9.1 INTRODUCTION

This Chapter deals with intent to consolidate the key findings of the present study. Based on the findings of the study a few suggestions are outlined. This study is carried out to know the financial performance of select cement companies in Tamil Nadu. In this respect only major cement companies were chosen that is five cement companies, 4 in the private sector and one government company on the basis of their presence, market dominance, size of the company and the total assets as a measurement of the firms’ size. The companies that have invested more than Rs.1500 lakhs in total assets during the end of the study period and having a production capacity of slated tons are selected for the present study.

The present study covers a period of 10 years starting from 1995-96 to 2004-05 and the required data for the sample companies were collected from the respective Annual Reports as published by the companies. In the study various statistical tools including Arithmetic Mean, Standard Deviation, Co-efficient of Variation, Correlation, Trend Analysis, Chi-Square Test, Students’ t-test, ANOVA, F-test, Hotelling T² Test for Equality of mean vectors are used. To measure the financial performance of the select cement companies ratio analysis, Z-Score analysis, Economic Value Added and Market Value Added, Risk Analysis, Profitability Analysis, Miller-Orr model on Cash Management are used and this study is organized into nine chapters.
9.2 SUMMARY OF FINDINGS

The study has come out with major findings that are arrived at from the various analyses.

A. Cost Structure Analysis

1. The average of Raw material to Net Sales ratio of the entire study period was 15.92 per cent, whereas the average Raw material consumed to Net sales ratio of Dalmia Cements was 24.43 per cent, which was highest ratio among the units under the study. While the Raw material consumed to Net Sales ratio of India Cements was 9.59 per cent, which was the lowest ratio among all units under study. The co-efficient of variation (C.V.) of industry was 14.28 per cent and was maximum of 20.10 by Dalmia Cements and a minimum of 6 per cent by TANCEM was 6.00 per cent. To test whether there is any significant difference in the ratio of raw materials consumed to net sales among the sample companies, the ‘F’ test has been applied and the result shows that the difference in the ratio of raw material consumed to net sales in the companies under the study were significant at 5 per cent level.

2. The average of power and fuel cost to net sales ratio of the entire study period was 27.69 per cent, whereas the average power and fuel cost to Net sales ratio of TANCEM was 40.30 per cent, which was highest ratio among
the units under the study. While the power and fuel cost to Net Sales ratio of Dalmia Cements was 18.58 per cent, which was the lowest ratio among all units under study. The coefficient of variation (C.V.) of industry was 12.03 per cent and was maximum of 17.17 per cent by Chettinad Cements and a minimum by India Cements was 8.09 per cent. To test whether there is any significant difference in the ratio of power and fuel cost to net sales among the sample companies, the ‘F’ test has been applied and the result shows that the difference in the ratio of power and fuel cost to net sales in the companies under the study were significant at 5 per cent level.

3. The average of wages and salaries cost to net sales ratio of the entire study period was 7.91 per cent, whereas the average wages and salaries cost to Net sales ratio of TANCEM was 15.24 per cent, which was highest ratio among the units under the study. While the wages and salaries cost to Net Sales ratio of Madras Cements was 5.09 per cent, which was the lowest ratio among all units under study. The coefficient of variation (C.V.) of industry was 17.54 per cent and was maximum of 21.79 by TANCEM and a minimum of 10.90 per cent by Madras Cements. To test whether there is any significant difference in the ratio of wages and salaries cost to net sales among the sample companies, the ‘F’ test has been applied and the result
shows that the difference in the ratio of wages and salaries cost to net sales in the companies under the study were significant at 5 per cent level.

4. The average of manufacturing cost to net sales ratio of the entire study period was 100.91 per cent, whereas the average manufacturing cost to Net sales ratio of India Cements was 106.80 per cent, which was highest ratio among the units under the study. While the manufacturing cost to Net Sales ratio of Madras Cements was 92.48 per cent, which was the lowest ratio among all units under study. The co-efficient of variation (C.V.) of industry was 6.97 per cent and was maximum of 8.97 by India Cements and a minimum of 4.96 per cent by Dalmia Cements. To test whether there is any significant difference in the ratio of manufacturing cost to net sales among the sample companies, the ‘F’ test has been applied and the result shows that the difference in the ratio of manufacturing cost to net sales in the companies under the study were significant at 5 per cent level.

