Japan and the World Economy 28 (2013) 41–52

Contents lists available at SciVerse ScienceDirect

Japan and the World Economy

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

Credit crunch and its spatial differences in Japan's lost decade: What can we learn from it?

Daisuke Ishikawa [a], Yoshiro Tsutsui [b,*]

[a] Ministry of Finance, 3-1-1 Kasumigaseki, Chiyoda-ku, Tokyo 100-8940, Japan
[b] Graduate School of Economics, Osaka University, 1-7 Machikaneyama, Toyonaka, Osaka 560-0043, Japan

ARTICLE INFO

Article history:
Received 28 August 2012
Received in revised form 14 June 2013
Accepted 26 June 2013
Available online 11 July 2013

JEL classification:
G21
E51
R51

Keywords:
Credit crunch
Prefectural panel data
Shift of functions
Japanese loan market

ABSTRACT

In this paper, we aim to elucidate whether effects related to supply or demand contributed to the Japanese "credit crunch" in the 1990s. Using prefectural panel data, we estimate loan supply and demand functions and calculate their shifts. Our analysis reveals that demand-side effects contributed to the Japanese credit crunch to an equal or greater degree than supply-side effects. Further, we show that the credit crunch was not uniform across Japan, but was more severe in urban relative to rural prefectures. These findings suggest that traditional countermeasures in the banking sector that similarly affect all prefectures may not induce economic recovery. Given this, we assert that region-specific policies may be more appropriate.

© 2013 Elsevier B.V. All rights reserved.

1. Introduction

From 1990 to 2003, the Japanese loan market was in a severe slump; banks' total loans outstanding were in decline. To illustrate the degree to which outstanding loans stagnated, the cumulative value of outstanding loans in Japan is shown in Fig. 1. As demonstrated by this graph, the 1990s was the first decade in postwar Japan in which the cumulative value of total loans outstanding declined. When this reduction occurred, many believed that small- and medium-sized enterprises (SMEs) would suffer the most, as it indicated that their applications for loans had been refused by banks. As such, the general opinion was that a major catalyst to the financial crisis was the banks' reluctance to advance loans. Some economists argued that the drop in stock prices that resulted from the bubble burst in Japan in 1990 decreased bank assets, and thus, diminished their capital. As a result, banks were compelled to compress loans to abide by regulations established by the Bank for International Settlements (BIS). Others believed that the financial crisis was caused by a fall in land prices. A deflation of land prices decreased its value as collateral, causing banks to suffer losses stemming from the bankruptcy of their borrowers. This pushed Japan into a cycle whereby increased incidence of bankruptcy coupled with a fall in land prices increased the number of non-performing loans. This incited banks to reduce the degree to which they offered loans to firms (i.e., a credit crunch). In turn, the credit crunch reduced options for borrowers and thus further contributed to widespread bankruptcies, thereby driving the Japanese economy into deeper turmoil. To end this cycle, the Japanese government injected a large amount of public funds into banks in 1998 and 1999.

In spite of these relatively clear-cut explanations for the credit crunch, it is important to recognize that the problem was not that simple. Since the early 1990s, the Japanese economy had been in a slump and the loan interest rate was falling. Therefore, the reduction in total outstanding loans may have its roots in demand for loans, rather than their supply.[1] An injection of public funds into banks, for example, could only have a limited effect on inciting banks to provide loans to borrowers.[2] Given this, it may have been useful to increase firms' demand for loans, thus providing a more sustainable solution to the financial crisis.

* Corresponding author. Tel.: +81 0 6 6850 5223; fax: +81 0 6 6850 5274.
E-mail address: tsutsui@econ.osaka-u.ac.jp (Y. Tsutsui).

[1] A decline in loan interest rates is only derived from a left shift in the demand function or a right shift in the supply function.

[2] Though its effects on the credit crunch may have been limited, injection of public funds into banks can be useful for amortizing the banks' bad loans.

0922-1425/$ – see front matter © 2013 Elsevier B.V. All rights reserved.
http://dx.doi.org/10.1016/j.japwor.2013.06.005

