Evaluation of liquidity measures: Study of Indian Construction Industry

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Abstract

Implications of firm capital structure, capital budgeting and working capital management decisions for stake holder wealth maximization have got impressive mention in finance literature. Firm value maximizes by optimizing working capital level, which is always a vital part of managerial decision (Khan & Jain, 2007). However, attaining optimal levels continues to be a puzzle. Repetitive revenue generating activity of an organization requires funds and working capital management deals with such requirement (Bhatia & Srivastava, 2016). It is said that for efficient operations of an organization, it is necessary to have both profitability and liquidity (Bolek & Wilinski, 2012). Working capital management of a firm is very complicated and strategic due to the presence of an inverse relationship between the two crucial goals of liquidity and profitability. Majority of recent studies are confined to empirical testing of the relationship between liquidity and profitability in different economies. However, existing liquidity measures appear to be inadequate in the light of several recent defaults of Indian Construction Companies. They failed in managing liquidity, and banks, rating agencies etc. failed in assessing the actual liquidity condition of Indian construction companies.

For a very long period, "Unused Bank Limit" was argued to be a good liquidity indicator (Keynes, 1930; Richards & Laughlin, 1983). However, studies have expressed difficulty in getting data related to unused borrowing limit of any firm since companies keep this data confidential. This paper strives to solve the long pending "unused borrowing limit" puzzle by introducing a new measure "Debt Capacity Utilisation (DCU) and Debt Capacity Utilisation for working capital (DCUWC)", which will indicate both overall used and unused borrowing capacity, and against working capital respectively.

Another way to capture liquidity has been the working capital operating cycle. From this perspective, several measures such as, Cash Conversion Cycle (CCC) (Richards & Laughlin, 1983), Net Trade Cycle (Shin & Soenen, 1998), modified Cash Conversion Cycle (mCCC) (Talonpoika, Monto, Pirttila, & karri, 2014), to name a few, have been developed. In Cash Conversion Cycle (CCC), working capital operating components such as, Inventory,

Receivables and Payables, were considered. This was improved by including advances received from customers and the modified Cash Conversion Cycle (mCCC) was developed. It was argued by Talonpoika *et al*., (2014) that other important components significantly impacting the working capital operating cycle should be included and they had named advances given to vendors as a component. For Indian construction companies, advances to various sub-contractors and vendors is an important component and needs to be included in the operating working capital cycle. Therefore, through this paper, I have introduced another new measure "modified Net Trade Cycle (mNTC)" by including advances given to vendors in the working capital operating cycle.

This research paper did comparative empirical testing (existing liquidity indicator CCC, mCCC vs. new measures developed DCU, DCUWC, and mNTC) on ten-year data (2006-2015) of 55 Indian Construction Companies listed on BSE / NSE. The empirical tests compared the usefulness of existing measures such as, CCC, mCCC *vis a vis* the new measures developed through this paper i.e., DCU, DCUWC and mNTC. Empirical test results show significant negative relationship between DCU and firm performance measures. "Debt Capacity Utilization (DCU)" has emerged as a robust liquidity indicator of construction companies as compared to all other measures. DCUWC has shown an inverted U-shaped relationship with both Gross Operating Profit (GOP) and Tobin's Q (TQ). By using DCU and DCUWC, banks/investors and even corporate managers can take guidance on company's borrowing plans. Another measure, mNTC, is a more comprehensive measure of Indian Construction Company's working capital operating cycle. Introduction of these significant liquidity measures and testing their empirical relationship with the profitability and market measure of Indian construction companies is a novel aspect of this research.

Keywords–Liquidity, working capital management, profitability, Indian construction company

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