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Finance companies in Mexico: Unexpected victims of the global liquidity crunch

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ABSTRACT

We study the connection between the global liquidity crisis and the severe credit crunch experienced by finance companies (SOFOLES) in Mexico using firm-level data between 2001 and 2011. Our results provide supporting evidence that, as a result of the liquidity shock, SOFOLES faced severely restricted access to their main funding sources (commercial bank loans, loans from other organizations, and public debt markets). After controlling for the potential endogeneity of their funding, we find that the liquidity shock explains 64 percent of SOFOLES' credit contraction during the recent financial crisis (2008–2009). We use our estimates to disentangle supply from demand factors as determinants of the credit contraction. After controlling for the large decline in loan demand during the financial crisis, our findings suggest that supply factors (such as nonperforming loans and lower liquidity buffers) also played a significant role. Finally, we find that financial deregulation implemented in 2006 may have amplified the effects of the global liquidity shock.

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1. Introduction

By the end of 2012, the three largest homebuilders in Mexico—Corporación Geo SAB, Desarrolladora Homex SAB, and Urbi Desarrollos Urbanos SAB—were near financial collapse and had to undertake major debt restructuring programs to avoid bankruptcy. One of the factors behind the harsh financial conditions of these companies was the significant decline in planned home sales caused by a lack of household financing opportunities, particularly in the mid- and low-income sectors. This situation made it very difficult for homebuilders to honor their debts in time. Potential losses associated with homebuilder defaults were likely to hit commercial banks, some of which are owned by large U.S. banks.[1] In this paper, we examine how the situation in 2012 was related to the failure of Lehman Brothers during the fall of 2008, and we argue that financial contagion from this global liquidity shock in the U.S. may have had long-lasting effects on the financial sector in Mexico.

The causes and consequences of the 2007–2008 liquidity crunch that followed the Lehman default in the U.S. have been widely documented (see for example, Brunnermeier, 2009; Longstaff, 2010; Eichengreen et al., 2012). So far, the narrative of the financial crisis has been centered on the large and visible events or institutions that were often highlighted in the news, such as the collapse of the banking sector in Iceland or the bankruptcy of shadow banking institutions that were heavily exposed to low-quality structured products. In this paper we argue that, from a financial contagion perspective, there are other, less visible repercussions that have not been explained because the links are more subtle and less clear. In our example above, we argue that the financial troubles of homebuilders in Mexico are linked to events that unfolded in the Mexican financial sector following the failure of Lehman Brothers. More specifically, the global liquidity shock affected the capital markets and the banking sector in Mexico, which in turn led to a severe credit crunch and the collapse of the nonbank financial corporations of limited purpose (Sociedades Financieras de

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[1] See Bloomberg article, "Citigroup's Losses on Loans to Mexico Homebuilders May Increase", October 15, 2013, available at http://www.bloomberg.com/news/2013-10-15/citigroup-s-losses-on-loans-to-mexico-homebuilders-may-increase.html.

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Objeto Limitado, SOFOLES). In this paper we use balance sheet data at the firm level for 68 SOFOLES from 2001 through 2011 to study the credit crunch that followed the global liquidity shock. SOFOLES were the key niche credit providers to mid- and low-income households, and their financial downfall has removed an important source of housing and construction finance from the Mexican economy, which continues to drag down home sales and the recovery of the housing market five years later.

Shortly after their creation in 1994, SOFOLES became one of the most important providers of mortgage loans in Mexico. As housing markets expanded considerably, SOFOLES funding began to rely less on government funding received through the federal mortgage company (Sociedad Hipotecaria Federal, SHF) and more on bank credit and short-term debt from capital markets. Thus, SOFOLES became typical shadow banks in Mexico, originating long-term loans funded with significant amounts of short-term debt. In the mid-2000s, this fragile funding model left them highly vulnerable to a liquidity shock—that is, to the breakdown of their funding sources. When the financial crisis erupted in the fall of 2008, the collapse of interbank and short-term funding markets for global banks was transmitted internationally and had a severe impact on financial markets in Mexico. With a fragile funding model, SOFOLES became the easy prey and unexpected victims of the global liquidity crunch.

In providing support for the liquidity shock hypothesis, our analysis considers two main transmission channels through capital and credit markets by which the global liquidity crunch affected the lending of SOFOLES. The first and most direct channel became manifest immediately after the collapse of short-term funding markets following the failure of Lehman Brothers. Credit spreads in Mexico mirrored credit spreads in the U.S. (e.g., the TED spread, the difference in yield between the 3-month LIBOR and the 3-month T-Bill). Also, the abrupt collapse of Asset-Backed Commercial Paper (ABCP) markets in the U.S. had an immediate counterpart in the crash of debt markets in Mexico, which were an important source of short-term funding for SOFOLES. The second channel was more indirect and involved the loans that SOFOLES obtained from commercial banks. The global liquidity shock affected the banking sector in Mexico—dominated by global banks—by reversing capital flows and restricting access to debt markets. Facing their own liquidity shock, banks immediately cut back on their lending to SOFOLES, thus creating a contagion channel within the Mexican financial sector.

