



The role of securitization in bank liquidity and funding management[☆]

Elena Loutskina^{*}

The Darden School of Business Administration, University of Virginia, 100 Darden Boulevard, Charlottesville, VA 22903, United States

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ABSTRACT

This paper studies the role of securitization in bank management. I propose a new index of “bank loan portfolio liquidity” which can be thought of as a weighted average of the potential to securitize loans of a given type, where the weights reflect the composition of a bank loan portfolio. I use this new index to show that by allowing banks to convert illiquid loans into liquid funds, securitization reduces banks’ holdings of liquid securities and increases their lending ability. Furthermore, securitization provides banks with an additional source of funding and makes bank lending less sensitive to cost of funds shocks. By extension, the securitization weakens the ability of the monetary authority to affect banks’ lending activity but makes banks more susceptible to liquidity and funding crisis when the securitization market is shut down.

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1. Introduction

Since the 1970s, the market for securitized loans in the United States has grown to dominate the mortgage market and has become an increasingly important factor in lending to both consumers and businesses (Fig. 1). In

2007, for example, \$8.1 trillion of loans outstanding were financed through securitization, or about 40% of all loans outstanding. Even in the aftermath of the 2007 financial crisis, the securitization market activity by volume exceeds the size of the corporate bond market. A rapidly evolving body of academic research aims to understand whether and how securitization changed the traditional role of banks in the economy.¹ This paper contributes to

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^{*} Tel.: +1 434 243 4031; fax: +1 434 243 12511.

E-mail address: eloutskina@virginia.edu

¹ For analysis of the impact of securitization on loan origination decisions, see, e.g., Loutskina and Strahan (2009), Mian and Sufi (2009), Demyanyk and Van Hemert, 2009, and Keys, Mukherjee, Seru and Vig (2010). For analysis of the changing mortgage rates under the evolving asset-backed securities market, see, e.g., Black, Garbade, and Silber (1981), Kolari, Fraser, and Anari, 1998, and Heuson, Passmore, and Sparks (2000). For analysis of the role of the government-sponsored enterprises (GSEs) and the effect of government subsidies to GSEs, see Passmore (2004), Ambrose and Warga (2002), and Nothaft, Pearce, and Stevanovic (2002). For analysis of the effect of securitization on the efficacy of monetary policy in influencing real output, see Estrella (2002).

