Since the early 90’s, the accounting profession has experienced considerable pressure to increase the usefulness of accounting reporting. Accounting standards were criticized because they were prepared without reference to an acceptable theoretical framework. Therefore, the Financial Accounting Standards Board (FASB) in the USA involved in a project to develop standards in order to contribute towards the development of an accounting framework for financial accounting and reporting.

The main objective of financial statements is to provide information about the financial position through balance sheet, performance through profit and loss account and changes in financial position through the cash flow statement of an entity that is useful to a wide range of users in making economic decisions. The users of financial statements are specifically interested in the ability of an entity to generate cash and cash equivalents and also the need to utilise these cash flows. Accordingly, there arisen the need to prepare and present a cash flow statement as an integral part of an entity’s financial statement. The cash flow information regarding the changes in the
The financial position of an entity is useful in evaluating its investing, financing and operating activities during a reporting period.

It is found in many researches, conducted in various countries that cash flow ratios that could be derived from cash flow data have the potential to increase the usefulness of the Cash flow statement (AS-3) and financial reporting. The Cash flow statement can determine the ability of business operations to generate future cash flows, meet obligations from internally generated funds and also indicate reliance on outside financing. Cash flow ratios can also be used to predict financial distress / failure.

Accounting standard setters claimed that the cash flow statement used in conjunction with other financial statements, the balance sheet and income statement, provides the following perceived benefits:

- It presents an insight into the changes in net assets of a company.
- It shows the ability of a company to generate cash and cash equivalents.
- It can be used in developing models to assess and compare the present value of the future cash flows of different companies.
- It also enhances the comparability of the reporting of operating performance by different enterprises because it eliminates the effects of using different accounting policies in accrual accounting for the same transaction and events.
It is usually used as a sign of the amount, timing and certainty of future cash flow.

It is also useful in checking the accuracy of past assessments of future cash flows and in examining the relationship between profitability and net cash flow and the impact of changing prices”.

Investors are interested in the dividends they will receive and the market value of their investments. They are, therefore, more interested in the cash flow than in the earnings of their investment.

The statement of cash flows can be especially useful for financial analysis because non-cash items are separately identified and others are classified with respect to activities (operating, financing and investing). In addition, ratios derived from the cash flow statement can provide information, useful for performance evaluation.

Referring the past studies, related to cash flow ratios, it is found by the researcher that many cash flow studies show the value of cash flow data in predicting financial distress. Havel and Levine also stated that an entity will not go out of business because it reports net losses, but because it runs out of cash. Ozanian & Badenhausen believed that it is possible for an entity to report impressive earnings and yet be bleeding cash.
The ability to generate cash flow and future cash flow is, therefore, critical for the financial success of an entity. If an entity can cover all obligations, reinvest in assets and pay dividends out of internally generated funds, it indicates a financially healthy entity.

The financial statement users have argued in favor of the disclosure of detailed information on an entity’s current operating cash flows. Therefore, the cash flow statement was designed to bridge the information gap between traditional accrual accounting and an understanding of the cash flow activities of an entity. A gap existed because accrual accounting failed to provide relevant disclosure to assess the amount, timing and uncertainty of future cash flows. Such disclosures would allow users to better assess the ability of an entity to generate positive future net cash flows, to meet obligations and to assess the need for external financing. It should also assist users of financial statements in their assessment of liquidity, viability and financial adaptability.

The greater the amount of future net cash inflows from operations, the greater the ability of an entity to withstand adverse changes in operating conditions. A cash flow statement highlights the liquidity and the management of working capital of an entity and enables users to be better informed about the performance of management during the accounting period of investments.
The inclusion of the cash flow statement in financial statements revealed the need to develop cash flow ratios for analysing the cash flow statement. As there is no consensus on a comprehensive set of cash flow ratios for analyzing the cash flow statement, this study has examined the cash flow ratios suggested by different authors. A set of cash flow ratios would be developed to serve the objectives of the cash flow statement and the same shall be suggested to be included in the financial analysis of business entities. This study becomes more relevant and accurate as financial information derived from cash flow statement will help better to identify the failure or progress of entities.

