The Evolving Role of Central Banking

by

Markus K. Brunnermeier

Princeton University

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Macro-Management

- Price stability
- Financial stability
- Fiscal debt sustainability
Roadmap

1. From a stock-flow to a risk perspective
   • Banks as money creators and “risk mitigators”
   • Amplification due to balance sheet impairments (bottleneck)
2. From a representative agent to a bottleneck perspective
3. Quantity vs. Prices
4. Independence – three dominance concepts
5. Size of Central Banks’ balance sheet
6. ZLB and Liquidity trap
7. MoPo and MacroPru interaction
1. From Level to Risk Perspective

- **Borrowers**
- **Savers**

- **The Loanable Funds Model**

- Money creation (inside money) depends on **risk bearing capacity**
- Demand for money rises if idiosyncratic risk cannot be diversified
- Amplification/endogenous risk
1. From Level to Risk Perspective

- The L Theory of Money
  - with Yuliy Sannikov
1. From Level to Risk Perspective

Banks as
- Risk mitigators
- Money creator (inside money) depends on risk bearing capacity
- Demand for money if idiosyncratic risk cannot be diversified
- Amplification/endogenous risk

\[ \text{The I Theory of Money} \]

- with Yuliy Sannikov
2. From an Average to a Bottleneck Perspective

- Identify bottleneck which may lead to amplification
  - Financial sector
  - Household sector in 2000s the US
  - Corporate sector in Japan 1990s

- Ex-post repair “sector-aggregate” balance sheet
  - E.g. QE2 in US supported house prices
    - helped households (most effective)
    - Not useful for Japan

- Transmission channel might be “sectorially impaired”
  - Monetary Transmission Mechanism works differently across sectors/regions
  - SME are disadvantaged compared to sovereigns and large corporations
3. Quantities vs. Prices: a) Vulnerabilities

- **Watching:** Vulnerability Indicator (build-up phase)

- **Trigger vs. Amplification**
  - Triggers: varies subprime, internet,
  - Amplification: common liquidity mismatch

- **Prices vs. Quantities**
  - Prices follow trend, but Quantities show build-up of risk

![Graph showing price vs. vulnerability]

Price doesn’t move much...
But is vulnerable to jump
3. Quantities vs. Prices: b) Target

- **Targeting:** Fed funds vs. Repo rate
  - Reverse repo

- Remoteness from risk for Central Bank

- Should Central Bank assume risk and thereby reduce endogenous risk?
  - Assume small amount of risk and reduce endogenous risk by a big amount
4. Independence of Central Bank

- **Monetary dominance**
  - Fiscal authority is forced to adjust budget deficits

- **Fiscal dominance**
  - Inability or unwillingness of fiscal authorities to control long-run expenditure/GDP ratio
  - Limits monetary authority to raise interest rates

- **0/1-Dominance vs. battle:** “dynamic game of chicken”
4. Independence & 3 Dominance Concepts

- **Monetary dominance**
  - Fiscal authority is forced to adjust budget deficits

- **Fiscal dominance**
  - Inability or unwillingness of fiscal authorities to control long-run expenditure/GDP ratio
  - Limits monetary authority to raise interest rates

- **Financial dominance**
  - Inability or unwillingness of financial sector to absorb losses
  - Refusal to issue no equity – pay out dividends in early phase of crisis
4. Independence: 2\textsuperscript{nd} Game of Chicken

- Monetary dominance
  - Fiscal authority is forced to adjust budget deficits

- Fiscal dominance
  - Inability or unwillingness of fiscal authorities to control long-run expenditure/GDP ratio
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- Financial dominance
  - Inability or unwillingness of financial sector to absorb losses
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5. Size of CB’s Balance Sheet

- Should size of CB’s balance stay large?

- Who should do maturity transformation of risk-free government debt?
  - Central bank or private sector (money market funds)?
  - Need of a safe government asset (ESBies)

- Maturity Rat race (Brunnermeier & Oehmke)
  - Private sector is not good at maturity transformation
  - Informational value of interbank market is only for high frequency movements, but not long-run build up of imbalances.
6. ZLB & Liquidity trap

- Difficulty in creating inflation due to

- Zero Lower Bound

- Liquidity trap (more generally)
  - Risk bearing capacity is impaired
  - Endogenous risk is rising
7. MacroPru & MoPo Interaction

- MoPo
  asset prices distortion
  - Insurance/recap sector risk -- The I Theory
  - Impacts *jointly*:
    risk taking, endogenous risk and risk premia

- MacroPru
  quantity restrictions
  - Control risk taking (quantity) separately from risk premia

- MacroPru *complements* MoPo
  - Not substitutes

- Good MacroPru enables more aggressive MoPo
  - More redistribution ex-post
  - More risk-transfers/insurance ex-ante
  - Value of money is higher (lifts level)

- Common MoPo in currency union -- MacroPru can be state dependent
Conclusion

1. From a stock-flow to a risk perspective
   • Amplification due to balance sheet impairments (bottleneck)

2. From a representative agent to a bottleneck perspective
   • Ex-post: Redistribute
   • Ex-ante: Insurance

3. Quantity vs. Prices
   • Watch for vulnerability build-up
   • Target rates. Which? Should central bank assume risk?

4. Independence – three dominance concepts

5. Size of Central Banks’ balance sheet
   • Safe government asset – ESBies
   • Who should do maturity transformation of safe asset

6. ZLB and Liquidity trap

7. MoPo and MacroPru interaction
# Redistributive Monetary Policy

<table>
<thead>
<tr>
<th>(New) Keynesian Demand Management</th>
<th>I Theory of Money Risk (Premium) Management</th>
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<tbody>
<tr>
<td>Stimulate aggregate consumption</td>
<td>Alleviate balance sheet constraints</td>
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<tr>
<td>Price stickiness &amp; ZLB</td>
<td>Both</td>
</tr>
<tr>
<td>Perfect capital markets</td>
<td>Financial frictions</td>
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<td></td>
<td>Incomplete markets</td>
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<td>Representative Agent</td>
<td>Heterogeneous Agents</td>
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<tr>
<td>Cut $i \Rightarrow$ reduces $r$</td>
<td>Cut $i$</td>
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<td>Euler equation $\Rightarrow c$</td>
<td>Changes bond prices</td>
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<td>(substitution effect)</td>
<td>Redistributes from</td>
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<td>low MPC to high MPC consumers</td>
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<td>Ex-post: Redistributes (wealth effect)</td>
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<td>(depend on asset holdings)</td>
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<td>Cut $i$ or QE</td>
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<td>Changes asset prices</td>
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<td>Focus on levels and risk dynamics</td>
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