

Discussions

Enrico Perotti

Univ of Amsterdam, DSF and CEPR

A big task

How do papers contribute to Mars objectives ?

- Grant financial intermediation a critical role on macroeconomic fluctuations
- Theoretical insight on endogenous risk creation
- Identify transmission and amplification channels which create systemic risk
- Give clear foundations for PREVENTIVE regulatory and monetary policy

New macro finance models

- Risk externalities, leverage effects
- (Bank) equity affects spillovers and fire sales
 - Slow to adjust, so it amplifies shocks
 - Create persistence even in stationary models
- Banks (or policymakers) always ensure solvency, as stationary models can't have default *in equilibrium*.
- So we still miss risk shifting incentives. We get endogenous transmission after shocks; but (mostly) not endogenous shock creation

Macroprudential Regulation Versus Mopping Up After the Crash

Important contribution

- Ex ante versus ex post prudential policy
 - Preventive policy gets too little attention, focus on ex post resilience (buffers), resolution
 - No concrete legislative initiative
- Optimal policy is a mix, done very rigorously
- Main contribution: careful welfare analysis in a proper framing
- Very useful result on timing of tax
- State of art: Endogenous amplification

Decisions over real time

- Insightful results derived in a fairly rich model.
- Financial evolution; also, investment takes time
- Borrowing may force costly divestment in financial constrained state
- Cost is direct (loss of e-s capital) and indirect
 - After a shock, fire sales depress capital value
 - Makes financial constraint bind for others
- Risk (or rather, collateral) externality means private debt is excessive

Ex ante prudential policy

- Tax cuts “excess” investment (not because too risky, but because amplifies fluctuations)
- Pigouvian tax on SHORT TERM debt (long term debt would solve the problem)
- Optimal to time the tax. Now assumed it can be raised in a stabilized future. Why not at 0 ?
- There is a literature one could cite here...
- Results on how to design a charge recognizing regulatory information constraints and risk shifting by undercapitalized banks

Ex post policy

- Ex post tax funded bailout is distortionary (second order loss) and alleviate binding constraints (first order gain).
- Important to recognize bailouts are also ex post costly (even with fiat money)
- Ex post relief weakens ex ante incentives
- Optimal therefore to combine the two

Contribution and further work

- Proper analysis of tradeoff between preventive and ex post relief policy
- Distress leads to fire sales to avoid default
- This lead to inefficient reallocation of assets because entrepreneur specific capital is lost
- Still little role for default in equilibrium
- This misses first order risk shifting via limited liability

The other bank risk externality

- Type I: Banks choose cheap unstable funding, or invest in yield-rich illiquid assets, create fire sale externality to others.
- Bad incentives reinforced by ex post support
- OK. But not the first order risk shifting.
- Type II: Highly leveraged banks choose excess risky because of limited liability upon default
- In reality, though not in DSGE: banks CHOOSE to be overleveraged.

Prevention vs Mopping Up

- First order loss in constrained state alleviated via second order costs in unconstrained times
- It formalizes important intuitions:
 - Bailout not to be based on ex ante funding
 - Redistribute cost of debt relief across periods
- Comment on ex ante policy too blunt, while ex post better targeted ? I do not agree. Ex post support validates moral hazard)
- Case for separating ex ante/ex post mandates

Optimal Monetary and Prudential Policies

Discussion

Monetary Policy and Capital Regulation

Important background ingredients:

- Capital raising is an expensive process
- Because of the opacity of bank balance sheets significant asymmetric information
- Demandable debt minimize investor concerns
- Also bank leverage is so high that more equity strengthen first debtors' claims
- Rapid capital adjustment MAY be very costly

Right intuition

- Important framing: models ex ante risk choice
 - Curiously, no real risk transfer..
- Key result: interest rate policy ineffective for risk control, as funding cost same for all loans
- In general, effect can be ambiguous
 - Low interest rates produce less risk taking (ceteris paribus), as effective leverage is lower
 - It may be that in practice bankers target nominal rates of return.. Behavioral issue.

