

Essays on the Theory of Bubbles

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In this study, we examine the validities of well-known phenomena related to economic bubbles. In general, some believe that economic booms come with bubbles. In terms of policy, policymakers consider that an increase in the reserve requirement ratio is effective in suppressing bubbles. Moreover, there are unresolved issues such as the causal relationship between a booming economy and the expansion of bubbles, and whether assets as a medium of exchange may become bubbles. This study points out phenomena that are different from what we commonly know about bubbles, and employs equilibrium dynamic models to explain them. We also offer suggestions about the unresolved issues related to bubbles.

This study consists of three main chapters from Chapter 2 through Chapter 4. Chapters 2 and 3 are based on an overlapping-generation model. Chapter 4 is based on an infinitely lived agent model with a banking sector. These two types of models introduce a useless asset that may assume the behavior of a bubble.

Further details of each chapter are as follows.

Chapter 2 demonstrates the possibility that a bubble exists whether the economy is in boom or recession. To show this result, we introduce a one-period monopoly production sector into an overlapping-generations model. In an economy where banks can lend to consumers, there exists a single equilibrium path in which the economic growth rate fluctuates with the bubble. On the contrary, in an economy where banks cannot lend to consumers, there is no equilibrium path.

Chapter 3 explores whether we can obtain the same results as in Chapter 2 in an economy in which households have two types of money: one as a store of value and the other as a medium of exchange. To clarify the medium of exchange, we introduce a cash-in-advance constraint into Chapter 2's model.

In Chapter 4, we investigate the effectiveness of the reserve requirement policy as a preventive measure of bubbles. In the existing literature, it has been highlighted that the expansion of bubbles can be prevented by raising the required reserve ratio. This study demonstrates that this may not be the case. If the ratio is below a certain threshold, the conventional policy prediction fails; in other words, raising the required reserve ratio expands the bubble. If, in contrast, the ratio is above the threshold, it prevents the expansion of the bubble (or the conventional prediction holds). In either case, raising the required reserve ratio

is welfare reducing in our model. This situation implies that if the ratio is below the threshold, the optimal policy is to cut the required reserve ratio, which will increase the welfare and, at the same time, reduce the bubble.