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International comparison of bubbles and bubble indicators

Naoyuki Yoshino · Tomoya Nakamura · Yoshitaka Sakai

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Abstract The purpose of this paper is to analyze the financial turmoil of the US subprime loan crisis of mid-Noughties and to compare it with the Japanese asset bubble of late 1980s. While examining the two crises, it compares the monetary policies of both countries, focusing on the excess liquidity and expansion of bank loans that were seen. This paper develops several bubble indicators, including the ratio of real estate loans to total loans, the loan-to-GDP ratio, and housing affordability. In order to develop these indicators, it is necessary to compare banking behavior in both Japan and the United States, as banks in both countries were making loans beyond the point of profit maximization. Property prices and monetary policy in both countries influenced banking behavior significantly. The bubble indicators developed in this paper can be used as early warning indicators for future bubbles.

Keywords Bubble indicators · Empirical analysis of banking behavior · Housing affordability

N. Yoshino (✉)
Keio University, Tokyo, Japan
e-mail: yoshino@econ.keio.ac.jp

N. Yoshino
Director, FSA Institute, Financial Services Agency,
Government of Japan, Tokyo, Japan

T. Nakamura · Y. Sakai
FSA Institute, Financial Services Agency,
Government of Japan, Tokyo, Japan
e-mail: nakamura@iser.osaka-u.ac.jp

Y. Sakai
e-mail: y-sakai@fsa.go.jp

1 Introduction

The purpose of this paper is to examine the financial turmoil of the US subprime loan crisis and the Japanese asset bubble. While they have some factors in common, each crisis has aspects that distinguish it from the other. In order to maintain financial system stability after a bubble bursts, it is important that a country have measures such as rescue plans and a deposit insurance system.

This paper reports that the causes of the Japanese and US bubbles can be seen in their expansionary monetary policies and aggressive credit expansions in the housing and real estate markets. While it takes time for the housing and real estate markets to adjust to drops in demand, housing and real estate prices rise very quickly when demand increases. Many banks expand their loans to the housing and real estate sector when they see that it is profitable based on short-term expectations, and real estate in Japan is used as collateral for bank loans, which exacerbated the Japanese bubble. When the land price was expected to rise, banks were certain that they could keep their collateral values even if people defaulted on their bank loans.

While the Japanese bubble was contained within Japan, the US subprime loan crisis spread all over the world because housing loans in the United States had been securitized and sold outside the country. Credit rating agencies gave high ratings to securitized mortgage products, as their values were expected to continue rising. Many investors trusted the good ratings given to securitized products and therefore suffered great losses after the collapse of the US housing market. Securitization allowed these housing loans to be sold to other investors, making banks less responsible for their quality. This is in spite of the fact that the banks created the loans to begin with.