Studies on Asset Bubbles, Economic Growth, and Bailout Policy in an Open Economy

Abstract

Atsushi Motohashi

Many countries experienced large economic fluctuations that were accompanied by sharp increases and decreases in asset prices. More recently, the impact of the sharp rise and fall in the U.S. housing prices around 2007 spread to the entire world through securitized products, bringing about simultaneous global economic changes and a serious crisis for the international financial system. As governments have implemented bailout policies, there has been growing interest in the impact of asset price fluctuations on economic growth and the nature of bailout policies at times of economic crisis. In addition, since the recent economic crisis, the U.S. has adopted a low interest rate policy for many years. In order to understand the relationship between asset prices and economic growth in the global economy, an analysis that takes into account the impact of the monetary policy of a large country like the U.S. on asset holdings and economic growth within other countries (small countries) is required.

In recent years, a series of studies that analyze these large economic fluctuations in asset prices and economic growth such as the emergence and bursting of asset bubbles have attracted a great deal of attention. This study builds on this literature to analyze the relationship between asset bubbles and economic growth in the global economy, the impact of the U.S. monetary policy, and the impact of bailout policies on them.

Introduction explains the organization of this thesis. In Chapter 2, with the latest asset bubble in mind, we extend the literature and build a global model consisting of a large country (the U.S.) and many small countries to analyze the impact of the occurrence of asset bubbles in the U.S. on global economy. First, we show that asset bubbles exist in more relaxed conditions due to financial globalization. This implies that asset bubbles are more likely to occur in more countries in the global economy. Second, we show that the impact of asset bubbles on the economic growth rates of small countries is greater in the global economy than in the closed economy. In particular, we show that countries with high financial frictions are more susceptible to the adverse effects of bubble bursting because of higher economic growth rates before bursting. This conclusion implies that large economic fluctuations can occur before and after bubble bursting in the U.S.

In Chapter 3, we analyze the impact of the U.S. interest rate policy on the global economy. Extending the model built in Chapter 2, we investigate the mechanism by which economic growth and asset prices accelerate rapidly after a U.S. interest rate reduction.

Specifically, we show that a U.S. interest rate reduction not only increases economic growth rates but also expands asset bubbles as long as bubbles exist in small open economies. We also show, however, that this low interest rate policy has a large side effect; that is, a collapse of asset bubbles causes a larger drop in the growth rate of small open countries than that in the case without a lower interest rate. After a U.S. interest rate reduction is made, small countries lose more assets due to bubble bursting, as bubbly assets are held at higher prices in these countries. This conclusion implies that small countries need to be prepared for overheated asset prices associated with the U.S. interest policies.

In Chapter 4, we extend the model from previous chapters to analyze the effects of bailout policies on the growth rate and asset prices in a small open economy with asset bubbles. In our model, bubbles stimulate investment and economic activities (so-called "crowd-in effect" of bubbles). Thus, after bubble crushing occurs, recessions follow. Under this condition, we show that as long as bubbles persist, generous bailout policies raise the economic growth rate by enhancing the crowd-in effect. When bubbles burst, the bailout policy mitigates capital losses caused by the burst and accelerates economic growth and workers' wages compared to the no-bailout case. Since the bailout policy has growth and recovery enhancing effects, a generous bailout policy is a desirable one for governments from the perspective of taxpayers' welfare. It should be noted, however, that a U.S. monetary policy to reduce the interest rate enlarges the size of asset bubbles in a small open economy, and further reduction of the U.S. interest rate makes the size of asset bubbles too large to be sustainable without adequate policy intervention of the small open economy. In other words, the government needs to reduce the scale of bailouts to an appropriate level in response to the U.S. interest rate reduction.