REKAYASA SISTEM DIAGNOSA TINGKAT KESEHATAN DAN KINERJA PERUSAHAAN AGROBISNIS/AGROINDUSTRI BERBASIS JARINGAN SARAF TIRUAN DAN LOGIKA FUZZY

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ABSTRACT

ANIF HANIFA SETIANINGRUM. The Diagnostic System Design for The Agroindustry/ Agribusiness Health Performances based on Neural Network and Fuzzy Logic. Supervised by MARIMIN and YENI HERDIYENI

The prediction of corporate bankruptcies is an important issue, since it can have significant impact on bank lending decisions. Sign of potential corporate failure are evident months before the actual bankruptcy materializes or the company which were in the process of debt restructuring on bonds and other debts. But accurate prediction of declining business activity that leads to bankruptcy allows time for managers, investor and creditor to take corrective action. Sign of potential financial distress are evident long before bankruptcy occurs. Financial distress begins when a corporation is unable to meet its payment scheduled or when the projection of future cash flows points to an inability to do so in the near future.

Discriminant Analysis of Financial Ratios is used in this thesis and it will be compared with Adaptive Neural Fuzzy Inferences System (ANFIS) to create a model that would help predict future financial insolvency for firms in the same industries such as Agroindustry or Agribusiness which were under monitored by Jakarta Stock Exchange/BEJ and BAEPAM. The data was collected and selected 73 data samples ratios from 26 firms between 2000 and 2004 that had been restructured or unrestructured. Although the firms were not indicated bankruptcy by the legal authority but they could identified unhealthy or indicated the firms should be taken the process of debt restructuring.

The Diagnostic Design System for the Agroindustry would assist to predict and diagnose the firm which have the financial distress. There are 33 ratios and previous research has found useful in bancruptcy predictions but It used 5 (five) ratios same as (Altman Z-Score, 1968) and (Healy Palepu, 1989) to predict bankruptcy or to find the characteristic of the firms which have financial distress. It was that observed the effects of the predictions capabilities of the methods using different sample sizes. Both of two methodologies will be compared to find the accurate prediction, and also to identify the cause of having financial distress by ANFIS methode.

Keywords : Discriminant Analysis, ANFIS Methode, Risk of Bankruptcy
Financial Distress, The Prediction and Diagnostic System