Price of credit matters less than quantity

- Interest-rate policy cannot target financial stability (Bernanke 2010)
- But monetary policy can mitigate the impact of capital policy on overall bank lending.
 - Clearly true at present, not a general principle.
 - Suppose credit grows too fast, which calls for sharp capital increases. Unlikely to happen.
 - Lowering rates would not help.

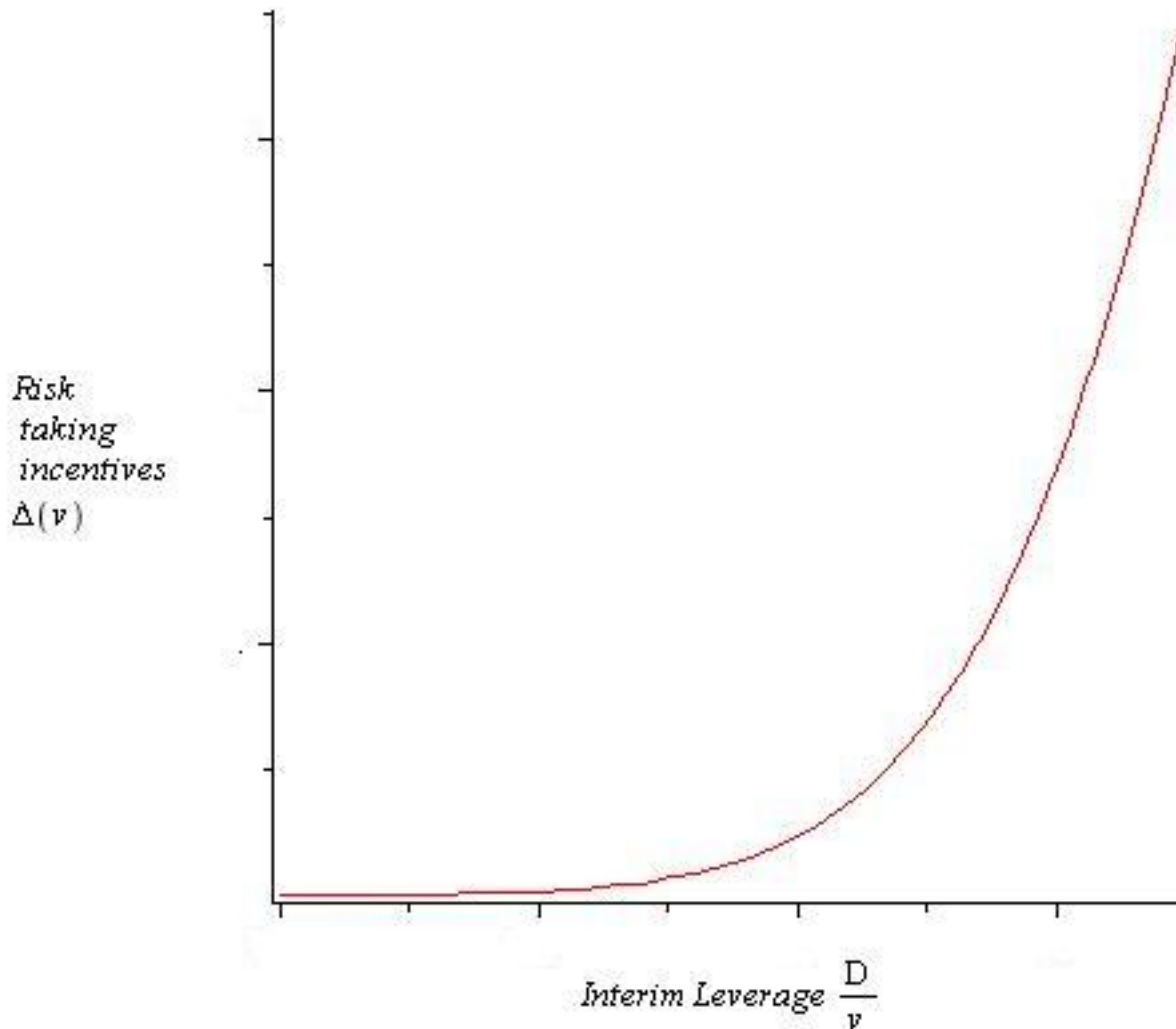
Right question

- Capital requirements needed because of limited liability and deposit insurance.
- Risk incentives very sensitive to leverage
- But how to adjust capital so frequently ?
 - In practice: supervision of admissible dividends
 - Clearly insufficient in bad times
- Raising contingent capital ex ante a solution. The problem is defining an efficient trigger.
- Again: key problem is **TIMELY** recapitalization.

