

Comments on Horváth & Wagner (2012)

“The disturbing interaction between countercyclical capital requirements and systemic risk”

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Not necessarily the views of the BoE

November 2012

Framing the paper

Macro-prudential policy is imminent

First-order policy question: **how should cyclical macroprudential tools be designed?**

Most of the literature splits the problems of pro-cyclicality and cross-sectional correlation

- Eg macro models with representative banks. **Cyclicality** arises from net worth-financial accelerator channels. Policy used to smooth response to shocks / dampen financial accelerator effects.
- Eg micro models examining strategic complementarities across banks. Reasons for **correlation** include expectation of future bailouts; managerial incentive contracts; common exposures and contagious bank runs

Yet procyclicality and correlation are inherently linked. After all, credit booms require many financial intermediaries to undertake expansion *collectively*.

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Key findings

Countercyclical policy can encourage systemic risk-taking by banks.

Basic idea: countercyclical policy hedges impact of aggregate shocks, encouraging exposure to these shocks *ex-ante*.

So there is a natural limit to the degree of countercyclicity that policy should exhibit.

Remark: For this, one probably needs an **asymmetry**. The beneficial relaxation of constraints in the downturn (encouraging exposure to aggregate shocks)...

... offsets the penalty associated with tightening constraints in the upswing (discouraging exposure to aggregate shocks)

When this is the case, countercyclical policy can exhibit what might be called a '**correlation bias**'.

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What is the mechanism?

Recap on the model (I)

1st key friction: deposit insurance mispriced. 100% deposit funding entails lack of effort by banks. Would like to incentivise monitoring effort with capital requirement.

2nd key friction: policymaker can only condition on aggregate state – so can only affect banks' costs when they expose themselves to the aggregate state. Policymaker has limited traction over banks' correlation choices.

Would like to (a) incentivise effort and (b) avoid systemic crises (credit crunch)

But with one tool, meeting these two objectives entails a trade-off.

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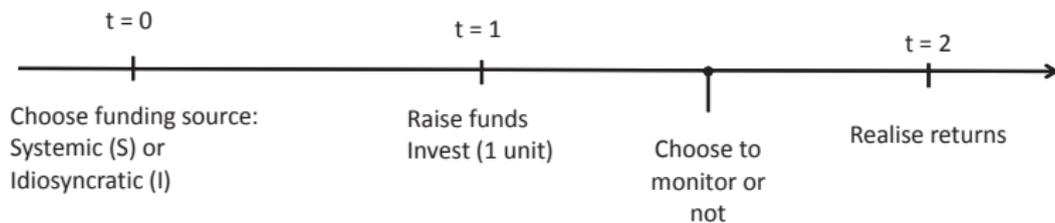
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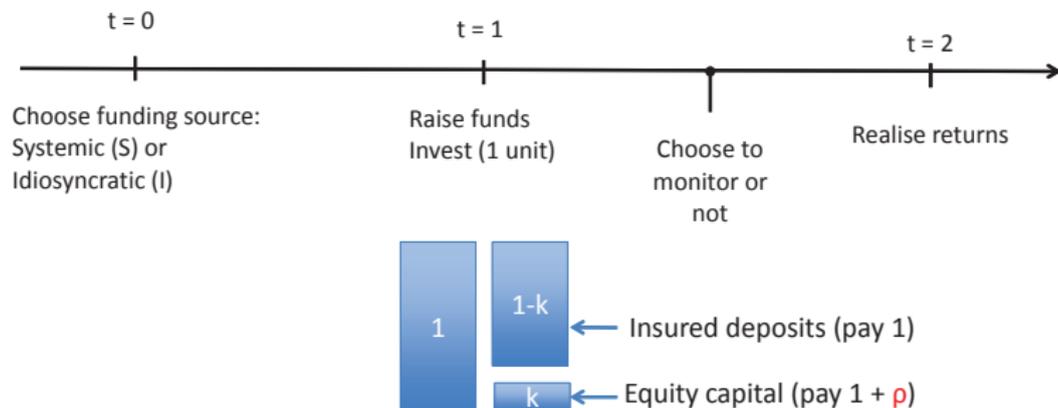
Figure: Timeline



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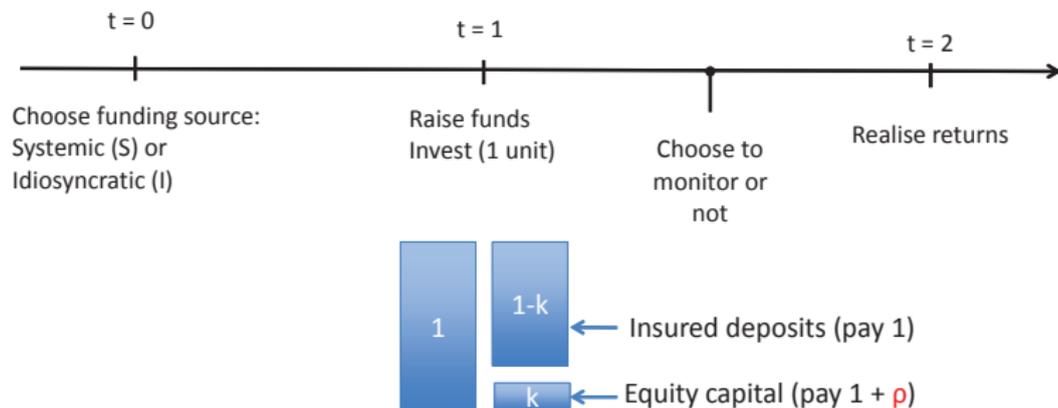
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Recap on the model (II)

Figure: Timeline



Two sources of shocks:

1. Cost of capital ρ is stochastic $[0, 2\mu]$
2. With prob p_f , all funding runs away

What is the mechanism?

Optimal policy

First-best would entail mixed funding sources (S, I) when the probability of a systemic shock (p_F) is high.

By lowering capital requirements in bad states (ρ high), the regulator can lower costs and so raise aggregate surplus. So some systemic funding is always optimal.

But when banks choose their funding sources, lowering costs 'too much' encourages banks to bet on the systemic funding shock, *ex-ante*.

If the probability of a systemic shock (p_F) is sufficiently high, this is not socially optimal.

(The 'last bank standing' effect goes two ways, which banks do not internalise.)

So the regulator should limit the degree of countercyclicality in policy rule to ameliorate *ex-ante* incentives for correlation.

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Interpretation

Role of capital

Here, payments to equity holders come out of profits (eg eqn (2)):

$$\pi_{M=0} = p[R - (1 - k)] - (1 + \rho)k - (1 - k)f$$

And a systemic shock entails *all* funding 'running away'.

Beauty of equity is that the return is **state-contingent** and it is a **residual claim**.

Alternative? Maybe k is a form of uninsured debt whose return is stochastic (ρ).

Interpretation: Calomiris-Kahn (1991) 'debt as a discipline device' - option to force liquidation. Debt discipline is most useful in booms...?

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Eg equity finance causes agency problems.

But equity is also the tool that the regulator can use to ensure banks monitor – so *improves* incentives?

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Takeaways for policy design

An important paper: Beware unintended consequences!

Countercyclical policies could be vulnerable to effects of “moral hazard”.

Micro- and macro-prudential standards should be complementary – incentive effects (micro level); correlation incentives (macro level).

Important to match policy instruments to underlying distortions. Having one instrument with $n > 1$ frictions is asking too much.

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