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The effects of foreign ownership on competition in the banking industry: The key role of financial reforms

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ABSTRACT

This study examines the impact of foreign ownership on bank competition and discusses whether the relation changes with various proxies of financial reform. We contribute to the extant literature by using the bank-level ratio of foreign ownership and applying five individual sub-indices of financial reforms from 50 countries. Within the emerging Asia and Middle East and North Africa (MENA) countries, our findings show that a higher ratio of foreign ownership in a bank can enhance competition, whereas a liberalization policy on banking supervision instead mitigates this positive relation between foreign ownership and competition. Conversely, the liberalization on bank privatization in Latin America and Sub-Saharan Africa (SSA) countries significantly increases competition. Thus, financial reforms do matter to the foreign ownership-bank competition nexus.

1. Introduction

Increased competition, as deduced theoretically, should provide potential incentives for managers to improve bank efficiency, regardless of the type of controlling shareholders' ownership. In other words, the stronger the competitive pressure is, the less relevant the ownership structure should be for productive efficiency (Vickers, 1995). However, following financial reforms, ownership structure does not appear to be neutral in terms of the changes in efficiency and productivity. According to the microeconomic theory, deregulation should foster competition as well. Evanoff and Wall (2001) discuss the potential benefits and offer a capital reform proposal that could improve both market and supervisory oversights, while Evanoff and Wall (2001) note that deregulations should lead to more prudent risk management due to more complex banking organizations, resulting in a safer industry with less potentially systematic problems.

This study empirically tests both the "ownership-competition" hypothesis of Vickers (1995) and the "financial reform enhancement" hypothesis of Evanoff and Wall (2001). The ownership-competition hypothesis states that higher concentrations of foreign ownership of local banks is associated with different levels of local competition. We aim to explore the question of whether financial reforms do affect the "ownership-competition" relation. If financial reforms exhibit a positive effect, then policymakers should be in favor of instituting them, whereas if the effect is negative, then financial reforms are unfavorable.

This paper contributes to the existing literature in three respects. First, we use the bank-level ratio of foreign ownership instead of using country-level data, implying that the degree of competition between any two banks may be significantly different, because the two bear different degrees of foreign ownership. Some related studies either adopt the number of foreign banks in a single country (Unite and Sullivan, 2003) or use country-level ownership data of foreign banks when foreigners own more than 50% of shares (Leye Yeyati and Micco, 2007; Andrianova et al., 2008; Detragiache et al., 2008; Jeon et al., 2011) for a cross-country investigation. This study herein differs from the influential paper of Zhao et al. (2010), who mainly use a stochastic cost frontier approach and set up foreign ownership dummy variables to investigate the impacts of financial sector reforms on the cost structure characteristics and the ownership-cost efficiency relation in India's banking

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sector. De Haas and van Lelyveld (2006) and Beck and Hesse (2009) also use a dummy variable to deal with bank ownership.

Applying country-level or dummy variables to deal with foreign ownership may not be able to capture the real situation for foreign investment in a banking sector. For example, Bank International Ningbo was established in 1993 as a China-incorporated foreign bank headquartered in Ningbo, with branches and offices in Shanghai and Beijing. United Overseas Bank Philippines (UOBP) is a thrift bank subsidiary of United Overseas Bank Limited (UOB), which is one of Singapore's biggest banks. In July 2002, UOB increased its ownership stake in UOBP from 60% to 100%. Even though some countries' financial systems present a lower proportion of foreign investment, this does not imply there is no access for foreign ownership. Hence, instead of using dummy variables, this study takes the actual fraction of foreign shareholders' ownership for each bank and year during 1995–2005. This new and hand-collected database enables us to catch real ownership changes over time.

Second, the existing literature either focuses on bank efficiency or bank risk-taking. Bank efficiency research examines foreign banks' effect on domestic banks' performance and/or their cost efficiency, while bank risk-taking research looks at foreign banks' effects on volatility of bank earnings. This study considers a set of competition topics in which foreign ownership may enhance competition among domestic banks, improve the efficiency of domestic bank operations, provide financial services at lower costs, and promote economic growth by boosting resource allocation efficiency (Andrianova et al., 2008; Jeon et al., 2011). On the other hand, banks with a higher proportion of foreign ownership may cherry-pick high quality borrowers, forcing domestic banks to specialize in serving higher-risk customers, thus leading to unprofitable, inefficient, and less competitive results (Leye Yeyati and Micco, 2007).