Leverage drives endogenous risk

- Bank equity has a convex payoff. Its value increases with risk, because of risk shifting.
- Risk incentives become very convex as debt rises.
- To stop risk creation we need recapitalization at critical junctions, not just static buffers
- Difficult however to raise capital in a crunch
- Pre-issued capital: contingent convertible debt

Risk incentives convex in bank leverage



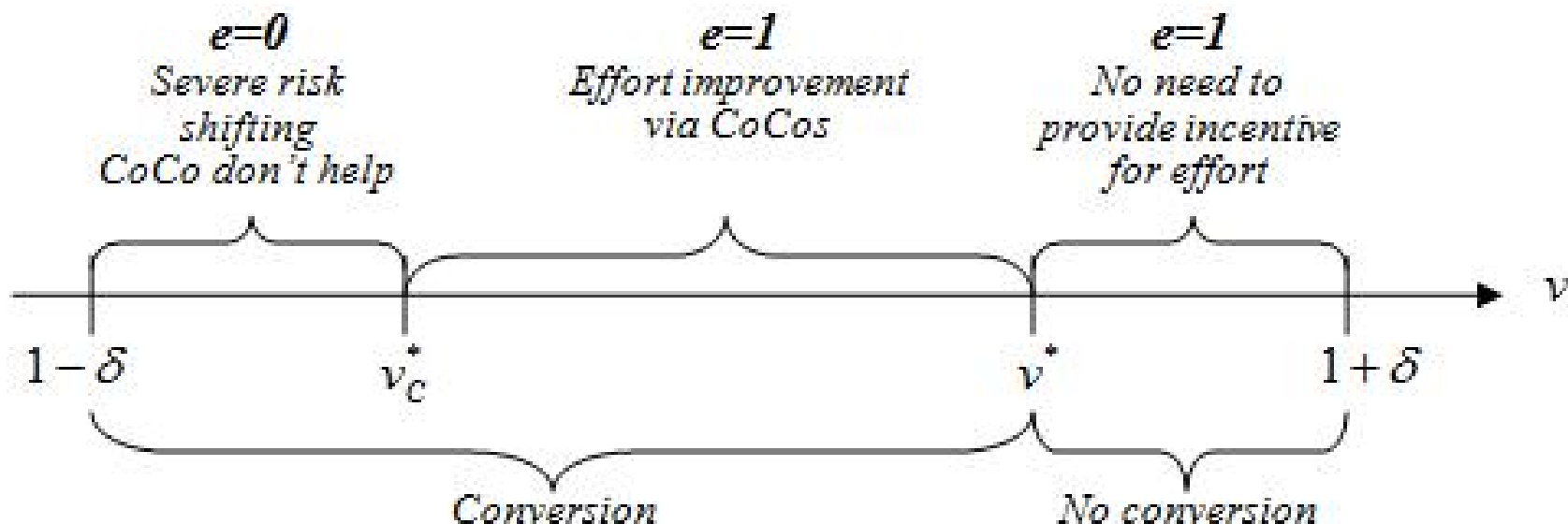
(Martynova-Perotti
2011)

Timely Capital Conversion

(Martynova-Perotti, 2012)

- Contingent capital should convert into equity whenever risk incentives are poor
- Conversion dilutes high gambling returns, reduce risk taking
- Coco capital not as good as equity
- Risk effect very sensitive to how informative is the conversion trigger

Timely conversion helps salvageable banks



← leverage increase

This paper a bit too optimistic

- General comment: The idea that capital ratios can be continuously adjusted just above the ICC for risk shifting is wildly optimistic.
- Assumes perfect timing, no costs
- Suboptimal to raise capital above **exact** ICC minimum
- Why? As “a tax on banks’ profits .. makes equity finance more expensive than debt finance: this .. decreases the (bank-financed) capital stock without reducing inefficient risk, which is already zero” (!)