5. The average of selling and distribution cost to net sales ratio of the entire study period was 27.71 per cent, whereas the average selling and distribution cost to Net sales ratio of Dalmia Cements was 36.84 per cent, which was highest ratio among the units under the study. While the selling and distribution cost to Net Sales ratio of Madras Cements was 19.79 per cent, which was the lowest ratio among all units under study. The co-
efficient of variation (C.V.) of industry was 11.41 per cent and was maximum of 21.41 by Chettinad Cements and a minimum of 3.36 per cent by India Cements. To test whether there is any significant difference in the ratio of selling and distribution cost to net sales among the sample companies, the ‘F’ test has been applied and the result shows that the difference in the ratio of selling and distribution cost to net sales in the companies under the study were significant at 5 per cent level.

6. The average of depreciation cost to net sales ratio of the entire study period was 6.16 per cent, whereas the average depreciation cost to Net sales ratio of Chettinad Cements was 9.68 per cent, which was highest ratio among the units under the study. While the depreciation cost to Net Sales ratio of TANCEM was 1.39 per cent, which was the lowest ratio among all units under study. The co-efficient of variation (C.V.) of industry was 14.05 per cent and was maximum of 19.81 per cent by TANCEM and a minimum of 11.39 per cent by Madras Cements. To test whether there is any significant difference in the ratio of depreciation cost to net sales among the sample companies, the ‘F’ test has been applied and the result shows that the difference in the ratio of depreciation cost to net sales in the companies under the study were significant at 5 per cent level.
B. Liquidity Analysis

Liquidity refers to the ability of a firm to provide cash to meet the claims, the supplier of capital of the firm. Liquidity or solvency of the firm has been analyzed by liquidity or solvency ratios. Further liquidity ratios are classified into two broad heads:

Short-term Liquidity Ratio

Long-term Liquidity Ratio

Short-term Liquidity Ratio

In this study, current ratio, inventory turnover ratio and debtors’ turnover ratio are taken as the short term liquidity ratios.

1. Under current ratio, India Cements is placed in a good liquidity position (3.703) with a lowest liquidity of Chettinad Cements (2.011). The current ratio is further analyzed whether the liquidity values of the companies put together on the average is the same for different years. Using F-test, it is found out that there is no significant difference between averages of liquidity over 10 years and between companies, there is a significant difference.

2. Inventory turnover ratio, indicates the number of times the inventory is replaced in a year. A normal ratio indicates a good system of inventory
management but a very high ratio calls for careful analysis. Madras Cements is placed (23.62) in good inventory turnover position with a higher mean value. Dalmia Cements (4.98) is placed at a low level indicating that the company is carrying excessive inventory. Chettinad Cements is having a very high Co-efficient of Variance (44.59%) and India Cements has a low C.V. (18.99%). Using the F-test, it is established that there is no significant difference between averages of inventory turnover over the study period and the values differ significantly.

3. Debtors Turnover Ratio indicates the velocity of debt collection. Higher the ratio, the more efficient the management is. Chettinad Cements is having a higher ratio (25.31) of debtors’ turnover indicating that the company is selling more on credit resulting in strengthening the bottom-line. Madras Cements (21.90) is moderately placed at second position, indicating that the debtors are managed effectively converging into more revenue for the company. TANCEM is having low debtors turnover (4.05) signaling ineffective management of debtors. While studying the entire period of select companies using F-test, it is concluded that there is no significant difference between the averages of the debtors over 10 years and the debtors’ turnover ratio values differ significantly between companies.
Long-term Solvency Ratio

The following two ratios serve the purpose of determining the long term solvency of the concern.

Debt – Equity Ratio

Interest Coverage Ratio

4. Debt – Equity ratio, if higher, represents higher claims of creditors over the assets of the company. A low ratio is considered as favourable to the management. Dalmia Cements (1.015) is placed in a comfortable position having a low mean average of debt-equity indicating that their creditors have fewer stakes in the company. TANCEM (2.705) is placed in a very high mean average indicating that their creditors have better say in the company. This is also evidenced by a very high C.V. ratio (76.45%) of TANCEM. In order to examine whether debt-equity ratio differ significantly on the average, F-test was applied. It is proved that the debt-equity ratio does not differ significantly between years and the ratio differs significantly between companies.

5. Interest coverage is an important ratio from the lenders’ perspective. A high ratio indicates a low level of debt and vice versa. The number of times it is covered that much is the safety to the lenders. India Cements is placed low (0.306) among the mean averages of the select cement companies assuring
its lenders, that their interest burden is not significant, TANCEM is negatively placed (-0.148) indicating that the company is fully dependent on outside borrowings and servicing the interest cost is doubtful or may not be met in full. By applying F-test, it was examined whether there is a significant difference between companies over the years. On analysis, it is concluded that the interest coverage do not differ significantly between successive years and between companies on the average.

