Capital regulation, risk-taking and monetary policy: A missing link in the transmission mechanism?

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Background and objective

- Evolution of transmission mechanism (TM) focus
  - from relative yields to relative funding costs
  - from reserve requirements to minimum capital

- Objective
  - brief overview of nexus between capital regulation, business cycle and TM...
  - broader reflections on the TM in light of evolution of the financial system

- Analysis of speculative and explanatory nature
Three core propositions

- The influence of capital regulation on business cycle may be increasing
  - ↑ risk-sensitivity and ↑ influence on risk measurement and pricing
- Insufficient attention to “risk-taking channel” (RTC) in TM
  - influence on perceptions of risk and risk tolerance…
  - …amplified by link of risk-taking with “liquidity”
  - importance of accounting practices
- Important to analyse TM in general equilibrium for given monetary policy regime
  - from “locally linear” to “globally non-linear” effects
    • boom-bust cycles?

⇒ Busy research agenda ahead
Outline

- Nexus: capital regulation, business cycle and TM
  - issue of procyclicality

- Nexus: risk-taking, liquidity and the TM
  - “liquidity multiplier”

- Nexus: risk-taking, TM and monetary policy regime
  - possibility of boom-bust cycles
Bank capital standards and behaviour

- The “capital threshold effect”
  - Breaching the minimum threshold is costly
  - Variable cost behaves like an option
  - Response to ↑ breach threat can result in restriction on credit
    - if equity capital is more costly at the margin than other funding sources

- The “capital framework effect”
  - borrow from framework to adjust measurement, management and pricing of risk
Bank capital standards and behaviour

- From Basel I to II, influence of capital regulation on behaviour has likely increased
- Capital threshold effect
  - Other things equal (given portfolio), ↑ in volatility and sensitivity to economic conditions
- Capital framework effect
  - Hard-wiring and extending best practice in risk measurement and management
  - More embedded in business decisions of the firm
Bank capital standards and the business cycle

- Concern with higher procyclicality for business cycle
  - More ample lending in good times, more restricted lending in bad times
- Effect is quite intuitive, but not easy to assess
  - Hard to model satisfactorily theoretically
  - Empirical evidence on Basel I suggests an effect is there
  - But identification problems exist
    - Credit demand vs. supply shocks
    - “Regulatory” vs. “Economic” capital impact
The procyclicality of Basel II vs Basel I

- Basel II minimum threshold likely to be more procyclical…
- …but Basel II as a package **may not be** (things are **not** equal)
  - improvements in risk management $\rightarrow$ ↑ prudence
    - dampen variability of threshold
    - hold larger buffers
  - greater external discipline
  - strengthened supervisory review pillar
  - supervisors aware and have made adjustments

$\Rightarrow$ Jury still out, could on balance be even **less** procyclical
Bank capital standards and the TM

- Four implications of the threshold effect for TM
  - impact on the capital cushion is multi-faceted
    - direct and indirect
  - impact varies substantially with macro and financial conditions
    - stronger if conditions weak
  - impact is asymmetric
    - larger for increases in policy rates
  - impact varies across institutions
    - given differential sensitivity to financial constraints

⇒ Empirical evidence supports this

- Capital framework effect?
  - best considered with RTC
The RTC: background

- Understanding implications of risk for the TM would benefit from blending of two perspectives

- “Finance” perspective
  - focuses on risk measurement and pricing…
  - …but typically abstracts from financing constraints

- “Economics” perspective
  - focuses on financing constraints…
  - …but typically relegates risk to secondary role
The RTC: definition, mechanisms and evidence

- **Definition:**
  - Impact of monetary impulses on risk perceptions and risk tolerance
- **1. Impact via valuations, incomes and cash flows**
  - closest to financial-accelerator but more varied
- **2. Impact via target rates of return**
  - contractual and behavioural factors
  - dependent on background conditions
- **3. Impact via reaction function of the central bank**
  - degree of perceived transparency and commitment ("transparency effect")
  - perceptions of elimination of downside tail risks ("insurance effect")
- Suggestive empirical evidence
The RTC: the role of liquidity

- Liquidity = ease with which perceptions of value can be turned into purchasing power
  - market liquidity and funding liquidity
- Link to theoretical literature on financing constraints
  - parameters setting the external financing and saleability constraints
- The “liquidity multiplier”
  - liquidity is partly endogenous
  - mutually reinforcing link with risk-taking

⇒ ↑ impact of the RTC
The RTC: the role of other factors

- Financial liberalisation and innovation may have increased the prominence of the RTC
  - easing of financing constraints
  - ↑ role of perceptions of wealth and risk in spending decisions
- Capital framework’s greater influence on risk measurement and pricing → ↑ role in RTC
- Underrated role of accounting practices in the TM
  - influence on measurement of value and its link to risk
- Importance of distribution of risk in the economy
  - given differences in measurement and risk-bearing capacity
    - Eg: transfer of risk to the household sector
The monetary policy regime and the TM

- Fuller appreciation of RTC calls for an analysis of its link to the monetary policy regime in general equilibrium
- Role may be significant
  - beyond transparency and insurance effect...
  - …how does the reaction function respond to risk-taking?
- Concern
  - locally linear/benign effects → globally non-linear effects → occasional boom-bust cycle
  - benign risk-taking → “excessive” risk-taking
  - benign persistence enhancement → build-up and painful unwinding of financial imbalances (FIs)
Boom-bust cycles: mechanisms, evidence, implications

- Two factors
  - limitations in risk perceptions
  - limitations in incentives

- Evidence
  - behaviour of market indicators of risk
  - cyclical pattern of underwriting standards
  - predictive ability of real-time indicators of financial imbalances

- Challenge for monetary policy
  - boom phase can occur in the absence of overt inflationary pressures
  - failure to respond could accommodate the build up of FIs
Boom-bust cycles: modelling challenges

- Current benchmark DSGE models not well suited to capture such boom-busts
  - model-consistent expectations and representative agent ill-suited to capture limitations in perceptions and incentives
  - no or limited role of liquidity and risk perceptions
  - often linearised around steady rates
  - no notion of default or feedback on to the economy

- Steps being made in right direction but still long way to go
Conclusion

- Transformation of financial sector ⇒ bigger role in macroeconomic dynamics
- TM likely to have been affected
  - ↑ influence of prudential framework
  - ↑ prominence of RTC in TM
  - ↑ possibility of boom-bust cycles
- RTC as natural evolution of views of the TM
  - not argue that it is the main channel
  - do argue that deserves more attention
- Exploration of RTC not easy but important to support monetary policy more effectively