An examination of working capital of Urban Local Bodies in relation to their own revenue in West Bengal

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Abstract
The present study evaluated the sound working capital strategies in relation to own sources income and liquidity capacities of Urban Local Government in West Bengal. The study covered two municipal corporations in West Bengal. Quantitative research approach was used in this study. The quantitative data was collected from Account Department of respective Municipal Corporations. The quantitative data was analyzed by using ratio analysis tool and Karl Pearson Coefficient of correlation was used to examined the relationship between the sound working capital and own source income and liquidity capacities of Asansol and Siliguri Municipal Corporations. The study revealed a negative relationship between sound working capital and the amount of own revenue and liquidity capacities of Municipal Corporations. The study has suggested that if the Urban Local Government will adopts an appropriate working capital strategies to minimize the level of current assets and to minimize the days debtors remain outstanding , the result will be the maximize own sources revenue and maximize liquidity capacities of Municipal Corporations.
Key Word: *Urban Local Government, own source income, Urban Local Government liquidity capacities, sound working capital management, working capital.*

I. INTRODUCTION

Most financial report of Urban Local Government revealed a high dependence of finance from State and Central Government. One of the major reasons behind this dependence is slow speed in collecting their revenue from debtors and discharged the liabilities. Working capital management of the local Government authorities needs a special attention because of rendering timely and lowly cost services to community. The operation efficiency of local Government authorities depends on sound working capital (Mahraj, 2012). An optimum credit policy to collect receivables has been a way to solve the problem of illiquidity of a commercial enterprise because of fund from debtors would be used to finance operation expenses and meet short term obligation. A sound working capital management of Urban Local Government would improve the ability to collect own source revenue to meet operational needs (Marwa.S, 2015). Quality and sound working capital management is as equally important for business entities as well as Government undertaking to enables the operation.   It was revealed from different studies (Nallathiga, R., 2012) that on average local urban Government in India are very much dependent on State and Central Government to finance their various activities. A part from own source revenue, urban local Government receiving huge amount of money from State and Central Government to supplement their budgetary needs. Hence it is important for these urban local bodies to examine how efficient manage their working capital. Failure to collect own source revenue forced urban local bodies unable to meet the day to day activities which has a direct impact on the quality and timely services rendering by the urban local bodies and also lead to increasing compliance risk.

It is evident from various studies that the municipal administration is experienced problems in collecting the own revenue that affects their liquidity position. The inefficient cash and debt lead to a shortfall in collecting revenue, possible delay payment of supplier and ultimately to creates liquidity crisis (Paul et.al, 2009). Optimum working capital management could be a way to solve the problem of liquidity because the organization can manage its operating expenses and short-term obligations from funds received from debtors. The working capital theory provides tools to the municipal administration to exploit their income opportunities. Current ratios, inventory turnover ratios, debtor turnover ratio, and creditor turnover ratio are measure how efficiently a firm's working capital managed.

The sources of income of Municipal Corporation may be classified into three categories such as own sources of the corporations, general grand and contribution. Own source revenue of municipal corporation consisting with tax revenue (octrai, property and other direct tax) and nontax revenue (rents on municipal property, charges, fees etc.) A good growth rate in won sources income of urban local Government indicates a sound financial strength to undertake service provisioning responsibilities. One of the way to improve the creditworthiness of municipal corporation is proportion of own revenue to total income receipts because of own revenue is a reliable revenue source. The proportion of own revenue to total revenue more than 50 percent is considered to be good and that of more than 70 percent is considered to be favorable from the view point of creditworthiness.(Mathur.P and Ray.S 2003).

Urban Local Government liquidity capacities may be define the ability to meet short term obligation as and when they become due. Inability to discharge short term liability affects the credibility of the Urban Local Government. Pandey (2004) defines liquidity how best the urban local Government may pay its short term obligation.

Working capital management is an integral part of the overall financial management. Sound working capital management means utilization of current assets and liability at optimum level in the best interest of the organization.

Working capital refers to funds required to be invested in current assets to enable an entities to perform its operations. They include cash, inventory, accounts receivable and short term marketable securities.

