

Impact of Collection Performance on Profitability: A Study Based on Selected Indian Cement Companies

Abstract

Credit has become almost an indispensable convenience or a necessity in our scheme of living. The modern business runs on the concepts of mass production with the objective of cost reduction. Mass production is not possible without mass distribution which in turn is not possible without credit. As the firm makes its credit policy lenient to achieve higher sales volume, investments in receivables also increases. Investment in receivables is treated as liquid asset so it is essential for every firm to recover it within the stipulated period allowed to the customers. In a competitive condition collecting all receivables within the period allowed is a difficult task. Unless receivables are collected in a certain period of time, the business firm loses its liquidity, exhausts its credit and finds its growth potential limited. Hence collections of receivables are an inherent part of any credit business. In this back drop, the present paper tries to highlight on analysis of customer details, classification of customer into different categories and suggesting the types of collection policy that a firm should adopt with respect to its credit policy.

Keywords: Credit Policy, Receivables Management, Collection Procedure, Profitability

Introduction

At present most of the business houses make their credit standard lenient to retain their market share and to expand their sales volume. With the increase in sales tendency to invest in receivables also increases. Unless receivables are converted into cash within the stipulated period, the business firm loses its liquidity, exhausts its credit and finds its growth potential limited. Receivables play a strategic role in the management of a firm. So it is essential for every firm to recover it within the stipulated period allowed to the customers. Hence collections are an inherent part of any credit business. The final step in the sale of goods or service is usually the satisfaction of the obligation by payments of accounts. Prompt collection is vital to the success of any business that sells on credit. We know, profit depends largely upon turnover and at the same time to increase turnover additional investments are necessary. A slow collection system can hamper the process. Slow collection means blockage of own capital of the company that leads to an increase in interest expenses on borrowing capital. Hence, profit can not be proportionately large unless collections are made promptly. But unfortunately very little attention is given to this point. Still many companies think that, receivable management is mere debt management. "A sale is not a sale until the cash register rings", or in other words we can say 'A sale is not a sale until it is paid for'. According to realization concept, orders and invoices are notional book entries, until payment is received. From this hard money point of view, it is often concluded that collections are the credit departments' most important responsibility. On the other hand, we know that achievement of sales target is not an easy task. The sales department may counter the credit manager by saying that, 'there is nothing to be paid, until there is a sale'. So, it is crystal clear that, for successful monitoring and collecting receivables, coordination among different departments is essential and as well as a well established collection policy is very much needed for fulfilment of objectives.



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Objectives of the Study

Investment in receivables is treated as an item of liquid assets. So, it is essential for every firm to recover that amount within the stipulated period allowed to the customer, otherwise, the firm may lose its liquidity. In this context present paper has the following objectives –

1. Try to establish a well defined controlling and collecting procedure.
2. Try to select the appropriate collection policy which is most effective for the firm.
3. Analysis and Classification of the customer's accounts and find out which collection method would be the most effective with that particular customer.
4. Try to find out which collection stages are applicable for which classes of customers.
5. To measure the efficiency of collection activity of the selected companies and its impact on profitability.

Methodology

For the purpose of our study we have selected some companies in Indian cement industry. To materialize this, data have been collected relating to background of companies, financial statement etc. for the practical purposes and convenience, the data collected and used are all secondary published data. The data of cement companies for the period of 2006-2015 used in this study have been collected from secondary sources –

1. The Stock Exchange official Directory of Bombay Stock Exchange.
2. Capital line 2015, the official data base of Capital Market publishers limited, Mumbai.

For the purpose of our study cement companies are selected following purposive sampling procedure. To assess effectiveness of Receivable management of those companies for the purpose of analysis we rely on existing published literature on the topic. Editing, classification and tabulation of the data collected from the sources mention earlier will be done as per requirement of the study. To test the impact of receivable on sales and how the companies manage their investment in receivables and the sensibility of the profitability to CR, DTO and ITO, we used statistical techniques like Karl's Pearson correlation analysis, multiple correlation analysis, regression analysis etc. Statistical test like 't' and 'F' also have been applied an appropriate places.

