

# Discussion

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## Introduction

The mainstream view among policy-makers and practitioners is that capital-adequacy requirements are necessary to guarantee an orderly functioning of financial markets and, therefore, an efficient allocation of resources. This view is not supported fully by the theoretical literature, however. The paper by Gale contributes to the debate about the desirability of bank capital regulations by studying a theoretical framework in which financial intermediaries play a central role because of missing markets. The main conclusion is that, although the absence of some markets can generate pecuniary externalities that lead to a suboptimal allocation of resources, the imposition of capital-adequacy requirements does not necessarily solve the problem. It might, in fact, exacerbate the allocation inefficiencies. In the following sections, I will discuss the main contributions of the paper and its relevance.

## Contributions

The paper makes three contributions. The first is to emphasize that, to study the effects of bank capital-adequacy requirements, we need to develop a well-specified theoretical framework where the banking sector plays a central role. Without such an apparatus, any discussion about the benefits and costs of imposing capital-adequacy requirements remains vague.

The second contribution consists of proposing an explicit theoretical framework in which the banking sector plays an essential role. This role derives from the assumption that consumers cannot access capital markets directly. Therefore, to smooth consumption, they need the intermediation of

banks. Despite the parsimonious structure of the model, it provides crucial insights into the fundamental economic role of banks in the economy.

The third contribution is to show, within the above theoretical framework, that capital-adequacy requirements are not necessary to reach the first-best allocation. Market forces ensure that banks choose the right capital structure in equilibrium even if consumers are unable to do so directly. The only chance for capital adequacy to have a beneficial role in the economy is in the presence of pecuniary externalities. Even with the presence of externalities, however, it is not obvious that capital adequacy is the appropriate remedy for the allocation inefficiencies. By extending the model to allow for some form of externalities, the author shows that the imposition of capital-adequacy requirements may, in fact, reduce welfare. Therefore, the paper undermines the conventional wisdom about the desirability of capital-adequacy regulations.

### **Can the Conclusion Be Generalized?**

The main message of Gale's paper is to cast doubts on the desirability of bank capital-adequacy requirements. But to what degree can this conclusion be generalized? I would like to emphasize some limitations of the analysis. Although the paper makes the important point that any serious policy analysis cannot be made without an explicit theoretical apparatus, we should also be aware that any model provides only a partial representation of the real world. The question, then, is whether the proposed model captures the key externalities that characterize the financial intermediation activity. In Gale's model, these externalities derive only from the inability of banks to sign state-contingent contracts with other banks. This implies that, in the event of unanticipated liquidity needs, banks have to sell their assets at the market price. Depending on the asset price that they expect for each realization of the shock, banks choose their investment policy. This policy is different from the one they would choose if state-contingent contracts were feasible. Therefore, the equilibrium allocation is suboptimal.

Is this the only form of externalities generated by financial intermediation activity? For instance, does the model capture the real macroeconomic cost of financial fragility in the event of a crisis? If not, we might worry that the paper does not provide a complete answer to the question of whether capital adequacy is a desirable policy.

In short, it is not clear that the model studied in the paper captures all the relevant externalities associated with the functioning of financial markets. However, this does not mean that the analysis is not important and useful. Quite the contrary. Gale's paper imposes a methodological standard for the

analysis of capital adequacy that all analysts should emulate. Granted, there are other important externalities that make the imposition of capital-adequacy requirements desirable. For instance, many believe that financial crises push countries into a long period of macroeconomic disruption, a problem the model does not capture. However, to make a convincing argument in favour of capital-adequacy requirements, the model must endogenously formalize these types of externalities. Otherwise, it is difficult to challenge the author's conclusion that capital requirements might be undesirable.

To summarize, Gale challenges the conventional wisdom that capital-adequacy requirements are welfare improving. Although the paper cannot be considered the final answer to the question of whether bank capital regulations are optimal, it does set a rigorous methodological standard for the analysis of the problem. I expect to see many more studies in the near future that follow the methodological lines suggested by this paper.