Monetary Analysis: Price and Financial Stability

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The 3 main points

1. Monetary analysis
   - more than a cross-check in two pillar strategy in world with financial frictions and instability

2. Price and Financial stability are intertwined
   - Can’t be separated – even fiscal policy is connected (FTPL)

3. “Sectoral” impairment of monetary transmission mechanism
   - SME are disadvantaged compared to sovereigns and large corporations
   - Prudentially designed ABS
     - Chance to standardize and set-up a stable European intermediation market
Overview

- Textbook monetary model vs. empirical finance view

- Why quantities in monetary analysis?

- Which quantities? in tranquil and turbulent times
  - Credit vs. money
  - Liquidity mismatch
    - Aggregate
    - Topography across sectors

- Sectoral impaired transmission mechanism

- ABS market for SME loans

Theoretical underpinning “The I Theory of Money”
Textbook monetary model (New Keynesian)

- Key friction: price/wage rigidity
  financial markets (almost) perfect (stable)

- Advancement: dynamic modeling
  emphasis on expectations of “the” short-term interest
  (and its dynamic evolution e.g. Taylor rule)

- Term spread: Expectations hypothesis
  - expected future short rate

- Credit spread: expected default rates
Finance view

- Key friction: financial frictions, segmentations

\[ \Delta \text{price} = f(\Delta E \text{[future cash flows]}, \Delta \text{risk premia}) \]

- Term spread: expectations hypothesis fails
- Credit spread: default risk, risk premium predicts future econ-activity
- VIX (VSTOXX)

- “I theory” risk is endogenous & risk premium is time varying
  - MoPo recaps impaired sectors and affects risk and risk premium
  - Surprise Fed interest rate cut lowers 10 year (real) TIPS yield
    Hanson-Stein (2014)
Finance view

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    - Surprise Fed interest rate cut lowers 10 year (real) TIPS yield Hanson-Stein (2014) - difficult to square with price stickiness alone
Why quantities?

- Arguments against, prices, rates, risk premia are enough
  - Only prices should affect individual decision makers’ actions!
  - Why not model with “exogenous risk premium wedge”?
    - Wedges can predict future economic activity
  - (Shadow) prices measure scarcity/abundance of quantities
Why quantities? – in tranquil times

- **Indicator of vulnerability** (to erratic shifts)
  - Not only mean prediction, but whole distribution

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

- Prices follow trend, but quantities show build-up of risk
  - quantities

- **Multiplicity**

![Graph showing the relationship between Price and Fundamental quantities.](image)

Price doesn’t move much
... But is vulnerable to jump
Impaired transmission mechanism

- “push on a string” or “trapped, constrained to push”

1. ZLB $\Rightarrow$ unconventional MoPo
2. Threat of runs (e.g. jump in multiple equilibria)
   - Interest rate cut might be seen as weak signal
   - CB’s action might be viewed as coordination device
3. Threat to financial instability
   - “Financial dominance”
4. Monetary Transmission Mechanism works differently across sectors/regions
   - “Sectorally impaired” later more
What quantities? Credit versus Money

• Old dispute
What quantities? Credit versus Money

- Old dispute
1. Shock impairs assets – 1\textsuperscript{st} of 4 steps

- Absent MoPo
2. Shrink balance sheet: sell off assets

- More riskier direct lending/credit
3. Liquidity spiral: price of assets drop

Riskier **direct lending/credit**
4. Deflation spiral: value of liability expand

1. Shock impairs asset  ↓
2. Balance sheet shrink  ↓  ↓
3. Asset price  ↑
4. Real value of deposit  ↑

Small shock has large effect and redistributes wealth
What quantities? Money vs. Credit

- **Money view**
  - Friedman-Schwartz
  - Restore money supply
    - Replace missing inside money with outside money
  - Aim: Switch off deflationary spiral
    - ... but banks might not extent credit (hold excess reserves)

- **Credit view**
  - Tobin
  - Restore credit flow
  - Aim: Switch off deflationary spiral & liquidity spiral
What quantities? – Vulnerability indicator

- What captures better endogenous risk?
  - Response indicator ⇒ amplification

- Monetary analysis = sectoral analysis (entire topography)
What quantities? – Vulnerability indicator

- What captures better endogenous risk?
  - Response indicator \( \Rightarrow \) amplification

Technological liquidity
- Duration of project/reversibility

Market liquidity
- Specificity/redeployability
- Can only sell assets at fire-sale prices