Conceptual Framework of the Study

Though the collection policy differs from industry to industry and with one business firm to another but experience has shown that of the four, the first two are most likely the policies to be found in effect. Now, what type of collection policy will be adopted by the company depends upon many factors which have a bearing on policy determination.

Collection work can be run effectively and efficiently, if the personnel engaged with overall collection work is analyzed and classified for the specific customer accounts. Collection work would be easier and the result better, if the account could be immediately and accurately classified as to reason for non payment and which collection method would be

the most effective with that particular debtor. Before taking a credit granting decision pertinent information regarding the prospective customer is very much essential which helps the credit men in classifying the debtors into one or more groups. Such classification helps the credit men to decide about what types of collection techniques to follow.

1. Customers who honestly misunderstand the terms of sale – Such type of customers offer no real collection problem. An explanation of the terms of sale usually brings a prompt remittance.
2. Customers who overlook accounts because of negligence or poor business methods - Just a reminder sent to customers, immediately after the expiry of the established credit period.
3. Customers who are temporarily slow, but who usually pay in time – Customers in this group usually pay their debt in time, but some times they make the creditor wait due to financial problem. These cases usually arise from shortage of operating capital. Debtors in this category involve no real credit risk and creditors firm may follow lenient collection policy with this class of debtors, but they should keep a close collection follow-up on the account.
4. Customers who are temporarily slow, because of local trade condition – Debtors in this group usually pay in time, but incidence like, strike natural calamity may create problem in meeting their own obligation. Risk in such cases is low and creditor firm may follow comparatively lenient collection policy and should co-operate until the debtors have time to overcome his temporary inability to pay, because debtors in this group are very much conscious to pay their obligation in due time but failed due to their temporary distress.
5. Customers who are chronically slow: - Debtors in this group fail to run their business operation efficiently. They have wrong collection policy in relation to their own debtors or draw too much from their business for personal living expenses, thus reducing their operating capital. Risk in such cases is high and chances of bad debt losses increase. The collection manager should adopt a firm collection policy toward these debtors, even at the risk of losing them as customers.
6. Customers who could pay promptly but disregard due dates because they think it is more profitable for them to use creditor's money then their own – Chances of bad debt losses is low in such cases but they tend to increases administration expenses. The creditors firm should follow stringent collection policy against these debtors. A consistently alert and forceful collection policy converts these types of debtors into fairly prompt paying customers.
7. Customers who are deliberately fraudulent – Debtors in this group are treated as very high risk category, and the probability of recovery of debt is very low. An attorney or collection agency can some times collect through energetic methods. It is only through the credit men that the fraudulent debtors can be put out of business.

8. Customers who are on the verge of insolvency or who are actually insolvent – The collection manager has no alternative but he has to take legal action or immediately place the account in hands of collection agency.

Such a classification helps the credit men to choose proper collection technique. After discussing all the stages, we can decide which collection devices are appropriate for which classes of debtors. This is shown in the following table –

Impersonal Routine Stage

Customers who honestly misunderstand the terms of sale, those awaiting notice, over look accounts because of negligence or poor business method. Ignore due dates because of the smallness of accounts

The Impersonal Appeals Stage

Temporarily financially hard-pressed, but who usually pay in time. Honestly overlook, careless in making payment, accident or misfortune.

The Personalised Appeals Stage

Overextended/ Overbought, Disputed account, financially sound but invest money in more profitable project. Chronically slow.

Drastic or Legal Action Stage

Chronically slow, on the verge of insolvency, or who are actually insolvent, deliberately fraudulent or no intention to pay.

Analysis and Findings

To measure the efficiency of collection activity of the selected companies and its impact on profitability, we selected four variables viz. return on capital employed (ROCE), current ratio (CR), Inventory turnover Ratio (ITR), and Debtors Turnover Ratio (DTR). A relatively high CR is an indication of firm's better liquidity position. An increase in the CR represents improvements in the liquidity position. ITR represents how quickly firm is able to convert its stock into sales. Generally a higher ratio indicates efficient management of inventory because more frequently the stocks are sold; the lesser amount of money is required to finance the inventory. DTR indicates how quickly the firm is able convert their credit sales into cash. We selected these variables for this purpose, as they have a close interrelation among each other. When a firm tries to accelerate its collection from debtors, it may hurt its sales volume, on the other hand, the objective of achieving higher sales may compromise with collection procedure. The influence of CR, ITO, and DTO on profitability (ROCE) in each of the companies is examined and analyzed. The interrelationship among the selected variables has been examined by computing Karl Pearson's correlation coefficient. In order to test whether the computed values of correlation coefficient are statistically significant or not, 't' test has been used.

