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Provision of Financial Stability: A non-cooperative game with mediation or a cheap talk game?

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Abstract:

An exploratory essay on financial regulation and related mechanism design regarding financial stability as a public good.

The issue: conditions of efficiency of two alternative ways of producing such a good: market-based (self)regulation and macro-prudential public regulation.

Related to: relevant incentive constraints-based social institutions that would perform in their communication and coordination role by allowing people to undertake activities that are consistent with systemic stability.

Financial regulation: systemic importance: continuous/sustainable provisioning of financial stability for the smooth functioning of markets.

Framework: a non-cooperative game between a public regulator and market actors (the regulatees)

Two mechanisms: - cheap talk process; - mediation-based revelation

Results: domain of applicability of both mechanism designs consistent with economic efficiency and stability criteria within a macroprudential framework.

Keywords: Cheap talk, financial stability, financial supervision, public good provision, regulation, revelation mechanism with mediation

JEL Classification Codes: C70, F18, G18, H41

Introduction

- Financial regulation/stability: a mechanism design *à la* Myerson.

- Resting on relevant incentive-constraints-based regulation

- Incentive efficiency to assess the rules/ institutions by which resources are allocated.

1. Lessons from the 2007 crisis regarding the design/organization of financial regulation and the weaknesses of self-regulation.

2. Monetary economies: systemic nature of financial regulation (public-good approach to financial stability).

3. Two mechanism-design alternatives within the framework of a non-cooperative communication game between a public regulator and market actors (the regulatees): cheap talk and mediation-based revelation.

The domain of applicability of each model consistent with economic efficiency and stability criteria within a macroprudential framework.

1) Financial regulation in the face of worldwide instabilities

The 2007-2008 crisis revealed some structural weaknesses of financial regulation in force since the 1990s, and arose the question: “What went wrong and how to fix it” (GFD Report, 2013).

This crisis also showed that financial system’s organization did matter and macro-stability was not obviously reached through restrictive public regulation-free / liberalized market mechanisms.

Micro-rational self-regulation does not cohere as a stable whole.

This observation gave rise to a broad consensus in the policy community that strengthening the macro-prudential orientation of regulatory and supervisory frameworks was essential for the promotion of financial stability (Borio, 2011)

such that

the prudential regulation of banks should be envisaged from a systemic, macro-prudential perspective, and not only from a traditional micro-prudential approach.

Weaknesses of micro-prudential regulation that gave rise to systemic concerns not taken into account by self-regulatory models and hampering sound working of financial markets (Clark and Jokung, 2015):

- conflict of interests;
- lack of bridge between micro-rationality and macro-consistency ;
- procyclical behavior and excessive risk taking;
- maturity and liquidity mismatches;
- interconnectedness in markets.

2) Money and the publicness of financial stability

- Market-based capitalist economy is a monetary economy (credit-debt financing process of economic life)
- Financial markets are at the core of economic operations
- Without monetary operations and related financial systems no economic activity can be undertaken and no wealth can be created
- Therefore, financial stability and continuous monetary (debt-financing) operations are essential conditions for a smooth economic development

Some characteristics of money

- Money is *transversal* since all economic transactions rely on monetary relations, and changes in money/financial markets affect the whole economy irrespective of decision units involved in debt relations.

- Money is also *ambivalent*. Indeed, it lies both in private decisions (debt-financing operations) and public rules and constraints.

Money is created through private decisions of banks (credit) and entrepreneurs (financing needs-debt)

It is a decentralized market outcome.

It is the general unit of account (society's economic language), means of payment, and means of general/social debt settlement (***social extinguisher*** of every engagement).

Money must lean on some societal public references.

The sustainability of the accumulation process lies in the systemic possibility to validate the debt structure (the realization of expected profits and repayment of debts) (Ülgen 2015: 497).

Money and related financial operations are required to allow market actors to undertake their decentralized economic activities.

Therefore, financial stability:

defined as the conditions that would make possible and sustainable continuous market operations,

is a prerequisite for a viable functioning of the economy.

Financial stability is not a “normal” product (good or service) that could be excludable and rival.

It is a “public good” and its inherent quality requires public production (Musgrave, 19459:44).

Its impacts are indivisibly spread around the entire society.

The question then arises: How to provide it (what is the relevant mechanism)?

3) Regulatory design: Cheap talk or mediation model

(NB: Formal models are in progress)

The design and implementation of particular supervision and intervention procedures are related to the choice of a peculiar organizational mode for which

"the game equilibria corresponding are as good as possible when one takes into account the constraints imposed by the diversity of information and the interests amongst the members of the organization" (Radner, 1987: 5).

Two mechanisms (among other possible communication games) are presented here:

cheap talk and direct revelation mechanism with a mediator.

- The first is much closer to free market contract schemes since it has simple rules and lower organizational constraints.

- The second is more centralized and binding.

a) Cheap talk is a plain conversation, unmediated and payoff-irrelevant. It rests on the free-negotiation principle. It does not include credibility costs but it conveys credibility to make players believe each other.

The advantage of cheap talk is that it allows large freedom of decision and action to market actors.

Could a cheap talk relation -as a continuous communication mechanism- generate a consistent information circulation and then result in a relevant regulatory schema?

Such a schema would be cheaper than any other regulation device and also let intervening parties free of heavy regulatory constraints.

Aumann and Hart (2003 : 1619) state that « With cheap talk, more can be achieved by long conversation than by a single message –even when one side is strictly better informed than the other.”

However, this process does require time.

b) The second alternative is the direct revelation mechanism with a mediator (Myerson, 1988).

The central mediator is a trustworthy person who asks market actors to report all their relevant private information.

The mediator then reveals to each individual, separately, only her/his own recommendation about the expected action of each individual.

If individuals expect that the others will be honest and obedient to the mediator, therefore, every individual will respect his/her engagements as announced to the mediator and will not implement cheating strategies.

However, such incentive-compatible direct-revelation mechanisms rest on highly centralized mediation of the economic system.

b') Condition to reinforce the bilateral communication mechanism in a sender-receiver game: strategic information transmission (Crawford and Sobel, 1982): communication of relevant information is dependent on the similarity of parties' interests.

In a public regulator (seeking social coherence=systemic financial stability)-private regulatee (seeking individual profit maximization) relationship how much and how this similarity could/might be reinforced? (In other words, how to convince the regulatee that the regulator seeks the interest of the regulatee through systemic stability and not her/his own interest?)

Conclusions

This article regarded financial regulation as a problem of mechanism design that seeks financial stability at a systemic level.

Assuming that financial stability is a public good, two mechanism designs are suggested within the framework of a non-cooperative communication game between a public regulator and market actors (the regulatees):

* a cheap talk model and

* a mediation-based revelation model.

Although within some delineated boundaries, the scope of application of each model results in a specific mechanism design that could be implemented within a macroprudential framework and seems to be consistent with economic efficiency and stability criteria.

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