Result: Optimal division of tasks

- Optimal capital policy tightens in good times, optimal monetary policy is counter-cyclical.
 - In practice: relief always happens (Greenspan put), tightening never does (least in booms)
 - Bankers fight hard against recapitalization
- What other tools to tighten in good times, with lower adjustment costs ?
- Not monetary policy, as the author(s) show
- Liquidity policy for bank debt structure

- Key result: Control over risk shifting over time by continuous capital ratio adjustment
- If we could do this ..
- Impossible to do with capital ratios, as they are sluggish and have high adjustment costs.
- To get continuous time risk control, more flexible tools needed.

Raising capital in a crunch always much harder

- Even when correct ratios can be calculated, capital has high adjustment cost and delay.
- Cannot be done instantaneously. So banks remain in risk shifting territory for long time
- Forbearance and liquidity support follow.
- So capital ratio policy neither safe nor credible
- Needed: flexible tools on bank funding with easier adjustment

Pure capital tools

- To address the deleveraging issue: Better to mandate capital amounts, instead of ratios !
- Alternatively: correct the tax distortion.
Suspend debt deductibility above 90%
- Some discussion in IMF bank tax report.

Nice extension

- Suppose the cost of safer loans depends on their volume. Then shocks increasing quantity of safe loans affect risk-taking incentives.
- I would pursue this further, rephrased:
- A favorable productivity shock may raise the optimal scale of lending, but this may stretch monitoring capacity, thus increasing banks' risk-taking.

Prudential Policy For Peggers

Intuition

- Euro participation (or an euro peg) increases the cost of wage rigidity
 - Certainly true, in fact I would go further. With wage rigidity, any demand variability imposes first order costs.
- Very useful to consider the damage of an excess credit boom. Citizens become used to higher standards, firms and government face high adjustment costs.
 - Naturally related to “kinks in utility around reference point”

What does the euro do here ?

- Unclear what exchange rates do in this model
- Price and quantities in the tradable markets are exogenous
- It would make sense to have euro drive some initial income boost. Public borrowing ?
- I miss a definition for “peripheral members of the union”.
- More generally many believe the key issue is euro membership relaxed wage discipline.

Irresponsible governments

- Downward nominal wage rigidity and a fixed exchange rate prevent real wages from adjusting, so more unemployment.
- Agents do not internalize how their expenditure cause inefficiently large increases in wages during expansions
- So the government should have !
- How does this differ across countries ?
- I like the key role of inflation in non tradable sector as a mayor source of vulnerability.

Some open issues

- All employment in nontradable sector. Does that define a periphery country ?
- “Government wishes to stimulate imports in a downturn as this increases demand for nontradables, thereby reducing unemployment”
- Free capital mobility induces peggers to overborrow.
- Should be contained with capital controls.

What could be added

- Why is only the periphery affected by the Euro rigidity ?
- I think Euro membership was a positive shock for their consumption, but NOT to their productivity
- This seems more realistic modelling
- Euro membership allowed more borrowing and thus more spending at 0, painful when reversed.
- I have to think more about how this affects a main result
- “Tax must curb consumption of tradeable good when positive shock as that increases demand temporarily and increases demand for labor.

The next goals for models

- Capital raising for banks is sluggish
 - Because of the opacity of bank balance sheets significant asymmetric information
 - Bank leverage high, so more equity strongly benefits debtors' claims (debt overhang)
- Demandable debt minimize investor concerns, it allows more credit as long as overall confidence
- Complement capital rules not with monetary policy
- Liquidity policy targets (shadow) bank funding (maturity, security)

Two period model

- Clear ex ante vs ex post tradeoffs
- Dynamic financial changes (renegotiation)
- Distinguish long term and short term assets
 - Intertemporal GE macro models are popular; give the illusion of dynamics
 - In reality, models in a Markovian framework are repeated stationary equilibria. Aside from a state variable, they cannot incorporate build up in risk which alters the ex ante distribution of shocks