The Table1 exhibits that the correlation Coefficient between CR & ROCE, in Madras, Birla, Dalmia, ACC, Gujrat, India, Narmada, Mysore, Shree, Katwa Deccan , 0.63, .597, .331, .2483, (.110), (.178), .602, .679, .540, (.52), (.087) respectively. The results show that out of the eleven companies, four companies (GAC, India, Katwa, and Deccan) have negative association between CR and ROCE during

the study period. Now, out of the four negative associations between CR and ROCE only in Katwa Company the correlation Coefficient was found to be significant at 10 per cent level. Other seven companies show a positive co-relation between CR and ROCE. Out of the seven companies, in Madras, Narmada, Mysore the correlation Coefficient was found to be statistically significant at 5 per cent level. In Birla and Shree it was significant at 10 per cent level. Thus, a mixed result (both positive and negative) was found in the calculation of correlation Coefficient between CR and ROCE.

In Table1 we also show the correlation Coefficient between ITR and ROCE. The results show that, out of the eleven companies, except Madras (-.498) and Birla (-.284), all have positive correlation Coefficient between ITR and ROCE. The negative association in these two companies, however, not found to be significant even at 10 per cent level of significant. All other companies Dalmia (.844), ACC (.18), GAC (.016), India (.27), Narmada (.53), Mysore (.36), Shree (.078) , Katwa (.88) and Deccan (.27) show positive correlation Coefficient between ITR and ROCE. The positive relationship in Dalmia and Katwa was found to be statistically significant at 1 per cent level. In case of Narmada it was at statistically significant at 10 per cent level.

Table1 depicts that the co-relation coefficient between DTR and ROCE in Madras, ACC, GAC, India, Narmada, Mysore, Katwa and Deccan were .90, .55, .54, .72, .78, .54, .56 and .33 respectively, which reveal high positive association between the two variables. So, out of the 11 selected companies eight companies show a positive co-relation between DTR and ROCE. The correlation coefficient in Madras, Narmada were found to be statistically significant at 1 per cent level. In ACC, GAC, Mysore, Katwa it was significant at 10 per cent level. In case of India it was found to be statistically significant at 5 per cent level. Birla, Dalmia and Shree show a negative co-relation co-efficient between DTR and ROCE. But they are not statistically significant even at 10 per cent level. It is an accepted principle that the faster the DTR, the lower is the relative investment in receivables and the higher is the profitability. The computed values of correlation coefficient between DTR and ROCE in the majority companies under study conform to the accepted principle.

In Table 2 and Table 3 it has been attempted to study the joint influence of liquidity and efficiency ratios on the profitability of each of the companies under study by using multiple correlation and multiple regression techniques. The partial regression co-efficient have been tested by 't' test and multiple correlation co-efficient have been examined by 'F' test. The regression equation that has been fitted in this study is-

$$ROCE = \beta_0 + \beta_1 \times CR + \beta_2 \times ITR + \beta_3 \times DTR$$

Where β_0 is the constant, β_1 , β_2 and β_3 are the partial regression co-efficient. Table II exhibited that for 1 unit increase in CR the ROC increase by 2.4 units in Madras, 41.94 units in Birla, 7.61 units in Dalmia, 34.49 units in ACC, 6.6 unit is Narmada,

33.56 unit Mysore, 19.39 units in Shree. Out of these seven companies ACC and Mysore was found to be statistically significant at 10 per cent level. Dalmia was statistically significant at 5 per cent level and Birla and Shree at 10 percent level. The positive association in case of Madras and Narmada was not statistically significant. The remaining four companies showed negative association but they were not statistically significant.