The study has identified 66 companies from different categories of the manufacturing industry that fulfilled the prescribed criteria and became part of the study. The combination of 66 companies constitutes 33 paired samples of financially distressed and non-distressed companies. The asset size of the entity varies to be large in privately held corporations. Therefore, the study takes in to account small and medium entities with the assets size up to 100 Crore Rupees, where the probability of failure is more. The study has evidence over its statement as large entities are established and financially strong in spite of challenges, but small and medium entities once hit the financial crisis find themselves difficult to restart. Strictly analysing, the influences drawn
from this study apply only to entities that are registered, listed and has
registered in CMIE database. It is also found that the similarity of asset size is
more among medium and small entities than large entities.

Another point to worth note is that the same numerical value of a ratio
implies a different meaning or probability of failure in different industries. The
evidence offered on behalf of industry differences is the fact that the ratio
distribution differ among industries.

The 33 pairs of financially non-distressed and distressed companies that
have been chosen in this study are from the industries namely, Cotton and
Blend Yarn, Pharmaceuticals, Plastic Tubes, Steel, Machine Tools, and Other
Electronics. Since the manufacturing industry is found to be a relatively
established sector and the financial information can easily be accessed, it has
been chosen as the area of the study.

The study examined the financial statements of selected 66 companies.
The percentage change of figures over the 5 years from 2003-04 to 2007-08 is
tremendous for distressed as well as non distressed entities. While comparing
these absolute increase and decrease across entities, it has been found that there
are similarities among the distressed companies.

Several past studies concluded that failing entities exhibit significantly
different ratio measurements than the continuing entities. Altman, in one of his
studies compared a list of ratios individually for failed entities and a matched sample of non-failed entities. He found that observed evidence for five years prior to failure was cited as conclusive and ratio analysis can be useful in the prediction of failure.

The present study has identified financial and cash flow ratios that would help to predict financial distress of companies. The study is done for a time period of 5 years where predictions validity, using ratios was more concrete. In general, ratios measuring profitability, liquidity, and solvency prevailed as the most significant indicators. The order of their importance is not clear since almost every study cited a different ratio as being the most effective indication of impending problems.

To identify the ratios that influence the predictability of financial distress and to test the normality of data, Kolmogorov – Smirnov test is applied. The results of the test helped the researcher to remove all those ratios that do not match the normality before applying the Discriminant analysis. The Discriminant analysis helped in identifying the ratios that have greater potential to indicate the state of financial distress of an entity.

Almost all studies have approved those ratios that were also statistically proved to be part of the study. Although the other ratios were relevant but not
statistically proved, were eliminated. It shows that statistically proved ratios can only become part of identification of distress status of an entity.

The researcher has made use of Z Score Model of Altman for both financial and cash flow ratios in this present study. The procedure applied by the researcher to do the analytical test is as follows:-

1) Selection of the industry and the companies in the industry.

2) Identifying the distressed company based on the auditor’s report and finding a mate for each chosen distressed company that is a non distressed company.

3) Comparing the asset size and selecting the company from the same industry, based on the established criteria.

4) The companies selected should have the financial statement for the years from 2003-04 to 2007-08 in the same format.

5) Once the variables are selected for computation of ratios, the ratios are calculated using MS Excel.

6) Once the variables are transposed and arranged in MS Excel, these are taken for further analysis in SPSS.

7) Kolmogorov- Smirnov test of normality is used to identify the normality of ratios.
8) After the outlier is identified and removed, the ratios are used for discriminant analysis.

9) All the ratios that form part of normality become part of Multiple Discriminant Analysis (MDA).

10) Multiple discriminant analysis is used to identify the ratios that are more discriminant than the others.

11) Remove the ratios that do not form part of the discriminant analysis and select the ratios that have the discriminant ability.

12) Computation of Z score of the companies for the study period of five years, using the ratios identified.

13) After arriving at the Z score, implement the cut off rate.

14) Classifying the companies as distressed or non-distressed based on their Z-score.

