

# Cash turnover in engineering micro and small enterprises

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**Abstract -** Cash is the key input essential to keep the business running on a continuous basis. Shortage of cash will result in disruption in manufacturing operations of the enterprise. On the other hand, excessive cash results in idle cash which will not contribute anything towards profitability of the enterprise. Therefore, an Enterprise should maintain optimum cash. Cash is the common denominator for which all current assets can be reduced. Hence, Cash Management is one of the important topics of Working Capital Management. Cash Turnover Ratio and Cash Turnover Period are the tools used for understanding efficiency in cash Management. Efficient Cash Turnover is not only important in Large Businesses but also in Micro and Small Businesses. This Research paper focuses on Cash Turnover in selected Engineering Micro and Small Enterprises in the state of Andhra Pradesh in India. Two-way ANOVA is used for framed hypotheses testing. Financial tools used include CTR and CTP.

**Keywords:** Cash Management, CTR, CTP, MSEs.

## 1. Introduction

Cash is the prime liquid current asset. Cash is the key input essential to keep the business running on a continuous basis. Shortage of cash will result in disruption in manufacturing operations of the enterprise. On the other hand, excessive cash results in idle cash which will not contribute anything towards profitability of the enterprise. Therefore, an Enterprise should maintain optimum cash. Cash is the common denominator for which all current assets can be reduced. Hence, Cash Management is one of the important topics of Working Capital Management. Cash Turnover refers to the number of times cash is used during every year. Cash Turnover Period is time that was taken for one turnover in a year. Cash Turnover Ratio and Cash Turnover Period are the tools used for understanding efficiency in cash Management. Efficient Cash Turnover is not only important in Large Businesses but also in Micro and Small Businesses. This Research paper focuses on Cash Turnover in selected Engineering Micro and Small Enterprises in the state of Andhra Pradesh in India. Micro and Small Enterprises in Andhra Pradesh contribute much to the economy in terms of State income and employment opportunities.

## 2. Review of Literature

Raju et al (2020)<sup>1</sup> had done a study on Indian IT companies by using techniques of Financial Analysis. Venkateswararao. Podile et al (2020)<sup>2</sup> had done a study on Profitability trends in Cement Engineering company. Venkateswararao.Podile et al (2020)<sup>3</sup> had conducted a research study on Working Capital Structure in Indian Cement Enterprise. Venkateswararao. Podile et al (2020)<sup>4</sup> had conducted a research study on Working Capital Turnover in Micro and Small Enterprises. Venkateswararao. Podile et al (2020)<sup>5</sup> had done a research study on

Receivables Management in Micro and Small Enterprises. Present study focuses on Cash Turnover in selected Engineering Micro and Small Enterprises in Andhra Pradesh. There were no previous studies pertaining to cash turnover in Enterprises, especially on Engineering Micro and Small Enterprises and more specifically in Andhra Pradesh.

### 3. Objectives

1. To investigate in to Cash Management of selected Engineering Micro and Small Enterprises in Indian state of Andhra Pradesh
2. To explore the differences in Cash Turnover Ratios (CTRs) of selected Engineering Micro and Small Enterprises in Indian state of Andhra Pradesh
3. To Enquire into the differences in Cash Turnover Periods (CTPs) of selected Engineering Micro and Small Enterprises in Indian state of Andhra Pradesh

### 4. Methodology

Secondary data is used in present research. Data is collected from thirteen Engineering Micro and Small Enterprise’s financial statements selected in random manner through simple random sampling from 13 districts of Indian state of Andhra Pradesh. The data is taken from 10 financial statements relating to period from 2006-2007 to 2015-2016. Two-way ANOVA is used for framed hypotheses testing. Descriptive statistical tools including Average and Variance are also used. Simple Bar graphs are also used for better understanding and presentation of results. Financial tools used include CTR and CTP.