II.   SIGNIFACTION OF THE STUDY

A large number of studies on urban local Government has been conducted in India, out of these most of the studies have been carried out on the issued the relationship between Union/ State and local Government and urban governance. It was hardly find any study in the context of working capital management of urban local Government in India. An attempted has been made by Marwa in Tanzania in 2015. Although profit and nonprofit seeking entities have different mission but the essence of working capital management remain same. The study has focused on working capital management of urban local Government to come up universal accepted standards. The study helps to finance manager to improve the way they manage working capital to make sure that both investment and liquidity decision are improve and as a result to minimized the chances of the urban local bodies being illiquid and out of stock.

III.   OBJECTIVE OF THE STUDY

The general objectives of the study to examine the sound working capital and its effect on the amount of urban local Government own income and liquidity capacities of municipal corporations. The specific objectives are –
➢   To examine the ability to pay off short term obligations
➢   To examine the relationship between working capital strategies and the amount of own income.
➢   To examine the relationship between working capital strategies and liquidity capacities of the urban local Government.

IV.   RESEARCH METHODOLOGY

The present study has been made on the basis of two municipal corporation out of six municipal corporation in West Bengal and selection has been made from Asansol Durgapur and Siliguri urban agglomeration region, Asansol from south east region and Siliguri from north region as these are industrial cities and huge amount of money spent by the Government through them and as well as these are second and third highest populated citiesin the West Bengal respectively. The present study was based on secondary data which has been collected from official website of municipal corporations. The financial ratios such as quick ratio, current ratio, and account receivable deferral periods were used to measure the liquidity of municipal corporations and Kerl Pearson correlation was used to examine the relationship between variables.

V.   DATA ANLYSIS & FINDING

Current Ratio, Quick Ratio, Cash to Current Asset Ratio, Cash to Current Liability Ratio and Receivable Deferral Period are used to examine the ability of the AMC and SMC to pay off their short term obligations during the study period.
Table 1 indicates the current ratios, finding calculate from the Balance sheet of AMC for a period covering eleven years from 2007-08 to 2017-18. Looking at the current ratios, finding in **table 1** it indicates that AMC cannot meet its short term financial obligation by using its current asset, as the current ratio is below the standard 2:1 (except the year 2007-08 and 2014-15). Therefore, it can be concluded that the AMC is not in a safer position in terms of solvency position.
SMC's current ratios are found too high during the entire study period (**Table 2**). High current ratios are not always good indicators for investors. If the current ratio is too high it may indicate that the organization is not

efficiently using its current assets or its short- term financing ('5 promising liquid stocks to Boost your portfolio' NASDAQ.com, 2016.09.25)

The finding from the quick ratio in **table 1** indicates that on average the liquid financial status of the AMC is satisfactory as its quick ratios are above the standard. Therefore, if the creditors put pressure on repayment the AMC would not probably face operational difficulties.

Looking at the quick ratio finding in the **table 2** it indicates that the SMC may have idle and excess cash (as its quick ratios are too high) which may be used to invest in treasury bill (as its risk free investments, money can be lost) or elsewhere to maximize their own source of revenue.

Looking at the **table 1** and **2** the AMC and SMC both have more than fifty percent of current assets in the form of cash and cash equivalent, which indicates that both the municipal corporation needs not to rely on inventory or the collection of accounts receivable from customers to pay off their liabilities.

It is noticed from **table 1** the liquidity position of AMC has been improved from the year 2014-15 onwards as the cash to current liability ratio is more than 1. Before 2014-15, the AMC had a shortfall of cash and cash equivalent than its current liabilities. It means the AMC had insufficient cash in hand to pay off its short term debt. On the other hand, SMC has a higher Cash to current liability ratio during the entire study period, which indicates that the corporation is enough solvent and can more easily transmit funds to repay its debt (**table 2**). But on the other side, it may also indicate that the SMC is inefficient in the utilization of cash or not maximizing the potential benefits of low-cost loans.

According to the finding from **table 1** and **2,** one may say that AMC and SMC are not effort at making strict receivable collecting polices, as a result, they may not be able to purchase inventory to finance operating activities. Therefore, both the municipal corporations should improve their receivable collecting policies because a high receivable collecting period indicates a liberal and inefficient credit and collection policy which may involve the risk of bad debt and high-interest costs involved in maintaining a higher level of debtors.