Our study attempts to link the collapse of the SOFOL sector to the international financial crisis through contagion in financial markets. It also serves as a natural experiment to study a particular credit crunch within the financial sector of a country. To provide empirical support to our liquidity shock hypothesis, our econometric approach considers whether the large contraction in SOFOL lending was driven primarily by supply factors. Specifically, we consider the impact on SOFOL loan growth of a liquidity shock that takes the form of a severe cutback in their traditional funding sources: commercial bank loans, loans from other organizations, and public debt markets.

We find that SOFOLES did indeed experience a severe liquidity shock from commercial banks and the securities market that was triggered by the collapse of Lehman Brothers in the fall of 2008. After controlling for the potential endogeneity of their funding, we find that the liquidity shock explains 64 percent of SOFOLES' credit contraction during the recent financial crisis (2008–2009). To further disentangle supply from demand factors, we use regression estimates to gauge the importance of individual determinants. After controlling for the large contraction in loan demand during the financial crisis, our findings suggest that other supply factors (such as nonperforming loans and lower liquidity buffers) also played a significant role. We explicitly account for other factors that contributed to SOFOLES' financial problems. Between 2006 and 2008, the sector lost a significant market share to commercial banks as the latter began expanding their mortgage credit business to previously unattended sectors.

As an alternative to our liquidity shock hypothesis, we explore whether the contraction in SOFOL lending was also the result of deregulation which, in the view of industry observers, ended up exacerbating the risk perception among investors and commercial banks. In mid-2006, deregulation arose as an effort by the government to ease the financial strains in the SOFOL sector and to help SOFOLES withstand the increased competition from commercial banks. As a result, many SOFOLES turned into deregulated institutions that stopped reporting their financial statements to the supervisory authorities. Deregulation facilitated the entrance of thousands of new market participants into the lending business, with no single regulatory authority having control over their financial activities. Our results, however, suggest that financial deregulation had only a minor role in causing the credit crunch, perhaps by amplifying the impact of the financial crisis.

Our study relates to a large literature on liquidity shocks, credit crunches, and their contagion in different markets and regions. Our findings highlight the importance of spillover effects of liquidity shocks from troubled banks in one region to the banks in other regions through different channels, such as valuation losses, contractual links between banks, and loss spirals resulting from asset fire sales. Examples of theoretical work modeling those features are Allen and Gale (2000), Diamond and Rajan (2005) and Brunnermeier and Pedersen (2009), respectively. From an empirical perspective, our results also provide evidence consistent with financial contagion channels such as the panic that took the form of a "run" in short-term funding markets for U.S. banks (Gorton, 2009; Cornett et al., 2011; Covitz et al., 2013), and for global banks (Beltratti and Stulz, 2012). Similarly, our empirical evidence is consistent with the international transmission of liquidity shocks from advanced economies to emerging markets through the lending of foreign banks (Cetorelli and Goldberg, 2011). Moreover, our results for Mexico complement the existing evidence on the transmission channels through which international liquidity shocks affect bank credit across borders, such as Khwaja and Mian (2008) for banks in Pakistan, Aiyar (2011) for U.K. banks, and Schnabl (2012) for Peruvian banks.

Our paper builds on this previous work and contributes to the literature on credit crunches and financial contagion through the lending channel in several ways. First, we use financial micro-level data for a developing country exposed to international financial contagion, and emphasize contagion channels across countries but also within the financial sector of a country. Most of the empirical literature focuses mainly on the cross-border contagion of a liquidity shock whereas empirical evidence on the effects of contagion within a country's financial sector, like the one in our paper, is more scant.[2] Second, we document the main sources of the credit crunch for a particular type of financial institution, which is similar in nature to finance companies in the U.S. but for which there is very little empirical evidence. Third, our results from the decomposition of the factors affecting the loan growth of SOFOLES shed light on how important supply and demand factors are in explaining a severe credit contraction.

Our paper is also related to Mendoza (2012), who studies the factors that increased the liquidity risk of debt securities issued

[2] Ramcharan et al. (2015) illustrate the effects within the U.S. financial industry of a liquidity shock transmitted from asset-backed securities (ABS) markets to the credit union sector.