### 5. Data Analysis

The average CTRs of selected MSEs varied from 11.3 to 220.8

Table-1: CTRs of Engineering MSEs during 2006-07 and 2015-16

Years	MSE 1	MS E2	MS E3	MS E4	MSE 5	MSE 6	MS E7	MSE 8	MSE 9	MSE 10	MSE 11	MSE 12	MSE 13
2006-07	126.1	17.16	35.39	61.16	295	32	24.11	108.48	347.82	140.34	20.01	5.58	161.67
2007-08	203.25	8.43	36.22	37.43	484.7	42.58	13.69	93.05	278.73	311.87	21.03	5.4	368.79
2008-09	113.18	1.26	30.73	35.35	60.59	50.19	50.85	27.09	736.28	280.87	13.03	15.44	202.75
2009-10	57.74	23.22	24.41	25.36	64.93	53.8	26.64	26.1	50.29	371.4	8.65	11.63	153.39
2010-11	53.13	15.27	20.65	29.88	78.16	181.37	11.84	90.03	61.53	277.71	14.38	4.59	29.34
2011-12	148.46	17.08	10.68	35.96	54.33	226.83	10.02	101.5	205.15	189.9	12.58	9.27	25.42
2012-13	153.74	20.66	8.34	35	80.94	416.37	51.18	14.26	210	207.66	7.7	38.8	34.95

<b>2013-14</b>	46.05	29.77	7.18	32.48	80.05	455.08	47.77	6.58	183.31	302.63	4.3	61.79	24.45
<b>2014-15</b>	27.32	46.62	7.19	26.76	97.27	29.73	60.14	4.05	54.5	68.74	5.94	47.19	32.2
<b>2015-16</b>	30.03	35.92	6.39	50.83	159.02	24.52	36.4	3.48	32.6	57.1	4.86	33.05	16.59
<b>Mean</b>	<b>95.9</b>	<b>21.5</b>	<b>18.7</b>	<b>37.0</b>	<b>145.5</b>	<b>151.3</b>	<b>33.3</b>	<b>47.5</b>	<b>216.0</b>	<b>220.8</b>	<b>11.3</b>	<b>23.3</b>	<b>105.0</b>

MSE1- Sri Nagavalli Solvent Oils Pvt. Ltd, MSE2- Radhika Vegetable Oils Pvt. Ltd., MSE3- Power Plant Engineering Works, MSE4- Sri Rama Chandra Paper Boards Ltd.,MSE5- Naga Hanuman Solvent Oils Pvt. Ltd.,MSE6- Kristna Engineering Works, MSE7- Power Oxides Pvt. Ltd., MSE8-Nagas Elastomer Works, MSE9-Raghunath Dye Chem Pvt. Ltd., MSE10-LaxmiVinay Poly Print Packs Pvt. Ltd., MSE11- Maitreya Electricals Pvt. Ltd.,MSE12- M.G. Metallic Springs Pvt. Ltd.,MSE13- Sri Srinivasa Spun Pipes Pvt. Ltd.

