Impact of Aggressive and Conservative Working Capital Management Policy on Firms Profitability

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Abstract
The corporate finance has traditionally focused on the study of long-term financial decisions, particularly investments, capital structure, dividends and company valuation decisions. However, short-term assets and liabilities are important components of total assets and total liabilities. Management of these short term assets and liabilities required careful investigation since the working capital lays an important role for the firm profitability. It required continuous monitoring to maintain proper level in various components of working capital i.e. receivables, payables and inventory etc. The present study investigates the relationship between working capital management and firm profitability. Using the data set for a period of 2005-2013, the impact of aggressive working capital investment and financial policies has been evaluated using return on assets and Tobin’s q. The variables that were used in this study for the measurement of working capital management are return on asset, TCA/TA, size, growth, financial leverage, real GDP, TCL/TA and Tobin’s q. The companies can create value if they adopt an aggressive towards working capital investment and conservative towards working capital financing policies.

Keywords: degree of aggressive/conservative, working capital investment/finance policies, return on assets, Tobin’s q, profitability

Introduction
The purpose of this study is find out the company are using aggressive or Conservative working capital. In corporate finance is focused on long term financial decisions, capital structure, dividends, and investments decisions. The working capital means amount of resources that a firm required to covers cost and expenses. Short term assets and liabilities are important components in total assets. Working capital play important role in a firm profitability and also risk as well.

In a broader spectrum, from the perspective of a Chief Financial Officer (CFO), working capital management is a simple and straightforward concept of ensuring the ability of the organization to fund the difference between short-term assets and short-term liabilities. The effective management of working capital is very important because it affects the profitability and liquidity of the firm. Therefore, firms try to keep an optimal level of working capital that maximizes their value

In practice, working capital management has become one of the most important issues in organizations, where many financial managers are finding it difficult to identify the important drivers of working capital and the optimum level of working capital. The companies can minimize risk and improve their overall performance if they understand the role of determinates of working capital.

A firm may adopt an aggressive working capital management policy with a low level of current assets as percentage of total assets, or it may also be used for the financing decisions of the firm in the form of high level of current liabilities as percentage of total liabilities. Excessive levels of current assets may have a negative effect on a firm’s profitability, whereas a low level of current assets may lead to lower levels of liquidity and stock outs.

Literature review
Kalpesh P Prajapati and Ritesh J Patel (2012) in the paper title “A Comparative study on Working capital management of selected steel companies of India” is highlighted comparative position
of steel industries in working capital management. The data is collected for a period from 2006-2011 of steel companies. The results different companies have good working capital management.

Kulkanya Napompech (2012) in paper title “Effects of Working Capital Management on the Profitability of Thai Listed Firms” is highlighted effects of working capital management on profitability. The data is collected for a sample of 255 companies listed on the Stock Exchange of Thailand from 2007 -2009. The results show a negative relationship between the gross operating profits and inventory conversion period and the receivables collection period.

Adeel Mumtaz, Muhammad Rehan, Muhammad Rizwan, Farhan Murtaza, Atif Jahanger, Hina, Almas Khan (2011) in the paper title “Impact of Working Capital Management on firms’ performance: Evidence from Chemical sector listed firms in KSE-100 index” is highlighted impact of working capital on firm performance in chemical sector. The data is collected for a period of 6 year from 2005-2010 for a sample of 22 firms. The results show that there is negative relational ship between working capital and firm performance. The relational ship between the size and profitability is positive.

Shahid Ali (2011) in the paper title “Working Capital Management and profitability of the Manufacturing Sector: A Case study of Pakistan’s Textile industry” is highlighted the association between working capital and management and the profitability of textile firms in Pakistan. The data is collected for a period 2000-2005 covering 160 textile firms by using ordinary least squares and fixed effect model. The result of regression analysis show that average days in inventory, average days in receivable ad average days payables have a significant economic impact on return on assets.


Mian Sajid Nazir and Talat Afza (2009) in the paper title “Working Capital Requirements and the Determining Factors in Pakistan” is highlighted importance of aggressive working capital management by analysing dividing the firms into various industrial sectors based on their nature business. The found positive relationship between They found positive relationships between i) operating cash flow and WCR, ii) Tobin’s q and WCR, iii) return on assets and WCR, and iv leverage and WCR. Authors did not find any statistically significant relationships between i) size of the firm and WCR and ii) sales growth and WCR. They also indicate that the level of economic activity does not have any significant effect on WCR practices of firms in Pakistan.

