ABSTRACT

Financial distress in companies indicates a situation where the firm is not able to meet its obligations due to poor financial performance manifested through reduction in revenues, low profitability, under-utilization of assets and poor working capital management. This leads to default in payment to lenders, creditors, employees and government. A distressed company’s long term survival prospects are diminished. A financially distressed company can turnaround itself through remedial measures taken at appropriate times. This is possible if the distress signals are identified in advance by the company’s management. A distressed company not only leads to erosion of investors’ wealth but also depresses the investment climate in an economy. During the financial crisis of 2007-08, many organizations filed for bankruptcy. A company passes through various stages of distress before it becomes bankrupt or insolvent. One of these stages is financial distress. It is a stage when the company finds it difficult to meet its contractual obligations. When financial distress cannot be mitigated, bankruptcy or insolvency sets in. Financial distress has permeated the Indian corporate fabric. There is an urgent need to identify signals which indicate financial distress in companies. This can serve as an early warning system to the company’s management as well as investors to protect wealth.

Review of studies on corporate distress revealed the need for country specific model incorporating firm specific and economy specific factors which can signal financial distress. Research in India in this area is at a nascent stage. The focus was primarily on application of existing models to Indian companies. Also some sector specific models developed are not validated. This gap in research led to the formulation of objective for this study. The objective of this study is to (i) identify the financial ratios which can indicate financial distress in listed manufacturing companies in India (ii) develop a Distress Prediction Model and (iii) examine the relationship between financial distress in companies and macroeconomic factors.

After extensive literature review, eighteen financial ratios and five macro-economic factors were selected as variables for the study. These financial ratios indicate profitability, efficiency, liquidity, efficiency and cash flows in a company. Macro-
economic factors used are Net National Income, Exchange Rate, Bank Rate, Inflation and Industrial Production Index (Manufacturing). Listed manufacturing companies reporting net losses for three consecutive years are selected as sample distressed companies for this study. Each of these distressed company is matched with a non-distressed company from the same industry. Thus 288 distressed and 288 non-distressed companies were selected for review, analysis and model development. Logistic Regression, Discriminant Analysis and Factor Analysis were used as tools for analysis.

Based on the results of the analysis, it is inferred that financial ratios can discriminate distressed and non-distressed companies. GPM, EBITM, DE, DTO, QR and CFOS are the important ratios which exhibit strong discriminating abilities. A logit model developed using financial ratios gave a classification accuracy of 90% from sample data. This model was also applied on new data for validation. The model could correctly predict distress or non-distress for 91% of the companies. The model developed in this study was also compared with the existing bankruptcy prediction models viz. Altman (1968) ‘z’ score model, Ohlson (1980) ‘o’ score model and Zmijewski (1984) model. Major improvements in variables identified were observed. The influence of macro-economic conditions of a country on corporate financial distress was examined by including the macro-economic factors along with financial factors in distress prediction model. The model accuracy did not show significant improvement. No correlation was observed between financial ratios and macro-economic factors leading to a conclusion that macro-economic factors do not substantially influence distress in a company. Firm specific factors are more relevant.

The model developed using financial ratios can serve as an early warning system for identification of areas in business which can lead to probable bankruptcy. This will be of immense value to all the stakeholders of the business.