



## Receivables Management of Cement Industries in Ariyalur Distric – A Study

### KEYWORDS

Receivables Management, Receivables turnover Ratio, Chi-square and ANOVA.

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**ABSTRACT** *In this paper an attempt is made to study the impact of Receivables Management on working capital. To accomplish this research objective data have been collected from the annual reports of select cement companies for the study period of ten years from 2003-04 to 2012-13. The ratios which highlight the efficiency of receivables management viz, the size of Receivables and average collection period have been computed, Statistical tools like Standard deviation, Co-efficient of variation; Chi-square Test and ANOVA Test were also used to know the impact of Receivables Management on working capital. The size of receivables and receivables turnover Ratio were considered as dependent variables. The investigation reveals that the receivables management across cement industries is efficient and showing significant impact on size of receivables and receivables turnover Ratio.*

### Introduction

Receivables result from credit sales. A concern is required to allow credit sales in order to expand its sales volume. It is not always possible to sell goods on cash basis only. Receivables constitute a significant portion of current assets of a firm. But, for investment in receivables, a firm has to incur certain costs. Further, there is a risk of bad debts also. It is, therefore, very necessary to have a proper control and management of receivables.

### Meaning and Definition:

Management of trade credit is commonly known as Management of Receivables. Receivables represent amounts owed to the firm as a result of sale of goods or services in the ordinary course of business. These are claims of the firm against its customers and form part of its current assets. Receivables are also known as accounts receivables, trade receivables, customer receivables or book debts. The period of credit and extent of receivables depends upon the credit policy followed by the firm. The purpose of maintaining of investing in receivables is to meet competition, and to increase the sales and profits. The term can be defined as According to Robert & Anthony "Accounts receivables are amounts owed to the business enterprise, usually by its customers. Sometimes it is broken down into trade accounts receivables; the former refers to amounts owed by customers, and the latter refers to amounts owed by employees and others".

Trade components of current assets, they form about one-third of current assets in India. Granting credit and creating debtors amount to blocking of the firm's funds. The interval between the date of sale and the date of payment has to be financed out of working capital. This necessitates the firm to get funds from banks (or) other sources. Thus, trade debtors represent investment. As substantial amounts are tied-up in trade debtors, it needs careful analysis and proper management is an important estimation which will help the concern in planning its working capital. Though it is not possible to forecast exact receivables in the future but some estimation is possible on the basis of past experience, present credit policies and policies pursued by other concerns.

### Objectives

The objective of receivables management is to take a sound decision as regards investment in debtors. In the words of Bolton, S.E., the objective of receivables management is "to promote sales and profits until that point is reached where the return on investment in further funding of receivables is

less than the cost of funds raised to finance that additional credit". Efficient and effective receivable management help to increase sales. Receivables and their management involve costs. Such costs should be controlled and within reasonable limit. The costs relating to maintaining of accounts receivables are as follows:

1. Capital costs
2. Administration costs
3. Collection costs
4. Default costs

### Cement industries in India

India has become the second largest cement producing country in the world. The gap between the largest producer China and the second largest producer are quite wide. China produces 1,400 million tons per year while India produces a mere 183 million tones. It is noted that there is an interlinking relation between cement consumption and the growth of economy. The country is on a high growth track and the focus now is on the development of the infrastructure facilities such as, highways, ports, canals, bridges, power-houses etc. The performance of cement industry has been commendable even during the global economic slowdown.

### Major players in Indian cement industry

The Indian cement industry comprises 185 large and about 365 mini cement plants, including public sector units. Large producers contribute about 95 percent to the installed capacity, while mini plants account for the rest. Holcim Group and Aditya Birla Group have emerged as the largest players in the Indian cement industry.

### Statement of the problem

Due to rapid industrialization and economic development in India, demand for cement is increasingly rapidly. To meet this growing demand, technology up gradation of existing plants by bringing about operational improvements and efficiency are also needed. In fact cement industries are established in those areas where such raw materials are available in abundance. Ariyalur and its surroundings areas are gifted with such raw materials in plenty.

### Database and methodology

#### Sampling design

Purposive sampling method has been employed in the study. There are six cement industries in Ariyalur District. Out of these, five cement industries were selected for this study.

