

Discussion of:

Liquidity Hoarding

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The issue

- Much discussion of interbank lending “freezes” and liquidity hoarding during the recent crisis
 - interpreting the evidence is tricky, though
- What is hoarding?
 - how would we identify it?
 - is it necessarily a bad thing?
 - what can/should a central bank do?
- Need a theory to guide us
 - This paper is a useful starting point

My discussion

- (1) What causes hoarding?
 - is it really inefficient?
 - go through a related model

- (2) A brief comment on policy prescriptions

A different model (or, Of disease and dosage)

- $t = 0, 1, 2, 3$
- Agents have endowments at $t = 3$, are risk neutral
- Each individual may contract a serious disease at $t = 1$ or $t = 2$
 - disease can be cured by a dose of medicine
 - otherwise individual is crippled, loses R at $t = 3$
 - fraction contracting disease in each period is random
- Medicine can be produced at $t = 0$ at utility cost ρ per dose

Q: How much medicine will be produced? How will it be distributed?

- “Hoarding”: unused medicine & sick agent(s) uncured at $t = 1$
- The efficient allocation is straightforward
 - once produced, give medicine to any sick person (no hoarding)
 - production at $t = 0$ satisfies $MC = E[MB]$
- Decentralized economy
 - agents individually decide whether to produce medicine at $t = 0$
 - markets for medicine at $t = 1, 2$; pay with $t = 3$ consumption

- Market outcome: No hoarding
 - if hoarding occurs, price of medicine at $t = 1$ will be R
 - price at $t = 2$ is at most R (and may be lower)
- ⇒ no incentive to hoard
- Different result from Gale-Yorulmazer
 - why?

- Suppose some sick people at $t = 2$ will lose $2R$ at $t = 3$ if not cured
 - develop a particularly nasty version of disease
- Result: hoarding may occur at $t = 1$
 - price at $t = 2$ may be as high as $2R$
 - may be profitable to not sell at $t = 1$, even if price = R
- But ... hoarding is not inefficient here
 - larger social value of treating very sick people

Going back to the paper

- Hoarding arises because p_2 may be large ($= 1 + p_1$)
 - buyers of illiquid asset in $t = 1$ have more to lose at $t = 2$
 - ~ being susceptible to the nasty version of the disease
 - How do banks end up in this position?
 - by *using their liquid asset* in the $t = 1$ market
- ⇒ The process of transferring liquidity to banks in need at $t = 1$ creates banks that are susceptible to a more costly shock at $t = 2$
- the existence of high-value banks create an incentive to hoard

- Is hoarding inefficient here? It depends.
- For their planner, the answer is yes
 - the planner can distribute liquid assets without changing the distribution of illiquid assets across banks
 - a bank that saved liquidity at $t = 0$ may be forced to give it away at $t = 1$
 - or, planner could transfer goods at $t = 3$ to compensate
- Is this the relevant benchmark for the decentralized economy?
 - perhaps, if banks could borrow liquid asset at $t = 1, 2$ and repay (with interest) at $t = 3$
 - if liquid assets must be purchased on spot market ...

- Could write a different planner's problem
 - transferring liquid assets at $t = 1$ requires transferring illiquid assets as well
 - planner faces same constraint as the market economy
 - planner will have to create high-value banks at $t = 1$
- Would the constrained-efficient allocation involve hoarding?
 - if so, this would be interesting
- Main point: (in)efficiency of hoarding depends on subtle issues, even in very simple settings

Policy prescriptions: A comment

- In the model, the quantity of liquid assets is fixed at $t = 0$
- Central banks can and do *create* liquidity during a crisis
 - no discount window in the model
- How should I think about the liquid asset here?
 - is it cash? or something else?
 - matters for the policy prescriptions
- Example: Goal of a minimum liquidity requirement?
 - here: have more liquid assets in the economy
 - in reality: ?

Conclusion

- Much (unstructured) discussion of liquidity, hoarding, etc.
 - need good theory to guide these discussions
- Reading this paper is a good starting point
- Authors argue that hoarding (*i*) is inefficient, (*ii*) occurs in equilibrium
 - ⇒ role for policy to improve outcomes
- I would like to understand (*i*) better
 - also relate results more closely to central bank liquidity policy