + \beta_1 \left( \frac{\text{TCA}}{\text{TA}} \right)_t + \beta_2 \left( \frac{\text{TCL}}{\text{TA}} \right)_t + \epsilon \]

Regression Equation 9
\[ \text{Standard Deviation}_\text{ROE}_t = \alpha + \beta_1 \left( \frac{\text{TCA}}{\text{TA}} \right)_t + \beta_2 \left( \frac{\text{TCL}}{\text{TA}} \right)_t + \epsilon \]

Where
- Standard Deviation represents the risk of the Firm.
DATA BASE

The present study is based on working capital performance of companies in Information Technology sector in India. The study has included 14 companies (as per BSE 200 companies) in the Information Technology sector, in respect of which data for 10 years i.e. from the year 2000-2001 to 2009-2010 has been taken.

The data has been taken from the PROWESS database of Centre for Monitoring Indian Economy. The analysis has been done by using SPSS 17.0 software package.

SECTION IV

EMPIRICAL ANALYSIS

Relationship between Liquidity and Profitability

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<td>-.183</td>
<td>-.151</td>
<td>-.299</td>
<td>-.375</td>
<td>-.431</td>
<td>.785</td>
<td>.717</td>
<td>.698</td>
<td>1</td>
<td>-.177</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

In the IT sector (Table 1) Current Ratio has negative correlation coefficient of -.044 with Return on Capital Employed, -.013 with Return on Total Assets, -0.062 with Return on Equity and a significant negative coefficient of -.204 with Income to Total Assets.

Quick ratio as well as Acid test ratio also has negative correlation coefficient of -.127 and -.183(significant at .05%) with Income to Total Assets. This means that efficient liquidity management increases profitability, as there is a negative relationship between the measures of liquidity management and profitability variable (Bhunia and Khan, 2011).

Working capital Ratio has significant negative relation of -.299(significant at .01%) with Income to Total Assets and -.379(significant at .01%) with Income to Sales. Current Assets to Total Assets have significant positive relation with all profitability parameters under study while it has significant negative relation with Income to Sales.

The results validate the work of Shin and Soenen(1998), Deloof (2003), Azarberahman and Azarberahman (2011) who found a strong significant relationship between the measures of liquidity and corporate profitability. Their findings suggest that managers can increase profitability by efficiently managing liquidity.
Impact of Working Capital Management on Profitability

Table 2: Impact of Working Capital Management on Profitability: Regression Equation 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression Coefficient</th>
<th>Standard Error of Regression Coefficient</th>
<th>‘t’ Value</th>
<th>Sign t</th>
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</thead>
<tbody>
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<td>AR days</td>
<td>-0.004</td>
<td>0.001</td>
<td>-3.21</td>
<td>.002</td>
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<tr>
<td>Size f</td>
<td>7.86</td>
<td>4.503</td>
<td>1.745</td>
<td>.084</td>
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<td>GR Sales</td>
<td>0.003</td>
<td>0.004</td>
<td>0.734</td>
<td>.464</td>
</tr>
<tr>
<td>Size S</td>
<td>-2.671</td>
<td>3.846</td>
<td>-0.694</td>
<td>.489</td>
</tr>
<tr>
<td>Debt</td>
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<td>8.542</td>
<td>0.481</td>
<td>.631</td>
</tr>
<tr>
<td>CATA</td>
<td>15.888</td>
<td>3.835</td>
<td>4.143</td>
<td>.000</td>
</tr>
<tr>
<td>CLTL</td>
<td>-22.613</td>
<td>10.125</td>
<td>-2.233</td>
<td>.027</td>
</tr>
<tr>
<td>CATR</td>
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<td>1.809</td>
<td>4.491</td>
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</tr>
<tr>
<td>Constant</td>
<td>-12.938</td>
<td>7.825</td>
<td>-1.654</td>
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Multiple R = .675  \( R^2 = .456 \)  \( \text{Adj R}^2 = .419 \)  \( \text{SE of R} = 11.855 \)

Table 2 shows that there is a negative relationship between accounts receivables days and profitability. This means that managers of this sector can increase the profitability of their firms by -.004 units by increasing the accounts receivables by one unit. This suggests that firm can improve their profitability by reducing the number of accounts receivables days. Consistent with Lazaridis and Tryfonidis (2006) findings this suggests that managers can improve their profitability by reducing the credit period given to the customers Stringent credit extension to debtors can facilitate prompt payments thus making timely availability of cash for satisfying other working capital needs. This makes the managers less reliant on external financing. The other variables of the equation a positive relationship between profitability and size of firm, growth of sales, current assets to total assets and current assets turnover ratio and a negative relationship between profitability & size of sales as measured by natural logarithm of sales, debt, current liabilities to total liabilities ratio. The multiple correlation coefficients are .675 and adjusted \( R^2 \) is .419.