Numerous past studies have shown that financial ratios, based accrual accounting data possess significant ability to predict bankruptcy (Altman and Spivack, 1983; Beaver, 1966, 1968; Libby, 1975; Ohlson, 1980). Most of these studies concluded that companies with weak and unstable financial ratios are more likely to fail than those companies with stronger and more stable financial ratios. However, these models did not emphasise the importance of cash flow data. An ideal approach is probably an integrated one, such as the
approach suggested in this study. This study provides evidence on the usefulness of cash flow data in the prediction of business failure and whether the integration of cash flow data with accrual accounting data can provide a superior measure over accrual accounting data alone for predicting bankruptcy / financial distress. It is to be noted that this present study does not suggest overlooking the earlier predictive methods, but rather it addresses whether cash flow information can complement the information already provided by accrual accounting data.

5.1 MAJOR FINDINGS OF THE STUDY

With regard to the application of financial ratios to predict the financial distress of companies, there have been ten financial ratios used in this study. The output of those selected ratios was put into the test of normality using Kolmogorov-Smirnov test. The significance of Kolmogorov-Smirnov Z Values at 5% level qualifies the variables to conduct the test of normality. The normality indicates that the variables have the efficiency to form group classifications against the predicted groups of financial distress. As per the results of the test, the level of significance is less than 0.05 for all the ten financial ratios chosen for the study. Hence, the hypothesis one has been proved that the financial ratios used in the study have the normality to predict financial distress of companies.
While predicting the group membership for identification of financial ratios, this study has found that 15 companies face Type I error and 14 companies face Type II error. Type I error occurs when a financially distressed company is identified as non-distressed. Type II error occurs when a financially non-distressed company is identified as distressed company. The effect of such a wrong classification would be that the banks and other financial institutions might not be ready to grant loan to a non-distressed company which is classified as distressed. As a result, the first error is more severe than the second error.

It is essential in this study to extract the perfectly discriminating variables using Wilk’s Lambda and F Values. The significance at 5% level exactly determines crucial financial ratios for financial distress. It is found that with lower standard deviation values, the three ratios such as, Working Capital / Total Assets; Cash + Receivables / Total Assets; and Current Liabilities / Total Assets are clustered around their mean values and two other ratios such as, Net worth / Sales; and Net Income / Sales have been widely spread with significantly higher figures than their mean values. Only these five ratios out of the ten ratios are identified to have the discriminant ability to predict the financial distress of companies and they have been further processed in this study.
To find the association between the financially non-distressed and distressed companies, Wilk’s lambda test has been applied. It is found that the Wilk’s Lambda value of 0.235 and chi-square value 89.054 are statistically significant at 5% level to extract those five financial ratios.

Since, a parametric justification is required to prove the proximity among those extracted financial ratios, Karl-Pearson’s co-efficient of correlation matrix is applied. It is found that the correlation co-efficient 0.611, -0.345, and 0.299 are statistically significant at 5% level and also give empirical evidences for the extracted financial ratios and also their proximity to determine financial distress of companies. In an evaluation of discriminant functions, most correlation between variables is positive and that by and large, negative correlation is really helpful for the study than the positive correlation. The logic behind if high negative correlation in the distressed group is that as companies suffer losses and deteriorate towards failure, their assets are not replaced as much as the healthier times, as well as the cumulative losses have further reduced the asset size leading them to access debt.

The five financial ratios that are identified as better predictors of financial distress of companies have become the elements of the Z-score model, constructed in this study. The model is mathematically expressed as:

\[ Z = 0.131 \times X_1 - 0.631 \times X_2 + 0.661 \times X_3 + 0.854 \times X_4 + 0.939 \times X_5 \]; Where: Z =
Discriminant Function (i.e., financially distressed and non-distressed); $X_1 = \frac{\text{Working Capital}}{\text{Total Assets}}$; $X_2 = \frac{\text{Cash} + \text{Receivables}}{\text{Total Assets}}$; $X_3 = \frac{\text{Current Liabilities}}{\text{Total Assets}}$; $X_4 = \frac{\text{Net Worth}}{\text{Sales}}$; $X_5 = \frac{\text{Net Income}}{\text{Sales}}$. Based on the MDA financial distress prediction model, the second hypothesis was tested and proved that financial ratios have significant ability to predict financial distress of companies.

The financial distress models are constructed for one, two, three, and four years prior to the financial distress, using equal prior probabilities and an equal cost of misclassification. The Discriminant analysis is used to build a predictive model of group membership based on the observed characteristics of each case. The procedure generates a discriminant function or a set of discriminant functions if the groups are more than two, based on linear combinations of the predictive variables that provide the best discrimination between the groups.

