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Does financial regulation affect the profit efficiency and risk of banks? Evidence from China's commercial banks

Tung-Hao Lee, Shu-Hwa Chih *

Department of Money and Banking, National Chengchi University, 64, Section 2, ZhiNan Road, Wenshan District, Taipei City 11605, Taiwan

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ABSTRACT

The goal of financial regulation is to enable banks to improve liquidity and solvency. Stricter regulation may be good for bank stability, but not for bank efficiency. This research aims to examine whether banks have met the CBRC's standard of financial regulations and explores how the previously implemented financial regulations have affected bank efficiency and risk in the past. In addition, we also explored the trade-off relationship between efficiency and risk. Unlike other studies, this study used bank assets as a classification standard from the financial risk and differential regulatory perspective.

The empirical results indicate that the CBRC regulates the provision coverage ratio and cost-to-income ratio, which seems relevant to large banks and the loan-to-deposit ratio, capital adequacy ratio, and leverage ratio, which seems relevant to small banks. The CBRC regulates the current ratio to reduce the risks of banks. Based on our empirical results, the current ratio did not affect the risks and led to different efficiency results between large and small banks. In an environment with asymmetric information, a bank decision-making is unobservable. The characteristics of financial regulation provide market clues if a bank is operating at the most efficiency and risk condition.

* Corresponding author.
E-mail addresses: leet@nccu.edu.tw (T.-H. Lee), shchih@gmail.com (S.-H. Chih).

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1. Introduction

China had planned to introduce the bank capital standards, putting China under the global Basel III regime, at the start of 2012 year, a year ahead of the phase-in period stipulated in the Basel agreement. By moving the start date to January 1 2013, China confirmed that those original plans were too ambitious. China will not postpone implementation of tougher global bank capital rules despite a delay in compliance by U.S. banks. The new timeline brings China in line with other countries. China had cited worries that the stricter rules would dampen domestic lending and hurt the economy at a time of global instability as reason for postponing the implementation from the original target date.

The China Banking Regulatory Commission (CBRC) released a set of guidelines for the banking industry, including imposing stricter requirements on capital bases, leverage, provision and liquidity, known widely as the China version of the new Basel III. The New Standards adopt capital adequacy rules and leverage ratios that are even more stringent than those of Basel III. In particular, the core tier 1 capital adequacy ratio will be set at 5%, 0.5% higher than Basel III.The required leverage ratio will be set at 4%, 1% higher than required by the Basel III agreement. The challenges of implementing Basel II/III in China are clear: more stringent local requirements.

With a tougher definition and level of capital, there will be pressure for banks to understate their risk-weighted assets. In addition, the new capital requirements will greatly inhibit commercial banks' credit expansion and may swallow their profits, leading to a decline in return on assets and return on capital. Upon the implementation of the new rules, Chinese banks will have to consider possible ways of replenishing capital again. According to the 'official supervision approach', official supervision can reduce market failure by monitoring and discipline banks thus weakening corruption in bank lending and improving the functioning of banks as intermediaries (Beck, Demirguc-Kunt, & Levine, 2006). Alternatively, powerful supervisors may exert a negative influence on bank performance.

Capital serves as a buffer against losses that can absorb the possibility of bank failure (Dewatripont & Tirole, 1993). The leverage ratio has the role of helping to contain the compression of the risk based requirement. In the meantime, strengthened capital supervision will help to lower the probability of banking crisis. Barth, Caprio, & Levine (2006) study what affects bank regulation and how banking regulation works. Their research on most countries shows that strong regulators and capital adequacy standards do not improve bank efficiency. Barth, Caprio, & Levine (2004) put forward various reasons for and against restricting bank activities. However, overall their results indicate that restricting them may not only lower banking efficiency but also increase the probability of a banking crisis.

From the long-term point of view, as China economic growth is highly dependent on credit supply, the banks need to grow their loan scales at certain rates so as to support the sustained economic growth. Therefore, they will be faced with the needs for capital supplementation in order to keep up with the regulatory requirements on capital adequacy ratio. Pasiouras (2008) mentioned that stricter capital adequacy, powerful supervision and market discipline power promote technical efficiency. However, only the latter one is significant. Too little capital increases the danger of bank failure whilst excessive capital imposes unnecessary costs on banks and their customers and may reduce the efficiency of the banking system. Furthermore, economic theory provides conflicting predictions about the impact of regulatory and supervisory policies on bank performance (e.g. Barth et al., 2004; Barth, Caprio, & Levine, 2007a).

Traditionally, commercial banks in China have reported a coverage ratio against non-performing loans in their financial results as an indicator. Chinese banks should be required to maintain such a provision coverage ratio at a 150% minimum. Furthermore, The CBRC issued a new 2.5 minimum loan-loss provision ratio for banks. It reflects how the regulator wants Chinese banks to set aside a precautionary amount of reserves ahead of the likelihood that an increasing proportion of their loans should turn bad. The new requirement represents the single biggest source of uncertainty for Chinese banks. This would result in bank non-performing loan levels rising, profitability falling and banks still needing more provisions. Banks will be also faced with the pressure of capital supplementation due to credit expansion.

Financial regulation will directly affect the behavior of commercial banks. Especially, as China commercial banks still follow the conventional business model, their ratios of deposits to total liabilities and of loans to total assets are relatively high. The main purpose of financial regulation is to enable