Such industries are: 1. Tamil Nadu Cement Corporation Limited (TANCEM), 2. Chettinad Cement Limited (CCL), 3. Aditya Birla Cement Limited (ACL), 4. Ram Co Cement Limited (RCL), 5. India Cements Limited (ICL). The first sample unit TANCEM is a public sector unit, while the other four units are from private sector. The Aditya Brila Cement Company is the largest cements industry in Ariyalur District. The sixth cement industry in Ariyalur District is Dalmia Cement Limited which is not taken for the study due to inadequate data for the entire study period.

#### Nature of study:

The study analyzed the relationship of Receivables Management with different variables like size of Receivable ratio and the relationship with the Receivables and current assets.

#### Data period:

The company wise information has been collected on a number of variables during the period from 2004 to 2013, covering ten years.

#### Data collection

For the purpose of the present study, various primary and secondary data are used for analysis. Most of the primary data required for the study, have been collected through personal visits, interviews with senior officials of the concerns. On the other hand, secondary data have been acquired through periodicals, newspapers, Government publications and annual reports and accounts of the cement companies. The available relevant studies relating to the title of the present research work have been referred by the researcher through the library work.

#### Data analysis:

The following analysis is made with regard to the receivables management of the selected sample cement industries.

1. Size of Receivables Ratios
2. Receivables Turnover Ratio in times and Days

#### Statistical tools

- a. Standard deviation
- b. Co-efficient of variation
- c. Chi-square Test
- d. ANOVA Test

#### Hypothesis

Hypothesis is an assumption which may or may not be true about a population parameter.

#### Hypothesis

One hypothesis is framed for the analysis:

There is no significant difference in the size of receivables of the cement industries under study.

#### Debtors or receivables turnover ratio and average collection period

The liquidity position of a concern to pay its short-term obligations in time depends upon the quality of its trade debtors. Two kinds of ratios can be computed to evaluate the quality of debtors.

#### Debtors / Receivables Turnover or Debtors Velocity

Debtor's turnover ratio indicates the velocity of debt collection of firm. In simple words, it indicates the number times average debtors (Receivables) are turned over during a year. Accounts receivable is a big use of cash and so a rapid turnover is good. I.e. the bigger the number, the Better (Usually) "Sales" might be substituted for "credit sales".

$$\text{Debtors Turnover Ratio} = \frac{\text{Total Sales or credit sales}}{\text{Debtors}}$$

Debtor's velocity indicates the number of times the debtors are turned over during a year. Generally, the higher the value

of debtor's turnover the more efficient is the management of debtors/sales or more liquid are the debtors. Similarly, low debtors turnover implies inefficient management of debtors/sales and less liquid debtors. But a precaution is needed while interpreting a very high debtors turnover ratio because a very high ratio may imply a firm's inability due to lack of resources to sell on credit there by losing sales and profits. There is no 'rule of thumb' which may be used as a norm to interpret the ratio as it may be different from firm to firm, depending upon the nature of business. This ratio should be compared with ratios of other firms doing similar business and a trend may also be found to make a better interpretation of the ratio.

#### Average collection period Ratio

The average collection period represents the average number of days for which a firm has to wait before its receivables are converted into cash.

$$\text{Average Collection Period} = \frac{\text{No. of working days}}{\text{Debtors Turnover}}$$

The average collection period ratio represents the average number of days for which a firm has to wait before its receivables are converted into cash. It measures the quality of debtors. Generally, the shorter the average collection period the better is the quality of debtors as a short collection period implies quick payment by debtors. Similarly, a higher collection period implies as inefficient collection performance which in turn adversely affects the liquidity or short-term paying capacity of a firm out of its current liabilities. Moreover, longer the average collection period, larger are the chances of bad debts, but a precaution is needed while interpreting a very short collection period because a very low collection period may imply a firm's conservative policy to sell on credit or its inability to allow credit to its customers (due to lack of resources) and thereby losing sales and profits.

**TABLE 1**

**Size of Receivables of selected cement industries for the study period**  
Rs. In lakhs

YEAR	TANCEM	CCL	ACL	RCL	ICL
2003-04	5	2	18	4	14
2004-05	5	2	17	4	18
2005-06	5	2	17	5	24
2006-07	5	2	18	6	26
2007-08	4	2	22	6	31
2008-09	2	4	19	9	35
2009-10	4	7	22	15	49
2010-11	4	11	60	18	25
2011-12	3	17	77	21	21
2012-13	3	21	102	30	46
Average	4	7	37	12	29

#### Source: secondary data

From the Table 1, it is clear that the average size of receivables was highest for ACL cement which was 37 lakhs followed by Rs. 29 lakhs of ICL cement, Rs.12 lakhs of RCL cement, Rs. 7 lakhs of CCL cement and Rs. 4 lakhs of TANCEM cement.