C. Profitability Analysis

Profitability implies profit making ability of a business enterprise. Profitability may be defined as the ability of the investment to earn a return from its use. The maximization depends on how effectively the investment is being used. A business is being set up with an intention of making profit and that too maximization of profits through minimization of cost. It is the main indicator of the efficiency and effectiveness of a business enterprise. The profitability can be measured using the profitability ratio. Profitability ratio can be determined based on sales or investments that is

- Relating to Net Profit
- Relating to Investments

From the net profit analysis, the industry’s mean average is 0.04 and Madras Cements has exceeded the industry average to 0.11 and TANCEM is the
lowest at – 0.03. On applying F-test, it is concluded that the average value of net profit ratio of the companies over the years during study period differ significantly and also the average net profit ratio for different companies differ significantly.

Profitability analysis relating to investments is split into return on capital employed and return on net worth. Return on capital employed of Madras Cements promises a good return to its shareholders and having the co-efficient of variation as the lowest. TANCEM is negative signaling that the ROCE is negative. While testing, the return on capital employed on the average are not the same for different years during the study period and also differs significantly between companies.

On the return on net worth, Madras Cements assures a higher return to its owners exceeding the industry average by 7 times. TANCEM slipped into negative on the mean average and the co-efficient of variation is negatively high. On applying F-test, there is a significant difference between the mean values for different years during the study period and between the companies also it differs.

**D. Risk and Profitability**

In the entire study, we assessed the trade-off between the risk and profitability to know whether the select companies have adopted an aggressive policy or a conservative policy in funding the current assets and because of this, is there any bearing on the profitability. Using John J Hampton’s method combined
with Rank correlation analysis, Madras Cements and India Cements have adopted aggressive policy resulting in impact on profitability. Madras Cements and India Cements’ modest aggressive policy resulted in negative correlation whereby the profitability is more when risk is less. To test this, we used t’ test where it is proved that the correlation is significant. TANCEM had adopted conservative policy having a negative impact on the profitability. Chettinad Cements and Dalmia Cements have adopted high degree of conservative policy of funding resulting in positive impact on its profitability.

E. Liquidity and Profitability

We are interested in knowing whether liquidity has a bearing on the profitability of a company. We were keen in testing whether the more liquid companies alone can make more profits and in case of illiquidity, whether such companies will run into loss. To test liquidity, we have taken the ratio of current assets to total assets and for profitability, ROCE is selected for comparison. We are also interested in knowing the correlation among the two. This is measured by computing Spearman’s Rank Correlation Co-efficient and significance of ‘r’ value is tested using Students’ ‘t’ test.

As far as TANCEM, Chettinad Cements and Dalmia Cements are concerned, it is concluded that there is positive correlation between liquidity and profitability. For Madras Cements, India Cements, it is summarized that there is a
negative relationship between liquidity and profitability. Madras Cements and India Cements should ensure adequate liquidity to increase their turnover resulting in more profitability.

**F. Analysis of Working Capital**

Working capital is analyzed using the following tools.

- **Ratio Analysis**

- **Funds Flow Analysis**

Under ‘Ratio analysis’, working capital is analyzed under the following ratios

(a) Turnover of Working Capital ratio
(b) Current Ratio
(c) Acid Test Ratio
(d) Cash Ratio

1. Turnover of Working capital ratio is higher in the case of Chettinad Cements (6.94) as compared to the industry average of 4.05. It is the lowest in the case of India Cements (2.20). Higher the ratio better is the availability of working capital. With a view to test whether the averages of net sales to working capital among the sample companies are same, F-test is applied. On analyzing, there is a significant difference between the companies.
2. Current ratio is measured to know the firm’s ability to meet the sudden demand to pay off all its short term loans. Higher the ratio, better it is for the companies. The industry average is 2.5 where India Cements mean average is 3.70. On applying F-test, it is concluded that there is a significant difference between the companies.

3. Acid test ratio is the better test of financial solvency and the industry average is 1.66 where India Cements is placed in a good position at 3.09 and the lowest being 0.95 for Chettinad Cements. On analysis, by applying F-test, it is revealed that there is a significant difference between the companies.

