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Effects of banking sector and capital market development on the bank lending channel of monetary policy: An ASEAN country case study

Attasuda Lerskullawat

Department of Economics, Faculty of Economics, Kasetsart University, Bangkok 10900, Thailand

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ABSTRACT

This paper examines the bank lending channel of monetary policy transmission and the effect of banking sector and capital market development on the lending channel using the bank-level panel data of 89 commercial banks in five ASEAN countries (Thailand, Malaysia, the Philippines, Singapore and Indonesia) over the period 1999–2011. The results show that monetary policy has a significant effect via the bank lending channel. The higher the capitalization and liquidity of banks, the weaker the effect of monetary policy via the bank lending channel; however, the greater the size of banks, the stronger the bank lending channel. Banking sector development in terms of banking activities and capital market development leads to a weaker effect of monetary policy through the lending channel, while the development of banks in terms of size strengthens the bank lending channel.

Introduction

The lending channel is an important means of monetary policy transmission which explains the effect of monetary policy via bank loan supply on the economy (Mishkin, 1996). Due to the important role of the banking sector and financial market in bank loans, financial market development, such as banking sector and capital market development, can result in significant effects on the banking sector and credit market (Altunbas, Gambacorta, & Marqués, 2009; Singh, Razi, Endut, & Ramlee, 2008). This raises the important issue of how these changes affect the way in which monetary policy influences the economy via the bank lending channel. However, studies of this issue are still limited and mainly discuss evidence in developed countries such as the US and those in the EU (Altunbas et al., 2009; Aysun & Hepp, 2011; Chatelain et al., 2003; Ferreira, 2010). Moreover, using the time series data in a bank lending channel study can lead to an identification problem caused by not distinguishing whether the effect of monetary policy on bank loans comes from the loan supply or the loan demand side. Recent studies mainly used bank-level panel data, which account for bank characteristic variables (size, capitalization, liquidity) to control the cross-sectional differences of the effects of monetary policy on loan supply, ensuring the supply side effect of monetary policy shock (e.g. Gambacorta, 2001; Kashyap & Stein, 2000). Most bank-level panel data studies of the lending channel have been conducted on European countries and the US (Gambacorta & Mistrulli, 2004; Kashyap & Stein, 2000), rather than on Asian ones (Agung, Morena, Pramono, & Prastowo, 2002; Ghosh, 2006; Hosono, 2006; Perera, Ralston, & Wickramanayake, 2014; Wu, Luca, & Jeon, 2007; Zulkhibri, 2013).

Given the financial market development in Southeast Asian regions, this market has recently become important, and is becoming an alternative investment funding source

E-mail address: fecoadl@ku.ac.th.
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for investors worldwide. After the Asian financial crisis in 1997, the banking sector and capital market in the ASEAN-5 (Thailand, Malaysia, the Philippines, Singapore and Indonesia) experienced continuous growth. According to Beck, Demirgüç-Kunt, and Levine's (1999) database, the average ratio of private credit by depository money banks to GDP, the ratio of stock market capitalization to GDP, and the ratio of bond market capitalization to GDP grew by 10.63 percent, 4.02 percent, and 3.21 percent, respectively, over the period 1999–2011. This was due to the greater development of the banking sector and capital market and financial reform implemented after the crisis in order to increase domestic funding, stabilize the financial market, and prevent any future crisis (Felman et al., 2011; Niblock, Heng, & Sloan, 2014). Regarding this significant development, we will fill a gap in previous literature by conducting a case study of the ASEAN-5 countries.