Funding liquidity
- Can’t roll over short term debt
- Margin-funding is recalled

Ease with which one can raise money by selling the asset
Ease with which one can raise money by borrowing using the asset as collateral
Quantities in tranquil times

- Risk build-up phase  
  - "Volatility Paradox"
  - Liquidity mismatch increases during tranquil times

Duration of projects $\uparrow$  
- Long-term irreversible projects
- Austrian element (Hayekian triangle)

Specialization $\uparrow$  
- Low market liquidity  
  $\Rightarrow$ larger fire-sale discount

Debt maturity $\downarrow$

- Intermediation chain often hide overall liquidity mismatch
- Distribution matters: "Topography of Liquidity Mismatch"
Sectoral analysis

- End-borrowers
- Credit
- Reserves
- Inside money
- Equity
- Outside money
- Banks
- Government

Riskier direct lending/credit
Sectoral analysis

Government
- Outside money
  - Reserves
    - Inside money
      - Equity

Banks
- Credit
  - Equity

Households
- Real Estate
  - Risky Credit
  - Equity

Corporation
- Factory
  - Risky Credit
  - Equity

Savers

Riskier direct lending/credit
Sectoral analysis: Run-ups of debt

- Different sectors
  - Japan 1980s: non-financial business + financial sector
  - US 2000s: household + financial sector
Quantities in turbulent times

- Theory: “Bottleneck approach” sectorally impaired
- Identify bottleneck
  - Sectors: Banking vs. insurance, SMEs, corporate sector, household,…

- “Stealth” recapitalization of impaired sector
  - Interest policy and OMO affect asset prices
    - i-cut: increases value of long-term assets relative to short-term money
      - Steepens yield curve
    - QE increases value of particular asset
      - Flattens yield curve
  - Ex-post: Redistributes wealth/risk
  - Reduces endogenous risk (premium)—additional element to FTPL
Recap strategies — two opposing alternatives

1. Recap through temporary **monopoly rents**
   - + forbearance (to hide losses on legacy assets, “zombie problem”)
   - Idea: Ex-post: recap, ex-ante: insurance
   - Competition is less fierce when balance sheets are impaired
     - Profit margins \(\uparrow\)
     - Volume \(\downarrow\) \(\Rightarrow\) spillovers to others in GE (“spillbacks”)
     - depends how crucial sector is, intern. competition
     - abroad: Latin America in 1980s
     - domestic: Japan 1990s

2. Attract **new risk-bearing capital**
   - Attract foreign competition S-Korea late 1990s
   - (Forced) equity issuance
   - Establish new efficient markets
     - Profit margins \(\downarrow\)
     - Volume \(\uparrow\) \(\Rightarrow\) new credit to real economy
Prudent ABS market for SMEs

- New risk-bearing capital targeted at SME/consumers
- Current situation:
  - Sovereign rates stabilized at low levels
  - Corporate bonds rates also down
  - High demand for long-dated liquid assets
    - $26 trillion global Pension savings (OECD data), s.t. regulatory hurdles
  - Private loans & SME credit

Source: investing.com
Prudent ABS market for SMEs

- Convert **illiquid** SME/consumer loans → **liquid** asset class

- **Short-run objective:**
  - Stimulate credit growth to SMEs
  - “sectorally balanced” MoPo

- **Long-run objective:**
  - Re-establish Euro-wide intermediation
    - ECB can set EU-wide standards (e.g. by co-investing in Mezzanine)
    - Small scale purchase might be sufficient to restart market
  - Create collateral/safe asset (like ESBies)
  - Reduce diabolic loop

- **Design choice**
  No maturity transformation (ABS are long-dated assets)
  - Otherwise: liquidity/run risk + adjust monetary analysis
To sum up - the 3 main points

1. Monetary analysis
   • more than a cross-check in two pillar strategy in world with financial frictions and instability
   • Quantities in tranquil time help to identify vulnerability
   • Quantities in turbulent times help to identify “bottleneck”
   • Topography of liquidity mismatch across sectors (not simply credit/money)

2. Price and Financial stability are intertwined
   • Can’t be separated

3. “Sectoral” impaired monetary transmission mechanism
   • SME are disadvantaged compared to sovereigns and large corporations
   • Prudentially designed ABS
     ▪ Chance to re-establish European intermediation
     ▪ Make illiquid loans into liquid standardized securities
     ▪ Stay away from securitization that involves maturity transformation