4. Cash ratio signifies the cash and balances and the higher the ratio, the funds are lying idle. The industry average is 44.58 per cent where as it is maintained well by Madras Cements, Chettinad Cements, Dalmia Cement Cements and TANDEM. India Cements cash ratio is the highest than the industrial average indicating that cash is kept idle by the company. While testing using F-test, there is a significant difference between the companies.

It is to be noted here that even though the current ratio is very good for India Cements, it could be due to the reason that the funds are not deployed properly and are lying idle. Hence, to suggest a proper cash management strategy,
Miller – Orr model is used. It is concluded that the management to adopt the spread and Return Point so that excess cash lying idle can be avoided.

**G. Funds Flow Analysis**

An important tool in the management kit to analyze the funds sources and uses. Where from the funds have come in and where it is deployed as a comparison between two periods. To examine Funds Flow Analysis, Schedule of Changes in Working Capital is of most importance. The working capital requirement differs from year to year, depending on the operations of the company. It may be increase in working capital requirement or decrease in working capital. To have a comparative idea of changes in working capital of companies and individual units, we fitted with the following statistical tools:-

i. Regression equation to know the trend

ii. Two way analysis of variance to examine whether average level of working capital changes between companies and between years.

1. Madras Cements was fitted with a regression equation and the calculated chi-square value between observed and expected values has $p > 0.05$, the model is not a good fit for the data, since there exists a significant difference. The second degree was tested and since $p = 0.822$, is not a good
fit. On applying cubic equation \( p = 0.404 \), which also proved inappropriate. It is concluded that the changes in working capital of Madras Cements are of oscillatory character and cannot be predicted accurately for the future.

2. India Cements was fitted with a regression equation and since \( p = 0.307 \) and \( p \) is > 0.05, the model is not a good fit for the data. The second degree was tested and since \( p = 0.450 \), is not a good fit. On applying cubic equation \( p = 0.286 \), which also proved inappropriate. It is concluded that the changes in working capital of India Cements are of oscillatory character and cannot be predicted accurately for the future.

3. Chettinad Cements was fitted with a regression equation and since \( p = 0.215 \) and \( p \) is > 0.05, the model is not a good fit for the data. The second degree was tested and since \( p = 0.464 \), is not a good fit. On applying cubic equation \( p = 0.646 \), which also proved inappropriate. It is concluded that the changes in working capital of Chettinad Cements are of oscillatory character and cannot be predicted accurately for the future.

4. Dalmia Cements was fitted with a regression equation and since \( p = 0.989 \) and \( p \) is > 0.05, the model is not a good fit for the data. The second degree was tested and since \( p = 0.880 \), is not a good fit. On applying cubic equation \( p = 0.477 \), which also proved inappropriate. It is concluded that
the changes in working capital of Dalmia Cements are of oscillatory character and cannot be predicted accurately for the future.

5. TANCEM was fitted with a regression equation and since \( p = 0.315 \) and \( p > 0.05 \), the model is not a good fit for the data. The second degree was tested and since \( p = 0.614 \), is not a good fit. On applying cubic equation \( p = 0.728 \), which also proved inappropriate. It is concluded that the changes in working capital of Madras Cements are of oscillatory character and cannot be predicted accurately for the future.

**Two Way Analysis**

All the companies taken together tested by using two way ANOVA. It is concluded that there is no significant difference between the cement companies with regard to changes in working capital. This fact has brought out that all the companies have the same average level of working capital over the different years.

**H. Funds from Operations**

1. Madras Cements’ correlation co-efficient is positive and is also greater than 0.5. Hence, it may be concluded that in the present context, high value of positive correlation implies that higher the level of changes in working capital, greater will be the level of funds from operation.
2. It is very interesting to observe that the correlation co-efficient is positive and is also greater than 0.5 with India Cements. Hence, it may be concluded that in the present context, high value of positive correlation implies that higher the level of changes in working capital, greater will be the level of funds from operation.

3. With TANCEM, the correlation co-efficient is positive and is also not greater than 0.5. Hence, it may be concluded that in the present context, the correlation between the two variables is positive but less pronounced. However, higher level of changes in working capital results in higher level of funds from operation but only to some extent.

4. Chettinad Cements is having the co-efficient as positive and very poor. An increase in the level of changes in working capital produces a slight change in funds from operation. It can be concluded that the working capital management need not be highly sensitive.

