

Comments on the paper by THOMAS GEHRIG: «Market Structure, Monitoring and Capital Adequacy Regulation»

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INTRODUCTION

This conference has provided many insights relevant to the debate on capital adequacy regulation. While insights are numerous, a consensus is not readily available. Even on the issue of the *desirability* of capital adequacy regulation diametrically opposite views have been expressed at this conference. BLATTNER – in his contribution to this conference – fully endorses the principle of capital adequacy regulation. He states:

«I think that there are hardly any convincing alternatives to capital adequacy regulation. This type of banking regulation is probably the most convincing, not the least on grounds of theoretical considerations» (BLATTNER, 1996).

GEHRIG, however, counters that the findings of his analysis cast some serious doubts on the presumption that capital adequacy rules will in fact reduce failure risk of banks, despite their role as loss buffers. Obviously this is an interesting controversy, particularly for academics. We thrive on finding controversies, often even on trivial issues; as might be clear this one is far from trivial.

INTERPRETATION OF GEHRIG'S ANALYSIS

GEHRIG's analysis can be interpreted in various ways. First and foremost, his analysis suggests that theoretical prescriptions are extremely sensitive to the agency or informational problems that the theoretician has chosen to model. This issue is particularly important because the model-specification flexibility is enormous. An important issue then is whether BLATTNER's specification – or GEHRIG's specification for that matter – is appropriate.

BLATTNER has a standard asset-substitution problem in mind where shareholders are in control. With this approach more capital discourages risk taking and is thus an effective instrument. I believe GEHRIG is right in his criticism that it is unlikely that risk taking incentives are monotonically decreasing in the required capital. At the extreme, with low or negative levels of capital, introducing a capital adequacy requirement, will likely reduce incentives for «gambling for resurrection». However, as GEHRIG points out, we may not expect that this behavior continues to improve for any further increase in capital. His analysis serves as a useful example highlighting the possible disadvantageous effects

of capital regulation. This interpretation of GEHRIG's contribution could also be considered a warning against drawing strong policy implications from theoretical models in this area.

Alternatively, we could interpret GEHRIG's analysis literally. GEHRIG shows that capital is bad because requiring more capital forces insiders to dilute their ownership claim in the bank. Insiders may therefore respond by reducing their effort choice. This happens because the insiders may have to invest their own resources (e.g. effort), while the benefits are now shared with new outside shareholders. This is a standard JENSEN-MECKLING (1976) agency problem, and was first used by BOOT-GREENBAUM (1993) in the context of capital adequacy regulation. The net result in GEHRIG's analysis is that capital regulation lowers monitoring incentives (the effort) and that therefore asset quality may deteriorate.

There are a few things we can say about the disappointing effectiveness of capital regulation that GEHRIG highlights. First, GEHRIG's formalization presumes a shareholder base that is actively involved in the management and/or supervision of the bank. While applicable in some cases, it does not seem to apply to most countries. Second, market mechanisms may develop that reduce the inefficiency that GEHRIG identifies. This is a small hint at the Coase-theorem. One could think about reputational arguments that could mitigate incentives to engage in effort reduction. For example, initial owners only get full value for the shares they issue, if they can commit not to reduce effort subsequently. A bank that has to enter the market regularly may therefore want to establish «a reputation» for good behavior. Sceptics may, however, counter (rightfully so) that reputation arguments could be used to mitigate nearly any conflict of interest, and actually may suggest that we do not need capital adequacy regulations at all.

I tend to conclude that we should not expect a direct empirical validity for our models on this subject. GEHRIG's analysis is very helpful in this respect. He warns us against too much confidence in the capital adequacy mechanism.

A MORE PROFOUND LESSON

I would not give sufficient credit to GEHRIG's analysis if I would ignore his other message: market structure guides bank behavior and, potentially, the effectiveness of regulatory instruments. GEHRIG shows that rents in banking induce banks to behave prudently. This may have important implications for the sustainability of deposit insurance. Deposit insurance may encourage imprudent – risk-seeking – behavior (further fuelled by a potentially unlimited supply of funds). Rents might be necessary to offset these incentives. Too much competition may then be undesirable. This may induce a debate on the sustainability and necessity of deposit insurance. If GEHRIG is right, and capital adequacy regulation is ineffective (or counterproductive) no «easy» remedies exist and the broader issue of the industry and organizational structure of banking needs

to be addressed (e.g. entry in banking, consolidation trends but also Narrow Banking and other reform proposals).