Talat Afza and Mian Sajid Nazir (2008) in paper title “It is better to be aggressive or conservative in Managing Working Capital” used data for a period of 1998-2005 and collected data from 208 public companies to discuss aggressive or conservative working capital is better. The results negative relationship between the profitability measures of firms and degree of aggressive of working capital investments.

Vedavinayagam Ganesan (2007) in the paper title “An Analysis of Working Capital Management Efficiency in Telecommunication Equipment Industry” is highlighted the relational ship between working capital management efficiency and profitability. The tools used in research are correlation and ANOVA analysis. The data is collected for a period of 2001-2007 for a sample size of 349 telecommunication equipment’s companies. The result shows that day’s working capital is negatively related to the profitability.

Marc Deloof (2003) in paper title “Does Working Capital Management Affect Profitability of Belgian Firms” is highlighted the factors effecting working capital management towards profitability in Belgian firms. The data is collected for 2000 most important Belgian firms for a period of 5 years from 1991-1995. The results show that significant negative relation between gross operating income and the number of days accounts receivable, inventories and accounts payable of Belgian firms.

Weinraub and Visscher (1998) used data for a period of 1984-1993 and collected data from 216 US firms to discuss issues of aggressive and conservative working capital management policies.
The results show that the industries had significantly different current asset management policies. The relative nature of the working capital management policies exhibited remarkable stability over the 10 year period of study. Weinraub and Visscher also found that industry policies concerning relative aggressive/conservative liability management were significantly different.

**Research Methodology**

**Variable used for study**

Aggressive Investment Policy (AIP) results in minimal level of investment in current assets versus fixed assets as Conservative Investment policy results a greater proportion of capital in liquid assets with lesser is profitability. In order to measure the degree of aggressiveness following ratio will be used

AIP (Aggressive Investment Policy) = \( \frac{\text{Total Current Assets (TCA)}}{\text{Total Assets (TA)}} \)

Where a lower ratio means relatively aggressive policy

Aggressive Financial Policy results higher levels of current liabilities and less term debt Conservative Financial Policy results more long-term debt and capital.

In order to measure the degree of aggressiveness of financial policy following ratio will be used

AFP (Aggressive Financing Policy) = \( \frac{\text{Total Current Liabilities (TCL)}}{\text{Total Assets (TA)}} \)

Where a higher ratio means relatively aggressive policy

The impact of working capital on profitability will be analysed through profitability measures ROA (Return on Assets), and also Tobin’s Q

ROA (Return on Assets) = \( \frac{\text{Net Earnings After Tax (NEAT)}}{\text{Book Value of Assets (BVA)}} \)

Tobin’s Q (Financial markets value of company assets. A low q (between 0 and 1) the cost of a firm asset is greater than value of its stock. This implies that the stock is undervalued. Conversely, a high q (greater than 1) the firm’s stock is more expensive than cost of its assets, which implies that the stock is overvalued.

Tobin’s Q = \( \frac{\text{Market Value of Firm (MVF)}}{\text{Book Value of Firm (BVA)}} \)

**Other Control Variables**

The control variables which are used in these study relating to firms such as the size of the firm, the growth in its sales, financial leverage and real GDP of India.

**Statistical Analysis**

The following regression equations are used to run to estimate the impact of working capital policies on profitability measures

\[
\text{ROA} = \alpha + \beta_1 \left( \frac{TCA}{TA} \right) + \beta_2 \text{(SIZE)} + \beta_3 \text{(GROWTH)} + \beta_4 \text{(LVRG)} + \beta_5 \text{(GDPGR)} + \varepsilon
\]

Tobin’s q = \( \alpha + \beta_1 \left( \frac{TCA}{TA} \right) + \beta_2 \text{(SIZE)} + \beta_3 \text{(GROWTH)} + \beta_4 \text{(LVRG)} + \beta_5 \text{(GDPGR)} + \varepsilon \)

And

\[
\text{ROA} = \alpha + \beta_1 \left( \frac{TCL}{TA} \right) + \beta_2 \text{(SIZE)} + \beta_3 \text{(GROWTH)} + \beta_4 \text{(LVRG)} + \beta_5 \text{(GDPGR)} + \varepsilon
\]

