Early Warning System of Financial Distress Based On Credit Cycle Index

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Abstract : Previous studies on financial distress prediction choose the conventional failing and non-failing dichotomy; however, the distressed extent differs substantially among different financial distress events. To solve the problem, "non-distressed", "slightly-distressed" and "reorganization and bankruptcy" are used in our article to approximate the continuum of corporate financial health. This paper explains different financial distress events using the two-stage method. First, this investigation adopts firm-specific financial ratios, corporate governance and market factors to measure the probability of various financial distress events based on multinomial logit models. Specifically, the bootstrapping simulation is performed to examine the difference of estimated misclassifying cost (EMC). Second, this work further applies macroeconomic factors to establish the credit cycle index and determines the distressed cut-off indicator of the two-stage models using such index. Two different models, one-stage and two-stage prediction models, are developed to forecast financial distress, and the results acquired from different models are compared with each other, and with the collected data. The findings show that the two-stage model incorporating financial ratios, corporate governance and market factors has the lowest misclassification error rate. The two-stage model is more accurate than the one-stage model as its distressed cut-off indicators are adjusted according to the macroeconomic-based credit cycle index.

Keywords : Multinomial logit model, corporate governance, company failure, reorganization, bankruptcy

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