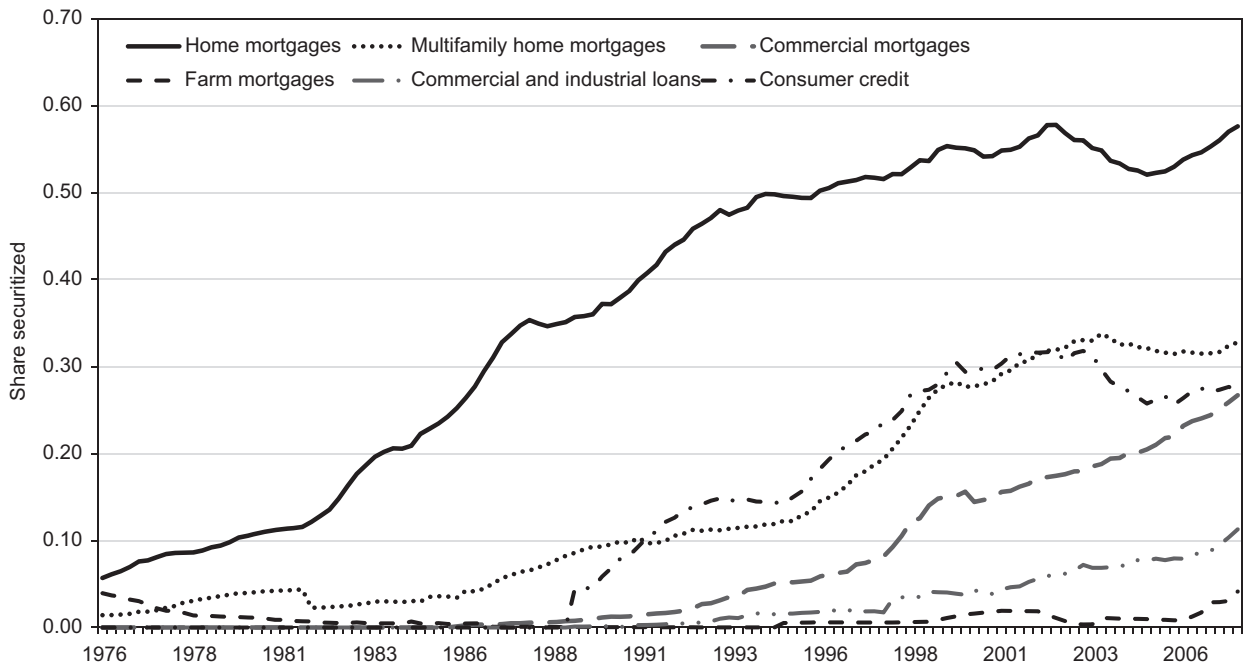


Fig. 1. Securitization of loans in the US economy. The figure presents the percentage of loans securitized relative to total loans outstanding for six categories of loans: (1) home mortgages, (2) multifamily residential mortgages, (3) commercial mortgages, (4) consumer credit, (5) business loans, and (6) farm mortgages. The data are from “Flow of Funds Accounts of the United States.” For the exact description of the methodology see Appendix A.

this strand of research by examining how securitization changed the ways individual banks manage their funding and liquidity and how these changes have in turn altered the traditional links between bank liquidity, cost of funds, and loan supply. I show, first, that securitization creates a new source of liquidity by allowing banks to convert illiquid, hard-to-sell loans into marketable securities. Second, by providing a new source of funds in the form of existing loans, securitization reduces the sensitivity of bank lending to the availability of the external sources of funds such as traditional liquid funds and deposits. As a result, securitization alleviates the impact of the local economic shocks and weakens the ability of the monetary authority to affect bank lending through open market operations. At the same time, it makes banks more vulnerable to various economic shocks when the market for securitized loans is disrupted.

I propose a new bank-specific index of “bank loan portfolio liquidity” (S_{it}) that effectively captures banks’ ability to sell loans. The index is a weighted average of the potential to securitize loans of a given type (based on market-wide averages), in which the weights reflect the composition of an individual bank’s loan portfolio. Thus, market trends generate time variation in the index, whereas differences in bank loan portfolio structures generate variation across institutions.

I first analyze whether securitization has reduced banks’ need to carry liquid assets to meet unexpected demands from depositors and borrowers. Using the new loan liquidity index (S_{it}), I show that securitization acts as a substitute for traditional liquid funds on banks’ balance sheets. Because banks choose liquidity levels and lending

jointly, I adopt two approaches to adjust for this endogeneity.² First, I implement the instrumental variable regressions using a synthetic instrument similar to the loan liquidity index (S_{it}). In constructing the instrument, I use fixed bank portfolio choices as of the beginning-of-period values. This constant-over-time loan portfolio structure removes the effect of the managers’ discretion and ensures that the instrument varies only as a result of the deepening of the securitization market. Second, I implement a difference-in-differences analysis around two sets of regulatory interventions and market shocks that significantly changed securitization market ability or willingness to absorb new loans.

The results suggest that as banks’ ability to securitize loans has increased, their holding of liquid assets on balance sheets has decreased. The magnitude of this decline is both statistically and economically significant (Fig. 2). From 1976 to 2007, the percentage of total assets held as liquid securities decreased on average by 7.33 percentage points due to the expanding secondary loan market. This decline is equivalent to roughly 69% of bank capital and cannot be explained by any time trends such as the increase in average bank size and changes in banking regulation. Because liquid funds and loans are two core components of bank assets, the decrease in the liquid funds holdings indicates a comparable increase in

² For example, banks that prefer more liquid assets are likely to have both more liquid funds and a more securitizable loan portfolio (which can be achieved by, e.g., issuing more mortgages and fewer commercial and industrial loans), thus creating a positive bias in the relations between traditional liquidity levels and bank loan portfolio liquidity.

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