WHAT DO WE KNOW ABOUT CAPITAL IN BANKING?

It seems a fact of life that banks consider capital very expensive, and therefore want to use their capital as effectively as possible. In practice, bankers will tell you that capital costs say 15%, while debt (deposits) will not even cost half of that. In their mind capital has this *fixed* high price. It is therefore not surprising that they will choose to utilize this expensive capital as effectively as possible. The problem with this line of (popular) reasoning is that capital does not have *one* price; the cost of capital is determined by the risks this capital is exposed to. This is a standard result in corporate finance. As we as finance theoreticians know, capital that supports risk-free investments (like shares in a money-market mutual fund that invests in government paper) will be priced to earn close to relevant market interest rate.

Bankers will counter that they are confronted with this high price for capital whatever the theory might say. This puzzle has – in my view – a straight forward resolution. The bankers' beliefs in expensive and fixed priced equity create a selffulfilling prophecy. The market knows that banks will put to use any unit of idle capital (not using it, *given the high fixed price* is a waste!), and therefore the market anticipates that any capital granted to a bank will be exposed to substantial risks. As a matter of fact, matters might even be worse. Banks will seek to put to use idle capital rapidly which elevates risk even more. These beliefs and anticipations create a perverse equilibrium. Given the bankers' state of mind – fixed priced, expensive capital that needs to be put to use as quickly as possible – the market responds rationally by charging a high price for capital. And given these anticipations by the market, the bankers' beliefs are justified and confirmed in equilibrium.

This perverse equilibrium further undermines the effectiveness of capital adequacy regulations. One implication of the equilibrium is that imposing higher capital requirements on banks will induce them to undertake new risky activities. That is, in the bankers' minds – with their «capital has a fixed price» fallacy – capital needs to be exposed to sufficient risk to make it cost-effective. I believe that this equilibrium is very relevant for the current practice in banking. The question then is how can we get away from this perverse equilibrium? Here I believe we need to look at the industry (or market) structure of banking.

COST OF CAPITAL AND INDUSTRY/ORGANIZATIONAL STRUCTURE

The perverse equilibrium that is rooted in selffulfilling beliefs is particularly relevant for opaque banking institutions. The market can then not sufficiently observe actual risk

choices and therefore acts on what it anticipates the banks might do. In more transparent institutions, funding costs are better linked to *actual* risk choices, and less dependent on the potentially «demoralizing» indirect inferences (via the selffulfilling belief of bankers and market). Now banks could be more readily rewarded for good behavior. In other words, *market discipline* might then work. This could break the perverse equilibrium and support BLATTNER's notion that «bankers from a totally selfish perspective may have an interest to behave well».

In this context, one might be somewhat concerned about the consolidation (and often despecialization) that characterizes banking in recent years. Particularly in my own country – the Netherlands – some banks have become large conglomerates with an ever increasing appetite for more growth. This is clearly at odds with the need for more transparency. As my brief analysis suggests, industry structure might affect both the cost of capital and the effectiveness of capital adequacy regulation.¹ But I would warn against drawing any strong conclusions from this. We need more research, particularly on the important issue of industry (or market) structure.

REFERENCES

- BLATTNER, N., «Capital Adequacy Regulation: There is Hardly an Alternative» (1996), in this volume.
- BOOT, A.W.A. and S.I. GREENBAUM, «Bank Regulation, Reputation and Rents: Theory and Policy Implications», in: C. Mayer and X. Vives (eds), *Financial Intermediation and Corporate Finance*, Cambridge University Press, 1993.
- GEHRIG, T., «Market Structure, Monitoring and Capital Adequacy Regulation» (1996), in this volume.
- JENSEN, M. and W. MECKLING, «Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure», *Journal of Financial Economics*, 1976.

1. Another important issue (also addressed at this Conference) concerns the control of risk in general in banking. Massive consolidation affects all control instruments, including external supervision and regulation and internal supervision. In general, all these instruments may become less effective with opaque banking organizations. As GOODHART has pointed out, this puts a lot of emphasis on creating an appropriate internal incentive structure.