Table 2 depicted that when ITR increased by one unit ROCE Increased, 0.24 in Madras, 4.41 in Birla, 3.62 in Dalmia, 3.35 in ACC, 2.21 in India, 3.3 in Mysore, 1.31 in Shree, 2.36 in Katwa and .004 in Deccan. Thus, out of eleven companies nine companies showed positive relationship. Among them Dalmia was statistically significant at 1 percent level, ACC and Katwa was found statistically significant at 5 percent level. India and Mysore was statistically significant at 10 percent level. GAC and Narmada were negatively associated but they are not statistically significant even at 10 percent level.

Table 2 also showed that when DTR increased by one unit ROCE stepped down by .08 in Birla. In case of other ten companies one unit increased in DTR, ROCE stepped up by .62 in Madras, .34 in Dalmia, 1.13 in ACC, .63 in India, .68 in Mysore, .57 in Shree, .006 in Katwa, .358 in Deccan and .097 in GAC. The partial regression coefficient in Madras, ACC, India and Narmada were found to be statistically significant at 5 percent level and the coefficient in GAC, Mysore and Shree were statistically significant at 10 percent level. The negative association showed by only one company was not statistically significant.

In Table III showed that multiple correlation and coefficient of ROCE on CR, ITR and DTR .91 in Madras, .92 in Mysore, .92 in Dalmia, .82 in ACC, .82 in Narmada, .89 in Katwa. Out of this six companies Madras and Narmada were found to be statistically significant at 1 per cent level and ACC, India, Katwa was statistically significant at 5 per cent level. However, the multiple correlation coefficients in the remaining companies are statistically insignificant. It implies that the joint influence of ITR and DTR on profitability was highly significant in Madras, Mysore, Dalmia, ACC, Narmada, Katwa and the selected influencing variables CR, ITR and DTR in this companies contributed respectively 82 per cent, 79 per cent, 83 per cent, 67 per cent, 70 per cent, 79 per cent of the variation in their ROCE.

Conclusion

1. In four out of eleven companies CR negatively associated with the ROCE. But the negative association was statistically significant only in case of Katwa at 10 per cent level. However, in the remaining seven companies the association was positive but it was significant at 5 per cent level only in case of Madras, Narmada and Mysore. In Birla and Shree the positive association is statistically significant at 10 per cent level. It indicates that no definite relationship between liquidity and profitability especially regarding its nature can be established from the empirical results obtained from the study.

2. In two out of eleven selected companies, there was a negative relationship between ITR and the profitability measure. The negative association between ITR and ROCE was statistically not significant. Remaining nine companies show positive association between ITR and ROCE. Out of this nine companies Dalmia and Katwa was statistically significant at five per cent level and Narmada was statistically significant at ten per cent level. In case of other companies the association was not statistically significant. The positive association confirms favorable influence of inventory management on profitability in the Indian cement industry during the stated period.
3. The impacts of credit management on profitability show a positive association in case of nine companies out of eleven companies. Out of the nine positively associated companies seven companies show a statistically significant relationship. In Madras and Narmada was statistically significant at one per cent level. India cement was statistically significant at 5 per cent level and ACC, GAC, Mysore and Katwa was statistically significant at ten per cent level. Only two companies show negative association, however, they were not statistically significant at ten per cent level. It confirms significant influence of credit management on profitability in the Indian cement industry and it was proved that the generally accepted rule, larger the debtors turnover higher the profitability.
4. The partial regression coefficient shown in the regression equation of ROCE on CR, ITR and DTR fitted in this study witness that though both positive and negative influence of variation in the liquidity, inventory turnover and debtors' turnover were found. Debtors' management and inventory management of the majority of the companies under the study made positive as well as very significant contribution towards improvement of profitability during the study period.
5. The joint influence of liquidity inventory management and credit management on the profitability was very significant in seven out of eleven companies selected for the study. Moreover, the outcome of the analysis of coefficient of multiple determinations makes it clear that at least 67.5 percent of the total variation in the profitability of the seven cement companies was accounted for by the joint variation in the three selected indicators relating to liquidity and efficiency ratio - CR, ITR and DTR.