Table 1: Liquidity and Solvency ratios of Asansol Municipal Corporation for a period covering 11 years from 2007-08 to 2017-18.

Liquidity and Solvency Ratios	Year											
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average
Current Ratio	2.15	1.59	1.17	1.43	1.06	1.03	1.15	2.25	1.49	1.49	1.5	1.48
Quick Ratio	2.11	1.54	1.14	1.39	1.02	0.99	1.14	2.23	1.34	1.31	1.29	1.41
Cash to Current Assets	0.4	0.45	0.35	0.58	0.53	0.58	0.65	0.7	0.68	0.69	0.7	0.57
Cash to Current Liability	0.85	0.71	0.41	0.83	0.56	0.6	0.74	1.57	1.01	1.03	1.05	0.85
Receivable deferral period (days)	394	358	372	332	259	272	266	293	273	255	249	302

Source: derived from Balance sheet of AMC

Table 2: Liquidity and Solvency ratios of Siliguri Municipal Corporation for a period covering 11 years from 2007-08 to 2017-18

Liquidity and Solvency Ratios	Year											
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average
Current Ratio	7.25	6.72	7.81	7.46	8.08	6.27	6.72	4.7	2.55	2.81	3.11	5.16
Quick Ratio	4.95	6.25	7.23	7.25	8.07	6.19	6.68	4.6	2.51	2.77	3.96	4.31
Cash to Current Assets	0.58	0.38	0.51	0.46	0.56	0.54	0.56	0.63	0.64	0.57	0.627	0.55
Cash to Current Liability	4.22	2.57	3.94	3.46	4.53	3.36	3.76	2.97	1.64	1.6	2.02	3.1
Receivable deferral period(days)	427	376	440	341	247	215	198	224	196	194	122	270

Source: derived from Balance sheet of SMC
Note:
1. Current Ratio = current asset / current liability
2. Quick Ratio = liquid assets/ liquid liability
3. Cash to Current Asset = cash and other highly liquid instrument/ current asset
4. Cash to Current Liability = cash and other highly liquid instrument/ current liability
5. Receivable deferral period (days) = (Receivables) ÷ (Own Source Income/365)

According to table 3 one may say that the networking capital of the AMC was found to be erratic and uneven. This is not a good indication as the operation efficiency of local government authority depends on sound working capital (Mahraj, 2012).

As per **table 3** the networking capital of SMC in the year 2008 to 2018 increased (except in the year 2011). Therefore, it can be concluded that current assets of SMC are higher than the current liability of ASMC. So it increased because of an increase in the value of inventories, account receivable, cash and cash equivalent, and other current assets.

Table 3: Net Working Capital of Asansol Municipal Corporation and Siliguri Municipal Corporation for a period covering 11 years from 2007-08 to 2017-18   (Rs in crore)

Year	AMC			SMC		
	Current Assets	Current Liabilities	Working Capital	Current Assets	Current Liabilities	Working Capital
2008	58.28	27.12	31.17	50.49	6.97	43.52
2009	70.38	44.34	26.04	50.69	7.55	43.14
2010	60.45	51.68	8.77	70.96	9.09	61.87
2011	100.76	70.63	30.13	69.89	93.77	60.52
2012	106.02	100.15	5.87	80.59	9.97	70.62
2013	137.86	134.04	3.82	74.03	11.82	62.21
2014	181.62	158.19	23.43	78.49	11.67	66.82
2015	302.3	134.51	167.79	108.06	22.97	85.09
2016	261.23	175.67	85.56	103	24.78	78.22
2017	291.02	194.69	96.33	109.69	25.46	84.23
2018	418.23	213.71	204.52	116.38	26.14	90.24