Graph-1: Mean CTRs of Engineering MSEs

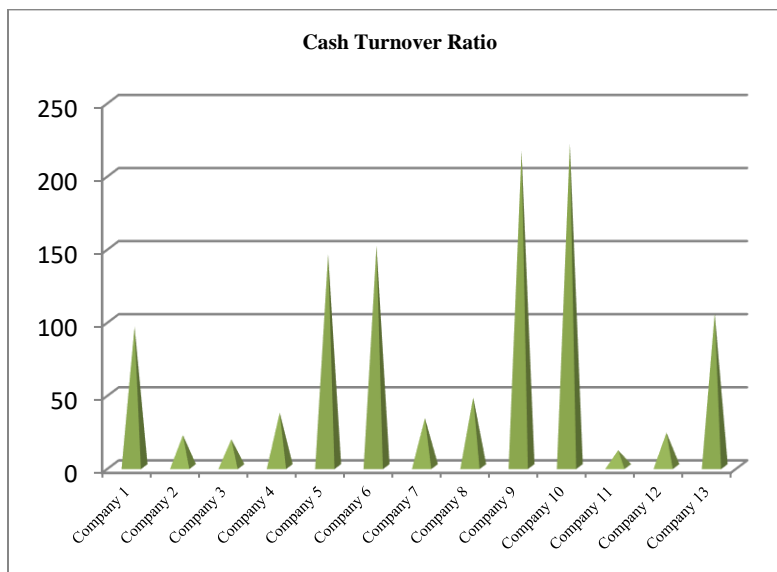


Table-2: Descriptive statistics of CTRs of Engineering MSEs

<b>SUMMARY</b>				
<b>MSE</b>	<b>Count</b>	<b>Sum</b>	<b>Average</b>	<b>Variance</b>
<b>1</b>	10	959	95.9	3739.5
<b>2</b>	10	215.4	21.5	174.3
<b>3</b>	10	187.2	18.7	150.6
<b>4</b>	10	370.2	37.0	121.6
<b>5</b>	10	1455.0	145.5	19435.0
<b>6</b>	10	1512.5	151.3	27309.8
<b>7</b>	10	332.6	33.3	342.6
<b>8</b>	10	474.6	47.5	1999.7

<b>9</b>	10	2160.2	216.0	44918.2
<b>10</b>	10	2208.2	220.8	11337.6
<b>11</b>	10	112.5	11.3	36.0
<b>12</b>	10	232.7	23.3	418.5
<b>13</b>	10	1049.6	105.0	13473.6

The variance of CTRs changed in between 36.0 and 44,918.2

Table-3: ANOVA results of CTRs among the years and among Engineering MSEs

ANOVA						
S.V	SS	df	MS	F	P-value	F crit
<b>Years</b>	143793.4	9	15977.05	1.783818	0.079463	1.967677
<b>MSEs</b>	682005.5	12	56833.79	6.345425	2.12E-08	1.842884
<b>Error</b>	967318.9	108	8956.656			
<b>Total</b>	1793118	129				

H<sub>01</sub>: Differences in CTRs of MSEs are insignificant among the years

H<sub>11</sub>: Differences in CTRs of MSEs are significant among the years

H<sub>02</sub>: Differences in CTRs are insignificant among MSEs

H<sub>12</sub>: Differences in CTRs are significant among MSEs

Calculated value of CTRs of MSEs among the years is lower than Critical Value i.e.,  $1.78 < 1.97$ . H<sub>01</sub> accepted. Therefore, it is concluded that differences in CTRs of MSEs are insignificant among the years. Calculated value of CTRs among MSEs is more than Critical Value i.e.,  $6.34 > 1.84$ . H<sub>02</sub> rejected. Therefore, it is concluded that differences in CTRs are significant among MSEs.

Table-4: CTPs of Engineering MSEs during 2006-07 and 2015-16

Years	MS E1	MS E2	MS E3	MS E4	MS E5	MS E6	MS E7	MS E8	MS E9	MSE 10	MSE 11	MSE 12	MSE 13
<b>2006-07</b>	3	21	10	6	1	11	15	3	1	3	18	65	2
<b>2007-08</b>	2	43	10	10	1	9	27	4	1	1	17	68	1
<b>2008-09</b>	3	290	12	10	6	7	7	13	0.5	1	28	24	2
<b>2009-10</b>	6	16	15	14	6	7	14	14	7	1	42	31	2
<b>2010-11</b>	7	24	18	12	5	2	31	4	6	1	25	80	12
<b>2011-12</b>	2	21	34	10	7	2	36	4	2	2	29	39	14
<b>2012-13</b>	2	18	44	10	5	1	7	26	2	2	47	9	10
<b>2013-14</b>	8	12	51	11	5	1	8	55	2	1	85	6	15

<b>2014-15</b>	13	8	51	14	4	12	6	90	7	5	61	8	11
<b>2015-16</b>	12	10	57	7	2	15	10	105	11	6	75	11	22
<b>Mean</b>	<b>4</b>	<b>17</b>	<b>19</b>	<b>10</b>	<b>3</b>	<b>2</b>	<b>11</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>32</b>	<b>16</b>	<b>3</b>