The financial distress or the inability of companies to pay their debts as they become due, is measured based on their Z-score values. Since the researcher found different cut-off rate calculation, followed by different authors and researchers in the past studies, he has determined separate calculation for predicting or measuring financial distress of companies belonging to the chosen sector of the study.
As per the discriminant analysis of financial ratios, the financial Z-score values for the year ended on 31st March 2004 have shown that 30 companies are financially very good with the Z-score $\leq 2$, another 30 companies stand financially good with the Z-score values between 2 and 1 and the remaining 6 companies have the possibility for financial distress in the near future due to the Z-score values between 1 and 0.5. It is also identified that the companies belong to the same sector and industry and with the same asset base have different financial Z-score values. Hence, the study has brought to sharp focus that 6 companies that form to 18% of the 33 financially distressed companies, have started moving towards financial distress in the fourth year (2003-04) prior to the year (2007-08) of financial distress of companies.

The financial Z-score values for the year ended on 31st March 2005 have shown that 29 companies are categorised to be financially very good and another 23 companies are found to be financially good, whereas the remaining 14 companies are found to have the possibility for financial distress in the near future. Hence, it is understood that 14 companies that form to 42% of the 33 financially distressed companies have started moving towards financial distress in third year (2004-05) prior to the year (2007-08) of financial distress of companies.
The financial Z-score values for the year ended on 31st March 2006 have shown that 24 companies are categorised to be financially very good and another 20 companies are found to be financially good with the Z-scores that lie between 2 and 1. The remaining 22 companies are found to have the possibility for financial distress in the near future. Hence, it is understood that 22 companies that form to 67% of the 33 financially distressed companies have started moving towards financial distress in the second year (2005-06) prior to the year (2007-08) of financial distress of companies.

The financial Z-score values for the year ended on 31st March 2007 have shown that 21 companies are accepted to be financially very good and 19 other companies are found to be financially good whereas, the remaining 26 companies are found to have the possibility for financial distress in the coming year. Hence, it is understood that 26 companies that form to 79% of the 33 financially distressed companies have started moving towards financial distress in the first year (2006-07) prior to the year (2007-08) of financial distress of companies.

The financial Z-score values for the year ended on 31st March 2008 that is the year of financial distress, have shown that 12 companies are categorised to be financially very good with the financial Z-Score values \( \leq 2 \). Another 11 companies are found to be financially good with the Z-scores that lie between
2 and 1. Ten other companies with the Z-score values between 1 and 0.5 are found to have the possibility for financial distress in the near future. The remaining 33 companies with the Z-score values less than 0.5 are already facing the financial distress problem.

In relation to the application of cash flow ratios to predict financial distress of companies, there have been ten cash flow ratios identified and used in this study. They have been chosen for their popularity in the past studies, carried out on this subject.

The output of those selected cash flow ratios for 66 companies was put into the test of normality using Kolmogorov-Smirnov test. As per the results of the test, the level of significance is less than 0.05 for all the ten cash flow ratios chosen for the study. Hence, the hypothesis three has been proved that the cash flow ratios used in the study have the normality to predict financial distress of companies.

While predicting the group membership for identification of cash flow ratios, this study has found that 12 companies face Type I error and 12 companies face Type II error.

It is found that the Wilk’s Lambda value of 0.237 and chi-square value 84.936 are statistically significant at 5% level to extract the five ratios such as, Cash flow from operations / Total External Financing Sources; Cash flow from
financing activities / Total Sources of cash; Cash flow from operations / Net Income; Cash flow from operations / Total Sources of Cash; and Cash flow from operations / Sales.

Since, a parametric justification is required to prove the proximity among those extracted cash flow ratios, Karl-Pearson’s co-efficient of correlation matrix has also been applied. It is found that the correlation co-efficient -0.307, 0.475, 0.300 and 0.864 are statistically significant at 5% level and also give empirical evidences for the extracted cash flow ratios and also their proximity to determine financial distress of companies.

