

Remarks about “Collateral Circulation...” and “Self-Fulfilling Fire Sales...”

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Remarks are Carey’s opinions, not those of the Board of Governors or the Federal Reserve System.

Overall Thoughts

- Both papers make contributions on very important topics that deserve much further research.
- Fire sales, financing constraints and illiquidity were important (maybe central) elements of the crisis that we do not fully understand; thus robust reform is difficult to achieve.

Collateral Circulation and Repo Spreads, by Jeongmin Lee

- Motivation: The repo market crashed during the worst of the crisis, adding to fire sale pressures and removing a channel where lenders and borrowers could trade.
- Idea: The driver of pricing and volume is timing mismatches between (financial) investments and ability to either cash out of the repo market or borrow more in the repo market.
- I don't believe the story, but the model is interesting and an important contribution.

Story

- Lenders of cash in the repo market became more concerned about their ability to take advantage of exogenously arriving financial investment opportunities by borrowing against investment collateral. They lent less or nothing.
 - I thought a significant fraction of repo market lenders became concerned they would have to take the collateral, and withdrew because they were unprepared to do so.

Model

- Equilibrium yields a balance between “waiters” and “investors” that depends on timing mismatch parameters.
 - The repo interest rate spread achieves the balance.
 - Higher spreads mean less borrowing. Borrowers hoard more cash to pay the spread and avoid bankruptcy. Conversely, lenders are more willing to chance foregone investment opportunities.
- All are risk neutral and a haircut eliminates any credit risk.
 - The haircut and price of seized repo collateral are uninteresting; both are constant functions of an illiquidity parameter.
- When the repo market has nonzero activity, it incentivizes agents to hoard less cash, placing more in other financial investments.
- If frictions that prevent unlimited borrowing against collateral worsen enough, prices in the market in which seized collateral is sold fall to fire-sale levels and the repo market collapses (temporarily).

Oddities

- Investors buy securities in competitive markets, but their ability to do so arrives only occasionally, and yet the markets clear with competitive prices.
- Repos cannot be terminated before maturity, and yet they are short-term in reality. Laws of large numbers handle perturbations from non-rollovers.
- “Investment” is in financial instruments, not real investments. Can’t say much about real effects.
- Agents with an investment opportunity either lever to the max permitted by the haircut or not at all. Arrival rates of investments and maturities are key drivers... but “maturities” are really decisions about trading and financing strategies and thus not really exogenous.
- If agents can borrow against any collateral at any time, the repo spread goes to zero while no one with cash stays out of the repo market. Odd that a low spread maximizes lending.

Bottom line on Lee's paper

- All models must abstract, but I'm not convinced this abstraction captures the main features and drivers of the repo market collapse.
- But it's an interesting model and a thought-provoking contribution. I'm glad to have read it.

Self-Fulfilling Fire Sales, Bank Runs and Contagion by Li and Ma

- Motivation: Many financial institutions experienced runs and engaged in fire sales, affecting solvency and liquidity (which are difficult to separate) and leading to contagion. We need to understand the drivers.
- Idea: Though both fire sales and runs have been the subject of several models, this paper models them as interacting endogenously. High capital is less helpful than it appears; disclosure is tricky.
- Differs from Brunnermeier & Pedersen in that drivers are coordination failure and asymmetric information. Many models with endogeneity are possible; study this one.

Story

- Runs lead to fire sales, and fire sales foster runs. Insolvency can cause illiquidity, but illiquidity can also cause insolvency.
- Solvent banks experiencing a run will have to sell assets at prices below fundamental value.
 - Thus, run first. Self-fulfilling.
 - Sufficiently common exposures feed contagion.
- Policy implications for capital and disclosure.

Model

- Bank creditors:
 - Observe only a noisy signal of bank cash flow, from which actual cash flow and common-exposure state-of-world are inferred.
 - Trade off an early-withdrawal penalty against loss associated with later failure of bank to repay.
 - Must estimate how many others will run; join them if estimate high.
- Asset buyers observe only runs. Number signals common exposure factor. Liquidation price of assets drops with runs and feeds runs.
- Conditional on a run, higher capital makes investors believe the state is worse, increasing contagion. Higher capital is stabilizing on average, but makes tail worse.
- Unique equilibrium.
- Solvent banks can fail, though without a fire sale discount, a solvent bank never fails.

Oddities

- Depositors observe a noisy signal of bank cash flow, but buyers of bank assets do not. They observe only run-or-no-run, so run status signals the noisy signal and influences asset prices.
 - Asset traders often more informed than depositors in reality. What if they observe the signal too? I *think* contagion still occurs...
- Is the early withdrawal penalty q also borne by asset buyers?

Policy findings

- Capital:
 - More provides a buffer that reduces the likelihood of insolvency and illiquidity
 - But if a bank fails either because of insolvency or a run, other agents infer that the state of the common exposure is very bad, thus increasing the likelihood of contagion.
 - Nice! Capital is not a panacea.
- Disclosure:
 - Presuming policymakers have to precommit to disclose the state-of-the-world, it helps sometimes but hurts other times.

Bottom line on Li & Ma's paper

- Many people ran from many financial institutions and products during the crisis. Knowledge that others were running increased the propensity to run. Falling asset prices did so as well.
- Other models might capture such behavior. But I believe the phenomenon was first-order important.