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Global retail lending in the aftermath of the US financial crisis: Distinguishing between supply and demand effects ☆

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ABSTRACT

This paper examines the broader effects of the US financial crisis on global lending to retail customers. In particular we examine retail bank lending in Germany using a unique data set of German savings banks during the period 2006 through 2008 for which we have the universe of loan applications and loans granted. Our experimental setting allows us to distinguish between savings banks affected by the US financial crisis through their holdings in Landesbanken with substantial subprime exposure and unaffected savings banks. The data enable us to distinguish between demand and supply side effects of bank lending and find that the US financial crisis induced a contraction in the supply of retail lending in Germany. While demand for loans goes down, it is not substantially different for the affected and nonaffected banks. More important, we find evidence of a significant supply side effect in that the affected banks reject substantially more loan applications than nonaffected banks. This result is particularly strong for smaller and more liquidity-constrained banks as well as for mortgage as compared with consumer loans. We also find that bank-depositor relationships help mitigate these supply side effects.

1. Introduction

Krugman and Obstfeld (2008) argue that "one of the most pervasive features of today's commercial banking industry is that banking activities have become globalized" (p. 600). An important question is whether the growing trend in globalization in banking results in events such as the US financial crisis affecting the real economy in other

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countries through the bank lending channel.[3] In particular, it is important to understand the implications for retail customers who are a major driver of economic spending and who have been the focus of much of regulators' attention in dealing with the current crisis.

The goal of this paper is thus to understand if subsequent to a substantial adverse credit shock such as the US financial crisis there is an important global supply side effect for retail customers even in banks that are mandated to serve only local customers and countries that are affected only indirectly by the crisis. The paper builds on the existing literature on nonmonetary transmissions of shocks to the lending sector (e.g., Bernanke, 1983; Bernanke and Blinder, 1988, 1992) and financial contagion (e.g., Allen and Gale, 2000) and asks the following questions. Does the financial crisis affect lending practices in foreign countries with stable economic performance? Do the worst-hit banks in these countries reduce their lending? Does the domestic retail customer, e.g., the construction worker in Germany, face credit rationing from his local bank as a result? Or is the decreased credit driven by reduced loan applications on the demand side by consumers? If there are supply effects, which type of credit is affected most? Do bank-depositor relations help mitigate these effects? These questions are particularly important in the context of retail lending on which there has been relatively little research.

In this paper we address these questions by taking advantage of a unique database. Our experimental setting is that of German savings banks, which provide an ideal laboratory to analyze the question of supply side effects on retail customers. Savings banks in Germany are particularly interesting to examine as they are mandated by law to serve only their respective local customers and thus operate in precisely and narrowly defined geographic regions, following a version of narrow banking. Total lending and corporate lending by savings banks in Germany kept increasing even after the beginning of the financial crisis in 2007. However, retail lending by savings banks showed a slow and continuous decrease. This raises the question of whether the decline in retail credit is due to savings banks rejecting more loan applications. For the savings banks we have the universe of loan applications made, along with the credit scoring. We also know which loan applications were granted and which were turned down. Hence we are able to directly distinguish between supply and demand effects. This differentiation is important from a policy perspective. We are able to assess the implications of credit rationing for retail customers on which there has been relatively little empirical work. Further, our data set also allows us to speak to the kinds of loans that are affected most and also assess if relations help mitigate credit rationing in such situations.

The German economy showed reasonable growth and a record-low level of unemployment until 2008. Furthermore, the German housing market did not experience the significant increase and rapid decline in prices that occurred in US and other European markets and thus did not affect German banks. At the same time, some of the German regional banks (Landesbanken) had large exposure to the US subprime market and were substantially hit in the wake of the financial crisis. These regional banks are in turn owned by the savings banks, which had to make guarantees or equity injections into the affected Landesbanken. We thus have a natural experiment in which we can distinguish between affected savings banks (that own Landesbanken affected by the financial crisis) and other savings banks.

Our empirical strategy proceeds as follows. Using a comprehensive data set of consumer loans for the July 2006 through June 2008 period, we examine whether banks that are affected at the onset of the financial crisis reduce consumer lending more relative to nonaffected banks. We are able to distinguish between demand and supply effects. While we find an overall decrease in demand for consumer loans after the beginning of the financial crisis, we do not find significant differences in demand as measured by applications to affected versus unaffected savings banks. More important, we do, however, find evidence for a supply side effect on credit after the onset of the financial crisis. In particular, we find the average rejection rate of affected savings banks is significantly higher than of nonaffected savings banks. This result holds particularly true for smaller and more liquidity-constrained banks. Further, we find that this effect is stronger for mortgage as compared with consumer loans. Finally, we consider the change in rejection rates at affected banks after the beginning of the financial crisis by rating class. We find that the rejection rates significantly increase for each rating class and, in particular, for the worst rating classes, but the overall distribution of accepted loans does not change.

We next analyze whether bank-depositor relations affect supply side effects in lending. We are interested in whether borrowers at affected banks who have a prior relationship with this bank are more likely to receive a loan after the start of the financial crisis. We show a clear benefit to bank-depositor relations resulting in significantly higher acceptance rates of loan applications by customers in the absence of the financial crisis. Further, while affected banks significantly reduce their acceptance rates during the financial crisis, we find relationships help mitigate the supply side effects on bank lending. Customers with relationships with the affected bank are less likely to have their loans rejected as compared with new customers. Our results are robust to multiple specifications.

Our paper adds to the growing literature on the effects of the globalization of banking. Peek and Rosengren (1997), Rajan and Zingales (2003), Berger, Dai, Ongena, and Smith (2003), and Mian (2006) analyze the opportunities and limits of banks entering foreign countries and the effect of foreign banks lending to corporate firms. Relatively little research has been done on the effect of globalization on retail lending, and on the effect of small savings banks taking on international exposure on the bank's local borrowers in the bank's home country. Our paper provides evidence on this count. We show that borrowers are affected through a direct banking channel when their local bank experiences an adverse shock even when the local bank itself practices narrow banking but has exposure in a foreign country through its ownership structure. Our paper also adds to the growing work that tries to understand the real effects of financial crises. Ivashina and

[3] Another event along these lines is the spring 2010 sovereign debt crisis in some European countries to which European banks in particular have a significant exposure.