Table 3: Impact of Working Capital Management on Profitability: Regression Equation 2

<table>
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<tr>
<th>Variable</th>
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<td>8.013</td>
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<td>GR Sales</td>
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<td>8.119</td>
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<td>.137</td>
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Multiple R = .645  \( R^2 = .416 \)  \( \text{Adj R}^2 = .376 \)  \( \text{SE of R} = 12.287 \)

Table 3 shows the results of regression equation 2 which shows that there is a negative relationship between inventory days and profitability. Increase in one unit of inventory days increases the profitability of the organisation by -.002 units. The analysis suggests that managers can increase the profitability of the organisations by reducing the number of days inventory is held in the organisation. This shows quick movement of inventory in the firms and saving the firm from obsolescence cost and losses due to pilferage of inventory.
The results are however not consistent with some of the earlier studies by Lazaridis & Tryfondis (2006), Padachi (2006) and Mathuva (2010). The other variables of the equation a positive relationship between profitability and size of firm, growth of sales, current assets to total assets and current assets turnover ratio and a negative relationship between profitability & size of sales as measured by natural logarithm of sales, debt, current liabilities to total liabilities ratio. The multiple correlation coefficients are .645 and adjusted $R^2$ is .376.

Table 4 shows that there is positive relationship between days accounts payables and profitability as increase in one unit of days accounts payables results in 7.137 units of increase in profitability. Contrary to the results of Deloof (2003) and Raheman & Nazr (2007) the results of the information technology sector reveal that more profitable firms wait longer to pay their bills. The results of other variables of the equation a positive relationship between profitability and size of firm as measured by natural logarithm of assets, growth of sales, current assets to total assets ratio and current assets turnover ratio and a negative relationship between size of sales as represented by logarithm of sales, debt and current liabilities to total liabilities ratio. The multiple correlation coefficients are .639 and adjusted $R^2$ is .369.

Table 4: Impact of Working Capital Management on Profitability: Regression Equation 3

<table>
<thead>
<tr>
<th>Variable</th>
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<td>0.004</td>
<td>0.791</td>
<td>.430</td>
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<tr>
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<td>-0.630</td>
<td>.530</td>
</tr>
<tr>
<td>Debt</td>
<td>-9.478</td>
<td>7.955</td>
<td>-1.192</td>
<td>.236</td>
</tr>
<tr>
<td>CATA</td>
<td>16.836</td>
<td>4.151</td>
<td>4.056</td>
<td>.000</td>
</tr>
<tr>
<td>CLTL</td>
<td>-18.135</td>
<td>10.662</td>
<td>-1.701</td>
<td>.092</td>
</tr>
<tr>
<td>CATR</td>
<td>8.021</td>
<td>1.972</td>
<td>4.067</td>
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</tr>
<tr>
<td>Constant</td>
<td>-10.838</td>
<td>8.686</td>
<td>-1.248</td>
<td>.215</td>
</tr>
<tr>
<td>Multiple R= .639</td>
<td>$R^2 = .409$</td>
<td>Adj $R^2 = .369$</td>
<td>SE of R= 12.360</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 shows that there is a negative relationship between cash conversion cycle and profitability as increase in one unit of cash conversion cycle results in -7.219 units of increase in profitability. The results are consistent with earlier studies like those done by Uyar (2009), Martínez-Solano and García-Teruel (2006), and Jose, Lancaster and Stevens (1996), Shin and Soenen (1998), Lazaridis and Tryfonidis (2006), and Raheman and Nasr (2007) which indicate an inverse relation between CCC with profitability of firms. The results of other variables of the equation a positive relationship between profitability and size of firm as measured by natural logarithm of assets, growth of sales, current assets to total assets ratio, current assets turnover ratio and a negative relationship between size of sales as represented by logarithm of sales, debt and current liabilities to total liabilities ratio. The multiple correlation coefficients are .639 and adjusted $R^2$ is .369.

Table 5: Impact of Working Capital Management on Profitability: Regression Equation 4

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression Coefficient</th>
<th>Standard Error</th>
<th>'t' Value</th>
<th>Sign t</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCC</td>
<td>-7.21</td>
<td>.000</td>
<td>-0.178</td>
<td>.859</td>
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<tr>
<td>Size f</td>
<td>7.245</td>
<td>5.607</td>
<td>1.292</td>
<td>.199</td>
</tr>
<tr>
<td>GR Sales</td>
<td>0.003</td>
<td>0.004</td>
<td>0.792</td>
<td>.430</td>
</tr>
<tr>
<td>Size S</td>
<td>-3.155</td>
<td>5.017</td>
<td>-0.629</td>
<td>.531</td>
</tr>
<tr>
<td>Debt</td>
<td>-9.482</td>
<td>7.955</td>
<td>-1.192</td>
<td>.236</td>
</tr>
<tr>
<td>CATA</td>
<td>16.833</td>
<td>4.151</td>
<td>4.056</td>
<td>.000</td>
</tr>
</tbody>
</table>
Working Capital Management and Profitability: An Empirical Analysis of Information Technology Sector in India

