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The X-efficiency of commercial banks in Hong Kong

Simon H. Kwan *

Federal Reserve Bank of San Francisco, Hong Kong Institute for Monetary Research, 101 Market Street, San Francisco, CA 94105, USA

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Abstract

Using the stochastic frontier approach to investigate the cost efficiency of commercial banks in Hong Kong, this paper found that the average X-efficiency of Hong Kong banks was about 16–30% of observed total costs. However, X-efficiency was found to decline over time, indicating that Hong Kong banks were operating closer to the cost frontier than before, consistent with technological innovations in the banking industry. Furthermore, the average large bank was found to be less efficient than the average small bank, but the size effect appears to be related to differences in portfolio characteristics among different size banks.

JEL classification: G21

Keywords: Hong Kong banking; Bank efficiency; X-efficiency

* Tel.: +1 415 974 3485; fax: +1 415 974 2168.
E-mail address: simon.kwan@sf.frb.org

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1. Introduction

The efficiency of commercial banks has been a subject of academic research for many years.[1] While the large majority of bank efficiency studies were based on US banking data, in recent years researchers started to look into the efficiency of banks in countries other than the US.[2] This is partly motivated by the belief that different banking market structures in other countries may have different implications for bank efficiency. For example, when the regulatory barrier to entry is high, or there exists some kind of permissible anticompetitive behavior due to banks' "specialness" in the economy, banking competition could be artificially restrained and, as a result, banking efficiency could be compromised. While researchers have broadened their use of banking data to include European and Japanese financial institutions in their analysis, research into banking efficiency in other Asian countries remains quite limited.[3] This paper uses the stochastic frontier approach to study the cost efficiency of commercial banks in Hong Kong.

Hong Kong offers a particularly interesting environment for studying banking efficiency. First, Hong Kong had a long tradition of being a laissez-faire economy when it was ruled by the UK as a British colony, and Hong Kong has committed to maintaining the free market stance since its sovereignty was returned to China in 1997. As a major international financial center in Asia and as a gateway to mainland China, Hong Kong has a very high density of financial institutions. It has over 150 licensed commercial banks in a city of only 1100 km^2 of land area. Thus, one would expect that the banking market in Hong Kong would be so competitive that it would leave little room for operating inefficiency. Yet, there was some evidence that banks were somewhat protected from competition at least prior to the deregulation of interest rates in 1994 (Kwan, 2003a), so it is unclear how competitive and thus how efficient Hong Kong banks were. Second, despite the large number of banks in Hong Kong, many medium-size to small banks are privately owned under the control of a founding family.[4] Unlike publicly traded banking companies, these closely held banks have a unique corporate governance structure and they are not subject to the usual market discipline as publicly listed companies are. As such, the lack of market scrutiny could breed inefficiency. On the other hand, publicly listed banking companies have separate ownership and control, which could give rise to agency costs and inefficiency. Third, Hong Kong banks had been quite profitable, with average growth in pre-tax profits of 15% per year in the 6 years prior to the Asian financial crisis.[5] On the one hand, the strong profit growth could be due to

[1] See for example, the special issue of the Journal of Banking and Finance (1993) on the efficiency of financial institutions.

[2] See Berger and Humphrey (1997) for an international survey of efficiency studies of financial institutions.

[3] One example is Kwan (2003b).

[4] Kwan (2003a) indicated that publicly listed banks in Hong Kong controlled about 48% of the banking market as of 1999.

[5] Hong Kong Monetary Authority Quarterly Bulletin, various issues.