5. Dalmia Cements’ correlation co-efficient is negative and is also not greater than 0.5. Hence, it may be concluded that in the present context, in the case of Dalmia Cements, more the changes in working capital, is followed by changes in funds from operation in the negative way. But, the correlation is not a significant one. However, the changes in working capital only result in greater consistency of funds from operation.
I. Working Capital Analysis – Private and Government Company

Working capital is the lubricating oil for the smooth functioning of any enterprise. Every company adopts its own style of funding working capital. A cautious approach in funding the same will make the organization to function smoothly. We are interested in knowing whether the private companies adopt a flexible and independent policy towards working capital so that their profitability is maximized and TANCEM, being a government owned, adopt bureaucratic policy where flexibility is missing to adopt to changing environment of business that hampers its growth resulting in a beating on the profitability.

It is analyzed as to working capital on the average differ significantly over the years, between all the private companies put together and the government company.

Using Students’ ‘t’ – test, it is concluded that the average working capital do not differ significantly between private companies put together and public sector company. This altered our presumption that all companies (including government company) are flexible enough to adopt their own working capital policies that do not have a bearing on the profitability.

Test of Ratios between Private and Government Company

Based on the various financial ratios like overall profitability ratio, Earning Per Share, Interest cover to lenders, liquidity ratio, debt to equity ratio and net
profit ratio, parameters that indicate the nature of functioning was tested to know whether there is any alignment of private companies with that of government owned company. Since there are six components, six dimensional space is created and multivariate approach is adopted using Hotelling $T^2$ test for equality of mean vectors.

While analyzing, between Madras Cements and TANCEM, there was a significant difference between the mean vectors taking all the six components together. Based on the mean vector difference, individual components of Madras Cements and TANCEM were tested using Students’ ‘t’ test. On the overall profitability, interest cover and on net profit ratio, the difference between the vectors was significant and on the rest, the vector difference was not significant.

India Cements and TANCEM mean vectors were compared and they differ significantly. On analysis, using Students’ ‘t’ test, excepting liquidity ratio, other components between the companies differ significantly.

Dalmia Cements and TANCEM components were compared and there was significant difference between the two. Using the Students’ ‘t’ test, excepting overall profitability ratio, on all the other ratios, there was a significant difference between the two companies.

There is no significant difference between the mean vectors of Chettinad Cements and TANCEM. It is interesting to note that the overall performance of
all the six components is same for both the companies. While analyzing, using Students’ ‘t’ test, it is concluded that excepting the net profit ratio, rest of the ratios of both the companies do not differ significantly.

**J. Assessment of Financial Health**

To properly assess the financial health, many tools can be used to bear. Traditional financial ratio analysis is very important, but it can be used only in conjunction with other tools. This study combines ratio analysis with a statistical technique and Discriminant analysis. It applies a popular model, the Altman’s Z score model in order to assess the financial condition of select cement companies during the study period.

1. The mean value of Z score of Madras Cements is 2.77 during the study period. Madras Cements was in the too healthy zone in 1995-96 and 1996-97 and slipped into the next level of health zone from 1997-98 to 2000-01 and in bankruptcy zone for four years from 2001-02 till the end of study period. Overall, it can be concluded that Madras Cements is in a healthy zone and appears to have been doing well during the study period.

2. The mean value of India Cements is 1.54 during the study period. India Cements was in healthy zone during the first half of study period and slipped into bankruptcy zone during the later half of the study period i.e. 2000-01 to 2004-05. Variable wise analysis reveals that during the study
period, low earning based on operation and low asset turnover ratio. It can be concluded from the study that the financial health of India Cements is not satisfactory during the study period.

3. The mean value of Z score of TANCEM is – 7.44 during the study period. TANCEM was in healthy zone in 1997-98 and rest of the years that is for 9 years it was in Bankruptcy zone. Variable wise analysis reveals that during the study period, the firm has registered a poor earning based on its operation and a low asset turnover ratio. It can be concluded that the financial health of TANCEM is very poor throughout the study period.

4. The mean value of Z score of Chettinad Cements during the study period is 1.76. Chettinad Cements was in healthy zone in 1995-96, 1996-97 and 2004-05 and was in bankruptcy zone during the rest seven year period. Variable wise analysis reveals that during the study period the company’s earning based on its operation has come down drastically from 2001-02 and 2002-03 and is also negative. It can be concluded from the table that the financial health of Chettinad Cements is not satisfactory during the study period excepting the first two years.

5. The mean value of Z score of Dalmia Cements is 1.99 during the study period which convey that the company is in healthy zone overall. The company was in healthy zone during 1995-96 to 2001-02 and 2003-04 and
for two years the company was in bankruptcy zone, 2002-03 and 2004-05. On analyzing variables, it is evident that most of the company’s variables are strong during the study period. To conclude that the financial health of Dalmia Cements is satisfactory during the study period.