Table 5: Contd.,

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression Coefficient (β)</th>
<th>'t' Value</th>
<th>Sign t</th>
<th>Regression Coefficient (β)</th>
<th>'t' Value</th>
<th>Sign t</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLTL</td>
<td>-18.139</td>
<td>10.662</td>
<td>-1.701</td>
<td>.092</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CATR</td>
<td>8.019</td>
<td>1.972</td>
<td>4.067</td>
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</tr>
<tr>
<td>Constant</td>
<td>-10.832</td>
<td>8.686</td>
<td>-1.247</td>
<td>.215</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Multiple R=.639 R² = .409 Adj R² = .369 SE of R = 12.360

Impact of Working Capital Investment and Financing Policies on Profitability and Risk

Table 6 shows that there is negative relationship between degree of aggressiveness of investment policy and return on assets. This means that as TCA/TA increases, the relative degree of aggressiveness of investment policy decreases and return on assets increases by 12.39 units.

The positive β coefficient of TCL/TA points out that as TCL/TA increases the relative degree of aggressiveness of financing policy increases and return on assets also increases by 3.83 units. The results of regression equation 6 where return on equity is dependent variable with similar independent variables also show a similar result. As TCA/TA increases, the relative degree of aggressiveness of investment policy decreases and return on equity increases by 14.25 units. Similarly, the positive β coefficient of TCL/TA points out that as TCL/TA increases the relative degree of aggressiveness of financing policy increases and return on equity also increases by 16.23 units.

The results of regression equation 5&6 of the Information Technology sector show a negative relationship between degree of aggressiveness of investment policy and accounting measures of returns i.e. return on assets and return on equity. However there is a positive relationship between degree of aggressiveness of financing policy and accounting measures of returns i.e return on assets and return on equity.

Table 6: Impact of Investment and Financing Policies on Profitability

<table>
<thead>
<tr>
<th>Variable</th>
<th>ROA</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCA/TA</td>
<td>12.394</td>
<td>14.254</td>
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<tr>
<td>TCL/TA</td>
<td>3.835</td>
<td>16.231</td>
</tr>
<tr>
<td>Constant</td>
<td>14.182</td>
<td>19.415</td>
</tr>
</tbody>
</table>

Multiple R=.357 R² = .128 Adj R² = .114 Multiple R=.283 R² = .080 AdjR² = .066

Table 7: Impact of Investment and Financing Policy on Risk

<table>
<thead>
<tr>
<th>Variable</th>
<th>SD Sales</th>
<th>SD ROA</th>
<th>SD ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCA/TA</td>
<td>23.53</td>
<td>19.25</td>
<td>.080</td>
</tr>
<tr>
<td>TCL/TA</td>
<td>12.05</td>
<td>3.846</td>
<td>.003</td>
</tr>
<tr>
<td>Constant</td>
<td>-13.11</td>
<td>1.16</td>
<td>.270</td>
</tr>
</tbody>
</table>

Multiple R=.777 R² = .604 Adj R²=.532 Multiple R=.582 R² = .39 Adj R²=.219 Multiple R=.603 R² = .362 AdjR² = .246

Table 7 shows the impact of investment & financing policies on the risk of the Information Technology Sector. The results of regression equation 7 show a negative relationship between the degree of aggressiveness of investment policy and relative risk of variation in sales. As TCA/TA increases the degree of aggressiveness of investment policy decreases and relative risk of variation in sales increases as shown by β coefficient of 23.53. The positive β coefficient of TCL/TA shows that as TCL/TA increases the degree of aggressiveness of financing policy increases and risk of variation
in sales also increases by 12.05 units. This thus shows a positive relationship between financing policy and risk of variation in sales. The results of regression equation 8 shows a positive relationship between the degree of aggressiveness of investment policy and relative risk of variation in return on assets. As TCA/TA increases the degree of aggressiveness of investment policy decreases and relative risk of variation in return on assets decreases as shown by β coefficient of -5.05. The positive β coefficient of TCL/TA shows that as the degree of aggressiveness of financing policy increases and risk of variation in return on assets also increases. This thus shows a positive relationship between financing policy and risk of variation in return on assets. The results of regression equation 9 show similar results for investment policy as well as financing policy. Thus regression equations 8&9 both indicate a positive relationship between the degree of aggressiveness of investment policy & financing policy and relative risk of variation in return on assets & equity.

SECTION V
CONCLUSIONS

The results of liquidity analysis found a strong significant relationship between the measures of liquidity and corporate profitability. The findings suggest that managers can increase profitability by efficiently managing liquidity. The results of regression analysis reveals that there is a negative relationship between profitability and accounts receivables days, inventory days and cash conversion cycle but a positive relationship between profitability and accounts payables days. Thus managers can create value for their firms by reducing the days inventory is held, days of accounts receivables and reducing cash conversion cycle.

The empirical analysis further finds that there is a negative relationship between degree of aggressiveness of investment policy and accounting measures of returns i.e return on assets and return on equity. However there is a positive relationship between degree of aggressiveness of financing policy and accounting measures of returns i.e return on assets and return on equity. The results also indicate a positive relationship between the degree of aggressiveness of investment policy & financing policy and relative risk of variation in return on assets & equity.

REFERENCES


