Financial Disintermediation and Financial Fragility by Kosuke Aoki and Kalin Nikolov

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Summary: Goal

- Goal: examine how the growth of non-bank sources of credit affects the susceptibility of the financial system to crises.
  - Two non-bank resources:
    - Corporate bonds
    - Shadow banking

Summary Methodology/Analysis

- Extend the limited commitment model of Aoki and Nikolov (2011), this model has the following main features:
  - 3 types of agents: entrepreneurs, workers, and bankers.
  - The entrepreneur's productivity could be "H" or "L", depending on stochastic/Markov process.
  - The shock would affect the price of bubble assets, which affects the net worth of the bankers.
  - The banks may divert. The diversion would lead a banker consumes the funds and closes the bank.

Summary
Main Findings

- Main Findings:
  - The growth of corporate bond markets can increase banking fragility although it also diminishes the impacts of banking crises.
  - Shadow banking allows higher financial system leverage and increases bank fragility.
    - Since this operation relies on bank capital, it provides no funding diversification and cannot offset the impact of banking crises.

Contribution

- Modelling non-bank sources of credit.
- Analysis on how various sources of credit would affect the stability of the financial system and real activities.

Questions/Suggestions

In general

- How is the fragility measured?
- Excluding bank credit
  - Concerns: Bank and non-bank credit are imperfect substitutes in some ways. Without bank credit, it is uneasy to identify the reasons behind the growth of non-bank credit.
    - This could be due to severe credit rationing, adverse shock, flight to quality, adverse selection.
    - Each of these reasons could have different implications on financial stability/fragility, and could affect the conclusion of the paper.
  - Suggest: To have 1-2 cases include bank credit.

Questions/Suggestions

In general

- The enforcement of loan
  - exogenously determined and only extreme cases discussed, $\psi = [0,1]$
    - Corporate bond market exists only when savers have the enforcement ($\psi = 1$).
    - Shadow banking is the only source of bank credit ($\psi = 0$).
  - Concerns 1. the fact $0 < \psi < 1$, which is usually the case for these two non-bank resources.
    - Shouldn't this case be discussed?
  - Concern 2: the amount of non-bank credit depends crucially on the enforcement, which then defines the fraction of corporate bonds.
    - So how to analyse the growth of either bank-source credit? Is such growth exogenous as well?
  - Suggest: the variable ψ to be endogenously determined.
    - So the growth rate of corporate bond/ shadow banking to be endogenously determined.
    - To do so, one possibility is to set up the circumstance(s) in which the demand of corporate bonds would adjust to credit demand/credit supplies of other sources.

Questions/Suggestions
In general

- The role of bubble assets
  - Concern: bubble assets are defined as durables but intrinsically useless assets, which has a fixed aggregate supply.
    - Q: Why fixed aggregate supply? Is it crucial to the results to have fixed aggregate supply for the bubble assets?
  - Concern 2: all three types of agents are buying the bubble assets, which provides no insurance.

Questions/Suggestions
In general

- Bank Divert: once diverting, the banks consumes the fund and closes the bank.
  - The bankers are identical. It will be either none or all diverts.
  - In the case of bubble burst, all banks divert. When banks are the monopoly enforcement ($\psi = 0$), there will be no bank and non-bank credit.
  - Q: Is there a mechanism in this model how the economy can recover? Or is this a model purely about collapsing?

Questions/Suggestions Specific--setup

- The shock
  - The introduction of the shock:
    - Q: Are the bankers the only agents receiving the shock, but not others?
  - It seems that the shock affects the price of bubble assets, which then, in turn, affects bankers' net worth. However, only the consumption which is not hit by the shocks are counted in the objective function [equation (7)].
    - Q: is it assumed that the consumption level when shocks hit is zero?

Questions/Suggestions Specific—setup

- The entrepreneur's productivity could be "H" or "L", depending on stochastic/Markov process.
  - Q: is the type of entrepreneur public/private information?
- Equation (14): "+" before b_t^w on LHS?
- Are the probability of shock $(1-\gamma)$ independent of the probability of bubble burst $(1-\pi)$?
  - How do these two are differentiated?

Questions/Suggestions Specific—setup

- Bank guarantees vs. bubble investment guaranteed by the government
- Bank guarantees appear as part of banks' net worth.
  - Q: what is the role of bank guarantees? What is guaranteed by them?
- Bubble investment by the government which is assumed financed by taxing the "H" entrepreneurs' net worth.
  - At the time of bubble burst, the entrepreneurs' net worth shrinks, so levied taxes reduce. This could then restrict further the government's ability to guarantee the bubble investment.
  - Q: Is it assumed that the government guaranteed bubble investment is always sufficient?