Ownership dispersion and bank performance: Evidence from China

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ABSTRACT

Using a unique hand-collected dataset of 115 China's commercial banks over the period 2007–2014, this paper investigates the effect of ownership dispersion on bank performance and explores the reason behind the relation. The results indicate that higher ownership dispersion improves return on assets (ROA), return on equity (ROE), and reduces the ratio of nonperforming loans (NPL). Moreover, lower ownership dispersion leads to higher loan concentration, testifying the hypothesis that ownership concentrated banks tend to offer huge loans to large enterprises that usually have connections with large shareholders.

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1. Introduction

Since the seminal book by Berle and Means (1932), the relation between ownership structure and firm performance has been an important issue in the corporate finance literature. Unlike the dispersed ownership in developed countries such as the U.S., the ownership structure in developing countries is concentrated due to a lack of shareholder protection and poor legal systems (La Portal et al., 1998). As a result, controlling shareholders tend to expropriate wealth from minority shareholders by pursuing personal benefits after they effectively control corporations (La Portal et al., 1999). Therefore, the agency problem of corporations in developing countries is not between owners and managers, but between controlling shareholders and minority shareholders (Chen and Yu, 2012).

As Cubbins and Leech (1983) note, a dichotomous variable defined on the basis of the shares owned by the controlling shareholder cannot measure the ownership structure perfectly, particularly the relative strength of the controlling shareholders vs. minority shareholders. In contrast, the Hirshmann-Herfindahl Index (HHI) is a better proxy variable. Despite several studies in corporate finance employing the HHI to measure the ownership dispersion of listed firms (Leech and Leahy, 1991;

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Bruton et al., 2010), the literature in the banking sector mainly use the dummy variable to differentiate bank ownership types due to data availability (Micco et al., 2007; Bertay et al., 2015).[1]

Based on a unique hand-collected dataset, we analyze the ownership dispersion of China's commercial banks and investigate its effect on performance with an attempt to fill the gap. It is a significant work since China is the largest emerging economy around the world, with bank loans dominating the source of firms' financing.[2] In addition, China has accelerated the process of financial reforms since the accession of WTO, where an important part is the diversification of the ownership structure and the introduction of strategic investors in the banking sector. During the 1990s, China's banking sector had been dominated by state-owned banks with the largest four banks accounting for three-fourths of industry assets (Berger et al., 2009). In 2002, the State Council started the ownership structure reform of state-owned banks, where both private and foreign capital were encouraged to enter the banking sector as shareholders. In 2006, China Banking Regulatory Commission (CBRC) issued *Guidelines on Corporate Governance of State-owned Commercial Banks*, requiring state-owned banks to introduce strategic investors to build a more efficient governance structure. The goal of this paper is to evaluate the effect of ownership dispersion on bank performance. Moreover, we explore the channel behind the ownership dispersion and performance relation, which offers helpful suggestions for government authorities.

2. Data and methodology

Our data are manually collected from the official website of each bank over the period 2007–2014. In May 2007, People's Bank of China (PBoC) promulgated *The Rules for Information Disclosure of Commercial Banks*, stipulating that all commercial banks were supposed to disclose annual reports on their official websites starting from 2007. It is noteworthy that the annual report covers the shares owned by the largest 10 shareholders each year, which enables us to calculate the HHI for ownership and describe the ownership structure of China's commercial banks during 2007–2014. Our sample include 115 commercial banks with 4 Big-four commercial banks, 13 joint-stock commercial banks, 79 city commercial banks, and 19 rural commercial banks.[3]

We estimate the following model in order to examine the effect of ownership dispersion on bank performance:

$$Perform_{it} = \alpha + \beta Disper_{it} + \gamma \cdot Z + \eta_t + \varepsilon_{it}, \tag{1}$$

where $Perform_{it}$ represents variables describing the performance of bank i in year t, $Disper_{it}$ represents the variable measuring the ownership dispersion of each bank, Z is a vector of control variables representing banks' characteristics that could have an effect on performance, η_t is the year specific dummy variables to control macroeconomic shocks and changes in regulations, ε_{it} is the error term.

We employ three indicators of bank performance: return on assets (*ROA*), return on equity (*ROE*), and the ratio of nonperforming loans to total loans (*NPL*). The ownership dispersion $Disper_{it}$ is calculated as $1 - \sum_{j=1}^{10} s_{jit}^2$, where s_{jit}^2 is the share of the largest j shareholder of bank i in year t. A higher value of $Disper_{it}$ indicates a more dispersed ownership structure and lower control of large shareholders. Following Iannotta et al. (2007) and Boateng et al. (2015), the control variables include the logarithm of total assets (*Lnasset_{it}*), the ratio of total loans to deposits and other short-term funding (*Loan − depos_{it}*), the ratio of noninterest income to total operating income (*r_nonintinc_{it}*), and the ratio of equity to liability (*r_equity_{it}*). Table 1 presents descriptive statistics of variables in Eq. (1). It is worth noting that the mean value of $Disper_{it}$ is 0.893 with the largest shareholder holding 20.94% stakes on average, suggesting a high-concentrated ownership structure for China's commercial banks.

3. Empirical results

As can been seen from Table 2, higher ownership dispersion improves return on assets, return on equity, and reduces the ratio of nonperforming loans. Specifically, one standard deviation increase (0.129) for ownership dispersion could bring about 0.07 (0.544 × 0.129) percentage points increase for *ROA*, 1.24 percentage points increase for *ROE*, and 0.50 percentage points decrease for *NPL*. The results suggest that ownership dispersion is an effective measure to improve bank performance. In terms of control variables, bank size has a negative and significant effect on *NPL*, although it has no effect on *ROA* and *ROE*. It is likely that larger banks could take advantage of the economies of scope better, which helps them lower credit risks. The transformation towards noninterest income businesses plays no role in improving *ROA* and *ROE* although it lowers the risk status. In addition, higher ratio of equity to liability is associated with lower ROE and NPL; higher ratio of total loans to deposits results in higher ROA.

As mentioned by La Porta et al. (1999), when large shareholders effectively control corporations, they tend to participate in management directly and use shares with superior voting rights that enable them to exercise control. As a result, the

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[1] Although the Bankscope database published by Bureau van Dijk and FitchRatings provides the general information on bank ownership, the problem of missing value is severe, particularly for developing countries like China. More importantly, it only provides the latest ownership information, making it impossible for us to analyze the ownership change during the sample period.

[2] According to the report of People's Bank of China (Chinese central bank), bank loans account for 79.56% of firms' financing in 2015. Data source: http://www.pbc.gov.cn/diaochatongjisi/116219/116225/3004957/index.html.

[3] The Big-four commercial banks include the Industrial and Commercial Bank of China, China Construction Bank, Agricultural Bank of China, and Bank of China.