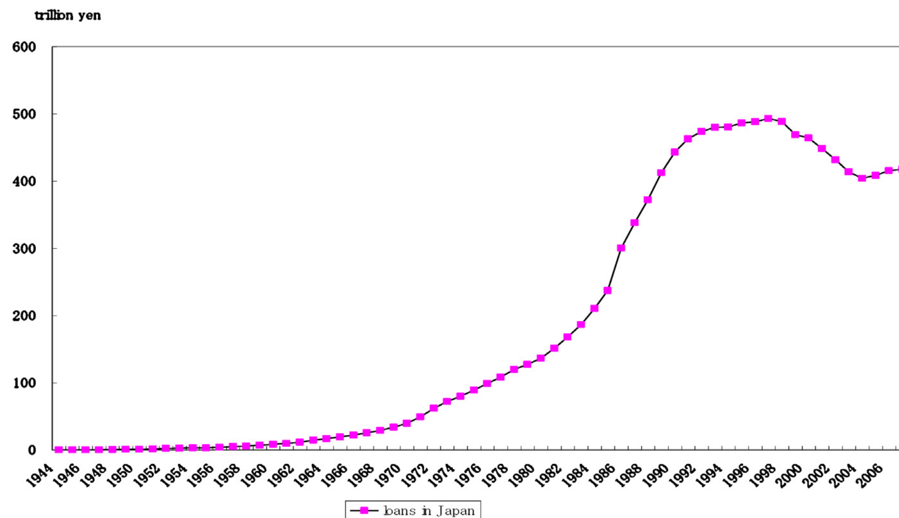

Fig. 1. Bank credit in Japan. Notes: The sample period is from 1944 to 2007.
Source: Financial Statistics Annual Report, the Bank of Japan.

In this paper, we seek to explore which side, supply or demand, was the greater cause for the reduction in banks' provision of loans in Japan in the 1990s. We perform this investigation with a particular emphasis on spatial differences associated with the credit crunch. As explained in Section 2, a significant portion of extant research on the Japanese credit crunch has focused on the relationship between banks' own capital ratios and non-performing loans and the extent to which banks provide loans. These studies have mainly considered supply-side variables as predictors of loan provision. However, it may be possible that increasing demand for loans is the key to economic recovery. Given this prospect, this paper is unique in its estimation of loan supply *and* demand functions and calculation of their shifts. Taken together, these measures will assist in revealing the primary factors responsible for the reduction in outstanding loans. In addition, by using a prefectural panel data set, we explore whether the credit crunch affected the Japanese economy homogeneously.

In light of these goals, the remainder of this article is organized as follows. In Section 2, we survey past research that informs the investigation we perform here. In Section 3, we explain the analytical framework, model specification, estimation method, and data. Following this, we present and discuss the results of our analyses in Section 4. Finally, in Section 5, we offer some concluding remarks.

2. Literature review

There have been a number of studies to investigate credit crunch in Japan, the majority of which have primarily focused on bank behavior (supply-side factors) as causally antecedent to the financial crisis. More specifically, these studies attributed the stagnant loan market of the 1990s to a reduction in land prices, an increase in the number of bad loans, and the regulation of banks' own capital ratios.

Ogawa and Kitasaka (2000) found that non-performing loans were negatively correlated with the supply of loans in the 1990s. In contrast, they also revealed that banks' own capital ratios were positively related to loan supply in that same period. Conversely, Yoshikawa et al. (1994) found no significant negative correlation between non-performing loan ratios and loan supply in the early 1990s. Taken together, these results are contradictory. Whereas the findings of Ogawa and Kitasaka (2000) supported the existence of the credit crunch in the 1990s, the research performed by Yoshikawa et al. (1994) refutes its existence.

The results of other studies in this area have been similarly mixed. For example, to demonstrate the effect of banks' own capital ratios on total loans outstanding, Woo (1999) conducted a cross-sectional analysis using bank financial data from 1991 to 1997. This analysis revealed that although banks' own capital ratios positively affected total loans outstanding in 1997, the relationship did not exist in other periods. Motonishi and Yoshikawa (1999) reported that the reduction of corporate investment in the 1990s was largely caused by real factors in 1992–1994, but was triggered by financial factors in 1997. Horie (2001), Ishikawa (2005), and Watanabe (2007) derived similar conclusions from their research as well. In concert, these studies suggest that the credit crunch was not severe in the early 1990s, but had become critical by the latter half of the decade.

In another line of research, Ito and Sasaki (2002) tested whether increases in bank capital financed by subordinate debentures affected the degree to which banks offered loans to borrowers. They found that banks' own capital ratios were positively related to loan supply in larger banks but not in smaller banks. Honda et al. (1996) obtained similar results. Taken together, the work of Ito and Sasaki (2002) and Honda et al. (1996) suggests that the effects of the credit crunch were more severe for large banks than small ones.

Other studies highlighted banks' excessive forbearance to firms in sluggish industries (e.g., construction, real estate). Peek and Rosengren (2005) empirically demonstrated that a bank was particularly likely to engage in forbearance lending to firms through either a main bank or *keiretsu* relationships. Caballero et al. (2008) found that industries dominated by zombie firms – insolvent borrowers surviving on forbearance lending by banks – exhibited more depressed job creation and lower productivity. Sasaki (2000) and Tsuru (2001) arrived at similar conclusions.

3. Analytical framework

3.1. A new measure for the credit crunch

As shown in Section 2, most previous work on the Japanese loan market has focused on the effects of BIS regulations and non-performing loans on the extent to which banks offer loans to potential borrowers. However, given the potential for demand-side variables to influence total loans outstanding, it is necessary to account for their effects as well.

In their attempts to isolate and identify the effects of supply-side variables on the credit crunch, past researchers have controlled for

Download English Version:

https://daneshyari.com/en/article/5086186

Download Persian Version:

https://daneshyari.com/article/5086186

Daneshyari.com