K. Economic Value Added (EVA)

Economic Value Added is a measurement of financial performance that combines the familiar concept of residual income with principles of modern corporate financial specifically that all capital has got a cost and the earnings more than the cost of capital creates value for the shareholders. The increasing awareness in the corporate sector, particularly in the present age of globalization, has led to a revolutionary change in the criteria of financial performance measurement. The concept ‘Economic Value Added’ is growing fast and is being used to evaluate the overall financial performance of corporate entities.

1. EVA of Madras Cements is positive and a value creator for its shareholders throughout the study period. The company has added more value in 1995-96 and the wealth is maximized during that year. The value addition to the shareholders is lower in the year 2004-05. It can be concluded that Madras Cements has created value to its shareholders in all the 10 years under review.
2. EVA of India Cements is positive in eight years during the study period. The company has created value for its shareholders and is a value destroyer in 2002-03 and 2003-04. During these periods the company was functioning at a loss due to fall in net sales. It is concluded that India Cement has been a value creator in eight years and is a value destroyer in two years.

3. EVA of TANCEM is negative in seven years from 1998-99 to 2004-05. The company’s sales are one of the reasons for this downward trend, where the new peaks were never touched after 1996-97, during the study period. Mounting cost, where the company has failed to exercise control in this aspect, is yet another factor for destroying value to the shareholders. The company has created value during the initial three year period due to increase in turnover. To conclude, TANCEM has been a value creator during the first three years and is a value destroyer during the last seven years.

4. EVA of Chettinad Cements is positive during the entire study period. The company has been consistently able to touch new peaks till 1999-2000 and the wealth of the shareholders is maximized during that year. It can be concluded that Chettinad Cements has created value to its shareholders in all the 10 years under review.
5. Dalmia Cements’ EVA is positive during the period 1995-96 to 2004-05. The company had been consistently adding value to its shareholders since beginning of our study period and has reached a new height in 2004-05 and the shareholder wealth is maximized during that year. While analyzing, raise in turnover, increase in market price of the share and enlargement of the asset based could be attributed as reasons for this massive growth. It can be concluded that Dalmia Cements has created value to its shareholders in all the 10 years under review.

**Trend and Chi-square Analysis of EVA**

1. The actual Market Value Added (MVA) is greater than the estimated EVA of Madras Cements during seven years under review and in the three years 1997-98, 1998-99 and 2003-04 MVA is unfavourable. On examining the trend values using chi-square test it is concluded that the shareholders expectations about value creation had not been fulfilled by Madras Cements.

2. The actual MVA is greater in the years 1998-99, 1999-2000 and 2004-05 than the estimated value in the case of India Cements. For rest of the years, MVA is not favourable during the study period. On analyzing using chi-square test, it can be concluded that the expectations of the shareholders about value creation are not fulfilled by India Cements.
3. The estimated MVA is greater than the actual MVA for TANCEM during all the years under review. While examining using chi-square test, it is evident that the shareholders expectations are not fulfilled by TANCEM during all the years under study.

4. During the years 1995-96, 1996-97, 2001-02 and 2004-05, the actual MVA is greater than the estimated MVA for Chettinad Cements and is favourable. For the rest 6 years, it is not favourable and is a value destroyer for the shareholders. On testing the hypothesis using chi-square, it is clear that the expectations of the shareholders about value creation are not fulfilled by Chettinad Cements.

5. The actual MVA is greater in five years compared to estimated MVA in the years 1995-96, 1996-97, 1998-99, 2003-04 & 2004-05 and is favourable for the shareholders of Dalmia Cements. But during the rest of the study period, the MVA is not favourable. Using chi-square, it is clear that the expectations of the shareholders about value creation are not fulfilled by Dalmia Cements.

L. Market Value Added (MVA)

Economic Value Added is a measurement reflecting the absolute amount of shareholders value created or destroyed during each year.
1. Economic Value Added (EVA) of Madras Cements is positive and value creator throughout the study period from 1995-96 to 2004-05. The company has added more value in 1995-96 and the wealth is maximized during that year. The value addition to the shareholders is lower in the year 2004-05. It can be concluded that Madras Cements has created value to its shareholders in all the 10 years under review. Conversely on examining using Chi-square test, it can be concluded that the shareholders expectations about value creation are not being fulfilled by Madras Cements.

