DISCUSSION OF:
MONETARY POLICY IN A CHANNEL SYSTEM

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31 Oct 2008
THIS DISCUSSION

(A) Key Features of the Model

(B) Main Findings and Intuition

(C) Discuss Robustness of the Policy Implications
   ◇ Relax Assumption
   ◇ Active Money Market
(B) MAIN FINDINGS AND INTUITION

Assumption ① - ④ imply First Best cannot be achieved:

\[
\text{Welfare} = (1 - n) \left[ u(q) - q \right] - (1 - \beta R)b
\]

trade surplus collateral cost

⇒ First Best: \( b = 0 \) and \( q = q^* \) with \( u'(q^*) = 1 \)

When \( b = 0 \), equilibrium money demand:

\[
\frac{\gamma}{\beta (1 + i_d)} - 1 = (1 - n)(u'(q) - 1)
\]

\[\text{MC} \quad \text{MB}\]

◊ Without ② or ④: \( \gamma = \beta \) and \( i_d = 0 \) \( \Rightarrow q = q^* \).

◊ With ② and ④: \( \gamma \geq 1 + i_d > \beta \) \( \Rightarrow q < q^* \).
(B) MAIN FINDINGS

Benchmark Case: When money market is inactive ($\epsilon = 0$):

Optimal Policy:

- Positive Interest Corridor $i_l - i_d > 0$

- Zero Lump Sum Transfers $\tau = 0$
(1) What’s the equilibrium effect of interest corridors?

Portfolio Choice

\[ i_l \uparrow \text{ relative to } i_d \]

\[ \Rightarrow \text{ borrowing } \downarrow \]

\[ \Rightarrow \text{ money } \uparrow \]
(1) What’s the equilibrium effect of interest corridors?

Portfolio Choice

Collateral (b)

Consumption (q)

\[ i_l \uparrow \text{relative to } i_d \]

\[ \Rightarrow \text{borrowing } \downarrow \]

\[ \Rightarrow \text{collateral } \downarrow \]

\[ \Rightarrow \text{Welfare } \uparrow \]

\[ i_l \uparrow \text{relative to } i_d \]

\[ \Rightarrow \text{borrowing } \downarrow \]

\[ \Rightarrow \text{consumption } \downarrow \]

\[ \Rightarrow \text{Welfare } \downarrow \]
(2) What is the optimal policy?

**Portfolio Choice**
- Money
- Loan

**Collateral (b)**

**Consumption (q)**

**Welfare**
- High R
- Low R

**Proposition 2**

**Optimal Policy:**
- \( b \) is costly (low \( R \)) \( \Rightarrow \) high \( i_l \) \( \Rightarrow \) \( b = 0 \)
- \( b \) is cheap (high \( R \)) \( \Rightarrow \) low \( i_l \) \( \Rightarrow \) \( b > 0 \)
(2) What is the optimal policy?

**Proposition 2**

**Optimal Policy:**

- If $b$ is costly (low $R$), then:
  - $i_l$ is high
  - $b = 0$

- If $b$ is cheap (high $R$), then:
  - $i_l$ is low
  - $b > 0$

$t = 0$
(C) DISCUSSION

**Benchmark Case**: When money market is inactive \((\varepsilon = 0)\):

Optimal Policy:

- Positive Interest Corridor \(i_l - i_d > 0\)
- Zero Lump Sum Transfers \(\tau = 0\)

**QUESTION**: How robust are these results?

- With general cost function
- With an active money market
(1) GENERAL COST FUNCTION

For tractability, the paper assumes that the cost of re-balancing portfolio in the settlement market is linear

QUESTION: How robust is the result if we relax the linear cost assumption?

ANSWER:
I numerically computed the case with standard convex cost functions and found that:

- The distribution becomes non-degenerate
- Positive corridor is generally still optimal ($i_l > i_d$)
- However, positive lump sum transfer can be optimal ($\tau > 0$) (due to redistributive effect studied in Molico (2006))
(2) ACTIVE MONEY MARKET ($\varepsilon > 0$)

When the money market is active, the paper only derives the equilibrium when “short-selling” constraints are not binding.

QUESTION: What’s the optimal policy when the money market is active?

ANSWER:
I computed the welfare effects of changing the interest corridor when “short-selling” constraints are not binding.
DISCUSSION

OPTIMAL POLICY WITH ACTIVE MONEY MARKET

Portfolio Choice

Collateral (b)

Consumption (q)

Welfare

money

loan

$\text{il} - \text{id}$

$\text{il} - \text{id}$

$\text{il} - \text{id}$

$\text{il} - \text{id}$

$q^H$

$q^L$

SHORT-SELLING CONSTRAINT
(2) ACTIVE MONEY MARKET \((\varepsilon > 0)\)

When the money market is active, the paper only derives the equilibrium when “short-selling” constraints are not binding.

QUESTION: What’s the optimal policy when the money market is active?

ANSWER:
I computed the welfare effects of changing the interest corridor when “short-selling” constraints are not binding. I found that:

- Welfare is decreasing in the interest corridor.
- Results suggest that the optimal interest corridor will probably induce binding “short-selling” constraints.
SUMMING UP

- I learned a lot from this paper.
- An important first step toward analyzing a channel system in a general equilibrium model.
- There are some important questions remained unresolved.
  (e.g. optimal policy when money market is active)