The five cash flow ratios that are identified as better predictors of financial distress of companies have become the elements of the Z-score model, constructed in this study. The model is mathematically expressed as:

\[ Z = -1.029 X_1 + 0.873 X_2 + 0.398 X_3 + 0.480 X_4 - 0.275 X_5 \]

Where: \( Z \) = Discriminant Function (i.e., financially distressed and non-distressed companies); \( X_1 \) = Cash flow from operations / Total External Financing Sources; \( X_2 \) = Cash flow from financing activities / Total Sources of cash; \( X_3 \) = Cash flow from operations / Net Income; \( X_4 \) = Cash flow from operations / Total Sources of Cash; \( X_5 \) = Cash flow from operations / Sales; Hence, the fourth hypothesis is tested and proved that the cash flow ratios have discriminant ability to predict the financial distress of companies.
As per the discriminant analysis of cash flow ratios, the cash flow Z-score values for the year ended on 31\textsuperscript{st} March 2004 have shown that 30 companies have the Z-Score that stand for financially very good condition and another 28 companies stand for financially good condition, whereas the remaining 8 companies have the possibility for financial distress in the near future due to the Z-score value between 1 and 0.5. Hence, it is understood that 8 companies that form to 24\% of the 33 financially distressed companies have started moving towards financial distress in the fourth year (2003-04) prior to the year (2007-08) of financial distress of companies.

The cash flow Z- score values for the year ended on 31\textsuperscript{st} March 2005 have shown that 28 companies are categorised to be financially very good and 20 other companies are financially good. The remaining 18 companies with the Z-score values between 1 and 0.5 are found to have the possibility for financial distress in the near future. Hence, it is understood that 18 companies that form to 54\% of the 33 financially distressed companies have started moving towards financial distress in the third year (2004-05) prior to the year (2007-08) of financial distress of companies.

The cash flow Z- score values for the year ended on 31\textsuperscript{st} March 2006 have shown that 20 companies are financially very good, 22 other companies are found to be financially good and the remaining 24 companies have the
possibility for financial distress in the near future. Hence, it is understood that 24 companies that form to 73 % of the 33 financially distressed companies have started moving towards financial distress in the second year (2005-06) prior to the year (2007-08) of financial distress of companies.

The cash flow Z- score values for the year ended on 31st March 2007 have shown that 15 companies belong to financially very good condition, another 23 companies belong to financially good condition and the remaining 28 companies with Z-score values between 1 and 0.5 are found to have the possibility for financial distress in the near future. Hence, it is understood that the financial distress of companies has been predicted to the extent of 85 % in the first year prior to financial distress of companies.

As of the year ended on 31st March 2008, the Z-score values of cash flow ratios have identified that 9 companies are categorised to be financially very good with the financial Z-Score values ≤ 2. Another 14 companies are found to be financially good with the Z-scores that lie between 2 and 1. Ten other companies with the Z-score values between 1 and 0.5 are found to have the possibility for financial distress in the near future. The remaining 33 companies with the Z-score values less than 0.5 are already facing the financial distress problem.
To test whether cash flow ratios are better predictors of financial distress of companies than the financial ratios, a comparative analysis was carried out using the results, derived from the Z-score models of financial and cash flow ratios, constructed in this study. The following findings have been revealed.

Ø The financial ratios applied in this study have found that 18% i.e., six out of the thirty three companies have started moving towards financial distress in the year 2004 itself. As far as the cash flow ratios used in the study are concerned, the predictive ability is 24% i.e., eight out of the thirty three companies have started moving towards financial distress in the same year.

Ø As of the year ended on 31st March 2005, the financial ratios have predicted the financial distress to the extent of 42% whereas, the cash flow ratios have predicted it to the extent of 55%.

Ø As of the year ended on 31st March 2006, the financial ratios have predicted the financial distress to the extent of 67%, whereas the cash flow ratios have predicted it to the extent of 73%.

Ø As of the year ended on 31st March 2007, the financial ratios have predicted the financial distress to the extent of 79%, whereas the cash flow ratios have predicted it to the extent of 85%.
This study has obviously brought to sharp focus that all through the five years period of the study, the predictive ability of cash flow ratios towards financial distress of companies has been much better than that of financial ratios. **Hence, the fifth hypothesis is proved that cash flow ratios are better predictors of financial distress of companies than that of financial ratios.**

### 5.2 SUGGESTIONS OF THE STUDY

The suggestions that emanate from the findings of the research are presented hereunder.

