European Economic Review 53 (2009) 996–1009

Contents lists available at ScienceDirect

European Economic Review

journal homepage: www.elsevier.com/locate/eer

Review paper

Securitisation and the bank lending channel

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ARTICLE INFO

Article history:
Received 27 August 2008
Accepted 11 March 2009
Available online 29 March 2009

JEL classification:
E44
E55

Keywords:
Asset securitisation
Bank lending channel
Monetary policy

ABSTRACT

The dramatic increase in securitisation activity experienced in Europe in the years following the introduction of the euro has altered the liquidity, credit and maturity transformation role traditionally performed by banks. We claim that the changing role of credit intermediaries due to securitisation has also modified the effectiveness of the bank lending channel and banks' ability to grant loans. We use a novel database of securitisation activity and a large sample of European banks and find that the use of securitisation shelters banks' loan supply from the effects of monetary policy. Securitisation activity has also strengthened banks' capacity to supply new loans. This capacity, however, depends on business cycle conditions and, notably, on banks' risks positions. The recent credit crisis is instructive in this respect.

1. Introduction

European banks rarely used securitisation techniques before the introduction of the euro. In the years following the inception of the single currency, however, there was a spectacular increase in securitisation activity in Europe. This was partly a global trend but the escalation in securitisation can also be linked to more regional factors such as the closer integration in European financial markets as well as a move towards a more market-based financial system. The use of securitisation has probably changed the monitoring function (Diamond, 1984; Holmström and Tirole, 1997) and reduced the liquidity transformation role traditionally performed by banks (Diamond and Dybvig, 1983). In other words, even if a project is illiquid, the underlying loan may be sold on to the markets, providing originating banks with additional sources of financing. In this way, while the origination of bank loans remains to a large extent local, securitisation can make previously illiquid loans tradable and available to global investors. As a result, banks maintain a central role as originators and evaluators of credit risk, while progressively losing importance as the primary holders of illiquid assets.

Loan securitisation activity together with the emergence of credit derivative markets seems to have altered credit risk management by banks. Through these financial innovations, credit risk may be easily transferred away from banks' balance sheets to other economic agents. Protection sellers, in turn, may further combine and diversify their asset portfolio, reaching parts of the credit spectrum that, until recently, were mostly illiquid. All these developments are likely to have contributed to a change in the way banks grant loans and react to monetary policy shocks.

We add to the "bank lending channel" literature by considering how securitisation affects the impact of monetary policy on loan supply. One of the major challenges of this literature is that it not easy to disentangle among demand and supply factors particularly when aggregate data are used. To date, the "identification problem" of the transmission mechanism of

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0014-2921/$ - see front matter
doi:10.1016/j.euroecorev.2009.03.004

monetary policy has been solved by using individual bank data and claiming that only certain bank-specific characteristics (such as size, liquidity and capitalisation) influence loan supply movements, while the demand for bank loans from borrowers is largely independent of them. After a tightening of monetary policy, the drop in the supply of bank loans is expected to be larger for: (1) small banks, which are financed almost exclusively from deposits and equity (Kashyap and Stein, 1995); (2) less liquid banks, which cannot protect their loan portfolio against monetary tightening simply by drawing down cash and securities (Stein, 1998; Kashyap and Stein, 2000) and (3) poorly capitalised banks, which might be below their target capital and have less access to markets for uninsured funding (Peek and Rosengren, 1995; Kishan and Opiela, 2000; Van den Heuvel, 2002).[1]

This paper argues that the development of securitisation has changed the bank lending channel mechanism. Securitisation has also probably altered those bank characteristics usually emphasised in the literature to identify shifts in loan supply. The size indicator is probably less significant because securitisation activity can considerably reduce the amount of loans on banks' balance sheets (DeYoung and Rice, 2004). Liquidity is also affected by securitisation because of the short-term inflows caused by the sale of asset-backed security (ABS) that modifies the standard liquidity ratio. Securitisation activity may also reduce the regulatory requirements for capital and make the standard capital-to-asset ratio a poor approximation of the relevant capital constraints faced by banks in this regard. More broadly, securitisation provides banks with additional flexibility to face changes in market conditions associated with monetary policy movements.

We have used an extensive database of ABS that has been matched with individual balance-sheet information of the originating bank. The main finding of the paper is that securitisation significantly reduces the importance of the bank lending channel. This effect is likely to depend on two main mechanisms at work. First, asset securitisation increases banks' liquidity and reduces banks' funding needs in the event of a monetary tightening. Second, it allows banks to transfer part of their credit risk to the markets (including institutional investors such as hedge funds, insurance companies and pension funds) and thereby reduces their regulatory requirements on capital. This capital relief seems to cause, *ceteris paribus*, a further increase in supplied lending.

Securitisation activity has also strengthened the capacity of banks to supply new loans to households and firms for a given amount of funding. However, we show that this capacity seems to change over time due to business cycle conditions—it is maximised during economic expansion when there is probably lower uncertainty among investors about the valuation of structured products.

The remainder of this paper is organised as follows. The next section outlines recent developments in securitisation activity in the euro area, compared with experiences in the United States. These institutional developments provide the basis for the subsequent econometric analysis in Section 3, which considers how securitisation activity may affect the monetary transmission mechanism. Section 4 describes the econometric model and the data, while Section 5 presents evidence on the response of bank lending to a monetary shock. Section 6 describes some robustness checks performed on the results. The final section summarises the main conclusions.

2. Developments in securitisation in the euro area

Securitisation can be defined, in a broad way, as the process whereby individual bank loans and other financial assets are bundled together into tradable securities, which are sold onto the secondary market. In the United States the market for ABS started to develop by means of government-sponsored agencies (such as the Federal National Mortgage Association, known as Fannie Mae, and the Federal Home Loan Mortgage Corporation or Freddie Mac),[2] which enhanced mortgage loan liquidity by issuing and guaranteeing, but not originating, ABS. These agencies contributed to the progressive growth in the outstanding volume of US agency mortgage-backed securities to USD 4 trillion at the end of 2006. Including both agency and non-agency issues the US market for mortgage-related securities accounted for over USD 6.5 trillion in this period, representing the largest segment of the fixed-income market in the world (to give an idea of the magnitude, the US corporate bond market accounted for USD 5.4 trillion, while the Treasury segment amounted to USD 4.3 trillion).

In contrast to the US experience, the development of the securitisation market in the euro area started much later and was not triggered by the introduction of any specific government agency.[3] As shown in Fig. 1, the growth in euro-denominated securitisation started at the end of the 1990s, accelerated strongly from 2004 to late 2007 and declined afterwards. Securitisation activity in the euro area has also been large in terms of total credit granted. In 2006 for instance, the annual net flow of ABS issuance was around one fifth of bank loans granted to households and non-financial corporations during that year.

The reasons for the spectacular growth in public securitisation activity in the euro area from 1999 to the recent credit crisis are linked to three main factors: the increased demand from investors; technological and financial innovation; and the introduction of euro. First, the demand for ABS grew rapidly from institutional investors, who were more willing to

[1] These studies on cross-sectional differences in the effectiveness of the "bank lending channel" refer to the US. The literature on European countries is far from conclusive (see, amongst others, Ehrmann et al., 2003b; Altunbas et al., 2004).

[2] Created in 1938 and 1968, respectively.

[3] Unlike in the United States and United Kingdom, where a common law system is in place, most continental European countries possess a continental law framework under which a specific regulation is required to issue ABS. In this respect, Belgium, France, Germany, Greece, Italy, Portugal and Spain had to enact specific laws to remove obstacles to the development of securitisation.