2. Economic Value Added (EVA) of India Cements is positive in eight years by value creating and is a value destroyer in the years 2002-03 and 2003-04. This is due to the reason that in those years there is a downward fall in the net sales and the profit level dipped into red despite keeping the cost at a constant level. On examining using Chi-square, it can be concluded that the shareholders expectations about value creation are not being fulfilled by India Cements.

3. Economic Value Added (EVA) of TANCEM is negative in seven years from 1998-99 to 2004-05 and is a value destroyer. While analyzing the reasons, the peak sale during the study period, in 1996-97 is never crossed. In addition, there has been consistent raise in the various overheads driving
the company in to red. This is supported by consistent funds erosion during the seven year period under reference. Using Chi-square, it can be concluded that the shareholders expectations about value creation are not being fulfilled by TANCEM.

4. Economic Value Added (EVA) of Chettinad Cements is positive and value creator through out the study period from 1995-96 to 2004-05. It can be concluded that Chettinad Cements has created value to its shareholders in all the 10 years under review. On examining using Chi-square test, it can be concluded that the shareholders expectations about value creation are not being fulfilled by Chettinad Cements.

5. Economic Value Added (EVA) of Dalmia Cements is positive and value creator through out the study period from 1995-96 to 2004-05. The reason for this value addition could be that the company’s asset base is enlarged to the maximum extent and the market price of its equity shares has touched the peak. It can be concluded that Dalmia Cements has created value to its shareholders in all the 10 years under review. Using Chi-square test, it can be concluded that the shareholders expectations about value creation are not being fulfilled by Dalmia Cements.
9.3 SUGGESTIONS

Having analysed and interpreted several variables under this study, the following suggestions and recommendations are offered to cement industry in general and to some companies, in particular.

1. Power and fuel cost play vital role in cement industry. Industry average of power and fuel cost to sales is 27.69 per cent and a quarter of the revenue is being eaten away by this cost. So the companies should try to reduce the expenses. High level of power tariff and consumption of power under High Tension (HT) is a problem to cement industry. Even though every company is having its own gensets, effective cost of running the plant with genset or under electricity should be thoroughly analyzed and the opportunity cost also to be considered while taking any decision in this front.

2. Next focus area is availability of coal. Inadequate and erratic supply of coal mainly due to poor availability of rail wagons, increase in coal prices following partial deregulation, poor quality of coal and frequent power cuts in major cement producing states is a next bottleneck to be overcome. This has adversely affected the performance of cement industry and there by its profitability. To overcome this situation many encouraging and ambitious efforts should be taken such as modernization/expansion programme of the
cement industry which includes conservation of energy, adoption of latest technology such as pre heaters and pre calcinators, installation of pollution control devices, frequent replacement of bags for bag houses, water sprinkling inside and outside the plant, setting up of coal washeries and captive power plants to solve the issues. Ways also to be devised to use alternates to coal where by coal consumption will also come down and the industry will be within the dust emission norms.

3. The effective leverage management can gear up the debt-equity ratio to attain maximum value creation for the shareholders. The leverage obtained from short term asset management at a low cost level, effective asset management that increase in equity wealth – in all will contribute to the increased market value of the share.

4. The study also reveals that the cost of finance is one of the important factors that cause weakness to the sample companies. The interest rate charged by the bankers and financial institutions are very high when compared to international rates. To augment the competitiveness of exports and to avoid weakness, efforts shall be taken by the government to offer various assistance in the form of working capital and fixed capital requirement at par with international standards.
5. Lack of adequate knowledge in financial planning is one of the reasons for the low profitability and poor liquidity position of the sample companies. It is imperative that sample companies follow proper financial planning that will help them to achieve better financial results.

6. While comparing China and Pakistan, the cost of production of cement in India is too high and hence the product is not competitive in the world market. It is clear from our analysis that the cost of production is on the steady increase. To maximize profit, cost should be reduced. Management can adopt the strategy of “per machine - production target” and try to achieve the optimum out of every machine. Wherever needed, to optimize cost and production, machineries may be modernised.

7. The debtor collection to be streamlined and the present trend is not satisfactory. The companies can adopt an appropriate receivable policy whereby the collection can be streamlined. Debtors can be analysed based on the age of the receivables. The collection policy to be evaluated periodically. It is advisable to get security deposit before down loading stock to a new dealer.