**Table 1.1 Analyses of Receivables in different statistical tools**  
Rs. In lakhs

Company	TANCEM	CCL	ACL	RCL	ICL
Standard deviation	1	6.68	29.41	8.41	10.90
Co- efficient of variation	25	95	79.06	71.28	37.60

From the Table 1.1, the lowest standard deviation of 1 is reported in TANCEM which means the average collection period fluctuation is Minimum in this company. TANCEM is followed by ICL with 37.60 percent. In other three samples cement units, the Co-efficient of variation of fluctuations are unreasonably wider; therefore their respective average collection periods are unreliable and undependable.

**Table 1.2 Test of Hypothesis Chi-Square and ANOVA test**

Test of Hypothesis through chi-square and ANOVA

**Null Hypothesis (Ho):** There is no significant difference in the size of receivables of the cement companies under study.

Selected five sample units				
Test of apply	Calculate value	d.f (r-1)(c-1)	Table value	Result
Chi-square test values	118.11	36	0.000	H <sub>1</sub>
ANOVA test values	8.62	V <sub>1</sub> =4, V <sub>2</sub> =45	0.000	H <sub>1</sub>

The table value for (r-1) (c-1) = (10-1) (5-10) = 36 d.f at 5% level of significance in 0.000.

**Alternative Hypothesis is accepted (H1) Chi-square test**

The chi-square test value for selected sample unit is 118.11 which are more than the table value of 0.000. The Alternative Hypothesis is accepted. Hence there is a significant difference in the size of receivables of the cement companies under study.

**ANOVA Test**

**Critical value of F (V1 = 4, V2 =45) at 5% level of significance = 0.000. Calculated value 8.635 0.000**

The calculated value of F is 8.635 which is more than the table value of F 0.000 at 5% level with d.f being V1 = 4 and V2 = 45. The Alternative Hypothesis is accepted. Hence there is a significant difference in the size of receivables of the cement companies under study.

**Table 2 Debtors or Receivables turnover ratio in Times and Days of selected cement industries for the study period**

The following two variables viz., net sales and Receivables Rs. In lakhs

YEAR	TANCEM	CCL	ACL	RCL	ICL
2003-04	2.00	16.50	12.56	17.25	7.28
2004-05	2.00	21.50	15.76	18.25	6.44
2005-06	2.00	24.50	19.41	20.00	6.46
2006-07	2.40	36.50	27.28	26.00	8.65
2007-08	3.50	46.50	25.05	33.33	9.81
2008-09	5.50	28.50	33.63	28.11	9.60
2009-10	4.00	19.57	32.04	18.67	7.53
2010-11	3.75	14.09	22.18	14.56	13.64
2011-12	4.33	12.12	23.78	17.71	20.00
2012-13	5.33	11.67	19.78	12.77	10.00

Source: secondary data

**Table 2.1 Receivables turnover ratio at a glance and average collection period in days (365) No. of working days size or receivables ratio (debtors turnover ratio)**

Company	TANCEM	CCL	ACL	RCL	ICL
Minimum	2	11.67	12.56	14.56	6.44
Maximum	5.33	46.50	33.63	33.33	20
Average	3.48	23.15	23.15	20.66	9.94
ACP	104	16	16	18	37

The receivables collection period of the sample industries is expressed both in Annual Turnover Ratios as well as in average days of collection. The sample units CCL and ACL took just 16 days only to convert their receivables into cash. From this it is observed that they maintain a highest receivables ratio of 23.15 times in a year with a lowest collection period of 16 days only from the date of credit sales which shows the higher efficiency of CCL and ACL in their receivables management. The sample unit RCL took 18 days only to convert its receivables into liquid assets. The RCL is also very active in its receivables management just like CCL and ACL. The average collection of RCL is 18 days which also maintains a fair position in its receivables management. The average collection period of ICL is 37 days which is a reasonably satisfactory period for the receivables management. The worst receivables management policy is followed by TANCEM which gave 3½ months time or 104 days to collect its dues from its receivables. For a manufacturing company this period is too long which may force the sample unit to depend on commercial banks for their liquid and working capital requirements.

### Conclusion

The receivables management of the selected sample cement industries is satisfactory. The selected sample cement units have no problem in the management of receivables since, there is always a heavy and continuous demand for cement from different agencies there is no need for cement industries to offer credit sales and therefore they generally do not face the problems of defaulting receivables.

### REFERENCE

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