An equilibrium model with two types of bubbles

Takashi Kamihigashi and Im Ryonfun

Abstract

We construct a model economy in which two types of asset bubbles can exist and investigate conditions for them to arise. One of them is a bubble on an intrinsically useless asset, so called fiat money, that is nonproductive savings and the other is a bubble on the stocks of firms newly created by R&D activities. We call the first type money bubble and the second type stock bubble. The money bubble and the stock bubble have different properties in the economy. The former crowds out productive savings away from capital accumulation, then lowers economic growth (crowding out effect) and the latter can enhance growth through stimulating R&D activities (growth enhancing effect).

We derive a condition for the two types of asset bubbles to arise in a steady state equilibrium. When the growth rate of a bubbleless equilibrium equals the market interest rate and money supply is constant, a steady state equilibrium with the money bubble can exist. If this is the case, then the stock bubble cannot exist in a steady state equilibrium, because it can exist only if the growth rate is lower than the market interest rate. Hence the money bubble and the stock bubble cannot coexist in a steady state equilibrium. But if money supply is grows at constant rate, a steady state equilibrium with two types of asset bubbles can exist in the economy.