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Margin Constraint and Asset Prices and Financial Crises
融資比率限制, 資產價格與金融危機

摘要

本文嘗試解釋在金融危機前後, 資產價格的“過度反應”現象. 我們用融資比率限制來解釋資產價格為何會偏離基本面. 當一個外生衝擊(比如景氣預測)使得資產價格下降至融資比率限制開始作用的水準時, 這會迫使人們繼續出售資產以求符合該限制. 如此, 資產價格會降到低於基本面應有的水準. 因此, 原來意圖穩定資產價格的金融監理政策可能反而加大資產價格的波動.

關鍵詞

金融危機, 泡沫, 融資比率限制.

Abstract

The overreaction of the asset prices that may be caused by the margin requirement in the aftermath of a financial crisis is the focus of this paper. The margin requirement requires that the borrower must contribute at least a certain portion of his own funds in the purchase of an asset. In this paper, we construct a simple model where, given a financial system in which moral hazard problem is severe, the loans are secured by the assets based on the expected value of collateral put forth by the borrowers. The equilibrium prices of the asset exhibit multiple equilibria, indicating a self-fulfilling nature of the market. Thus the asset prices can have large swings as we have observed. Next, we introduce an exogenously imposed margin requirement. We find that the margin requirement does not help to stabilize the asset prices. Instead, it pushes the asset prices to a lower level than it otherwise should be when the margin constraint binds, because the agents have to shed the stock of holdings to satisfy the margin constraint. This suggests that the government should be very careful in designing its regulations, even if the seemingly benign prudential regulations.

Key words

financial crisis, bubbles, margin requirement

計畫緣由與目的

The huge volatility of the asset prices has been well-documented in the literature. Particularly, many financial crises erupt following a rapid increase in the asset prices and then result in a collapse in the asset markets. The boom-bust cycles of the asset prices along many episodes of the financial crises have attracted a lot of attention recently, attempting to explain the pro-cyclical nature of the asset prices. The 1997 Asian crisis is the most recent example. The dramatic increase in stock prices and real estate prices occurred in Japan in the second half of 1980s and the later collapse in early 1990s depressed the Japanese economy almost a decade. Also, nearly all other OECD countries experienced similar pattern of asset price fluctuations around the same period of time. These episodes share the same feature: asset price inflation often follows a rapid increase in credit expansion before its collapse (Ito and Tokuo (1996), Browne and Rosengren (1992), Shigemi (1995)). Kaminsky and Reinhart (1996a,b), Corsetti, Pesenti and Roubini (1998)).

Due to the tremendous impact of a collapse of asset prices on the economy, the government heavily regulates the financial markets and institutions for prudential purposes, and frequently interfere in case a financial crisis occurs. It is very often cited that the asset prices overreact to the arrival of new information and tend to deviate from their fundamental values given an exogenous shock. In other words, asset prices contain bubbles. A lot of efforts have been made to account for the surge of the asset prices in the wake of a financial crisis. There are distortions that may help propel the surge of the asset prices, namely government guarantee or the so-called crony capitalism. The eruption of a financial crisis turns the galloping asset prices downward and frequently raises a fierce debate over whether the government should stabilize the financial markets and rescue the failing financial institutions. Very often, the government steps in to try to stabilize the asset markets based on the widely accepted view that the pessimism of the market tends to overkill the prices, that is, the asset prices may drop under the level that is supported by the fundamentals of the economy. In other words, it is the negative bubbles that concern the government.

結果與討論

In this paper, we construct a simple model where, given a financial system in which moral hazard problem is severe, the loans are secured by the assets based on the expected value of collateral put forth by the borrowers. The equilibrium prices of the asset exhibit multiple equilibria, indicating a self-fulfilling nature of the market. Thus the asset prices can have large swings as we have observed. Next, we introduce an exogenously imposed margin requirement. We find that the margin requirement does not help to stabilize the asset prices. Instead, it pushes the asset prices to a lower level than it otherwise should be when the margin constraint binds, because the agents have to shed the stock of holdings to satisfy the margin constraint. This suggests that the government should be very careful in designing its regulations, even if the seemingly benign prudential regulations.

計畫成果自評

In the original proposal I stressed the connection between financial intermediaries and asset bubbles. The results here have shifted to negative bubbles due to the imposition of the margin requirement. For this, I find the interesting policy implication that the prudential regulation that intended to stabilize the asset prices in effect help enlarging the volatility of the asset prices.

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