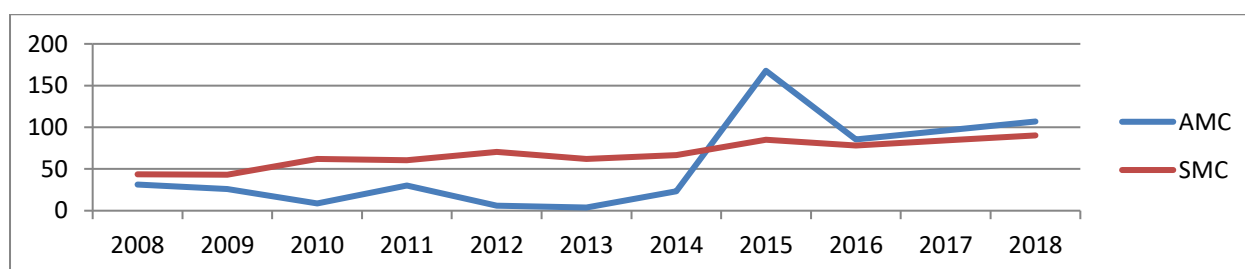*Source:* derived from Balance sheet of AMC and SMC

Chart 1: Net Working Capital of Asansol Municipal Corporation and Siliguri Municipal Corporation for the period from 2007-**08 to 2018**

Relationship between Determinants of Sound Working Capital and Own Income

Karl Pearson's coefficient of correlation can be used to know whether there is any causal relationship between the variables (Kothari, 2004). The coefficient checks whether the two variables are causally related, which means that one variable is dependent and the other independently.

 Karl Pearson's coefficient of correlation is used to find out any causal relationship between the determinants of sound working capital and own income of AMC and SMC. All the four determinants of working capital i.e. quick ratio, current ratio, receivable deferral period and payable deferral period were checked to know if there is any correlation between them and own income of AMC and SMC. **Table 4** summaries own income of AMC and SMC for the period of eleven years from 2008-2018.

Table 4: summaries own income of Asansol municipal corpoartion and Siliguri municipal corporation and SMC (**Rs in crore**)

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
AMC	12.5	14.05	14.29	16.6	20.87	20.13	21.56	21.46	24.22	25.67	27.13
SMC	11.35	13.6	12.43	16.25	21.39	26.18	29.34	30.14	33	35.56	38.17

Source: derived from Income and Expenditure Account of AMC and SMC

   Table 5 represents the findings of the relationship between determinants of sound working capital and own income of AMC and SMC. In this regard, 11 items were analyzed and the finding is summarized in **table 5**. It is observed that there is a negative relationship between quick ratio and own income of AMC and SMC. This indicates that if the Corporations will have an excess quick ratio beyond the standard 1:1, the own source revenue will decrease and v*i*ce versa. The relationship between current ratio and own income is also found negative in both the municipal corporations which indicates if AMC and SMC reduce their current ratio to the standard of 2:1, it may maximize own revenue because the idle fund would be invested to earn more revenue. In case of both the municipal corporations, the relationship between receivable deferral period and own income has been found negative. This result explains that lower the receivable deferral period would lead to higher own revenue.

   It's referred the average length of the time period between the purchase of supplies, materials and labour and payment of cash for them. This ratio indicates how well the institution's cash outflows are being managed. This ratio is calculated by taking the total purchase made from supplies and divided it by average accounts payable amount during the same period. Due to the non-availability of detail financial data regarding supplies, materials, and labour, it is not possible to calculate the payable deferral period of AMC and SMC.

Table 5: Relationship between determinants of sound working capital and own income of AMC and SMC

Independent Variable	Dependent variable	Value of coefficient correlation	
		AMC	SMC
Quick ratio	Own income	-0.29	-0.65
Current ratio	Own income	-0.17	-0..84
receivable deferral period	Own income	-0.93	-0.91

Source: Self-Calculated

VI.   CONCLUSION:

   It was evident and can be concluded from the ratio analysis of Municipal Corporation's financial statement and Karl Pearson correlation that there was a negative relationship between sound working capital and the amount of own source revenue and liquidity capacities of municipal corporations .If Municipal Corporations adopt an appropriate working capital strategies are being used to minimize the level of current asset and to minimize the days debtors remain outstanding, the result might be maximize own sources revenue and maximize liquidity capacity of municipal corporation. It was noticed from the analysis that the Siliguri municipal corporation has excessive cash which may be invest in treasury bill and short term marketable securities to maximize own source income.

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