Tobin’s q = \( \alpha + \beta_1 \left( \frac{TCL}{TA} \right) + \beta_2 \text{(SIZE)} + \beta_3 \text{(GROWTH)} + \beta_4 \text{(LVRG)} + \beta_5 \text{(GDPGR)} + \varepsilon \)

Where,

\( \frac{TCA}{TA} \) = Total Current Assets to Total Assets Ratio
TCL/TA = Total Current Liability to Total Assets Ratio
ROA = Return On Asset
Tobin’s q = Value of q
SIZE = Natural log of firm size
GROWTH = Growth of sales
LVRG = Financial Leverage of firms
GDPGR = Real Annual GDP growth rate of India
Alpha = Intercept and
Error = error of the model

Sample and Data
The sample of study consists of firms listed on Bombay Stock Exchange (BSE). BSE has divided the firm into various industrial sectors based on nature of firm. Future more, firm must have complete data for the period 2005-2013. Thus the final sample consists of 30 firms from 5 various industrial sectors. This study used annual financial data of 30 firms for the period 2005-2013. The data set for 8 years for 30 firms with 240 observations.

Analysis
Table 1 presents the results of regression model in which the impact of working capital investment policy on the performance measurements. The F-value of regression models run is found statistically significant. The t-statistics of working capital investment policy is negative and statistically significant 5% level for Return on Assets and Tobin’s q. The negative coefficient of TCA/TA indicates a positive relational ship between the degree of aggressiveness of investment policy and return on assets. As the TCA/TA increases, the degree of aggressiveness increases, and return on assets decreases. Therefore, there is a positive relational ship between the relative degree of aggressive of working capital investment policy and both performance measure, i.e. ROA and Tobin’s q.
Table 2 presents the results of regression results of working capital financing policy and performance measures. The F-value of regression model run is found statistically significant. The negative value of β coefficient for TCL/TA indicates the negative relational ship between the aggressiveness of working capital financing policy and return on assets. However the relational ship between Tobin’s q and working capital financing policy has been established as positive and not statistically significant.

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROA</th>
<th>Tobin’s q</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>P-value</td>
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<tr>
<td>TCA/TA</td>
<td>-.0667</td>
<td>0.0445</td>
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<tr>
<td>GROWTH</td>
<td>0.032</td>
<td>0.0024</td>
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<tr>
<td>LVRG</td>
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<td>0.0064</td>
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<tr>
<td>GDPGR</td>
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<td>0.001</td>
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<tr>
<td>SIZE</td>
<td>0.001</td>
<td>0.0076</td>
</tr>
<tr>
<td>F-VALUE</td>
<td>34.191</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>240</td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Regression Analysis of Performance Measures and working Capital Financial Policy

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROA</th>
<th>Tobin’s q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>P-value</td>
</tr>
<tr>
<td>TCA/TA</td>
<td>-.241</td>
<td>0.0029</td>
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<tr>
<td>GROWTH</td>
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<tr>
<td>LVG</td>
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<tr>
<td>GDPGR</td>
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<td>SIZE</td>
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<td>F-VALUE</td>
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The control variables used in the regression model are natural log of firm size, sales growth, Real GDP growth and leverage. All control variables have impact on performance of the firm. Firm SIZE, Growth, LVG and GDPGR causes the return of the firm to be increased and it is found to be statistically significant. LVG and GDPGR are found significantly associated with the book-based return on assets (Tobin’s q). Firm SIZE and GROWTH not impact on book based return on assets. Manager can create value if they adopt an aggressive towards the working capital investment and cannot create value if they adopt an aggressive financial policy.

Conclusion

The present study investigates the relationship between the aggressive/conservative working capital assets management and financing policies and impact on profitability of 30 Indian firms divided into 5 industrial groups by BSE for a period of 2005-2013. The impact of aggressive/conservative working capital investment and the financing policies has been examined using regression model between working capital policies and profitability. The study found a positive relational ship between the profitability measures of firm and degree of aggressiveness of working capital investment policy, but negative relational ship between the profitability measure of firm and degree of aggressiveness of working capital financial policy. These studies were further examining the impact of aggressive working capital policy on market measure (Tobin’s q) of profitability. However, the investor found the aggressive working capital companies are more value.

The study used a measure of profitability i.e. Tobin’s q and regression analysis to investigate the relationship between working capital management and firm returns in India. The findings of the present study are expected to contribute significantly by finance literature. The results of the present study are in contradiction to those of some earlier studies on same.

References