

Application of Data Envelopment Analysis to Operating Performance Evaluation of Financial System

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ABSTRACT Banking departments have been the focus of domestic financial system and played the critical role in the economic development process. Nevertheless, since the financial liberalization policy in the end of 1980, banks have encountered great challenges. Inspecting the brief situations of domestic banks in the past decade, the profits have been reduced and the operating efficiency is gradually decreasing. The risks of loans are increasing that it becomes a primary issue for the general deposit account and shareholders of banks knowing the operating problems of banks earlier and selecting the accurate and stable investment to ensure the personal profits. Based on the operation investigation of native banks in Taiwan in 2010-2012, Data Envelopment Analysis (DEA) and Malmquist Productivity Analysis are combined to measure Total Efficiency (TE), Pure Technical Efficiency (PTE), and Scale Efficiency (SE) of 16 native banks in Taiwan for the reference of further improvement of operating efficiency. The empirical results show Bank of Taiwan and Taishin Bank being relatively efficient, as the operating efficiency achieves the ideal state, while the rest 14 native banks appear comparatively lower operating efficiency. Besides, it is found that merely Bank of Taiwan and Taishin Bank present improvement on the technical change in two periods, while the rest do not improve.