

Thesis Title : Measuring Management Efficiency and Efficiency Improvement of Commercial bank in Thailand: the application of DEA model in Thai commercial banks.
Student's name : Supachai Ungpisitsak
Thesis Major Advisor : Dr. Tang Zhimin
Program of Study : MBA (Day Program)

The Abstract

Economic recession in Thailand caused a deterioration of assets of the entire banking industry, sale of nationalized bank, and declining in loan portfolio quality. Moreover, various impacts occurred from entering liberalization process. While the recession extending into present, competition in the Thai banking industry continues to intensify. The challenge is to survive in the new changing environment. All local banks must unavoidably pay close attention to monitor, measure, and improve their management efficiency.

This study is designed to investigate "which commercial bank in Thailand has a relative higher management efficiency, and also examine the way to improve their efficiency through restructuring. The study aimed to compare and measure the efficiency of current Thailand financial bank, application of DEA model. Furthermore, the study also aimed to improve their efficiency management according to result suggested by DEA model. Data Envelopment Analysis, occasionally called DEA model, is becoming an increasingly popular management tool. It is a linear programming based technique for measuring the relative performance of organizational units where the presence of multiple inputs and outputs makes comparisons difficult, developed by Chanres, Cooper and Rhodes in 1978.

A DEA evaluation requires data that measures each of the relevant outputs and each of the inputs used to produce these outputs over a common time period. The resources or inputs used include labor, and total asset. The outputs consist of total deposit, total loan, and number of branch. The measurement period ranges from 1997 to 1999. Those of ten banks include Thai Farmers Bank, Siam Commercial Bank, DBS Thai Danu Bank, Radanasin Bank, Bangkok Metropolitan Bank, Bank of Ayudhya, Bangkok Bank, Bank of Asia, Krung Thai Bank, and BankThai.

There are two important findings discovered in this study. First, it show that the good performance bank previously measured and indicated by using financial ratio is not always true when measured by DEA model. That means one banks which is considered as having a good management efficiency measured by accounting ratio, however, may not efficient at all when measured by DEA model. The result reveals that Bank of Asia has the outstanding relative highest efficiency score from 97-99 year. In addition, BOA has been

found to be the highest score 99.71% average in term of management efficiency. While SCB is the second one with the DEA score of 89.50%, the third one is KTB with the DEA score of 83.25%. Next, there are TMB, TFB, BT, UOBR, BAY, BBL, and BMB respectively. Additionally, the least efficiency score is BMB with 65.86%. Bank Thai and Bangkok Metropolitan Bank have steadily shown a substantial improvement in term of management efficiency. However, UOB Radanasin Bank and Thai Military Bank have a continuously decline in term of management efficiency, while the remaining is found to be stable.

Secondly, several banks considered the most profitable such as Siam Commercial Bank and Bangkok Bank could be even more profitable because they were not the most efficient. Moreover, it is known that restructuring may be necessary to undo a previous poor performing and operating that proved unsuccessful. In this study, there are eight alternative ways discovered for inefficiency bank to improve their management efficiency through restructuring including asset selloffs or cost and work force restructuring or branches expansion or altering amount of loan and deposit. However, to answer which way is the best way for implementation, it depends on the bank itself. This is because they have to take into account various factors in term of duration of time, labor lay-off effect, or spending budget before making a decision. So one bank may be suitable for a particular alternative while the other do not.

And finally, there could be a substantial resource saving and service volume expansions, in case if restructuring proved to be succeeded, in other word, inefficiency bank become as efficient one. For the future application of DEA, the study can be strategically applied to inside bank operation, for example their own branch's operation or even other more complex service business. The study help to establish optimal benchmark models for each category of service branch based on the best-practice banks identified by DEA.