Interbank Market Liquidity and Central Bank Intervention
by Franklin Allen, Elena Carletti, and Douglas Gale

Discussion by
Adriano A. Rampini
Duke University

Central Bank Liquidity Tools
Federal Reserve Bank of New York

New York, NY
February 19, 2009
Comments

• Main results

• Mechanism of the model

• Comment 1: Notion of market freezes?
  • Market freeze here is lack of trade when all banks have excess liquidity.

• Comment 2: Central bank policy or fiscal policy?
  • Central bank liquidity tools include lump sum taxes and rebates.

• Comment 3: Complete markets and their absence?
  • What explains the absence of opportunities to hedge liquidity shocks?

• Additional comments
Question and Model

• Question
  • Role of central bank intervention in interbank markets

• Model
  • Quite standard Diamond/Dybvig (1983) model of liquidity demand
  • Short asset (return 1) and long asset (return $R > 1$); no liquidation
  • Aggregate and idiosyncratic liquidity demand shocks (high or low)
  • Assume deposits not state contingent and no default.
Main results

• Findings
  . With incomplete liquidity hedging markets, price of long asset varies across states $P_0 = R > 1 > P_1$.

  . Central bank intervention can stabilize price of long asset at $P = 1$ and attains constrained efficient allocation.
    ◦ Constrained efficient allocation involves “market freezes” where banks don’t trade liquidity.

  . Complete markets also attain constrained efficient allocation.

• Focus of model is on liquidity
  . ... not solvency
  . ... no role for bank capital
  . ... no issues of default and enforcement
Mechanism of the Model

• When banks cannot hedge and the central bank does not intervene
  • ... banks carry enough liquidity to meet high liquidity demand (by assumption)
  • ... but banks have excess liquidity when demand is low implying ...

\[ P_0 = R \]

that is, banks bid up the price of the long asset.

• To implement constrained efficient allocation,
  • ... central bank needs to drain excess liquidity when demand is low (by selling long asset “short”).

• Even in absence of aggregate risk, to keep \( P = 1 \) central banks needs to
  • ... collect lump-sum tax/rebate at date 0 and buy/sell short asset
  • ... buy/sell long asset for liquidity at date 1
  • ... grant lump-sum rebate/tax to late consumers at date 2
Comment 1: Notion of Market Freezes?

• **Market freeze** in the model
  
  * If aggregate uncertainty is sufficiently high, banks keep lots of liquidity.
  * When the realized aggregate liquidity demand is low, each bank can meet its own liquidity demand.
  * All the central bank does is drain excess liquidity.
  * No reallocation of liquidity in the interbank market is necessary.

• Market freezes are **constrained efficient**
  
  * ... not a market failure that requires intervention.

• Is this the **right notion** of a market freeze?
  
  * ... market freeze when there is excess liquidity
  * ... banks all have sufficient liquidity and hence don’t trade

Or maybe this is the key policy implication: drain liquidity when market freezes.
Comment 2: Central Bank Policy or Fiscal Policy?

- Central bank **liquidity tools** (somewhat) **unconventional**
  - More than “open market operations”
  - Lump sum taxes/rebates
  - Time 2 taxes/rebates type contingent (only levied on late consumers)
  - Issuance of long term debt

- **Central bank vs. government** (treasury)
  - Optimal policy includes fiscal policy
  - This may be an important implication of the paper
  - Government has considerable enforcement power

- Alternative implementations of central bank policy? Or **unique**?
  - Tax (or rebate) at time 0 and purchase (or sale) of long asset?
Comment 3: Complete Markets and Their Absence?

- Analysis with complete markets
  - Markets in time 0 Arrow claims or dynamic trading of 1-period Arrow claims
    - ... implement constrained efficient allocation
  - Highlights key assumption
    - Lack of opportunities to hedge liquidity needs

- Explanation of absence of
  - “... involve a large number of securities being issued and traded. In practice, the costs of issuance and of the infrastructure for trading securities ... are likely prohibitive.”
  - “This is why the role of the central bank in implementing the constrained efficient allocation is so important.”
Comment 3: Complete Markets and Their Absence? (Cont’d)

- What about the costs of policy intervention?
  - Information costs
  - Effect on incentives (‘moral hazard’)
  - Time-consistency of government policy or political economy considerations

- Or do banks choose not to hedge?
  - Opportunity cost of hedging since conserving net worth is costly (Rampini and Viswanathan 2008)
Additional Comments

• Comment 4: What is **price of long asset with complete markets** at time 1?
  - Is it $P_\theta = 1$ as with government intervention?

• Comment 5: Alternative implementation of complete markets?
  - Would forward contracts on liquidity, i.e., **long-short swaps** work?

• Comment 6: Why **deposit contracts**?
  - Full insurance of consumers with liquidity needs violates risk sharing consideration!
    ◦ Are we fostering an addiction to liquidity?
Conclusion

- Interesting paper on the role of central bank intervention in
  - ... providing and draining liquidity.
  
  Paper displays authors’ mastery of this type of liquidity demand model.

- Paper predicts
  - ... unconventional central bank liquidity tools
  - ... occasional lack of inter bank trade (“market freezes?”)

- Open issues:
  - Relative cost of central bank intervention vs. liquidity hedging markets
  - How much risk free liquidity can and/or should society provide?