In this paper, we examine the bank lending channel of monetary policy transmission in the ASEAN-5 countries (Thailand, Malaysia, the Philippines, Singapore and Indonesia) using the bank-level panel database approach of 89 commercial banks, from the period 1999–2011. We also examine the effect of different bank characteristics on the bank lending channel as well as investigate the effect of financial development, including banking sector and capital market development, on the bank lending channel. This paper has three main contributions. First, as the time series studies of the bank lending channel can cause an identification problem, we conduct a bank-level panel data study by using bank characteristic variables (size, capitalization and liquidity) to control the cross-sectional differences in the effects of monetary policy on loan supply. Second, this paper examines the effect of financial development, including banking sector and capital market development, on the lending channel, which was not the main focus of previous literature and also some papers only focused on the individual aspect (Ferreira, 2010). Third, we fill the gap in prior studies especially regarding study of the effect of banking sector and capital market development on the lending channel, which previously was mostly focused on developed countries such as in the EU and the US (e.g Altunbas et al., 2009; Chatelain et al., 2003; Ehrmann, Gambacorta, Martinez-Pagés, Sevestre, & Worms, 2001; Kashyap & Stein, 1994; Kishan & Opiela, 2000; Matousek & Sarantis, 2009), by introducing a case study of the ASEAN-5 countries. Regarding this, the lending channel and the effect of banking sector and capital market development on this channel in developed countries will be different from those in the ASEAN-5. This is due to the financial markets and banking institutions in developed countries being more financially developed and relatively large in terms of size, liquidity, and capital, compared with those in developing and Southeast Asian regions (Beck, Demirgüç-Kunt, & Levine, 2009; Čihák, Demirgüç-Kunt, Feyen, & Levine, 2012). As a result, the effects of monetary policy and financial development are possibly greater through the lending channel in Southeast Asian regions, as the banks in less-developed financial market will have difficulty in finding alternative funding sources to outweigh the effect of monetary policy on their balance sheet. Therefore, this research will shed light on a case study of ASEAN-5 countries, which have not been the focus in previous studies. In addition, this study will make a contribution to the understanding of the lending channel, and the effect of financial market development on the channel in the case of Southeast Asian regions, the ASEAN-5 countries, which have differences in financial development and structures, and relatively less developed financial markets compared with the previous studies in financially developed countries. The remainder of the paper will be developed as follows: the next section presents a literature review related to our studies, followed by data description and methodology as well as a discussion of our empirical results. The last section will present the conclusion of the paper.

Literature Review

The lending channel of monetary policy transmission explains the effect of monetary policy on the economy through bank loan supply. The use of contractionary monetary policy by increasing the policy interest rate will result in an increase in the market interest rates, reducing the money supply. This leads to a reduction in bank deposits and bank loan supply, decreasing investment, expenditures, and economic growth (Mishkin, 1996). This effect of monetary policy through the bank lending channel is relatively low in large, highly capitalized, and highly liquid banks, compared to small, weakly capitalized, and less liquid ones. This is due to the former have a relatively high reputation and liquidity, better risk diversification behavior, and higher creditworthiness than the latter (Ehrmann et al., 2001; Gambacorta & Mistrulli, 2004; Hosono, 2006). This results in greater opportunities for the less financially constrained banks to raise external funding (Altunbas et al., 2009; Kashyap & Stein, 2000), thus weakening the effect of monetary policy on bank loans on them.

Financial market development, involving banking sector and capital market development, is considered to have an effect on the way in which monetary policy passes through the bank lending channel. Gertler and Rose (1996) state that banking sector development can increase the level of financial intermediation in terms of the size and liquidity of financial institutions. This reduces financial costs and raises the balance sheet strength of banks. Capital market development also increases liquidity in the financial market, resulting in higher bank loans and more opportunities for banks to find external funding sources. As a result, banking sector and capital market development can weaken the effect of monetary policy via the bank lending channel. This is due to these developments increasing the size, capital, and liquidity of banks as well as creating more opportunities for them to obtain external funds (Altunbas et al., 2009; Ferreira, 2010; Gertler & Rose, 1996).

For the empirical study of the bank lending channel, a study by applying time series data can lead to an identification problem. As a result, recent empirical studies of the bank lending channel apply the bank-level panel data and add bank characteristic variables to control the cross-