Third, unlike previous studies adopting an aggregated financial reform index (Tressel and Detragiache, 2008; Delis, 2012), our study applies five individual sub-indices of financial reforms (liberalizations), which enable us to distinguish five different dimensions of financial sector policy. The five proxy dimensions include information on credit controls, interest rate controls, entry barriers, banking supervision, and privatization. The financial reforms database provides a graded score (rather than a binary one), from zero to three, with zero corresponding to the highest degree of repression and three indicating full liberalization. The other regulatory variables, obtained from the World Bank database and developed by Barth et al. (2001, 2006), are not continuous data and are only available at three points in time, such as 2001, 2006, and 2008. There is no regulatory observation available until 2001, and regulatory variables are not changed until the new database is revised. Hence, bank reforms may not be well identified by financial policy changes. Instead, we adopt these graded scale reform indices, because they can be more informative than the use of dummy variables in previous studies. The reform indices allow us to consider a more harmonized measure that is particularly important in a cross-sectional setting (Agoraki et al., 2011).

This study employs the dynamic panel GMM technique and adopts bank-level foreign ownership to analyze the impacts of foreign ownership on competition, proxied via two measures of concentration in the banking sector: the four-bank concentration ratio (CR4) and the Herfindahl-Hirschman index (HHI). We also consider Panzar-Rosse's (1987) H-statistic (H-stat hereafter) as the proxy for bank competition. The countries we focus on cover the four regions of emerging Asia, Latin America, Middle East and North Africa (MENA), and Sub-Saharan Africa (SSA). We further examine the effects of financial reforms on foreign ownership and competition for each region. Empirical results offer evidence that country characteristics do matter on the ownership-competition nexus. Moreover, the evidence reveals that financial reforms can enhance bank competition. Hence, governments or authorities can take our results into consideration when executing related policies, because the findings are in sharp contrast to the conclusions of existing research.

This paper is organized as follows. The next section discusses some theoretical considerations. Section 3 outlines the methodology and empirical model. Section 4 provides a description of the data, including data sources and definitions of the variables. Section 5 reports and analyzes the empirical results of both the benchmark model and extended model. The final section presents the conclusions plus a few salient implications based on the empirical findings from this extensive research.

2. Literature review

Changes to foreign bank participation occurred in Southeast Asia following the region's 1997/1998 financial crisis, fostered by the further removal of foreign ownership limits. The relaxation of entry barriers that followed the financial crisis was intended to improve the efficiency of local financial institutions. Molyneux et al. (2013) propose that increases of ownership stakes in domestic banks mainly involve foreign banks building up stakes that they already own, especially for Indonesia and Thailand.

Anzoategui et al. (2012) analyze bank competition in Russia's financial system and find that foreign-owned banks appear to be less competitive than others. They conclude that bank competition varies significantly across regions, regulations, and supervisory practices when safeguarding a bank's competition in the banking sector. Competition also needs to be defined region by region to raise efficiency, rather than focusing only on the national level. Based on Malaysia's financial system, Ang (2008) finds mixed results that some deregulations are favorable to bank competition, such as interest rate controls and capital liquidity requirements, but some are harmful to bank competition, such as higher statutory reserve requirements and the presence of directed credit programs.

Naceur and Omran (2011) examine the influence of bank regulations (proxied by corruption and law and order), competition on commercial bank margins, and profitability across a broad selection of Middle East and North Africa (MENA) countries. They observe that the entire MENA region is classified as a bank-based economy, because banks are the dominant financial institutions there as they control most of the financial flows and possess most of the financial assets. However, economic reforms such as easier entry for foreign banks have helped enable the latter to participate in MENA markets. They further point out that enhancing competition through this easing of market entry should be accommodated since foreign banks can reduce interest margins by intensifying competition. Therefore, it is necessary to further clarify the role of foreign ownership.

As discussed earlier, the relation among competition, foreign ownership, and financial reforms has received a lot of attention, but comparative research is sparse. For the impact of foreign ownership on bank competition, one of the dramatic and influential studies is Jeon et al. (2011), who examine the impact of foreign bank penetration on the competitive structure of domestic banking sectors in host emerging economies. They find that the positive relationship between foreign bank penetration and banking competition can be contributed to the spillover effect of foreign banks toward domestic counterparts. However, along with other studies in the literature, they use country-level data of ownership targeting foreign banks. Researchers have not yet empirically investigated how financial reforms interact with foreign ownership in shaping the degree of competition. This means that the same reform policy employed in different countries does not need to exhibit identical effects on the level of banking competition, depending on the degree of foreign ownership (Gilbert et al., 1984).