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Foreign bank penetration and the lending channel in emerging economies: Evidence from bank-level panel data

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A B S T R A C T

This paper examines the main implications of recently increasing foreign bank penetration on bank lending as a channel of monetary policy transmission in emerging economies. Using a dynamic panel model of loan growth, we investigate the loan granting behavior of 1273 banks in the emerging economies of Asia, Latin America, and Central and Eastern Europe during the period from 1996 to 2003. Applying the pooled OLS, system GMM, and panel VAR estimators, we find consistent evidence that foreign banks are less responsive to monetary shocks in host countries, as they adjust their outstanding loan portfolios and interest rates to a lesser extent than domestic private banks, independent of their liquidity, capitalization, size, efficiency, and credit risk, and although there exists a bank lending channel in the emerging economies, it is declining in strength due to the increased level of foreign bank penetration. We also explore possible driving factors for the different responses of foreign and domestic banks to monetary policy shocks by investigating foreign banks' different behavior during banking crises and tranquil periods, the effects of mode of entry to host countries, the home-country effects, and the response of foreign banks from OECD countries vs. all foreign countries including non-OECD countries. We suggest the access of foreign banks to funding from parent banks through internal capital markets as the most convincing explanation.

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1. Introduction

Foreign banks' presence in emerging economies has been rising significantly since early 1990s. As of end-2007, for a number of emerging economies, foreign ownership of the banking system is greater than 75 percent of system assets. For example, the share of foreign bank assets in the banking sector total assets has reached 80 percent in Mexico and has exceeded more than the 90 percent level in several Central and Eastern European countries, such as Estonia, Romania, and the Czech Republic. (See BIS, 2009, p.85) Whether the presence of foreign banks in these economies alters the transmission or effectiveness of monetary policy has become a pressing question for emerging market policy makers.

The bank lending channel of monetary policy transmission assumes that bank deposits and other sources of bank finance are imperfect substitutes and, when the central bank tightens the money supply, banks cannot fully substitute reduced deposits with other funding sources. Thus, they have to contract lending, and this in turn reduces firms' investment and output by limiting credit availability. To verify the existence of the bank lending channel, one has to show that banks that have different characteristics but face similar credit demand respond differently to monetary policy shocks, due to banks' different ability to shield their loan granting activities. We use banks' ownership, domestic privately-owned versus foreign-owned, to test for the existence of a bank lending channel by using data for more than 1200 banks in the emerging markets of Central and Eastern Europe, Latin America and Asia, over the period from 1996 to 2003. We use the pooled ordinary least squares (POLS) estimator and the system generalized method of moments (system GMM) estimator, as well as the panel vector autoregression (panel VAR) model that allows us to examine the dynamic pattern of domestic and foreign banks' different responses to monetary policy shocks.

We find evidence that foreign banks show a smaller sensitivity to domestic monetary policy shocks than their domestic peers. When central banks tighten the monetary policy, the effects are less pronounced for foreign banks in the sense that they contract their loan portfolio and raise their loan interest rates by less. Thus, our findings provide evidence for the existence of the bank lending channel, but also suggest that monetary policy in host countries could become less effective as the level of foreign bank penetration increases. We then explore possible explanations for this fact, and find that even after controlling for individual bank characteristics (liquidity, capitalization, size, and efficiency), credit risk, and credit demand effects, foreign banks are still less sensitive to changes in monetary policy than domestic counterparts. We believe that these findings are consistent with the existence of internal capital markets for global banks, that is, foreign subsidiaries have access to funds from their parent companies that shield them from adverse host country monetary shocks. This conjecture is reinforced by 1) comparing the behavior of domestic and foreign banks during banking crisis periods versus tranquil periods; 2) examining the impact of foreign banks' mode of entry (takeover versus greenfield) to host countries; and 3) estimating the effects of changes in monetary policy and banking conditions in foreign banks' home countries on their lending in the host country. Our analysis of dynamic effects provides additional evidence on the different responses of domestic and foreign banks to changes in monetary policy and banking conditions over time.

The rest of the paper is organized as follows. Section 2 reviews the existing work on the effect of foreign bank penetration on bank credit stability. Section 3 describes our dataset and provides descriptive statistics. Section 4 presents the econometric methodology and discusses the empirical results. We conclude in Section 5 and discuss directions for future research.

2. Literature review

The main transmission channels of monetary policy shocks to the real side of the economy, which are still debated intensively in the literature, are: 1) the interest rate channel, 2) the exchange rate channel, 3) the assets price channel, and 4) the bank credit channel. Banks play no active role in the first three channels, as they are assumed to substitute deposits costlessly with other forms of financing when deposits contract in response to monetary policy tightening.

The bank lending channel, pioneered by Bernanke and Blinder (1988, 1992) and further explored by Kashyap and Stein (1995), assumes that deposits and other sources of finance are imperfect substitutes.