The average CTPs of selected MSEs varied from 2 to 32

Graph-2: Mean CTPs of MSEs

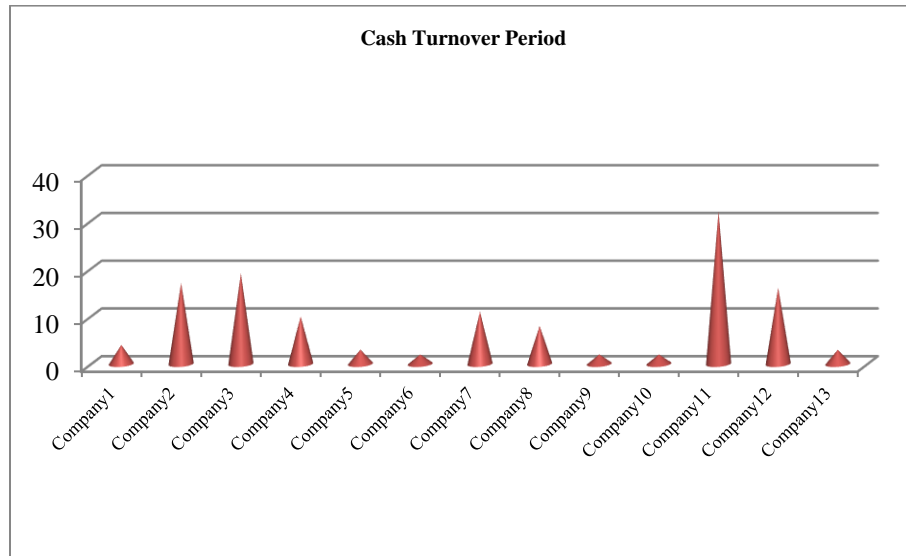


Table-5: Descriptive statistics of CTPs of Engineering MSEs

<b>Summary</b>				
<b>MSE</b>	<b>Count</b>	<b>Sum</b>	<b>Average</b>	<b>Variance</b>
<b>1</b>	10	59.4	5.9	17.4
<b>2</b>	10	463.2	46.3	7410.4
<b>3</b>	10	301.6	30.2	366.5
<b>4</b>	10	105.3	10.5	6.8
<b>5</b>	10	40.1	4.0	4.0
<b>6</b>	10	66.5	6.6	26.7
<b>7</b>	10	160.8	16.1	124.2
<b>8</b>	10	318.5	31.8	1460.7
<b>9</b>	10	39.4	3.9	12.9
<b>10</b>	10	24.0	2.4	3.6
<b>11</b>	10	429.0	42.9	571.8
<b>12</b>	10	341.0	34.1	771.2
<b>13</b>	10	92.9	9.3	50.7

The variance of CTPs changed in between 3.6 and 7410.4

Table-6: ANOVA results for CTPs among the years and among Engineering MSEs

ANOVA						
S.V	SS	df	MS	F	P-value	F crit
Years	4459.665	9	495.5184	0.575545	0.814588	1.967677
MSEs	30591.07	12	2549.256	2.960962	0.001339	1.842884
Error	92983.18	108	860.9553			
Total	128033.9	129				

H<sub>03</sub>: Differences in CTPs of MSEs are insignificant among the years

H<sub>13</sub>: Differences in CTPs of MSEs are significant among the years

H<sub>04</sub>: Differences in CTPs are insignificant among MSEs

H<sub>14</sub>: Differences in CTPs are significant among MSEs

Calculated value of CTPs of MSEs among the years is lower than Critical Value i.e.,  $0.58 < 1.97$ . H<sub>03</sub> accepted. Therefore, it is concluded that differences in CTPs of MSEs are insignificant among the years. Calculated value of CTPs among MSEs is more than Critical Value i.e.,  $2.96 > 1.84$ . H<sub>04</sub> rejected. Therefore, it is concluded that differences in CTPs are significant among MSEs.

## 6. Conclusion

It is found that the average CTRs of selected Engineering MSEs in Indian state of Andhra Pradesh varied from 11.3 to 220.8. The variance of CTRs changed in between 36.0 and 44,918.2. The average CTPs of selected Engineering MSEs varied from 2 to 32. The variance of CTRs changed in between 3.6 and 7410.4. It is also observed that differences in CTRs and CTPs of Engineering MSEs are insignificant among the years. It was also found that the differences in CTRs and CTPs are significant among Engineering MSEs.

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