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Monetary Policy, Credit, and Real Activity: Evidence from the Balance Sheet of Japanese Firms[1]

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We analyze the mechanism of monetary transmission in the Japanese economy by using the quarterly time series data disaggregated by firm size. In particular we examine the channels through which monetary policy influences the firm's fixed investment with special focus on the firm's land. We estimate the vector autoregressive model where we encompass two competing hypotheses on the monetary transmission: monetary and credit channels. Our evidence is in support of the credit channel. We find that land has played a vital role in the monetary transmission, especially for small firms. Moreover, we find that fall of land value in 1990s weakened the efficacy of monetary policy considerably. *J. Japan. Int. Econ.*, December 2000, **14**(4), pp. 385–407. Institute of Social and Economic Research, Osaka University, Osaka, Japan. © 2000 Academic Press

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Key Words: monetary transmission mechanism; monetary channel; credit channel; collateral, land stock; vector autoregressive model; impulse response.

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1. INTRODUCTION

The official discount rate in Japan has fallen to a historic low of 0.5% per annum since September 1995 in order to boost the domestic economy. Despite such an easy monetary policy, the real GDP growth rate of Japan for 1998 was the lowest in the postwar period, indicating how stagnant the Japanese economy has become. Increasingly alarmed at the prospect of the Japanese economy plunging into a deflationary spiral, the Bank of Japan (BOJ) started to ease the monetary policy further in September 1998 and in February 1999. The overnight call rate eventually fell to 0.03% per annum or a virtually zero level, allowing for brokerage fees.

The predicament of the Japanese economy naturally raises the question why an expansionary monetary policy has been ineffective in boosting the Japanese economy. It has been frequently asserted that the huge burden of bad loans in the banking sector is blamed for the prolonged stagnancy of the economy.[2] The underlying logic is as follows. Mounting bad loans hinder commercial banks from playing an intermediary role. This severely affects the real activities of bank-dependent firms, most of which are small in size. It should be noted that the bad loan problem stems from excessive loans to the private sector secured by land in the late 1980s. Land assets were ideal for collateral since it was expected that the land price would continue to rise. However, this perception was completely shattered and the sharp decrease in land prices in the 1990s forced a large proportion of loans into default. Thus it appears that land is a key ingredient in understanding the mechanism through which monetary policy is propagated into the real economy.

For a rigorous evaluation of the arguments above, it is important to analyze the channels through which monetary policy is transmitted into the real economy. This study is an empirical attempt to analyze the monetary transmission mechanism in Japan with special attention paid to the role of land. In conducting the research for the period including the turbulent late 1980s to the 1990s, the following point deserves to be taken into consideration. In the course of liberalization and internationalization of financial markets, large firms could raise the funds directly from equity or the bond market at a lower cost than bank loans. Therefore, the banks were forced to lend to new customers, most of whom were small firms. When there is asymmetric information between lenders and borrowers, banks will be cautious in sharing with new customers information which has not been accumulated within the banks. However, when the land price is rising and is expected to continue to rise, the default risk of loans will be alleviated to a large extent by taking land as collateral. However, if the expectation turns out to be wrong, it will lead to a massive default of loans. It is conjectured that this was exactly the situation in

[2] Another view on the efficacy of monetary policy is based on the perception that the Japanese economy is in a liquidity trap, as is forcefully discussed by Krugman (1998). As is well known, traditional monetary policy is not effective.