An analysis model of merchant discount rate for services of credit card in commercial bank using fuzzy logic

**Abstract**
This paper presents a model of merchant discount rate using fuzzy logic for credit card services of commercial bank. Generally, the bank staffs present to search the information and bring them to analyze the suitable factors for setting a merchant rate. Therefore, it has a difference in merchant discount rate (MDR) of each bank. The merchants obtain the different MDR to get the lowest rate. This problem is a critical issue for business. The bank will find a method to analyze the merchants for the lowest MDR under costs and competitive market. This paper proposes an idea to help for analyzing the merchant discount factors using fuzzy logic. The samples from the business in Bangkok consisting of 1) automobiles, 2) apparels, 3) clinics, 4) restaurants, 5) materials and 6) schools. There are totally 400 samples used in this experiment. The factors for analyzing MDR comprise 1) sales volume, 2) over drown, 3) deposit and 4) time period. According to the experiment, the results of the model border on the MDR of each bank are more than 94%. The MDR can alternatively help the evaluation of the merchants. ©2010 IEEE.

**Author Keywords**
Effective factor of merchant discount rate; Fuzzy logic; Merchant discount rate; Merchants

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