The Accounting Standard (AS-3) on the subject titled ‘Cash flow Statement’ has been made mandatory from 1st April 2001 in India in respect of (i) companies whose shares are listed in a recognised stock exchange in India and also (ii) the other business enterprises whose turnover for an accounting period exceeds Rs.50 Crore. However, it is found that the information made available in the cash flow statement are not properly used by the different stakeholders associated with such entities. Therefore, it is suggested that awareness should be created among such stakeholders to understand the relevance of cash flow information that would help them in knowing the correct financial state of their entities.

The users of financial statements are specifically interested in knowing the ability of an entity to generate cash and cash equivalents and also the need
to utilise these cash flows. Undoubtedly, it is suggested that cash flow information would help them to understand such ability of an entity. Hence, financing bodies / entities can rely more on the cash flow information than financial information to evaluate the cash generating ability of companies, applied for loan.

Statistical significance does not always follow accounting logic. Therefore, it is dangerous to select the ratios, using only statistical logic. For example, assume that statistics show that the current ratio is better than the quick ratio in analysing liquidity in current assets. Accounting logic contradicts this result. The current ratio includes inventories while quick ratio does not. Consequently, the result may cause mistakes in assessing liquidity. In this case, one should use accounting logic and not statistical results. But to prove it as per research, accounting logic as well as statistical relevance play a major role. Therefore, it is recommended that the analysts should make use of the ratios that fulfill the relevance as per both accounting and statistics.

Profit shown in the profit and loss account does not necessarily reflect an increase in cash. Moreover, the profitability and financing issues are reported separately in the Profit and Loss account and Balance sheet respectively. This causes misleading and confusing results to the users of financial statements. The present study emphasises the use of cash flow
information in conjunction with financial information which is superior to use of financial information alone for making financial decisions. Hence, the users of accounting information are advised not to ignore the relevance of cash flow information while making investment decisions.

The conditions under which cash flow information provides valuable information would be insightful. It is found and suggested that under high task uncertainty, the provision of cash flow information may add value whereas under low task uncertainty, its incremental information content may be insignificant.

It is suggested to examine the relationship between the components of operating cash flow that would highlight the causes of the variability in operating cash flow. This helps to identify companies that are reducing inventory and receivables and increasing accounts payable to manipulate cash flow from operations. Investigating the relationships between investing, financing, and operating cash flows would also indicate the major source of cash for an entity.

If a company is on the verge of bankruptcy for financial reasons, then it is suggested to observe the declining operating cash flows and increasing cash inflows from financing and investing activities. Probing which components of financing and investing cash flows is providing the cash would reveal
information not discernible from the profit & loss account and the balance sheet.

The objective of creative accounting or window dressing is to portray the favourable by distorting and suppressing unfavourable accounting information. It is not surprising that distressed companies are more likely than non-distressed companies to engage in such practices. Since, it is difficult to adjust for the window dressing effects prior to model construction; it is advisable to seek predictive variables which are more difficult to window dress. It is more feasible to use the cash flow information because it is less susceptible than accrual information to window dressing and moreover, the scope of cash flow information for window dressing relative to accrual information is also limited. Hence, accounting or legal regulations that discourage window dressing could highlight the importance and use of cash flow information.

Since accrual accounting policies tend to vary between companies within an industry and across industries, comparative financial performance analysis may be limited by the extent of differences in the accounting policies adopted. Such an analysis may not reflect the actual economic performance of the company but reflect only the effect of the accounting policies adopted. But, the use of cash flow information will improve comparability amongst
companies, as it is based on single accounting policy that is to report all cash inflows and cash outflows. However, uncontrollable industry differences and management manipulation of the timing of cash flows will remain.

At present, many business entities make use of few ratios that have Cash flow or Net cash as one of the variables. But, they fail to make use of other relevant cash flow information that are available in the cash flow statement. All such cash flow information should also be used to compute ratios that would facilitate effective financial decisions.

This study has brought out a financial distress prediction model using cash flow ratios. The model can be a tool to the users of financial statements to evaluate the financial ability / inability of an entity.