Table-1

Karl Pearson's. Simple Correlation Analysis between the Selected Profitability measure and Ratios relating to Liquidity and Efficiency of the selected companies in Indian Cement Industry

company	Correlation Coefficient between CR & ROCE	Correlation Coefficient between ITR & ROCE	Correlation Coefficient between DTR & ROCE
MADRAS	.630 (2.433701)**	(.498) (1.72283)	.904 (6.343378)*
BIRLA	.597 (2.232496)***	(.284) (0.88859)	(.147) (0.44584)
DALMIA	.331 (1.052318)	.844 (4.720858) *	(.286) (0.8954)
ACC	.2483 (0.768982)	.1817 0.554327	.552 (1.9858)***
GUJRAT	(.110) (0.33201)	.016 0.048006	.537 (1.9097)***
INDIA	(.178) (0.54267)	.272 (0.84797)	.724 (3.148739)**
NARMADA	.602 2.261752**	.532 1.8848***	.786 (3.814136)*
MAYSUR	.679 (2.77468)**	.363 (1.16871)	.543 (1.939903)***
SHREE	.540 (1.92475)***	.078 (0.234715)	(.333) (1.05947)
KATWA	(.52) (1.8456)***	.877 (5.475656) *	.569 (2.27579)**
DECAN	(.087) (0.26199)	.268 (0.834528)	.327 (1.03806)

Figures in bracket show t values

*Significant at 1 percent level, **Significant at 5 percent level, ***Significant at 10 percent level
Table Value of t with (n-2) i.e. 9 degree of freedom at 1 percent, 5 percent, at 10 percent levels are 3.25, 2.26 and 1.83.

Table-2

Multiple Regression Analysis of the Selected Companies in Indian Cement Industry Regression Equation of Roce on Cr, Itr and Dtr.

$$ROCE = \beta_0 + \beta_1 \times CR + \beta_2 \times ITR + \beta_3 \times DTR$$

Company	Partial Regression Coefficients			Constant
	β_1	β_2	β_3	
MADRAS	2.402462 (.292)	.247064 (.151)	.622988 (2.7687)**	.093707 (.004)
BIRLA	41.942540 (1.842)***	4.410652 (.9730)	-.083381 (.135)	-81.490710 (1.384)
DALMIA	7.614833 (2.275)**	3.621667 (5.214)*	.339564 (.687)	-16.572768 (1.524)
ACC	34.494972 (3.681)*	3.348168 (2.336)**	1.133499 (2.983)**	-70.118896 (2.722)
GUJRAT	-.775691 (.665)	-.425207 (.986)	.097938 (1.908)***	12.684386 (2.439)
INDIA	-1.204852 (.281)	2.213602 (1.916)***	.630011 (2.873)**	-10.449074 (.0239)
NARMADA	6.609311 (.521)	-5.293331 (1.160)	2.851884 (2.625)**	-23.210699 (1.823)
MAYSUR	33.568982 (4.163)*	3.300778 (1.965)***	.678772 (1.835)***	-76.746529 (4.836)
SHREE	19.393972 (1.888)***	1.307044 (1.165)	.574451 (1.856)***	-33.321153 (.183)
KATWA	-.609 (.877)	2.357 (2.357)**	(.006) (.094)	(.794) (.183)
DECAN	-1.058085 (.254)	.004172 (.006)	.358063 (.646)	11.055165 (.815)

Figures in bracket show t values

*Significant at 1 percent level, **Significant at 5 percent level, ***Significant at 10 percent level

Table Value of t with (n-2) i.e. 9 degree of freedom at 1 percent ,5 percent , at 10 percent levels are 3.25, 2.26 and 1.83.

Table 3
Multiple Correlation Analysis of the Selected Companies in Indian Cement Industry

Company	R	R2	F
MADRAS	.9055	.8199	10.6247**
BIRLA	.62464	.39017	1.49286
DALMIA	.91151	.83086	11.46181**
ACC	.82076	.67364	4.81630*
GUJRAT	.57773	.33377	1.16896
INDIA	.77964	.60784	3.61661
NARMADA	.8242	.67934	4.9434*
MYSORE	.89304	.79752	9.190438**
SHREE	.6745	.45501	1.94809
KATWA	.8918	.7953	7.7698*
DECAN	.36876	.13599	.36724

*Significant at 1 percent level

**Significant at 5 percent level

Table value of F with (k, n-k-1) i.e. (3,7) degree of freedom at 1 percent and 5 percent levels are 8.45 and 4.35 respectively.

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