8. As rapid growth leads to change in the capital structure, especially in debt-equity ratio which influences the cost of capital and its associated risk profile, every company should consciously take decision while constructing
or modifying its capital structure. In financial decision, finance manager’s job is to come out with an optimum capital structure. The optimum capital structure should ensure the market value per share is maximum and the cost of capital is minimum.

9. Material management in sample companies plays an effective role in controlling the cost of production and its reduction. A special emphasis and attention therefore should be given to sound and efficient material management. Cost control and reduction techniques like budgetary control, standard costing, control ratios and value analysis should be adopted. Further, efforts should be made by the cement industry to control and reduce the administration, selling and distribution overheads.

10. The staff cost plays a major cost in cement companies, particularly in TANCEM. Personnel cost should be controlled through improvement in efficiency and productivity of employees. In the place of extra workers, badlis can be recruited on daily basis from outside the factory gate – as is done with textile industry – where the idle time of labour can be reduced. Extra staff can be diverted to maintenance work. Preventive maintenance can be taken up instead of break down maintenance. The target should be optimization of labour productivity.
11. It is found that majority of the study period sample companies are in all the zones such as financially bankruptcy zone, in healthy zone and are in too healthy zone. Appropriate measures are taken to improve their ‘Z’ score. The problem of under trading must be attended immediately. Further the company should plan to have adequate working capital. The company should have achievable sales targets and all possible steps are to be taken to achieve the sales targets and the deviation from the targets should be addressed immediately. The company should taken necessary steps to fully utilize the available capacity and the fixed assets are to be purchased only when the company is able to utilize its full capacity. The capital structure is to be changed in such a way to have standard debt-equity ratio and higher debt-content affects the borrowing power and profitability of the concern.

12. The amount invested in inventories is found to be very high in the sample companies, thereby, reducing the liquidity, most of the sample companies are not found to have managed their inventories properly. To solve the inventory problem, it is suggested that they improve their inventory control system by using all the modern sophisticated techniques.

13. The optimum investment in working capital should be determined and every firm should ensure a proper balance between profitability and liquidity. The increase in sale volume should be in proportion to the
increase in current assets. This can be ensured by proper utilization of capacity rather than adding capacity. The sample companies can have their managements’ attention focused on the variable where the liquidity is more. Effective strategies can be adopted and modified suitably in order to accelerate cash flows and the productive use of the same so that the return can be maximised. This will enhance the intrinsic value of the shares and the shareholders wealth.

14. The Operating Profit After Taxes (OPAT (also called NOPAT)) is the stronger determinants of MVA of all the sample companies and positively influencing the MVA. So the firm should try to maximise the profit and minimize the cost of production. The value of a company’s share depends largely on its net worth. This depends on the EPS and the goal of the management is to maximise the EPS.

15. Even though the sample companies are large in size and have invested in larger amount in total assets, it is incurring loss for some of the years during the study period. It indicates that the assets of the company could not be utilized efficiently. Hence, the sample companies should try to utilize their assets efficiently and economically, proper utilization of assets will increase the production, profitability and market value of shares.
9.4 TOPICS FOR FURTHER RESEARCH

1. A Study on Capital Structure of Cement Industry in Tamil Nadu


9.5 CONCLUSION

On the basis of critical evaluation of financial performance and financial position of the sample companies, it is observed that the profitability, solvency position and value creation of sample companies is generally satisfactory. Higher cost of production, low demand, low productivity and poor liquidity are the main reasons for the poor financial performance of sample companies. To compare with China and Pakistan, the cost of production in India is very high. So the cement industry is not competitive in the global market and the high cost of production adversely affects the financial performance of the cement companies. During the study period, only the last two years, the financial performance of the sample companies had been improving. In recent years, the Government of India
has given both direct and indirect incentives and tax sops to the cement industry. The indirect benefits are in the form of demand push by giving priority to the infrastructure and housing sectors. Besides, import of cement are made unviable by the government, removing the fear of foreign cement getting dumped in India. The government has also set up a pilot project for transportation of bulk cement in Mumbai to reduce the problem of transportation and distribution by gradually switching over from the traditional movement of cement in bags to modern bulkers. To sum up, the adoption of above said suggestive measures will certainly help the selected units to improve their financial performance.

If this study would motivate others to conduct further research, the researcher would feel highly rewarded. He will feel satisfied if the Cement Industry would consider the findings useful for their financial decision-making in the future.
CHAPTER IX

SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION

9.1 Introduction

9.2 Summary of Findings

9.3 Suggestions

9.4 Topics for Further Research

9.5 Conclusion