Among the two models for predicting the financial distress, built in this study, the cash flow ratios model is proved to be better than that of financial ratios. Therefore, cash flow ratios model is recommended for better prediction of financial distress of companies.

As per the findings of this study, it is recommended that the suggested models shall effectively predict financial distress of companies only during the four years prior to the year of actual financial distress. However, the models could be applied to a company periodically and the results could be obtained to determine its financial state.
Asset management and their utilisation are of vital importance for the effective functioning of an entity. The ratio- Working capital / Total Asset that is characterised by $X_1$ in the financial ratios based model helps a company to measure to what extent, the assets are managed and utilised towards improving profitability. Another ratio – Cash + Receivables / Total Assets, that is characterised by $X_2$ in the model helps in determining the liquidity status. Similarly, Profitability is measured by another ratio- Net Income / Sales, which is characterised by $X_5$. In addition, the short-term debt holder’s claim against assets and the impact of turnover on shareholder’s wealth are measured by the ratios- Current Liabilities / Total Assets and Net worth / Sales respectively of the financial ratios based model. Therefore, the financial ratios based model is suggested to be used by the companies with varied interests to address the mentioned important aspects that contribute towards success.

In relation to the financial distress prediction model based on cash flow ratios, built in this study, it also addresses the various issues such as, the ability of a company to generate sufficient cash, measurement of quality of earnings, the financial flexibility and ability of the management, the company’s reliability on creditor’s and owner’s contribution, and Understanding the financial position of a company. Therefore, this model could be used not only
for predicting financial distress but also to address the above mentioned issues that are inevitable for the prosperity of an entity.

5.3 CONCLUSION

Traditionally, the users of accounting information have been making use of a set of financial ratios as an effective tool for financial analysis of business entities. Unfortunately, it is possible that current and quick ratios of an entity can be positive and profit can also increase, while at the same time, the entity can be in severe financial distress. After the inclusion of cash flow statement in financial reporting, new and more useful information has become available for inclusion in a financial analysis. Within the financial analysis of an entity, the cash flow information can be more reliable than the information derived from the balance sheet and income statement. The balance sheet information is static since it measures a single point in time that is the date of balance sheet. The income statement on the other hand contains many non-cash transactions also. But, cash flow statement is dynamic. It records the changes in other financial statements over a period and focuses on the cash available from as well as for the core operations and further investments. It is found that a set of cash flow ratios used along with the traditional balance sheet and income statement ratios could be of increased value to evaluate the financial strengths and weaknesses of an entity. Many researchers in other developed countries have also
emphasized the importance of including cash flow ratios in the financial analysis of business entities, obviously to protect the interest of the different stakeholders.

In India, the research on the application of cash flow ratios as better indicators of financial distress of a business entity is perceived to be new. It is the primary reason of this study to identify and apply a set of cash flow ratios computed using cash flow data that would facilitate early identification and prevention of financial distress with reference to private sector Indian manufacturing companies.

The prediction of financial distress is one of the suggested uses of the cash flow statement, although users may have different uses for the cash flow statement. Shareholders will use the cash flow statement as it records the changes in the other statements and focuses on what shareholders really care about: the cash available for operations and investments. Investors are interested in the dividends they will receive and the market value of their investments. They are, therefore, more interested in the cash flow than in the earnings of their investment. Hence, the importance of cash flow information for effective financial analysis should be accepted and experienced by all the users of accounting information. In addition, the models suggested in the study could be used periodically by them so that they can predict the financial
distress if any, of entities at an early stage and prevent it. A final word of the study is that let all the users of accounting information make use of cash flow information in conjunction with financial information for making better economic decisions.

5.4 SCOPE FOR FURTHER RESEARCH

There is adequate scope for further research in the following areas:

- A study on developing a cash flow model for predicting financial distress of companies belonging to service sector in India.
- A separate study could be undertaken to develop a common set of cash flow ratios for all sectors.
- This present study was on developing models on financial and cash flow ratios for private sector companies in India, there is a scope for undertaking a study specifically on the public sector companies. Since most Public Sector Undertakings in India enjoy patronage from Government during times of distress, such a study could be undertaken in isolation of financing from Government or its agencies.