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Operating liquidity and financial leverage: Evidences from Indian machinery industry

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Abstract

Operating liquidity and financial leverage are two significant aspects of overall firm management. This paper analyses the impact of financial leverage on various measures of operating liquidity. Further, we examine the effect of both operating liquidity and financial leverage on the firm's performance. We employ a sample of 151 Indian machinery firms and 10 years annual financial standalone data from 2004-05 to 2012-13 was collected using CMIE Prowess database. Ratio analysis and Panel data regression model have been applied to study the relationship. It was found that financial leverage has significant impact on different measures of operating liquidity. Further operating liquidity and financial leverage have considerable impact on performance of the Indian machinery firms. This study provides insights on interrelation between operation management and financial management and their impact on firm's performance.

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Keywords: financial Leverage, operating liquidity, machinery firms, panel data, India

1. Introduction

Operating liquidity and financial leverage are two significant aspects of overall firm management. Operating liquidity refers to the balance between resources in the form of cash or readily convertible into cash (current assets) and liabilities for which cash will be required soon (current liabilities). Financial leverage states the relationship between borrowed funds and owner's funds in the capital structure of a firm. It includes debt, common equity and preferred equity that are used to finance the firm's total assets, operations and financial growth.

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Operating liquidity management involves decisions regarding (a) choosing between high costs of stockholding due to inventory pile up vs. cost of stock outs, (b) determining between high levels of receivables to promote sales vs. cost of slow cash inflow, (c) choosing between benefits of delaying the payments vs. need to retain goodwill of suppliers and (d) finally deciding between liquidity benefit of holding cash vs. opportunity cost. There can be mainly three major approaches to liquidity management namely aggressive, moderate and conservative. Aggressive approach requires keeping a low level of short term assets and high level of short term liabilities. On the other hand conservative approach requires keeping low amount of short term liabilities and high amount of current assets. The moderate approach follows a mid-level approach between the two. An appropriate approach is essential for effective and efficient operations management.

Firms with only equity as a capital are called as unlevered firms while firms with both equity and debt are termed as levered firms. It is important on the part of the financial manager to determine the optimum level of capital structure as the right mix maximizes the shareholder's wealth whereas its imbalance would adversely affects the shareholder's wealth. The leverage decisions are to be taken in advance and to be adjusted on a continuous basis for smooth operations of the firm. Hence, financial leverage plays a vital role for successful operations of the firm.

In this paper we empirically analyze the interrelation between operation management and financial management and their impact on firm's performance. The rest of the paper is divided as follows: section 2 lists some previous studies related to leverage and liquidity; section 3 lists the objective of the study; section 4 discusses the theoretical framework; in section 5 we present and discuss the results and finally in section 5 we conclude.

2. Literature review

Saarani and Shahadan (2012) argued that financial leverage is one the important determinants of operating liquidity. Palombini and Nakamura (2012) found that firms that have higher levels of leverage choose to keep lower levels of operating liquidity. Taleb et al. (2010) stated that debt level of a firm is one of the most significant antecedents of its working capital. Naser et al. (2013) argue that effectiveness of operating liquidity is influenced by the firm's financial leverage. Gill (2011) found that in Canadian manufacturing industry leverage plays an important role in determining the level of operating liquidity. Nazir and Afza (2009) state that financial leverage significantly affects the operating liquidity of firms in Pakistan.

Zubairi (2011) studied the impact of operating liquidity and capital structure on profitability of automobile firms in Pakistan and found statically significant impact of both the factors on profitability. Fama and French (2002) establish a positive relationship between leverage and profitability. Pouraghajan and Malekian (2012) found a significant relationship between leverage and firm performance. Olokoyo (2013) establish a negative effect of leverage on firm's profitability. Xin (2014) found that leverage has a statistically significant relationship with the firm's financial performance. Sheikh and Wang (2013) establish a negative correlation between leverage and firm's performance.

Padachi (2006) studied small manufacturing firms in Mauritius and found evidence of a significant relationship between operating liquidity and firm's performance. Charitou et al. (2010) examined firms listed in the Cyprus Stock Exchange and found that operating liquidity and it components are associated with the firm's profitability. Lazaridi and Tryfonidis (2006) analyzed companies listed in the Athens Stock Exchange and found statistically significant relationship between profitability and liquidity position of firm. Mansoori and Muhammad (2012) examined a sample of Singapore firms and state that efficient working capital management can lead to increase in profitability. Lazaridis and Tryfonidis (2006) have conducted a similar study on firms listed in Athens stock exchange and found evidence of significant relationship between profitability and operating liquidity.

Thus we find that previous studies provide contradictory evidences relating to impact of leverage on operating liquidity and combined effect of leverage and operating liquidity on firm's performance. We therefore in this study have tried to examine machinery firms in India to empirically investigate the above relationships.

3. Objectives of the study

1. To empirically investigate the impact of financial leverage on operating liquidity of Indian machinery firms
2. To empirically investigate the combined effect of operating liquidity and financial leverage on financial performance of Indian machinery firms.